

Temple University

Research Development Report

Reporting Period:

July 1, 2009 - June 30, 2010

Commercial Development of Research

Temple inventions generated \$378,000 in gross royalty revenue during the fiscal year ending June 30, 2010. In addition companies provided \$1.65 million in research funding related to inventions under license or option.

Pursuant to the Invention and Patent Policy, the net (of 20 % tax) royalty revenue and the equity generated by each invention (after deduction of the associated costs) are shared with the inventors (50%) and with their departments and colleges (25%). In FY 2010, this resulted in cash payments of \$178,000 to inventors (excluding the value of directly issued start up equity) and \$90,000 to departments and colleges. Cash payments made since 1991 total \$4.19 million to inventors and \$2.66 million to departments and colleges.

Un-reimbursed patent costs (\$325,000) and other operating costs (\$395,000) together with the cash payments made to inventors brought the total cost of the Technology Transfer program to \$720,000 in FY 2010.

The reporting period brought change in Temple University leadership related to the commercial development of research and development of strategic relationships with private sector interests. University President Ann Weaver Hart re-designated the position of Senior Vice President for Research and Strategic Initiatives to the Senior Vice Provost for Research and Graduate Education effective May 1, 2010. The new Senior Vice Provost, Dr. Kenneth Blank, reports to Acting Provost Richard Englert. Dr. Blank oversees all facets of Temple's research enterprise, including the administration of sponsored research; technology transfer and commercialization of the university's intellectual property; research infrastructure, including laboratories and other facilities; partnerships with business and other organizations; and compliance with federal, state and university research regulations at all 17 of Temple's schools and colleges as well as more than a dozen interdisciplinary research centers and institutes.

Research Licensing Agreements

Temple University continues to have one standard license agreement form that is customized in a variety of ways to fit each particular licensing arrangement. This helps accommodate, for example, the nature of the licensed patent (e.g. product or process) or of the financial arrangement (e.g. cash only, equity only, or a combination of cash and equity). Standard forms are also available for research and option agreements, one-way and two-way confidentiality, and

material transfer agreements. These are available at:
http://www.temple.edu/ovpr/ott/sample_agreements.html

Training Students and Health Professionals

During the reporting period Temple University continued working under agreements with other institutions to facilitate those students' transfer into Temple and promote their long-term academic success. These agreements continue to help students in the health sciences who are anticipating careers in the health professions.

Temple University continues to have Dual Admissions agreements, which include substantial merit scholarships, with five Pennsylvania community colleges (Bucks County, Delaware County, and Montgomery County Community Colleges, Harrisburg Area Community College, and the Community College of Philadelphia).

Health-related programs in the following Temple University schools, colleges, and departments have program to program agreements that define the articulation between community college degree programs and Temple Baccalaureate programs:

Nursing: Bucks County Community College, Community College of Philadelphia, and Northampton Community College. Degree completion programs based on these agreements are offered on-site at the three community colleges.

Allied Health: Long-standing agreements with Harcum College, Keystone Junior College, Messiah College, and Wilkes College.

Also, Temple University continues to use Formula Funding to support graduate level training and education through research fellowships in each of the basic science departments and the MD/PhD program at the Temple Medical School. To date, more than 70 Formula Fund fellowships have been awarded to Temple students.

Commercial Research Development Training

During the reporting period, Temple University's Office of Technology Transfer provided outreach to faculty, staff, and students through numerous presentations at department and college/school meetings, and at the annual orientation sessions for new faculty and graduate students. All new faculty are also sent a technology transfer information packet.

During the reporting period, the Temple University Office of Postdoctoral Fellows (<http://www.temple.edu/grad/pfo>) developed and offered information and training to postdoctoral fellows, visiting research scholars, and visiting research faculty in many areas of research and career development, including various aspects of technology transfer. The Office of Postdoctoral Fellows was moved to the Graduate School in the previous reporting period, and staff now report directly to the Graduate School Dean.

Outreach to Businesses Regarding Recent Research Developments

Temple has moved responsibility for outreach to businesses related to research activities to the Office of Technology Transfer (OTT) in order to further promote interaction between Temple researchers and regional business interests. The Office of Technology Transfer will continue to (1) Provide support to Temple researchers in identification and acquisition of privately sponsored research. (2) Provide an effective mechanism for stimulating entrepreneurial activity among university faculty. (3) Facilitate cross disciplinary collaboration and promote Temple's research capacities locally and regionally, linking Temple's research expertise with external need.

OTT actively seeks partnerships with companies to commercialize Temple-owned inventions. Rights to commercialize an invention are negotiated and granted through a royalty-bearing licensing agreement managed by OTT.

Research Development Collaboration

Along with other area academic institutions, Temple University is a continuing participant in the Biotechnology Greenhouse Corporation (aka BioAdvance). With the mission of accelerating the growth of the region's life sciences industry by transforming its strengths in biomedical research into commercial opportunities, BioAdvance provides funding to startup life sciences companies in Southeastern Pennsylvania through its \$20 million Greenhouse Fund through investments in therapeutics, devices, diagnostics and platform technologies focused on human health. This is accomplished through:

- Investing in emerging life sciences technologies with the most promising commercialization prospects
- Accelerating the transfer of technology from research laboratories to start-ups and established companies,
- Attracting, retaining, and supporting life sciences entrepreneurs, and
- Building collaborations between academic, entrepreneurial, corporate, financial, and government partners.

Temple University also participates as a sponsor of BioStrategy Partners, a virtual life sciences incubator providing technology and business development services to start-up and emerging-stage life sciences companies and university based research projects in the Greater Philadelphia region. BioStrategy Partners specializes in offering business guidance and support to first-time entrepreneurs, scientific founders, and university based principal investigators helping them reach the next level of development or commercialization. This is accomplished through a network of expert volunteers, partners and service providers offering business and technical assistance on a reduced fee or deferred compensation basis.

Temple University is an active member of the Ben Franklin Technology Partners of Southeastern Pennsylvania <http://www.sep.benfranklin.org/>, which provides a model for investment in innovative enterprises and created commercialization pathways and partnerships that generate wealth through science and technology. The organization has provided more than \$140 million to grow more than 1,700 regional enterprises across all areas of technology.

Temple University is also a member of the Nanotechnology Institute (NTI) <http://nanotechinstitute.org/about-nti>. NTI is the region's first partnership created to be a catalyst for nanotechnology development, commercialization and company formation. NTI has helped produce more than 357 Intellectual Property assets, created or assisted more than 22 young companies, and attracted more than \$200 million in public and private investment to the region. The overarching mission of NTI is to focus on the transfer of nanotechnology discoveries and intellectual knowledge from universities to industry partners, and on the rapid application and commercialization of nanotechnology to stimulate economic growth through:

- Multi-institutional and interdisciplinary research & development to facilitate the transfer and commercialization of discoveries and intellectual knowledge that support rapid application of nanotechnology to the life sciences sector and the creation of new enterprises around this technology
- A Comprehensive Approach requiring the strategic alignment of six programmatic areas
- Industry-focused research and development
- Entrepreneurial business development and commercialization
- Risk capital
- Workforce development
- Economic research
- Community-of-interest networks

Temple University participates in the Energy Commercialization Institute (ECI) <http://www.sep-energy.org/eci.html>, a regional partnership with the mission of accelerating alternative and clean energy technology development and commercialization through translational research and sponsored research funding. ECI focuses specifically on high-impact energy generation, transportation and conservation. ECI pools intellectual property from participating institutions, providing dedicated technology transfer services with expertise to promote energy commercialization. It offers corporations a single point of negotiation for IP licensing, independent of the number of institutions with ownership of that IP.