

Translational tidbits

By Lev Osherovich & Michael J. Haas, Senior Writers

Last month's public-private partnership with the highest total funding was the launch of the **Global Health Innovative Technology Fund**, an infectious disease initiative that plans to disperse \$100 million over 5 years. On the biotech side, **Onyx Pharmaceuticals Inc.** formed an alliance with the **University of California, San Francisco's** Helen Diller Family Comprehensive Cancer Center.

A table of selected public-private partnerships (PPPs) announced in June rounds out this edition of translational tidbits (see **Table 1**, "Selected public-private partnerships for June 2013").

Japan reaches out

The **Global Health Innovative Technology Fund (GHIT Fund)** launched its flagship funding program to partner Japanese pharma and academics with Western not-for-profit organizations to conduct research on tropical and neglected diseases.

GHIT Fund's plan is to distribute about \$100 million over 5 years for R&D in diseases that mostly occur outside of Japan, including tuberculosis, malaria and a range of tropical parasites.

About half of the committed funding comes from Japan's government, a quarter from the **Bill & Melinda Gates Foundation** and the rest from a consortium of five Japanese pharma—**Astellas Pharma Inc.**, **Daiichi Sankyo Co. Ltd.**, **Eisai Co. Ltd.**, **Shionogi & Co. Ltd.** and **Takeda Pharmaceutical Co. Ltd.**

In June, GHIT Fund handed out its first tranche of \$11.3 million to fund 13 separate partnerships between 3 Western not-for-profit groups and Japanese companies and academic institutes.

"This is the most significant investment both by the Japanese government and by the Japanese private sector in R&D in global health," said GHIT Fund CEO and executive director B.T. Slingsby.

Under the scheme, **Medicines for Malaria Venture** will partner separately with Eisai, Daiichi and Takeda to screen for antimalarial compounds from those companies' libraries. Academic collaborators in this project are at the **Institute of Microbial**

Chemistry (BIKAKEN) and the **Kitasato Institute**.

The **Global Alliance for TB Drug Development** will work separately with Eisai, Daiichi, Shionogi and Takeda to screen for TB compounds.

Finally, the **Drugs for Neglected Diseases initiative** will collaborate

separately with Eisai, Takeda, BIKAKEN and the Kitasato Institute to identify compounds for leishmaniasis, Chagas disease and human African trypanosomiasis (sleeping sickness).

Each grant will cover two years of work and is subject to annual progress evaluations.

Slingsby said that GHIT Fund will not take a stake in new IP coming out of the partnerships, and new discoveries will belong to their inventors.

Participating companies will retain rights to their existing compounds. Slingsby said that the pharma most likely will grant their not-for-profit collaborators royalty-free licenses to promising lead compounds.

GHIT Fund will work with the not-for-profit organizations and the **United Nations Development Programme** to help make the new compounds available to interested parties for further development.

"We're trying to ensure access, which is not always the same as IP," said Slingsby.

GHIT Fund has issued a second call for proposals for development of preclinical assays and clinical trial design in HIV, TB, malaria and neglected tropical diseases. The second round of funding also will pair Japanese and partners outside Japan but will not necessarily require pharma participation.

Full-spectrum cancer innovation

The **Oncology Innovation Alliance** between Onyx and UCSF aims to discover and develop therapies to treat hematological cancers and solid tumors.

Pablo Cagnoni, Onyx's EVP of global R&D and technical operations, told *SciBX* that Onyx established the three-year alliance with UCSF "because of our physical proximity to one another, our shared commitment to cancer research and our existing and past research collaborations."

He added, "Initially the alliance will consider funding projects across the entire drug development spectrum, from drug discovery to the use of markers, novel statistical methods and surrogate endpoints to accelerate clinical development. We may refine the focus of the alliance according to the type of proposals we actually get."

A joint steering committee—composed of three members each from Onyx and UCSF—will oversee the alliance.

"I would like to have the first set of projects approved and ready to go by the end of the year," said Cagnoni.

The number of projects the alliance funds each year will be dictated by a fixed annual budget, although the financials are not disclosed.

Under the terms of the agreement, IP generated by the alliance could be owned jointly or by either party alone. Onyx will have options to license IP from the alliance, said Cagnoni.

"Initially the alliance will consider funding projects across the entire drug development spectrum, from drug discovery to the use of markers, novel statistical methods and surrogate endpoints to accelerate clinical development."

—Pablo Cagnoni,
Onyx Pharmaceuticals Inc.

"This is the most significant investment both by the Japanese government and by the Japanese private sector in R&D in global health."

—B.T. Slingsby,
Global Health Innovative
Technology Fund

Table 1. Selected public-private partnerships for June 2013. Significant public-private partnerships announced in June included the NIH's National Center for Advancing Translational Sciences (NCATS) award of \$12.7 million to 9 academic research groups to repurpose compounds from pharma partners.¹ Japan's Global Health Innovative Technology Fund program also disclosed a first tranche of \$11.3 million to support partnerships between Western not-for-profit organizations and Japanese companies and academic institutes.

Source: BCIQ: BioCentury Online Intelligence

Companies	Institutions	Business area	Disclosed value	Purpose
AstraZeneca plc (LSE:AZN; NYSE:AZN); Eli Lilly and Co. (NYSE:LLY); Johnson & Johnson (NYSE:JNJ); Pfizer Inc. (NYSE:PFE); Sanofi (Euronext:SAN; NYSE:SNY)	Baylor College of Medicine; Indiana University; Kennedy Krieger Institute; Mayo Clinic; University of Pittsburgh; The University of Rhode Island, Kingston; University of Virginia; University of Washington; Virginia Commonwealth University; Yale University	Cardiovascular disease; musculoskeletal disease; neurology; pulmonary disease	\$12.7 million	Repurposing compounds from pharma partners within NCATS's Discovering New Therapeutic Uses for Existing Molecules program
Astellas Pharma Inc. (Tokyo:4503); Daiichi Sankyo Co. Ltd. (Tokyo:4568; Osaka:4568); Eisai Co. Ltd. (Tokyo:4523; Osaka:4523); Shionogi & Co. Ltd. (Tokyo:4507; Osaka:4507); Takeda Pharmaceutical Co. Ltd. (Tokyo:4502)	Bill & Melinda Gates Foundation; Drugs for Neglected Diseases initiative; Global Alliance for TB Drug Development; Medicines for Malaria Venture; United Nations Development Programme	Infectious disease	\$11.3 million in initial tranche; \$100 million in total funding over 5 years	Support partnerships to develop drugs, vaccines and diagnostics for HIV/AIDS, malaria, tuberculosis and neglected tropical diseases within the framework of the Global Health Innovative Technology Fund
Athera Biotechnologies AB	Leiden University Medical Center	Cardiovascular disease	€6 million (\$8 million)	Grant from EU's Seventh Framework Program to CARDIMMUN consortium for developing Athera's phosphorylcholine (PC) mAb through proof of concept
None	Duke University; University of California, San Francisco; NIH	Infectious disease	\$2 million received by Duke; up to \$62 million to entire consortium by 2019	Clinical research network focused on antibacterial resistance
Shionogi & Co. Ltd.	Research institutes in Ireland	Pharmaceuticals	Each Shionogi Science Program (SSP) project will receive up to ¥15 million (\$158,400) annually	SSP drug discovery competition in Ireland, in which academics apply to partner with Shionogi to discover and develop new drug therapies
Abcodia Ltd.	Cancer Research UK	Cancer; diagnostics	Unavailable	Developing blood tests to detect a range of cancers when they are still early stage and asymptomatic
Advinus Therapeutics Ltd.	H. Lee Moffitt Cancer Center & Research Institute	Cancer	Undisclosed	Developing a disruptor of the interaction between retinoblastoma (RB) and CRAF (RAF1), and developing an inhibitor of rho-associated coiled-coil containing protein kinase (ROCK)
AstraZeneca	Cancer Research UK; The University of Manchester	Cancer	Undisclosed	Developing a therapeutic targeting an undisclosed protein involved with DNA damage response and screening for compounds against an undisclosed target
Inflection Biosciences Ltd.	Spanish National Cancer Research Centre (CNIO)	Cancer	Unavailable	Developing preclinical kinase inhibitors to treat cancer
Johnson & Johnson	Icahn School of Medicine at Mount Sinai	Autoimmune disease	Undisclosed	Launch of Johnson & Johnson Boston Innovation Center and new collaboration with Icahn School of Medicine to investigate triggers of inflammatory bowel disease (IBD)
Latitude Pharmaceuticals Inc./Xeris Pharmaceuticals Inc.	JDRF	Endocrine/ metabolic disease	Undisclosed	Develop formulations of soluble glucagon for use in infusion pumps
Onyx Pharmaceuticals Inc. (NASDAQ:ONXX)	University of California, San Francisco	Cancer	Undisclosed	Oncology Innovation Alliance to discover and develop therapies for hematologic cancers and solid tumors
Sanofi	Curie Institute	Cancer	Undisclosed	Identifying targets to treat ovarian cancer
Theradiag (Euronext:ALTER)	Unicancer Group	Cancer; diagnostics	Undisclosed	Developing microRNA-based theranostic tools to screen and monitor treatment response to radiotherapies and chemotherapies for colorectal cancer

In 2012, Onyx signed a nonexclusive, two-year deal with **The University of Texas MD Anderson Cancer Center** to research potential treatments for multiple myeloma (MM) and lymphoma, including the company's proteasome inhibitors carfilzomib and oprozomib (formerly ONX 0912).

Osherovich, L. & Haas, M.J. *SciBX* 6(26); doi:10.1038/scibx.2013.645
Published online July 11, 2013

REFERENCES

1. Haas, M.J. *SciBX* 6(25); doi:10.1038/scibx.2013.616

COMPANIES AND INSTITUTIONS MENTIONED

Astellas Pharma Inc. (Tokyo:4503), Tokyo, Japan
Bill & Melinda Gates Foundation, Seattle, Wash.

Daiichi Sankyo Co. Ltd. (Tokyo:4568; Osaka:4568), Tokyo, Japan
Drugs for Neglected Diseases initiative, Geneva, Switzerland
Eisai Co. Ltd. (Tokyo:4523; Osaka:4523), Tokyo, Japan
Global Alliance for TB Drug Development, New York, N.Y.
Global Health Innovative Technology Fund, Tokyo, Japan
Institute of Microbial Chemistry, Tokyo, Japan
Kitasato Institute, Tokyo, Japan
Medicines for Malaria Venture, Geneva, Switzerland
Onyx Pharmaceuticals Inc. (NASDAQ:ONXX), South San Francisco, Calif.
Shionogi & Co. Ltd. (Tokyo:4507; Osaka:4507), Osaka, Japan
Takeda Pharmaceutical Co. Ltd. (Tokyo:4502), Osaka, Japan
United Nations Development Programme, New York, N.Y.
University of California, San Francisco, Calif.
The University of Texas MD Anderson Cancer Center, Houston, Texas