



QEDProgram



OVERVIEW: A response to a recommendation by the CEO Council for Growth, an affiliate of the Greater Philadelphia Chamber of Commerce that sets the regional economic growth agenda, the University City Science Center's QED Proof-of-Concept (POC) Program provides a mechanism for supporting the region's academic researchers as they develop strategies for translating their life science research to the private sector. The QED Program provides key resources, including business guidance, bridge funding, and access to industry and investor representatives, to competitively selected projects.

RESEARCH INSTITUTIONS:

- Children's Hospital of Philadelphia
- Delaware State University
- Drexel University
- Fox Chase Cancer Center
- Harrisburg University of Science and Technology
- Lankenau Institute for Medical Research
- Lehigh University
- Monell Chemical Senses Center
- Phila. College of Osteopathic Medicine
- Philadelphia University
- Rutgers University
- Temple University
- Thomas Jefferson University
- University of Delaware
- University of Medicine & Dentistry of NJ
- University of Pennsylvania
- University of the Sciences
- Widener University
- The Wistar Institute

THE PROCESS starts with scientist-authored white paper proposals that are screened by an industry and investor Selection Team. For up to 10 selected projects, scientists are paired with entrepreneurs who assist in developing detailed POC plans to efficiently retire risk in preparation for private sector investment. The QED Selection Team recommends up to three of these projects to receive up to \$200,000 each over 12 months.

THE GOALS of the QED Program are to engage the region's academic institutions, research scientists, entrepreneurs, investors, and industry in early stage life science commercialization, and ultimately to increase the pace and value of life science technology transfer in the region.

ACHIEVEMENT OF OPERATIONAL GOALS: The QED Program has launched four cycles since it began in April 2009. To date POC plans

have been developed for 30 technologies, and nine projects have received funding. The Program has enhanced the region's innovation ecosystem through collective engagement of academic, private sector, and entrepreneurial stakeholders.

ACADEMIC RESEARCH INSTITUTIONS: 19 research institutions from Penn., N.J., and Del. are signatory to a single agreement that defines participation terms. Unbiased regional competition is bearing out the hypothesis that high-potential technologies exist across the region: 12 of the participating research institutions are represented among projects recommended by the Selection Team for POC plan development, and five research institutions have received funding.

INDUSTRY AND INVESTORS: QED projects are selected using a market-driven, rather than a peer-review, process. The Selection Team members

(business development and external research representatives from 20 industry and investor organizations) make recommendations by indicating which projects, if successfully executed, they would be likely to support through follow-on investment. All applicants receive Selection Team feedback.

SCIENTISTS AND ENTREPRENEURS: The QED Program has screened 227 white papers from academic researchers through the four cycles. A vetted network of approximately 30 entrepreneurs with commercial experience in a variety of life science fields works directly with researchers in developing POC plans. Over the first three cycles of the QED Program, the proportion of POC plans receiving recommendations for project funding from the Selection Team rose from 34 to 55%.



OUTCOMES: Of the nine projects that have received funding to date, three technologies have been licensed (#), and one technology has been optioned (~) to start-up or existing companies. The early successes of these projects suggest that an 8:1 ratio of funds leveraged (as exhibited by other POC programs) is likely. The QED Program has received a \$1.0 million grant from the U.S. Economic Development Administration as well as financial support from the Ben Franklin Technology Development Authority (\$400,000), William Penn Foundation (\$300,000), and Wexford Science + Technology (\$200,000). The Science Center is seeking to raise approximately \$15 million to endow the program in perpetuity.

Project	Org.	Technology
Near Infrared wound monitor #	Drexel	Diagnostic device
Breast cancer detector #	Drexel	Diagnostic device
Sol-gel drug delivery platform	Penn	Combination therapy
Magnetic nanoparticle drug delivery system ~	CHOP	Combination therapy
Heart valve replacement system	Penn	Implantable device
U1 adaptor for gene silencing #	Rutgers	Therapeutic/research
Differentiation therapy for Leukemia	Temple	Therapeutic
miRNA cluster to treat HCV	CHOP	Therapeutic
Nanopore system for detection of miRNAs	Penn	Diagnostic device

INDUSTRY AND INVESTORS:

- AstraZeneca
- Becton Dickinson
- Ben Franklin Technology Partners (SEP)
- Blue Highway (Welch Allyn)
- BioAdvance
- Bracco
- Delaware Crossing Investors Group
- Exponent
- FemmePharma
- Integra Life Sciences
- Johnson and Johnson
- MentorTech Ventures
- Merck
- MidAtlantic Angel Group
- NewSpring Capital
- Novartis
- Quaker Bioventures
- Safeguard Scientifics
- Seguro Surgical
- SR One (GSK)



University City Science Center
 3711 Market Street, Suite 800
 Philadelphia, PA 19104
 215-966-6000
www.sciencecenter.org
QED@sciencecenter.org