New initiatives with academic partners to move early stage research forward

Strategic partnerships are central to Merck’s mission to turn breakthrough science into new medicines that improve patients’ lives.

In a world in which collaboration has become the key to drug discovery and development, Merck (known as MSD outside of the US and Canada) has established itself as a truly committed collaboration partner. In March 2012, Merck announced that it will provide substantial support to the California Institute for Biomedical Research (Calibr)—a newly created, independent, not-for-profit organization established to accelerate the translation of academic basic research into innovative medicines.

This is just one of many ways in which Merck continues to demonstrate its commitment to creating and supporting innovative collaborations with academic researchers worldwide. The new Calibr center in San Diego was set up specifically to offer academic researchers streamlined and flexible paths for translating their basic biomedical research into new medicines.

The institute’s estimated 150 scientists will collaborate with academic researchers from around the world to advance new discoveries to preclinical proof of concept, at which stage commercial partnerships will be sought to help develop new drug development avenues even on in the process.

Pharma companies and academic researchers working together in translational medicine can accelerate scientific advances, according to Peter Kim, president of Merck Research Laboratories, one of the world’s largest medical research organizations.

Kim will serve on Calibr’s joint steering committee, which is headed by Christopher Walsh, Hamilton Kuhn professor in the Department of Biological Chemistry and Pharmacology at Harvard Medical School and former president of the Dana-Farber Cancer Institute.

Calibr will not be associated with Scripps, Harvard or any other particular institution, nor will it have a predetermined therapeutic focus. The scientific advisory board will evaluate project proposals from academic researchers worldwide and make selections on the basis of criteria such as novelty, biomedical impact and technical feasibility.

Leverage strengths and advance innovative therapeutics

“Effective translation of basic biomedical research is essential to advancing the next generation of novel therapies,” said Kim. “Calibr will provide an important venue where basic research and drug discovery scientists may leverage each other’s strengths in the fight against disease.”

On the one hand, Calibr will allow Merck to find and access new avenues in basic biomedical research. In return for its seven-year funding commitment of up to US$90 million, Merck will have an option to obtain exclusive revenue-sharing licenses to therapeutic candidates coming out of the work. Calibr will have the freedom to seek outside private-public funding to develop projects that Merck decides not to license.

Academic researchers, on the other hand, will be able to access a wealth of drug discovery tools that are usually not accessible to them. Calibr will, for example, have the latest high-throughput screening, imaging, informatics, medicinal and protein chemistry, pharmacology and preclinical sciences capabilities.

“Some scientists would very much like to see whether they can use their discoveries for developing drugs, but at present they do not have access to the medicinal chemistry or pharmacology tools that are necessary to test such hypotheses,” Kim said.

Academic partnerships are key to Merck

Merck’s interest in creating partnerships with researchers working in academia is extensive. In fact, one-third of about 50 major licensing deals Merck executes each year are signed with academic institutions.

Last year, the company signed 277 smaller intellectual property–generating academic research collaborations. If all types of transactions are included, Merck’s interactions with academia number in the thousands each year, many outside of the US.

In April 2012, for example, the Novo Nordisk Foundation Center for Basic Metabolic Research at the University of Copenhagen and Merck announced that they had entered into a research alliance in the area of diabetes.

The alliance will combine Merck’s strength in developing new small molecule drug candidates with the University of Copenhagen’s wealth of experience and focus on gut hormones research at its Metabolism Center, part of the university’s Faculty of Health and Medical Sciences.

Together, scientists in Copenhagen and at Merck will study potential ways of targeting a group of hormones that transmit messages from the gastrointestinal tract to the rest of the body to regulate blood sugar levels. Changes in these hormones are thought to play important roles in the development of diabetes.

Innovative HIV collaboration: Merck joins nine universities in R&D efforts

Another new academic partnership, announced in 2011, brings together leading researchers from nine universities and Merck with the goal of developing ways to fully eradicate latent HIV infections from patients’ bodies. The National Institute of Allergy and Infectious Diseases, part of the US National Institutes of Health, is the primary funding organization for the...
Merck has forged a research alliance in the area of diabetes with the Novo Nordisk Foundation Center for Basic Metabolic Research located at the University of Copenhagen (shown above). The alliance combines Merck's strength in developing new small molecule drug candidates with the Metabolism Center's wealth of experience in gut hormones research.

research efforts. Merck will not receive any funding for its participation in the effort.

Led by David Margolis, director of the Program in Translational Clinical Research of the Institute for Global Health & Infectious Diseases at the University of North Carolina, the collaboration hopes to achieve two goals. The ultimate objective is to develop drugs against latent HIV infection. At a more fundamental level, however, the collaboration aims to find the methods that are needed to discover and develop new approaches in the first place.

“This therapeutic area is totally new, and no developmental path has ever been proven or used before,” Margolis said. “We are trying to both develop the systems to discover and test potential eradication therapies and develop and test such therapies at the same time.”

The collaboration includes many researchers in many universities, Margolis said, because the problem is very complex and reaches across many areas of expertise that do not exist in any one university. It involves Merck, he added, because many of the challenges are really drug development and drug discovery challenges.

“Those are the expertise of a science-based pharmaceutical research company. Merck was perfectly suited to play this role because of their strengths, their track record and their history,” Margolis said. “Merck’s participation was crucial, and without it the program might not have happened.”

Collaborations are key to future medicines

Collaborations between industry and academia are particularly important in areas for which there is not a straightforward development path to new therapeutic approaches.

So, what is the added value of entering such collaborations from an academic’s point of view? “Industry-academic collaborations offer both opportunities and challenges,” Margolis said. “There are some limitations that academics such as myself have to get used to, but we have become pretty much experts at that. The important attraction is that you acquire lots of resources and areas of expertise that you really need to answer the questions. They are often outside of academia but do exist within science-based pharmaceutical companies such as Merck.”

Forward-looking statement

This profile contains “forward-looking statements” as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements are based on management’s current expectations and involve risks and uncertainties, which may cause results to differ materially from those set forth in the statements. The forward-looking statements may include statements regarding product development, product potential or financial performance. No forward-looking statement can be guaranteed and actual results may differ materially from those projected. Merck undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise. Forward-looking statements in this profile should be evaluated together with the many uncertainties that affect Merck’s business, particularly those mentioned in the risk factors and cautionary statements in Item 1A of Merck’s Form 10-K for the year ended Dec. 31, 2011, and in any risk factors or cautionary statements contained in the Company’s periodic reports on Form 10-Q or current reports on Form 8-K, which the Company incorporates by reference.

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