Translational tidbits

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The **Cancer Prevention & Research Institute of Texas** is back in the grant-making business after a legislated time-out to rebuild its executive leadership and sort out perceived transparency problems.

Last week, Texas Gov. Rick Perry lifted an 11-month moratorium on the distribution of grants previously approved by the agency.

The Cancer Prevention & Research Institute of Texas (CPRIT), which

distributes taxpayer money to Texas-based academic and industry cancer researchers, ran into problems last year when CSO Alfred Gilman accused the institute's executive leadership of tampering with the scientific peer review of grant proposals.¹

Gilman, an emeritus professor of pharmacology at **The University of Texas Southwestern Medical Center**, resigned in October 2012. His departure led to mass resignations of CPRIT's scientific staff and a political brouhaha that ultimately cost CPRIT executive director William Gimson his job.

Last December, Perry and state legislators froze CPRIT's grant-giving authority until the agency created a new plan for vetting grant proposals. In June, the Texas legislature passed Senate Bill 149 (SB149), which dictates tighter terms for the composition of CPRIT's politically appointed oversight committee, and ordered the institute to tighten up its conflict-of-interest procedures.

Table 1. Selected public-private partnerships for October 2013. Two significant developments in the public-private partnership space this month include the launch of **Tri-Institutional Therapeutics Discovery Institute Inc.** and its partnership with **Takeda Pharmaceutical Co. Ltd.** to expedite early stage drug discovery, and the launch of the Canadian Alliance for Healthy Hearts and Minds project to identify early root causes of chronic diseases in the brain, heart and cardiovascular system. Notably, **Evotec AG** announced its fourth deal with **Harvard University** and its affiliates this year. Also, **Debiopharm Group** is making a move into epigenetics drug discovery in cancer with its partnership with the Experimental Therapeutics Centre at the **Agency for Science, Technology and Research (A*STAR)**.

Source: *BioCentury Archives*

Companies	Institutions	Business area	Disclosed value	Purpose
Takeda Pharmaceutical (Tokyo:4502)	Memorial Sloan-Kettering Cancer Center; The Rockefeller University; Weill Cornell Medical College	Pharmaceuticals	\$20 million + \$1.5 million/year	Launch of Tri-Institutional Therapeutics Discovery Institute to expedite early stage discovery into clinical treatments and therapies
Not applicable	Canadian Partnership Against Cancer; Heart and Stroke Foundation	Cancer; Cardiovascular disease; Neurology	C\$16 million (\$15.3 million)	Partnership to launch the Canadian Alliance for Healthy Hearts and Minds project to identify early root causes of chronic diseases of the brain, heart and cardiovascular system
EffRx Pharmaceuticals S.A.; Campbell Charles Associates Ltd.; Klifo A/S; RCTs; Sciprom S.a.r.l.; Sermes Planificacion S.L.U.	University of Liverpool; European Commission	Genitourinary disease	€5.9 million (\$8 million)	Metfizz consortium to develop EffRx's EX404 to treat polycystic ovarian syndrome (PCOS)
GlaxoSmithKline plc (LSE:GSK; NYSE:GSK)	Bill & Melinda Gates Foundation	Infectious disease	\$1.8 million	Partnership to improve the thermostability of vaccine adjuvants, with an initial focus on the adjuvant AS01
Not applicable	Boston University; Medical Research Council	Cardiovascular disease; Inflammation	At least \$577,000 (\$921,815)	Partnership to develop a humanized antibody against IL-16 to treat inflammatory diseases and ischemic reperfusion injury
Agilent Technologies Inc. (NYSE:A)	Seoul National University Hospital	Diagnostics	Undisclosed	Partnership to develop and verify biomarkers in areas such as narcotics and immunosuppressants
AstraZeneca plc (LSE:AZN; NYSE:AZN)	National Research Program for Biopharmaceuticals	Pharmaceuticals	Undisclosed	Partnership to allow researchers in Taiwan to conduct preclinical and clinical research on 20 small molecules and biologics developed and selected by AstraZeneca
AstraZeneca	Wyss Institute for Biologically Inspired Engineering at Harvard University	ADMET	Undisclosed	Partnership to develop and validate animal cell-based organs on chips for preclinical drug safety testing
Bayer AG (Xetra:BAYN)	RWTH Aachen University	Bioinformatics	Undisclosed	Partnership to form the Joint Research Center on Computational Biomedicine to develop new methods in computer-based modeling of complex biological processes

(Continues on p. 6)

Table 1. Selected public-private partnerships for October 2013. (continued)

Companies	Institutions	Business area	Disclosed value	Purpose
Berg Pharma LLC	Icahn School of Medicine at Mount Sinai	Cancer; Diagnostics; Endocrine/Metabolic disease; Neurology	Undisclosed	Partnership to discover and develop biologics, small molecules and diagnostic tools for cancer and CNS and endocrine disorders
BioMotiv LLC	Alzheimer's Drug Discovery Foundation; University Hospitals	Neurology	Unavailable	Partnership to advance preclinical Alzheimer's disease therapeutics in U.S. academic medical institutions
Charleston Laboratories Inc.	Stanford University	Gastrointestinal disease; Neurology	Unavailable	Partnership to evaluate antiemetic effects on opioid-induced hyperalgesia and physical dependence to prevent opiate withdrawal in patients on chronic opiates
DBV Technologies (Euronext:DBV)	Institut National de la Sante et de la Recherche Medicale (INSERM)	Hematology; Drug delivery	Undisclosed	One-year partnership to conduct preclinical testing of epicutaneous recombinant factor VIII (rFVIII) protein via DBV's Viaskin skin patch technology
Debiopharm	A*STAR	Cancer	Undisclosed	Partnership to develop oral small molecules targeting an undisclosed class of epigenetic modulators to treat tumors with genetic lesions
Eli Lilly and Co. (NYSE:LLY)	The University of Edinburgh	Cancer	Undisclosed	Partnership to study cancer mechanisms and mechanisms of action for undisclosed oncology compounds
Eli Lilly; Pfizer Inc. (NYSE:PFE)	Joslin Diabetes Center	Endocrine/Metabolic disease	Undisclosed	Partnership to conduct research to predict, treat and prevent kidney failure in patients who have type 2 diabetes
Evotec (Xetra:EVT)	Harvard University	Endocrine/Metabolic disease	Undisclosed	TargetEEM collaboration to identify enteroendocrine mechanisms for potential diabetes therapies
Not applicable	Alliance for Lupus Research; Lupus Research Institute	Autoimmune disease	Unavailable	Partnership to analyze a database of 70 drugs approved for other indications for potential use in lupus
Not applicable	Autism Speaks; Baylor College of Medicine; Boston Children's Hospital; University of California, Davis	Neurology	Unavailable	Preclinical Autism Consortium for Therapeutics to build and validate a platform of preclinical tests for new autism medications in rat and mouse models
Sanofi (Euronext:SAN; NYSE:SNY)	Bill & Melinda Gates Foundation	Infectious disease	Unavailable	Collaboration on platforms and methods for vaccine R&D
Sistemic Ltd.	Health Science Scotland; NHS Scotland	Diagnostics	Unavailable	Partnership to develop diagnostic biomarkers for the early detection of diabetic retinopathy and infective keratitis

Since then, CPRIT has appointed a new oversight committee, strengthened the role of scientifically qualified grant reviewers and clarified how it will report conflicts of interest. CPRIT also re-reviewed 118 grants awarded in FY12 and FY13 that had been frozen under the moratorium to make sure they conformed to its tighter ethical and scientific standards.

Perry's letter, co-signed by Lt. Gov. David Dewhurst and Speaker of the House Joe Strauss, noted that CPRIT has made good progress toward the reforms laid out in SB149 and ordered release of the frozen moneys even though not all of SB149's requirements have yet been met.

CPRIT spokeswoman Laura Kunz said that it is not yet clear when the grant recipients will receive their money.

Kunz said that the unfrozen funds include one of three grants flagged by state auditors earlier this year as having been improperly vetted. That grant, for \$11 million to **Peloton Therapeutics Inc.**, passed muster upon re-review.

The two grants that will not be funded are \$20 million to the Houston-Area Translational Research Consortium (HATRC), which is a biotech incubator at **Rice University** and **The University of Texas MD Anderson Cancer Center's** Institute for Applied Cancer Science, and a separate \$25.2

million grant primarily to MD Anderson for a now shuttered clinical trials consortium, the Statewide Clinical Trials Network of Texas (CTNet).

In a public meeting last week, the institute's new oversight committee endorsed promoting interim executive director Wayne Roberts to permanent executive director. Roberts must now formally apply for the job.

GSK discovers winners

GlaxoSmithKline plc announced the winners of its Discovery Fast Track contest, a program that aims to connect North American academics with collaborators at the pharma to test drug discovery hypotheses.

The 8 academic teams, selected from 142 proposals, will work with GSK scientists to conduct preliminary drug screens in a range of therapeutic areas, although the majority of winning proposals focus on infectious disease.

Sarah Ades, an associate professor of biochemistry and molecular biology at **Pennsylvania State University**, will search for antimicrobial agents for Gram-negative bacteria. Rahul Kohli, an assistant professor of medicine and of biochemistry and biophysics at the **University of Pennsylvania**, will test a hypothesis for designing antibiotics to overcome drug resistance.

Myles Akabas, a professor of physiology and biophysics at the **Albert Einstein College of Medicine of Yeshiva University**, will screen for a new class of malaria therapeutics. A joint team led by **Boston University** research assistant professor Lauren Brown, Boston University associate professor of chemistry Scott Schaus and **University of California, San Francisco** pathology professor James McKerrow aims to identify new leishmaniasis therapies.

Three of the winning proposals focused on other diseases.

Richard Leduc, a professor in the Department of Pharmacology at the **University of Sherbrooke**, will test a new approach to treating iron overload disease. Deborah O'Brien, a professor of cell biology and physiology at **The University of North Carolina at Chapel Hill**, submitted a winning proposal concerning the regulation of male fertility. Another UNC team, led by pharmacology professor John Sondek, will screen for metastatic epithelial cancer therapeutics.

The contest winners submitted nonconfidential proposals outlining their screening strategies and how collaborating with GSK could be helpful.

Earlier this year, technology transfer officers at the **University of California, Los Angeles** raised concerns about whether participation in GSK's contest would undermine intellectual property claims by universities. In response, GSK modified the terms for contest participation to allow technology transfer offices to vet proposals for potential IP problems.²

Financial terms and the duration of the winning proposals are undisclosed. If any of the projects yield promising results after preliminary drug screens, the researchers will have the option to enter into a long-term collaboration with GSK.

PPP roundup

October public-private partnerships (PPPs) kicked off with the launch of **Tri-Institutional Therapeutics Discovery Institute Inc.** (Tri-I TDI) and its partnership with **Takeda Pharmaceutical Co. Ltd.** Other notable events last month included the announcement by **Evotec AG** of its fourth partnership with **Harvard University** and its affiliates this year, whereas **Debiopharm Group** moved into epigenetic regulators for cancer via a partnership with Singapore's **Agency for Science, Technology and Research (A*STAR)**.

Memorial Sloan-Kettering Cancer Center, **The Rockefeller University** and **Weill Cornell Medical College** launched Tri-I TDI as an independent, not-for-profit organization that will pool the resources of the institutions and form industry partnerships to help translate early stage research into diagnostics and therapeutics (see Table 1, "Selected public-private partnerships for October 2013").

It was founded with a \$15 million gift from Lewis and Ali Sanders and a \$5 million gift from Howard and Abby Milstein. The institute is funded through philanthropy, direct contributions from the institutions and a yearly \$1.5 million contribution from Takeda—Tri-TDI's first partner.

The institute initially will focus on small molecules, with medicinal chemistry activities taking place at Weill Cornell and Takeda helping to run research at the institute's laboratories.

Tri-I TDI eventually plans to expand into biologics and molecular imaging agents.

This month, Evotec announced its fourth deal for the year with Harvard and its affiliates—dubbed TargetEEM. The partners hope to identify new enteroendocrine mechanisms involved in insulin resistance and energy handling. Under the diabetes deal, Harvard is responsible for discovery

research, while Evotec is responsible for development and will have rights to resulting products.

The partners will use animal models as well as transcriptional and proteomic profiling platforms from both parties and will share commercialization profits. Financial details are undisclosed.

Including TargetEEM, Evotec has now disclosed six partnerships with Harvard and its affiliates. The biotech's other diabetes-focused partnership with the university is the CureBeta collaboration to jointly discover and develop therapies that target pancreatic β cell regeneration, which was announced in March 2011.

Last July, **Johnson & Johnson's** Janssen Pharmaceuticals Inc. unit in-licensed a portfolio of small molecules and biologics generated under the CureBeta collaboration for \$8 million up front and potential milestones of up to \$300 million per product, plus royalties.³

Finally, Debiopharm ventured into the epigenetics space this month via a partnership with the Experimental Therapeutics Centre research unit of A*STAR to exclusively develop oral small molecules targeting an undisclosed class of epigenetic modulators to treat tumors with genetic lesions.

Debiopharm and the center will cofund and participate in the discovery research. Debiopharm will be responsible for development and will have rights to resulting compounds. Financial details are undisclosed.

Debiopharm has 10 disclosed oncology-focused programs in its pipeline in Phase III testing or earlier. The company already markets two oncology drugs: Eloxatin oxaliplatin to treat colorectal cancer and Pamorelin LA, a gonadotropin-releasing hormone (GnRH) agonist, to treat prostate cancer.

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2. Oshervich, L. *SciBX* 6(22); doi:10.1038/scibx.2013.536
3. McCallister, E. *BioCentury* 20(31), A9–A10; July 30, 2012

COMPANIES AND INSTITUTIONS

Agency for Science, Technology and Research, Singapore
Albert Einstein College of Medicine of Yeshiva University, New York, N.Y.
Boston University, Boston, Mass.
Cancer Prevention & Research Institute of Texas, Austin, Texas
Debiopharm Group, Lausanne, Switzerland
Evotec AG (Xetra:EVT), Hamburg, Germany
GlaxoSmithKline plc (LSE:GSK; NYSE:GSK), London, U.K.
Harvard University, Cambridge, Mass.
Johnson & Johnson (NYSE:JNJ), New Brunswick, N.J.
Memorial Sloan-Kettering Cancer Center, New York, N.Y.
Peloton Therapeutics Inc., Dallas, Texas
Pennsylvania State University, College Station, Pa.
Rice University, Houston, Texas
The Rockefeller University, New York, N.Y.
Takeda Pharmaceutical Co. Ltd. (Tokyo:4502), Osaka, Japan
Tri-Institutional Therapeutics Discovery Institute Inc., New York, N.Y.
University of California, Los Angeles, Calif.
University of California, San Francisco, Calif.
The University of North Carolina at Chapel Hill, Chapel Hill, N.C.
University of Pennsylvania, Philadelphia, Pa.
University of Sherbrooke, Sherbrooke, Quebec, Canada
The University of Texas MD Anderson Cancer Center, Houston, Texas
The University of Texas Southwestern Medical Center, Dallas, Texas
Weill Cornell Medical College, New York, N.Y.