

Children's Hospital of Pittsburgh

Research Development Report

Reporting Period:

July 1, 2010 - June 30, 2011

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 resources 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," who are 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 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 256 in 19 divisions. The training programs benefitted 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 that have gone onto fellowship programs, 3 remained at CHP, 3 went to CHOP; 2 each are at Johns Hopkins and 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 program. During this reporting period the RAC received a total of 25 new proposals and 4 second year proposal requests. Funding was granted to 9 new proposals and 4 second year proposals. New proposals were funded in the following categories: Start-up/Seed (4), Fellowship (2) and Graduate Student Researcher (3). These awards undergo a competitive peer review process under the direction of senior research faculty. The 2010 awards to young investigators included the divisions of Pulmonology, Infectious Disease; Adolescent Medicine; Immunogenetics; Genetics and General Academic Pediatrics. Year 2 proposals were funded in the departments of Emergency Medicine; Medical Genetics; Immunogenetics and General Academic Pediatrics.

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 with 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. The program supports 30 student researchers annually. During this reporting period participation demographic data included students from 15 colleges, universities and medical schools. Students are required to present their work at the conclusion of the summer at the annual Poster Day Symposium.

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 2010-2011 reporting periods sponsored 45 guest speakers, 16 of whom were invited guest lectures from academic institutions throughout the country.

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 departments 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 fall 2010, 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 OED, in February 2011, 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.
- OTM/OED conducted six introductory presentations in departments across campus, as well as to student classes.
- The OTM distributed its “Pitt Innovator’s Guide to... Technology Commercialization at the University of Pittsburgh” throughout the year.
- OTM/OED have been working closely with the Swanson School of Engineering for the past year in the development of a new Medical Innovation Center that would bring students and faculty together as teams to develop and commercialize new innovations. OTM/OED has been working to educate the development team and prepare for educating students who will join the innovation development teams.
- In October 2010, OTM hosted its sixth annual Celebration of Innovation before an audience of more than 150 innovators, as well as both University and external supporters.
- OED hosted several lecture programs in FY 2011, including a well-attended program that featured Robert Langer, a famous technology-based innovator and entrepreneur from MIT who talked about how to turn unique innovations into successful companies. An estimated 300 people – mostly faculty and students -- attended the lecture.
- OED hosted its annual meeting with its Commercialization Advisory Committee, made up of local entrepreneurs, investors and Pitt alumni who also are successful business leaders. The committee meets with a select group of Pitt Innovators who present innovations with start-up potential. The committee then critiques each innovation and presentation to help the innovators move their ideas forward toward market.

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. OTM/OED hosted numerous meetings on campus with industry in FY 2011 and travelled off campus as well.
- *Commercialization Advisory Committee*—The OED once 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 have continued to reach out to the community and industry via the MIT Enterprise Forum of Pittsburgh, 3 Rivers Venture Fair, Entrepreneur’s Growth Conference, local 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 and 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 8th annual Technology Showcase reception as part of Pitt’s annual celebration of science and research, “Science2010.” This event provided industry and venture capitalists with the opportunity to view and explore 28 of the latest innovations coming out of Pitt, with a focus on commercialization.
- *Annual report*—OTM, in September 2010, published its 6th annual report showcasing 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.
- *Celebration of Innovation*—OTM and the Office of the Provost hosted the 6th annual celebration in October 2010 to recognize the involvement of faculty, staff, and students in the commercialization process. Awards were given to those whose innovations were licensed in the last year. To build awareness of Pitt’s commercialization efforts, OTM invited dozens of local companies, investors, economic development representatives, and foundations to attend.

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. Total research funding for the CHP and the University of Pittsburgh's Department of Pediatrics rose to \$57 million for FY10 which included a new center grant to further understand the pathogenesis of sexually transmitted infections. Large ongoing collaborative initiatives are underway in the Division of Pediatric Gastroenterology involving 13 academic institutions nationally and in Canada. In addition numerous collaborative research initiatives are underway within various pediatric divisions and academic institutions throughout the country.