

CLINICAL GROUP

Barry L. Gause, M.D., Director

CLINICAL RESEARCH DIRECTORATE

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DIRECTORATE OVERVIEW

The Clinical Research Directorate (CRD) was established in November 2006 by bringing together the Clinical Monitoring Research Program (CMRP) and the Quality Assurance Programs of the Vaccine Pilot Plant (QA-VPP) and the Biopharmaceutical Development Program (QA-BDP). The major purpose for establishing a new directorate was to bring those programs at the clinical end of the translational spectrum under an umbrella that fosters interactions in areas of overlap and provides clinical supervision of such activities. In addition, the assignment of the QA programs to this directorate is necessary to provide the required autonomy and transparency.

The overall objective of the directorate is to provide clinical research support in the performance of clinical trials and quality assurance for the production of vaccines and biological agents at the National Institutes of Health (NIH). This support includes clinical trials management and regulatory support for clinical research. The directorate accomplishes its mission by providing comprehensive, dedicated clinical research support to major clinical programs within the National Cancer Institute (NCI) and the National Institute of Allergy and Infectious Diseases (NIAID). In addition, the directorate establishes quality systems at the VPP and the BDP before the initiation of manufacturing and follows through on all regulatory aspects of production, including providing support for Investigational New Drugs (INDs). Detailed descriptions of the QA activities will be presented under the sections for the VPP and BDP.

SAIC-Frederick is providing support to the National Human Genome Research Institute (NHGRI) Therapeutics for Rare and Neglected Diseases (TRND) program. We are establishing an infrastructure to subcontract various drug development activities and monitor their progress. At this time, we are responding to two initial Yellow Tasks and working with the TRND program to establish its requirements.

CLINICAL MONITORING RESEARCH PROGRAM

Beth Baseler, M.S., Director

OVERVIEW

The primary mission of the Clinical Monitoring Research Program (CMRP) has been to provide comprehensive, dedicated clinical research support to major programs within NCI, including the Office of the Director (OD), the Center for Scientific Strategic Initiatives, the Center for Cancer Research (CCR), the Division of Cancer Control and Population Sciences (DCCPS), the Division of Cancer Treatment and Diagnosis (DCTD); and within NIAID, including the Division of Clinical Research (DCR) and Division of Intramural Research (DIR). To support the diverse research requirements of the clinical research community, CMRP provides an integrated range of quality services that are functionally organized within CRD. CMRP represents a comprehensive resource for NCI's and NIAID's Intramural Clinical Research Programs. CMRP staff continues to provide high-quality programmatic and clinical trials management support, as well as regulatory support, to an extensive variety of high-profile NCI and NIAID initiatives.

The creation of CMRP in late 2001 produced a unique program that has dramatically expanded to include operations such as: (1) the Regulatory Compliance and Human Subjects Protection Program (RCHSPP), providing support to NIAID; (2) support to the NIAID-Mali HIV Research Initiative; (3) support to the Phidisa Project, a joint effort between the South African Military Health Service of the South African National Defense Force (SANDF), the U.S. Department of Defense (DoD), and NIH; (4) the Clinical Consulting and Services Group; (5) support to the India/Mali Initiative; (6) support to the Nigeria Project; (7) support to biostatistics; (8) support to the India Initiatives; (9) support to the Uganda Initiatives; (10) support to NIAID clinical teams; (11) nursing and clinical/protocol monitoring support to CCR; (12) support to CCR's Protocol Re-engineering Project; (13) support to the Cancer Therapy Evaluation Program (CTEP) through the Translational Research Initiative (TRI); (14) support to the NCI Behavioral Research Branch (BRB) and the Cancer Information Service (CIS); (15) support to the Development of Clinical Imaging Drugs and Enhancers (DCIDE) program; (16) support to the Cancer Disparities Research Program; (17) support to the Health Communication and Informatics Research Branch (HCIRB); (18) support to the CCR/DCTD Chemical Biology Consortium through the Project Management Office (PMO); (19) support to the NCI Community-based Cancer Centers Program (NCCCP) initiative; (20) support

to the Office of Biorepositories and Biospecimen Research (OBBR); (21) support to the Coordinating Center for Clinical Trials (CCCT); (22) support to the Office of Latin America Cancer Program Development (OLACPD); (23) support to the H1N1 Influenza initiatives; (24) support to the Radiation Research Program (RRP) Patient Navigation Research Program for including the NCI's Cancer Disparities Research Partnership (CDRP) Program and the planning efforts for the Cancer Experts Corps; (25) support to the NIAID Institutional Review Board (IRB) Pilot Program; and (26) support to the American Recovery and Reinvestment Act of 2009 (ARRA) through the NCCCP and cancer Human Biobank (caHUB) initiatives.

Major efforts continue to include the management of a clinical trials management and regulatory compliance program to monitor an extensive variety of clinical trials being conducted by the Intramural Research Program within NIAID and NCI. Evidence of CMRP's successes in providing comprehensive clinical research support services to NIAID's domestic and international clinical research initiatives has been the ability to provide rapid responses and high-quality solutions, and recruit and retain experts with a variety of backgrounds. This combination has served CMRP well to meet the growing portfolio of NCI and NIAID and meet the growing challenges of providing expanding support. CMRP supports approximately 350 domestic and international clinical protocols at different clinical sites throughout the United States, Europe, South America, Canada, Southeast Asia, and Africa. Many CMRP staff members participate in international clinical efforts, including projects in Southeast Asia, Latin America, Mali, Uganda, and South Africa.

As a program, CMRP has provided high-quality clinical research support services to meet the expanding and new challenges faced by NIH researchers. CMRP has recognized that there are numerous barriers to conducting clinical research not only domestically, but particularly in an international setting. Successful completion of our mission directly benefits the mission of NCI and NIAID and has contributed to improving the overall standards of public health globally. The repertoire of support services provided to clinical researchers throughout the world has expanded dramatically over the last seven years, assisting researchers in providing clinical research of the highest quality, compliant with applicable regulations and guidelines, and maintaining data integrity with the overall goal of protecting human subjects.

The year 2010 was marked by accomplishments across CMRP's portfolio of services and programs, as well as the inauguration of several new endeavors. CMRP has been instrumental in launching several major program initiatives in support of the evolving research and development mission of NCI-Frederick and NIAID. During the reporting period, CMRP provided a rapid response to the NCCCP ARRA initiative, expanding the program to an additional 14 community cancer sites across the country and broadening research in the existing hospitals. Additional dedicated project and procurement

management and logistical support was provided to OBBR to develop a common biorepository infrastructure that promotes resource sharing and team science to facilitate multi-institutional, high-throughput genomic and proteomic studies. Equally important, CMRP provided regulatory and clinical trial project managers to work with NIAID and provided a rapid response to an urgent healthcare need regarding H1N1 influenza-related activities. In addition to expedited regulatory reviews of inpatient and outpatient H1N1 research protocols, research contracts were established to assure the necessary resources were ready in case of a pandemic.

Another project resulted in the development of two new Protocol Development and Navigation Programs within NCI and NIAID designed to enhance the development of protocols and decrease the time from scientific review to the opening of clinical trials for patient accrual, while maintaining or increasing quality and safety.

In addition, CMRP staff has continued to play an active role in NCI-Frederick community outreach programs, participating in the Elementary Outreach Program, Take Your Child to Work Day, and the Spring Research Festival. Numerous representatives of CMRP contributed posters for the NCI-Frederick Annual Spring Research Festival, the NIH Research Festival, and the NCI PI Retreat. CMRP staff, in collaboration with Frederick Community College, will present a half-day seminar in fall 2010, featuring speakers and posters to raise awareness of clinical research as a career path for nurses.

CMRP Services

Services available through CMRP are as follows:

- Provides comprehensive clinical trials monitoring/management and regulatory support encompassing clinical monitoring, IND management, regulatory support, as well as other operational support;
- Maintains regulatory surveillance over clinical trials to ensure that trials are conducted in accordance with the U.S. Department of Health and Human Services (HHS)/U.S. Food and Drug Administration (FDA)/NIH regulations and International Conference on Harmonisation (ICH) Good Clinical Practices (GCP) guidelines;
- Develops, assembles, maintains, and submits to sponsor IND (independent new drug) applications and interim/annual reports to FDA; offers regulatory guidance (assists in determining whether an IND is needed; IND Application Review Document for New Protocols); offers consultation, preparation, and submission of IND applications (investigator's brochure; protocol review; informed consent form [ICF] review; and pre-IND meetings with FDA); provides IND maintenance (maintains IND, prepares IND amendments, annual reports, IND safety reports); and serves as a communication link with FDA;

- Reviews adverse event (AE) reports and prepares safety reports, provides instruction and guidance to staff, and prepares and submits IND safety reports for sponsored INDs; provides a dedicated safety fax and phone line for principal investigators (PIs) to report serious adverse events (SAEs); develops uniform SAE reporting forms;
- Acts as a liaison for regulatory issues with FDA, the pharmaceutical industry, and the Office for Human Research Protection during the initiation and conduct of a clinical trial;
- Develops training programs in the principles of GCPs and the regulations pertaining to the Standards of Clinical Research for clinical research personnel;
- Provides pre-IRB protocol and informed consent review to include: protocol templates based on the Clinical Center *Protomechanics Guide*; reviews protocol and consent for adherence to the *Code of Federal Regulations* (CFR) and ICH/GCP;
- Evaluates IND requirements, makes recommendations regarding monitoring/Data Safety and Monitoring Board (DSMB) plans, and evaluates case report form (CRF) needs;
- Provides clinical research trials monitoring: develops guidelines on monitoring requirements; provides investigator study binders for new protocols; provides study manuals for study staff; provides protocol and informed consent review prior to submission of the IRB application/approval; initiates protocol monitoring to protect the well-being of human subjects, reports accurate trial data (i.e., safety/efficacy and adherence to clinical protocol), compliance with regulatory authorities (i.e., NIH/HHS and/or FDA), and compliance with ICH/GCP; meets with PIs to conduct and review/outline monitoring plans and discuss study initiation visits, routine monitoring visits, study close-out visits, and tools to assist study staff with conducting the trial;
- Provides medical personnel (e.g., physicians, clinical research nurses [CRNs], protocol nurse coordinators, physician assistants, clinical assistants, etc.) to support various NCI and NIAID intramural clinics;
- Provides protocol development and navigation services in support of the NCI CCR Protocol Service Center (PSC) and NIAID Intramural PIs;
- Provides management of clinical operations, including study start-up, study document design, preparation, submission, distribution, and tracking; development of guidelines, investigator meetings, and site training, initiation, and monitoring;
- Provides scientific administration to oversee establishment of subcontracts and professional services agreements/consultants;
- Provides logistical and operational support to a variety of clinical projects, including document control, informatics support, quality assurance/compliance, laboratory supplies and renovations, and capacity building;
- Provides project management support to a variety of domestic and international clinical studies and NIH programs;
- Provides medical and scientific writing supporting the development of clinical/scientific materials;
- Evaluates regulatory documents to ensure consistency and accuracy from a quality control perspective.

CMRP Personnel

The current CMRP staff (positions filled), located at Industry Lane and Grove Road, Frederick, MD, consists of 90 staff members, including: 29 professionals, 27 technical, 33 administrative/computer support, and one shuttle bus driver. CMRP is actively recruiting to fill one additional professional and one additional administrative position. Included in the CMRP, but working off-site, are 117 staff members who support the Bethesda, Rockville, and District of Columbia (D.C.) operations: 36 professionals, 55 technical, 24 administrative/computer support, and two shuttle bus drivers. CMRP is actively recruiting for six additional professionals, nine additional technical, and two additional administrative/information technology (IT) staff members. Several employees are approved for full-time telecommuting, including one professional employee in North Carolina, one professional employee in Minnesota, and one professional employee in New Hampshire. Support to several international initiatives requires employees to be detailed to these international locations. These employees include: one professional international (Uganda) employee; one professional international (India) employee, and one administrative international (Mali) employee.

CMRP Initiatives

CMRP members frequently take part in activities that promote and teach about NCI and NIAID projects, including volunteering in the NCI-Frederick-sponsored Take Your Child to Work Day, participating in each bi-weekly New Employee Orientation program, and presenting “Clinical Trials 101” for senior nurses at the Frederick Community College to increase the visibility of the clinical trials arena as a career option. CMRP staff, in collaboration with Frederick Community College, will present a half-day seminar in fall 2010, featuring speakers and posters to raise awareness of clinical research as a career path for nurses.

Moreover, CMRP staff is greatly involved in creating and maintaining an atmosphere with a strong sense of team and high employee morale. Two important projects that staff organized, planned, and participated in were the Annual Diversity Day Pot Luck Luncheon in June 2010 and the Third Annual Office Olympiad, held during the summer of 2010, in which 78 percent of the staff

participated. Several CMRP members were also recognized by their peers in the “Show some RESPECT” program for their service to others.

Many CMRP team members were designated to participate in NCI and NIAID projects within fiscal year (FY) 2010. Team members prepared, participated, and presented at a monthly seminar series, provided seminars at the NIH Clinical Center and Rockledge, and presented several posters in various forums held at Fort Detrick and NIH.

To encourage innovation and cost savings, several CMRP members submitted suggestions to the “A Penny Saved” initiative, as well as to the newly established “Ask Beth” mailbox.

During calendar year (CY) 2010, the CMRP team continued to expand its technical and professional skill competencies. Coursework in clinical research, current Good Clinical Practice (cGCP), and regulatory affairs was completed by some team members and several participated in a certification-based course on “The Science of Small Clinical Trials,” which was hosted at Industry Lane. Seventeen members of the CMRP administrative team participated in a year-long class to prepare for the International Association of Administrative Professionals (IAAP) certification examinations to be given in the fall of 2010.

One member collaborated on “Manager as Communicator,” a mandatory, SAIC-Frederick-wide communication initiative for all managers. At the request of the staff, the CMRP Training Retreat is planned for fall 2010. This event will include more than 30 sessions organized into six major areas: communication, compliance, health-focused, professional development, managerial/supervisory, and IT applications. This event will also feature a poster session highlighting the diverse activities of the CMRP staff and a webinar on data management that will provide continuing education units.

CMRP Program Management

CMRP continues to provide high-quality clinical trials/regulatory and programmatic/project management support to NCI and NIAID initiatives. The ability to provide rapid responses, high-quality solutions, and to recruit and retain diverse subject matter experts (SMEs) is evidence of CMRP’s success. CMRP programmatic management support was launched to offer a complete approach to clinical support services. The CMRP Program Management Office contributes to NCI and NIAID clinical research activities by providing centralized services that facilitate high-quality clinical research through program guidance and support, strategic planning and direction, project management, technical direction, learning and professional development, and general assistance to various government entities. The CMRP Program Management Office includes an administrative group, a training group, and a clinical informatics group.

CMRP Project Management

The CMRP Project Management Office (PMO) provides operational support to all overarching CMRP initiatives. PMO is comprised of two clinical project managers (CPMs), level I, one medical writer, and one document coordinator.

Working in conjunction with the administrative group and the NIAID and NCI support groups, the PMO staff prepares and submits budgets and responses for Yellow Task (YT) inquiries. Once YTs have been approved, PMO works with the respective CMRP groups and tracks the status of tasks (including the hiring of staff and establishment of research subcontracts) required to fulfill the needs of the YT. When budget revisions are requested, the PMO staff works with the appropriate CMRP personnel to revise the budget and submit it through the YT Webmail system.

The PMO staff is also responsible for coordinating the submission of several reports throughout the contract year. Every six months, the staff collects information within CMRP regarding each group’s goals and objectives; each goal has specific and measureable elements with associated target dates. The PMO staff works with the corresponding CMRP group to monitor the progress made towards the goal. PMO works with individual CMRP groups to collect information for the Operational Contract Performance Status Report (OCPSR), submitted bi-annually, which highlights significant work conducted in the previous six-month time period. Additionally, the PMO group coordinates the efforts for the generation and submission of the CMRP annual report each fall for NCI-Frederick.

The PMO provides overall project management support for internal CMRP initiatives, as well as a high-profile HIV/AIDS collaboration between NIH and the Washington, D.C., Department of Health. During CY2010, PMO worked with IT to redesign the CMRP web site, contributed to the development of American Recovery and Reinvestment Act of 2009 (ARRA) workflow diagrams, developed a CMRP policy and associated training material on a new federal regulation, developed and compiled the *FDA Inspection Binder* and the associated training contained within, and provided management and oversight for CMRP organizational charts. In addition, PMO participated in the SAIC-Frederick Gap Analysis program by providing monthly reports outlining any significant gaps in service, along with a mitigation plan. Providing support to the CMRP director, the PMO provides medical writing services to prepare presentations, edit statements of work (SOWs), and write internal procedures.

CMRP Administrative Group

The CMRP Administrative Group continues to expand its capabilities and take on new challenges in support of NCI and NIAID. In an effort to meet the increasing demand for cost accountability and to monitor budgets to ensure funding availability, CMRP established a Financial

Management Working Group. This group manages 85 cost centers, comprised of one for the Clinical Research Directorate (CRD), four for the Office of the Clinical Director (OCD), three for the Clinical Center/Agency, 18 for NCI Center for Clinical Research (CCR), seven for NCI's Division of Cancer Treatment and Diagnosis (DCTD), one for the NCI Division of Cancer Epidemiology and Genetics (DCEG), one for NCI's Division of Cancer Control and Population Sciences (DCCPS), 14 for NIAID's Division of Intramural Research (DIR), 18 for NIAID's Division of Clinical Research (DCR), and 18 for the Office of Directorate recovery centers. This group works collaboratively with other SAIC-Frederick directorates, managers, and inner departments, as well as with NCI and NIAID officials.

The Financial Management Working Group was instrumental in the establishment of a working group (WG) to develop an internal Administrative Policy Manual that ensures consistency of processes and, therefore, increases the efficiency of the standard operating procedures (SOPs) within the program.

Additionally, the Financial Management Working Group established a WG to develop and implement a SharePoint site to manage all CMRP research contracts, PSAs, and consultants. This site provides quick access from one location to all source documents and financial information, allowing the program to increase efficiency when responding to customer inquiries.

In response to ARRA requirements, the administrative group identified qualified SMEs on the various administrative processes and implemented the required process training and competencies based on the duties and responsibilities of each individual. This training will also be extended to non-ARRA staff to ensure consistency of SOPs and increase the operation efficiency of the program.

Within the reporting period, the administrative group continued to manage and develop cost estimates for new work scopes, provide monthly financial report information, anticipate estimates-at-completion deadlines, and track project costs for all budgets to ensure accuracy and accountability of costs. In addition, as a result of excellent planning for the collection and assembly of information, the group responded to the submission of the CY2011 budgets to meet the contractual deadline.

CMRP Clinical Training Group

CMRP training support is provided by the Clinical Training Group (CTG) composed of a clinical training manager, a training specialist/instructional designer, and an administrative support staff member. CTG supports RCHSPP, the Office of Strategic Planning and Assessment (OSPA), CMRP, and the ARRA program. In supporting these various clients, CTG participates in activities that fall into five categories: (1) identify/develop training resources to address client-identified training needs; (2) provide training and professional development subject matter expertise; (3) provide administrative support for activities with training components; (4) ensure

compliance and continuous improvement of training processes and initiatives; and (5) conduct professional development sessions to ensure that staff members maintain their subject matter expertise, including providing training sessions, presenting at conferences, and participating on advisory committees.

During this reporting period, the group has implemented the following activities to serve specific needs.

Identify/Develop Training Resources to Address Client-identified Training Needs

CTG developed and facilitated a bi-weekly review program to prepare the administrative team to complete IAAP certification. This course spanned approximately 15 months and involved a minimum of 16 participants over the course of the year.

The training manager developed a presentation on communication style preference as a segment of the "Manager as Communicator" program. This program was given 13 times and was very well received.

Provide Training and Professional Development Subject Matter Expertise

CTG facilitated the Community College Outreach Program, a half-day program designed to raise the visibility of clinical research as a career option for nurses. The program, originally scheduled for early summer 2010, was postponed until early October 2010. The CTG provided organizational development support to the Rockledge administrative group as the Rockledge group set its professional standards.

During the reporting period, CTG also presented a session on creative problem-solving at the Basic Science Program Retreat, presented a session on communication style preference at the Scientific Publications, Graphics and Media (SPGM) retreat, supported OD in the configuration of training on the Health Information Technology for Economic and Clinical Health (HITECH) Act, and completed a CMRP Training SharePoint Site overview to staff at Rockledge.

Additionally, a member of CTG served on the Workforce Development Board of Frederick, the Science Technology and Engineering Steering Committee for Frederick County Public Schools, the SPGM Advisory Board, and the NCI Learning Management System (LMS) Advisory Team, assisting in planning SAIC-Frederick's implementation of LMS.

Provide Administrative Support for Activities with Training Implications

CTG facilitated six monthly seminar series for CMRP staff while ensuring WebEx access for off-site staff. The group also facilitated 25 training sessions on various topics; each session included presentation evaluation and attendance documentation for each participant. In addition, CTG facilitated 15 NEO sessions for 44 new employees. Efforts included scheduling presenters, compiling information into a reference binder for each new employee, and presenting the "Clinical Training

Presentation” section of the session. Furthermore, the team facilitated seven weekly sessions of the “Ethical and Regulatory Aspects of Clinical Research” via video conferencing for 11 CMRP employees, including attendance monitoring, administering pre- and post-tests, and transferring information to a liaison at the Department of Bioethics. In addition, the group facilitated eight sessions of “The Science of Small Clinical Trials” via video conferences, which included assisting participants with registration and ensuring participants had access to the final test to receive CEU credits.

This team also provides administrative support to the FDA Inspection Readiness Teams, the CMRP Presentation Advisory Board, and the CMRP Training Workgroup.

Ensure Compliance and Continuous Improvement of Training Processes and Initiatives

CTG is heavily involved with the CMRP Gallup Poll Impact Plan, assisting authors, collecting data, and facilitating delivery on actions. The group is also administering the 2010 résumés/CV and signature log review project for all CMRP staff, which includes sending a current résumés/CV and signature log to each employee, instructing the employee to update, if needed; and tracking the return of all résumés/CVs and signature logs to ensure 100 percent compliance.

The CTG also conducted a “Value of CMRP New Employee Orientation” survey. The results were favorable; new employees find great value in the NEO session, whether they are off-site or located at Industry Lane.

The training records are audited, both hard-copy to electronic and electronic to hard-copy, annually. As in the past, this effort ensures that our training records are at least 97 percent accurate.

Conduct Professional Development Activities

To ensure professional development opportunities are provided to the CMRP staff, the CMRP Training Work Group was established. All members of the Clinical Training Group serve on this team, which is also responsible for the 2010 CMRP Training Retreat in September 2010.

CTG leads the CMRP Monthly Presentation Advisory Board by planning, facilitating, and sometimes presenting a topic of interest to our diverse CMRP workforce.

During the contract year, CTG delivered training sessions to various CMRP groups and other SAIC-Frederick colleagues, on five topics, including “Giving and Receiving Constructive Feedback” and “Train the Trainer,” which were presented 10 times.

CTG was also involved in the development and presentation of a poster at the NCI-Frederick/Fort Detrick Spring Research Festival, “CPS/CAP: Changing the Workplace, One Administrative Professional at a Time. Get on the Path to Certification Today!”

Additional support activities provided to each of our clients will be described separately.

CMRP Clinical Informatics Group

The CMRP IT group provides software development, computer, network, application, and disaster recovery support to both NIAID and NCI initiatives. Members of the IT group specialize in the evaluation of core business processes, utilizing simple and flexible methodologies to transform business needs into suitable, cost-effective, technical solutions, while maintaining focus both on providing customer satisfaction and on meeting the unique operational requirements for management of clinical trial, regulatory, and clinical safety data.

In the past year, the IT group was involved in several key technical initiatives for the program, including:

Conceptual design, development, and production release of a customized Microsoft® SharePoint Services platform for the centralized storage, management, and tracking of program-specific subcontract information: Continued and branching growth within the program resulted in a vast collection of subcontract-related materials, many of which were uniquely structured to meet the individual needs of the area supported. To enhance operational efficiencies and develop a standards-based, collective management framework of subcontract-related materials, a WG was formed to establish requirements, identify, and prioritize business and organizational drivers, and construct a committee for the evaluation and review of the proposed software solutions. As a result of this collaboration, the IT group was able to develop an application, based on the Microsoft® SharePoint Services platform, which fulfilled the primary problem definition identified by the group, as well as additional needs introduced during the design and development phase. The application provided custom data views of strategic operational objectives in the management of program-specific subcontract elements, with the flexibility to allow both primary and secondary stakeholders to quickly review the status of individual subcontracts, as well as to track and manage the performance metrics of the larger division-level subcontracts. Document libraries, with mapping of custom subcontract attributes to document types, were defined and integrated into the application, thereby providing the direct linkage of subcontract documents to specific subcontract performance markers. A custom reporting web interface finalized the application build, providing the flexibility to broaden or flatten relevant subcontract data elements and, in doing so, providing the ability to render the screen display to Adobe® Portable Document Format files or paper-based output.

Specification, acquisition, configuration management, technical guidance and IT back office and infrastructure support to program initiatives awarded to SAIC-Frederick through ARRA: To support specific ARRA requirements awarded to the SAIC-Frederick contract and the resulting increase in program staffing levels, members of the IT group were involved in multiple facets of service delivery, ranging from the specification and technical evaluation of IT

equipment requirements to the management of data systems, application support, and participation in training initiatives for the design and construction of standardized framework for the rapid delivery of IT and business-related training to program staff.

Evaluation and development of a new communications network: The IT group, in close collaboration with SAIC-Frederick telecommunications and network operations staff, was responsible for evaluating and developing a network design that would provide high-speed wide-area connectivity to the NCI-Frederick campus, as well as interoperability between the leased space and the Industry Lane location. Specification of hardware for both local and wide area network operations was conducted and reviewed for compatibility and integration into existing infrastructure. The next steps in the implementation process are pending approval of the project stakeholders.

The IT group continually assesses the goals and objectives of CMRP and uses leading-edge technology to provide the best return on investment while ensuring compliance with all applicable regulatory and security best practices, policies, and standards.

Significant Achievements

Support to NCI

CMRP provided support to NCI's new PSC through the coordination and preparation of new proposals/protocols and progress reports for the Safety Monitoring Committee and IRB meetings; reviewing and recommending changes to protocol amendments and other research study documents; setting the agenda for IRB meetings; sending roster information to the Office of Human Subjects Research (OHSR); ensuring that regulations and guidelines are followed; and participating in the creation of the electronic document management system.

SAIC-Frederick team members provided feedback to help improve the design and usefulness of CCR's new scientific review tool in the Integrated Research Information System and were among the first to successfully use the system.

The nurse practitioner within the Developmental Therapeutics Clinic (DTC)/Phase 0 contributed to the successful development and undertaking of new trial designs, such as the single-agent Phase II trial with ADZ2171 (Cediranib), which is one of the most promising regimens in a rare form of sarcoma (alveolar soft-part sarcoma), and a multi-histology Phase II trial with R788 that conserves resources used in clinical trials, which have also been started.

In support of the Surgery Branch within NCI, CMRP staff provided support and guidance to the newly formed CCR Protocol Support Office (PSO). CMRP team members have been working closely with the CCR's PSO leadership, providing new SOPs, reviewing existing SOPs, and providing suggestions on logistical issues.

CMRP's protocol coordinator and documentation specialist, both within the Surgery Branch, played a key role in processing 40–60 protocols for submission and maintaining databases to track all submissions to various regulatory agencies, such as IRB, FDA, the Office of Biotechnology Activities, and the Institutional Biosafety Committee (IBC).

CMRP was requested by the Pediatric Oncology Branch within NCI to provide psychometricians to work primarily with the neuropsychology program in conducting longitudinal neurobehavioral assessments of children, adolescents, and adults with medical conditions on collaborative research protocols or in response to clinical referrals. CMRP developed a job description, compensation plan, and recruitment specifications for this new type of position. Two psychometricians were recruited and hired to support this effort. Additionally, CMRP recruited and hired a part-time, licensed clinical psychologist to provide supervision and oversight of the hired psychometricians.

CMRP provided ad hoc support to the Patient Characterization Center/Clinical Assay Development Center, an ARRA-supported subcontract for a specimen retrieval system to collect cases for validation of NCI-supported clinical assays. This subcontract was awarded to Kaiser Permanente while NCI investigates other Health Maintenance Organization (HMO) institutions to participate in this initiative.

The Quality Assurance Team supporting NCI's Cancer Imaging Program (CIP) has implemented an audit program, conducting site visits for most of the program's IND agents.

In support of CIP, further enhancement of the systems and processes devoted to AEs and audit documentation in CIP clinical trials is underway. SAIC-Frederick staff has completed modifications and evaluation of existing AE reporting systems, designed for therapeutics, so that it now meets the needs of imaging clinical trials.

The regulatory team supporting NCI's CIP provided comprehensive regulatory support to those activities related to the IND process for the imaging agents. Subcontracts with extramural sites were coordinated to facilitate the formal clinical trials performed at the CIP Phase I and II contract sites. Six INDs are currently held by CIP and managed by SAIC-Frederick staff:

1. IND 71,260 (^{18}F -fluoro-L-thymidine [FLT]), proliferation agent
2. IND 68,556 (ferumoxytol), blood pool MR agent
3. IND 70,900 (ferumoxtran-10), lymph node MR agent
4. IND 76,042 (^{18}F -fluoromisonidazole [FMISO]), hypoxia agent
5. IND 79,005 (^{18}F -fluoroestradiol [FES]), estrogen receptor agent
6. IND 103,429 [^{18}F -NaF], submitted on August 28, 2008

An additional IND, F-deoxycytidine, is in the later stages of preparation for patients receiving deoxycytidine with tetrahydrouridine (THU) and will be filed with FDA in late FY2010.

CMRP provided support to NCCCP by coordinating all activities related to the NCCCP pilot, including the management of 10 research subcontracts. Additionally, results of an ongoing program evaluation were used to refine the program concept and, in October 2009, the expansion of the program was announced via a full and open competition. ARRA funding supported the award of 14 additional community-based hospitals to join the 16 hospitals, which were awarded additional funds for year 4 of their original awards.

NCCCP was awarded approximately \$76 million in ARRA funds dedicated to: (1) funding additional research opportunities for the existing sites, and (2) the awarding of subcontracts to new sites. Approximately \$40 million will support 18 projects at the current sites, spanning the following NCCCP program components: disparities, clinical trials, quality of care, survivorship and palliative care, biospecimens, communications, and IT. The other \$36 million will be used to expand the program through the funding of 14 additional community cancer sites across the country. Pilot awards have been extended for a fourth year. Each of the organizations will be awarded approximately \$500,000 by July 1, 2010, to cover costs related to new network projects; awards will total \$5 million. NCI's decision to exercise the year 4 option with additional appropriated funding is a direct result of the outstanding accomplishments being made by these community cancer centers.

CMRP provided support to five major initiatives in NCI's OBBR. These initiatives included the Biospecimen Research Network (BBRN), strategic planning for caHUB, the caHUB pilot, The Cancer Genome Atlas (TCGA), and the Genotype Tissue Expression (GTEx) NIH Roadmap projects. Dedicated project and procurement management and logistical support was provided to OBBR, which is responsible for developing a common biorepository infrastructure that promotes resource sharing and team science to facilitate multi-institutional, high-throughput genomic and proteomic studies.

The responsibility for TCGA was transferred from OBBR team management to a newly formed TCGA project management team within NCI. SAIC-Frederick staff assumed responsibility for coordinating the subcontract completion efforts at all collection sites participating in the pilot phase of TCGA. SAIC-Frederick was also tasked with identifying the sites that could be closed for one of two reasons: (1) the work could be completed and goals of the subcontract could be met, or (2) the sites were unable to provide the contracted or additional tissue types approved by TCGA. Once the subcontracts were modified to collect from an expanded list of tumor types, several sites that had difficulty identifying and obtaining the required tissue types were extended. These subcontracts were extended to allow sites

to modify their materials transfer agreement (MTA) and IRB requirements to collect additional tumor types approved by the TCGA project management team.

NCI requested technical and operational support services to establish and manage six thematic WGs whose job would be to develop a strategic plan for the caHUB. The subgroups were founded and produced a set of recommendations, SOPs, best practices, research findings, and issues for consideration. A subcontract was established with Decision Biosolutions to develop a biospecimen acquisition operational plan for caHUB, including a plan to establish a Pathology Resource Center (PRC).

In October 2008, NCI requested technical and operational support services to establish and manage thematic WGs to develop a strategic plan for caHUB. SAIC-Frederick was requested to form, facilitate, and manage six thematic WGs that were critical to developing a comprehensive plan and vision for caHUB. To date, SAIC-Frederick has successfully established the Administration WG (AWG), seven related subgroups (Strategic Planning and Organizational Structure; Biospecimens; Acquisition of Normal Tissues; Ethical, Legal and Social Issues [ELSI]; Facilities; Informatics; and Partnerships) and hosted a National Cancer Data Base (NCDB) Workshop, along with a User Group Workshop. Additional WGs and subgroups will be launched in a prioritized, phased manner in FY2011.

Organization of caHUB business units was essential to allow for efficient solicitation and award of research subcontracts. The Tissue Procurement Business Unit request for proposal (RFP) for the A1 Task Order will be issued in late July/early August 2010 to solicit responses from entities that have the ability to serve as a biospecimen source site (BSS) for cancer biospecimens, providing prospectively collected, clinically annotated cancer biospecimens to caHUB. A competitive basic ordering agreement (BOA) RFP was solicited to qualify organizations capable of accruing and delivering targeted normal biospecimens and associated clinical data for caHUB. BOA awards were made to six organizations considered to be in the competitive range, and site qualification visits were made. The A2 Task Order under this BOA has been placed on hold until FY2011.

The Laboratory Business Unit issued a competitive RFP in May 2010 for the Comprehensive Biospecimen Resource (CBR) component of the caHUB initiative. The purpose of this RFP is to support the two-year pilot caHUB as a proof-of-concept biorepository. This project will provide NCI with the blueprint for developing a permanent biorepository supplying academia, advocacy, industry, and individual research efforts with quality biospecimens and accompanying annotated data.

The IT Business Unit issued an RFP in support of the establishment of the Comprehensive Data Resource (CDR) project to provide access to caHUB data and services; it is anticipated to be issued in August 2010. The NCDB alignment RFP that will modify the current NCDB system to provide clinically relevant data associated with

biospecimens from BSSs entered into caHUB's CDR is expected to be published on the FedBizOpps.gov web site by August 2010.

The Biospecimen Research and Development Business Unit issued a competitive RFP in November 2009 for research and development in biospecimen quality evaluation and control to allow solicitation of innovative approaches to biospecimen quality issues. Two proposals are awaiting award, due to revisions made to the ARRA cost estimates.

The Ethical and Regulatory Affairs (ERA) Business Unit will provide support for all ethical, legal, social, and regulatory issues for the caHUB initiative. The ERA Business Unit has developed templates that reflect NCI's caHUB policies for informed consent, material transfer and data usage, biospecimen and associated data access policy and general guidelines for caHUB subcontractors. Future work will involve the oversight of ERA issues for caHUB subcontractors, developing and implementing quality initiative directives and providing ongoing support to caHUB business units as the pilot caHUB transitions into the permanent caHUB.

The CPM I hired in August 2009 has taken a strategic position, on-site in the CCCT's Bethesda office, allowing for enhanced and streamlined communication between SAIC-Frederick and CCCT program directors with Scientific Steering Committee (SSC) accountability. This has been necessary, as the following program growth has occurred: in 2008, there were six SSCs and 140 consulting agreements; in 2009, nine SSCs and 237 consulting agreements; in 2010, 12 SSCs and 357 consulting agreements; in 2011, it is estimated there will be 17 SSCs and approximately 400 consulting agreements.

Continued growth for CCCT is anticipated in the coming year as five new SSCs will be added. These include: Brain, Imaging, Melanoma, Pediatrics Blood Tumor, and Pediatrics Solid Tumor. The Brain and Imaging SSCs are already recruiting members, and the remaining three SSCs are expected to be active by the end of CY2010. This expansion represents a 284 percent growth in the number of SSCs over four years. SAIC-Frederick's support of the SSCs includes project management, program analysis, and management of the massive and growing consultant agreement effort.

The Biomarker, Imaging and Quality of Life Studies Funding Program (BIQSFP) continued to grow in scope and effort. Eleven BIQSFP applications were submitted and reviewed in 2009. The reviews entailed collaborating with CTEP, the Division of Cancer Prevention (DCP) and the SSCs along with facilitating the identification and coordination of expert external reviewers. NCI approved one 2009 application and an SAIC-Frederick subcontract was established for funding. Seven BIQSFP applications

have been submitted and reviewed in 2010; three received NCI approval for funding. Additionally, one subcontract is in place and two are in process. Additional BIQSFP applications are anticipated throughout the rest of the calendar year.

A revised BIQSFP announcement was released in April 2010, along with a new BIQSFP web site facilitated by the CPM II. The web site received more than 600 unique visitors during its first eight weeks.

CMRP provided support to the Applied Cancer Screening Research Branch (ACSRB) within NCI's DCCPS. The behavioral research associate (BRA), supporting the ACSR, collaborated with NCI and external colleagues on a variety of ongoing projects. In the area of strategic planning, the BRA completed HHS-wide portfolio analyses of grant funding related to aging and behavioral research in genomics, and represented the branch by highlighting branch priorities and interests at the April 2010 Health Information National Trends Survey (HINTS) Users Meeting.

In support of the Basic Biobehavioral and Research Branch (BBRB), staff provided support to establish the newly created BBRN. The purpose of the network is to stimulate transdisciplinary research on biological and behavioral mechanisms that underlie the interactions of mind, brain, body, and social context, and contribute to the pathogenesis, course and treatment of cancer. CMRP staff also planned and facilitated a one-day pre-conference workshop to the American Psychosomatic Society (APS) annual meeting in Portland, OR, entitled, "Stress-Mediated Effects on Cancer Biology: A Primer on Cancer Biology and Plausible Mechanisms." Due to a successful turnout, this pre-conference workshop will now be offered annually.

In support of the Tobacco Control Research Branch (TCRB) and to increase social encouragement, CMRP assisted with the addition of two applications to the Facebook[®] Smokefree Women group. The project has been recognized at NCI, NIH, and HHS levels. The team received an NIH Plain Language/Clear Communication Gold Award and an NIH Director's Award Nomination (pending selection in July 2010) for the Smokefree Women web site. Additionally, the CPM I working on this project also served on the planning committee for a preconference workshop held at the Society for Research on Nicotine and Tobacco (SRNT) 16th Annual Conference and authored and co-authored three presentations that have been accepted for presentation at the International Union Against Cancer (UICC) World Cancer Congress to be held in Shenzhen, China, in August 2010.

CMRP staff is currently working with the Tobacco Research Network on Disparities (TReND) program to provide logistics and administrative support for their culmination meeting to be held in October 2010, highlighting the contributions of TReND research, examining the role of network and network processes in scientific inquiry, and discussing areas of future investment to reduce tobacco-related health disparities (TRHD). During the meeting, a senior special projects administrator

(SSPA) will present a research analysis activity that was part of TReND's efforts in a presentation titled, "A More Comprehensive View of Worksite and Home Smoking Bans: Are We Reaching All Working Women?"

CMRP provided support to the establishment of the Office of Latin American Cancer Program Development (OLACPD) initiative, including budget preparation and monitoring; scientific conference, seminar and workshop planning and support; preparation of international and domestic travel packages; and establishing a consultancy agreement, BOA, and one subcontract with a clinical research organization.

In support to the Office of the Associate Director, a CPM II completed the HINTS unified modeling languages model for use as an exemplar dataset in the grid-enabled measures database for the Society of Behavioral Medicine meeting. The CPM II is co-author on an abstract: "The Consumer Health Portal: An Informatics Tool for Translation and Visualization of Complex, Evidence-based Population Health Data for Cancer Prevention and Control," to be presented at the American Public Health Association (APHA) annual meeting this fall.

CMRP's special projects administrator (SPA) led a collaborative effort between NCI's HCIRB and Hablamos Juntos, a program of the Robert Wood Johnson Foundation. This partnership focused on assessing the translation quality of the HCIRB's HINTS briefs that have been translated into Spanish. These English and Spanish language briefs summarize significant research findings from HINTS, which will be distributed to a broad audience, including public health professionals.

CMRP managed more than 300 awards (273 research subcontracts and 27 additional BOAs) to 52 extramural institutions, totaling more than \$18 million committed for the NCI's TRI.

CMRP staff members in the NCI Clinical Core serve as AIs on eight protocols, six of which are actively recruiting and transplanting patients.

NCI Clinical Core support staff have been involved in the development of the first double cord blood transplant protocol at NIH, which is currently recruiting patients. The Clinical Core group also identified and transplanted suitable cord units for two aplastic anemia patients at the National Heart, Lung and Blood Institute (NHLBI) for the Haplo/Cord Protocol.

Support to NIAID

The Regulatory Affairs Group of the RCHSPP, supporting NIAID Intramural investigators, provided support for 56 active IND applications, two active Investigational Device Exemption (IDE) applications, and five active Drug Master Files (DMFs), which include protocols that are being conducted at domestic and international sites. Staff developed and submitted to FDA 12 new IND applications and two new IDE applications. Additionally, there are approximately 15 INDs/IDEs in various stages of development. As part of the ongoing

maintenance for these new and existing applications, staff developed and submitted to FDA more than 280 IND, IDE, and DMF amendment submissions, 10 pre-IND or pre-IDE meeting requests, and 10 information packages.

The Regulatory Affairs Group continued to move toward the goal of transitioning from paper INDs to an electronic common technical document (eCTD) format for FDA submissions. The director selected an eCTD software applications package, and a purchase order and product licensing agreement were signed in mid-December 2009. The Regulatory Affairs Group received extensive on-site training in March 2010 and has worked closely with the software vendor and FDA to set up the electronic submission gateway (ESG). An ESG test account was approved by FDA in mid-May 2010, and transmission of a test submission was completed on June 25, 2010. Staff members are currently preparing a pilot test submission of an IND application in the eCTD format and expect to deliver it via ESG in August 2010.

The Regulatory Affairs Group submitted the second Regulatory Compliance and Human Subjects Protection Branch (RCHSPB)-sponsored IDE. This noteworthy application is for the use of *Ixodes scapularis* ticks in the xenodiagnosis of Lyme disease and was the first such application ever reviewed by FDA. It was also the first time the Regulatory Affairs Group worked with the Center for Devices and Radiological Health at FDA; these exchanges were vital in laying the groundwork for future interactions with this center. After nearly a year of working with new investigators at three sites, coordinating numerous protocol revisions, and working extensively to manage the construction of other sections within the IDE, the IDE application was approved by FDA in the first half of 2010.

During the past year, in support of the ongoing effort to develop vaccines and therapeutic products to combat the novel swine-origin H1N1 influenza virus, the Regulatory Affairs Group developed and submitted to FDA two IND applications to evaluate the potential therapeutic use of H1N1 hyperimmune plasma for immunotherapy. The first IND involves two protocols and a coordinated effort among several study sites to collect high-titer anti-influenza H1N1 plasma from human volunteers. The second IND evaluates the safety and efficacy of treatment with this investigational anti-H1N1 hyperimmune plasma in subjects with H1N1 influenza and at risk for severe disease. As part of the ongoing maintenance for these INDs, the Regulatory Affairs Group staff prepared and submitted more than 25 IND amendments, participated in numerous teleconferences with FDA, including a face-to-face meeting in October 2009, and attended twice-weekly meetings with DCR and other stakeholders to discuss study logistics, implementation, and progress.

The RCHSPP Clinical Trials Management (CTM) team ensured that the high-profile H1N1 protocol for the Mexico Network project was activated in a timely fashion.

The CTM team worked with the Infectious Diseases Clinical Research Program (IDCRP) on a guidance document, to be used for monitoring, that is part of their internal quality management program.

The CTM team ensured that four studies associated with four PIs were monitored and that close-out visits occurred prior to the end of the NIH contract and Cooperative Research and Development Agreement (CRADA).

The CTM team continued to work with diverse sites, study staff, and lead investigators to accommodate special requests for site-initiation visits; train new sites on GCPs; and ensure international studies are compliant with the Department of Health and Human Services (HHS) and GCP guidelines.

CTM staff worked with a Laboratory of Clinical Infectious Diseases (LCID) PI to expedite the activation of a clinical trial in China. Staff also participated in the ceremony held in China to kick off the study, with several government officials in attendance.

The CTM team provides highly specialized support to facilitate well-controlled clinical research trials sponsored by the RCHSPB/NIAID Intramural Research Program/NIH. The main focus of this support is the organization and oversight of clinical research studies. Currently, CTM is involved with managing and/or monitoring approximately 146 clinical research studies conducted at sites throughout the United States and in several foreign countries. The team conducted one pre-study site assessment visit, 55 study initiation visits, 171 interim monitoring visits, and 31 close-out study visits, and monitored various clinical sites in Africa (Mali, Uganda, and Kericho), Korea, Thailand, Indonesia, India, Vietnam, Cambodia, Peru, Mexico City, and other countries. CTM conducted international site-initiation visits in Singapore, Thailand, China, Mexico City, Mali, and Kericho, Africa, and conducted seven study-site audits in hospitals in Singapore, Thailand, and Mali. The team also developed 18 study CRFs for data collection in various studies, reviewed 40 initial clinical research protocols/informed consent forms (ICFs), 60 amendment reviews, and nine site-specific ICFs.

The RCHSPP Clinical Safety Office (CSO) provided safety surveillance and oversight for SAE reporting for NIAID intramural clinical trials and has processed 23 SAE report records, and multiple follow-up and final SAE report forms for each case. CSO edited 15 AE tables for AE terminology consistency in preparation for inclusion in FDA annual reports, and reviewed approximately 118 CTM monitoring reports. The medical monitors and clinical safety associates (CSAs) reviewed 83 clinical research protocols, consisting of 32 PI reviews, 39 amendment reviews, seven site-specific ICF reviews, and five pre-IRB/navigator protocol reviews, along with the associated ICFs. Additionally, the medical monitors served on eight clinical protocol teams as the IND sponsor medical monitors.

A medical monitor within the Clinical Safety Office gave two "Train the Trainer" lecture presentations to SAIC-Frederick staff, presented a lecture on the novel

influenza pandemic, which was simultaneously broadcast to several remote sites, and gave a professional lecture to a class at Frederick Community College. Two posters were created and presented at the NCI/Fort Detrick Spring Research Festival and one poster was created and presented at the Association of Clinical Research Professionals 2010 Global Conference.

The RCHSPP DSMB executive secretary participated in 12 teleconferences involving 13 PIs for 18 protocols and two face-to-face meetings where 27 protocols were reviewed.

Two members of Document Control (DC) participated in the Certified Professional Secretary/ Certified Administrative Professional (CPS/CAP) training program. They also participated in designing a poster for the NCI Spring Research Festival that was held in May 2010.

The document control manager co-authored an article in the SAIC-Frederick, Inc. *News and Views* newsletter, explaining the importance of document control to BDP, VPP, and RCHSPP.

DC has been asked by RCHSPB to handle the archiving of 21 boxes containing the studies that have been closed down by Johns Hopkins University (JHU). RCHSPB also asked DC to handle the archiving of SILCAAT (an international HIV study sponsored by NIAID) files for the two sites that were closed. New systems have been created to handle these documents so that they are maintained independently from the RCHSPP documents.

DC processed over 130 regulatory submissions and 200 SAEs.

CMRP provides support to the NIAID IRB pilot program through overseeing a research subcontract. SAIC-Frederick was requested to extend the contract and assist with reporting the findings to NIAID's PIs, NIAID's IRB, RCHSPB, and SAIC-Frederick's RCHSPP. Additional responsibilities included discussing the recommendations for improvement to the process workflow, organizational structure, documentation management, template documents, and database/tracking system.

The Clinical Training Group facilitated the Community College Outreach Program, a half-day program designed to raise the visibility of clinical research as a career option for nurses.

The Clinical Training Group presented a session at the Basic Science Retreat on creative problem solving, presented a session on communication style preference at the SPGM retreat, supported OD in the configuration of training on the HITECH Act, and completed a CMRP Training SharePoint Site overview to staff at Rockledge.

The Clinical Training Group facilitated six monthly seminar series for CMRP staff while ensuring WebEx access for off-site staff. The group also facilitated 25 training sessions on various topics; all sessions included presentation evaluation and attendance documentation for each participant.

The Clinical Training Group facilitated seven weekly sessions of the Ethical and Regulatory Aspects of Clinical Research via video conferencing for 11 CMRP

employees, including attendance monitoring, administering pre- and post-tests, and transferring information to a liaison at the NIH Department of Bioethics.

The Clinical Training Group, in support of RCHSPP, identified and developed training resources, including the following training programs: “RA-0715 On-Site Compliance Inspection,” “Inspection Awareness Computer-Based Training (CBT),” “TrackWise® Protocol Review (CBT),” “TrackWise® Clinical Trials Management Modules (CBT) for the Protocol Record, Site Record, Site Visit Record, Subject Record, and Violation Record,” “TrackWise® Integrated Team Applications, and Time Wizard User Training.” The Clinical Training Group also collaborated with the senior management team to provide a two-day training event on the various aspects of clinical research.

The Clinical Training Group conducted extensive research on auditable elements of the ARRA Training Program to develop an audit awareness training program. ARRA training records are being maintained in an audit-ready state by the group.

The Clinical Training Group provided training and professional development subject matter expertise by collaborating with the ARRA Training Program Steering Committee to design and implement the ARRA Training Program. This program involves extensive training needs assessment, including risk analysis, identification of qualified SMEs, training session configuration, review, approval and evaluation, and documentation of all training events.

The Clinical Training Group facilitated the fourth annual CMRP Administrative Professionals’ Retreat.

Seventeen members of the CMRP administrative team participated in a year-long class to prepare for the IAAP certification examinations to be given in fall 2010.

PMO established a project tracker for tracking unanticipated projects within RCHSPP. This tracker provides input for the program planning and budgeting teams.

CMRP IT developed an application based on the Microsoft® SharePoint Services platform to provide custom data views of strategic operational objectives in the management of program-specific subcontract elements, with the flexibility to allow both primary and secondary stakeholders to quickly review the status of individual subcontracts, as well as track and manage the performance metrics of the larger division-level subcontracts.

CMRP’s IT group provided specification, acquisition, configuration management, technical guidance, and IT back office and infrastructure support to program initiatives awarded to SAIC-Frederick through ARRA, including the specification and technical evaluation of IT equipment requirements, management of data systems, application support, and participation in training initiatives for the design and construction of standardized framework for the rapid delivery of IT and business-related training to program staff.

CMRP’s IT team scaled up the network communications backbone for the Industry Lane location to accommodate an increase in data throughput, as well as

adding additional fault tolerance capabilities. The IT group designed and executed an upgrade plan that migrated existing layer-2 switches from copper-based node-to-node interconnects, to a ring topology with a fiber channel layer 3-core switch. As a result, capacity for LAN-based data transfer has increased from 1 Gbps to 10 Gbps and a redundant, backup route for data to traverse exists in the event of a line or hardware device failure.

The high-speed wide area network communication link between Industry Lane and NIH was completed. To support both an increased number of staff and data throughput requirements, the IT group, in close collaboration with NIAID technical staff and several external vendors, developed and executed a project plan that featured a greater than 30x increase in capacity for the site, while maintaining fault tolerance against a single point of failure by reallocating the existing line as a redundant link. Cutover to the new DS-3 circuit occurred in late 2009 and has transformed the technical environment for the program, with bandwidth intensive applications such as IP-based video-teleconferencing and web conferencing now readily available for program staff. Remapping of the dedicated T1 circuit to provide automated failover services was completed in May 2010 and featured the traversal of both an independent path and carrier, thereby providing additional layers of wide area network fault tolerance for program operations.

In support of the Laboratory of Immunoregulation (LIR) within NIAID, CMRP staff provided oversight and management of a subcontract to execute a non-clinical (animal) safety, pharmacokinetic (PK) and pharmacodynamic (PD) study to determine the immunological effects of deamidated human IL-15 in male rhesus monkeys. A Good Laboratory Practices (GLP)-compliant, non-clinical toxicology Contract Research Organization (CRO), Avanza Laboratories (formerly Bridge Laboratories), was selected to perform a sub-chronic infusion and subcutaneous dosing study of the IL-15 in rhesus monkeys. As a result of the successful completion of the PD/PK studies, the CMRP Administrative Support Group, in collaboration with LIR, has initiated the project planning of another PD/PK study using simian immunodeficiency virus (SIV)-infected monkeys.

In conjunction with NIAID’s OSPA and RCHSPP, CMRP staff developed and implemented a new operational plan for Intramural Clinical Management and Operations Branch (ICMOB) in an effort to execute strategic planning for DCR branches and offices.

- OSPA’s Technical Solutions Group (TSG) within NIAID provided support to the fourth and fifth CRIMSON Award Fee panel reviews to assess contract performance against the metrics outlined in the SOW. Data were extracted from monthly status reports and compiled into comparative spreadsheets.

OSPA’s TSG played an integral part in the 2010 annual Acquisition Management and Operations Branch (AMOB) inventory of equipment; tracking PDAs, laptops, and all equipment used for telecommuting. The group

collaborated with the inventory team to reconcile property records and research the locations of missing and/or at-home equipment to resolution.

In 2009, the District of Columbia (D.C.) and NIH launched a partnership to make D.C. a leader in the response to the HIV/AIDS epidemic. There have been multiple advances in the development of this program. The following goals have been met with CMRP's support to NIH: (1) a strategic plan with program metrics has been drafted; (2) downtown D.C. office space has been secured and was occupied in February 2010; (3) 145 new patients have been evaluated for subspecialty hepatitis care and treatment within three integrated HIV community clinics in D.C., totaling 425 patient visits; (4) two research protocols have been submitted for IRB approval; (5) operational plans for research in the community clinics are being developed; and (6) patients are being screened and referred for other NIH research protocols.

SAIC-Frederick provided support for the conduct of an observational study, known as the Acute Respiratory Infection Consortium (ARIC) protocol, to characterize persons infected with H1N1 influenza during the 2009–2010 pandemic on five continents. The primary objectives of this study are to: (1) characterize individuals with influenza or influenza-like illness in terms of demographics, co-morbid conditions, and prior influenza vaccinations; (2) describe the clinical course and treatment provided; (3) assess the outcome 28 days after diagnosis of influenza A; and (4) establish a repository of samples to determine a precise diagnosis and to characterize, on a molecular level, the virus from different sites. Enrollment began in September 2009 from 50 clinics located in North America, South America, Western Europe, Australia, Thailand, Japan, and Africa; currently, 120 patients are enrolled. An additional study, FluPro, has been approved and will begin enrolling this fall when the flu season begins.

CMRP staff, in support of the Division of Intramural Research's (DIR) International Centers for Excellence in Research (ICER) Core within NIAID, implemented a Laboratory Improvement Plan for a new site in Cambodia, assisted with College of American Pathologists accreditation of the Mali ICER Clinical Laboratory, and implemented the industry standard FreezerWorks[®] specimen inventory and retrieval system in the Uganda laboratory.

CMRP administrative staff, in support of NIAID's Clinical Consulting and Support (CCS) group assisted in the recruiting and hiring for 48 positions; participated in six conference booth exhibits; established and maintained 21 subcontracts and 39 consulting and PSAs; prepared 71 international and 151 domestic travel packages; coordinated arrangements for eight conferences, seminars, retreats, and training sessions; prepared 38 non-employee travel packages to attend conferences, seminars, and training sessions; completed 520 courier runs; and provided acquisitions support, including purchasing and property.

RCHSPP developed and implemented a Protocol Development Program/Protocol Navigation (PDP/PN) to support the NIAID Intramural principal investigators and Study Teams with developing, writing, and tracking clinical protocols through the protocol life cycle. The pilot program has reduced the timeline from concept stage through protocol development, review, approval, and initiation. To date, 12 protocols have gone through the PDP/PN process.

CMRP FY 2010 Planned Accomplishments

To meet NCI's need for standardized data, NCCCP hospitals have united in their approach to collecting race and ethnicity data, providing a solid foundation upon which to better understand population-specific health care needs, compare quality of care and health outcomes, and assess the need for translation services and cultural awareness training. NCCCP hospitals met the program goals of developing a detailed deployment plan for connecting with NCI's cancer Biomedical Informatics Grid (caBIG[®]) and working towards the implementation of an electronic health record (EHR) system; addressing patient's long-term needs for education, communication, appropriate follow-up for medical and supportive care; and ensuring that programs that are adopted are based on the latest, evidence-based scientific findings in survivorship. Given the success of the initial three years of the NCCCP, NCI approved funds to support a fourth year of the original NCCCP awards. In the fourth year, the participating hospitals will continue to collaborate with and learn from one another to further strengthen this public-private partnership and share what they learn with community hospitals outside the network.

Building upon the accomplishments of the NCCCP pilot, NCI used funds from ARRA to expand the number of participating sites by adding 14 new NCCCP organizations to the original ten that represent 16 individual cancer centers. Funds were also used to increase the breadth of activities at the original NCCCP cancer centers, to further enhance this community-based research resource provided to the cancer research community. As the result of an extensive full and open competition process, the NCCCP is now a network of 30 cancer centers in 22 states.

CMRP, with the assistance of consultants and sSMEs, developed a strategic plan for caHUB. This included the management of six thematic WGs that developed a set of recommendations, SOPs, best practices, research findings, and issues for consideration in construction of caHUB.

Through the use of ARRA funds, SAIC-Frederick extended its support to developing the management strategy for the Phase I or pilot of caHUB. The organizational structure of the pilot caHUB was developed, requirements were assessed, and staff was recruited and trained. With the assistance of consultants and experts, OBRR and SAIC-Frederick management and staff began implementation of the resource's strategic and

organizational plan to include: (1) developing a project scope, budget, timeline, and plan; (2) developing the caHUB internal organizational structure and associated business unit charters; (3) establishing a network of member agreements; (4) producing SOPs and a quality management process for the caHUB enterprise; (5) securing commitment and initiation of subcontract negotiations with BSSs (A1/A2/C1/C2), biospecimen resource and IT entities and collaborations (B1/B2/B3), and potential commercialization (C3); (6) establishing a pathology reference center; (7) creating MTAs; (8) developing ethical, legal, and social issues policies and templates; and (9) instituting biospecimen access policies.

A major initiative for RCHSPP staff included the development and full execution of an RCHSPP inspection readiness SOP. An Inspection Readiness Steering Committee and operating team were organized during FY2009. The RCHSPP regulatory affairs senior IND manager will serve as RCHSPP's compliance inspection coordinator (CIC). The CIC led a team of staff members from all RCHSPP functional groups in revising and completing the SOP for RCHSPP on-site compliance inspections. A risk assessment of RCHSPP's inspection readiness and an analysis of planned processes were performed. Meetings were coordinated to define roles and responsibilities and to name individuals who would serve in those roles during an on-site inspection. In coordination with the Training Group, the CIC assisted in defining and creating important inspection materials (e.g., SOP lists, Inspector's binder) and in developing and presenting all training sessions for the program to date.

The Regulatory Affairs Group continued to move toward the goal of transitioning from paper INDs to an eCTD format for FDA submissions. An ESG test account was approved by FDA in mid-May 2010, and transmission of a test submission was completed. Staff members are currently preparing a pilot test submission of an IND application in the eCTD format.

CMRP Recognitions/Awards/Distinctions

- CMRP employees have been recognized in the Coordinator's Report: Melissa Borucki, Tracy Dean, Jen Imes, Tracey Miller and Cynthia Osborne.
- CMRP employees who received NIAID Merit Awards include: Barbara van der Schalie, Cynthia Osborne, and Shelly Simpson.
- Two CMRP employees, John Powers and Heather Edwards, received the NIH Directors Award.
- Several CMRP employees received recognition from SAIC-Frederick regarding their off-site work during the closure of the office in February 2010: Joy Beeler, Lisa Geibeig, Liam Harmon, Gina Hodge, Denise Shelley, Shelly Simpson, and Ilmiya Yarulina.

- One of the CMRP regulatory associates, Tom Harvey, earned his Regulatory Affairs Certification (RAC) this year from the Regulatory Affairs Professional Society (RAPS).
- One of the CMRP clinical research associates, Lisa Giebeig, earned her Clinical Research Associate Certification this year from ACRP.
- Several CMRP employees were recognized with RESPECT Awards: Lisa Hoopengardner, Katie Watkins, and Liam Harmon.

SUPPORT TO AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA) INITIATIVE, NCI

CMRP provides support to numerous ARRA initiatives within NCI.

caHUB ARRA Initiatives

Currently, eight ARRA YTs are approved to support new initiatives within caHUB. The eight initiatives, as referenced in the caHUB WGs and caHUB ARRA sections, are divided into three main components: (1) tissue procurement; (2) caHUB coordination; and (3) biospecimen research and development. CMRP is providing dedicated staff and is managing numerous research subcontracts and professional/consulting agreements to address these initiatives.

Tissue Procurement

In the tissue procurement section (A1/A2), SAIC-Frederick provides logistical, management, and regulatory services to procure both normal and tumor tissue specimens, collected in a uniform manner under stringent SOPs to generate meaningful molecular analysis data, which will produce a greater return on NCI's cancer research investment.

caHUB Coordination

In the caHUB coordination section of this program (B1/B2/B3), SAIC-Frederick provides essential infrastructure for centralized quality assurance, molecular validation, storage, and distribution of high-quality biospecimens. This type of infrastructure includes a multidisciplinary quality program essential to the caHUB vision to provide high-quality tissue for the cancer research and development enterprise. SAIC-Frederick is in the process of awarding a subcontract to develop caHUB's CDR, which will be a comprehensive databank that incorporates clinical data from patients in the NCDB, specimen-handling data collected on site, patient consent and HIPAA authorization information, and molecular analysis data into one integrated system. SAIC-Frederick will also manage integration of caHUB data with NCDB. By collaborating with NCDB, caHUB will benefit from an

established clinical data collection system. Combining these data with specimen handling and molecular analysis data, all within a caBIG®-compliant environment, will create a uniquely rich data profile of each sample collected.

Biospecimen Research and Development (R&D)

In the biospecimen R&D portion of this program (C1/C2/C3), SAIC-Frederick supports high-impact R&D projects on biospecimen molecular integrity. This research will significantly accelerate the development of the scientific data urgently needed to develop standardized, evidence-based biospecimen collection, processing, and storage protocols. In addition, the proposed research program will fund a multi-site study to establish the state of practice in cancer tissue collection, processing, and storage, and accelerate the development of the scientific knowledge base urgently needed to develop SOPs for biospecimen collection, processing, and storage protocols. Lastly, SAIC-Frederick will support efforts to connect caHUB partners to accelerate progress. One such initiative will provide for the development, integration, and effective dissemination of highly advanced, innovative analytical and processing technologies applicable to biospecimen sciences and capable of supporting caHUB's R&D infrastructure as part of the caHUB mission, as detailed in the Biospecimen Research Network (BRN) section.

NCCCP ARRA Initiatives

SAIC-Frederick supported the extension of NCCCP beyond the pilot phase. In addition to the original 10 pilot subcontracts, 35 ARRA subcontracts were awarded through RFP development and solicitation. Dedicated CMRP staff is managing the comprehensive communications infrastructure of the expanded program and the 45 research subcontracts awarded to the NCCCP community hospitals and collaborating institutions.

CMRP ARRA Training Support

In addition to CMRP's project management, logistical, and subcontract support, the CMRP ARRA infrastructure support to the ARRA initiatives also includes assistance with training as detailed below. CMRP's clinical training manager, a newly hired training specialist, a training specialist/instructional designer, and an administrative support staff member support ARRA training initiatives.

In an effort to identify/develop training resources to address client-identified training needs, the Clinical Training Group designed a number of training presentations for this program, including "ARRA Inspection Awareness," "Section 508 Awareness," and "Training Database Overview."

The Clinical Training Group provided training and professional development subject matter expertise by collaborating with the ARRA Training Program Steering Committee to design and implement the ARRA Training Program. This program, which falls under the CMRP

Training Policy, involves an extensive training needs assessment, including a risk analysis, identification of qualified SMEs, training session configuration, review, approval and evaluation, and documentation of all training events. The Clinical Training Group also participated in the instructional design and review of several of the ARRA training sessions with topics that include an OBBR program overview, IT security, budget/funding, an NCCCP program overview, and signature authority and property accountability.

Additionally, the Clinical Training Group provided administrative support for activities with training implications, including the configuration of the training program and training records, tracking of components, and the development of training modules.

To help ensure compliance and continuous improvement of training processes and initiatives, the Clinical Training Group conducted extensive research on auditable elements of the ARRA Training Program in order to develop an audit awareness training module. The ARRA training records are being maintained in an audit-ready state. TrackWise® Training Manager is currently being developed for implementation to monitor compliance with training requirements.

Additional details for ARRA support are presented in the respective sections of this report.

SUPPORT TO NCI

Support to the Molecular Imaging Program (MIP), NCI

The mission of NCI's MIP is to develop and test targeted imaging methods for cancer detection and treatment. This program performs translational research in targeted cancer imaging for purposes of early tumor detection and characterization, treatment monitoring, and drug development. SAIC-Frederick was requested to provide a dedicated team of individuals to operate the NCI Research Imaging Clinic in the most efficient, effective, and compassionate way.

CMRP staffs a Positron Emission Tomography (PET) physicist for MIP. This person has been instrumental in working with the National Institute of Standards and Technology (NIST) to determine the accuracy of the PET/Computed Tomography (CT) scanner; performing radiation dosimetry for clinical trials; credentialing the PET/CT scanner for clinical trials experiments; performing quantitative analysis; and solving technical image quality problems. In the absence of the nuclear medicine dosimetry calculations physician, the PET physicist is responsible for solving technical problems with imaging and quantitative analysis.

The senior nurse practitioner (SNP) for MIP provides medical coverage and expertise in direct patient care to patients participating in clinical trials. The SNP performs medical histories and physical examinations, prescribes medications, and orders and interprets diagnostic tests. The SNP also provides medical coverage to the Medical

Oncology Branch (MOB), Developmental Therapeutics Branch, and provides oversight to the MIP's clinical support staff.

Two MIP PET/CT technologists perform highly skilled PET/CT scans for patients involved in clinical trials. The technologists have been instrumental in writing policy relevant to PET/CT and maintaining quality assurance for radiation safety. Staff members have met all rigorous requirements for credentialing necessary to function as authorized users of radiopharmaceuticals. This accomplishment provides support directly to the principal investigator, as well as to the entire department.

The Magnetic Resonance Imaging/Computed Tomography/Radiology technologist (MRI/CT/RT) is credentialed at the master's level in three modalities and is now a candidate for PET certification training, which is an outstanding accomplishment. The person in this position is responsible for SOP development and implementation regarding MRI contrast and delivery.

The patient care coordinator is responsible for coordinating the schedule of patients visiting the molecular imaging clinic for participation in clinical trials. Other responsibilities include acting as an interpreter for Spanish-speaking patients and interfacing with other branches, such as urology, to coordinate referrals into the department. The coordinator provides administrative support to the principal investigator, as well as to the patient clinical trials clinic.

Within the first year of operation, the molecular imaging clinic was fully staffed with a full-time PET/CT physicist, a senior nurse practitioner, two PET/CT technologists, one MRI technologist, and one patient care coordinator. SAIC-Frederick staff has been instrumental in the operational, technical, and administrative functions required to open a new clinic that is safe and in compliance with all regulations pertaining to clinical research. Several collaborative partnerships have been formed with the radiology, urology, and medical oncology departments to increase referrals and continuity of care.

The following six new clinical trials opened since SAIC-Frederick staff joined, all of which the nurse practitioner is participating in as an AI:

- 08-C-0226 – C-11 acetate study for men with prostate cancer; 39 out of 40 total subjects accrued
- 08-C-0200 FLT – lymphoma; 4 out of 30 subjects accrued to date
- 09-C-0080 – F-18 angiogenesis; 3 out of 18 subjects accrued to date
- 07-C-0101 – Indium Trastuzumab; 6 out of 20 subjects accrued to date
- Protocol # pending – F-FACBC- Phase II prostate imaging trial
- 05-C-0252 – CALGB-50303 FDG PET imaging companion study

Protocols pending IRB approval include:

- ^{18}F sodium fluoride for metastatic prostate imaging and multiple melanoma
- ^{18}F Fluciclatide (RGD)
- IdUrd Phase 0 PET/CT imaging trial
- ^{18}F - FdCyd Phase 0 PET/CT imaging trial
- 8FFPAC Phase I prostate imaging
- ^{18}F FDG CALGB (sarcoma, thymoma)

The molecular imaging technologists receive training in clinical applications of the PET/CT and MRI scanners. The technologists are all cross-training to increase proficiency in all three modalities: PET, CT, and MRI. In addition, the technologists have been compliant in maintaining the professional standard of training on the Phillips camera.

Support to the Metabolism Branch, NCI

The Metabolism Branch's primary focus is to combine basic research with preclinical investigation and drug development to provide innovative therapeutic clinical trials in the area of immune response and immunoregulation disorders that underlie immunodeficiency and neoplastic diseases. SAIC-Frederick provides a clinical research nurse (CRN) II and a CRA II to support these efforts.

In support of the Metabolism Branch, CMRP staff performed many integral functions, including developing several collaborative relationships with investigative sites and client personnel; performing and coordinating assigned aspects of the clinical monitoring process in accordance with GCPs and global SOPs to assess the safety and efficacy of investigational products; conducting internal audits to determine protocol compliance; preparing required documentation; and providing assistance with close-out visits.

CMRP staff assisted the Metabolism Branch by performing quality assurance/quality improvement review of various studies and providing data to PIs to analyze for presentations, posters, and publications.

In collaboration with Biovest International, CMRP staff has been involved with the design, planning, and implementation of the Phase III vaccine trial for non-Hodgkin's lymphoma. CMRP staff assisted with developing protocol and case report forms (CRFs), tracking and maintaining study-related files, and assisting with conducting internal site visits to ensure compliance with clinical protocol and overall trial objectives. This staff maintained tracking of patients enrolled, patient follow-ups, and overall patient outcomes. Additionally, the CMRP staff assisted in the preparation and production of documents for FDA submission for approval of this study.

Support to the Protocol Service Center (PSC), NCI

CCR is re-engineering its processes regarding the development, review, and opening of clinical trials in order to decrease the time from scientific review to opening clinical trials for patient accrual, while maintaining or increasing quality and safety. CCR envisions serving as a national model for cancer protocol development and review and anticipates that significant changes will be required to achieve this goal, involving process mapping, organizational and work culture change, identification and use of metrics and measurements, strategic planning, and priority setting, monitoring, and evaluation. CCR identified a need for increased administrative and regulatory support to existing staff engaged in the protocol development review and implementation process. Thus, CCR established a PSC. The new PSC will oversee services in three major areas: (1) writing and editing, (2) regulatory and compliance, and (3) protocol navigation and administration. The office supports the clinical research infrastructure in processing all actions to and from the IRB and provides administrative support to the IRB chair for conducting daily activities.

CMRP is responsible for assisting in coordinating the preparation of new proposals/protocols and progress reports for IRB meetings. CMRP assists PSC staff in reviewing and making recommendations/changes to protocol amendments and other documents related to research studies. Protocol Review Office (PRO) staff is responsible for setting the agenda for IRB meetings, sending roster information to OHSR, ensuring regulations and guidelines are followed, ensuring all applications are complete and accurate, and forwarding any concerns to the chair or clinical director. This team also assists with training new staff and has been involved in the creation of the electronic document management system. Additionally, CMRP staff ensures meeting packets are prepared and distributed and helps to prepare proposals/protocols and progress reports for the SMC. CMRP staff is required to attend the IRB meetings and assist in contacting principal investigators for the review board, as needed.

In support of the PSC, SAIC-Frederick hired a protocol coordinator (PC) to liaise with CCR/NCI staff to initiate and complete tasks related to protocol support, a regulatory associate (RA) II to prepare and review submissions to FDA and ensure that all documents are in compliance with FDA regulations, and a medical writer III to attend IRB and Branch meetings and take minutes, as well as review and edit protocol amendments and continuing reviews. CMRP is in the process of recruiting for a second PC to support this effort. As staff is hired, CMRP will continue to reassess support needs, modify existing positions, and/or hire additional staff when necessary.

Support to Clinical Core (Transplantation), NCI

The Experimental Transplant and Immunology Branch (ETIB) is dedicated to coordinating efforts in basic, preclinical, and clinical investigations in the area of transplantation science. The goal of this program is to generate information from basic and preclinical investigations leading to the development of novel, curative therapies for cancer. Information from new treatment protocols (including novel endpoints generated in the course of basic/preclinical research) is used to generate new questions and studies in basic and preclinical research efforts. SAIC-Frederick provides a nurse practitioner I, a clinical coordinator, and a CRN III to support these efforts. CMRP is in the process of recruiting and hiring a physician assistant (PA) to support the transplantation clinical efforts.

Currently, CMRP staff is acting as the AI on eight protocols, six of which are actively recruiting and transplanting patients. SAIC-Frederick Clinical Core support staff has been involved in the development of the first double-cord blood transplant protocol at NIH, which is open and recruiting patients; searches for three patients have been completed and suitable cord pairs have been identified. The Clinical Core group also identified and transplanted suitable cord units for two aplastic anemia patients at NHLBI for the Haplo/Cord Protocol.

Notably, the Clinical Core group has played an integral part in negotiating the Data Transmission Agreements between the Center for International Blood and Marrow Transplant Research (CIBMTR) and NCI, NHLBI, and NIAID. This group also drafted the CIBMTR Data Repository Submission protocol for ETIB and POB.

CMRP facilitated, coordinated, and managed all unrelated donor (URD) product/research activity at NIH. Staff continues to perform searches and advise on donor selection for all URD products and patients. In support of this initiative, standards and processes were developed for an increasingly busy URD transplant program. CMRP staff provides outstanding leadership by participating and leading weekly Human Leukocyte Antigen (HLA) meetings for NCI URD patients; these efforts result in improved communication among all parties involved in the transplant and aid in problem-solving.

Until this year, NCI's URD protocol (07-C-0195) only allowed 10/10 allele matching between donor and patient. There is literature to suggest that mismatching at the DQB1 locus does not affect overall survival. CMRP staff pointed this out to the principal investigator, and the investigators were open to this discussion. The Clinical Core group initiated a journal club in ETIB. The objective of this journal club was to examine HLA mismatching in URD transplants. A literature review was conducted and several articles were selected for discussion. The result was an amendment to the 07-C-0195 protocol, which allows a 7/8 allele matched donor to be used; the first HLA-mismatched URD transplants at NIH. Subsequently, the accrual rate increased dramatically, and two patients were transplanted

in August 2009 who would have otherwise been ineligible to receive a URD transplant here or anywhere else, due to insurance and other limitations.

Support to the Developmental Therapeutics Clinic (DTC)/Phase 0, NCI

DTC's overarching mission is to evaluate innovative anticancer compounds in early-phase clinical trials, while providing outstanding clinical care for patients with different types of cancer. An important focus of the clinic is first-in-man clinical trials, particularly those that incorporate PD and PK endpoints, with the goal of informing subsequent clinical development. SAIC-Frederick provides a nurse practitioner II and a CRN II to support these efforts.

The nurse practitioner contributed to the successful development and undertaking of new trial designs like the single-agent Phase II trial with ADZ2171 (Cediranib), which is one of the most promising regimens in a rare form of sarcoma (Alveolar soft-part sarcoma), and a multi-histology Phase II trial with R788. CMRP staff continues to perform protocol-required skin punch biopsies to facilitate the research process for the Phase I LMP776 protocol. CMRP staff also continues to collaborate with other cancer centers (i.e., the City of Hope) in multiple trials including Phase I 5FdCyd +THU trial and Phase I ABT-888+Cytosin. SAIC-Frederick staff participates extensively in the Phase I oral Topotecan trial in tumors that are positive for hypoxia-inducing factor-1 alpha (HIF-1 alpha), under the direction of the DTP-Tumor Hypoxia Laboratory.

A CRN from SAIC-Frederick has been hired to support the DTC's early drug development team under MOB. The research nurse is actively involved in coordinating research protocols and capturing research data to assist the team in fulfilling its mission.

SAIC-Frederick's CRN supports the MOB's thoracic team under the MOB's branch chief. The team is involved in a lot of research with targeted agents singly and in combination with conventional chemotherapeutic agents like SNX-5422 RML, which is an HSP-90 inhibitor that inhibits the division and replication of cancer cells. A combination therapy of ADZ 2271 (a targeted agent) with Gemzar+Cisplatin is being used for refractory solid tumors in a Phase I trial. The research nurse won an award and received recognition for initiatives during the past year.

Support to the Surgery Branch, NCI

The main objective of the Surgery Branch is to conduct laboratory and clinical research focused on improving the care, management, and outcomes of patients by developing innovative surgical and adjunctive approaches.

The CMRP team supporting NCI's Surgery Branch consists of eight team members, including a CPM I, two CRNs II, two CRAs (level II and level III), a clinical coordinator, a PC I, and a documentation specialist I.

Over the past few years, the Surgery Branch has seen a significant increase in workload and the SAIC-Frederick support staff has been instrumental in maintaining and improving the Surgery Branch's reputation for high-quality work. In particular, this branch has been the coordinating center for a high-profile Phase III trial, which has successfully completed accrual. CMRP CRAs and the clinical coordinator quickly adapted to working with a demanding sponsor and trained 10 clinical sites on data reporting and management, receiving accolades as a result. As part of the data review for the sponsor, the CRA III was chosen to attend an important data review meeting in Boston in the spring. Additional trials have added to the workload and responsibilities, but the dedication and hard work of the staff has made this increase in workload seem effortless.

Other areas of the Surgery Branch have also seen an increase in workload and SAIC-Frederick support staff has continued to provide the highest quality of work and, as a result, has received excellent feedback from our clients. Together, the two CRNs currently coordinate seven trials for the Thoracic Oncology Section and Endocrine Oncology Section of the Surgery Branch. There is one additional trial awaiting approval.

In the Protocol Support Office (PSO), the increase in active protocols and in the complexity of these protocols has also created an increase in workload. The PC and the documentation specialist played a key role in processing 40–60 protocols for submission and maintaining databases to track all submissions to various regulatory agencies, such as IRB, FDA, OBA, and IBC. The PC also trained staff in the utilization of Integrated Medical Research Information Systems (iMedRIS). Beginning in November 2009, the PC also assumed the role of supervisor of the documentation specialist.

The CPM continues to be instrumental in assisting the PI with the tools needed to prepare staff for the new task of manufacturing a new cell therapy product, and reviewing all laboratory SOPs to ensure the team will follow current Good Manufacturing Practice (cGMP) guidelines during this process. Currently, the CPM is responsible for providing regulatory and scientific support to the PSO and directly supervises six CMRP team members (the PC, CRAs, CRNs, and the clinical coordinator). The CPM has also been assigned two more PIs to work with directly, one of whom has received assistance from the CPM with their first successful submission of a clinical protocol.

Over the past year, the CMRP team members from the PSO have had a major role in providing support and guidance to the newly formed CCR PSO. CMRP team members have been working closely with the CCR's PSO leadership, providing new SOPs, reviewing existing SOPs, providing suggestions on logistical issues, etc. In addition, in the past year the Surgery Branch PSO was tasked with beta testing and spearheading implementation of the CCR's new Scientific Review tool in iRIS. SAIC-Frederick team members provided feedback to help improve the design and usefulness of the tool and were among the first to successfully utilize the system.

Additionally, during the reporting period, the CMRP CRAs and the clinical coordinator have continued to play a key role in the conduction of a series of high-profile studies (including a Phase III trial) in which NCI has been the primary center and for which a New Drug Application (NDA) is currently being filed by the sponsor.

Support to the Urologic Oncology Branch (UOB), NCI

UOB conducts clinical and basic research designed to develop better methods for detection, prevention, and therapy of patients with genitourinary malignancies. The primary focus of UOB is the study of the genes associated with initiation and progression of kidney and prostate cancers. SAIC-Frederick provides a CRN II to support these efforts.

In support of UOB, CMRP staff performs many integral functions. The staff has developed many collaborative relationships with investigative sites and client personnel. They have also coordinated and collaborated with multi-clinical teams, including Internal Medicine, Pre-Anesthesia, and outside primary care providers, to successfully manage 104 pre-operative cases (52 patients for robotic radical prostatectomy and cystectomy and 92 patients for prostate fusion biopsy). Additionally, CMRP staff manages 350 active patients, routine follow-up patients, and patients on active surveillance protocols within agreed-upon time frames. Furthermore, CMRP staff has conducted internal audits to determine protocol compliance and has prepared required documentation and assisted with close-out visits.

In support of UOB, CMRP staff have efficiently recruited and enrolled an additional 104 new patients into tissue procurement protocol 97-C-0147 and screening protocol 01-C-0129 in 2009 to meet patient needs for early cancer detection and early treatment of prostate/bladder cancer.

SAIC-Frederick staff continues to coordinate and collaborate with the Molecular Imaging Branch (MIB) study on C-Acetate PET and 3 Tesla MRI in Men with Prostate Cancer Undergoing Prostatectomy (08-C-0226) and the study on the Electromagnetic Tracking of Devices during Interventional Procedures (05-CC-0091). Externally, CMRP staff supports the collaborative efforts of UOB with the Charles County Department of Health Cancer Outreach Program and Walter Reed Army Medical Center for the MRI research project.

Support to the HIV/AIDS Malignancy Branch (HAMB), NCI

HAMB studies the pathogenesis in AIDS-related malignancies, HIV disease, and viral-induced tumors to develop innovative therapies. Many of the research efforts in this translational research program are focused on the viruses that cause HIV-related malignancies or HIV. SAIC-Frederick provides a patient care coordinator to support these efforts.

Notably, the HAMB team has made substantial contributions to the development of AIDS therapies, such as zidovudine (AZT), didanosine (ddI), zalcitabine (ddC), and paclitaxel for the therapy of Kaposi's sarcoma.

There are currently seven active protocols for which the HAMB team is recruiting. SAIC-Frederick staff assisted with patient recruitment and administrative support for the branch.

Additionally, CMRP contributed to the coordination of various patient needs prior to and upon arrival at the center.

Psychometrician Support to the Pediatric Oncology Branch (POB), NCI

During the reporting period, CCR's POB established a Behavioral Sciences Core Program that consists of two separate but interrelated components: (1) the neuropsychology program and (2) the psychosocial program. While the two programs have been in existence for many years, the Behavioral Sciences Core was created to facilitate the development of studies investigating neuropsychological and psychosocial effects of chronic illness, provide specialized research support to clinical trials using neuropsychological and quality of life (QOL) outcome measures, and offer clinical services to the patients and families enrolled in studies throughout NCI.

The main objectives of the neuropsychology program are to conduct research to: (1) investigate the effects of disease and treatment on the neurobehavioral functioning of children and adults with chronic medical illness through comprehensive, state-of-the-art longitudinal assessments; and (2) examine the pathogenesis of central nervous system (CNS) dysfunction by exploring the relations of neuropsychological measures with disease parameters, neurological abnormalities, biomedical and genetic variables, and environmental and psychological factors. In addition, the neuropsychology group offers clinical services to patients, such as providing the results of assessments to families, making recommendations and coordinating psychoeducational services at home, and implementing clinical interventions based on patient needs. The neuropsychology group also conducts a training program, providing valuable clinical and research experience in a medical setting to psychology students.

SAIC-Frederick was requested to provide psychometricians to work primarily with the neuropsychology program in conducting longitudinal neurobehavioral assessments of children, adolescents, and adults with medical conditions on collaborative research protocols or in response to clinical referrals. CMRP developed a job description, compensation plan, and recruitment specifications for this new type of position. Two psychometricians were recruited and hired to support this effort. Additionally, CMRP recruited and hired a part-time, licensed clinical psychologist to provide supervision and oversight of the hired psychometricians.

Currently, psychometricians under the supervision of the licensed clinical psychologist conduct comprehensive neuropsychological research evaluations of patients and

prepare comprehensive clinical reports in order to help families, schools, and/or mental health agencies locally manage the child's educational services and psychological care. The supervised psychometricians also provide clinical interventions to children enrolled in protocols who have developmental delays, problems with medication adherence, severe emotional disturbance, or other behavioral issues, in an effort to improve the child's well-being and help the patient to remain in the study and comply with treatments. The psychometricians are integrally involved in the training of incoming employees and students, where appropriate, and also complete data entry, administrative, and other research-related tasks. Recently, one psychometrician had the opportunity to participate in the collaborative development and presentation of a poster at the 2010 Children's Tumor Foundation Conference in Baltimore, MD.

SUPPORT TO THE OFFICE OF THE NCI DIRECTOR

Support to the Office of Biorepositories and Biospecimen Research (OBBR)

Joy Beveridge, M.S., Clinical Project Manager III

Beth Baseler, M.S., Director

Since April 2008, SAIC-Frederick has supported multiple initiatives of OBBR. During the past year, SAIC-Frederick continued to add project managers and technical experts to the dedicated project team to address the comprehensive needs of OBBR. Dedicated project and procurement management and logistical support was provided to OBBR, which is responsible for developing a common biorepository infrastructure that promotes resource sharing and team science to facilitate multi-institutional, high-throughput genomic and proteomic studies.

During the past year, dedicated support was provided to OBBR to address the following major initiatives: BRN, strategic planning for caHUB, the caHUB pilot, TCGA, and the GTEx NIH Roadmap project. The staff dedicated to each of these initiatives assists NCI with the coordination of activities and the comprehensive communication plan with all stakeholders in the mission of OBBR.

In recent years, advances in biomolecular technology have significantly increased the power and precision of analytical tools used in cancer research. A critical resource for basic and translational research in cancer is human biospecimens because they are a direct source of molecular data from which targets for therapy, detection, and prevention are identified. The reliability of molecular data derived from these new analysis platforms depends

on the quality and consistency of the biospecimens being analyzed; therefore, the standardization of biospecimen resources, using state-of-the-science approaches, has become a critical need across the research enterprise. The lack of standardized, high-quality biospecimens is widely recognized as a significant roadblock to cancer research.

In this context, NCI began a comprehensive due diligence process in 2002, comprising NCI surveys, community forums, and publications (i.e., the National Biospecimen Network Blueprint and Case Studies of Existing Human Tissue Repositories) to understand the state of its funded biospecimen resources and the quality of biospecimens used in cancer research. In 2005, OBBR was established to lead and coordinate a strategic plan to confront and resolve the issues identified in a stepwise fashion. In 2006, NCI successfully published "First-Generation Guidelines for NCI-Supported Biorepositories," a first-iteration document that was subsequently revised based on public comment and input from content experts, and renamed "NCI Best Practices for Biospecimen Resources" (NCI Best Practices). The second version of this document is due for publication in fall 2010.

In addition to developing principles of best practice for biospecimen resources, NCI took a stepwise, multifaceted approach to address the needs of biospecimen resources across the cancer research community as described below. SAIC-Frederick assigned dedicated staff to address specific work in support of the following initiatives: (1) BRN; (2) strategic planning for caHUB; (3) ARRA caHUB; (4) TCGA; and (5) GTEx.

Support to the Biospecimen Research Network (BRN), NCI

Beth Baseler, M.S., Director

Christen Osburn, M.B.A., Clinical Project Manager I

In 2006, NCI launched BRN to systematically address the impact of specific variables in individual specimen types on molecular data from given analysis platforms. The goal of BRN is to address these issues by sponsoring, conducting, and collaborating on studies to assess the effects of human specimen pre-analytical variables on the outcome of genomic and proteomic studies conducted for clinical diagnosis and cancer research purposes. By communicating the results of such research to the scientific community, BRN aims to significantly improve the quality of NCI-funded, biospecimen-based research. The results of BRN research will support NCI discovery efforts and contribute to developing evidence-based best practices for collecting, processing, storing, and analyzing biospecimens, building on NCI Best Practices.

Information gathered by NCI in the past five years has brought attention to a significant amount of heterogeneity in the methods used to collect, process, store, and disseminate biospecimens. This heterogeneity affects a number of pre-analytical variables that impact R&D

efforts in cancer research. For example, reports in the literature indicate that specific procedural variables (e.g., the length of time between surgical excision and biospecimen freezing, conditions of tissue fixation, blood collection and separation procedures, and sample storage conditions) produce variation in gene expression patterns and detection of protein biomarkers. However, the precise relationships between biospecimen handling and the quality and reproducibility of data for cancer research remain undefined. The lack of information regarding specimen handling variables on molecular testing of human tissues is also problematic in the clinical arena.

The significant variances in biospecimen resource practices and protocols for biospecimen handling may affect the outcomes of molecular research initiatives across the cancer research enterprise. Extramural research programs that rely on networks for shared biospecimens, such as the Specialized Programs of Research Excellence (SPORes) and the Early Detection Research Network (EDRN) are significantly affected by the heterogeneity of human specimens. Private-sector efforts to develop cancer diagnostics and therapeutics are also hindered by the difficulties in obtaining high-quality human specimens and developing appropriate, evidence-based biospecimen quality assurance/quality control (QA/QC) methods and systems. Large-scale genomic and proteomic studies require sufficient numbers of quality-controlled biospecimens to enable reproducible, statistically significant comparisons of control and research subject samples.

SAIC-Frederick led the efforts of the dedicated project team to design the research projects and to manage the projects using a trans-disciplinary and highly collaborative model, taking into account the many scientific disciplines and operational factors that influence the collection, annotation, processing, and storage of human specimens. The research is being performed at multiple sites and supported through various subcontract mechanisms. SAIC-Frederick is managing the procurement process to accommodate the full and open competitive procurement process and sole-source procurement, as appropriate, and also the resulting research subcontracts related to increasingly complex research initiatives associated with biospecimen research.

Support to BRN involves a comprehensive program of research to: (1) systematically define the impact of key pre-analytical variables of specific types of human biospecimens on downstream molecular data generated from specific molecular analysis platforms, and (2) to develop innovative approaches to control, monitor, and assess biospecimen quality. These efforts are providing a mechanism for directed R&D in biospecimen science that broadly supports the mission of NCI. Data resulting from the proposed research program will soon provide the basis for evidence-based biospecimen protocols that will increase the quality of human specimens for research and emerging personalized medicine.

SAIC-Frederick is coordinating the following three mechanisms to achieve this goal:

1. A sole-source subcontract was awarded to Indivumed in March 2009 to conduct gene expression and protein analysis research on intra-operative ischemia. The studies on intra-operative ischemia require a unique combination of customized surgical procedures and extreme care and attention to biospecimen annotation and handling. Indivumed, a German company with offices in the U.S., has a well-developed infrastructure for biospecimen collection that combines highly collaborative relationships with hospitals and surgeons with sophisticated specimen SOPs and bioinformatics systems for recording extensive clinical and surgical information. The proposed study cannot be approached without this high degree of surgical control and tissue SOPs and access to the full range of de-identified patient clinical and surgical data.
2. A competitive RFP was solicited in September 2008 for R&D in biospecimen quality evaluation and control to allow solicitation of innovative approaches to biospecimen quality issues. The multitude of biospecimen quality issues that challenge the cancer R&D community represent a general need to obtain ideas to help define and solve the most important biospecimen challenges by inviting proposals spanning a broad range of biospecimen issues. By September 2009, four subcontracts were awarded to MD Anderson Cancer Center, PPD, Inc., Yale University, and University of California, San Francisco. The subcontractors awarded under the RFP entitled "Research and Development on Human Biospecimen Integrity," will have completed their first year of the project by September 2010. Several institutions spent the first year of the project completing preparations surrounding the clinical sample collection, including writing protocols, obtaining IRB approval, and refining SOPs. (Please note: Over the past year, PPD Biomarker Discovery Sciences, LLC was purchased by Caprion Proteomics U.S., LLC.)
3. A competitive RFP was solicited in May 2009 for research studies on multiple, defined pre-analytical variables in normal and cancer tissues and their effects on quality-controlled downstream molecular analysis. This research will allow NCI to obtain very high-quality and well-annotated cancer and normal specimens for research on the effects of pre-analytical variables on downstream molecular analysis. The experimental plan to identify the most important variables for molecular analysis requires the ability to specify in great detail how the specimens are annotated, collected, processed, and stored. The research to be conducted will enable the appropriate tissue collection and processing for these studies. Three proposals were deemed to be within the competitive range. Pre-award site visits were conducted in early 2010. As a result of the site visits, two

institutions remain within the competitive range. Present efforts include determining the IT platform for these sites, in addition to solidifying the tissue collection and clinical data elements. An SSC is currently being established and will be comprised of scientific experts from various disciplines. The SSC will provide expert input on the project, taking into account operational factors that influence the collection, annotation, processing and storage of human specimens, and scientific studies to assess the effects of those factors on biospecimen molecular integrity.

Planning for the cancer Human Biobank (caHUB) – Working Groups

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In response to the need for high-quality human biospecimens and data, NCI's OBBR is actively developing caHUB. In October 2008, NCI requested technical and operational support services to establish and manage six thematic WGs whose job would be to develop a strategic plan for caHUB. SAIC-Frederick initiated the planning phase for this project in July 2009 with the establishment of the AWG, which comprises a wide range of experts and opinion leaders. As recommended by the AWG, SAIC-Frederick subsequently created a series of strategic and operations subgroups and charged each one with the production of a deliverable(s) relevant to the establishment of caHUB.

Approximately nine months later, the subgroups responded to their responsibilities via a myriad of teleconferences and a dozen workshops, all of which culminated in the production of a set of recommendations, SOPs, best practices, research findings, and issues for consideration. Presented below is an overview of the products, or suite of products, developed by each subgroup. These products were supported by SAIC-Frederick SMEs, project management staff, and by a report on economic considerations for caHUB prepared by a consulting team at Booz Allen Hamilton (BAH), a SAIC-Frederick subcontractor.

Strategic Planning and Organizational Structure Subgroup

This subgroup was responsible for defining caHUB's mission, objectives, and scope of operations, as well as its organizational structure. The subgroup responded by generating an eight-component strategic plan document. The first and key component of the strategic plan is a vision statement which the subgroup recommends the OBBR endorse and adopt. The corresponding mission statements and "Implementation Milestones and Success Factors" document establish an operational framework for caHUB and provide a high-level work plan by which caHUB's development and achievements toward realizing

this vision can be measured and tracked. Some activities, with regard to defining the scope of caHUB in Phase I and II, remain outstanding. This includes developing a client profile and conducting a gap analysis for client needs. "Implementation Milestones and Success Factors" identifies many of the activities that are in progress and provides a suggested timeline for completion. In terms of caHUB's organization and function, the strategic plan provides recommended organizational structures for Phase I and Phase II, as well as a section that outlines a diverse portfolio of market-driven service competencies that caHUB may consider providing to strengthen its financial foundation. Finally, the strategic plan provides charters for two expert groups recommended for establishment in Phase I caHUB; the Tactical Discussion Group and the External Strategic Scientific Group. The plan also provides charters for a number of professional resource groups comprising existing subgroups that will continue in perpetuity throughout the life of caHUB, and for new groups yet to be established. It is expected that these groups will serve as a resource to OBBR in refining and implementing the strategic plan.

The following sections outline the activities of each subgroup:

Biospecimens Subgroup. This subgroup was charged with defining caHUB business and operating plans related to the prioritization, collection, processing, and the storage of biospecimens. In response, the subgroup produced ten deliverables that include a tissue prioritization matrix, tissue collection SOPs, tissue morphologic and molecular qualification SOPs, fixation SOPs, blood collection and processing SOPs, and a preliminary draft of quality monitors to serve as the basis for the caHUB Total Quality Management plan. One of the major products developed by this subgroup is the tissue prioritization quantitative matrix, which is based on the NCI Surveillance Epidemiology and End Results program's malignant neoplasm categories. Each cancer is scored using a value-ranking system, as described in the tool, to provide an overall score for each specimen type that creates a priority of biospecimen collection for research. The other major product is a set of 42 SOPs, based on input from nationally recognized pathologists and surgeons, offering guidance for procuring cancerous and normal (non-diseased) tissues. A fresh-frozen and paraffin-embedded tissue qualification criteria set was also produced. Collectively, the documents described above will serve as the basis for caHUB's collection strategy and tissue banking operations.

Acquisition of Normal Tissues Subgroup. This subgroup was tasked with defining "rapid autopsy" parameters and the range of normal (non-diseased) sample and data requirements to meet the needs of the GTE project and other identified market needs. The subgroup's primary deliverable, currently in draft form, is a manuscript titled "Best Practices for Postmortem Recovery of Normal Human Tissue for Research." This manuscript aims to define the ideal best technical, operational, and ethical practices for biospecimen

resources and tissue banks, recovery organizations, and scientists working with postmortem tissues. These best practices supplement “NCI Best Practices for Biospecimen Resources” and offer guidance on donor identification and screening; tissue recovery; coordination of biospecimen collection; the preparation, storage, and processing of biospecimens and associated clinical data; and quality concerns related to interpreting advanced analytical research methodologies. In addition, this document includes a draft set of case studies of normal postmortem research tissue collection projects that highlights methods of implementation, real-world outcomes, and useful lessons learned. In addition to serving as a resource for current practitioners, this document is intended to support the harmonization of postmortem research tissue collection efforts to align with preferred biobanking practices. The document is currently being shared with collaborators and, pending the receipt of feedback from the entire subgroup and OBBR, will be submitted for publication to a high-impact journal. A draft program checklist and evaluation criteria for postmortem tissue recovery programs have not been completed.

Ethical, Legal, and Social Issues (ELSI) Subgroup.

The ELSI subgroup was assigned the task of defining the ethical, legal, and social issues that surround the creation of caHUB. The first major product of this subgroup is a document titled “Preliminary Ethical, Legal, and Social Considerations for the caHUB.” It was prepared based on the deliberations of the ELSI subgroup and contains their preliminary recommendations in the areas of governance, privacy, access to data and biospecimens, data sharing, custodianship and intellectual property, return of research results, informed consent, and conflicts of interest. Special issues related to research participation by children and the collection of biospecimens through rapid autopsy are also addressed. Where issues remain unresolved or require further consideration, the subgroup has provided recommendations on how caHUB should proceed in the near term.

The second product of the ELSI subgroup is an informed consent document (ICD) template for collection of diseased tissues at the BSSs for caHUB. The ICD template was developed by the subgroup after careful review of relevant consent forms created by other NCI programs and academic research institutions. The ELSI subgroup did not develop an ICD template for the collection of normal tissues because of time constraints; however, as noted above, “Preliminary Ethical, Legal and Social Considerations” contains recommendations and issues for further consideration relevant to the collection of biospecimens through normal autopsy. This document may serve as the foundation for development of a normal tissue collection ICD template.

Facilities Subgroup. This subgroup was tasked with defining the caHUB business and operating plans, more specifically with bridging the requirements and needs of caHUB processes with repository facility attributes. In response, the subgroup began by developing a set of biospecimen shipping and storage flow charts. These

documents identify appropriate shipping containers for specific temperature requirements and also identify the proposed storage temperature for the quantity and type of material that caHUB needs to store and manage. The storage temperature and type of material being procured by caHUB will impact facility design. Flow charts document tier-2 processes that are contingent upon tier-1 processes in OBBR’s “caHUB Case Flow and Sample Quantities Diagram”; thus, modifications to either set of processes should be reflected in the other. In addition, the Facilities Subgroup provided a facilities plan that covers the topics of total collection targets, storage requirements, staffing numbers, and space needs. The plan is accompanied by a comprehensive set of facilities planning recommendations based on the expertise within the subgroup, and that of a group of external biorepository facility experts who were convened to review and provide input on the facilities plan. OBBR was encouraged to consult these recommendations in the build-out of the Phase II caHUB facility.

Informatics Subgroup. This subgroup was delegated four tasks: (1) to establish an architectural framework that comprehensively illustrates interoperable components of caHUB; (2) to establish high-level use cases that illustrate the informatics vision for caHUB; (3) to address and compile subject matter vocabularies; and (4) to provide operational informatics input to the other caHUB subgroups. The subgroup’s response to the first task was the development of the caHUB Notional Informatics Architecture (NIA) diagram based on the information systems requirements described in the National Biospecimen Network Blueprint, a concept that forms the basis of the caHUB vision. The NIA diagram provides a high-level view of caHUB’s Pathology Resource Center (PRC) and the organizations and systems that will connect to it. A list of data categories (for groupings of data that are necessary to manage caHUB), informatics components required to support caHUB and the categories of data stored, and a description of data flows within the caHUB enterprise accompany the diagram. Ultimately, these products will inform development of use cases for caHUB’s Comprehensive Data Resource (CDR), interoperability specifications, and an actual informatics architecture. Development of high-level interoperability use cases and defined lists of vocabularies, including semantic infrastructure to handle establishment and change control, is ongoing.

Partnerships Subgroup. The Partnerships Subgroup was required to define partnering objectives and potential targets for caHUB. The deliberations of the subgroup focused on whether caHUB should transition from a government entity to a public-private partnership (PPP) at the end of Phase I (Pilot) and, if so, how this transition might be accomplished. The Subgroup’s conclusions are reflected in its deliverable, a document titled, “Recommendations of the caHUB Partnerships Subgroup: Making Phase II Possible.” Its contents include key principles, on which a caHUB PPP should be based, and pros and cons of maintaining caHUB as a government entity versus a PPP along several domains: control,

intellectual property, the role of partners, public trust and benefit, and human subjects and ownership issues. The document also outlines key factors for the success of biobanking partnerships based on case studies of a diverse group of national and international biobanking models. It concludes with the recommendation that caHUB form a PPP under the auspices of the Foundation for the NIH (FNIH), and further recommends five activities that should occur during Phase I of caHUB to ensure a smooth transition to a PPP model in Phase II. The subgroup did not address its second task of identifying and/or profiling potential caHUB partners; it is expected that this work will occur under the auspices of the PPP formed with FNIH during Phase I of the caHUB.

Economic Considerations (Booz Allen Hamilton (BAH), an SAIC-Frederick subcontractor). The BAH team created a document, “Economic Considerations for the Formation of a National Cancer Human Biobank (caHUB),” that provides a comprehensive economic analysis and business case for the formation of the caHUB initiative. It features development of a caHUB biobanking value chain methodology; a total lifecycle cost of ownership (TLCO) approach for establishing, maintaining, and sustaining the caHUB operation; research results on the industry financial landscape and pricing considerations; analysis of potential cost recovery models and recommended approach; and justification of the investment through a quantified benefits analysis. Each section includes the team’s recommended action items for OBBR. Notably, the TLCO approach allowed the team to generate an estimated lifecycle cost for caHUB for the years 2011 to 2027, which amounts to approximately \$941.9 million. The report breaks down costs by value stream and estimates the financial burden for NCI over the life of caHUB to amount to \$91.73 million in facilities costs. The remaining \$850.14 million would be funded through caHUB or potentially through a public-private partnership.

The AWG, comprised of approximately 50 SMEs who were assigned to subgroups based on expertise, is currently reviewing subgroup products. Upon receipt of their feedback, SAIC-Frederick staff will revise the subgroup products in collaboration with subgroup leaders. SAIC-Frederick and the OBBR Senior Leadership Team will then utilize these products to develop the business and operating structure, policies, and physical facility for caHUB. By fall 2010, subgroup deliverables will be highlighted on the caHUB web site.

Additional Activities

To assist OBBR and the SAIC-Frederick project management team in the ongoing development of caHUB, a subcontract was also established with Decision BioSolutions in 2009 to develop a biospecimen acquisition operational plan for caHUB, including a plan to establish a PRC. To this end, Decision BioSolutions actively participated in the AWG, the Facilities, Biospecimen, and Acquisition of Normal Tissues

Subgroups, and in the development of associated deliverables. The PRC proposal will be reviewed and revised, as appropriate, once the caHUB pathology team, currently being recruited by SAIC-Frederick, is in place.

Two other workshops were also planned by an SAIC-Frederick CPM I and held in 2009 in support of caHUB: (1) The National Cancer Data Base (NCDB) Workshop and (2) the User Group Workshop. The purpose of the former meeting was to present the NCDB and Cancer Registry Programs to SAIC-Frederick and OBBR, and review the benefits and concerns related to their use as procedural and informatics components of caHUB. Information gathered at this workshop facilitated the establishment of requirements and a timeline for developing a caHUB informatics plan.

The purpose of the second workshop, the User Group Workshop, was to address questions that emerged during the design of the caHUB biospecimen collection. Specifically, the goals of the workshop were to: (1) define the types of research questions that can be addressed using caHUB biospecimens; (2) define the types of biospecimens that should be collected by caHUB and what clinical data should be attached to the specimens; and (3) how best to reduce bias hardwired into the biospecimen collection housed by caHUB. While the intent was for this group to be output focused and to create a product that would inform caHUB planning and implementation, follow-up teleconferences and/or meetings with a subset of this group will be necessary after the caHUB strategic and operational plan have been completed.

American Recovery and Reinvestment Act of 2009 (ARRA) cancer Human Biobank (caHUB)

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Many high-impact NCI and NIH research initiatives are significantly hindered by limited human biospecimen availability and quality. As early as 2002, the groundbreaking National Dialogue on Cancer identified access to appropriately collected and annotated tissues as a critical need for fully capitalizing on new genomic and proteomic technologies to accelerate progress against cancer. Access to sufficient high-quality human biospecimens remains a significant impediment to research efforts.

In response to this need, NCI OBBR is creating caHUB, a unique public resource, with a mission to accelerate biomedical and translational cancer research by ensuring the adequate and continuous supply of high-

quality, highly annotated human biospecimens. caHUB has the potential of overcoming current barriers posed by limited access to high-quality biospecimens and leading a transformation from individual to collaborative research. caHUB will create a collection of targeted/research-driven, diseased and associated normal biospecimens (both tissue and fluids) with a level of quality and characterization that would be difficult to achieve physically or economically by individual or smaller collection efforts. It will also provide access to a suite of tools to support the efforts of the individual or smaller collection to enhance their capabilities, thus allowing them the option to participate in caHUB efforts.

Biospecimens will be collected according to the highest technical and ethical standards, providing biospecimen reference samples that will serve as benchmarks for biospecimen integrity and molecular type, supporting research that advances evidence-based biospecimen best practices and creating opportunities for collaboration and information exchange across the research enterprise. Researchers will have the capability to provide feedback on targeted caHUB collections and determine future acquisitions and associated annotation. Furthermore, by carefully creating fully characterized samples, fragments, derivatives, RNA, DNA, and slides of each biospecimen, opportunities for collaborative research combining the power of multiple analytical platforms and technologies are created. This will promote the ability of researchers to access caHUB collections and develop new models of disease with a systems approach across the same set of highly qualified and characterized samples through dedicated informatics platforms and to follow on with validation studies. The biospecimen best practices resulting from caHUB will translate to the clinical realm and support the advancement of personalized medicine.

As noted above, SAIC-Frederick has supported the strategic planning of caHUB. With the availability of ARRA funds, SAIC-Frederick extended this support to developing the management strategy for the Phase I or pilot of caHUB. With the assistance of consultants and experts from a variety of disciplines, OBBR and SAIC-Frederick management and staff will implement the resource's strategic and organizational plan to include: (1) developing the project scope, budget, timeline, and plan; (2) developing the caHUB internal organizational structure and associated business unit charters; (3) establishing a network of member agreements; (4) producing SOPs and a quality management process for the caHUB enterprise; (5) securing commitment and initiation of subcontract negotiations with BSSs (A1/A2/C1/C2), biospecimen resource and IT entities and collaborations (B1/B2/B3), and potential commercialization (C3); (6) establishing a pathology reference center; (7) creating MTAs; (8) developing ethical, legal, and social issues policies and templates; and (9) instituting biospecimen access policies.

Upon CMRP's receipt of the NCI request for support, staff immediately reviewed and responded to implement caHUB. Project scopes, budgets, and timelines were prepared to address the multiple business units of the project. The organizational structure of the pilot caHUB was developed, requirements were assessed, and staff was recruited and trained. The organization of the business units was essential to allow for efficient solicitation and award of research subcontracts, including awards targeted for addressing the caHUB business units.

To date, the business units that have been developed include the tissue procurement, laboratory operations, information systems, biospecimens research, and ELSI and regulatory affairs as detailed below.

Tissue Procurement Business Unit. The Tissue Procurement Business Unit initiatives include the projects: cancer tissue procurement and normal tissue procurement.

In regards to A1, cancer tissue procurement: The purpose of the caHUB cancer tissue procurement RFP, to be issued in late July-early August 2010, is to solicit responses from entities that have the ability to serve as a BSS for cancer biospecimens, providing prospectively collected, clinically annotated cancer biospecimens to caHUB. To meet the caHUB's goals, SAIC-Frederick will establish a BOA with several organizations capable of recruiting targeted cancer patients from the Commission on Cancer (CoC)-accredited institutions and delivering clinically annotated biospecimens. Under the BOA, task orders will be competed among qualified offerors to acquire targeted cancer tissues, associated blood, biospecimen collection, handling and processing data, and clinical data for caHUB. Biospecimens will undergo quality control (including extensive pathology characterization), be processed into molecular analytes, stored, and distributed for qualified R&D. This RFP is one of a series that will establish a pilot for the caHUB initiative (see other RFPs below). The pilot phase of caHUB will involve multiple contracts and work conducted by numerous organizations representing different interdependent components, all of which must be synchronized to function as one larger project.

In regards to A2, normal tissue procurement: A competitive BOA RFP was solicited in January 2010 to qualify organizations capable of accruing and delivering targeted normal biospecimens and associated clinical data for caHUB. In June 2010, BOA awards were made to six organizations considered to be in the competitive range for the solicitation. A site qualification team comprised of NIH and SAIC-Frederick personnel visited each of the six institutions to assess capabilities surrounding donor recruitment and consent, specimen chain of custody, informatics and data management, and quality assurance and quality control. The A2 task order under this BOA has been placed on hold until FY2011. Altogether, the biospecimens and data provided by these BSSs—featuring academic centers, rapid autopsy programs, and organ procurement and tissue recovery organizations—will be delivered to caHUB for quality control, extensive

pathology characterization, diagnostic verification, processing into molecular analytes, storage, other relevant processes, and distribution for qualified R&D.

caHUB coordination initiatives include the three projects as outlined below:

caHUB Laboratory Business Unit. The purpose of B1, a competitive RFP that was solicited in May 2010 for the CBR component of the caHUB initiative, is to support the 2-year pilot caHUB as a proof-of-concept biorepository. This project will provide NCI with the blueprint for developing a permanent biorepository, supplying academia, advocacy, industry and individual research efforts with quality biospecimens and accompanying annotated data. CBR will provide shipment oversight, receipt, processing, storage and distribution of biospecimens to a variety of end users. This RFP was issued as a basic order agreement, which will qualify a select group of potential offerors. Multiple task orders will be issued under this BOA as early as October 2010 with the intent of selecting a primary offeror to provide CBR services to caHUB.

Information Technology (IT) Business Unit. The intent of B2, the CDR project, is to provide access to caHUB data and services. caHUB data will include patient clinical and pathology data; extensive annotation surrounding biospecimen collection, storage, and processing conditions; quality assurance/quality control measures; molecular quality measures; and experimental data from biospecimen analysis. CDR will provide access to caHUB data from a combination of local data sources containing the core data of caHUB and federated data from other sources. It will interact with informatics systems implemented by other components of caHUB as defined in the caHUB Notional Informatics Architecture; i.e., the NCDB, caHUB BSSs, CBR, the caHUB Clinical and Anatomical Pathology Team, and caHUB end users and collaborators. CDR will be developed in compatibility with the NCI Center for Biomedical Informatics and Information Technology (CBIIT) conformance and compliance guidelines. It is anticipated that an RFP in support of the establishment of CDR will be issued in August 2010.

In regards to B3, the NCDB alignment: NCDB, a joint program of the American College of Surgeons and the American Cancer Society, is a nationwide oncology outcomes database that will be used to provide specimen-related clinical data for cancer biospecimens to caHUB, leveraging the accreditation programs of both CoC and certified tumor registrars who collect the data. BSSs providing cancer biospecimens to caHUB will already have a relationship with NCDB to which they report clinical data on an annual basis. During caHUB's pilot phase, the goal will be to leverage the mature processes used to collect and verify such data, as well as NCDB's large repository, to demonstrate their value to the research community. The purpose of this sole source subcontract is to modify the current NCDB system to provide clinically relevant data associated with biospecimens provided by BSSs and

making this information available to the caHUB's CDR. The RFP for this project is expected to be published on the FedBizOpps.gov web site by August 2010.

Biospecimen Research and Development Business Unit. The ARRA Biospecimen R&D initiatives include these three projects:

1. In regards to C1, a competitive RFP was solicited in November 2009 for R&D in biospecimen quality evaluation and control to allow solicitation of innovative approaches to biospecimen quality issues. The multitude of biospecimen quality issues that challenge the cancer R&D community highlight a general need to obtain ideas to help define and solve the most important biospecimen challenges by inviting proposals spanning a broad range of biospecimen issues. In January 2010, three proposals were deemed to be within the competitive range. Due to budget constraints, one proposal was removed from the competitive range. At the time of this report, two proposals are awaiting award due to revisions made to the ARRA cost estimates.
2. The intent of the C2 project is to issue a competitive RFP for research studies on multiple, defined pre-analytical variables in normal and cancer tissues and their effects on quality-controlled downstream molecular analysis. This research will allow NCI to obtain very high-quality and well-annotated cancer and normal specimens for research on the effects of pre-analytical variables on downstream molecular analysis. The experimental plan to identify the most important variables for molecular analysis requires the ability to specify in great detail how the specimens are annotated, collected, processed, and stored. The research to be conducted will enable the appropriate tissue collection and processing for these studies. The RFP for this project is currently on hold until budget revisions are finalized.
3. In regards to C3, in 1998, NCI established the groundwork for stimulating the next wave of technologies capable of being applied toward the field of cancer research through a highly successful program focused on early-stage innovative technology development, the Innovative Molecular Analysis Technologies (IMAT) program. Unlike other initiatives of the time, IMAT solicits only the most cutting-edge ideas, thus restricting its application pool to those technology development projects with the potential to be truly transformative. Successfully developed and commercialized products such as RNALater[®], Affymetrix gene chips, Illumina[®] bead platforms, quantum dot labeling, and isotope-coded affinity tag (ICAT) technology were all considered high-risk ideas at the time of their inception and initial funding through the IMAT Program. Its mission is to support the risks needed for a scientist to conduct their investigations by

providing proof-of-concept funding. By doing so, the program filled a void that no other program at NCI or NIH filled.

caHUB is currently being planned and implemented by NCI's Office of Biorepositories and Biospecimen Research (OBRR). This biobank will improve medical science by ensuring that high quality, well annotated, and ethically collected biospecimens are available for cancer research. IMAT is administratively managed by NCI's OBRR and, since 2004, has had a specific solicitation for technologies that address biospecimen quality. The "Innovative and Applied Emerging Technologies in Biospecimen Science" Funding Opportunity Announcement for FY2010 seeks to support early-stage development of cancer-relevant technologies that address the issues related to pre-analytical variations in the collection, processing, handling, and storage of biospecimens or their derivatives. The overall goal is to develop technologies capable of assessing and/or maximizing the quality and utility of biospecimens or their derived samples for downstream molecular analyses. This solicitation has supported the development of tools, devices, instrumentation, and associated methods to assess sample quality, preserve/protect sample integrity, and establish verification criteria for quality assessment/quality control and handling under diverse conditions.

Integral to the initiation of the program was the realization that technology development, often of a high-risk, high-impact nature, does not flourish using the R01 mechanism and that the cancer research portfolio lacked strategies to foster technology development. At its inception, the program itself was innovative in creating a new funding mechanism known as the phased innovation award, which is now commonly used across NIH and recognized as the R21/R33 mechanism. This grants program is also unique in the technical evaluation of project milestones during the award period by NCI program managers. IMAT currently offers a suite of opportunities to the investigator community to support innovative (inception) to emerging (application) technology development projects.

The intent of this project, Innovation Central, is to accelerate the translation of scientific knowledge to a commercially disseminated technology by encouraging collaborations between technology end-users and innovators, and by ensuring that the most commercially promising innovations are accelerated to market. The development of the statement of work (SOW) for this initiative began in late 2009. Once the SOW was near completion, the Office of the General Council reviewed the SOW to ensure it was within the NIH mandate. The interpretation of the SOW is that it supports education and commercialization of an end product that was outside of the NIH's authority. The concept of Innovation Central has been set aside. The scope of work will be redirected, but the intent of the Yellow Task will be maintained and options are currently being researched.

Ethical and Regulatory Affairs (ERA) Business Unit. The mission of the ERA Business Unit is to provide support for all ethical, legal, social, and regulatory issues

for the caHUB initiative. A priority within the mission is to implement policies and procedures that will ensure the highest ethical and regulatory standards by which caHUB operates, to protect the rights and welfare of research participants. The ERA Business Unit has developed templates that reflect NCI's caHUB policies for Informed Consent, Material Transfer and Data Usage, Biospecimen and Associated Data Access Policy, and general guidelines for caHUB subcontractors. Future work will involve the oversight of ERA issues for caHUB subcontractors, developing and implementing quality initiative directives, and providing ongoing support to caHUB Business Units as the pilot caHUB transitions into the permanent caHUB.

The additional business units, including the Executive Office, Special Collections and Services, Partnerships, Business Development Office, and the Pathology team are still in the planning stages.

Support to The Cancer Genome Atlas (TCGA), NCI

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In 2005, NCI and the National Human Genome Research Institute (NHGRI) established TCGA as a comprehensive and coordinated effort to accelerate an understanding of the molecular basis of cancer through the application of genome analysis technologies, including large-scale genome sequencing. By 2006, a collaborative three-year pilot project of TCGA was launched to assess the feasibility of a full-scale effort to systematically explore the entire spectrum of genomic changes involved in select human cancers.

SAIC-Frederick established a dedicated project team responsible for overseeing and managing twenty-six new or extended tissue source site (TSS) subcontracts for the three pilot-phase tumors: brain, lung, and ovarian. Together, these cancers account for more than 250,000 cancer cases each year in the U.S. The comprehensive and integrative efforts of four program components contribute to the pilot phase efforts: a Biospecimen Core Resource (BCR); Cancer Genome Characterization Centers (CGCCs); Genome Sequencing Centers (GSCs); and a Data Management, Bioinformatics, and Computational Analysis Core.

Using NCI's and NHGRI's existing infrastructure, knowledge, and resources, the data from the TCGA Pilot Project is being used to determine whether it is possible to cost-effectively characterize the genomes of a few cancer types and whether an atlas of all major cancer types is feasible. In addition, the project is supporting the development of new technologies. Critical to the success of TCGA is the supply of qualified and adequately annotated biospecimens. Since its inception, the TCGA

Pilot Project has been subcontracting with academic medical institutions for the supply of retrospectively collected biospecimens through the NCI prime contract with SAIC-Frederick. The project also obtained, through subcontracts with SAIC-Frederick, the services of two BCRs; International Genomics Consortium and Nationwide Children's Hospital.

In February 2008, under the direction of TCGA leadership, OBBR assumed oversight of all tissue acquisition for TCGA by awarding subcontracts to TSSs. As new TSS research subcontracts were established they were assigned to the OBBR portfolio at SAIC-Frederick and existing TSS subcontracts were transferred to OBBR as they came up for renewal.

The original efforts have contributed significantly to the advancement of the TCGA program; CMRP staff is now transitioning the primary responsibility of coordinating the comprehensive support of TCGA activities from multiple SAIC-Frederick directorates/offices to NCI to facilitate planning for the implementation of TCGA Phase II.

In late 2009, SAIC-Frederick established a project team to closely review 33 TSS subcontracts awarded to 26 different institutions (some institutions had multiple subcontracts) to collect retrospective specimens. The review was completed to determine whether or not the subcontracts would be completed as planned, closed prior to the end of the period of performance, or extended beyond the period of performance (with potential expansion of the tumor types to be collected). SAIC-Frederick performed site-by-site analysis on the status of each subcontract in a coordinated manner. The team determined the status of the subcontracts to include what specimens were lacking and what data were lacking, they obtained tissue qualification information from BCR, and finally, obtained clinical data from the site. SAIC-Frederick was tasked with identifying the sites that could be closed for one of two reasons: (1) the work could be completed and goals of the subcontract could be met, or (2) the sites were unable to provide the contracted or additional tissue types approved by TCGA. Once the subcontracts were modified to collect from an expanded list of tumor types, several sites that had difficulty identifying and obtaining the required tissue types were extended. These subcontracts were extended to allow sites to modify their MTA and IRB requirements to collect additional tumor types approved by the TCGA project management team.

Among the 33 TSS subcontracts evaluated, 10 have been extended and are still open with work in progress and 23 are completed. NCI plans to complete all the pilot phase TSS subcontracts (with the exception of the NCCCP sites) by the end of 2010.

The process of evaluating all subcontracts revealed a key process issue. Some of the TSSs were impacted by the fact that NCI often changed the priority of sample processing at BCR, so the sites frequently did not receive their qualification information in a timely manner. This was the result of BCR holding some tissues types in their

pipeline in order to process others. Subsequently, this caused a delay with tissue qualification reporting, as well as the invoicing process. Several TSSs had to have their subcontract dates extended to allow time for the normal process to bill for work completed.

In March 2010, the responsibility of the TCGA program was transferred from OBBR team management to a newly formed TCGA project management team within NCI. SAIC-Frederick staff assumed responsibility for coordinating the subcontract completion efforts at all collection sites participating in the pilot phase of TCGA.

SAIC-Frederick also continues to manage the two subcontracts awarded to community hospitals to collect prospective biospecimens for the initial pilot tumor types and the expanded list of tumors: Catholic Health Initiatives (CHI) (with two collection sites) and Christiana Care. These subcontracts were originally awarded in 2008 as time and material subcontracts. Currently, these subcontracts are being modified to a fixed price model to better match the agreements being negotiated directly between NCI and the TCGA collection sites.

All subcontracts that were extended to collect additional tumor types (beyond the three pilot phase tumor types) were modified to collect the following tissue types approved by the TCGA management team at NCI: (1) breast (breast lobular carcinoma); (2) CNS/brain (astrocytoma, glioblastoma multiforme); (3) gastrointestinal (rectal carcinoma, hepatocellular carcinoma, pancreatic ductal adenocarcinoma, stomach adenocarcinoma); (4) gynecologic (cervical cancer squamous cell carcinoma, uterine corpus endometrial carcinoma); (5) head and neck (head and neck squamous cell carcinoma, thyroid carcinoma); (6) hematologic (acute myeloid leukemia, chronic lymphocytic leukemia, diffuse large B-cell lymphoma, multiple myeloma, non-Hodgkin lymphoma); (7) skin (cutaneous melanoma, including metastatic cases); (8) thoracic (lung adenocarcinoma, lung squamous cell carcinoma); and (9) urologic (bladder muscle invasive [high grade], kidney papillary carcinoma, prostate adenocarcinoma).

The TCGA subcontracts managed by SAIC-Frederick have collected more than 1,200 qualified tissue cases, completing the ovarian pilot tissue requirement of 500 or more. During the past year, SAIC-Frederick project managers and subcontract specialists continued to coordinate weekly project meetings with TCGA leadership and subcontractors, to provide subcontract progress reports and to manage the communication plan for TCGA stakeholders, TCGA team members, consultants, and subcontractors.

Support to Genotype Tissue Expression (GTEx), NCI

Beth Baseler, M.S., Director
Theresa Engel, M.F.S., Clinical Project Manager I

In support of NCI's OBBR, SAIC-Frederick provides assistance with the procurement of normal human tissues for the GTEx NIH Roadmap project. SAIC-Frederick is primarily responsible for establishing research subcontracts with tissue procurement organizations that have significant experience in obtaining normal human tissues through rapid autopsy programs and collection of excess post-surgical tissues. CMRP staff assumed primary responsibility for coordinating the comprehensive support to GTEx activities, spanning multiple SAIC-Frederick directorates/offices, to facilitate planning for the implementation of GTEx.

The GTEx project aims to provide a resource to the scientific community with which to study the relationship between genetic variation and regulation of gene expression. This project will collect and analyze multiple human tissues from donors who have been characterized for germ-line genetic variation through dense genotyping. By treating global RNA expression levels as quantitative traits, loci with polymorphisms that are highly correlated with variations in expression will be identified as expression quantitative trait loci, or eQTLs. The single-nucleotide polymorphisms (SNPs) within the eQTL that are correlated with gene expression are sometimes called eSNPs. Based on the analysis of individual tissues, approximately 10 percent or more of gene transcripts have cis-eQTLs, operationally defined as an eSNP that is located close to the gene whose expression it is correlated with. To identify trans-eQTLs, in which the eSNP maps far from the gene or on a different chromosome than the gene it is regulating, much larger sample sizes, relative to cis-eQTLs, will be required. This is because of the need to adjust for the large number of statistical tests involved in searching for correlation between expression levels of every transcript and a very large number of genetic variants. Comprehensive identification of both cis- and trans-eQTLs will provide a valuable basis on which to study gene regulation, with an immediate application in interpreting genome-wide association study (GWAS) findings.

The primary goal of the pilot is to assess the feasibility of enrolling 160 donors identified through low-post-mortem interval autopsy or organ transplant settings and collecting high-quality RNA from multiple tissues per donor. The precise number of tissues to be collected from each donor is not yet known; ideally between 50 and 70 samples will be collected to analyze gene expression. The technology for measuring RNA expression and genetic variation is evolving and will continue to mature over the course of the project. The GTEx pilot project also aims to determine the optimal number of tissue types to sample,

based on the redundancy of eQTL results across multiple tissue types, and to evaluate the similarity of eQTL results to other published analyses.

In response to a YT request in September 2009 by OBBR for support to GTEx activities, SAIC-Frederick established a dedicated project team to provide a contract procurement mechanism to establish research subcontracts with TSSs, including: (1) providing assistance with the development of the GTEx SOW; (2) providing expert review of proposals submitted in response to the GTEx solicitation; (3) performing site pre-qualifications visits (SQVs) to determine the ability of offerors to meet the needs of the solicitation; and (4) to negotiate research subcontracts with qualified TSSs.

In addition, CMRP staff: (1) provide overall project management for the GTEx program and manage interactions between the TSSs and the Laboratory, Data Analysis and Coordinating Center (LDACC) contracted by NHLBI; (2) track and manage recruitment and research subcontract development; (3) ensure compliance with subcontract milestones, timelines, and deliverables; (4) coordinate and participate in weekly and ad hoc teleconferences with OBBR to review progress and discuss issues; (5) provide routine detailed reports of subcontract activities; and (6) develop and manage the communications plan that provides information to all GTEx stakeholders.

The GTEx project has been in the start-up phase for this reporting period. A formal SOW was generated and Solicitation #S10-120 was posted on the FedBizOpps.gov web site as Task Order #1 under BOA #S10-084. SAIC-Frederick hosted a bidder's teleconference to answer questions from offerors regarding the requirements of this task order. By the end of the posting period deadline, ten proposals were received and at the Responsiveness Determination Meeting, all were deemed to be responsive. SAIC-Frederick convened a Source Evaluation Group (SEG) comprised of SMEs in the areas of Biorepository Operations, Bioinformatics, Brain Banking, ELSI, and Pathology. SAIC-Frederick provided meeting logistics coordination, which included securing meeting facilities and providing travel and lodging support for SMEs. SEG represented SMEs from government, private companies, and academic institutions.

Each SEG member was assigned specific proposals, which focused on his/her area of expertise, to review. After reviewing the assigned proposals, SEG members submitted score sheets which were used as the basis for initial proposal discussions during the SEG meeting in April 2010. At the conclusion of the SEG meeting, five proposals were considered to be in the competitive range. The offerors of proposals that were deemed to be non-competitive were notified and debrief teleconferences were held with key institution representatives.

A team of government and SAIC-Frederick experts was assembled to perform SQVs. SQVs were conducted for the five proposals considered to be in the competitive range. Notably, the first site visit was completed within three weeks of the SEG meeting and two more site visits were completed within five weeks. An extremely limited

amount of time existed between the completion of the SEG meeting and the pre-identified site visit window to meet the contract award milestone. This made the logistics of completing the first three site visits extremely challenging. Upon completion, team members submitted site visit reports, which were later compiled into a comprehensive report from the visit. A contingent award was made to one site before the award milestone date. Ultimately, two sites were awarded a contract under the GTE_x task order.

During the subcontract award phase, the primary contact for the GTE_x project within OBBR changed. This presented some challenges as the transition period was non-existent. SAIC-Frederick staff worked with the new contact to bring her up to speed as quickly as possible, limiting the amount of time lost due to this transition.

During the first six months after the contract awards, SAIC-Frederick worked with the sites to revise their Informed Consent/Authorization Forms to ensure all required elements were present and to create GTE_x-specific Consent/Authorization Addendums containing specific verbiage for this protocol. In addition, the project team worked with the sites to develop protocol-specific SOPs and data collection tools.

Additionally, SAIC-Frederick staff created a GTE_x WG to establish the required data elements and integration applications as they relate to the overall caHUB CDR where GTE_x data will ultimately reside. This team met weekly to create Use Cases; define required data elements, a data dictionary, and CRFs; and provide overall progress updates.

A CPM I was identified to participate in the start-up activities. The CPM I has been integral in providing logistical and project management support during the start-up phase of this project. An SPA was hired in May 2010 and will be responsible for interfacing with the contracted sites to manage budgets, milestones, and deliverables.

Support to the NCI Community Cancer Centers Program (NCCCP), NCI

Beth Baseler, M.S., Director

Joy Beveridge, M.S., Clinical Project Manager III

Administrative clinical services support has been provided to NCCCP since May 2006, beginning with the original RFP. NCCCP is a network of hospital cancer centers that serves as a community-based platform to support basic, clinical, and population-based research initiatives across the cancer care continuum—from prevention, screening, diagnosis, treatment, and survivorship through end-of-life care. NCCCP started in 2007 as a three-year pilot program with 16 community cancer centers.

A strategic partnership between NCI and participating hospitals, NCCCP is designed to support cancer research and enhance access to and increase quality of care at

community hospitals so more patients benefit from the latest research. New knowledge and advanced technology allow complex cancer treatment to be provided at community hospitals, where the vast majority of people with cancer in the United States are diagnosed and treated. To enhance community-based cancer care, sites are studying ways to reduce cancer health care disparities, enhance community outreach for cancer screening and follow-up, improve quality of cancer care, and expand survivorship and palliative care programs.

In addition, NCCCP centers are directly contributing to the cancer research enterprise by accruing patients to clinical trials, collecting high-quality biospecimens for research, expanding IT through the use of electronic health records (EHRs) and participation in NCI's cancer Biomedical Informatics Grid (caBIG[®]), and collaborating with other NCI programs and related organizations, including NCCCP, TCGA, the NCI Community Networks Program (CNP), the American Society of Clinical Oncology (ASCO), and the American College of Surgeons' CoC.

During the reporting period, SAIC-Frederick continued to provide support to NCCCP; efforts include: (1) central communication support to all pilot site representatives, including the coordination of nine monthly meetings, recurring and ad hoc WG meetings, maintenance of the private intranet site content, and collaboration with RTI International, Inc. (RTI); (2) procurement coordination for NCCCP's ARRA RFPs; (3) project management of 45 individual NCCCP research subcontracts that resulted from the competitions; (4) coordination of the NCCCP annual meeting; and (5) assistance to NCI with presentations to the advisory boards which demonstrate the efforts necessary to build a national network of community cancer centers that are fully engaged with the research community and that provide the latest evidence-based, multidisciplinary care and treatment to patients of all racial and ethnic backgrounds and socioeconomic standings in their home communities.

In July 2010, the pilot phase of NCCCP ended its third year by implementing a variety of initiatives to advance clinical research and improve the quality of cancer care at community hospitals, with an emphasis on minority and underserved patients. The following descriptions outline the progress made in the individual focus areas of NCCCP, as well as accomplishments made in the overall organizational components of the pilot.

Reducing Cancer Health Care Disparities

Disparities in cancer health care are a national challenge. The NCCCP sites are addressing disparities by building their capacity to improve access to quality cancer prevention and treatment programs among underserved populations. In the third year of the program, NCCCP sites have continued to target their outreach efforts to underserved neighborhoods in their communities. They increased the number of cancer screening events and

education programs and partnered with cancer advocacy groups to extend their reach into the community. Specific accomplishments include:

Standardized Race and Ethnicity Categories. To meet NCI's need for standardized data, NCCCP hospitals have united in their approach to collecting race and ethnicity data. This provides a solid foundation upon which to better understand population-specific health care needs, compare quality of care and health outcomes, and assess the need for translation services and cultural awareness training. The sites are standardizing race and ethnicity data collection using U.S. Office of Management and Budget (OMB) guidelines and categories. Such standards are not otherwise widely used by community hospitals across the United States, but are recognized as increasingly necessary to measure progress in reducing disparities.

Increased Cultural Awareness Education. NCCCP sites have embraced the need for improved cultural awareness of specific populations by their staff to make progress toward reducing health care disparities. The sites developed a series of educational programs focused on improving access to care and promoting research among diverse patient populations. The sites also worked with experts in the field and with patient advocates to develop webinars exploring the health histories and beliefs of African Americans and Native Americans.

Increasing Patient Involvement in Clinical Trials

NCCCP sites are building the capacity to expand their clinical trials research infrastructure so they can increase the number of patients accrued to clinical trials, increase participation by minority and underserved populations, and increase the types of trials that are available to patients, including earlier phase trials. Progress made in meeting these goals in year three includes:

Clinical Trials Screening and Accrual Log. The NCCCP network developed a web-based application for supporting real-time data collection of demographic information on patients considered for clinical trials. The NCCCP "Clinical Trials Screening and Accrual Log" contains information on patients who entered trials as well as those who did not. In year three, the log expanded with the number and types of trials available at the sites, including a Phase II trial, cancer control trials, and a tissue procurement trial. The tool has also been enhanced to include reporting capabilities that monitor progress and data integrity. Data analysis is enabling identification of individual and site accrual barriers, and creating opportunities to develop strategies to increase trial participation among patients.

Underserved Accrual Project. NCCCP site patient navigators are studying ways to increase accrual of underserved patients to clinical trials. Navigators are providing clinical trial education materials to patients, and ensuring that clinical trials are discussed as a treatment option with all potential participants. The navigators

record barriers and successes to clinical trial accrual and share them with their research teams for real-time project improvement.

Enhancing Information Technology (IT) Capabilities

IT is a key enabler for improving the quality of cancer care, enhancing cancer research, and supporting personalized medicine through its ability to build bridges required for data sharing and integration within and across cancer centers. NCCCP sites are leveraging the IT resources available through caBIG[®], NCI's nationally networked research IT platform to support activities such as clinical trial accrual, biospecimens collection, and clinical data analysis. NCCCP sites have made progress in the following areas:

Adoption of caBIG[®] Tools. NCCCP sites have met the program goal of developing a detailed deployment plan for connecting with caBIG[®] and working towards implementing an EHR system. Several sites have adopted caBIG[®] tools, including caTissue (a biospecimen tracking and inventory management tool) and the National Biomedical Imaging Archive (NBIA), and are planning to adopt the caBIG[®] Clinical Trials Suite.

Oncology-extended Electronic Health Records (EHRs). In collaboration with ASCO and NCI, NCCCP sites have developed an oncology EHR requirements report for the development of an oncology-extended EHR for integrated use by private practice physicians, community cancer centers, and hospitals. The use of EHRs opens new avenues for data intensive research in understanding cancer and for helping physicians and patients manage cancer care more effectively.

National Cancer Research Data Network. Connecting NCCCP cancer centers to caBIG[®] strengthens the nationwide repository of voluntarily provided patient information. In year three, the sites worked to write a collective report on their experience in assessing caBIG[®] integration into a community cancer center setting. The report also addresses the IT business needs of community cancer centers and how best to establish technology strategies to support those needs.

Striving for Standardization of Biospecimens Collection

The study of tissue, blood, and tumor cells collected from patients plays a critical role in translating basic science into targeted cancer treatments; however, researchers cite the lack of access to appropriately collected and annotated tissue as a major barrier to realizing the promise of personalized cancer medicine. In year three, NCCCP made progress toward standardizing the way they collect and store biospecimens. Efforts include:

Biospecimens Collection and Contributions to Research. NCCCP sites have documented the requirements, infrastructure investment, and process changes necessary for a community cancer center to collect high-quality biospecimens following NCI's "Best

Practices for Biospecimens Resources” guidelines. Several sites have exceeded the NCCCP goal by actively contributing biospecimens for research purposes. Using these best practices, all sites are in compliance with the formalin-fixation protocol for breast tissue; three NCCCP sites are participating in TCGA by providing high-quality tissue; and five sites are participating in the Moffitt NCI-designated Comprehensive Cancer Center’s Total Cancer Care biospecimen collection program.

Biospecimen Handling Protocol. To support cultural considerations for the disposal of biospecimen donation, the NCCCP sites developed a model biospecimen handling and disposal protocol. These efforts were brought to the attention of the College of American Pathologists (CAP), which subsequently incorporated similar considerations into its guidelines, which are currently being updated.

Improving Quality of Cancer Care

The NCCCP is working to promote evidence-based and coordinated cancer care across the cancer care continuum at community cancer centers. The focus in year three has been on developing data to help understand ways to drive improvements in care. Initiatives include:

NCCCP/Commission on Cancer (CoC)

Partnership. NCCCP sites are testing the American College of Surgeons’ CoC new Rapid Quality Reporting System (RQRS). The system provides real-time surveillance and feedback to sites on the status of patients whose cancer care falls within the National Comprehensive Cancer Network (NCCN) guidelines. This is a new approach where data are reported directly from the hospital’s cancer registries, making the information available in a few weeks—instead of years—enabling closer monitoring and intervention, if needed.

This NCCCP project is part of a national pilot test of the RQRS system, enabling NCI to compare the performance of NCCCP sites with that of other cancer centers.

NCCCP/American Society of Clinical Oncology

(ASCO) Partnership. NCCCP sites are working to engage their local community-based private practice oncologists in research and quality improvement by participating in ASCO’s Quality Oncology Practice Initiative (QOPI), which involves monitoring physician adherence to evidence-based guidelines. As participants in QOPI, the NCCCP site’s local physician practices are sharing data and identifying best practices from high-performing oncology offices to develop projects that are aligned with the NCCCP mission and goals.

Enhancing Survivorship and Palliative Care

According to the Institute of Medicine’s report, “Lost in Transition,” the end of cancer treatment is too often the end of formalized support for cancer survivors. The NCCCP sites are working to address patient’s long-term needs for education, communication, appropriate follow-up for medical and supportive care, and to ensure that programs that are adopted are based on the latest,

evidence-based scientific findings in survivorship. In year three, NCCCP sites focused on: (1) providing patient treatment summaries and survivorship care plans, (2) promoting approaches for incorporating psychosocial care into the model of cancer care, and (3) exploring effective models of palliative care for cancer patients. Specific accomplishments include:

Patient Treatment Summaries and Survivorship Care Plans. NCCCP sites developed a breast cancer patient treatment summary and survivorship care plan to provide patients and their primary care physicians with important records of the treatment they received, including a detailed post-treatment follow-up plan that is comprised of best-practice experiences.

Psychosocial and Palliative Care Matrices. The NCCCP sites are focused on exploring the best ways to incorporate psychosocial and palliative care into cancer patient’s comprehensive treatment plans. The sites developed a psychosocial matrix and a palliative care matrix and are testing them at each site for utility and usability. The matrices are the self-assessment and planning tools designed to enable each NCCCP site to evaluate its capacity to deliver and support high-quality psychosocial and palliative care programs and services.

Organizational Accomplishments

In addition to the year-three focus-area accomplishments, the NCCCP pilot reached several organizational milestones. The network developed guidelines for a physical director, intended to ensure that sites have a physical director with cancer expertise who can devote most of his or her time to the program (with funding for the position provided by the hospital), and with the authority and resources necessary to provide effective management for the program. Fourteen of the sixteen sites have already implemented, or are in the process of implementing, the network-developed and recommended “Physician’s Conditions of Participation” document to support NCCCP goals for participation in clinical trials, quality of care, board certification, and acceptance of uninsured patients.

Given the success of the initial three years of NCCCP, NCI approved funds to support a fourth year of the original NCCCP awards. In the fourth year, the participating hospitals will continue to collaborate with and learn from one another to further strengthen this PPP and share what they learn with community hospitals outside the network. For NCI, the team has also developed “white papers” that document, by focus area, lessons learned for the best ways to advance state-of-the-art cancer care and research to benefit patients in their home communities. Evaluation of NCCCP continues, with RTI conducting a cost study, a patient survey, and a case study, including site visits. The results on the impact of the program are expected in 2011 and data collection from the original NCCCP awardees will continue during year four.

Building upon the accomplishments of the NCCCP pilot, NCI used funds from ARRA to expand the number of participating sites by adding 14 new NCCCP organizations to the original 10 that represent 16 individual cancer centers. Funds were also used to increase the breadth of activities at the original NCCCP cancer centers, which further enhanced this community-based research resource provided to the cancer research community. As the result of an extensive full and open competition process, NCCCP is now a network of 30 cancer centers in 22 states.

The 30 programs serve patients from a wide range of geographic and demographic localities in rural, small-town, and underserved urban areas. This diversity offers a potential framework for a national program of community cancer centers that would be integrated with NCI's extensive network of cancer research and quality care initiatives. The NCCCP hospitals will continue to share their findings and best practices with other community hospitals by accessing information from the NCCCP public web site where tools created by the NCCCP network are routinely posted.

The ARRA subcontracts were awarded to the 14 new NCCCP organizations on April 14, 2010. Orientation binders that included comprehensive information about the NCCCP and how communications are coordinated were also provided to the new sites in April and a series of orientation conference calls (separate calls for each of the eight subcommittees to welcome the new sites to the NCCCP) were completed in May. Follow-up calls to each new site to obtain feedback on the annual meeting and to allow for site-specific questions were completed in July. SAIC-Frederick staff quickly and efficiently coordinated the incorporation of the new site representatives into the existing communications structures, including webinars, listservs, distribution lists, and use of the private intranet site.

Stimulus funds also supported the expansion of activities at the original NCCCP cancer centers, to further enhance this community-based research resource provided to the cancer research community. A limited competition was conducted amongst the 10 original NCCCP organizations to participate in 18 new initiatives; all related to the major programmatic areas of the NCCCP. As a result of the limited competition, new ARRA subcontracts were awarded on April 14, 2010, to the original NCCCP organizations. This included 174 individual awards to address the 18 specific projects to enhance the initial work of the pilot.

Two of the ARRA projects awarded to the original sites involve collaborations with two NCI programs: (1) CNP and (2) CTEP's Early Drug Development Program (EDDP). Once the collaborating sites were identified, SAIC-Frederick was asked to prepare solicitations for 11 additional sole-source subcontracts to support the collaborations between the NCCCP sites and their CNP (ARRA Project 7) and EDDP (ARRA Project 2) partners. These collaborations were previously approved by NCI (as part of the project's SOW) and

funds were available to support the additional subcontracts. The solicitations were issued June 18, 2010, and subcontracts are in the process of being executed.

SAIC-Frederick continues to coordinate all activities related to the NCCCP project, including the management of the 45 individual NCCCP research subcontracts. This includes the original 10 subcontracts (recently modified to extend to year four), new ARRA subcontracts to the same original NCCCP organizations, and 14 ARRA subcontracts to new organizations. As noted above, an additional 11 subcontracts were required to support the collaborations between NCCCP hospitals and other academic institutions to address work being done within two of the 18 specific projects. Each set of subcontracts includes a defined scope of work and milestones; dedicated staff manages the relationships between SAIC-Frederick and the awarded organizations. With ARRA funds available, CMRP staff was added to support this expanded level of support to NCCCP. During the reporting period, four ARRA positions were hired: a senior special projects administrator (SSPA), a special projects administrator (SPA), a document coordinator specialist III, and an administrative assistant.

In early 2010, NCI dedicated funding to establish an online resource to request and submit the quarterly technical progress reports required of all NCCCP awardees. SAIC-Frederick continues to assist NCI with developing plans to enable efficient data collection, advanced analytics, data storage, and data sharing across all programmatic components of the NCCCP. SAIC-Frederick assisted NCI with obtaining input from the NCCCP NCI advisors, with summarizing the information to share with NCI and BAH, and with providing user-testing input that resulted in major revisions. BAH, managed by the SAIC-Frederick Center for the CBIIT support team, was subcontracted in May 2010 to address the task of making online reporting tools available to the NCCCP network by early July 2010. Focus was placed on the quarterly reports, but will transition to the Baseline (new sites) and Final Assessment Surveys (original sites). SAIC-Frederick will continue to assist BAH and NCI until all reporting tools have been completed and made available to the NCCCP awardees.

During the reporting period, SAIC-Frederick staff planned, coordinated, and facilitated the NCCCP Annual Meeting that included NCCCP network representatives, NCI advisors, and invited guests and collaborators, estimated at 350 participants. The 2010 meeting was extended to three full days to accommodate the expanded audience. Once again, the meeting was a great success and included numerous productive working sessions and an evening poster session that allowed for essential networking of existing and new NCCCP sites.

The NCI project officer presented an NCCCP update to the National Cancer Advisory Board (NCAB) in February and June 2010 and to the NCAB Working Group in July 2010. SAIC-Frederick staff provided site information and financial information to assist with these presentations. The NCI project officer is expecting

SAIC-Frederick to assist with another RFP in late fall 2010 to allow for the original NCCCP organizations and other community hospitals to compete for continued participation in the NCCCP.

Support to the Coordinating Center for Clinical Trials (CCCT), NCI

Joy Beveridge, M.S., Clinical Project Manager III

Geoffrey D. Seidel, R.N., M.S., Clinical Project Manager II

During the past year, CMRP continued to provide a cost-effective and efficient support mechanism to reimburse for the efforts of the clinical/scientific/advocate experts serving on the scientific steering committees (SSCs) in support of NCI's Clinical Trials Working Group.

Two additional clinical project managers (CPMs), both level I, were hired in the past 10 months as a result of accelerated growth within the three CCCT programs supported by SAIC-Frederick. These programs are the SSCs, Biomarker, Imaging and Quality of Life Studies Funding Program (BIQSFP) and the Special Translational Research Acceleration Projects (STRAPs). The addition of these positions has enhanced the project management and program analysis support to CCCT.

The CPM I hired in August 2009 has taken a strategic position, on-site in the CCCT Bethesda office, allowing for enhanced and streamlined communication between SAIC-Frederick and CCCT program directors with SSC accountability. This has been necessary as the following program growth has occurred: in 2008 there were six SSCs and 140 consulting agreements; in 2009, nine SSCs and 237 consulting agreements; in 2010, 12 SSCs and 357 consulting agreements. In 2011, it is estimated there will be 17 SSCs and approximately 400 consulting agreements.

Continued growth is anticipated in the coming year as five new SSCs will be added; these include: Brain, Imaging, Melanoma, Pediatrics Blood Tumor, and Pediatrics Solid Tumor. The Brain and Imaging SSCs are already recruiting members and the remaining three SSCs are expected to be active by the end of CY2010. This expansion represents a 284 percent growth in the number of SSCs over four years. SAIC-Frederick's support of the SSCs includes project management, program analysis, and management of the massive and growing consultant agreement effort.

During the reporting period, the BIQSFP program continued to grow in scope and effort. Eleven BIQSFP applications were submitted and reviewed in 2009. The reviews entailed collaborating with CTEP, DCP, and the SSCs (as appropriate), along with facilitating the identification and coordination of expert external reviewers. NCI approved one 2009 application which resulted in the awarding of a research subcontract. Seven BIQSFP applications have been submitted and reviewed in 2010; four received NCI approval for funding.

Additionally, one subcontract is in place and two are in process. Additional BIQSFP applications are anticipated throughout the rest of the year.

A revised BIQSFP announcement was released in April 2010 along with a new BIQSFP web site facilitated by a CPM II. The web site received over 600 unique visitors during its first eight weeks. In addition, the CPM II provided CCCT coordination for the design and staffing of the CCCT kiosk at the American Association for Cancer Research (AACR) and the ASCO conferences. SAIC-Frederick also designed and printed a BIQSFP bookmark for distribution at the ASCO conference and during the coming year, highlighting the new web site as a resource for information. The CPM II supports the BIQSFP within CCCT and has assumed responsibility for the three SAIC-Frederick cost centers. The CPM II also supervises four SAIC-Frederick staff members with CCCT-specific responsibilities.

In November 2009, the NCI Clinical Trials and Translational Research Advisory Committee (CTAC) approved the Immune Response Modifiers (IRM) Pathway as the first STRAPs pathway for implementation. The CPM I hired in February 2009 to support the STRAPs program has provided project management and program analysis expertise during the IRM Pathway development and application process. The evaluation of the responses to the administrative supplement announcement will begin in July 2010, wherein the CPM I will support this effort. The CPM I became an integral member of the STRAP team, as two key NCI personnel left the team earlier this year, and has been tasked with supporting a new program within the CCCT, the Cost-Effectiveness Analysis (CEA) Working Group. CEA was born out of CTAC in July 2009 to explore and make recommendations on the role of economic analyses relative to large cancer clinical trials. CMRP has supported project management and program analysis for the CEA initiative. The recommendations will be presented to CTAC in September 2010 with the expectation that CEA funding will be subcontracted through SAIC-Frederick and the monies within the BIQSFP program. This will entail additional support within the BIQSFP program.

SUPPORT TO DCTD

Support to the Translational Research Initiative (TRI) within the Cancer Therapy Evaluation Program (CTEP), NCI

Joy Beveridge, M.S., Clinical Project Manager III

Rhona McVicker, R.N., O.C.N., CTEP Administrator

Since 2002, administrative support has been provided to CTEP and TRI to efficiently manage the pre- and post-contract mechanism that was developed to award institutions performing the correlative and imaging studies

executed during the conduct of sponsored clinical trials of CTEP IND agents. As of July 2010, 300 awards (273 contracts, plus 27 additional BOAs) have been made to 52 institutions, totaling more than \$18 million committed. Since these awards are cost-reimbursement subcontracts, the amount that has actually been paid to the subcontractors is much less, at approximately \$9.6 million.

Because of limited CTEP resources, the moratorium on TRI subcontracts imposed by CTEP in August 2007 remains in place for all CTEP-funded subcontracts. However, a number of subcontracts were considered for awards, and those deemed critical to the drug development efforts were funded through non-NCI resources (e.g., Cooperative Research and Development Agreements [CRADAs]). The only subcontracts awarded in FY2010 were two high-priority subcontracts issued using CRADA funds. Approximately five additional CRADA-funded subcontracts are pending award.

During this reporting period, NCI decided to discontinue the TRI program. As of April 16, 2010, all CTEP TRI remaining subcontracts were issued stop-work orders to halt work on July 16, 2010. SAIC-Frederick staff continues to manage the existing 29-plus open subcontracts and those pending award, and to work with CTEP to coordinate additional non-NCI financial support.

During the past year, ongoing efforts have been heavily focused on obtaining timely deliverables, providing the drug monitors with continual updates on the status of all subcontracts and the monies remaining on each, and communicating with subcontractors from the 52 research institutions. SAIC-Frederick continues to encourage subcontractors to submit invoices and reports per subcontract requirements and for those subcontracts coming to closure, and will work diligently to obtain all final invoices and reports to ensure timely closure prior to the end of FY2010. Additionally, SAIC-Frederick will continue to manage the remaining non-NCI-funded subcontracts for the remainder of FY2010 and into FY2011, as appropriate. As such, modest programmatic support will continue to be provided to CTEP.

Support to the Cancer Imaging Program (CIP), NCI

*Joy Beveridge, M.S., Clinical Project
Manager III*

*G. Craig Hill, Ph.D., Medical Affairs
Scientist I*

*Marc Teitelbaum, M.D., Medical Affairs
Scientist II*

*John Freymann, B.A., Systems Program
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Overview/Summary

Since 2002, the overarching support to CIP has included the oversight of regulatory affairs, medical imaging agent availability, and imaging informatics. Regulatory support has been related to the IND process for the imaging agents and managing the subcontracts that were awarded to facilitate preclinical and clinical activities related to the IND process. These IND efforts have enabled wider availability of investigational agents for exploratory clinical trials—by contract, in the research community, and within the Joint Early Phase Therapeutics Development Program (JDC) and the Imaging Drug Group (IDG), which have since been subsumed into the NCI Experimental Therapeutics (NExT) Program. IT management support has been a major contributor to initiatives across NCI in support of its imaging informatics plan. The collaboration with multiple NCI-wide committees and major initiatives in imaging informatics have proven to be extremely important in the NCI's development of an infrastructure that supports imaging informatics and one that is aimed at higher-level compatibility with the Center for Biomedical Informations and Information Technology's (CBIIT) caBIG[®] and other NIH Roadmap Initiatives. CMRP's IT management support is a major contributor to initiatives across NCI in support of its imaging informatics plan. The IT manager collaborates with multiple NCI-wide committees and oversees the major initiatives in imaging informatics.

Since January 2006, the SAIC-Frederick manager has collaborated with other NCI programs, with other NIH groups within NIH at the Clinical Center and in Frederick, and with scientific societies and FDA. These efforts were to support the CIP goals of promoting the wider use of medical imaging in diagnosis, response to therapy monitoring, therapeutic drug development, and medical decision making. Since May 2009, a chemist-medical affairs scientist (MAS) has provided oversight to the group; this person serves both a radiopharmaceutical-scientific and administrative role. A new leader for IND-related regulatory affairs joined the team at CIP in November 2009, and has since overseen multiple regulatory submissions related to the CIP IND portfolio. A physician-MAS provides clinical trials monitoring and regulatory support and oversees the Quality Assurance Team that has been in place since June 2009. Over the past year, the Quality Assurance Team has implemented an audit program, conducting site visits for most of the program's IND agents.

During the past three years, there has been a continuation in the shift in CIP program emphasis toward development and delivery of a variety of imaging products that have required new strategies; resources; and cross-division, cross-institute, cross-agency, and external outreach activities. The Phase 0 initiatives and the dissemination of short-lived tracer technology are two prominent examples of initiatives that have emerged from this shift in CIP focus. CIP continues to be involved in projects from the NExT Program, which integrated the

activities of several cross-institute imaging drug activities into two decision-making committees. SAIC-Frederick staff also serves in an advisory role with the CCR's Molecular Imaging Program (MIP) and Small Animal Imaging Program (SAIP), and the Nanotechnology Characterization Laboratory (NCL). This has resulted in additional on-site SAIC-Frederick support to CIP.

This past year, a \$2.4 million subcontract was negotiated with the American College of Radiology Imaging Network/American College of Radiology (ACRIN/ACR) to provide SOP development and qualification of Cancer Centers as Centers of Quantitative Imaging Excellence. The primary objective of this agreement is to establish a resource of trial-ready sites within approximately 58 cancer centers from NCCCP and across the nation that are capable of conducting clinical trials in which there is an integral molecular and functional advanced imaging endpoint; for example, as positron emission tomography (PET), volumetric computed tomography (vCT) or magnetic resonance (vMR), and dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI). This resource will support the development and clinical implementation of quantitative imaging for measurement of response to therapy. The potential exists to extend this effort to other NCI Clinical Trial System participating sites within other groups, such as SPOREs and CTEP Cooperative Groups.

Since late 2008, an MAS, experienced in IT systems and regulatory affairs, has assisted the clinical trials branch chief to administer the procedures covering the research, design, development, alteration, and improvement of new and existing protocols, and to help direct and manage these clinical trial efforts. This position has evolved to include serving as the lead CIP contractor representative on various NCI committees and WGs. In addition, a second CRA joined the team. This expansion greatly increased the amount of support to the program by enabling new and expanded clinical trials contracts to be placed through NCI and additional related subcontracts to be placed through SAIC-Frederick. This addition to the SAIC-Frederick team has also provided invaluable expertise in the auditing and oversight functions for managing trials within CIP.

The receipt and tracking of AEs and auditing reports at CIP for the ACRIN trials has been substantially upgraded during the past year. A new round of initiatives to further enhance the systems and processes devoted to AEs and audit documentation in CIP clinical trials is underway and completion is anticipated in the second half of 2010. SAIC-Frederick staff has completed modifications and evaluation of existing AE reporting systems, designed for therapeutics, so that they now meet the needs of imaging clinical trials. Additional regulatory projects include: (1) the ongoing co-monitoring of some trial sites within ACRIN to gather sufficient information to permit a comprehensive process audit of the cooperative group, and (2) a project to amend the cooperative group guidelines so that ACRIN can be managed under the same policies as the other cooperative trial groups.

During the past year, there have been ongoing efforts to interview and hire a Nuclear Regulatory Commission (NRC)-qualified nuclear pharmacist to dispense doses from this laboratory. Last year, bench chemistry expertise needed to support medical imaging agent development activities was added to the team. This expertise was in addition to the expertise provided by the principal scientist, who was hired in August 2007 to provide senior scientific support to activities related to imaging agent development, including IND work and subsequent late-stage development toward commercialization to include clinical trials. CIP's chemistry program has recently been expanded to include a senior scientist and a post-doctoral fellow. These positions primarily support the goals of IDG, providing development of new imaging agents and backup testing of currently administered agents. This groundbreaking work may eventually lead to increased availability of types of agents for clinical trials. Maturation of this effort is documented by the fact that the original space designated for this work will soon be turned into a United States Pharmacopeia (USP)-level radiopharmaceutical production center capable of delivering clinical grade human doses for use in preclinical and clinical evaluation efforts by a certified pharmacist.

In the informatics area, an additional staff member was added to support the IT manager because the National Cancer Imaging Archive (NCIA) reached a critical level of maturity, requiring more support. Additional projects in support of the ACRIN cooperative group have provided new opportunities for the growth and maturity of valuable cross-discipline projects in informatics to become a reality.

The 11 members of the SAIC-Frederick CIP support team provide comprehensive scientific and administrative support to the program. More than 20 procurements (including subcontracts and consulting agreements) have been executed to meet the needs of the CIP principals. Subcontracts have been established with major medical institutions, experts in the field of cancer imaging, and commercial companies that are assisting in the analysis and development of CIP's portfolio of radiopharmaceuticals. Additional detail in these areas is outlined below:

Regulatory Support

During the past year, comprehensive regulatory support was provided to CIP activities related to the IND process for the imaging agents. Subcontracts with extramural sites were coordinated to facilitate the formal clinical trials performed at the CIP Phase I and II NCI contract sites. CIP focuses on facilitating the development of promising diagnostic agents that are not otherwise likely to undergo adequate preclinical testing to warrant an IND application or early-phase clinical testing in the conventional industrial development/sponsorship process.

Six INDs are currently held by CIP and management is supported by SAIC-Frederick staff:

1. IND 71,260 (^{18}F]-fluoro-L-thymidine-FLT), proliferation agent
2. IND 68,556 (ferumoxytol), blood pool MR agent
3. IND 70,900 (ferumoxtran-10), lymph node MR agent
4. IND 76,042 (^{18}F]-fluoromisonidazole [FMISO]), hypoxia agent
5. IND 79,005 (^{18}F]-fluoroestradiol [FES]), estrogen receptor agent
6. IND 103,429 [^{18}F]-NaF, was submitted on August 28, 2008.

Multiple protocols, the majority of them Phase II trials, are being conducted under each of the CIP-sponsored INDs. Twelve trials are currently active and enrolling patients. Many of the trials have inherent regulatory complexities due to the involvement of multiple investigators, sites, and contract organizations located in the U.S., Canada, and Korea. Several products at various stages in the development pipeline are to be transferred to CIP for sponsorship during 2010. One additional IND is still in the later stages of preparation: F-deoxycytidine, for patients receiving deoxycytidine with THU. It was to be filed in late-FY2009, but work on this was halted by the project officer (although it will resume in the near future).

Unique Issue

SAIC-Frederick provided full regulatory support to CIP in the submission of a marketing application (New Drug Application [NDA]) for [^{18}F]-NaF in 2008; this is the first time NCI filed an NDA. FDA approval is pending, due to the many complicated and unique arrangements of this agent. CIP, with SAIC-Frederick support staff, continues to provide responses to FDA's requests for additional information.

Chemistry and Imaging Agent Availability

Efforts to make promising radiopharmaceutical agents available to the research community for clinical investigation have been significantly broadened. The aforementioned PET tracers have no intellectual property associated with them, making it very risky for commercial entities to invest in them. However, by following NCI's ongoing attempts, this has been achieved by patient-sustained efforts over the past few years. SAIC-Frederick personnel negotiated a letter of reference to the full toxicology data in an IND held by a commercial firm for the therapeutic (non-radioactive) fluoro-L-thymidine (FLT). The studies referenced cost several million dollars to perform. Additionally: (1) several meetings between FDA, NCI, Radiological Society of North America (RSNA), and the Society of Nuclear Medicine (SNM) have been completed, culminating in an Imaging Workshop in April 2010; (2) FDA-accepted documents for the manufacturing of three PET agents, FLT, fluoro-

misonidazole (FMISO), and 16alpha- ^{18}F]-fluoro-17beta-estradiol (FES), are now available on the CIP web site; (3) currently, 42 letters of authorization to the CIP's INDs have been issued (more than 10 this reporting period) to allow outside clinical researchers to file INDs of their own; and (4) in May 2005, a contract was awarded to Ion Beam Applications S.A. (IBA), a major supplier of cyclotron-produced isotopes and radiopharmaceuticals, to implement FLT tracer synthesis and to apply for a drug master file (DMF) so the tracer could be supplied to NCI trials and other sites.

The current task order is to supply 5-F-deoxycytidine for a trial under NExT to be performed in the clinical center. All preclinical dosimetry had been completed and a further allocation of \$50,000 has been set aside to produce 20 doses. Additionally, a company investigating a therapeutic drug contracted with another major PET agent manufacturer (Cardinal Health) to make FMISO, which is one of the PET tracers for which CIP holds INDs. The CIP manufacturing documents for this tracer were transferred to the company under a material transfer agreement (MTA). The trial of the therapeutic with the tracer is ongoing. Other entities are planning trials using this agent and the company has filed a DMF to allow use of the agent. Cardinal Health filed a DMF on FLT and provided a cross-file letter in the CIP IND so that CIP can use this company, as well as IBA and PETNET, to supply its trials. Cardinal Health has also been tasked with an additional two orders (the transfer of synthesis of alpha- ^{11}C] methyl-L-tryptophan from Wayne State University to Moffitt Cancer Center (which Cardinal is operating) and the transfer of synthesis of FES from the University of Washington to their Beltsville, MD, production facility. These three main PET manufacturers have also agreed to supply their imaging agents for expanded NCI-sponsored multicenter clinical trials in the areas that they currently serve as part of the widening projects funded by ARRA. These companies communicate through the SAIC-Frederick contractors to avoid commercial conflicts.

Additional tracers are being investigated under SAIC-Frederick subcontracts, whereby the vendor holds the IND or obtains Radioactive Drug Research Committee (RDRC) approval. These include: (1) synthesis and exploratory clinical study of three PET tracers (1-(2'-deoxy-2'- fluoro-beta-D-arabinofuranosyl) uracil [FAU], now at five patients; 3'-deoxy-3'- ^{18}F -fluorothymidine [FLT], now at five patients; and ^{18}F -1-(2'-deoxy-2'- fluoro-beta-d-arabinofuranosyl) thymine [FMAU], now at four patients) in breast cancer patients who will be receiving capecitabine as part of their standard of care; (2) evaluation of alpha- ^{11}C] methyl-L-tryptophan as a probe to assess tryptophan metabolism in extra-cranial tumors by performing total body PET imaging with alpha- ^{11}C] methyl-L-tryptophan in a small cohort of human subjects to assess the feasibility of using imaging as a potential tool to select, direct, and monitor future trials with the immunomodulator 1-methyltryptophan (due to slow accrual according to the enrollment criteria, this study will be moved to the Moffitt Cancer Center); (3) a pilot

study of ^{11}C -SN-38 uptake and retention in patients who will be receiving irinotecan as part of their standard of care, now at five patients; (4) a pilot study of ^{11}C -doxorubicin in patients who will be receiving doxorubicin as part of their standard care is still in the preclinical phase; (5) a pilot study of ^{13}N -gemcitabine uptake and retention in patients who will be receiving gemcitabine as part of their standard of care has now been terminated due to the inability of the on-site PI to secure the proper approvals; and (6) Hynic-Annexin V preclinical studies to help determine the apoptosis pathways involved in cancer treatments that proved ineffective in final studies.

Other results from SAIC-Frederick subcontracts include: (1) successful production and preclinical evaluation of IgG-CHX-A'' as a control for radiolabeled monoclonal antibodies; (2) production of a radiopharmacy-ready generic kit for radiolabeling monoclonal antibodies (same as that used for Zevalin); and (3) successful production, but disappointing preclinical results for Cetuximab-CHX-A'' because of a lack of specific uptake.

Through SAIC-Frederick, CIP hired a senior scientist to help develop radiopharmaceuticals. Laboratory space at NCI-Frederick (Building 325, Room 103) was identified, but CMRP did not have an on-site supervisor to immediately assist with this activity. An on-site administrative Applied and Developmental Directorate (ADD) supervisor was identified; however, the CMRP's CIP supervisor is still assigning scientific work tasks.

During the past year, major renovations have been made to Building 325, Room 103; and to Building 376 at Fort Detrick. These efforts have provided space for establishing a radiopharmaceutical chemistry group. Primary responsibilities of this group include: chemical assays for characterization of imaging agent products, chemical assays of radioactively labeled materials, and biological assays of radioactively labeled materials. These new capabilities offer an opportunity for CIP to expand its R&D resources and to ensure the quality of currently used agents. The major asset of these facilities is provided by computer-driven Eckert and Ziegler fully automated modular laboratory synthesis devices in a lead-lined Capintec hood. This equipment allows for the safe preparation and purification of radio-labeled materials, while minimizing radiation exposure to manufacturing personnel. Various analytical equipment has also been purchased to fully characterize the radiopharmaceutical products. Current capabilities include: (1) the synthesis of FLT, ML-10, and FES PET tracers, with three others in development; (2) the synthesis of ^{111}In -HerScan and $^{99\text{m}}\text{Tc}$ Hynic Annexin SPECT tracers with two others in development; and (3) their complete chemical assays and biological evaluations. Future plans include upgrading Building 325, Room 103 to Good Manufacturing Practice (GMP) level and USP 823-level preparation of radiopharmaceuticals for preclinical and clinical doses. To fully staff this USP facility, an NRC-certified nuclear pharmacist was recently hired and a research associate will be hired shortly. R&D operations of the original staff will be shifted to Building 376.

Informatics Support

During the reporting period, informatics support initiatives included: (1) responding to a CIP request to stimulate imaging integration with genomics/molecular analysis by developing/managing a project to correlate imaging characterizations with molecular data from the TCGA project; (2) providing technical direction, including the creation and management of an extensive documentation wiki to major CIP-sponsored research data accrual activities (the Reference Image Database to Evaluate Response to Therapy [RIDER], Lung Image Database Consortium [LIDC], Imaging Databases Resource Initiative [IDRI] projects, radiotherapy data, PET/CT studies, and others), and providing logistical support for data transfer and data manipulation; (3) providing policy and technical leadership for accelerated development and deployment of the National Biomedical Imaging Archive (NBIA) web site; and (4) providing leadership guidance for caBIG[®] Imaging Workspace activities through successful community-building and project-implementing activities. The IT manager serves on the NBIA and caBIG[®] Imaging Workspace steering and technical committees and coordinates the implementation by the NCI CBIIT team. This activity has been a CIP-funded collaboration between CIP and CBIIT. The IT manager also coordinated data-gathering activities and outreach with cancer centers and clinical trial PIs, and participated in developing design documents for workspace-funded software and standards development activities.

The premise of NBIA and caBIG[®] Imaging Workspace efforts is that reliable image data can lead to smaller clinical trials with fewer patients, earlier go/no-go decisions on compounds, faster regulatory approval, and shorter time to market for new drugs and therapies, which in turn would lead to improved efficiencies in the cost of NCI clinical trial operations.

The Imaging Informatics resources are divided about equally between the development of NBIA and the Imaging Workspace. NBIA is a web-based infrastructure (<http://imaging.nci.nih.gov>) that supports submission, curation, storage, and access to cancer clinical and research-relevant image data and image-related data. By providing standards-based, controlled collections of data using NBIA, CIP is able to leverage a central resource rather than funding the endless replication of ad-hoc data systems from new grant resources. NBIA is actively supporting three ongoing CIP projects, and working with others. NBIA has proactively engaged with industry to provide free or low-cost data to populate the system. Through NBIA, CIP is leveraging resources at CBIIT, which is providing space and management staff for the project. NBIA leverages CBIIT infrastructure and technology support as well. NBIA has collaborated with commercial off-the-shelf (COTS) software developers (Cedara) to provide central-read support at a greatly reduced cost. Additionally, NBIA leverages the

Radiological Society of North America, which provides significant technology support for the data submission component of NBIA.

The Imaging Workspace is designed to address the lack of imaging standards and quantitative tools by providing support for 15 funded SMEs and through funding of focused technology development projects. The SME's participation is highly leveraged and complemented with 60–80 regular voluntary expert participants. Telephone conferences occur regularly and three to four annual face-to-face meetings have been held. Active projects include development of an Extensible Imaging Platform (XIP), which is being created by Washington University in St. Louis and Siemens CR. The Annotation and Image Markup project (AIM), an effort to associate standard-based human and computer analysis with images, leverages participation of Integrating the Healthcare Enterprise (IHE) and other standards organizations. Another project, caGRID Imaging Middleware, will allow disparate image archive systems and algorithms to interoperate over the NCI Grid, representing a major efficiency in use of data and analytical resources. The Imaging Workspace and NBIA activities are complementary, closely coordinated, and integrated.

Major informatics projects that continued during the past year include:

Cancer Central Clinical Database (C3D) Case Report Forms (CRFs). The adaptation of the existing C3D CRFs and databases for use in imaging trials was completed. Six CIP contract trials have been transitioned to use this system. Planning and testing is underway for the integration of support for imaging trials into the newly adopted CTEP/caBIG[®] Clinical Data Management System (CDMS).

Integration of Imaging with Genomics. SAIC-Frederick managed a project that included development of feature characterizations of brain MR images, collecting image data from three cancer centers from cases included in The Cancer Genome Atlas (TCGA) project within NCI/NHGRI, guiding a team of six neuroradiologists in the use of custom-built workstation software to score the images, and working with biostatisticians to provide analysis. The intent is to determine if any characteristics of the images will correlate with any of the genomic or survival data for any of the tumor types. This activity will continue to expand with additional data and tumor types.

Support for Radiation Therapy (RT)/Multimodality Trial Research. RT planning images and FDG-PET/CT images used to evaluate patient responses to chemo-radiation were acquired. The images were in a completely different format and required substantial effort to bring into the archive. This effort should allow for improved RT dose planning once the image sets are fused. SAIC-Frederick participated in the strategic planning subgroup for this project.

The team also managed the development of proposals for a clinical trial image management system and infrastructure for tumor tracking and managed the implementation of RECIST 1.1 for support from CBIIT through caBIG[®] Imaging Workspace. A coordination

team was established to develop recommendations for de-identification of in vivo images for the imaging community.

Cancer Diagnosis Program (CDP), NCI

Joy Beveridge, M.S., Clinical Project Manager III

Rhona McVicker, R.N., O.C.N., CTEP Administrator

Since January 2008, research subcontracting support has been provided to the Cancer Diagnosis Program (CDP) to assist with its mission to improve the diagnosis and assessment of cancer by effectively moving new scientific knowledge into clinical practice. To date, five initiatives have been supported: (1) construction of statistically designed tissue microarrays using pre-existing breast cancer tissue; (2) just-in-time accession of clinically annotated pathology specimens for molecular marker research; (3) calibration of the BCR-ABL assay; (4) Phase II calibration of the BCR-ABL assay; and (5) a specimen retrieval system (SRS) to collect cases for validation of NCI-supported clinical assays. As of July 2010, 19 research subcontracts were awarded to 11 different institutions for a total award amount in excess of \$1.6 million.

During the past year, the research subcontract with Harvard University continued. This organization is serving as a test site for the evaluation of a peer-to-peer informatics system to locate and retrieve specimens and pertinent clinical/outcome data on an as-needed (just-in-time) basis from community health care settings, including Health Maintenance Organizations (HMO) and community hospitals. Specifically, Harvard University will continue to test and adapt their previously developed de-identification protocol at local community health care settings, evaluating its performance on an even larger numbers of cases. Additional modifications and an extension were issued to Harvard in support of the just-in-time accession of clinically annotated pathology specimens for molecular marker research. The work on this subcontract will continue into FY2011 with SAIC-Frederick staff continuing to manage the open and pending subcontracts and monitoring the work being conducted at the multiple subcontract sites.

During the reporting period, CMRP staff also provided ad hoc support to the Patient Characterization Center (PCC)/Clinical Assay Development Center, an ARRA-supported subcontract for an SRS to collect cases for validation of NCI-supported clinical assays. This subcontract was awarded to Kaiser Permanente while NCI investigates other HMO institutions to participate in this initiative. NCI is establishing a system that will provide sets of appropriate specimens to facilitate evaluation of an assay's analytical performance and initial assessment of clinical utility. These sets of specimens will come from community settings and will be associated with clinical and outcome data. The specimen sets will have to be

assembled rapidly to meet assay development needs identified during clinical trial concept review and review of emerging technologies.

Initially, two member organizations of the Cancer Research Network, a subset of the HMO Research Network, participated in a pilot study that indicated previously developed software can identify cases that meet defined assay development needs. The software, developed by a group at Harvard as part of an earlier NCI initiative, was designed to interact with existing medical records at the participating institutions, to strip the records of protected health information (PHI), and to use natural language processing to collect specified data related to treatment and outcomes.

The current request is to support the collection of specimens from 500 to 1000 cases each of defined tumor types. The cases will be evaluated for their completeness, and appropriate paraffin blocks will be submitted to a repository in Frederick, Maryland, for subsequent distribution to laboratories participating in the Clinical Assay Development Program. Demographic and clinical data will be assembled into a database established by NCI with contractor support. Before utilization of specimens, a pathologist will review each case to ensure that it meets the requirements of the study in which it will be used.

Support to the Cooperative Planning Grant for Cancer Disparities Research Partnerships (CDRP) Program and the Cancer Expert Corps (CEC), within the Radiation Research Program (RRP), NCI

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The Cooperative Planning Grant for CDRP is a program that supports the conduct of radiation oncology clinical research trials in institutions that care for a disproportionate number of medically underserved, low-income, ethnic and minority populations, but that traditionally have not been involved in NCI-sponsored research. CDRP supports collaborative partnerships between grantee institutions and experienced institutions actively involved in NCI-sponsored cancer research. CDRP is linked to those centers by TELESYNERGY[®], a telemedicine system capable of transmitting a wide variety of diagnostic-quality images, including radiology and pathology images. This sophisticated telemedicine system provides support to community hospitals and their experienced cancer center partners, and advances the mentoring process, provides clinical research advice and guidance, and imports continuing educational activities, despite a community hospital's geographic isolation.

From October 2002 through September 2007, administrative support was provided to the CDRP grant program. Support included: (1) serving as the primary

contact for the grantees; (2) coordinating the efforts of the awarded institutions and their partners as they implemented and enhanced their clinical research programs to enroll special population patients on trials and to develop more effective outreach educational and prevention programs; and (3) assisting with the overall grant administrative functions of CDRP and the evaluation process.

In September 2007, the SAIC-Frederick grants specialist assigned to support CDRP transferred to support another DCTD program, and ultimately, the Radiation Research Program (RRP) decided that full-time support was not required. During FY2009, only interim administrative support was being provided to this program and during FY2010, while a full-time grants specialist position remains an approved position, no support was provided to this program.

Beginning in December 2005, high-level administrative support was provided to CEC, a unique RRP-based initiative that helps provide the infrastructure, technical assistance, and coordination of public and private organizations to establish a regional, national, and international knowledge and mentoring network of expert cancer professionals. Through the development and implementation of research, education, and communications platforms, CEC would enable applicant organizations to become active and networked members of the global cancer research community and, thereby, help generate, benefit from, and disseminate new knowledge and support best practices related to cancer research, prevention, diagnosis, and treatment to health disparities communities who have historically been on the periphery.

CEC is patterned after the Peace Corps in that it emphasizes person-to-person connectivity and long-term mentoring relationships. It is composed of infrastructure (expert hubs in Washington, D.C., Brussels, Singapore, and potentially others), recipients (disparities populations in the United States and worldwide), and experts (the United States and international partners). It will be a unique example of a PPP involving the U.S. government, international partners, professional organizations, foundations, individual contributors, and industry. Cancer is now a major worldwide health burden to both developing and developed countries. CEC will not only advance cancer treatment, but will also serve to bring the world closer together to solve common problems. Once developed, this model can be used for other medical matters, including medical response to various threats. It is also anticipated that future growth would be largely from non-U.S. government sources. CEC builds on existing NCI programs and partnerships, including telemedicine (TELESYNERGY[®]), cancer disparities programs (Center to Reduce Cancer Health Disparities and CDRP), cooperative groups, clinical trials quality assurance, biospecimen banks, caBIG[®], and international partnerships.

From December 2005 through July 2008, a comprehensive business plan and budget was presented to NCI, NIH, and HHS leadership in an attempt to obtain dedicated funding for the initiative. In addition, numerous

collaborations were initiated with private organizations that anticipated being part of the PPP. Unfortunately, dedicated funding from NCI was not allocated, so the full-time staff assigned to support CEC resigned. No support was provided to the CEC until December 2008, when part-time effort was provided for the CEC's ongoing efforts to identify potential private partners, such as ASCO, the International Agency for Research on Cancer (IARC), and the International Union against Cancer (UICC).

Since December 2008, part-time support has been provided to collaborate and assist in developing a plan of action to contact previous ASCO, IARC, and UICC mentors who are willing to help develop relevant research projects and access NIH funding through the grant process. The mentors are working with their previous mentees in submitting abstracts along with specific aims detailing their cancer research proposals. More than 40 mentors have expressed interest and are in various stages of submitting abstracts to NCI. The abstracts are currently being reviewed by RRP principals; they are currently investigating potential grant funding opportunities and matching the opportunities with the abstracts. RRP remains involved with the mentors, offering assistance with the task of applying for an NIH grant. The list of participating individuals is continually updated and forwarded to RRP.

Additionally, several of NCI's CTEP personnel have expressed interest in volunteering their time and talents in this venture. The Oncology Nursing Society is offering to assist in providing expert nursing resources. All corresponding spreadsheets and documents are being forwarded to RRP in order for these to be incorporated into their database(s). NCI persists in investigating potential funding sources for CEC and for hiring full-time NCI staff. SAIC-Frederick anticipates the level of support provided to CEC to decrease in FY2011.

Support to the Division of Cancer Control and Population Sciences (DCCPS) Behavioral Research Program (BRP), NCI

Beth Baseler, M.S., Director

Mary Spinelli, B.S., Clinical Program Administrator

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor

Lila Finney-Rutten, Ph.D., M.P.H., Behavioral Scientist

Annie X. Feng, Ed.D., Behavioral Scientist

Rebecca Anhang Price, Ph.D., Behavioral Scientist

Giovanna Zappala, Ph.D., Medical Affairs Scientist

Heather Edwards, Ph.D., M.P.H., Behavioral Research Associate II

Ami L. Bahde, M.P.H., Behavioral Research Associate II

Kia Davis, M.P.H., Special Projects Administrator

Allison Rose, M.H.S., Clinical Project Manager I

Paul Courtney, M.S., Clinical Project Manager II

The primary goals of the Division of Cancer Control and Population Sciences (DCCPS) are to reduce risk, occurrence, and deaths from cancer and improve the quality of life for survivors. Over the past 10 years, CMRP has assisted DCCPS by providing programmatic and scientific support services to all branches within the DCCPS's BRP, including the Tobacco Control Research Branch (TCRB), Health Communication and Informatics Research Branch (HCIRB), Applied Cancer Screening Research Branch (ACSRB), Office of the Associate Director (OAD), Basic and Biobehavioral Research Branch (BBRB), and Health Promotion Research Branch (HPRB). CMRP behavioral scientists and project administrators have been pivotal in researching the various causes and circulation of cancer in populations, developing new interventions, and observing and communicating cancer trends to the public. CMRP provided a central leadership role in developing, maintaining, and evaluating several NCI web sites, including <http://smokefree.gov>, <http://women.smokefree.gov>, and <http://meetings.smokefree.gov>. These web sites have resulted in NIH Plain Language awards for several staff members during the past 10 years. The passing of legislation granting FDA the authority to regulate tobacco products brought new responsibilities and an increased workload to CMRP as staff helped draft a number of responses to HHS, FDA, and White House inquiries. As a vital member of the Health Information National Trends Survey (HINTS) III Management Team, CMRP staff was responsible for providing a key source of information for health care providers, researchers, cancer patients, and survivors. Key staff has presented numerous scientific presentations at leading conferences and has published more than 90 publications in peer-reviewed journals. The team played a significant role in developing and presenting NCI's new smoke-free meeting policy. This policy was recognized nationally as a commendable step toward national efforts to pass smoke-free laws.

Recognizing the growing needs of SAIC-Frederick's support to DCCPS, a clinical program administrator (CPA) position was requested and approved via YT 08-220. The CMRP clinical program administrator serves as an essential communication liaison between NCI's DCCPS and SAIC-Frederick management and staff. This position provides administrative support to various branches within the program and works closely with the on-site supervisor, SAIC-Frederick personnel, and the customer to coordinate

and participate in planning and the implementation of new and ongoing initiatives. These activities also include: recruiting and hiring for various technical positions; assisting with creating and maintaining budget assumptions and cost estimates for all existing and new positions and activities within the group; serving as the SAIC-Frederick Contracting Officer's Technical Representative (COTR) on numerous subcontracts; coordinating the planning and support for various conferences and seminars (e.g., 14th World Conference on Tobacco and Health Disparities [Mumbai, India], Informatics for Consumer Health: Summit on Communication, Collaboration, and Quality) for the program; and serving as the point of contact on these efforts.

Recently, a CPM II was hired to lead the efforts related to the PopSciGrid. The PopSciGrid is an initiative to use and expand on the resources of caBIG[®] to develop tools for behavioral health scientists. Specifically, PopSciGrid aims to develop resources that allow researchers to combine and analyze large datasets (e.g., population-based health surveys, such as the National Health and Nutrition Examination Survey [NHANES], National Health Interview Survey [NHIS], and HINTS). This initiative includes addressing the technical details of mounting data sets, harmonizing data elements, and developing analytic tools.

Additionally, SAIC-Frederick has been requested to provide additional support to BRP in order to support the development of new areas of research emphasis and expansion of its research portfolio. During the past year, SAIC-Frederick hired an MAS to fulfill this need. The MAS contributed to the development of a biobehavioral research network and assisted planning a one-day seminar, "Stress-Mediated Effects on Cancer Biology: A Primer on Cancer Biology and Plausible Mechanisms."

CMRP has played a major role in providing scientific expertise and special project support to BRP's TCRB and HCIRB and, most recently, to the Surveillance Research Program. Current efforts supporting DCCPS activities include support to the <http://meetings.smokefree.gov>, <http://smokefree.gov>, and <http://women.smokefree.gov> web sites; support to the North American Quitline Consortium and the National Network of Quitlines; participation in the development of scientific meetings related to tobacco cessation; subcontracting support to various tobacco cessation, Cancer Care, Tobacco Research Network on Disparities (TReND), and other initiatives; and support to HINTS, a biennial, general-population survey designed to measure the nation's use of health information technologies. CMRP BSs and project administrators play a pivotal role in providing scientific leadership and support to a wide range of high-visibility scientific initiatives important to the mission of BRP to disseminate evidence-based findings to prevent, treat, and control tobacco use as a public health priority. This dissemination of information allows for scientific progress to translate into communicable and accessible health information for the public.

Support to the Basic Biobehavioral and Research Branch (BBRB)

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor
Giovanna Zappala, Ph.D., Medical Affairs Scientist

The medical affairs scientist (MAS) and senior behavioral scientist (SBS) provided support to establish the newly created BBRN. The purpose of the network is to stimulate transdisciplinary research on biological and behavioral mechanisms that underlie the interactions of mind, brain, body, and social context, and contribute to the pathogenesis, course, and treatment of cancer. The network includes diverse disciplines of researchers who seek the following goals: (1) to encourage collaborations among multiple research disciplines; (2) to serve as a forum for generating new ideas and research projects focused on understanding social regulation of tumor biology; and (3) to serve as a knowledge-transfer conduit for basic, clinical, and translational scientists. In addition to monthly conference calls, the network meets three to four times per year. CMRP staff provided scientific communications and administrative support, meeting and travel coordination, and established four consulting agreements and one Yellow Task to support BBRN efforts.

In addition, CMRP staff planned and facilitated a one day pre-conference workshop to the American Psychosomatic Society (APS) annual meeting in Portland, OR, entitled, "Stress-Mediated Effects on Cancer Biology: A Primer on Cancer Biology and Plausible Mechanisms." Experts in the field educated over 100 attendees on: (1) initiation and the six hallmarks of cancer; (2) angiogenesis, invasion and metastases; (3) inflammation and the immune response; (4) synthesis of cancer biology fundamentals; (5) systemic regulation of tumor progression I: hypothalamic pituitary adrenal axis; (6) systemic regulation of tumor progression II: sympathetic nervous systems; and (7) systemic regulation of tumor progression III: clinical models and translational applications. Due to a successful turnout, this pre-conference workshop will now be offered annually.

Support to the Tobacco Control Research Branch (TCRB), NCI

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor
Ami L. Bahde, M.P.H., Behavioral Research Associate II
Allison Rose, M.H.S., Clinical Project Manager I

CMRP staff continued to participate in a wide range of activities during this reporting period. These activities include: reviewing abstracts for scientific conferences and

manuscripts submitted to scientific journals, authoring multiple manuscripts published in scholarly journals, and presenting original work at scientific meetings. CMRP's SBS served as NCI's scientific staff representative at the American Public Health Association (APHA), the American Psychosomatic Society (APS), the International Society of Behavioral Medicine (ISBM), the Society for Neuroscience (SfN), the Society for Research on Nicotine and Tobacco (SRNT), and the Society of Behavioral Medicine (SBM) annual meeting. In addition, oral presentations were given at the American Society of Preventive Oncology (ASPO) in Bethesda, MD, and at ISBM in Seattle, WA.

Within TCRB, in addition to general scientific and administrative support, CMRP personnel provide mentoring to fellows, interns, and graduate students, and are actively involved in more than a dozen research projects. The passing of legislation granting FDA authority to regulate tobacco products brought new responsibilities and an increased workload to TCRB. The SBS was the key staffer responsible for planning an NCI in-house meeting that brought together leadership from the new Center for Tobacco Products at FDA, the World Health Organization (WHO), and NCI's DCCPS.

The SBS was also a key committee member, planning NCI's December meeting, "Treating Tobacco Dependence at NCI Cancer Centers." This meeting provided an overview of tobacco use, changing trends in smoking, quitting in the context of cancer care, treatment, and survivorship, and highlighted the importance of treating nicotine dependence in the context of cancer care and survivorship. All 37 of the NCI-designated cancer centers participated in the conference and the proceedings were turned into a publication.

In addition, the SBS continues to serve as the lead contact person for NCI's smoke-free meetings policy and maintains NCI's smoke-free meeting planning web site. This web site includes an interactive smoke-free venue locator tool to help staff find smoke-free venues based on up-to-date smoking policy information for states and local jurisdictions. It also provides additional information about the policy and provides a mechanism for staff to send inquiries and concerns. This person also serves as a key member of the TCRB team that manages a contract funding multidisciplinary research on the interplay of tobacco type, behavior of product use, chemistry, toxicology, and biology to determine the addiction and cancer risk potential of new, potential reduced-exposure tobacco products.

With the help of a behavioral research associate (BRA), SAIC-Frederick continues to support, promote, and maintain <http://smokefree.gov> and <http://women.smokefree.gov>, NCI's smoking cessation web sites. Smokefree.gov has been rated by peers in published manuscripts as one of the two most trusted and credible web sites in the world for smoking cessation. It continues to maintain the number one ranking on both Google™ and Yahoo!® rankings, using the search term "quit smoking," without any commercial advertising or

promotion. CMRP's BRA manages the global Smokefree.gov task list. The BRA works with team members to ensure that deliverables are completed and helps determine priorities to ensure proper implementation of selected revisions to the site. This year, redesign and maintenance of Smokefree.gov, <http://smokefree.gov>, continued. The BRA helped determine new areas for the web site, including tools, content, and applications that help the target audience to quit smoking and to remain non-smokers. 1-800-QUIT-NOW pages were integrated into Smokefree.gov and a new section on other tobacco products was developed. Mother's Day 2010 marked the first anniversary of the Smokefree Women campaign, a multi-million dollar smoking cessation campaign targeted at women. The centerpiece of this effort is the Smokefree Women web site, <http://women.smokefree.gov>, which offers a special focus on topics important to women. Along with the founding team, the BRA was responsible for launching the initial concept for Smokefree Women. This year, two applications were added to the Smokefree Women Facebook® group to increase social encouragement. The project has been recognized at NCI, NIH, and HHS levels. The team received an NIH Plain Language/Clear Communication Gold Award and an NIH Director's Award Nomination (pending selection in July 2010) for the Smokefree Women web site.

The passing of legislation granting FDA authority to regulate tobacco products brought new responsibilities and an increased workload to TCRB. The BRA helped draft a number of responses to HHS and FDA inquiries and created presentations for the DCCPS division director and the TCRB chief. One of the noteworthy responses was the NIH Priority Setting, "Tobacco Goal on Youth Smoking Prevalence." HHS selected the area as one of their high-priority goals and designated NIH, the Centers for Disease Control and Prevention (CDC), FDA, and the Administration for Children and Families (ACF) as contributors to the performance goal. These goals will also become goals of the Obama presidential administration. The CMRP BRA participates in communication liaison meetings as the TCRB representative; one at the division level and the other at the program level. Both the BRP and the DCCPS communication liaison meetings facilitate the transfer of best practices, protocols, and project updates among BRP and DCCPS communication staff. The DCCPS New Media Interest Group was formed to help further our understanding of new media in the context of DCCPS's mission; the BRA helped plan their monthly meetings.

The CMRP BRA also continues to expand NCI visibility by publishing and preparing presentations, manuscripts, and *NCI Cancer Bulletin* articles. The CMRP BRA coordinates the dissemination of TCRB publications at national and international conferences, such as the American Psychological Association (APA), SRNT, National Conference on Tobacco or Health (NCTOH), National Conference on Health Communication, Marketing, and Media (NCHCMM), and

the World Conference on Tobacco or Health (WCTOH). The BRA was also involved in disseminating the NCI Tobacco Control Monograph No.20 titled “Phenotypes and Endophenotypes: Foundations for Genetic Studies of Nicotine Use and Dependence,” which involved revising fact sheets, creating summary presentations, and distributing copies of the publication to NIH leadership and various organizations.

CMRP staff has provided continued assistance to TCRB in support of TReND. TReND’s mission is to understand and address tobacco-related health disparities (TRHD) by advancing science, translating the scientific knowledge into practice, and informing public policy. The subcontract initially established to support the network and several conferences was terminated. In its place, two additional subcontracts have been established to support TReND efforts, including support to numerous conferences. CMRP staff has been involved with providing administrative and scientific support to the various TReND research projects, dissemination efforts, and investigator conference calls and meetings, including the final culmination meeting of TReND to be held in October 2010.

A CMRP clinical project manager I (CPM I) participated in a number of research activities involving the dissemination of critical tobacco-related findings at international and domestic conferences and meetings. The CPM I served as the liaison to CDC and supported efforts to plan the 2nd Conference on Menthol and Tobacco, a research conference highlighting the current state-of-the-science on menthol cigarettes organized by a number of tobacco control researchers and advocacy groups. The CPM I collaborated with NCI colleagues and co-authored two poster presentations at the conference. The CPM I also helped coordinate a panel session sponsored by TReND and served as a moderator for a scientific session on tobacco-use behaviors among populations with mental illness at the 135th APHA Annual Meeting and Exposition. The CPM I also served on the planning committee for a preconference workshop held at SRNT’s 16th Annual Conference and authored or co-authored three presentations that have been accepted for presentation at UICC World Cancer Congress to be held in Shenzhen, China in August 2010. A previous presentation authored by the CPM I at the 14th World Conference on Tobacco or Health, titled “The Role of Worksite and Home Smoking Bans in Smoking Cessation among U.S. Employed Adult Female Smokers,” has been accepted for publication with the *Journal of Health Promotion* and is expected to be published in early fall 2010.

The CPM I continued to provide assistance to NCI’s efforts to expand the science base on the role of menthol cigarettes in tobacco use behaviors and disease outcomes – a critical issue under examination by the newly created Tobacco Products Division of FDA in support of the 2009 Family Smoking Prevention and Tobacco Control Act. The CPM I assisted with efforts to develop and publish a special journal supplement, focusing on the role of menthol in tobacco use, addiction/cessation behaviors,

and disease outcomes, using data from two national surveys co-sponsored by NCI. The CPM I co-authored two publications that will be published in the special issue. The CPM I also led the development of NCI’s web site on menthol and tobacco and a comprehensive literature review that includes 343 peer-reviewed research articles, dating back to 1921, on the topic of menthol and tobacco. The literature review, a key resource to FDA staff, provided the foundation for much of the research presented at the first meeting of the FDA Tobacco Products Scientific Advisory Committee.

The CPM I also provided support to TCRB’s international tobacco research activities and led the development of a two-page fact sheet (highlighting NCI’s international tobacco control research initiatives) distributed at a key meeting attended by a number of federal agencies and hosted at the White House. The CPM I also served as the primary note-taker for a groundbreaking collaborative meeting, the Joint Workshop on Environmental Pollution and Cancer in China and the U.S. (co-hosted by the Chinese Academy of Sciences and NIH), held in Guangzhou, China. Following the meeting, the CPM I led the development of the meeting report.

Support to the Tobacco Research Network on Disparities (TReND)/ Tobacco-Related Messages and Media (TeRMM) within the Tobacco Control Research Branch (TCRB), NCI

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor
Allison Rose, M.H.S., Clinical Project Manager I, Supervisor TReND/TeRMM

Beginning in 2004, CMRP began to provide assistance to NCI’s Tobacco Control Research Branch (TCRB). TCRB’s mission is to lead, collaborate on research, and disseminate evidence-based findings to prevent, treat, and control tobacco use. To achieve this mission, TCRB established several transdisciplinary and multidisciplinary research networks to foster collaborations among researchers and practitioners from diverse geographical backgrounds. CMRP staff continues to provide administrative and scientific support to one of these multidisciplinary research networks, TReND. The mission of TReND, a collaborative effort funded by NCI’s TCRB and the American Legacy Foundation, is to understand and address tobacco-related health disparities (TRHD) by advancing science, translating scientific knowledge into practice, and informing public policy. The network includes investigators from diverse fields who seek to: (1) encourage collaborations to promote TRHD research across multiple disciplines; (2) establish a translation mechanism for interacting with other networks, organizations, and community groups to address TRHD; (3) promote the involvement and training of junior investigators and the participation of senior

investigators in TRHD research; and (4) provide and facilitate scientific information and serve as a resource on tobacco and health disparities issues. This is the only national research network on tobacco and health disparities that offers a unique forum for stimulating scientific inquiry, promoting scientific collaborations, and evaluating the scientific evidence of research. Over the past six years, TReND's efforts have resulted in four published special journal issues (plus three additional special journal issues under development), four meeting reports, numerous peer-reviewed manuscripts and conference presentations, 18 research projects, six scientific and training workshops, career development and enhancement, multiple TReND-inspired collaborations, and the first and only public web site devoted to TRHD, www.tobaccodisparities.org.

CMRP currently maintains 1.3 full-time employees (FTEs) to support TReND's efforts. The full-time position is filled by a CMRP CPM I. In support of TReND, the CPM I and other CMRP staff provide scientific, communications, and administrative support; meeting and travel coordination; and have established 16 consulting agreements and four subcontracts. The subcontracting assistance includes: providing technical support for projects, such as the development of a multi-channel communications plan for researchers interested in tobacco and health disparities; the applicability of previously identified predictors of tobacco cessation; the methodological and conceptual issues associated with small sample size populations; and the sampling methodology in migrant farm working communities. Fostering collaborations, conducting research, and disseminating evidenced-based science requires multiple channels of communication which include, but are not limited to, in-person meetings and symposia, video conferences, teleconferences, print media, web site interactions, e-mail, and video. CMRP staff is currently working with TReND to provide logistic and administrative support for their final meeting to be held in October 2010. The goals of this final meeting are to highlight the contributions of TReND research, examine the role of network and network processes in scientific inquiry, and discuss areas of future investment to reduce TRHD. CMRP staff is also developing the conference registration web site, arranging travel and accommodations for invited speakers and meeting participants, and assisting with the development of the meeting agenda and scientific program. During the meeting, the senior special projects administrator (SSPA) will present a research analysis activity that was part of TReND's efforts in a presentation titled, "A More Comprehensive View of Worksite and Home Smoking Bans: Are We Reaching All Working Women?"

The CPM I primarily works with NCI staff and TReND investigators, assisting TReND's research activities by conducting literature reviews, summarizing scientific information, providing analytic and writing support to various TReND-related efforts, working with researchers to solicit input, and completing final products,

including journal articles, meeting reports, and other project materials. During the past year, the CPM I has worked with the TReND project leaders to update content for TReND's web site,

<http://dcccps.nci.nih.gov/tcrb/trend/index.html>, which includes descriptions and other relevant information for each of TReND's past and active projects; there are currently 18 projects to date. These webpages can also be accessed via TReND's public web portal, <http://tobaccodisparities.org>. The SSPA has been working with members of the public web site team at the Dana Farber Cancer Center to ensure that the two TReND web sites are complimentary and not redundant in their efforts.

Additionally, the CPM I has been responsible for the dissemination of TReND research products and has assisted with efforts to coordinate and plan for the three special journal issues currently under development, which focus on: (1) the role of menthol cigarettes in tobacco-use behaviors; (2) smoking prevention and cessation interventions among priority populations; and (3) global efforts to reduce tobacco-related inequalities. The CPM I has been involved in the development and dissemination of the call for abstracts, coordinating conference calls with editorial team members, and providing other research and administration support as needed.

Support to the Health Communication and Informatics Research Branch (HCIRB), NCI

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor
Lila Finney-Rutten, Ph.D., M.P.H., Behavioral Scientist

CMRP staffs a behavioral scientist (BS) to support and lead several initiatives within HCIRB. Through these initiatives, the BS serves on the management team for the Health Information National Trends Survey (HINTS), a biannual, nationally representative survey that collects information on how Americans find and use cancer information and determines what type of health information people are looking for and if they are finding it. Duties include: leading weekly planning meetings for the program; developing program publications; supporting HINTS data users and responding to their questions; updating and providing content to the HINTS web site; and working to develop and implement the next iteration of the HINTS survey, including informing the development of an online infrastructure for item solicitation and rating.

The BS also serves on the Steering Committee for the Center for Excellence in Cancer Communication Research (CECCR). CECCR duties include: participating in monthly calls; working with the CECCR grantees to develop and implement an evaluation of the Cancer Survival Query System developed by NCI's

Statistical Research and Applications Branch; and briefing CECCR leadership on opportunities for collaboration in HCIRB initiatives.

The BS works on many writing projects related to HINTS and other DCCPS data resources. Since August 2009, the BS has published nine articles in peer-reviewed journals, including the *Journal of the National Cancer Institute*, the *New England Journal of Medicine*, and *Cancer Epidemiology, Biomarkers, and Prevention*. The BS has also published three book chapters and two technical reports during this time. Additionally, nine articles have been submitted for publication and are currently under review.

CMRP's BS also served as the lead editor on a Hampton Press volume *Health Communication* to be published in August 2010. The volume is dedicated to analyses of HINTS data with a focus on methodological issues, the changing communication landscape, health disparities, and the role of health IT in promoting health communication. The BS serves as lead editor on a special issue of the *Journal of Health Communication* to be published in December 2010. This issue will document the use of HINTS data to inform the science and practice of health communication so that other scientists, public health planners, and medical practitioners can benefit from the national data collection.

In addition, the BS actively participates in and presents work at national meetings. The BS presented over 20 papers at the following meetings since September 2009: Cancer Survivorship Research Conference, in Washington D.C., June, 2010; Society for Behavioral Medicine, Seattle, WA, April, 2010; American Society for Preventive Oncology, Bethesda, MD, March, 2010; Society for Personality and Social Psychology annual meeting, Las Vegas, NV, January 2010; Cancer Control Congress, Cernobbio, Como, Italy, November, 2009; American Public Health Association, November, 2009, Philadelphia, PA; and the Health Information National Trends Survey Data Users Conference, September 24–25, 2009, Silver Spring, MD.

The BS chaired the planning committee for the HINTS Data Users Conference, Partners in Progress, in September 2009. The conference included oral presentations, poster presentations, and discussions that focused on the role of collaboration and use of national data to inform health policy, practice, and research. The BS also served on the planning committee for the NCI Workshop on Cigarette Warning Labels, Packaging, and Product Labeling. The aims of this workshop were to describe the knowledge and beliefs that the general public has concerning smoking and health and what influences their knowledge, beliefs, and behavior regarding smoking; review the scientific evidence on the effectiveness of warning labels, packaging, and product labeling of cigarettes; define the best practices for practical aspects for implementation of warning labels, packaging, and product labeling of cigarettes; and identify research needs to improve public health effectiveness of cigarette warnings, packaging, and product labeling. The BS

summarized proceedings from this meeting into a set of recommendations. These recommendations were submitted to FDA in response to their call for state-of-science recommendations for implementing their newly granted regulatory authority over tobacco.

The BS serves on an expert panel for BRP and supports their efforts to develop a longitudinal survey to assess and compare the extent to which certain health behavior theories and related constructs are predictive of health behavior change relevant to cancer. The BS participated in several conference calls and an all-day expert panel meeting to discuss the aims of the survey, theoretical content, behavioral outcomes, and appropriate methodology for the survey.

CMRP provides a special projects administrator (SPA) to support the research efforts of HCIRB. The SPA primarily works with NCI's chief of HCIRB and the program director for NCI's Multimedia Technology Health Communication Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Program.

The SPA also works closely with investigators funded through the CECCR Initiative. The CECCR Initiative is a five-year, \$40 million initiative funded to promote innovation and advance basic science in cancer communication. The SPA assists by coordinating activities across the CECCR sites, and by planning site visits and other CECCR meetings and phone calls. CMRP's SPA has been instrumental in HCIRB dissemination activities and has played a leading role in coordinating the distribution of branch materials to national conferences and professional organizations. In recognition of their leadership in dissemination efforts, the SPA was invited to join the Communication-Research Practice Interface workgroup to discuss a research-to-practice "pipeline" with others from DCCPS and the Office on Communications and Education. The offer to join was accepted and the SPA participated in the workgroup.

Additionally, the SPA identified and coordinated efforts to work with potential partners in dissemination, such as the National Public Health Information Coalition (NPHIC), which includes a network of public health communicators who distribute evidence-based communication strategies.

The SPA assists with HINTS dissemination efforts, particularly partner outreach. As part of the dissemination team, the SPA is responsible for using expertise to identify collaboration opportunities by leveraging existing partnerships and by creating new ones, such as NPHIC, so results users will be aware of and use HINTS resources and materials.

Furthermore, the SPA led a collaborative effort between NCI's HCIRB and Hablamos Juntos, a program of the Robert Wood Johnson Foundation. This partnership focused on assessing the translation quality of the HCIRB's HINTS briefs that have been translated into Spanish. These English and Spanish language briefs summarize significant research findings from HINTS, which will be distributed to a broad audience, including

public health professionals. Upon completion of the translation quality assessment, the SPA led a meeting between NCI and Hablamos Juntos to discuss the process, plan the next steps, and create a summary report. The SPA has been working with the Office of Communication and Education (OCE) staff to translate all of the HINTS briefs and fact sheets into Spanish.

Additionally, the SPA continues the work on health disparities and has conducted a content analysis of the presentation of the Human Papillomavirus Vaccine (HPV) vaccine in minority U.S. newspapers. The SPA has served as co-author on several manuscripts currently in press or under review by utilizing national data, including HINTS, the Physician Survey data collected in the Applied Research Program and the Food Attitudes, and behavior data collected by BRP. The SPA has presented this work at several national conferences, including the HINTS Data Users Conference and the International Cancer Control Congress.

Support to the Office of the Associate Director (OAD), NCI

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor
Annie X. Feng, Ed.D., Behavioral Scientist
Paul K. Courtney, Clinical Project Manager II

The behavioral scientist (BS) supporting OAD has been with SAIC-Frederick a short time, but has played a tremendous role. The BS serves as project leader of the Transdisciplinary Tobacco Use Research Centers (TTURC) Bibliometric Study. Under this capacity, the BS works with a multidisciplinary team comprised of psychologists, epidemiologists, evaluation experts, statisticians, and information scientists to examine the TTURC research productivity, utilize stronger design features, develop new bibliometric indicators, and use unconventional visualizing methods. This is a collaborative effort between the NCI Bibliometric Study Working Group, contractors in academia, and professional corporations.

The BS also served as the project director of the HINTS usability testing project. HINTS is a biennial, general population telephone survey designed to measure the nation's use of health information technologies. Under the umbrella of the HINTS usability testing project, there are ongoing projects that look at the usability of various components of the HINTS web site (e.g., electronic codebook, online materials, data, etc). Other HINTS products have undergone usability testing, such as the HINTS trends report and HINTS briefs.

The BS gave more than eight presentations during the past year, including presentations at the American Educational Research Association annual meeting in Chicago, Illinois; the Transdisciplinary Research in Energetics and Cancer Scientific Meeting in Seattle, Washington; and the American Evaluation Association

annual meeting in Denver, Colorado. The BS continues to hone evaluator expertise through continued training throughout the year.

A CPM II, supporting OAD, provides leadership and coordination of multiple biomedical informatics projects, including efforts related to the PopSciGrid, in support of NCI's Division of Cancer Control and Population Sciences (DCCPS). The PopSciGrid is an initiative to use and expand on the resources of caBIG[®]. By utilizing the emerging PopSciGrid, the CPM II has been instrumental in bridging the gap between IT, research scientists, and other end users that enable the correct information to be available to the right person at the right time to support their workflow. For OAD, keeping up-to-date on what other Institutes/Centers (ICs) and Divisions are doing about informatics infrastructure and maintaining awareness of other cyber infrastructure initiatives in the field of biomedical research is vital. The CPM II travels nationally and internationally and facilitates meetings between ICs, Divisions, and CBIIT leadership, etc., and advises OAD on how best to adopt technologies from various resources. The CPM II works with national organizations to develop standards on tools and techniques available to support population cancer research. The CPM II completed the HINTS unified modeling languages (UML) model for use as an exemplar dataset in the grid-enabled measures (GEM) database for the SBM meeting. The CPM II is co-author on an abstract, titled "The Consumer Health Portal: An Informatics Tool for Translation and Visualization of Complex, Evidence-Based Population Health Data for Cancer Prevention and Control," to be presented at the APHA annual meeting this fall. The CPM II continues collaborations between DCCPS and CBIIT to gain a better understanding of the larger CBIIT initiatives, and how DCCPS could engage more productively with them.

Support to the Applied Cancer Screening Research Branch (ACSRB), NCI

Sarah E. Evans, Ph.D., Senior Behavioral Scientist, On-Site Supervisor
Heather Edwards, Ph.D., M.P.H., Behavioral Research Associate II
Rebecca Anhang-Price, Ph.D., Behavioral Scientist

The behavioral research associate (BRA), supporting ACSRБ collaborated with NCI and external colleagues on a variety of ongoing projects. In the area of strategic planning, the BRA completed an HHS-wide portfolio analyses of grant funding related to aging and behavioral research in genomics, and represented the branch by highlighting branch priorities and interests at the April 2010 HINTS Users Meeting. In addition, the BRA served on several committees involved in planning a March 2011 conference and subsequent journal supplement about multilevel interventions in health care.

The BRA conducted research and collaborated on papers related to cancer screening in an aging population, multilevel factors across the cancer-care continuum, genetic testing and the paradigm of cancer screening, influences of EHR use, and media coverage of the U.S. Preventative Services Task Force (USPSTF) revised breast cancer screening guidelines. A paper about organizational factors in cancer screening coauthored with NCI and SAIC-Frederick colleagues was published in the *Journal of the National Cancer Institute* monograph. Other work was presented at the SBM meeting in 2010. The BRA will receive an NIH Director's Award in the group category in July 2010.

The BS led the effort to develop and submit a special session panel for inclusion in the November 2010 APHA conference. The panel is entitled, "Reaching Subgroups at Greatest Risk with New Medical Technologies: Learning from the Human Papillomavirus (HPV) Vaccine." In addition, the BS drafted a manuscript on HPV vaccine uptake among adult women, based on analyses of the National Health Interview Survey 2008. The BS also wrote an outline for a paper on the role of genetic susceptibility testing in cancer screening and contributed to the continuing development of a paper on multilevel simulation modeling in cancer care.

Based on team meeting discussions, the BS commissioned additional HPV vaccine analyses using the California Health Interview Survey and National Health Interview Survey. In collaboration with the BRA, the BS reviewed grants related to genomics and cancer screening, developed priority genomics questions for ACSRB, and contributed ACSRB's perspective to a Centers of Excellence in Genomics Translation Concept (currently under development at CDC).

Support to the Office of Latin American Cancer Program Development (OLACPD), NCI

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager
Irene Mueller, M.P.H., Clinical Project Manager I

OLACPD is a pilot initiative and partnership between NCI and the Fogarty International Center (FIC) designed to develop and implement mutually beneficial cancer research programs in Latin America. The goal of this program is to increase the capability of these countries to participate and partner in cancer research, including the critical development of clinical trials networks, advanced technology centers, and personnel to deliver state-of-the-art cancer care to patients.

Mexico, Argentina, Brazil, Chile, and Uruguay are participants in the U.S. – Latin America Cancer Research Network. Each has a specific formal agreement with NCI through a ratified Letter of Intent (LOI), which outlines joint efforts in cancer research projects, project-specific training and capacity building activities, as well as other research-related activities that support these projects.

The first phase of the Latin America initiative is a multi-site breast cancer molecular profiling pilot study. During the reporting period, support included: (1) budget preparation and monitoring; (2) scientific conference, seminar, and workshop planning and support; (3) the preparation of nine SAIC-Frederick international travel packages, conference coordination for four events, and 115 non-employee travel packages; (4) travel preparation for foreign and domestic travelers; (5) a Consultancy Agreement with a clinical pathologist with expertise in human tissue banking; and (6) a BOA and one subcontract with a clinical research organization for technical and scientific assistance to provide guidance and infrastructure support to collaborating investigators, researchers, and the Clinical Research Network Steering Committee in the implementation of the clinical study protocol. Four LOIs to participate in the molecular profiling of breast cancer study have been received from three Latin American countries; two from Mexico, and one each from Argentina and Brazil. Subcontract documents were translated into Spanish and Portuguese in preparation for the formal agreements between SAIC-Frederick and the participating countries to implement the breast cancer pilot study.

CMRP is establishing an agreement for a Latin America on-site coordinator as well as recruiting for a clinical project manager I and a senior program coordinator to provide dedicated support to OLACPD as the program plans for expansion in the upcoming year.

SUPPORT TO NIAID

Regulatory Compliance and Human Subjects Protection Program (RCHSPP)

Beth Baseler, M.S., Director
Molly Buehn, B.S., Director of Regulatory Affairs
Shelly Simpson, M.S., Clinical Trials Director
Laurie Lambert, B.S., Clinical Project Manager III
Barry Egel, M.D., Director, Clinical Safety Office
Barbara van der Schalie, M.S., Clinical Training Manager
Michael Galcik, M.S., IT Manager

OVERVIEW/SUMMARY

Since January 2002, CMRP has played a major role in developing a regulatory environment to support the work of the NIAID Intramural Research Program. CMRP established and managed RCHSPP, which included development of the Regulatory Affairs Group, Clinical Trials Management (CTM) team, and Clinical Safety Office (CSO). The objectives of RCHSPP are to continue to provide a unique resource for comprehensive clinical trials monitoring and management, regulatory support, and clinical safety oversight encompassing clinical trial monitoring; clinical research organization oversight; IND/IDE/DMF application development and management; ensure compliance with clinicaltrials.gov reporting requirements; regulatory surveillance over clinical trials; AE reporting; safety reporting; protocol and informed consent development and review; investigational product oversight; Data and Safety Monitoring Board (DSMB) and Safety Monitoring Committee (SMC) management; IRB support; IT systems maintenance; quality assurance compliance; document management, and training program support. All of these efforts are to ensure that the clinical protocols are conducted in accordance with HHS, FDA, and NIH regulations and ICH/GCP guidelines. Additionally, RCHSPP provides scientific administration oversight to the establishment and maintenance of subcontracts, logistical/project management, and operational support to a variety of clinical projects.

SAIC-Frederick's mission is to provide regulatory support to the PIs within NIAID to meet the requirements of the Standards of Clinical Research established by NIH in 2000. Before the RCHSPP existed, PIs were required to manage and coordinate all of the regulatory/monitoring oversight for their individual clinical studies. With the establishment of RCHSPP, the regulatory compliance, clinical monitoring, and medical monitoring aspects of clinical research are now supported. This has given the PIs more opportunity to focus on the main objectives of their clinical protocols.

RCHSPP provides dedicated regulatory, safety and clinical monitoring support for a variety of clinical trials conducted by the Intramural Research Program within NIAID. These Phase I, II, and III trials run the gamut from natural history to interventional studies, including gene therapy, and cover a wide range of infectious disease states. The studies may involve IND or IDE applications. While many of the clinical studies are conducted at NIH, Johns Hopkins University's (JHU's) satellite site, the Washington Hospital Center (WHC), Unity Clinic, and the Walker Clinic in Washington, D.C., the staff is also currently traveling to remote sites, such as Mali, Kenya, India, Uganda, Cambodia, Peru, China, Indonesia, Thailand, Vietnam, Singapore, Korea, Mexico City, and South Africa. Additionally, staff monitors domestic sites, including Children's Hospital in Seattle, University of Vermont (UV), University of Rochester, Yale University,

and Tufts University. RCHSPP also continues to play a significant role in the regulatory/clinical trials support for the DoD human immunodeficiency virus (HIV), general infectious diseases (GID) and Acute Respiratory Infections Consortium (ARIC) clinical protocols, including H1N1.

Key management staff members within RCHSPP serve as technical experts on a variety of committees and task forces within NIAID, including the NIAID Clinical Research Subcommittee (NCRS), the Learning and Professional Development (L&PD) Working Group, the Strategic Planning WG, the Protocol Navigation WG, and the steering committee for OSPA.

Regulatory Affairs Group (Investigational New Drugs/Biologics/Devices)

The RCHSPP Regulatory Affairs Group performs the essential functions of preparation, submission, and maintenance of Investigational New Drugs (INDs), Investigational Device Exemptions (IDEs), and Drug Master Files (DMFs) to ensure that these applications are in compliance with FDA regulations, Good Clinical Practices (GCPs), Good Laboratory Practices (GLPs), Good Manufacturing Practices (GMPs) and the International Conference on Harmonisation (ICH) guidelines. Regulatory Affairs staff consists of one Regulatory Affairs director, one senior IND manager, seven regulatory associates (RAs) and a regulatory submissions coordinator.

The Regulatory Affairs Group, in collaboration with the Regulatory Compliance and Human Subjects Protection Branch (RCHSPB) IND Clinical Research Oversight Manager (CROM), is responsible for oversight of IND, IDE, and DMF sponsorship; provides overall regulatory support and guidance to the intramural investigators; interacts with industry collaborators; and serves as a liaison to FDA. The RCHSPP Regulatory Affairs Group supports investigators in the Intramural Research Program of NIAID, which includes multiple laboratories within the Division of Intramural Research (DIR), as well as investigators within the Division of Clinical Research (DCR) and the Vaccine Research Center (VRC).

The Regulatory Affairs Group provides comprehensive protocol reviews to the PIs; interacts with various divisions of FDA; works closely with investigators to prepare IND, IDE, and DMF applications, and other regulatory documents; and interacts with various pharmaceutical companies as well as other outside contractors to obtain information required for the support of RCHSPB-sponsored projects. Other important responsibilities of the Regulatory Affairs Group are to prepare, compile, and submit various documents to maintain and ensure regulatory compliance of RCHSPB-sponsored INDs, IDEs, and DMFs. These documents include, but are not limited to, protocol amendments, information amendments, annual reports, safety reports, responses to FDA comments and requests for additional

information. In addition, staff members are also responsible for ensuring compliance with the mandated reporting requirements for the clinicaltrials.gov web site.

Currently, the Regulatory Affairs Group provides support for 56 active IND applications, two active IDEs, and five active DMFs, several of which include protocols conducted at international sites. During the past contract year, the group prepared and submitted 13 new IND applications and two new IDE applications. Additionally, there are approximately 15 INDs/IDEs in various stages of development. As part of the ongoing maintenance for these new and existing applications, staff developed and submitted to FDA more than 280 IND, IDE, and DMF serial submissions, and 10 pre-IND or pre-IDE meeting requests and information packages. Staff also participated in numerous teleconferences with FDA to discuss IND and IDE issues. Other IND, IDE, and DMF support provided by the Regulatory Affairs Group during the contract year includes: (1) participating in multiple teleconferences and face-to-face meetings with NIAID scientific investigators, PIs, collaborating industry representatives and other stakeholders to discuss ongoing scientific issues and IND management strategies (e.g., MedImmune pandemic influenza CRADA projects, anti-H1N1 plasma studies); (2) participating in multiple meetings with investigators from the Laboratory of Infectious Diseases to review current and proposed projects and project timelines; (3) and providing cGMP guidance to RCHSPB about product storage, labeling, and manufacturing issues.

The Regulatory Affairs Group continued to move toward the goal of transitioning from paper INDs to the electronic common technical document (eCTD) format for FDA submissions. After evaluating the options available from three separate vendors, the director selected an eCTD software applications package from Omnicia, Inc., and a purchase order and product licensing agreement were signed in mid-December 2009. Omnicia representatives provided a weeklong on-site training session for all Regulatory Affairs Group staff during the first week of March 2010 and have worked closely with the Regulatory Affairs Group and FDA to set up the electronic submission gateway (ESG). An ESG test account was approved by FDA on May 19, 2010, and transmission of a test submission was successfully completed on June 25, 2010. Staff members are currently preparing a pilot test submission of an existing initial IND application converted to the eCTD format. This pilot submission is expected to be delivered to FDA via ESG in August 2010.

During the past year, in support of the ongoing effort to develop vaccines and therapeutic products to combat the novel swine-origin H1N1 influenza virus, the Regulatory Affairs Group developed and submitted to FDA two new IND applications that address the potential therapeutic use of H1N1 hyperimmune plasma for immunotherapy. The first IND covered two protocols and involved a coordinated effort among several study sites to collect high-titer anti-influenza H1N1 plasma

from human volunteers. The second IND evaluates the safety and efficacy of treatment with this investigational anti-H1N1 hyperimmune plasma in subjects who are likely to have H1N1 influenza and are at risk for severe disease. As part of the ongoing maintenance for these INDs, the Regulatory Affairs Group staff developed and submitted more than 25 IND amendments and participated in numerous teleconferences with FDA, including a face-to-face meeting in October 2009. The staff also attended twice-weekly meetings with DCR, PIs and study coordinators from NIH, representatives from DoD, and other external contractors to discuss site recruitment, document flow from the clinical site to FDA, and the data capture process for the studies. The Regulatory Affairs Group also submitted current information on these protocols and all associated study sites to the clinicaltrials.gov web site in accordance with the federal regulations.

Among the various documents submitted to FDA within the past year by the Regulatory Affairs Group is the second RCHSPB-sponsored IDE. This noteworthy application is for the use of *Ixodes scapularis* ticks in the xenodiagnosis of Lyme disease and was the first such application ever reviewed by FDA. Additionally, it was the first time the Regulatory Affairs Group worked with the Center for Devices and Radiological Health at FDA, and these exchanges were vital in laying the groundwork for future interactions with this center. After nearly a year of working with new investigators at three separate sites, coordinating numerous protocol revisions, and working extensively to manage the construction of other sections within the IDE, the IDE application was approved by FDA in the first half of 2010.

Following the development and full execution of an RCHSPP inspection readiness SOP, the Regulatory Affairs Group senior IND manager continued to direct the processes for finalizing the RCHSPP Inspection Readiness Program. General inspection awareness training was provided to all CMRP staff during November and December 2009 and the process for training new employees was subsequently established. Inspection readiness materials, such as the Inspector's Binder, Front Desk Binder, and description group-specific qualifications/training requirements, were completed, work instructions for key roles during an inspection were created, and process flow documentation was finalized. Important computer-based modules were developed for both inspection awareness training and inspection readiness SOP training and the operating team members are in the process of beta testing these modules; a third computer-based training for interviewing techniques and procedures is being prepared.

Regulatory Affairs Group staff worked closely with the TrackWise® (TW) developers and served as a member of the TW Working Group to improve the capture of process details and information, define new processes and reports, and to ensure that all TW notifications are informative, comprehensive, and distributed to appropriate personnel. Twenty-two TW change requests

were submitted for review in this past year; of these, 18 were completed and formal trainings conducted to ensure that awareness and proper implementation of the changes occurred. Examples of TW modifications include a product record change so that all RCHSPP groups can provide input into the creation and closure of product records, updates to the IND and other regulatory process flows to improve efficiency and accurately reflect current business processes, and improvements of TW reports to the branch and management to provide additional information in a more useful format. In addition, a RA was an integral part in the creation of a TW integrated training application and will be presenting a large portion of this training in the fall of 2010. This training will provide awareness to all RCHSPP functional area groups about the uses of TW in each functional area and the benefits of the application to group processes.

The regulatory affairs director worked with the RCHSPB chief, CROMs, and other staff members to create guidance documents to assist investigators in implementing the updated Policy for Regulatory Review of NIAID Intramural Protocols. The director developed an easy-to-read, FAQ-style guidance document, a checklist for the investigator to provide instruction to RCHSPP on the type of protocol review to be performed, and a sample protocol review form containing examples of comments that may be generated on different sections of a protocol during an RCHSPP protocol review, including comments that would require an investigator's response. These documents were drafted, passed through multiple branch reviews, updated to include all suggestions and edits, and finalized and distributed to the branch for publication/posting within three months.

Clinical Trials Management (CTM) Team

The CTM team is an integral part of RCHSPP. The team plays a key role in the success of performing well-controlled clinical research trials sponsored by the RCHSPB/NIAID Intramural Research Program at NIH. CTM's main focus is the facilitation and oversight of clinical research studies; its responsibilities are: to monitor these studies to ensure that the rights, safety, and well-being of human subjects are protected; to ensure that the reported study data are accurate, complete, and verifiable from source documents; to ensure that the study conduct is in compliance with IRB/ethics committee (EC)-approved protocol, ICH/GCP guidelines, and all other applicable regulatory requirements; to detect, report, and assist with site quality management planning and resolve discrepancies that occur during the study period; and to communicate all site-monitoring reviews and observations to the PIs and CROMs. The team also ensures that the sites maintain a study agent in compliance with study protocols under an IND.

Currently, CTM is involved with the management and/or monitoring of approximately 146 clinical research studies conducted at sites throughout the U.S. and in several foreign countries. The studies the team is

responsible for monitoring vary and include Phase I/II IND studies, natural history studies, pediatric studies, and research studies that are non-invasive and are not under an IND. During CY2010, the team conducted approximately one pre-study site assessment visit (PSSAV), 55 study initiation visits, 171 interim monitoring visits, and 31 study close-out visits (SCOV). Monitoring of trials included various clinical sites in Africa (Mali, Uganda, and Kericho), Korea, Thailand, Indonesia, India, Vietnam, Cambodia, Peru, Mexico City and other countries across the world. CTM also conducted international site-initiation visits in Singapore, Thailand, China, Mexico City, Mali, and Kericho, Africa, and conducted seven study-site audits in hospitals in Singapore, Thailand, and Mali.

The team continues to provide sponsor-related clinical trials management for several newly established NIAID networks, including SEA Influenza, INSIGHT (START), and the Mexico Flu networks. CTM manages the sponsor's essential document files for the 20 active clinical sites within both networks, as required by FDA and HHS, and conducts sponsor site audits. In February 2010, CTM was asked to expedite the closing process for one of the larger IND studies within the SEA network by April 30, 2010. The group worked with the clinical research organization to ensure all study sites had a SCOV scheduled by this time. The final SCOV report and letter was sent to the site on June 23, 2010. All of the site action items need to be completed by the end of the contract in September 2010. In addition, specifically at the request of the NIAID clinical director, CMRP began to monitor two of the INSIGHT (START) protocol sites in FY2010. CTM also expedited the initiation of a new influenza study this fiscal year for the Mexico network. The large kickoff meeting occurred in January 2010, and RCHSPP and CTM activated the first site on March 29, 2010.

CTM reviewed clinical research protocols and informed consent forms (ICFs), and provided commentary to NIAID, DoD, and Infectious Diseases Clinical Research Program (IDCRP) PIs; and reviewed, created, and revised IDCRP protocol study manuals, source documents, and case report form (CRF) edits.

CTM provided input for the updated *Protocol Version Control Guidelines* from RCHSPB and participated in the review of the *DCR Quality Management Policy* and the development of a Quality Management template and tracking tools.

The team participated in the editing of a protocol template language document for non-IND studies with RCHSPB and the NIAID IRB. The clinical trials director (CTD) participated as a working member of the NIAID monitoring seminar series established to help improve/re-evaluate the overall compliance monitoring processes for NIAID. A poster session for the seminar series was held in October 2009, which included other divisions within NIAID.

The team continues to review all protocol amendments that affect the activated DoD/IDCRP- GID and HIV studies and will monitor the second IND study activated within IDCRP. The CTD and the CPM II continue to review and provide comments on the goals/objectives of the RCHSPP Project Management Office (PMO), in addition to working with the PMO to design the protocol project life cycle. The CTD also worked with the PMO to develop project management models to help assess resources needed to complete future studies within certain models. The CTD, and the CPM II participated in developing the goals/objectives and key performance indicators for the RCHSPP Strategic Plan. The entire team also participated in several Gallup poll implementation exercises and continues to discuss areas of enhancement and improvements of team processes and communications.

The CTM team continues to provide oversight of PPD Thailand and Quintiles Korea for monitoring functions that are carried out in Korea, China, and Southeast Asia. The team worked with the NIH PI and the SEA network to implement two new clinical protocols conducted in CY2010. To date, approximately two studies are planned for the SEA network; NIH PI staff will also add one new study in Korea. The increase in protocol activities has impacted and increased clinical research organization activities for the contracts that are currently in place. The plan for FY2011 is for two new studies to be opened in Thailand and one to be opened in Vietnam. The CTM team will continue to work with NIH staff and the PPD clinical research organization to ensure that new studies under the new SEA network contract are carried out in a timely manner and within all applicable guidelines.

The team continued to review and provide extensive comments on several draft documents for RCHSPB, including monitoring guidelines, RCHSPP SOPs, draft outlines for TrackWise[®] trainings, the CTM policy and procedures manual update to version 3.0, and other CTM team computer-based trainings. Several team members wrote and received approval from RCHSPB on several guidance documents this fiscal year: "Subject Study Status Definitions," and "Use of a Witness during the Informed Consent Process." The Form FDA 1572 Guidance document was edited and is currently posted as version 2.0. In addition, CTM continued to maintain 11 approved SOPs specific to major processes for clinical site monitoring and internal procedures, and has revised seven of the 11 active SOPs this year. One new SOP is also in development. The CTD also participated in the review of several of the safety group's SOPs. A CPM I attended and presented at a vendor training conference. The presentation was titled "Improving the Monitor's Reputation: 'Fixing' Site Misperceptions of the Monitor's Role."

CTM performed a comprehensive review and developed monitoring plans in support of the Southeast Asia Network initiative. In addition, the CTD continued to perform a comprehensive review by providing comments, on site visit reports, in support of the PHIDISA South Africa initiative and continued to attend

regulatory WG calls and conferences for the Phidisa project. CTM team designees continued to perform comprehensive revisions of SEA monitoring reports produced by the clinical research organization that monitors the SEA001, SEA004 and SEA032 protocols.

The team created and updated lessons learned and items observed from monitoring visits for the VRC, DoD, and JHU studies and the Southeast Asia Network. The team also developed and provided approximately 18 study CRFs to the PIs for data collection for various studies and reviewed approximately 40 initial clinical research protocols/ICFs, 60 amendment reviews, and nine site-specific ICFs.

The decrease in CRF development was related to the improvement of other data collection tools which have been implemented for new studies in CY2010. The CTD conducted and circulated the annual review for the RCHSPP Glossary and Acronym List, updated the RCHSPP Protocol Review and Amendment review flows to include protocol navigation flows, and supported the review efforts for significant revisions to the CTM team's Policy and Procedure Manual for CRA/CTM reference. The CTD participated in weekly calls to review/discuss the timelines associated with the protocols under the protocol navigation process that were implemented in FY2010.

Designees from the CTM team worked on the completion of the JHU Manual of Procedures for CRAs and JHU staff to review; the final copy is pending review of JHU PIs.

This year, the CPM I helped to implement four new studies in the CRIMSON data collection system outside of NIH; studies are currently conducted at JHU, UV, and at Rocky Mountain Laboratories (RML). Also, Versions 3.0 and 4.0 of the Instructions for CRIMSON Data Entry were distributed to all JHU, UV, and RML CRIMSON users. A new document, the *CRIMSON Monitoring Guidelines*, was also released in early 2010. Since then, Version 2.0 of this document has been distributed.

A CRA, who was hired to monitor in Mali, also performed approximately three GCP training sessions at the request of the site PIs in Mali, Africa. The CTD and several CTM team designees participated in a steering committee and WG to prepare an SOP on FDA inspection readiness and worked to finalize staff training tools for compliance of this SOP.

During the contract year, the team also worked internally to create and update more customer-specific site-initiation visit templates for studies. The templates will help the team facilitate timely and focused presentations for study protocols for PIs from IND, non-IND, and pediatrics-only studies. The team also updated the JHU/DoD/VRC templates for other non-IND studies that may need to be initiated domestically and internationally. The CPM I updated the monitoring visit, site-initiation visit, and study close-out visit reports to include entry fields for project codes to allow for easy reference. CTM designed a field training program for newly hired CRAs. In addition, the CRAs worked with

management to help ensure that monitoring plans are written and sent to PIs shortly after the activation of their studies. This has allowed the PIs and the CTM team to make better assessments of resources and schedule timely monitoring visits.

CMRP's team updated several CTM template forms for further enhancement/function, made suggestions to JHU staff on revising some of their template forms, participated in several face-to-face meetings with IDCRP key staff and NIH coordinators to streamline the clinical trials processes and CMRP functions in support of their work, and assisted with the development of a two-day in-house regulatory and monitoring training presented by an outside vendor, to be held in fall 2010 at RCHSPP.

The team updated and distributed a work distribution flow chart to the CTM team for reference so that all members know who primarily works on each group's projects, including VRC, NIH, JHU, DoD/IDCRP, and international projects. This has allowed the CRAs to reach out to the team for more assistance when needed. The DoD/IDCRP work flow chart was also distributed to IDCRP to use as a reference.

Along with the CPM II, the CTD worked to create a monitoring plan tracker and template for CRAs to use for many of the IND studies. This was in addition to the development of new processes and support to the WGs to complete several Mali monitoring plans. The CPM I worked with the team and the TrackWise® support designee to streamline CTM process entry screens and helped to create and test reports that are generated out of TrackWise®. This effort also helps to update, on a quarterly basis, the Program Management Office, the DCR clinical director and the RCHSPB branch chief on any significant protocol violations that occur. These efforts have successfully streamlined the project updates for the Regulatory and CTM groups and have been essential in the development of other reports for the CTM group as well.

The CTD and the CPM II continue to work with the RCHSPB CROM to identify ways for the PIs to inform the group of upcoming projects in a timely manner. This information helps the director assess what new projects are in the pipeline and ensures that proper resources are in place within the RCHSPP CTM team.

CTM continues to collaborate with the medical monitors, CPMs, and regulatory directors to improve the protocol/consent form initial review process and the PI review process and checklist. To meet an RCHSPP strategic plan goal, a mini-group within CTM set up quarterly meetings to review SOPs and IRB stipulations.

CTM staff consists of one CTD, three CPMs, 13 CRAs, and a program coordinator. A CRA located in Benin, Africa, is also part of the team and is seamlessly involved with monitoring the studies in Mali and Kericho, Africa. In addition, a replacement CRA and two new CRAs were hired this year to help continue the support of RCHSPB, NIAID, and NIH activities. Due to the

continually increasing number of clinical studies supported by CMRP staff, recruiting is active for one additional CTM position.

Members of the CTM team participate in calls involving the Southeast Asia Infectious Disease Clinical Research Network (SEAICRN) Trials Operations Committee, bi-weekly calls with the clinical research organization for SEA, and monthly calls with RCHSPB members for updates on the network. Members also participate in monthly program-related calls with RCHSPB and IDCRP staff. In addition, CTM team members participate in disease-specific calls for the IDCRP group (HIV/GID/ARIC), as well as CRF development calls that involve the IDCRP data management team.

Projects that CTM team members have initiated or collaborated on include: finalizing and assisting in the development and beta testing of computer-based training covering TrackWise® database fundamentals and proficiency; participating in the protocol development project; implementing CRIMSON at clinical sites outside of NIH; and writing approval documents related to CRIMSON.

Clinical Safety Office (CSO)

CSO provides primary professional support to the Regulatory Compliance Human Subjects Protection Branch/Program (RCHSPB/P) in three distinct functional areas: (1) CSO support for RCHSPB; (2) data and safety oversight committee support; (3) and medical writing support. Additional support functions include: pharmacologic, scientific, and clinical support to other RCHSPP groups and to the RCHSPB, as well as serving as primary protocol medical monitors on specific protocols.

CSO also provides surveillance, monitoring, and regulatory reporting of SAEs occurring on NIAID Intramural Clinical Trials, including all trials where RCHSPB is the IND sponsor. CSO ensures compliance with the Code of Federal Regulations, NIH policies, ICH/GCP guidelines for protocols, informed consent documents, and case report forms (CRFs). During the contract year, 23 SAEs were processed and completed with continuing correspondence with the reporting investigator. Fifteen AE tables were reviewed for SAE reconciliation and AE terminology in preparation for IND annual reports to FDA.

The medical monitors and clinical safety associates (CSAs) reviewed 83 clinical research protocols over the contract year, consisting of 32 PI reviews, 39 amendment reviews, seven site-specific ICF reviews, and five pre-IRB/navigator protocol reviews, along with the associated ICDs. Comments and edits were suggested to the PI regarding safety and regulatory compliance prior to submission to the NIAID IRB. For the initial pre-IRB reviews, medical monitors performed a final review of the entire protocol for subject safety concerns, data integrity, and clinical trial design. As part of the review process, the reviewer may participate in numerous conference calls

with investigators to discuss and resolve regulatory or safety concerns with the protocol, which may forestall approval by the NIAID IRB or FDA. Nearly universally, PIs and the IRB have commended these reviews as being useful in addressing concerns prior to IRB submission.

The CSO staff participated in the nascent Protocol Development Program/Protocol Navigation (PDP/PN), providing medical monitoring, medical writing, and clinical safety support to assist in the development of 12 protocols. This task included weekly meetings and close cooperation between the medical monitor and writer with the PIs, project coordinators (PCs), and protocol navigators. So far, four of these protocols have received IRB approval.

CSO provides administrative and logistical support to the NIAID Intramural DSMB. A CSA serves as the DSMB executive secretary (DSMB ES), and is responsible for arranging all teleconferences and face-to-face meetings, distributing review materials to DSMB, recording and moderating the review sessions, preparing the DSMB summaries for the reviews, preparing minutes of the meetings, communicating with the members of DSMB, and maintaining records associated with DSMB membership. In the past contract year, the DSMB ES arranged and facilitated 12 teleconferences involving 13 PIs for 18 protocols. The DSMB ES also arranged and facilitated two face-to-face meetings where 27 protocols were presented by 14 PIs. Following each meeting, the DSMB ES prepared summaries of the reviewed protocol discussions and decisions, which are compiled and distributed to the DSMB members by the ES. Six new data table templates were developed to improve the efficiency and accuracy of the data submitted to the DSMB for review.

CSO is responsible for oversight, support and facilitation of four protocol-specific SMCs and one Independent Medical Monitor (IMM). The SMC executive secretary is responsible for arranging all teleconferences, distributing review materials to the SMC members, moderating the review sessions, preparing the SMC minutes for the reviews, and maintaining records associated with SMC membership.

CSO also collaborates with the Regulatory Affairs Group and the CTM team, providing guidance, instruction, and expertise to the staff. CSO reviewed approximately 118 CTM Monitoring Visit Reports and collaborated with the CRAs to resolve any subject safety discrepancies found during these reviews.

In FY2010, the CSO medical writers provided grammatical, formatting, and content review for 30 pre-IRB/navigator protocols, PI review protocols, and associated ICFs. One of the medical writers attended eight IRB meetings and drafted four IRB meeting summaries. The medical writers draft original documents, edit, and review documents generated by or received from CMRP sources, such as the Influenza White Paper. Also, as a whole, CSO developed seven documents for both internal and external use; “Medical Monitor Survey,” “Sample Protocol Section on Adverse Event Reporting,” “IRB

STIPS Summary,” “Standard Language HLA Genetic Testing,” “IRB Notes to SAIC Reviewers for 2009,” “Review of Pregnancy Issues w/SEA Protocols,” and the “Draft Tobacco Use Policy” for Industry Lane. CSO drafted and revised five SOPs and has finalized evaluation of the responsible/accountable/consulted/informed RACI processes for four SOP topics.

CSO participates in training and develops educational and procedural programs for both internal and external groups. In FY2010, CSO developed and presented six training seminars to RCHSPP staff. Over the course of the contract year, 88 New Employee Orientation (NEO) presentations were given by five members of the team; CSO and medical writers present separately.

In support of RCHSPP, CSO staff members have participated in NIAID/NIH programs, projects, and committees that expand the scope and visibility of their respective positions beyond the confines of their usual positions. CSO physicians, at the request of the PIs, have served on protocol teams as IND sponsor medical monitors on eight clinical trials. One medical monitor participates in the SEAICRN Trials Operations Committee teleconferences.

Projects which CSO team members have initiated or collaborated on include: assisting in the development and beta testing of computer based training covering TrackWise® database fundamentals and proficiency, participating in the Protocol Development Project, and assisting in creating and writing TrackWise® Integrated Training Applications (TWITA).

The CSO team continues to expand their technical and professional skill competencies. “Coursework in Clinical Research,” “cGCP,” and “Regulatory Affairs” were completed by some team members. Members of CSO also participated as a team in two on-site courses, “Endnote” and “Small Clinical Trials.” Two CSO members achieved certification in their respective areas from an accredited professional organization (Association of Clinical Research Professionals [ACRP]/Academy of Pharmaceutical Physicians and Investigators [APPI]), one as a Certified Clinical Research Professional and one as a Certified Physician Investigator. A medical monitor gave two “Train-the-Trainer” lecture presentations to SAIC-Frederick staff, presented a lecture on the novel influenza pandemic that was simultaneously broadcast to several remote sites, and gave a professional lecture to a class at Frederick Community College. Two posters were created and presented at the NCI/Fort Detrick Spring Research Festival, and one poster was created and presented at the ACRP 2010 Global Conference. CSO staff also submitted two publications.

CSO staff consists of one CSO director/medical monitor, one medical monitor, one medical affairs scientist, two medical writers, one clinical safety manager, one CSA/SMC executive secretary, one CSA/DSMB ES, and one secretary II. CSO worked collaboratively with other members of RCHSPP to draft the RCHSPP Ops Plan, strengths/weaknesses/

opportunities/threats SWOT analyses, and Project Management Product and Services breakdowns.

Project Management Office (PMO)

The RCHSPP's PMO provides program management, operational management, and logistical support to enhance the capacity of RCHSPB in the conduct of its mission and to maintain the infrastructure for SAIC-Frederick to fulfill contractual requirements. PMO works in collaboration with all program support team members and functional groups to link their operational and project activities strategically and with the tactical goals and objectives required to achieve overall success within RCHSPP and RCHSPB. The Project Management (PM) team within PMO provides expertise and logistical support for developing and executing RCHSPP's strategic plan in support of the mission, goals, and objectives of RCHSPB.

PMO Accomplishments. Within the project management function, a list of significant accomplishments and key milestones were achieved during FY2010. The PM team presented a paper on achieving program success through an Integrated Strategic Project Management Framework (ISPMF) to the Global Annual Conference 2009, organized by the Project Management Institute (PMI). In addition, the team presented a poster on "Flexible Project Management Models for Optimizing Resources in an Ever-Growing Clinical Research Environment" to the Annual Research Conference 2010, also organized by PMI. PMO established a project tracker for tracking unanticipated projects within RCHSPP. This tracker provides input for the program planning and budgeting teams. Working in collaboration with the functional groups, the PM team also identified and defined high-level, protocol-specific products and services provided by each functional group within RCHSPP. PMO established a process for reporting a high-level status of protocol projects at a program management level by utilizing the updated reports from TrackWise[®] and Time Wizard[®] systems. Recently, in collaboration with RCHSPP and RCHSPB, the team defined/confirmed protocol life cycle stages that could be commonly used across all functional areas within RCHSPP and RCHSPB.

Current PMO Activities. The PM team supports both administrative and functional groups through the implementation of ISPMF within RCHSPP. ISPMF will gradually be implemented and will allow PMO to gather meaningful project data so that senior management will be able to make informed decisions to address the growing program management requirements and promptly respond to RCHSPB inquiries.

The team works collaboratively with senior management and functional leaders within RCHSPP to leverage their knowledge in project management and to heighten program management success. PMO continues to support the functional leaders within RCHSPP to establish standard strategic project management model(s) that can be flexible, customizable, repeatable, and

extendable to fit the strategic/project needs of additional clinical projects based on the criteria provided by RCHSPB. These models enable program and project leaders to plan, execute, monitor, control, and complete projects in a timely manner.

The project-based, bottom-up resource forecasting, budget estimating, and project planning processes also enable PMO to establish project baselines with overall budget estimates and to start monitoring, tracking, and reporting the progress of projects against baselines at both program and functional levels. These models assist senior management in making informed decisions with a higher degree of program visibility and resource forecasting accuracy. In addition, this helps to streamline the project management process and improve the efficiency and effectiveness of the delivery of the products and services to RCHSPB.

Since the protocol lifecycle is defined and confirmed by senior management, the project team is working with the Project Management Working Group to align existing program and functional processes with defined stages. The project team is currently collaborating with functional group leaders to identify and align resources to each protocol project and to establish a baseline program plan. Furthermore, the project team guides, trains, mentors, and coaches program and project management team members within RCHSPP as needed or as recommended and provides an opportunity for creating a project knowledge repository for supporting all program-, operation-, and project-related activities. The project management team is also assisting the Strategic Planning Committee with development of an operational plan to implement RCHSPP's Strategic Plan. Metrics for these efforts include the RCHSPP Operational Plan for Implementing the Strategic Plan and the RCHSPP Baseline Program Plan.

Institutional Review Board (IRB) Support

The Administrative Group provides administrative support to NIAID's IRB. In this role, RCHSPP works in collaboration with RCHSPB to process documents for submission to IRB. Support efforts include: processing protocol actions for IRB meeting reviews via iRIS; generating the agenda and minutes templates; preparing meeting packages; tracking protocol submissions from initial submission through the approval phase; preparing tracking reports, as needed; and maintaining protocol-specific records.

During the contract year, RCHSPP provided administrative support for the following IRB-related ongoing activities: processing incoming submissions and submission approvals, including reviewing submission components, listing deficiencies, and providing administrative stipulations and guidance to investigators to assist them in successfully completing their submissions; processing final approvals incoming from OPS (including logging and filing); updating the Action Tracker, a manual log of protocol renewals; responding to

inquiries and providing advice to investigators and study staff; attending regular staff meetings; contributing to procedure discussions regarding new/changing NIH policies that affect NIAID IRB; writing meeting agendas and minutes shells; and writing SAE Reports to the clinical director and the acting director of the Office of Human Subjects Research (OHSR).

In addition, CMRP provided support to special projects, including the utilization of iRIS (iMedRIS) web-based IRB submission software (where submissions from the NIAID labs are received and processed), and the writing and presentation of quarterly trainings to keep study coordinators up to date on IRB activities and changes to NIH policies.

RCHSPP Training Group

Support for RCHSPP is provided by a clinical training manager, a training specialist/instructional designer, and an administrative support staff member. The activities supporting RCHSPP are listed below.

Identify/Develop Training Resources to Address Client-identified Training Needs. During CY2010, the Clinical Training Group (CTG) identified and developed training resources in support of RCHSPP, including the following trainings: “RA-0715 On-Site Compliance Inspection,” “Inspection Awareness Computer-Based Training (CBT),” “TrackWise® Protocol Review (CBT),” “TrackWise® Clinical Trials Management Modules (CBT) for the Protocol Record, Site Record, Site Visit Record, Subject Record, and Violation Record,” and “TrackWise® Integrated Team Applications, and Time Wizard User Training.” The CTG also collaborated with the senior management team to provide a two-day training event on the various aspects of clinical research.

The CTG worked with subject matter experts (SMEs) to develop TrackWise® training scenarios to provide employees hands-on experience with TrackWise®. The scenarios will be conducted in the TrackWise® Training environment rather than the TrackWise® Production environment.

Provide Training and Professional Development Subject Matter Expertise. The CTG provided leadership in the development of the RCHSPP Strategic Plan, facilitating delineation of the mission, visions, and core values that allowed the development of goals/objectives and KPIs. Several members of the CTG are serving on KPI Implementation Teams.

The CTG was involved in the planning and execution of the SAIC-Frederick Administrative Professionals’ Day in the spring of 2010.

Provide Administrative Support for Activities with Training Implications. The CTG facilitated 11 audio conferences on technical topics, including obtaining approval for the session, as well as implementation, evaluation, and documentation for each participant. The titles of these audio conferences include: “ABCs of Clinical Research for Clinical Administrative Support

Staff,” “Adverse Events for Medical Devices,” “Adverse Event Compliance in Drug and Biologic Clinical Trials,” “Trials and Tribulations: Clinical Studies Overseas, Investigational Device Exemptions Made Easy,” “Monitoring Plan Development,” “Pre-IND Meeting Success,” “Trial Master File: Ensure Your Documentation Will Pass FDA Inspection,” “Clinical Trials SOPs: Ensure Your Procedures are Compliant and Followed Correctly,” “Update on FDA Basics: Webinar on FDA’s Inspection Process,” and “Deploying Training Content in a Highly Regulated Environment.”

Ensure Compliance and Continuous Improvement of Training Processes and Initiatives. The CTG continued to provide guidance on FDA Inspection Readiness and participated in the development and implementation of the following trainings to support this effort: “Role-specific Training for Regulatory Inspections” and “Regulatory Inspection Interview Strategies.” In order to ensure compliance of the RCHSPP functional groups with all mandatory SOPs, the Training Group reviews training completion data on each new SOP as it is issued and for any technical revisions to existing SOPs. The Training Group compiled and assembled the FDA Inspection Readiness Binder, detailing the process for initiation of a regulatory inspection for use by the administrative staff upon the arrival of a regulatory inspector.

The CTG continued to maintain a spreadsheet identifying FDA Warning Letters citing GCP issues. These data were the basis of two presentations at national conferences, one focusing on FDA Warning Letters concerning training, and the other focusing on clinical trials monitoring.

The CTG researched and identified an alternative electronic training session on Human Subjects Protection this year, when the current offering suddenly became unavailable. This team also worked with the OD to facilitate completion of mandatory training by making the electronic announcements more clear and the links more available.

Conduct Professional Development to Ensure that Staff Members Maintain Their Subject Matter Expertise. The CTG developed two trainings, “Regulatory Inspection Awareness” and “Communication Style Preference,” which were given to RCHSPP audiences a total of six times.

RCHSPP Document Control (DC)

CMRP’s RCHSPP DC group is at the core of RCHSPP’s Quality System. The DC group maintains and archives critical documents, including RCHSPP-controlled documents and Clinical Research’s Trial Master Files. DC offers many services to assist with the document control needs of the various RCHSPP groups. These services include: (1) the protocol review process; (2) paper and electronic file storage and maintenance of various documents; (3) creation of CDs, various

databases, and logs; (4) document scanning and archiving; and (5) training on the DC system and the various electronic documents maintained in the system.

Four years ago, CMRP did not have a document control presence and each group maintained their documents individually. Over the last four years, the DC group has grown to include a manager and two specialists. This group has worked hard to centralize the filing of critical documents for RCHSPP and has created PDF versions of many documents to allow instant access to the files. Additionally, the DC group now controls over 5,000 documents related to various RCHSPP protocols; there are approximately 2,000 regulatory documents, 150 protocols (maintained in 178 buckets), 1,200 SAEs, and 500 DSMB documents. Over the last year, DC has processed over 130 regulatory submissions and, by the end of FY2010, DC will have processed over 200 SAEs for 2010.

The DC group has completed the annual audit of the SOP binders and has issued 10 new and eight revised SOPs. In addition, there are currently eight SOPs in revision and approximately 10 SOPs in development. DC also recently completed 100 percent verification on the Regulatory, SAE, and CV files.

RCHSPP Information Technology (IT)

The RCHSPP IT Group provides software development, computer, network, application, and backup/disaster recovery support services to NIAID initiatives. In the past year, the IT group was involved in several key technical initiatives for the program. Staff members include an IT manager, two program analysts (level II), one program analyst III, a systems administrator II, and a LAN/network specialist II.

The team was responsible for the completion of a high-speed wide area network communication link between Industry Lane and NIH. To support both an increased number of staff and data throughput requirements, the IT group, in close collaboration with NIAID technical staff and several external vendors, developed and executed a project plan that featured a greater than 30x increase in capacity for the site, while maintaining fault tolerance against a single point of failure by reallocating the existing line as a redundant link. Cutover to the new DS-3 circuit occurred in late 2009 and has transformed the technical environment for the program, with bandwidth-intensive applications, such as IP-based video-teleconferencing and web conferencing, now readily available for program staff. Remapping of the dedicated T1 circuit to provide automated failover services was completed in May 2010 and featured the traversal of both an independent path and carrier, thereby providing additional layers of wide area network fault tolerance for program operations.

The team also scaled up the network communications backbone for the Industry Lane location to accommodate an increase in data throughput as well as adding additional fault tolerance capabilities. An upgrade plan

was designed and executed by the IT group that migrated existing layer 2 switches from copper based node-to-node interconnects, to a ring topology with a fiber channel layer 3 core switch. As a result, capacity for LAN based data transfer has increased from 1 Gbps to 10 Gbps and a redundant, backup route for data to traverse exists in the event of a line or hardware device failure.

The solicitation, review of the SOW for professional services configuration management of the TrackWise[®] Training Manager component by Sparta Systems, Inc[®], and allocation of program-related resources, both internal and external, for initial prototype construction was also completed. Within the scope of this project, an upgrade to the latest service release of the current application build occurred, resulting in additional enhanced functionality being available to the user community. Prototyping and incremental release of the Training Manager component is underway and expected to be completed by the start of CY2011.

Additionally, the IT group provided technical guidance and direction for the acquisition and deployment of an eCTD authoring and publishing software package for the submission of regulatory documents to FDA by the RCHSPP Regulatory Affairs Group. The IT group, along with project stakeholders from the RCHSPP Regulatory Affairs Group and NIAID RCHSPB/Office of Cyber Infrastructure and Computational Biology (OCICB), evaluated several commercial off-the-shelf (COTS) products for suitability and best fit for program operations; the OmniSUITE[™] product line from Omnicia Inc. was chosen as the preferred product. Following acquisition, the IT group was responsible for evaluating technical operating requirements for the product suite and ensuring sufficient IT resources were in place. Installation and configuration of the product was a success and the next phase in transmitting submissions to FDA via ESG is underway.

Ongoing core IT functions provided to the program and program staff span a broad spectrum of technologies and service offerings, including: (1) application of whole-disk encryption to all new laptop computers, encryption key recovery services, and conduction of routine audits to assure continued compliance with the OMB/ HHS directive for protection of sensitive information; (2) evaluation, specification, acquisition, integration, and management of computer hardware/software; (3) system administration, technical support, and backup/disaster recovery services for program staff in both domestic and international settings; (4) standardization of government-furnished Microsoft Windows[®] personal computers in compliance with the United States OMB Federal Desktop Core Configuration mandate via technical analysis and review of federal policies/procedures, establishment of project plans, software impact analysis, dissemination of communications to program staff, categorization of resources into applicable security containers, development and submission of waivers, and generation and allocation of secondary administrative accounts; (5) installation and monitoring of McAfee ePolicy Orchestrator[®] for the management of site antivirus and related security software

and BigFix™, for hardware inventory and software patch management; (6) collection, evaluation, design, and implementation of change requests for TrackWise®, the quality and process tracking system for the program; (7) development, unit testing, and maintenance of custom Crystal® reports for correlative analysis, qualitative and quantitative process/data measurements, and end-of-month/quarter/year summaries from TrackWise®; (8) participation in RCHSPP strategic planning sessions, Section 508 compliance, TrackWise®, Livelink® working groups, and FDA inspection readiness teams; (9) evaluation, procurement, and deployment of encrypted USB key chains to staff in adherence with HHS policies; (10) development of IT training materials and presentation at NEOs; (11) providing management, maintenance, and support services to the core site network and data services infrastructure; (12) design, development, hosting, integration, and maintenance of a Microsoft® SharePoint Services platform; and (13) serving as a member of and key contributor to several technology-related project teams, including the SAIC-Frederick, Inc. IT Steering Committee and Microsoft® Active Directory working group.

CMRP Support to the Rakai Project, NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager
Irene Mueller, Clinical Project Manager I
Melissa Borucki, B.A., Senior Special Projects Administrator

The Rakai Health Sciences Program (RHSP) initiative is an ongoing project sponsored by the Laboratory of Immunoregulation's (LIR's) Division of Intramural Research (DIR), to establish the provision of antiretroviral drugs (ARVs) in rural villages in the Rakai District, Uganda, Africa. Since 2004, CMRP has provided support to RHSP by providing timely assistance with subcontracting, purchasing, consolidating, and shipping of instrumentation and supplies to assist in this effort. The Rakai Program is a NIAID International Center for Excellence in Research (ICER). ICER is a laboratory-oriented grant that funds many of the laboratory studies to be conducted on biospecimens. The primary purpose of ICER has been to build infrastructure in Rakai, Uganda to conduct collaborative biomedical research with Ugandan scientists.

CMRP staff members have collaborated on a project specifically involving a subcontract with RHSP in support of NIAID. LIR, DIR, NIAID, Makerere University, Johns Hopkins University, Columbia University, and Walter Reed Army Institutes of Research are studying, on a population-based level, the effect of U.S. President's Emergency Plan for AIDS Relief (PEPFAR)-provided ARVs. This collaboration is in a unique position to assess multiple potential effects of PEPFAR-derived ARVs

because of the wealth of historical data of the cohort in Rakai, Uganda. For the past 10 years, the collaborative efforts in Rakai, Uganda, have collected linked interviews and biological specimens from 44 communities, representing approximately 12,000 individuals, 15 percent of whom are HIV-positive. Collaborative efforts from this cohort have produced more than 60 peer-reviewed manuscripts and influenced the public health practices involving HIV treatment and care in the developing world.

A Basic Ordering Agreement (BOA) was established with RHSP to support additional clinical research protocols. Under Task Order 1, the first protocol, "A Randomized, Double-Blind, Placebo-Controlled Trial of Acyclovir Prophylaxis versus Placebo among HIV-1/HSV-2 Co-Infected Individuals in Uganda," studies the role of HSV-2 in facilitating both HIV-1 acquisition and transmission. Interventions that slow HIV-1 disease progression among persons with CD4⁺ counts above 250 cells/L could postpone the need for antiretroviral therapy (ART) and prolong life expectancy for HIV-infected persons. Due to the lack of human resource capacity, health care infrastructure, cost, and supply-chain management structures required for ART delivery in resource-limited settings, strategies to retard the development of clinical AIDS and requirements for Highly Active Antiretroviral Treatment (HAART) are urgently needed. The above-mentioned protocol addresses this issue.

In addition, a BOA was established with the Infectious Disease Institute (IDI) to support clinical research protocols. IDI is an Uganda-registered, non-governmental, independent teaching, research, and clinical organization owned by Makerere University, whose mission is to build capacity in Africa for the delivery of sustainable, high-quality care and prevention of HIV/AIDS and related infectious diseases through training and research. IDI trains health workers from Uganda and 26 other countries on HIV/AIDS, malaria, pharmacy, lab, and data management. The first protocol, titled "A Comparison of the Development of Thymidine Analogue Mutations (TAMS) with CD-4 Monitoring Alone Versus CD-4 Monitoring Plus Viral Load Monitoring in Naïve HIV-1 Individuals on First Line Antiretroviral Therapy in Africa," was a cross-sectional comparison of the rate of TAMS in treatment-naïve patients following 36 months of HAART; comparing 500 patients in the cohort with 1,000 additional clinic patients not enrolled in the cohort. The results of this study have had a positive impact on the clinical monitoring of HIV-infected patients and the choice of second-line ART drug regimes.

RHSP and IDI are collaborating on a study titled "Hepatitis B and HIV Co-Infection." The study examines liver disease and hepatotoxicity in participants with HIV and hepatitis B (HBV). Data from Africa on the prevalence and clinical implications of HIV/HBV co-infection are sparse or unavailable. Upon completion of this collaborative study, information for understanding the complex interaction of HIV and HBV will be provided, as well as a plan for optimizing the benefits while mitigating the potential consequences of ARV programs in Africa.

The Rakai Project provides dedicated personnel, both on-site in Africa and off-site in Frederick, MD, to coordinate activities for the laboratories, manage administrative concerns, track and monitor dedicated budgets, assist with personnel logistics, provide project procurement support, and provide overall coordination of administrative program-level functions.

A protocol coordinator located in Johannesburg, South Africa, makes regularly scheduled site visits to Uganda and assists the Ugandan research teams in implementing and conducting quality control procedures/processes required for research and clinical care and to ensure good clinical and laboratory practices for existing and new protocols. The PC assists the research teams with data analyses and preparation of manuscripts for peer-reviewed journal publications.

A quality assurance specialist, based in Bethesda at NIH, also made several visits to Rakai and provided QC/QA support for GLPs and assisted with implementing new laboratory tests and procedures, including HIV viral load testing, routine chemistry and hematology, expansion of the current microbiology and molecular biology laboratories, and implementation of the FreezerWorks[®] system for specimen inventories and tracking.

During the reporting period, support was also provided for logistical and administrative tasks related to daily international operations; budget preparation and monitoring; travel preparation for six non-employees for training and collaboration visits; procurement of more than 160 pieces of miscellaneous laboratory items; coordination and tracking of 10 perishable shipments from SAIC-Frederick; and invoice payments for 20 shipments from Rakai to the US.

Support to the India/Mali International Centers for Excellence in Research (ICER), NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager
Allison Eyer, Secretary III

The India/Mali ICER initiative is an ongoing project sponsored by NIAID to establish a research infrastructure that facilitates research relevant to the pathogenesis and control of lymphatic filariasis (LF) in both Indian and West African populations. Because Africa and India disproportionately bear the burden of LF, the study of these infections must be performed there. Since these countries have few resources, they require outside assistance to develop resources and strategies relevant to their local conditions. Since 2004, CMRP staff has assisted NIAID researchers to establish research infrastructure and train investigators for both the Indian and Malian LF Research Initiatives. NIAID has outlined three stages of this project: (1) NIAID will establish laboratory facilities, train personnel, and conduct several well-defined pilot projects; (2) NIAID will implement

small-scale clinical trials; and (3) NIAID will facilitate multiple trials conducted by both intramural and extramural investigators.

The India/Mali effort provides dedicated personnel, both on-site in India and off-site in Frederick, MD, to coordinate activities for these state-of-the-art laboratories, manage administrative concerns, track and monitor dedicated budgets, assist with personnel logistics, provide project procurement support, and provide overall coordination of administrative program-level functions. A senior scientist located in Chennai, India oversees the research projects conducted at the Laboratory of Parasitic Diseases (LPD) at the Tuberculosis Research Center (TRC). The collaborative program has recently:

- Demonstrated that latent TB is characterized by an increased activity of Tregs and a coincident downregulation of Th17 cells;
- Demonstrated that the pathology seen in lymphatic filariasis (lymphedema and elephantiasis) is associated with an augmented Th1/Th17 response following TLR ligation that is associated with augmented P38 MAPK phosphorylation and NF-κB activation;
- Examined the process of lymphangiogenesis and tissue re-modeling in the lymphatic pathology in lymphatic filariasis;
- Developed methods for examining dendritic cell subsets in peripheral circulation and examining their role in mediating differences seen in immune responsiveness among patients with varying manifestations of filarial infections;
- Examined the numbers and function of Tregs in filarial infections and related these parameters to pathological consequences of filarial infections; and
- Examined the role of immune complexes and complement system in filarial infections.

CMRP's overall goal is to facilitate communication and continuity for the clinical researchers located in India and Mali. During the reporting period, logistical and administrative support for daily international operations, budget preparation and monitoring, travel preparation for eight non-employees, travel for conference attendance at the Conference on Retroviruses and Opportunistic Infections (CROI) and Indian Immunology Society, procurement of three pieces of capital equipment, and more than 800 pieces of miscellaneous laboratory items, including the establishment of service agreements for equipment located in India and Mali, and the coordination and tracking of 23 perishable, eight bulk, and three dangerous goods shipments from SAIC-Frederick has been provided.

CMRP Support to Malian Malaria Research, NIAID

Beth Baseler, M.S., Director
Melissa Borucki, B.A., Senior Special Projects Administrator

In 2005, NIAID began a research initiative investigating the cellular and molecular basis of the acquisition and maintenance of malaria immunity. NIAID maintains laboratory facilities, trains personnel, and conducts several well-defined projects and small-scale clinical trials by both NIH intramural and extramural investigators through the Malaria Research and Training Center (MRTC). The overall goal is to take advantage of the research infrastructure in order to facilitate research that is relevant to the acquisition and maintenance of malaria immunity in Mali.

CMRP has been requested to provide administrative assistance for the management of a subcontract in support of the NIAID-Malian Malaria Immunology Research Program, which is part of the NIH/NIAID ICER program. The subcontract agreement will procure Malaria Protein Microarray Chip Fabrication, Probing and Analysis on serum and/or plasma samples.

CMRP Support to Division of Intramural Research (DIR) – South Africa, NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager
Melissa Borucki, B.A., Senior Special Projects Administrator

The Laboratory of Virology (LV) within DIR recently initiated a collaborative research program with the National Institute for Communicable Diseases (NICD) in Johannesburg, South Africa, to study hemorrhagic fever viruses (HFVs) and other emerging infectious disease viruses. The collaborative research initiative will involve ecological field studies of the HFVs, pathogen discovery and sequencing of viral isolates collected in the field, and studies on potential animal intermediate hosts and vectors of these viruses, including African fruit bats. The studies will include the establishment of field research sites in the Democratic Republic of the Congo (DRC), Kruger National Park in South Africa, and other potential sites to be determined in the future. LV investigators will work closely with counterparts at the NICD in training and execution of the research objectives.

In support of the NIAID-NICD collaborative research initiative, SAIC-Frederick will provide rapid deployment of a range of services in support of this initiative, including procuring and arranging the shipment of laboratory and field research equipment, arranging to subcontract full-genome sequencing (including 454 sequencing) of non-infectious viral isolates, and arranging travel services.

Support to the Division of Intramural Research's (DIR) International Centers for Excellence in Research (ICER) Core, NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager
Irene Mueller, M.P.H., Clinical Project Manager I
Joseph Shott, B.S., Quality Assurance Specialist for International Research

CMRP staff continues to provide critical research support to NIAID's ICER initiatives in Mali, Uganda, Tanzania, Cambodia, Thailand and India. The primary goal of this support is to develop sustained research programs in geographic areas of high infectious disease burden through partnerships with scientists in developing countries and to enhance the capacity of international research sites throughout Africa and Southeast Asia to perform clinical research in accordance with ICH/GCP guidelines and applicable U.S. government-mandated regulatory requirements.

The quality assurance specialist provided initial and follow-up reviews of the aforementioned labs in terms of their adherence to GLPs, GMPs, College of American Pathologists (CAP) or CAP-equivalent standards, as appropriate, and implementation of QA/QC programs for clinical laboratories.

Significant accomplishments include the implementation of a Lab Improvement Plan for a new site in Cambodia, CAP accreditation of the Mali ICER Clinical Laboratory and the implementation of the industry standard FreezerWorks® specimen inventory and retrieval system in the Uganda lab.

Staff from SAIC-Frederick's Clinical Consulting and Support Program and RCHSPP has been actively involved in supporting the operations of several of these sites.

Support to the NIAID-Mali HIV Research Initiative, NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager

The U.S.-Mali HIV Research Initiative is an ongoing project sponsored by NIAID to establish clinical research projects investigating the effects of HIV and its treatment in West African populations. Since 2003, CMRP staff has assisted NIAID researchers in establishing laboratory facilities and training Malian investigators for Project SEREFO (Centre de Recherche et Formation) located at the University of Bamako in Bamako, Mali, West Africa. The overall goal of this operation is to help establish a research and administrative infrastructure that facilitates research relevant to the African HIV epidemic. Phase III

of this project is ongoing, whereby clinical research protocols are developed and initiated with the Malian clinical research team.

A clinical research associate (CRA) located in Benin, West Africa, provides support through an employment agency. This CRA travels one week of each month to Bamako and works closely with CMRP staff to ensure that the clinical trials are effectively monitored and the rights, safety, and well-being of human subjects are protected. The CRA also works to ensure that the reported study dates are accurate, complete, and verifiable from source documents; to ensure the study conduct is in compliance with the protocol, ICH/GCP guidelines, and applicable regulations and standards; and to detect, report, and resolve discrepancies that occur during the conduct of the study.

The Mali HIV effort provides dedicated personnel, both on-site in Africa and off-site in Frederick, MD, to coordinate activities for state-of-the-art laboratories, manage administrative concerns, track and monitor dedicated budgets, assist with personnel logistics, provide project procurement support, provide translation services to researchers and guests visiting the research facility, and participate in the overall coordination of administrative program-level functions. Dedicated staff permanently located in Bamako, Mali, includes a senior program coordinator. The overall goal is to help establish research infrastructure and to provide training to our Malian collaborators that facilitates research relevant to the African HIV epidemic, a necessary step to advance the global fight against AIDS.

During the reporting period, support has been provided for: (1) logistic and administrative support for daily international operations; (2) budget preparation and monitoring; (3) continued on-site training of the senior program coordinator; (4) travel preparation for 19 Malian investigators to attend various international conferences; (5) procurement of four pieces of capital equipment and more than 2,300 pieces of miscellaneous laboratory items, including training and establishing service agreements for equipment located in Bamako; (6) coordination and tracking of 18 perishable, 17 bulk, five dangerous goods and one ocean shipment from SAIC-Frederick; (7) coordination and tracking of four hazardous sample shipments from Mali to Frederick, MD, for testing; (8) continuation of contracts to provide transportation service for the SAIC-Frederick employees temporarily detailed to Bamako; (9) maintenance of the agreement with Johns Hopkins School of Public Health to provide training and mentoring to the Malian investigators; and (10) technical experts for maintenance and recertification of the BioSafety Level-3 (BSL-3) laboratory.

The renovation of the BSL-3 laboratory, including procurement, shipment, installation and operation, was successfully completed this year.

CMRP Support to the China Tuberculosis Research Initiative, NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager

It is estimated that 4.5 million patients in China are infected with tuberculosis. Due to an insufficient support structure for poor patients who cannot afford their medicines on a regular basis, China has become a breeding ground for drug-resistant tuberculosis and, as this country opens up, these resistant infections will spread.

In 2008, NIAID established a Cooperative Tuberculosis Research Program with investigators at the Henan Chest Hospital in the city of Zhengzhou and Fudan University in Shanghai. An agreement between the U.S. government and the government of the Peoples Republic of China on Cooperation in Science and Technology (signed in 1979) has been supported and made more specific with several additional agreements. The most recent agreement between NIH and the China National Center for Biotechnology Development (as administrative department) of the Ministry of Science and Technology of China was signed in June 2008. NIAID initiated the establishment of a research initiative to investigate the effects of tuberculosis in Chinese provinces. The following stages will take place: (1) NIAID will support the establishment of laboratory facilities, provide equipment, train personnel, and conduct several well-defined pilot projects; (2) NIAID will implement small-scale clinical trials; and (3) NIAID will facilitate multiple trials conducted by NIH intramural investigators. The overall goal is to help establish research infrastructure that facilitates research relevant to the pathogenesis and control of tuberculosis and extensively drug-resistant tuberculosis (XDR-TB) in China.

During the reporting period, support has included: (1) logistical and administrative assistance for daily international operations; (2) budget preparation and monitoring; (3) procurement of capital equipment and miscellaneous laboratory items, including training for equipment located in China; and (4) coordination and tracking of shipments.

Support to the IL-15 Project, NIAID

Laurie Lambert, B.S., Clinical Project Manager III
Craig Gladden, M.B.A., Program Manager

CMRP continues to provide support to NIAID's LIR, for the recombinant human interleukin-15 (rhIL-15) project, working in collaboration with NCI's DCTD.

CMRP's Administrative Support Group continues to provide project management support in concert with the SAIC-Frederick Research Contracts Department to oversee coordination with a subcontractor (Biological

Consulting Group), the Clinical Services Program (CSP) and Avanza Laboratories (formerly Bridge Laboratories) to perform pharmacodynamic (PD) and pharmacokinetic (PK) studies. During the past year, CMRP staff has successfully completed the following activities in support of this effort:

A GLP-compliant, non-clinical, toxicology Contract Research Organization (CRO), Avanza Laboratories (formerly Bridge Laboratories), completed the PD and PK studies to determine the immunological effects of deamidated human IL-15. The PD study involved the administration of IL-15 to male rhesus monkeys using two series of subcutaneous doses or via a continuous intravenous infusion for eight weeks. Twelve male rhesus monkeys were randomly assigned to one of four dose groups. Three animals/groups were dosed with high-deamidated or low-deamidated IL-15 via subcutaneous injection. After sampling was completed, the animals were returned to the stock colony. Upon the completion of the PD study, the CMRP Administrative Support Group assisted with the preparation of an amendment to the contract with Avanza Laboratories to perform a PK study in twelve male monkeys to determine the pharmacokinetics and immunologic effects of low-deamidated IL-15 administered as two series of subcutaneous doses or via a continuous intravenous infusion for two separate 10-day periods; each period was separated by 8 weeks. Both studies were conducted separately and coincided with the in-house expertise of the Clinical Support Laboratory for IL-15 PK testing, cytokine analysis, flow cytometry analysis, immunogenicity testing, and possibly autoantibody formation. In preparation for these studies, the Clinical Support Laboratory developed a validated enzyme-linked immunosorbent assay (ELISA) that was used to test blood samples obtained from the primates. Other parameters evaluated during the studies included mortality, clinical, cage-side and post-dose observations, body weight changes, qualitative food consumption, clinical chemistry, and hematology.

At NIAID's request, the CMRP Administrative Support Group assisted with the modification of the existing contract to draw additional blood samples from the 12 surviving monkeys from part one of the IL-15 PD/PK studies. This amendment allowed Avanza Laboratories to draw approximately 25 ml of blood on each animal to send to the Clinical Support Laboratory at SAIC-Frederick for additional immunologic studies. In addition, the amendment included the housing and maintenance of the 12 surviving monkeys to have them available for future studies related to IL-15 for the remainder of CY2010 and for CY2011.

As a result of the successful completion of the PD and PK studies, the CMRP Administrative Support Group, in collaboration with LIR, has initiated the project planning of another PD/PK study using SIV-infected monkeys. Again, this study will be in concert with the SAIC-Frederick Research Contracts Department, a subcontractor (Biological Consulting Group), the CSP

and Avanza Laboratories (formerly Bridge Laboratories). This study is anticipated to be completed by the end of the fourth quarter of CY2010.

Support to the Biostatistics Research Branch, NIAID

Laurie Lambert, B.S., Clinical Project Manager III

Sharat Srinivasula, M.S., Biostatistician II

Wenjue Gu, M.S., Biostatistician I

Xiao Liu, M.S., Biostatistician I

The Biostatistics Research Branch's mission is to develop collaborative relationships with intramural and extramural researchers and to conduct independent research in statistical methodology. CMRP staffs two biostatisticians, both level I, a bioinformatics specialist, a biostatistician II, and a senior program coordinator supporting the Biostatistics Research Branch within NIAID.

The biostatisticians provide statistical support for many of the intramural clinical research protocols, as well as data management, programming, and statistical data analysis. The biostatisticians are involved in the analysis of novel, high-dimensional immune assay data collected in Phase I studies of various vaccine studies, such as HIV, West Nile virus, and severe acute respiratory syndrome (SARS) conducted at NIAID's VRC. The group is also involved in a wide variety of projects, from the analysis plan development stage to performing complex statistical analysis and producing weekly reports for the EBC asthma study, IRIS study, H1N1 flu study, and IL-7 receptor signaling project, as well as conducting various statistical tests and generating descriptive statistics and graphs in several VRC studies (VRC 205, VRC 304, VRC 305, VRC 307, VRC 308, and VRC 309) and Phidisa II projects. The biostatisticians are also involved in developing new theories for researchers and training staff at various laboratories within NIAID in the utilization of statistical software.

The bioinformatics specialist provides programming and technical support, and assists with the experimental imaging of infectious diseases (including simian immunodeficiency viruses/simian-human immunodeficiency virus [SIV/SHIV]) in rhesus macaques by extracting information from the single-photon emission computed tomography (SPECT) images; creating user-friendly interfaces to automatically count the number of cells per unit area of immunohistochemistry- (IHC)-stained tissue sections, and developing a genome sequence mutation algorithm to analyze and simulate HIV-1 sequence mutations over time and to predict the topology of a phylogenetic tree.

The biostatistician II provides statistical and mathematical programming support and aids in the analysis of a broad range of clinical and laboratory studies, while assisting with the research in the

experimental imaging of SIV/SHIV in rhesus macaques. The biostatistician II is also involved in a variety of projects, including non-invasive in vivo SPECT imaging of SIV/SHIV-infected, non-human primates; designing and conducting ligand-receptor binding studies; mathematical modeling and analysis to quantify the cell turnover rate in BrdU pulse labeling studies; developing a mathematical model to explain the binding kinetics of interleukin-7 with its receptor CD127 in the presence of HIV-1 infection and during the course of therapy; and the effect of cell recovery on cytokine levels.

In February 2010, DCR's Biostatistics Research Branch hired a skilled senior program coordinator (SPC) to provide programmatic, administrative, and operational support to the branch. The SPC provides excellent customer service to the branch by coordinating meeting logistics, serving as its point of contact, and solving trivial to complex issues within the branch. The SPC is responsible for coordinating branch initiatives, such as its monthly seminar speaker series. Since February 2010, the SPC has provided operational and logistical support to the seminar speaker series, coordinating five seminar series where guest speakers are invited to the Biostatistics Research Branch to present premier biostatistics R&D grand rounds. The SPC is very instrumental in streamlining IT processes by fielding IT issues and problems and monitoring resolutions for staff. In addition, the SPC has developed and implemented a tracking system for the branch's software database using MS Excel. Since February, in collaboration with the IT department at NIAID, the SPC has successfully implemented an automated renewal process for the Statistical Analysis System (SAS) and JMP[®] licenses, two applications of which are dominantly used by the branch. The SPC does an outstanding job of coordinating and preparing travel packages for the branch, and has played a key role in improving the travel processes and quality by participating in the travel WG and developing travel-mapping processes.

Support to the Southeast Asia Initiative, NIAID

Beth Baseler, M.S., Director
Julia Welch, M.S., Clinical Project
Manager II

The CMRP director and other senior regulatory staff have provided valuable expertise and input into the development of protocols designed for the Southeast Asia Clinical Research Network, now in its fifth year. This clinical research network, which began in four countries (United States, Vietnam, Thailand, and Indonesia), currently supports 11 clinical research sites conducting clinical research on severe human and avian influenza, as well as other infectious diseases. This research is of highest priority for HHS, NIH, and NIAID. International clinical research conducted throughout a network is

logistically challenging to develop and implement. Multiple and different regulations governing each site, differing levels of site readiness and knowledge of clinical research, and language barriers are a few of the challenges being addressed.

One of several special projects in the Division of Clinical Research (DCR) (NIAID/NIH/HHS), the Southeast Asia Initiative, has had sites in five countries: United States, Vietnam, Thailand, Indonesia, and Singapore. The U.S. site was closed in 2009 after the NIAID PI left the project and the Singapore sites were closed out in early 2010 when their protocol was closed. The efforts of the CMRP director and other senior regulatory staff continued to provide valuable expertise and input into the development of protocols. CMRP was requested to facilitate the research through the development and award of several multimillion-dollar subcontracts. These subcontracts provide support and assistance to the network and provide site management for the clinical research sites in Indonesia. Family Health International (FHI) was originally awarded several subcontracts with SAIC-Frederick to support this network. SAIC-Frederick manages the Data and Safety Monitoring Board (DSMB) activities through FHI and manages a position to support NIAID as a full-time contract employee. In the past year, the contractor spent four weeks in Southeast Asia supporting NIAID. Activities there included: (1) assisting the Network Coordinating Center (NCC) with developing operational procedures; (2) conducting study initiation training in Vietnam; (3) mentoring newly hired NCC staff; and (4) developing tools and procedures for evaluating site capabilities for research. To date, 20 protocols have been approved for development by the Network Steering Committee (NSC).

Activities for the final year of the five-year contract, which ends September 30, 2010, have focused on close-out activities for the active protocols, planning completions of analyses, and contributing to the transition to a new funding mechanism. Five clinical protocols are currently active (SEA 004, SEA 008, SEA 025, SEA 032, SEA 034) and four laboratory protocols are active (SEA 006, SEA007, SEA 019, SEA 032 sub-study). All research activities are planned to close out prior to September 30, 2010. A small annual meeting to review the scientific output of the Southeast Asia Infectious Disease Clinical Research Network (SEAICRN) is planned for early September in Hong Kong. The Indonesia sites reopened after a memorandum of understanding was signed by the Ministry of Health and Wellcome Trust, allowing collaboration to resume after nearly two years of suspension.

CMRP continues to provide contract support for DSMB through FHI. DSMB continues to meet regularly to review proposed protocols and evaluate ongoing protocols for SEAICRN.

CMRP will provide oversight of the additional support and assistance contracts in the continual development of the sites, training of site staff, and regulatory input.

Support to the Phidisa Project, NIAID

Beth Baseler, M.S., Director
Shelly Simpson, M.S., Clinical Trials Director

DCR continues to collaborate with the South African National Defense Force (SANDF) and the U.S. DoD to establish the necessary clinical research infrastructure needed to conduct clinical research in the prevention and treatment of infectious diseases and disorders of the immune system, specifically HIV infection, in Africa. The Phidisa Project is an extension of the Masibambisane Program, a cooperative initiative to help prevent the transmission of HIV/AIDS among South African military and civilian employees and their families. The Phidisa Project program is designed to help establish a clinical research infrastructure with SANDF and a network of clinics, sick bays, and hospitals.

The involvement of the clinical trials director (CTD) and the RCHSPP director as active participants of the Phidisa Regulatory Working Group is of notable importance. This group provides expert advice and input on regulatory and clinical trials management issues, such as DSMB, SAE reporting, ICH/GCP, and South African GCP guidance related to accessing study files, and general monitoring issues for the Phidisa clinical trials. The CTD participated in discussions related to the Phidisa benchmarks and helped to edit and finalize the revised monitoring plan for the Phidisa protocols.

A number of subcontracts continued to support the Phidisa Project during this reporting period. Agreements with seven pharmaceutical companies, through two distributors, provide all ARV drugs. SAIC-Frederick awarded a large clinical monitoring subcontract to the Lancet Corporation in South Africa on January 1, 2005, to provide courier support and clinical laboratory monitoring for the Phidisa protocols. In April 2008, a division of Lancet Corporation, Bioanalytical Research Corporation (BARC), took over the responsibility of Phidisa IA and Phidisa II support. There was no difficulty in the transition to BARC, as all contacts remained the same and there was no interruption of services provided. A BOA was executed, effective April 1, 2008, and two task orders were issued. Task Order 1 continued supporting the Phidisa IA and Phidisa II protocols for laboratory, shipping, sample storage, courier, etc. Task Order 2 completed an analysis of possible immunological indicators of early mortality in HIV infection and complications of HBV infection in HIV-infected study participants who received the antiviral drug Lamivudine. This study added to the existing body of knowledge that explores the contribution of the infecting virus to the therapeutic outcome and evolution of the HIV-1 pandemic, provided valuable information in understanding the treatment outcomes observed in the Phidisa II protocol, and contributed to overall knowledge of the HIV-1 epidemic in South Africa.

Support to the Clinical Consulting and Support (CCS) Group, NIAID

Beth Baseler, M.S., Director
Jennifer Imes, A.A., Program Manager
Melissa Borucki, B.A., Senior Special Projects Administrator

The CCS group was established in the fall of 2004 to support NIAID's special initiatives and projects. The CCS group within CMRP provides a range of support to various projects being conducted within NIAID, including conference and travel coordination for the Phidisa Project and other NIAID initiatives, laboratory administration for the Mali ICER, and administrative support. In addition, CCS administers and oversees subcontracts in support of RHSP, the Phidisa Program, H1N1 Research, the Regulatory Compliance and Human Subjects Protection Branch, the Malaria Vaccine Development Branch, and the Laboratory of Host Defenses.

CCS continues to provide support to a variety of NIAID's special initiatives and projects, including the following:

Travel Coordination

The CCS group provides travel coordination for non-government and SAIC-Frederick employees involved in the Phidisa Project and other major initiatives within NIAID. CCS coordinates the international meetings, conferences, and training for non-government participants collaborating on many long-term, international clinical research initiatives. The international collaborations are designed to build biomedical and public health research capacity within the host country. The services include: arranging visits by foreign and domestic scientists/officials to foreign countries and to locations within the U.S. to attend meetings, conferences, planning sessions, and program discussions; developing detailed travel itineraries; providing guidance and assistance to U.S. and foreign travelers in obtaining passports and/or visas; arranging ground transportation as necessary; arranging hotel or other lodging accommodations; paying appropriate subsistence allowances in advance; making direct contact with the host and the traveler to ensure all arrangements are mutually understood; and providing reimbursement upon receipt of an expense statement for appropriate expenses relating to travel.

Subcontracts Management

CCS administers and oversees the establishment of subcontracts in support of specific international and domestic NIAID research efforts. This support includes writing SOWs, monitoring subcontractor progress, monitoring budgets, and collaborating with NIAID project officers to ensure the SOW goals are met in a timely and efficient manner. Throughout 2010, CCS was active in the preparation and management of subcontracts

with PPD, Inc., to support continuing clinical monitoring efforts in Southeast Asia; management of a subcontract with FHI to provide support and assistance to SEAICRN for DSMB; management of a subcontract with the University of Pittsburgh to provide an additional clinical research site to conduct a clinical research protocol for NIAID; preparation and management of subcontracts for the Phidisa project to support clinical research protocols and sub-studies in South Africa; preparation and management of subcontracts with Rakai Health Sciences and the Infectious Disease Institute for HBV and HIV co-infection studies in Uganda; and management of a subcontract with the HIV Resistance Response Database Initiative (RDI) for modeling various antiretroviral (ARV) therapy responses.

In addition, CCS managed an agreement with Chesapeake Research Review for an evaluation of the NIAID Human Subjects Program. The review was conducted through the months of September 2009–January 2010 with analysis and recommendations presented in March 2010. Also, CCS managed an agreement with Quality Science International (QSI) to conduct a feasibility study to determine the viability of measuring the impact of strategic planning for NIAID, DCR, and the Office of Strategic Planning and Assessment (OSPA). QSI presented their analysis and recommendations in February 2010. QSI recently completed additional analysis and assistance to determine KPIs for the newly initiated Protocol Development Program/Protocol Navigation (PDP/PN) project. QSI will provide a validation of the process maps and data and further development of benchmarks (both data and practice benchmarks) in early FY2011.

CCS also administers and oversees subcontracts in support of the NIH Clinical Center, Critical Care Department, for their Collaborative Program for AIDS Progress to provide support for HIV studies at NIH for the District of Columbia Program for AIDS Progress. Three subcontracts were established for medical assistance support and phlebotomy services at three clinics; Whitman Walker, Unity, and Family Medical. Additionally, a PSA with Howard University was created to provide medical support services for assistance with raising awareness and provider competency in HIV knowledge and testing, and facilitating communication about best practices in opt-out testing.

Administrative Support

The CCS Administrative Group provides dedicated and specialized support to a variety of initiatives within CMRP. This includes support to NIAID DCR and DIR projects. CMRP administrative staff consists of 14 team members. Over the past contract year, this group has provided the following support: assisted in recruiting and hiring 48 positions, including participation in six conference booth exhibits; established and maintained 21 subcontracts and 39 consulting and professional service agreements; prepared 71 international and 151 domestic

travel packages; coordinated arrangements for eight conferences, seminars, retreats, and training sessions; prepared 38 non-employee travel packages to attend conferences, seminars, and training sessions; completed 520 courier runs; and provided acquisitions support, including purchasing and property.

The current scope of work supporting the DCR mission has resources located in Bethesda, MD. These resources are allocated to support initiatives in the areas of strategic planning, clinical research, biostatistics, and international collaborations. Staffing consists of three secretary IIIs, who support the Program Planning and Analysis Branch (PPAB), RCHSPB, the Collaborative Clinical Research Branch (CCRB), and the OD.

The CCS administrative staff services include, but are not limited to: managing calendars and schedules, coordinating meetings, preparing agendas and disseminating meeting minutes, making conference arrangements (local and international), scheduling guest speakers, coordinating training sessions, preparing travel packages in accordance with all applicable government guidelines (both domestic and foreign), tracking action items related to branch initiatives and project milestones, and coordinating with project teams to compile and distribute information as directed.

Support to the Protocol Service Center (PSC), NIAID

Beth Baseler, M.S., Director

Laurie Lambert, Clinical Project Manager III

Tracey Miller, Senior Protocol Navigator

Since the hiring of a senior protocol navigator (SPN) in November 2009, the PSC has grown in staff and business. PSC is comprised of protocol navigators and medical writers, as well as CMRP staff who are involved with aspects critical to protocol implementation and maintenance. For NIAID, this is a high-priority initiative and support was requested from SAIC-Frederick. The Protocol Development Program (PDP) team is critical to study start-up activities. The Protocol Navigation (PN) aspect helps study staff handle the research logistics throughout a protocol lifecycle. Two medical writers were hired. Since then, the protocol and consent development productivity has improved. Additionally, interviews are underway to hire an additional protocol navigator. To date, the PDP/PN team has been involved with developing 11 initial studies. Protocols for these studies have varied in phase and type and have also spanned several intramural labs; including, the Laboratory of Clinical Infectious Diseases (LCID), the Laboratory of Immunoregulation (LIR), the Laboratory of Parasitic Diseases (LPD), the Laboratory of Allergic Diseases (LAD), and Laboratory of Immunogenetics (LIG). PSC staff assists junior and senior investigators and have had repeat business from both investigators and labs, which serves as an indicator of satisfaction with the overall program.

The senior navigator met with several investigators while attending staff meetings, Scientific Reviews, and IRB meetings and has met with key personnel and established working relationships with some of the logistical entities (i.e., NIAID Ethics Office, Office of Technology Development, Division of Radiation Safety, recruitment office, and Office of Protocol Services) to introduce the program and discuss ways in which this program can improve research processes within NIAID. The senior navigator meets regularly with the NIAID clinical director, the RCHSPB branch chief, and various oversight managers (from the safety, regulatory, monitoring, and IRB offices) to keep them apprised of the workload and upcoming projects, to troubleshoot issues, and to promote the future growth of this program. NIAID's PSC serves as a pilot for the other institutions, which anticipate starting similar programs. The senior navigator met with the NIH investigators spearheading this effort to discuss the NIAID program and answer questions about how to translate it to their programs.

One of the biggest challenges, prior to hiring additional support staff, was incorporating new tasks into the existing structure. Within the existing RCHSPP structure, a designated medical monitor and medical writer were identified to review PDP/PN protocols for consistency. In addition, staff from the CMRP functional group offices, such as CSO, CTM, and Regulatory (REG)/Investigational New Drug (IND), served as designated personnel to incorporate multiple layers of review to check for consistency between documents and ensure that a cohesive and well-written protocol and consent are delivered to the investigator/protocol team. Another challenge was to set realistic timelines for adequate review and delivery of a quality product while working on multiple protocols. To meet this challenge, a CMRP project manager was identified to organize the individual tasks and facilitate the flow of document review by the functional review groups (CSO, CTM, and Regulatory) to keep the teams on track with timelines and to manage multiple protocols and reviews at the same time. A weekly status call was instituted between RCHSPB and RCHSPP staff (who are involved in protocol development) so all members are aware of timelines, areas of concerns, and action items for the upcoming week, and to assist with advanced planning and future workload the protocol would place on these groups. Teleconferences are conducted with the RCHSPP team after an initial investigator meeting to discuss the new protocol, responsibilities, and to create an action plan with a workable timeline given the tasks at hand. The expectation is that, once several different types of protocols at different stages of development have timelines tracked, it will help the navigators predict the timeframe a set of tasks should take to complete within future projects.

One of the top priorities was to develop performance metrics for this program. A process flow map was created, in conjunction with a consultant, and identified milestones are currently being tracked and areas needing

improvement determined. Metric and data collection were formalized and include factors ranging from categorizing stipulations from IRB reviews to identifying areas needing quality improvement. Feedback tools are also being developed to assess multiple stakeholders' satisfaction with the new program and the deliverables produced. The new flow proposes more direct and consistent communication with the investigators, decreased development time, that assurance deadlines are met, and the creation of a quality deliverable that is consistent with applicable regulations.

The navigation process and its logistics require constant management and re-evaluation. The process flow has undergone revisions based on the addition of staff and tweaking of timelines to improve operations and deliverables by utilizing resources optimally. This is all part of creating a workable and viable process, which ultimately enhances the program's success. Thus far, the investigators have been very enthusiastic about the navigation program and appreciative of the efforts to assist them in navigating through the multiple steps to get a protocol approved within NIAID. The program helped draft a protocol and consents for a malaria study being conducted in Mali. Within two weeks of the initial PI meeting, the PDP/PN delivered a protocol and consents ready for IRB review. This timeline from concept to submission was fast-tracked since the malarial season had already started; being able to quickly implement this protocol in a new village in Mali was essential so that critical data collection was not missed. It took the coordination of the PI, a writer, and functional groups to successfully meet this goal.

The navigation program presented multiple internal presentations to the NIAID community and submitted an abstract poster to the Third Annual Clinical Research Management Workshop/Yale Center for Clinical Investigation for consideration. Spreading the word on this very exciting initiative is a top priority. Efforts will improve the NIAID clinical research enterprise, present studies to subjects more rapidly, and enhance the timeline for groundbreaking scientific and clinical research.

Support to the Office of Strategic Planning and Assessment (OSPA), NIAID

Beth Baseler, M.S., Director

Laurie Lambert, B.S., Clinical Project Manager III

Cynthia K. Osborne, B.S., Clinical Project Manager II

Barbara van der Schalie, M.S., Clinical Training Manager

Mildred Gapara, M.B.A., Clinical Program Administrator

During FY2010 the SAIC-Frederick clinical program administrator (CPA) continued to serve as executive secretary for the NIAID Clinical Research Subcommittee (NCRS). The CPA liaises with the Clinical Research Working Group (CRWG) to organize groups of SMEs to assist with facilitating NCRS initiatives through the approval process. This year, the CPA has been directly involved in supporting three key NCRS initiatives related to Barriers to Clinical Research: (1) identify alternative models for IRB review, (2) identify and resolve barriers produced by the HHS, NIH and NIAID policies and regulations and (3) address barriers to international research caused by requirements of the European Union Clinical Trials Directive (EU CTD).

The CPA provides administrative support to these initiatives by creating and editing documents and reports, and provides programmatic support by tracking and reporting the progress of initiatives for NCRS leadership. In addition, the CPA serves as the logistical point of contact to coordinate and facilitate work group sessions (for SMEs and division representatives) to discuss progress and monitor performance. The CPA supported the DCR's Go Green efforts by facilitating a paper reduction initiative for CRWG. This initiative included presenting meeting agendas and action items in electronic format at team meetings rather than making copies for each team member.

In FY2009 (reported in December 2009) the CPA was recognized in the April–September 2009 Coordinator's Report for doing an outstanding job performing and facilitating all projects for NIAID. In February 2010, the CPA was recognized by SAIC-Frederick for providing support to DCR during the inclement weather that closed NCI-Frederick for over a week.

The CPM II continues to provide support to the OSPA Strategic Planning Group (SPG) throughout the strategic planning process. SPG currently has plans in process for six DCR branches/offices: OSPA, PPAB, RCHSPB, the Intramural Clinical Management and Operations Branch (ICMOB), CCRB, and the Office of the Chief Scientist for the Integrated Research Facility at Fort Detrick (IRF). CCRB and OSPA have started a new strategic planning cycle for the current reporting period.

The CPM II develops and maintains the project management master system and related processes/templates necessary for facilitating the planning, tracking, and execution of operational plans for DCR branches and offices. DCR has directed resources for operational planning in an effort to implement and execute strategy for its branches and offices. During this reporting period, one new operational plan was developed and implemented for ICMOB. Operational plans for OSPA, RCHSPB, and PPAB remain deployed and monitored. An operational plan is in development for CCRB and is anticipated to be executed in Q2 FY2011.

The CPM II is also responsible for establishing, implementing, and maintaining a flexible reporting system for monitoring the progress of operational plans, which requires facilitating the ongoing review and

maintenance of four DCR operational plans and preparing quarterly progress reports for each branch's leadership. During this reporting period, quarterly progress reports for OSPA, RCHSPB, PPAB, and ICMOB were reported for each branch. Also during this reporting period, the need for additional administrative resources to perform maintenance on the operational plans was identified. A resource plan was developed and implemented to engage the SAIC-Frederick administrative staff to support the progress report preparation process.

The CPM II performs a high degree of mentoring and knowledge/skills transfer within the subject area of operational planning utilizing project management concepts. During the current reporting period, the CPM II facilitated the development of a charter for a PPAB WG.

The CPM II also develops, implements, and maintains workforce alignment strategies throughout DCR, assists various levels of DCR staff with aligning performance initiatives to strategic goals and objectives and aligning operational accomplishments with performance targets. In the current reporting period, the CPM II assisted 35 DCR staff members with workforce alignment strategies.

Management Support

The CPM II provides management oversight to the CPA, who provides supervisory oversight to five administrative support staff located at Rockledge. Collectively the CPM II and CPA provide focus and direction for enhancing the quality of services and customer satisfaction. A main focus for 2010 has been to identify areas for organizational and process improvements. A time-to-task analysis was performed to assess resource needs and available capacity. As a result, all open administrative support positions were filled and an opportunity was identified for the administrative staff to support the operational planning efforts within DCR. Organization tools, such as an organizational chart, employee coverage plan, and communication model, have been developed and implemented to ensure continuity of services. Efforts are being directed at developing standards for job performance and service excellence. Through focus group sessions, which included the administrative and management staff, four key areas for improvement were identified: (1) professionalism, (2) communication, (3) policy and procedures, and (4) roles and responsibilities. Work groups have been formed for each area to define the skills, knowledge, and competencies necessary to provide excellent service and increased customer satisfaction.

OSPA Training Support

Training Support for OSPA is provided by a clinical training manager as a member of the Learning and Professional Development (L&PD) group.

Identify/Develop Training Resources to Address Client-identified Training Needs. Most of the training requests within OSPA are initiated within the administrative support branch and PPAB. This year, the

CTG has provided training on creative problem solving, communication preferences, and learning preferences. They have also provided extensive organizational development support and facilitation services. PPAB has requested ongoing training, one learning segment per month, through the end of CY2010.

In addition, ICMOB requested assistance to provide learning segments at their staff meetings. A training session preference survey was conducted and the sessions were prioritized; they will be provided beginning September 2010.

The OSPA director also requested an administrative certification program for PPAB, with possible NIAID-wide implementation. This is to be discussed again later in the year.

Provide Training and Professional Development Subject Matter Expertise. RCHSPB requested assistance in human capital allocation, using succession-planning tools supplied by the CTG. This project will include job analyses and providing useful data for professional coverage.

The CTG participated extensively in the development, review, and evaluation of the GCP Online Course. The NIAID GCP Learning Center web site, on which the GCP Online Course resided, was selected as a 2010 Excellence.gov award top 20 finalist.

The CTG is currently involved in the configuration of an online training course for DSMB members. A training-needs assessment was conducted and critical content was identified; the course is in the process of being developed.

The next session of the NIAID Seminar Series will focus on Clinical Data Management and the CTG is on the configuration team for the event.

HHS has mandated the implementation of a specific learning management system (LMS). The training manager is serving on the NIAID LMS Work Group and the Stakeholders Group.

The L&PD group is leading the team responsible for the implementation of a leadership culture within DCR. This involves extensive research, development of strategy, and eventual implementation. So far, this initiative has required attendance at the Baldrige Quest for Excellence Conference and collaboration with a clinical research organization that won this year.

Ensure Compliance and Continuous Improvement of Training Processes and Initiatives. The OSPA "Training Standard" document was revised this year to differentiate between training initiatives and informational presentations.

Conduct Professional Development to Ensure that Staff Members Maintain Their Subject Matter Expertise. This year, two presentations were given at national conferences: "Why Train? What Do FDA Warning Letters Tell Us?" (Barnett Training Forum in Boston, October 2009) and "What FDA Warning Letters Tell Us About Clinical Monitoring: Diverse Perspectives on a Critical Process" (Cambridge Healthcare Institute, Mastering Clinical Trial Monitoring Symposium, June 2010).

A poster and several sessions, including: "Why Train? What the FDA Warning Letters Tell Us", "Generations in the Workplace," "Learning Style Preference," and "Myers-Briggs Type Indicator: Communication Implications," were also presented to NIAID staff.

Support to the Office of Strategic Planning and Assessment's (OSPA) Technical Solutions Group (TSG), NIAID

The OSPA TSG provided support to the fourth and fifth CRIMSON Award Fee panel reviews to assess contract performance against the metrics outlined in the SOW. TSG extracted data from monthly status reports and compiled the information into comparative spreadsheets. Excel templates were used to graphically depict the quantitative metrics from the SOW. The current review period, as well as other review periods, were compared to the SOW metrics. A qualitative summary was written and combined with the metric analysis into a detailed review narrative that the panel used to make their determination for the six-month period.

During this reporting period, the TSG group undertook the task of researching over 400 pieces of property listed in the Sunflower asset management system as being assigned to DCR. This effort was part of an ongoing attempt to update the property records to accurately reflect where the property is and whether or not it is active or in surplus. Once the property's disposition is determined, any/all paperwork will be updated to reflect the correct information. TSG also completed the ordering of 40 computers and 30 PDAs for staff. The ordering, delivery, and installation of each piece of equipment was tracked along with the associated costs of the items and reconciled with the DCR Funding Report issued by the Office of Cyber Infrastructure and Computational Biology (OCICB). TSG serves as the central point of contact for ordering all technical equipment upgrade and replacements. This team also determines hardware and software specifications, provides IT support, and follows through to user satisfaction.

Additionally, TSG played an integral part in the 2010 annual Acquisition Management and Operations Branch (AMOB) inventory of equipment. This includes tracking PDAs, laptops, and all equipment used for telecommuting. The group collaborated with the inventory team to reconcile property records and research the locations of missing and/or at-home equipment to resolution. TSG also provided support in issuing approximately 56 long-term property passes (LTPP) for all portable and at-home equipment within DCR. This process is coordinated with the property manager and includes verifying the equipment, NIH decal number, and manufacturer's serial number within the NBS property database. The group is currently involved in a Livelink[®] project to automate the process of issuing long-term property passes.

Support to the Infectious Diseases Clinical Research Program (IDCRP), NIAID, DoD

John Powers, M.D., Senior Medical Scientist

Alice Rosenberg, R.N., Clinical Research Nurse III (Outreach)

Since 2005, CMRP has worked with NIAID to establish a collaborative effort between CMRP, NIAID, and DoD in IDCRP. With the senior medical scientist serving as the team leader for this project, and the CRN III serving as project manager, the overarching goal of this collaboration has been to facilitate high-priority, translational clinical research to address infectious disease problems of military relevance. Additional ambitions of this partnership include building research capacity, developing infrastructure, facilitating efficient clinical research, and leveraging scientific expertise within and outside of NIH.

During this reporting period, CMRP staff helped to continue to enfranchise the IDCRP steering committee by helping re-write the Inter-Agency Agreement that outlines steering committee functions and objectives and helping develop agendas for steering committee meetings. In addition, CMRP staff worked with NIAID staff on clarifying the membership of the steering committee to best reflect those parties with knowledge of areas of military relevance for clinical research. The staff also facilitated the development of research capacity by aiding IDCRP staff in developing and implementing protocols for infectious diseases of military relevance.

Currently, 66 protocols are in various stages of development within IDCRP; 19 are approved and 17 are in development. CMRP staff members have also helped develop research capacity by acting as points-of-contact for clinical research questions and standards, such as NIAID-specific protocol templates and SOPs. Administratively, CMRP staff organized regular meetings regarding function and vision of the IDCRP program and kept NIAID staff up-to-date on the progress of the program. CMRP's senior medical scientist serves on the Scientific Review Board ensuring the scientific validity of protocols before sending them to the IRB. The senior medical scientist has also lectured to groups of PIs to enhance their scientific understanding and has given the Preventative Medicine Grand Rounds.

The program has undergone an independent review by the American Institute of Biological Sciences (AIBS); results are pending. CMRP staff aided DoD staff in developing an infectious disease-specific IRB. In addition, RCHSPP of SAIC-Frederick provides pre-review of protocols for regulatory compliance and, when appropriate, provides monitoring of protocols per GCPs. The CRN III has assisted in addressing monitoring and regulatory issues. Most recently, CMRP staff worked with IDCRP staff to develop an Acute Respiratory Diseases

program to address clinical research in novel influenza disease and in other respiratory diseases in the military.

Support to the District of Columbia Partnership for AIDS Progress (DCPFAP), NIAID

John Powers, M.D., Physician III
Dawn Fishbein, M.D., MS, Medical Director,
Medical Affairs Scientist II

Alice Rosenberg, R.N., Clinical Research Nurse III (Outreach)

Rachel Newman, R.N., M.P.H., Clinical Nurse Administrator

Erica Eaton, M.P.A., Clinical Program Administrator

In 2008, the District of Columbia (D.C.) Department of Health and NIH launched a new partnership to make D.C. a leader in the response to the HIV/AIDS epidemic. This is being referred to as the D.C. Partnership for HIV/AIDS Progress (DC PFAP). For the first time, the nation's capital and leading health research institution joined together to work with the district's universities and community-based health care providers to bring new ideas, new services, and access to clinical research to D.C. residents. The partnership draws upon a diverse portfolio of academic institutions, community-based organizations, and stakeholder groups for the design and implementation of specific projects and activities. CMRP has played a major role in the implementation of this partnership, beginning with initial navigation by the clinical research nurse (CRN) III who helped to bring the D.C. HIV provider community and NIH together, and assisted in the recruitment of the medical director, a medical affairs scientist (MAS) II, of the DC PFAP Subspecialty Clinics in May 2009.

Since June 2009, there have been multiple advances in development of this new program with CMRP and the identified staff providing support to NIH, including: (1) a strategic plan with program metrics has been implemented; (2) a core team has been staffed to include a clinical nurse administrator and a CPA, with a physician II joining in July 2010; (3) downtown D.C. office space has been secured and was occupied in February 2010; (4) 145 new patients have been evaluated for subspecialty hepatitis care and treatment within three integrated HIV community clinics in D.C., totaling 425 patient visits; (5) two research protocols have been submitted for IRB approval; (6) operational plans for research in the community clinics are being developed; (7) patients are being screened and referred for other NIH research protocols; (8) monthly educational webinars are provided for HIV treatment/care providers, organized by the core team in collaboration with the D.C. Department of Health and the AIDS Education and Training Center; (9) multidisciplinary, inter-institutional monthly research

meetings have been established, such as a Liver Disease Working Group; and (10) discussions with several NIH Institutions, including NCI, the National Institute of Mental Health (NIMH) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) regarding expansion of multiple subspecialty clinics.

The DC PFAP Subspecialty Clinic program development is on target and continuing to create an expanding number of new opportunities to address the high rate of HIV infection in Washington, D.C.

Support to the National Institute of Allergy and Infectious Diseases (NIAID) and the Washington Hospital Center (WHC) Collaboration to Enhance Clinical Research, NIAID

For the first time, an NIH intramural research protocol was taken off-site to increase the scope of research training for fellows, to increase the patient population available for study, and to make research protocol participation more accessible, resulting in a greater opportunity for inner-city resident participation. As a result of this change, the protocol to evaluate the function of HgbA1C in the progress of diabetes enrolled 125 patients at WHC and was completed within one year. A second protocol, in conjunction with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), is currently in progress to determine if proteinuria is a predictor of renal disease in HIV-positive patients. In addition, a team at the DC Veteran's Administration Hospital has been formed to conduct a protocol that will determine the value of using pioglitazone to diminish steatosis in HIV-positive patients with hepatitis C complications. Under the supervision of the MAS, CMRP's CRN III aided in the organization of these projects; recruitment, consent, and enrollment of patients; obtaining all patient samples; preparation and packing of specimens for shipment; and preparation of the necessary documentation for monitoring visits.

Support to NIAID Clinical Teams: Support to the Intramural Clinical Management and Operations Branch (ICMOB); Laboratory of Immunoregulation (LIR); Laboratory of Host Defenses (LHD); Laboratory of Clinical Infectious Diseases (LCID); Laboratory of Parasitic Diseases (LPD); Laboratory of Allergic Diseases (LAD); and the Laboratory of Immunology (LI)

Taree Foltz, Program Manager

Michelle Paulson, Physician II

Daphne Mann, Nurse Case Manager III

Support to the Intramural Clinical Management and Operations Branch (ICMOB)

ICMOB oversees the logistical management of clinical research and all related clinical operations for the intramural laboratories with a major emphasis on patient-oriented research: (1) LIR, (2) LHD, (3) LCID, (4) LPD, (5) LAD, and (6) LI. ICMOB manages inpatient units and outpatient clinics in concert with the Clinical Center. It is also responsible for clinical protocol review and approval, assurance of scientific quality and human subject protection, the quality of care delivered to the NIAID patients, and the quality of professional performance of the health care providers.

The intramural portfolio is constantly expanding as new research initiatives and projects are identified to help further the mission of NIAID. SAIC-Frederick is actively involved with projects of a similar nature and similar support services; clinicians, study coordinators, and administrative support personnel have been requested and provided. These staff members will provide the necessary clinical support to handle this extensive effort.

Support to the Laboratory of Immunoregulation (LIR)

CMRP provides protocol nurse coordinator support to LIR. A protocol nurse coordinator III was hired this year as a replacement and is currently working on protocols involving HIV, influenza, and lymphocyte subgroups.

Support to the Laboratory of Host Defenses (LHD)

CMRP provides nurse case management support to LHD. A nurse case manager II provides direct nursing care to an assigned caseload of patients through facilitation of patient visits and supporting both clinical and research needs. A CRN was hired to assist with the implementation of clinical protocols, the documenting and tracking required for adverse events, and to correspond with patients.

Support to the Laboratory of Clinical Infectious Diseases (LCID)

CMRP provides clinical, medical, protocol, and study coordinator support for LCID, which is interested in a wide spectrum of diseases, including primary immunodeficiencies, hyper IgE syndrome, mycobacterial, viral and tick-borne infections, and autoimmune lymphoproliferative syndrome. CMRP provides three nurse practitioners to provide direct patient care to patients enrolled in LCID protocols. One of the nurse practitioners was named as a co-author on two papers that were published this year. One of the three nurse practitioners was hired this year in a part-time capacity. Due to increased activities within LCID, CMRP has been tasked with actively recruiting candidates to fill a new nurse practitioner position to support viral and tick-borne protocols.

CMRP provides additional direct clinical support through two nurse case managers. These case managers coordinate patient care-related activities and help facilitate appointments. A nurse case manager III is involved in developing a patient educational booklet about hyper IgE patients and is responsible for assigning patients to case managers. Additionally, CMRP provides one patient care coordinator to LCID.

A physician II continues to provide direct support to the LCID's interest in tuberculosis and their outreach program to the greater Washington D.C. area through support to the Washington D.C. Department of Health Tuberculosis Control Program. An NIAID/LCID tuberculosis protocol written by the physician II is pending review by IRB. Additionally, the physician II provides direct care to tuberculosis patients, presents educational lectures to rotating residents on the NIAID service, and leads a continuing education lecture for an Inova Juniper Program.

CMRP provides four protocol nursing coordinators to support implementation of protocols, data and regulatory management, and safety data monitoring. Included is one protocol nurse coordinator I who was recently hired. Their depth of involvement in protocols has resulted in two protocol nurse coordinators being listed as co-authors on studies published in research journals this year. A protocol nurse coordinator II is also listed as a co-author on publications being submitted for review. A protocol nurse coordinator II initiated a weekly didactic lecture series for both CMRP and Clinical Center staff, aimed at broadening scientific understanding of ongoing LCID interests.

CMRP also provides CRN support to facilitate protocol recruitment, enrollment, and data management. A CRN III plays a pivotal role in meeting the increased needs of LCID and is responsible for specimen management, ordering research studies, and patient screening and scheduling. This CRN was listed as a co-author on a clinical paper published this year. A part-time CRN I was also recently hired to facilitate chart reviews, patient enrollment, and specimen processing.

Support to the Laboratory of Parasitic Diseases (LPD)

CMRP provides nurse case-management support and study coordination services to LPD. A nurse case manager II was hired to provide direct nursing care to an assigned caseload of patients, utilizing the nursing process to assess, plan, intervene, and follow up on disease-related features as outlined in the clinical protocol. A protocol nurse coordinator II was hired to serve as a liaison with personnel at clinical and laboratory sites and the NIAID PI, participate in clinical trials protocol development, develop procedure manuals for clinical trials protocols, help create case report forms, train staff, and visit off-site collaborative centers as needed.

Support to the Laboratory of Allergic Diseases (LAD)

CMRP provides nurse case management support to LAD, supporting protocols that study various aspects of mastocytosis, idiopathic anaphylaxis, urticaria and atopic dermatitis, asthma, and systemic capillary leak syndrome. A nurse case manager II provides direct nursing care to an assigned caseload of patients, utilizing the nursing process to assess, plan, intervene, and follow up on disease-related features as outlined in the clinical protocols. Additionally, this nurse case manager II provides procedure support through skin punch biopsies, antigen skin testing, and pulmonary function testing.

Support to the Laboratory of Immunology (LI)

CMRP provides clinical trial coordination and implementation and clinical protocol and data management to LI. A protocol nurse coordinator II was hired to: manage the quality assurance and quality improvement initiatives; manage implementation, tracking, data abstraction, collection, and data reporting; liaise with referring physicians and patients; and coordinate a screening protocol clinical trial. These studies will assist in determining the biochemical and genetic causes of inherited childhood immune diseases that affect lymphocyte homeostasis.

H1N1 Influenza Support to the Division of Clinical Research (DCR), NIAID

SAIC-Frederick continues to provide support to the H1N1 Influenza initiative. H1N1 influenza presents challenges to global health security because many foreign nations, especially less developed countries, may not have preparedness plans and/or the capabilities/capacity to respond to the pandemic. For these reasons, NIAID's DCR requested that SAIC-Frederick provide support in the following areas: (1) clinical trials management and support; (2) regulatory support, including clinical trials monitoring, safety reporting, and IND management; (3) clinical site preparation and study/trial operational assistance; (4) handling of clinical specimens; (5) training; (6) data management; (7) general logistical and administrative services, such as conference, travel,

and meeting planning and organization; (8) protocol development and review; (9) web site development and maintenance; (10) personnel; and (11) biostatistics support.

During Phase I, SAIC-Frederick provided support for the conduct of an observational study to characterize persons infected with H1N1 during the 2009–2010 pandemic on five continents, also known as the Acute Respiratory Infection Consortium (ARIC) protocol. The primary objectives of this study are to: (1) characterize individuals with influenza or influenza-like illness in terms of demographics, co-morbid conditions, and prior influenza vaccinations; (2) describe the clinical course and treatment provided; (3) assess the outcome 28 days after diagnosis of influenza A; and (4) establish a repository of samples to determine a precise diagnosis and to characterize, on a molecular level, the virus from different sites. Enrollment began in September 2009 from 50 clinics located in North America, South America, Western Europe, Australia, Thailand, Japan, and Africa; currently there are 120 patients enrolled. An additional study, FluPro, has been approved and will begin enrolling this fall when the flu season begins.

Support to Institutional Review Board (IRB) Process Improvement, NIAID

Over the past contract year, CMRP has been involved in the NIAID IRB pilot program with the Regulatory Compliance and Human Subjects Protection Branch (RCHSPB), DCR. The goal of this program is to perform a critical review of current IRB policies, procedures, and systems to implement changes to facilitate the work of investigators in the intramural community and those sponsored by NIAID intramural programs while maintaining an environment where high-quality clinical research can be conducted in accordance with applicable regulations, standards, and guidelines. SAIC-Frederick provided oversight for the executed research subcontract from the Project Kickoff meeting held in July 2009 through the presentation of the final report in February 2010. The critical review was completed in February 2010 with a presentation of the findings to NIAID senior management, the IRB chair, RCHSPB management, and CMRP/RCHSPP management. The preliminary report was generated and distributed expeditiously after completion of the review process. Due to the observations and recommendations for improvement, SAIC-Frederick was requested to extend the contract and assist with reporting the findings to NIAID's PIs, the NIAID IRB, RCHSPB and SAIC-Frederick's Regulatory Compliance and Human Subjects Protection Program (RCHSPP). Additional responsibilities included discussing the recommendations for improvement to the process workflow, organizational structure, documentation management, template documents, and database/tracking system.

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Rutten L, Hesse B, Augustson E, **Evans S**: Perceptions of risk, worry, and mental representations of lung cancer among current smokers, former smokers, and non-smokers. 34th Annual American Society for Preventive Oncology Meeting. Bethesda, Maryland. March 21-23, 2010.

Seidel G: Nanotechnology: New cancer treatment on the horizon. INGROSE 09 Conference, Minneapolis, Minnesota. September 29 – October 1, 2009.

Seidel G: Funding for Biomarker Imaging & QOL Studies Associated with NCI Clinical Trials. 101st American Association Cancer Research Annual Meeting, Washington Convention Center, Washington, DC. April 18-21, 2010.

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Stipelman B, Solomon L, **Feng X**: Tobacco control evaluation initiatives title: A quasi-experimental bibliometric study comparing the productivity of the Transdisciplinary Tobacco Use Research Centers

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van Bommel D, Baris D, Schwenn M, Johnson A, Schned A, Jones M, Kida M, **Lenz P**, et al.: DNA methylation by source: A comparative study of global methylation levels of genomic DNA isolated from blood, serum, buccal cell, and tissue among bladder cancer cases. AACR, Molecular Epidemiology Working Group, Miami, Florida. June 6-9, 2010.

van der Schalie B: While the good clinical practices (GCPs) do not clearly mandate specific training requirements, a review of the FDA warning letters over the past several years indicate increased scrutiny of the qualifications of clinical research staff. This presentation will provide an overview of the clinical research-associates FDA warning letters associated trends. SoCRA 18th Annual Conference, Nashville, Tennessee. September 26, 2009.

van der Schalie B: Train the Trainer: Instructor-Led Training Content Configuration. September 30, 2009.

van der Schalie B: Bi103/104 Human Anatomy and Physiology course presented to Prospective Healthcare Professionals. Frederick Community College. September – December 2009 (104) and January – May 2010 (103).

van der Schalie B: Why Train? What FDA warning letters tell us. SoCRA Annual Conference, Nashville, Tennessee, September 26, 2009, Barnett Training Conference, October 26, 2009, Boston, Massachusetts, and Clinical Center Staff, NIH campus, Rockville, Maryland, December 14, 2009.

van der Schalie B: Manager as communicator. SAIC-Frederick Managers. Ft. Detrick, Frederick, Maryland. October 1, 6, 14, 19, 21, 2009, November 3, 10, 12, 18, 2009, February 25, 201, March 2, 2010 and September 16, 2010.

van der Schalie B: Train the trainer (Two parts). SAIC-F/NCI staff, Ft. Detrick, Frederick, Maryland, September 30, 2009 & October 7, 2009, SAIC-Frederick staff, NIH

campus, Rockville, Maryland, December 2, 2009 & December 9, 2009, and VPP staff, Frederick, Maryland, December 7 & 16, 2009, February 17, 2010 & March 3, 2010.

van der Schalie B: CMRP training policy. CMRP Managers/supervisors, webinar from Industry Lane, Frederick, Maryland. October 13, 2009.

van der Schalie B: Giving and receiving constructive feedback. SAIC-F/NCI staff. Ft. Detrick, Frederick, Maryland. October 28, 2009 and March 10, 2010.

van der Schalie B: Generations in the workplace. Clinical Center staff. NIH Campus, Rockville, Maryland. November 2, 2009.

van der Schalie B: Learning style preference. PPAB staff, Bethesda, Maryland. November 16, 2009.

van der Schalie B: Inspection awareness training. Industry Lane/Grove Road staff. Frederick, Maryland. November 6, 9 & December 15, 2009.

van der Schalie B: Communication preference. Regulatory Staff, November 23, 2009, April 22 & 29, July 16, 2010, Basic Science Admin. Retreat, March 12, 2010, SPGM Retreat, March 24, 2010.

van der Schalie B: Why Train? What FDA warning letters tell us. Clinical Monitoring Research Program Staff, Frederick, Maryland. April 30, 2010.

van der Schalie B: Myers-Briggs Type Indicator: Communication Implications, NIAID PPAB Staff, Bethesda, Maryland. May 26, 2010.

van der Schalie B: What the FDA Warning Letters Tell Us About Clinical Monitoring: Diverse Perspectives on a Critical Process. Barnett International and Cambridge Healthtech Institute's: Mastering Clinical Trial Monitoring, Royal Sonesta Hotel, Cambridge, Massachusetts. June 25, 2010.

Venkatesan A, Stratton P, Locklin J, **Gates S**, Pulanic T, Segars J, Merino M, Dreher M, Partanen A, Sokka S, Wood B: High intensity focused ultrasound ablation of uterine fibroids using novel volumetric ablation. International Society for Therapeutic Ultrasound. Aix en Provence, France. September 23-26, 2009.

Walker K, Martin S, Wolters P, Widemann B: Social-Emotional Functioning in Youth with Neurofibromatosis Type 1 (NF1) and Plexiform Neurofibromas (PNs). 2010 Children's Tumor Foundation, Neurofibroma Conference: Back to the Future, Sheraton City Center Hotel, Baltimore, Maryland. June 5-8, 2010.

Walsh-Childers K, **Edwards H**: What black women need to know: Breast cancer coverage in African-American magazines. Association for Education in Journalism and Mass Communication Southeast Colloquium, University of North Carolina, Chapel Hill, North Carolina. March 2010. *Top Paper*

Walsh-Childers K, **Edwards H**: What black women need to know: Breast cancer coverage in African-American

magazines. Association for Education in Journalism and Mass Communication Annual Meeting, Denver, Colorado. August 4-7, 2010.

Welch J: International research capacity building: Ethical and practical issues (international track). PRIMR Annual Meeting: 2009 Advancing Ethical Research Conference. Nashville, Tennessee. November 15, 2009.

Welch J: Overview of the southeast Asia infectious disease clinical research network. Introduction for a panel presentation by MOH IRB members from SE Asia, and NIH Bioethics Department Speaker PRIMR Annual Meeting: 2009 Advancing Ethical Research Conference. Nashville, Tennessee. November 15, 2009.

Zappala G: Cancer and inflammation. 68th Annual Scientific Meeting of the American Psychosomatic Society, NCI Sponsored Preconference Workshop, Marriot Downtown Waterfront Hotel, Portland, Oregon. March 10, 2010.

Posters

Andres C, Burns J, Dale J, Gallo S, **Simpson S, van der Schalie B**, et al.: Site Training at the National Institute of Allergy and Infectious Diseases (NIAID). Clinical Site Monitoring Seminar. October 26, 2009.

Andres C, Burns J, Dale J, Gallo S, **Simpson S, van der Schalie B**, et al.: Site Monitoring For FY2008 at the National Institute of Allergy and Infectious Diseases (NIAID). Clinical Site Monitoring Seminar. October 26, 2009.

Babu S: Regulatory T cells modulate Th17 responses in latent tuberculosis. Keystone Symposia on Overcoming the Crisis of TB and AIDS, Arusha, Tanzania. October 2009.

Baseler B, Beveridge J, Blanchard F: Pilot year two successes and program expansion. 2010 NCI Intramural Scientific Investigators Retreat, #65, Bethesda North Marriott Hotel & Conference Center, Bethesda, Maryland. January 7, 2010.

Burnette T, Gilchrist D, Hohnke M, Huber L, Kennedy A, Lewelling S, May C, Schildtknecht A, Simpson K, Soto R, Wesmiller K, van der Schalie B, Baseler B: CPS/CAP: Changing the Workplace, One Administrative Professional at a Time. Get on the Path to Certification Today! NCI Spring Research Festival, Frederick, Maryland. May 6, 2010.

Cahill K, **Kapoor P:** Disclosure of Trial Results to Research Participants. Association of Clinical Research Professionals 2010 Global Conference & Exhibition, Tampa, Florida. April 22-23, 2010.

Chiatt D, **Miller T**, Pierson J, Lassa J, Tavel J: Evaluation of the NIAID Protocol Development Program. Third Annual Clinical Research Management Workshop/Yale

Center for Clinical Investigation, Bethesda, Maryland. June 21, 2010.

Davis KL, Anhang Price R, Koshiol J, Tiro J: Using population based data surveillance to eliminate disparities in cancer control. International Cancer Control Congress. Cernobbio, Como, Italy. November 8-11, 2009.

Edwards H, Breslau E: Cancer Screening Attitudes in Older Adults with Comorbid Conditions. Society of Behavioral Medicine, Seattle, Washington. April 6-11, 2010.

Foltz T, Spinelli M: Foundations for Tomorrow...Supporting Clinical Research...CMRP and NCI Clinical Support. 2010 NCI Intramural Scientific Investigators Retreat, #65, Bethesda North Marriott Hotel & Conference Center, Bethesda, Maryland. January 7, 2010.

Giri J, Lambert L, Tierney J, Pierson J, Baseler B: Flexible Project Management Models for Optimizing Resources in an Ever-Growing Clinical Research Environment. PMI Research Conference, Washington, D.C. July 11-14, 2010.

Giri J, Lambert L, Baseler B: Flexible Project Management Models for Optimizing Resources in an Ever-Growing Clinical Research Environment. Fall NIH Research Festival, Bethesda, Maryland. October 6-7, 2009.

Fagan P, Moolchan E, Hart A, **Rose A**, Lawrence D: Nicotine Dependence and Quitting Behaviors Among Menthol and Non-menthol Smokers with Similar Consumptive Patterns. UICC World Cancer Congress 2010, Shenzhen, China. August 18-21, 2010.

Rose A, Vallone D, Beebe L, Perez-Stable E, Viswanath K: Examination of Tobacco-Related Message and Media (TERMM) Exposure to the Undeserved: A Critical Component of Tobacco Control Monitoring. UICC World Cancer Congress 2010, Shenzhen, China. August 18-21, 2010.

Rose A, Lawrence D, Parker K, Fagan P, Gibson T: Gender Differences in Patterns and Correlates of Menthol Smokers in the United States. UICC World Cancer Congress 2010, Shenzhen, China. August 18-21, 2010.

Rutten L: Social Networks & Smoking Status. Society of Behavioral Medicine, Seattle, Washington. April 6-11, 2010.

Smith H, Baseler B, Beveridge J: CMRP Support to the NCI Office of Biorepositories and Biospecimen Research OBBR. 2010 NCI Intramural Scientific Investigators Retreat, #65, Bethesda North Marriott Hotel & Conference Center, Bethesda, Maryland. January 7, 2010.

Walker K, Martin S, Wolters P, Widemann B: Social-Emotional Functioning in Youth with Neurofibromatosis Type 1 (NF1) and Plexiform Neurofibromas (PNs). 2010 Children's Tumor Foundation, Neurofibroma Conference: Back to the Future, Sheraton City Center Hotel, Baltimore, Maryland. June 5-8, 2010.

Wolters P, Martin S, **Walker K**, Widemann B: Impact of Pediatric Illness (IPI) Scale Parent Form: Validity and Reliability Data For Children with Neurofibromatosis Type 1 (NF1) and Plexiform Neurofibromas (PNs). Children's Tumor Foundation 2010 "Back to the Future" Conference. Sheraton Baltimore City Center Hotel in Baltimore, Maryland. June 5-10, 2010.

Zuckerman J, van der Schalie B: NIAID GCP Learning Center: Evaluation of a Computer-based Training (CBT): 3rd Annual Clinical Trials Management Workshop, Bethesda, Maryland. June 21, 2010.

Collaboration

Hartford JB, Edwards BK, Nandakumar A, Ndom P, Capocaccia R, et al., collaborators: **Rutten LJ, Davis KL, Price RA**, et al.: Cancer control-planning and monitoring population-based systems. *Tumori*, 95(5):568-78. September-October 2009. PMID: 19999948 [PubMed – indexed for MEDLINE].

Book Review

Rutten L: Talking about communication: why technology matters. *Psyc Critiques*.

Positions of Leadership

Babu S: Poster Presentations Judge. Indian Immunology Society Meeting, Bangalore, India. December 2009.

Babu S: Young Investigator Award Committee Judge. 58th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), Washington, DC. November 2009.

Radio Interview

Rosenberg A: Baby hats for Rwanda babies dying of hypothermia. Beth Waring, NIH Record/Joe Balintly, NIH Research Radio, NIH, Bethesda, Maryland. February 2, 2010.

