University City Science Center

QED QEDProgram

Spring 2013 Application Cycle

FREQUENTLY ASKED QUESTIONS

SPECIAL EMPHASIS TOPIC – DIGITAL HEALTH TECHNOLOGIES

- **What are the implications of the special emphasis topic?**

- **How do I apply as a special emphasis topic project?**

What are the implications of the special emphasis topic?

During this application cycle, QED is emphasizing digital health technologies as an area of special interest. We are dedicating up to two potential QED awards for projects in this area. We are assembling a Selection Team and group of Business Advisors with appropriate domain expertise to provide commercial guidance and market insight. Special topic projects will involve budget proposals of $100,000, and awards will include $50,000 from the Science Center plus an institutional match of equal value. As with all QED projects, special topic projects will focus on product development and defining the appropriate path for technology commercialization.

How do I apply as a special topic?

On the Spring 2013 White Paper application form, Section 3 contains a checkbox for special emphasis topic submissions. Investigators submitting digital health technologies should check this box for their White Paper to be considered as a special topic project. Special emphasis topics will be considered and judged in a group separate from other QED projects.

GENERAL – WHITE PAPER PREPARATION

- **Is this program right for me, and how does it differ from other funding and grant opportunities?**

- **What sorts of projects are being sought? (What does "proof-of-concept" mean?)**

- **What information should I include in my White Paper?**

- **What are some common reasons that a proposal may not be selected for consideration?**

- **What sort of feedback can I expect from the Selection Team, and if I don't get funded, what's next?**

- **Can I get help with my White Paper?**

Is this program right for me, and how does it differ from other funding and grant opportunities?

The QED Program is designed to translate high-potential life science research into useful commercial products in the healthcare marketplace. This program will likely appeal to applicants who have a desire to apply their research against industry/market/clinical priorities, and to interface with, and accept guidance from, Business Advisors and market representatives who have previously worked in that commercial area.

The QED Program differs from other funding and grant opportunities in several ways:

- The QED Program supports milestone-driven research with direct commercial relevance (product development research) rather than exploratory research.
- Unlike most programs directed to early commercial development (e.g., SBIR/STTR), there is no need for a company to be formed as a pre-condition of the grant. The QED Program funds work in an academic laboratory to prepare technology for transfer to a commercial setting.
- QED provides access to resources that help optimize the commercial relevance of the work being supported. You will be required to work with a QED Program Business Advisor, and you will receive ongoing guidance from the QED Program Selection Team which includes market players and may represent commercial funding opportunities following QED.

What types of projects are being sought? (What does "proof-of-concept" mean?)

The QED Program is broadly open to technology development across all life/health sciences sectors. If you can imagine a product resulting from your technology, it may be appropriate for this program. The goal of the QED Program is to develop your technology sufficiently to the point that follow-on funding in the private sector is likely (e.g., sponsored research/licensing or investment in a new start-up). Your application should provide a convincing case that your technology is likely to be of interest to follow-on funders if your proposed project is successful. This will vary with the technology: you do not need to finalize your product within the scope of the QED Program, but rather answer key questions relating to its commercial feasibility (i.e. the proof of concept).

What information should I include in my White Paper?

White Papers are used as a preliminary screening tool by the QED Program Selection Team. ***Note that no information included in any White Paper will be considered confidential.*** Due to the high volume received, White Papers are limited in the amount of information that is requested. Consider the White Paper to be a brief summary of your proposed project. If your proposal is successful in the White Paper round, you will be invited to prepare a more detailed Proof-of-Concept Plan.

A compelling White Paper will clearly and crisply address scientific and commercial points raised by the form questions, while minimizing repetition. The White Paper solicits information from you in defined fields, and don't be afraid to indicate if there is something you do not know at this point. Indeed, the purpose of the QED Program is to provide resources that enable discovery and development to continue in both technical and commercial areas. A proposal that acknowledges gaps in knowledge will be stronger than one that overlooks or misstates information.

Consider the following guidance when addressing these specific form fields of the White Paper:

4d. Describe the status of the intellectual property.
Succinctly identify the stage of any intellectual property protection relating to your technology – i.e. disclosures made, or patents filed or published. Published journal articles are also relevant here insofar as they describe the actual technology you are submitting for the QED Program. Remember that any public disclosure may impact the patentability. A patent does not necessarily enable a product to be developed or marketed. Patents differ in their strengths and breadth. Briefly summarizing one or two key aspects covered by the claims of your relevant patents may clarify the strength and competitiveness of your intellectual property position. For example, does your patent claim a material, a design, or a use? (Also see Section 4d of this document.)

5a. Describe the product(s) and service(s) that will eventually result from the work you are proposing.
Describe the end product that you imagine eventually reaching the marketplace as a result of your research. Describe its composition and form as well as the use to which it will be put. What is the business model by which the combination of the product and its use will make money? In some cases, this is very straightforward and may be self-evident (e.g., a drug to treat breast cancer). In some cases, this may be more complicated (e.g. a device for detecting infection which is sold with a disposable sensor unit). In many cases, your technology may have the potential to engender more than one product. Which product is likely to be the most attractive to develop first, and why? What are the other products that may result later?

5b. Describe the need your product will meet.
Describe the specific problem that your product will address. What is the current standard for addressing this problem, why is it insufficient, and what is the opportunity for improvement associated with your product? Identify the value proposition to the buyer: i.e., the reasons that your product will result in improved outcomes and cost savings as compared to the current standard. Describe the scope of the problem your product will address: in simple terms, this could

be an estimate of how many times your product may be used in a given population over a given period of time (e.g., number of cases per year, number of treatments per patient).

5c. Describe the current and upcoming competitive landscape.
Show your awareness of both currently available products and emerging technologies that haven't yet reached the marketplace. Do not confine yourself to "like" technologies – technologies that are <u>functionally dissimilar</u> to yours, but that address the same need, may be important competitors. Address the key advantage of your technology in each case, considering anticipated cost and effectiveness.

5d. Describe the key or unique features of your technology.
Highlight which findings and/or technology developments <u>enable</u> you to develop this product now. Why has the proposed product not been previously possible – what key problem have you solved that overcomes the prior limitations to developing the proposed product? Using reference (not repetition), relate your description here to the status of intellectual property protection (see Section 3d); use this section to expand the description of key elements claimed in any disclosures or patents.

5e. Summarize your key findings to date.
Keep this section focused on evidence that suggests your technology will work in the way you predict. Briefly list the <u>directly relevant</u> concepts related to your technology that you have already demonstrated: e.g. importance of a molecular target in cells; component development and testing in prototypes; acute biocompatibility in an animal model. If you wish to list publications, keep the citations brief.

5f. Summarize the questions you propose to answer.
Given what you already know, list the next logical questions that must be answered to demonstrate the commercial feasibility of the product you are proposing. Identify why these questions (and not others) are the logical ones to be addressed within the scope of QED Program support. For each question (aim/objective), what is the milestone that will answer it, and what is the time and what are the resources required to get there? Provide some (necessarily qualitative) estimate of the risk associated with successfully answering each question – which are straightforward, and which are high risk?

5g. Summarize how your proposal will address commercial proof-of-concept.
Within the scope of a QED Program R&D project, it will not likely be possible to develop your technology into a usable end-product. There will still be many questions left to answer, and these will require follow-on funders (investors, industry) to provide the resources to get your product to the marketplace/clinic. Identify what the key remaining questions and developmental steps are likely to be (including regulatory or reimbursement hurdles if known), and what time, money, and other resources will be required to address them. Why will the questions you are attempting to answer with the QED Program position you to address these follow-on issues? What do you anticipate is the full time and cost to get your product into the hands of end-users? What are the mechanisms you anticipate to support these follow-on activities (e.g. license to an established company, startup venture, sponsored research, SBIR/STTR). Describe any interest you have already received from follow-on funders or potentially interested parties.

What are some common reasons that a proposal may not be selected for consideration?

The QED Program Selection Team seeks to identify opportunities for R&D that will result in <u>commercially competitive</u> technologies and products. Importantly, failure to secure QED Program funding does not mean that the science is without merit. There are many reasons, other than significance or innovation, for which great science may fail to attract commercially-directed funding, particularly at an early stage. Many of these projects may be highly competitive for other types of funding (e.g. NIH basic research grants, foundation grants).

Common reasons that projects fail to receive funding in the QED Program include:
1. The technology is too early in development, or its stage of development is unclear. (A technology that requires more than one or two significant risks to be overcome ("miracles") may require further exploratory research.)
2. The technology does not appear to address a large enough market, or the target market application is not well defined or chosen. This is not a reflection of the significance of the research. Rather, the goal of commercially-oriented research is to maximize the impact on health or other outcomes, which is commonly assessed in cost savings.
3. The business model is not well defined, and it is difficult to envision how the proposed product or service resulting from the technology will make money in the marketplace.

4. The competitiveness of the technology is not adequately addressed, i.e., it is not sufficiently clear how the technology will be substantially better than alternative products or emerging technologies, or whether the intellectual property is sufficiently protected by suitably broad patents.
5. The proposed proof-of-concept project doesn't address the right commercial questions, the aims and milestones are improperly defined, and/or the project timeframe or funding doesn't fit the R&D objectives (consult the QED guidelines and website – www.sciencecenter.org/programs/qed/rfp) or contact your Technology Transfer or Business Development Office, or the Program (see below).

What sort of feedback can I expect from the Selection Team, and if I don't get funded, what's next?

White Paper proposals that do not reach the Full Application stage will receive some feedback, limited naturally by the volume of proposals and time available to provide detailed feedback from the Screening Team. Full Applications, however, will receive substantial feedback – both during and following the selection process, from the Selection Team and an outside scientific review agency; and during the development of the Full Application, as a result of interaction with business advisory resources. All of this feedback can be applied to additional scientific and market research that will strengthen the proposal for re-submission during a future QED cycle or submission to alternative programs.

Can I get help with my White Paper?

Yes, your primary point of contact for the QED Program is your Technology Transfer Office. Do not send project-specific information to the QED Program (we are unable to process requests that may involve proprietary information unless it is sent by your Technology Transfer Office). However, we will answer questions that involve general program questions, and you may contact us at qed@sciencecenter.org.

We are also encouraging all applicants to meet individually with the QED Program staff prior to their final White Paper submission. In order to do so, applicants should contact their Technology Transfer Office in advance of the early White Paper submission deadline of **May 17, 2012** to schedule such a meeting.

Please refer to the following list of institutional contacts:

Children's Hospital of Philadelphia	Office of Technology Transfer	Ellen Purpus Greg Baker	Purpus@email.chop.edu bakerg@email.chop.edu
Delaware State University	Office of Sponsored Programs	John Austin	jaustin@desu.edu
Drexel University	Office of Research Technology Commercialization	Bob McGrath Heather Rose Paul Daugherty Alexey Melishchuk	rbm26@drexel.edu heather.rose@drexel.edu pjd58@drexel.edu am633@drexel.edu
Fox Chase Cancer Center	Office of Corporate Alliances	Inna Khartchenko	Inna.Khartchenko@fccc.edu
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Lehigh University	Office of Technology Transfer	Yatin Karpe	yak206@lehigh.edu
Harrisburg University of Science and Technology	Office of the Associate Provost for Strategic Markets	Bili Mattes	bmattes@HarrisburgU.edu
Monell Chemical Senses Center	Office of Technology Transfer	Mark Friedman	friedman@monell.org

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