Children’s Hospital of Pittsburgh

Research Development Report

Reporting Period:

July 1, 2011 - June 30, 2012

Commercial Development of Research

No activities during the reporting period related to any Tobacco Funds for Children’s Hospital of Pittsburgh research recipients.

Research Licensing Agreements

Children’s Hospital of Pittsburgh of the University of Pittsburgh Medical Center Health System (CHP) researchers are faculty of the University of Pittsburgh. CHP and the University have an agreement that all intellectual property developed through CHP researchers be assigned to the University of Pittsburgh.

The University of Pittsburgh Office of Technology Management (OTM) and its affiliate office, the Office of Enterprise Development Health Sciences (OED) is a service of the Office of the Senior Vice chancellor and acts as a resource for health science faculty pursuing entrepreneurship and interactions with industry. (http://www.oed.pitt.edu) OED is a central link bringing the University of Pittsburgh’s world class researchers together with the life sciences business community. The OTM serves as the hub of all technology commercialization activities at the university. The OTM assists in fulfilling the University’s mission of education, research and public service by facilitating the development of products and processes from University technology for the benefit of the University, its faculty and staff, and the community. OTM provides an Inventors Handbook to researchers to help them become well informed, effective participants in the process of transferring University inventions to the commercial sector. The OTM has a comprehensive web site http://www.otm.pitt.edu designed to assist investigators in all aspects of technology management, including licensing. To manage the commercialization activities for staff, the OTM employs intellectual property experts, specialized licensing managers, business development and technology marketing professionals, education and outreach teams and reporting and compliance personnel.

The OTM and OED continue to focus on engaging more faculty, staff and students in the innovation commercialization process; educating them about such endeavors; and building a community of “Pitt Innovators,” defined as those who enter the process officially by submitting invention disclosures for commercial consideration.

Training Students and Health Professionals

Children’s Hospital of Pittsburgh of UPMC maintains a very successful pediatric training
program for our students, residents, fellows and junior faculty. During this reporting period the faculty of the Department of Pediatrics faculty grew to 266 in 19 divisions. The residency program of the department grew to five this year, including Categorical Pediatrics, Medicine-Pediatrics, Pediatric-Psychiatry Triple Board, Child neurology, and a new Patient Advocacy-Leadership Service Residency program funded by a grant from the Health Resources and Services Administration (HRSA). The latter program is focused on training residents to work with children in underserved urban and rural areas. We had 75 fellows in 15 subspecialty fellowship training programs. New T32 grants in nephrology (NIH) and general academic pediatrics (HRSA) were received, and NIH T32 grants in endocrinology, gastroenterology and rheumatology were renewed. The department of pediatrics also competed successfully for renewal of its Child Health Research Center grant, which provides support for mentoring of junior faculty members as they develop careers as physician scientists.

The training programs benefited 78 subspecialty fellows and 112 residents including the categorical, Medicine-Pediatrics, (Peds-Psych-Child Psych), and Child Neurology residency training programs. Twelve of the 28 graduates from the 2010 class matriculated in fellowship program or took faculty positions at CHP. Of the 16 graduates who have gone onto fellowship programs, 3 remained at CHP, 3 went to CHOP; 2 each are at Johns Hopkins, Boston Children’s and Children’s National Medical Center and 1 each went to Columbus Children’s, Cincinnati Children’s, Mt. Sinai, and Children’s Memorial in Chicago.

The internal Research Advisory Committee (RAC) of Children’s Hospital of Pittsburgh is responsible for soliciting, evaluating, awarding and administering internally funded research grants, fellowships and mentored student summer programs. During this reporting period the RAC received a total of 22 new proposals and 2 second year proposal requests. Funding was granted to 13 new proposals and 2 second year proposals. New proposals were funded in the following categories: Start-up/Seed (7), Fellowship (4) and Graduate Student Researcher (2). These awards undergo a competitive peer review process under the direction of senior research faculty. The 2011 awards to young investigators included the divisions of Pulmonology, Infectious Disease; Immunogenetics; Medical Genetics; General Academic Pediatrics; Nephrology, Newborn Medicine, Critical Care Medicine and Pediatric Surgery. Year 2 proposals were funded in the division Medical Genetics and Infectious Disease.

Each summer, the Children’s Hospital of Pittsburgh Research Advisory Committee (RAC) conducts a Research Summer Internship Mentored Program. This 8-week program provides undergraduate, graduate and medical students an excellent opportunity to learn the rationale, design strategies, methods and other aspects of biomedical research by engaging in stimulating hands-on research under the direction of faculty and research staff. During this review period the program supported a record high of 36 students. During this reporting period participation demographic data included students from 21 colleges, universities and medical schools. Students are required to present their work at the conclusion of the summer at the annual Poster Day Symposium. Interns also have the opportunity to participate in clinical shadowing experiences offered in the Emergency Department, Neonatal ICU and the Labor and Delivery Department at the Magee Women’s Hospital of UPMC.

CHP collaborates with the University of Pittsburgh and the University of Pittsburgh Medical
Center (UPMC) to offer didactic training courses designed for all levels of trainees and faculty. In addition, the Department of Pediatrics sponsors a bi-weekly Continuing Medical Education opportunity for continuing education and collaboration on the CHP campus. The 2011-2012 reporting periods sponsored 46 guest speakers, 25 of whom were invited guest lecturers from academic institutions throughout the United States and abroad.

**Commercial Research Development Training**

All activities related to Commercial Research Development Training are conducted through the University of Pittsburgh.

A specific function of the Office of Technology Management is education and training opportunities to faculty, staff, postdoctoral fellows, and graduate students related to commercialization of research. Additionally, the Office of Enterprise Development offers customized seminars to department and centers on issues related to commercialization, such as Intellectual Property; Corporate Collaborations; Funding for Commercial Development; and Starting a Company. During this reporting period, the Office of Technology Management (OTM) and Office of Enterprise Development, Health Sciences (OED) engaged in a series of activities to provide training opportunities to faculty, staff, postdoctoral fellows, and students related to the commercialization of research. Activities included the following:

- In the fall 2011, OTM and the Office of the Provost once again hosted a seven-week course, “Academic Entrepreneurship: The Business of Innovation Commercialization” for faculty and their research students. The course focuses on the early stages of commercial innovation development and teaches participants how to transform their ideas and research into commercially viable business opportunities. The course also includes a one-day Innovation Workshop during which attendees have an opportunity to explore their own innovation ideas in a private, team-oriented learning environment.

- Beginning in January 2012, the OED hosted its own 10-week commercialization course, called “From Benchtop to Bedside: What Every Scientist Needs to Know.” The course focuses on the innovation development/commercialization process, but with particular emphasis on life sciences-related technologies, regulatory issues, and topics such as business models based on insurance reimbursement. The course consists of a series of seminars designed to identify and provide details about the steps necessary to develop a scientific or clinical discovery from the laboratory to the patient.

- In May, 2012, the OTM and OED launched a new enhanced website at www.innovation.pitt.edu

- OTM/OED conducted six introductory presentations in departments across campus, as well as to student classes.

- The OTM distributes the “Pitt Innovator’s Guide to… Technology Commercialization at the University of Pittsburgh” throughout the year.

- The OED also publishes a biweekly newsletter designed to keep investigators informed of news and trends related to entrepreneurial activities, technology transfer, and commercialization. Investigators are encouraged to subscribe to this electronic communication.
Outreach to Businesses Regarding Recent Research Developments

All activities related to Outreach Research Developments are conducted through the University of Pittsburgh.

- **Database marketing**—OTM continued to post its portfolio of available innovations on searchable online databases, including TechFinder, which is accessible through the OTM Web site (www.otm.pitt.edu) by industry, investors, and other outside parties. The network provides ongoing leads from interested industry representatives.

- **Business development**—OTM and OED continued to pursue the development of new long-term relationships with industry for the purposes of sponsored research, clinical trials, and innovation out-licensing.

- **Commercialization Advisory Committee** – The OED again hosted a gathering of its Commercialization Advisory Committee to review and discuss potential start-up opportunities among Pitt innovations. The group is made up of business leaders and successful Pitt alumni.

- **Entrepreneurial Speed-dating**—OED began to test this concept in 2006, bringing together pre-screened faculty and industry representatives for many short, tightly structured meetings to explore potential common interests. In FY 2011, OED hosted two sessions.

- **Technology conferences**—OTM and OED representatives attended numerous conferences during this reporting period to meet with specific industry representatives and market specific innovations that are available for licensing and other potential industry partnerships.

- **Community involvement**—The OTM and OED continue to reach out to the community and industry via the MIT Enterprise Forum of Pittsburgh, 3 Rivers Venture Fair, Entrepreneur’s Growth Conference, The Indus Entrepreneurs (TiE) events, OED’s Lecture Series, the BIO International Conference, annual conference of the Association of University Technology Managers (AUTM), the Association for Corporate Growth-Pittsburgh, State Science and Technology Institute (SSTI), the Pittsburgh Technology Council’s Tech 50 Awards program, and several other technology-based industry conferences. The OTM/OED sponsor many of those events and manage exhibit booths to share Pitt’s technology commercialization activities.

- **Technology Showcase**—OED worked with the Office of Academic Affairs, Health Sciences to organize the 9th annual Technology Showcase reception as part of Pitt’s annual celebration of science and research, “Science2011.”

- **Annual report**—OTM, in September 2011, published its annual report celebrating 15 years of innovation. The report showcases Pitt innovators and their commercially viable innovations. OTM sent the report to nearly 1,000 companies, economic development agencies, investment firms, foundations, and others to promote commercialization and foster more interaction with industry.

Research Development Collaboration

Collaborative efforts continue to expand both the basic and clinical research areas with faculty at Children’s Hospital of Pittsburgh /University of Pittsburgh School of Medicine and those of external institutions. Large ongoing collaborative initiatives continue in the division of Pediatric Gastroenterology involving 13 academic institutions nationally and in Canada. During this
reporting period we have recruited new division chiefs and faculty who will lead new programs in bone marrow and cellular transplantation therapies; neurodevelopmental function in rare disorders, and the R.K. Mellon foundation Institute for Pediatric Research. These new recruits and initiatives will contribute to the continued expansion and collaboration of our research and training efforts throughout the country.