

Translational tidbits

By C. Simone Fishburn, Senior Editor, Lev Osherovich, Senior Writer, and Kai-Jye Lou, Senior Writer

Consorting with academia

GlaxoSmithKline plc has set up an immuno-oncology consortium that invites academics from six cancer centers to view its nonpublic early pipeline programs and share ideas for new therapeutic candidates.

The Oncology Clinical and Translational Consortium (OCTC) includes the **Gustave Roussy Institute**, **The University of Texas MD Anderson Cancer Center**, the **Memorial Sloan-Kettering Cancer Center**, the **Netherlands Cancer Institute**, the **Princess Margaret Cancer Centre** and the **Vall d'Hebron Institute of Oncology**.

Mining academia for ideas is not new for GSK, as it previously created partnerships through its Center for Excellence for External Drug Discovery, which ran from 2005 to 2012, and it continues scouting for new opportunities via its Discovery Partnerships with Academia group.

The pharma also is putting some molecules in the public domain by contributing compounds and related data from discontinued programs to the therapeutics discovery program run by the **NIH's National Center for Advancing Translational Sciences**.

Now, rather than giving out discontinued compounds or asking academics what they have in their labs, GSK is disclosing its own active, early stage programs and asking academics how they might leverage these with basic research findings to create improved therapeutics.

Axel Hoos, VP of the Immuno-Oncology and Combinations Discovery Performance Unit at GSK, is spearheading the consortium and told *SciBX* that there will be a significant—but not exclusive—focus on cancer immunotherapy combinations.

Hoos said that combination therapies in cancer frequently come about through ad hoc ideas based on what is already available. He expects the consortium will be a better way to have a science-driven approach to combining drugs to improve outcomes.

He said that the goal is for the academic scientists to provide mechanistic expertise on what compounds against specific targets might combine with the GSK pipeline compounds to produce new combinations. Ideas put forward by either GSK or the academics can then spawn new projects that might include either OTCT members or involve partnering with additional companies.

The consortium operates under an umbrella agreement with the participating centers. For each new project a contract will be negotiated with the relevant tech transfer office. Because there is no upfront investment, Hoos said that the OTCT is a low-cost way to increase the flow of ideas and to build the pipeline.

Despite that, Hoos acknowledges that there is some risk of leakage of

proprietary GSK data to people outside of the alliance. Nevertheless, he believes the benefits of openness far outweigh those risks.

"You can't spark innovation if you don't share information," he told *SciBX*.

GSK has established several metrics to track the success of the consortium. These include the number of projects started in an undisclosed time frame, the speed at which new projects get started, the efficiency of enrolling patients in clinical trials and the speed of progress of preclinical projects.

The consortium is in a pilot phase. If successful, it could be expanded to include more centers.

GSK's West Coast beachhead

Half a year after GSK and **Avalon Ventures** partnered to launch up to 10 companies from the VC's biotech incubator, the pharma has decided it wants its own feet on the ground to help bring fledgling companies into the GSK fold. GSK now plans to open an R&D outpost in San Diego that will work with Avalon to help shape the nascent companies.

Under the April incubator deal, GSK and Avalon are providing seed funding of up to \$30 million from Avalon and up to \$465 million from the pharma. GSK will have options to acquire assets developed by Avalon's companies.¹

Avalon has a separate 10,000-square-foot facility that hosts five to six early stage companies. That facility and those companies are not part of the GSK deal.

GSK will deploy a team of 5–10 senior business development and discovery science staff to its new West Coast office by year end.

Damien McDevitt, VP of business development and site head of GSK's West Coast R&D satellite, said that the facility's primary mission is to inject pharma perspective into companies in Avalon's new incubator from the get-go.

GSK's team will provide technical knowledge and access to global R&D facilities for fledgling companies, the first of which is celiac disease play **Sitari Pharmaceuticals Corp.**

"As we select the companies and launch them, we will be working to make sure these companies are supported by GSK," said McDevitt. "The new companies will, for example, be starting up assays, so they'll need to work with our scientists to [eventually] transition the projects to GSK."

The GSK team also will manage regional research collaborations and scout new partnering opportunities with West Coast universities.

"GSK has about 20 major collaborations with companies in California. Having someone on the ground will really help us," said McDevitt.

The new office also will help the pharma "keep our finger on the pulse of breakthroughs in medical innovation coming out of the universities all along the West Coast," he added.

GSK is the latest pharma to set up shop in San Diego. Last year, **Johnson & Johnson** opened its Janssen Labs incubator in San Diego.² In J&J's incubator, up to 20 companies share a range of technical and administrative resources with one another and J&J's San Diego R&D facilities.

Unlike in the GSK-Avalon incubator, startups at Janssen Labs are not necessarily bound by equity or IP rights agreements with their pharma host, nor are they required to directly collaborate with J&J.

Table 1. Selected public-private partnerships for November 2013. Public-private partnership activity was almost nonexistent in the U.S. in November, thanks in part to the Thanksgiving holiday, but ex-U.S. translational deals more than picked up the slack.

Source: BioCentury Archives

Companies	Institutions	Business area	Disclosed value	Purpose
Microvitae Technologies; to-BBB technologies B.V.	Academic Medical Center; Aix-Marseille University; Ben-Gurion University of the Negev; Imperial College London; Mario Negri Institute for Pharmacological Research; Hannover Medical School; Nencki Institute of Experimental Biology; University Hospital Bonn; University College London; University of Eastern Finland; University of Ferrara; Lund University; University of Veterinary Medicine, Vienna; European Commission	Neurology	€11.9 million (\$16.1 million)	Five-year EPITARGET consortium to identify biomarkers and develop therapeutics for preventing epileptogenesis and progression of epilepsy
Prosensa Holding N.V. (NASDAQ:RNA); Consultants for Research in Imaging and Spectroscopy; Scito S.A.	Institute of Myology; Catholic University Leuven; Leiden University Medical Center; Newcastle University; University College London; Catholic University of the Sacred Heart; European Commission	Musculoskeletal disease	€6 million (\$8.1 million)	BIOIMAGE-NMD consortium to develop imaging biomarkers for rare neuromuscular diseases, including Duchenne muscular dystrophy (DMD)
Summit Corp. plc (LSE:SUMM)	University of Oxford	Musculoskeletal disease	£3.3 million (\$5.4 million)	Partnership to develop treatments for DMD
ApoCell Inc.	Fraunhofer Institute for Cell Therapy and Immunology	Diagnostics	€4 million (\$5.3 million)	Partnership to develop ApoCell's ApoStream device for detection of circulating tumor cells
AmorChem L.P.	Center University Hospital of Quebec; Laval University	Cancer	Up to C\$2.5 million (\$2.4 million)	Partnership to develop compounds to treat endometriosis and estrogen-dependent cancers, with a focus on preclinical hydroxysteroid 17β dehydrogenase 1 (HSD17B1) inhibitors
BioSpring GmbH; Dr. Reddy's Laboratories Ltd. (NYSE:RDY); InteRNA Technologies B.V.; Quiet Therapeutics Ltd.; Laboratory of Pharmacology and Toxicology GmbH & Co. KG	VU University Medical Center; European Commission	Cancer	€1.2 million (\$1.6 million)	Two-year MiRacle consortium to develop tumor-selective, microRNA-based therapeutics to treat head and neck cancer
arGEN-X B.V.	Université Catholique de Louvain	Cancer	Undisclosed	Partnership to validate the biology of an undisclosed cancer immunomodulation target and develop therapeutic candidates
AstraZeneca plc (LSE:AZN; NYSE:AZN)	Agency for Science, Technology and Research (A*STAR)	Infectious disease	Undisclosed	Partnership to discover treatments for Gram-negative bacterial infections
BioNet-Asia Co. Ltd.; DBV Technologies (Euronext:DBV)	University of Geneva	Infectious disease; drug delivery	Undisclosed	Partnership to develop a booster vaccine against pertussis through Phase I proof of concept
Bionure Farma S.L.	Myelin Repair Foundation	Autoimmune disease	Undisclosed	Partnership to evaluate the neuroprotective capabilities of Bionure's BN201 in promoting myelin repair for multiple sclerosis (MS)
Evotec AG (Xetra:EVT)	Leukemia & Lymphoma Society	Cancer	Undisclosed	Partnership to support one of the society's screen-to-lead cancer programs
GlaxoSmithKline plc (LSE:GSK; NYSE:GSK)	Cancer Research UK; The University of Manchester	Cancer	Undisclosed	Partnership to develop cancer drugs targeting an undisclosed protein involved in epigenetic regulation
HitGen Ltd.	Cancer Research UK; The University of Manchester	Cancer	Undisclosed	Partnership to discover candidates against undisclosed new cancer targets selected by the university

(Continues on p. 7)

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

Companies	Institutions	Business area	Disclosed value	Purpose
ImmunoGenes AG	Public Health England	Infectious disease; diagnostics	Unavailable	Partnership to discover and develop mAbs to detect and treat <i>Clostridium difficile</i> infection
Japan BCG Laboratory Ltd.; Dainippon Sumitomo Pharma Co. Ltd. (Tokyo:4506)	Aeras; National Institute of Biomedical Innovation	Infectious disease	Undisclosed	Partnership to jointly develop mucosal tuberculosis (TB) vaccines based on the institute's human parainfluenza type 2 vector technology
Johnson & Johnson (NYSE:JNJ)	MaRS Innovation	Pharmaceuticals; diagnostics	Undisclosed	Partnership to jointly identify and fund early stage life science technologies from MaRS' 16 member institutions
ModiQuest Research B.V.	Beckman Research Institute of the City of Hope	Antibodies	Undisclosed	Collaboration to use ModiSelect B cell selection technology to generate mAbs against an undisclosed target selected by the institute
Not applicable	MRC Technologies; University of Oxford	Neurology	Undisclosed	Partnership to screen selective and potent potassium channel K2p18.1 (KCNK18; TRESK) activators to develop compounds to treat migraines
Nuevolution A/S	Cancer Research UK	Cancer	Undisclosed	Partnership to use Nuevolution's Chemetics technology to discover small molecules against undisclosed targets to treat cancer
Redx Pharma Ltd.	Royal Liverpool and Broadgreen University Hospitals NHS Trust	Infectious disease	Undisclosed	Partnership to develop drugs to address antibiotic resistance

Public-private partnership roundup

A trio of new consortia secured grant funding from the EU's Framework Programme 7 in November to get their R&D projects going (see Table 1, "Selected public-private partnerships for November 2013").

The EPITARGET consortium received €11.9 million (\$16.1 million) to identify biomarkers and treatments for epilepsy; the BIOIMAGE-NMD consortium received €6 million (\$8.1 million) to work on imaging biomarkers for rare neuromuscular diseases; the MiRacle consortium received €1.2 million (\$1.6 million) to develop microRNA-based treatments for head and neck cancers.

In Canada, **MaRS Innovation** paired up with J&J to jointly identify and fund early stage life science technologies from MaRS' 16 member institutions. In August 2010, MaRS partnered with the J&J Corporate Office of Science and Technology to cofund early stage, Toronto-based life sciences technologies.

Cancer Research Technology Ltd. (CRT), the commercialization arm of **Cancer Research UK**, had a busy November with three new partnerships.

CRT and **Nuevolution A/S** will use the biotech's Chemetics technology to discover small molecules against undisclosed targets to treat cancer.

CRT, GSK and **The University of Manchester** partnered to develop cancer drugs targeting an undisclosed protein involved in epigenetic regulation. CRT and the university also announced a deal

with **HitGen Ltd.** to discover candidates against undisclosed new cancer targets selected by the university.

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- Cain, C. *SciBX* 4(43); doi:10.1038/scibx.2011.1196

COMPANIES AND INSTITUTIONS MENTIONED

Avalon Ventures, La Jolla, Calif.
Cancer Research Technology Ltd., London, U.K.
Cancer Research UK, London, U.K.
GlaxoSmithKline plc (LSE:GSK; NYSE:GSK), London, U.K.
Gustave Roussy Institute, Villejuif, France
HitGen Ltd., Chengdu, China
Johnson & Johnson (NYSE:JNJ), New Brunswick, N.J.
MaRS Innovation, Toronto, Ontario, Canada
Memorial Sloan-Kettering Cancer Center, New York, N.Y.
National Center for Advancing Translational Sciences, Bethesda, Md.
National Institutes of Health, Bethesda, Md.
Netherlands Cancer Institute, Amsterdam, the Netherlands
Nuevolution A/S, Copenhagen, Denmark
Princess Margaret Cancer Centre, Toronto, Ontario, Canada
Sitari Pharmaceuticals Corp., La Jolla, Calif.
The University of Manchester, Manchester, U.K.
The University of Texas MD Anderson Cancer Center, Houston, Texas
Vall d'Hebron Institute of Oncology, Barcelona, Spain