From a Trickle to a Tidal Wave: New Kauffman Paper Outlines Potential Solution for Filling Drug Pipeline and Protecting U.S. Global Dominance in Biomedical Products

Authors say drug discovery is in jeopardy and recommend new 'distributed partnership' model for speeding therapeutic products to market

(KANSAS CITY, Mo.) Jan. 25, 2010 – A new Kauffman Foundation paper released today claims the United States could speed the flow of new therapeutic drugs into thirsty industry pipelines by creating a new model for drug discovery and development.

Authors Duane Roth, chief executive officer of CONNECT®, a San Diego nonprofit that commercializes local research-based discoveries, and Pedro Cuatrecasas, a biochemist and adjunct professor for the Departments of Pharmacology and Internal Medicine at the University of California, San Diego, say their "distributed partnering model" could foster productive, efficient advancement of biomedical innovations.

The paper, *The Distributed Partnering Model for Drug Discovery and Development*, is an outgrowth of the 2009 Translational Medicine Alliance Forum, created to facilitate collaboration between the biomedical research and drug development industries. The Forum is sponsored by the Kauffman Innovation Network and the Translational Medicine Alliance.

"The Kauffman Foundation created the forum for the express purpose of focusing on new models that can eliminate barriers to bringing early stage life science research to the market," said Lesa Mitchell, vice president of advancing innovation at the Kauffman Foundation. "This paper is one of the many breakthrough concepts to come out of this year's forum."

In the 20th century, pharmaceutical and biotechnology companies were the major contributors to therapeutic innovations. Their 25-year-old copartnering model, once the source of a steady stream of innovative products, now is "ineffective and anachronistic," according to the paper.

"The flow of new drugs has slowed to a trickle, impairing therapeutic advances," Cuatrecasas said.

Authors attribute the business model's demise to two major developments: pharmaceutical companies shifting control from research to marketing, which has stifled scientific research; and investors shying away from long-term commitments for products that often are seen as "too early" in the development phase or "too risky."

"The biotech/pharma model is failing to translate the advances of biomedical sciences to innovative products," Roth said. "But lessons from the past show we can overcome these hurdles to market."

Roth and Cuatrecasas' proposed distributed partnering model involves four distinct, independent spheres collaborating in a risk-shared environment to discover, define, develop and deliver innovative products. The United States, they say, is well-represented in each of those disciplines.

Unlike the existing business model, which requires legions of experienced entrepreneurs and venture capitalists, this business model would be composed of product definition companies (PDCs), specifically structured to advance innovation through the initial definition research phase.

Each PDC would consist of a team of experienced professionals who would raise funds to manage several projects simultaneously. The entities would acquire early stage discoveries from research institutions and invest in defining product applications with the ultimate goal of selling the successful endeavors to pharmaceutical companies for further development and delivery.

"The model focuses on advancing products as opposed to companies," said Frank Douglas, a senior fellow at the Kauffman Foundation. "We need thousands of new products, not thousands of new companies."

Roth and Cuatrecasas maintain that by combining the expertise of distinct cultures and organizations, innovative products could be advanced efficiently, making the risks and investments more proportional to – and rational for – each partner. In addition, oversight would occur primarily through peer review and the granting agency, a culture that cannot be duplicated in the copartnering model.

"The unrestricted pursuit of basic science is essential to new product innovation," Cuatrecasas said. "If the model is successful, the United States might continue, and even accelerate, its global dominance in innovative medical products."

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For a copy of the report go to:

http://www.kauffman.org/uploadedFiles/distributed-partnership-model_12510.pdf