



PENNSYLVANIA DRUG DISCOVERY INSTITUTE

Accelerating Biomedical Research

Located at the Pennsylvania Biotechnology Center



MISSION

To provide service to the scientific community, such as by workplace re-entry and networking activities, as well as entrepreneurship mentoring.

To conduct innovative, collaborative research to accelerate drug discovery and the translation of discoveries into development candidates for human clinical trials.

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The Pennsylvania Drug Discovery Institute (PDDI) was founded at the Pennsylvania Biotechnology Center (PABIO), in Doylestown, PA in June 2010, as a nonprofit organization that conducts research and provides service to the scientific community in the region.

The PDDI is involved in discovering new drugs and in accelerating the translation of discoveries into potential therapies for improving human health. Its drug discovery capabilities reside within a network of nonprofit research organizations and biotechnology companies, with emphasis on innovative, multidisciplinary, and collaborative research. We use industry-standard methods to identify therapeutic targets, lead compounds, and preclinical development compounds; assess risk; and advance potential clinical development candidates. The PDDI serves as a think-tank to brainstorm ways to enhance productivity in early drug discovery research and to improve the process of technology transfer. We attract top scientists and work to create jobs in companies in the PABIO community. The PDDI also provides services to the regional scientific community by helping experienced, senior-level biomedical scientists, who have been laid off, re-integrate into the scientific/technical workforce.



----- Drug Discovery (4-6 years) ----- | ----- Drug Development (4-6 years) -----

The major challenge that drug discovery research faces today is a lack of productivity as measured by the introduction of new molecular entities (NMEs) into therapy. There were 41 NMEs approved by the FDA in FY 2014, the most productive year during the past decade. However, in general productivity is now equal to the level of the mid-1980's, in spite of a massive surge in drug R&D spending. The drug discovery process can take 8–12 years from first synthesis of a drug candidate to commercialization, and is very costly, often requiring \$1–3 billion for a drug that enters clinical practice.

Programs of the PDDI

- **ForwardTrack™**, a workforce reentry program for qualified, unemployed scientists
- **Curation of in-kind donations from major pharmaceutical companies, available for free use by academic, nonprofit, and small biotechnology organizations in the region**
- **Developing public-private partnerships to discover new therapeutics faster**
- **Faculty positions, seminar programs, formal research reviews, and due diligence review of technologies**
- **Facilitation of networking between enterprising researchers, innovative entrepreneurs, and unemployed senior-level scientists from the pharmaceutical industry**
- **Annual Drug Discovery Award and Award Lecture**

Your generous, tax-deductible donations can be made *via* the PDDI website.

In-Kind Assets Available from Donations

The PDDI has received a large collection of valuable consumables and small capital items from pharmaceutical companies in the region that have downsized over the past several years. We provide a process to receive such assets, including the assumption of any liability as required by the donor. These donations include hundreds of boxes of glassware, pipette tips, plates, and related items. In addition, we have received organic and inorganic reagents, laboratory and NMR solvents, particularly from AstraZeneca and Cephalon/Teva. We now curate a collection over >10,000 reagents and starting materials that are bar-coded, computer searchable, and clustered in functionality-appropriate bins. The reagents are freely available to academic, nonprofit, and small biotechnology organizations in the region. For more information, contact Dr. Dennis M. Gross (dgross@padrugdiscovery.org).

Forward Track™ Program

- Thousands of biopharma R&D scientists in Pennsylvania and neighboring states have become unemployed because of mergers, downsizing, and restructuring in the pharmaceutical industry over the past several years. The PDDI has developed the ForwardTrack™ program as a response to these mass-layoffs of highly talented scientists. Our objective is to provide workforce re-entry assistance for advanced scientists.
- Through ForwardTrack™, qualified, senior-level research scientists can locate at the PDDI and be mentored in developing research plans, founding startup companies, assembling multidisciplinary teams, and writing grant applications. Researchers affiliated with the PDDI are given career development advice and assistance, especially for establishing collaborations and accessing federal and other funding sources.
- A monthly Outreach Seminar Series™ is conducted to identify qualified scientists for ForwardTrack™.
- Program members are invited to participate in seminars, journal clubs, research rounds, and ad hoc interactions that are hallmark features of the collaborative spirit at the PABIO.
- Program members can network freely with entrepreneurs and small-business owners to find mentors and establish plans for the future.
- Applications for the program are accepted at any time, and further information can be obtained by e-mail by contacting Dr. Allen Reitz (AReitz@PADrugdiscovery.org) or Dr. Dennis Gross (DGross@PADrugdiscovery.org).

Recent PDDI Program Activities

- Sponsored seminars at the PA Biotech Center
- Legal Primer for Entrepreneurs with Panel Discussion
- Outreach Seminar Series™ presentations
- Annual Biotechnology Entrepreneurship Boot Camp in conjunction with the National BIO meeting in Philadelphia in 2015
- Updated functional web site: www.padrugdiscovery.org
- PDDI-based journal *Technology Transfer and Entrepreneurship* www.benthamscience.com/tte
- Development of a **Facebook** page
- Development of a satellite site in King of Prussia, PA



Leadership Team

Board of Directors: Allen B. Reitz, Ph.D., President & Founder; Joseph F. Aceto, Ph.D., Esq.; Paul S. Anderson, Ph.D.; Dennis M. Gross, Ph.D., CEO & Treasurer; Bashar Hanna, Ph.D.; Ceile E. Hedberg, D.V.M., Ph.D.; Ned D. Heindel, Ph.D.; Gregory F. Krug; Bruce E. Maryanoff, Ph.D., Vice President; Karen Rauch, Ph.D.; Chris DiPaolo, Michael J. Zelesko, Ph.D.

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