

'Thank You' from Val Stella

The successes from my laboratory could not have been possible without the help of a team of dedicated colleagues. I had people such as Howard Mossberg, Eli Michaelis, Charles Decedue, Diane Thompson, Kathy Porsch, and Roger Rajewski to help make our success in the laboratory a commercial reality. Today, KUCR and the technology transfer office provide strategies that will be critical to future success. I am glad that I have been able to help provide an example of what is possible here at KU, but in reality "it took a village."

- Valentino Stella

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KU Celebrates Bayh-Dole at 25: Promoting Innovation to Benefit Society

On November 17, 2005, the University of Kansas commemorated the 25th anniversary of the Bayh-Dole Act at the Dole Institute of Politics. KU researchers, state and local representatives, and members of the business community joined the Office of Technology Transfer to mark the passage of this important legislation and reflect on its remarkable impact on university-industry partnerships.

The legislation, co-sponsored by former Kansas Sen. Robert J. Dole, shifted ownership and control of patents stemming from federally-funded research to the institution that performed the research. Previously, federal agencies retained patent rights, resulting in few commercial applications. Passage of the Bayh-Dole Act led to a major expansion of technology transfer and licensing efforts at KU and other universities.

The highlight of the event was the presentation of the inaugural KU Technology Transfer Leadership Award to Valentino J. Stella, distinguished professor of pharmaceutical chemistry.

The event was organized by the KU Center for Research and KUMC Research Institute, with sponsorship by the Ewing Marion Kauffman Foundation, the Kansas Technology Enterprise Corporation, and the Kansas City Area Life Sciences Institute.

Val Stella Recognized with Inaugural KU Technology Transfer Leadership Award

Valentino J. Stella, distinguished professor of pharmaceutical chemistry at KU and inventor, is the first recipient of the KU Technology Transfer Leadership Award.



Stella, a native of Melbourne, Australia, received a degree in pharmacy from the Victorian College of Pharmacy. He completed a doctorate in analytical pharmaceutical chemistry at KU in 1971, where he studied under Takeru Higuchi.

Stella invented or co-invented drugs for the treatment of epilepsy and AIDS. He also developed a new agent, Captisol, which is used to dissolve drugs for injection.

During his tenure as director of KU's Center for Drug Delivery Research (1989-99), Stella spun off three companies: CyDex, CritiTech and ProQuest. He also obtained seven patents and developed a series of modified cyclodextrins that are the basis of several pharmaceutical products.

The award recognizes Stella's "dedication to the commercialization and dissemination of technology for the benefit of society." His influence as an educator and mentor extends around the world, with more than 170 former graduate students now working in 15 countries.



A leader by example for students and colleagues, motivated by translating the utility of scientific innovations for the purpose of solving real-world problems and improving our quality of life.

An innovator and problem-solver who is both an expert in his field and enjoys the challenge of working with teams from different fields to address the myriad novel situations that arise in development of a product.

A person of judgment and vision, with confidence to take necessary risks for the benefit of scientific discovery and product innovation.

Other Notable KU Innovators

Epileptic Seizure Detection

Ivan Osorio, MD

Comprehensive Epilepsy Center
KU Medical Center

Dr. Osorio's research interests include advanced techniques for vagal nerve stimulation for the treatment of epilepsy and developing a system for the prediction of rapid detection, warning, and prevention of changes in activity states of the brain in regard to epilepsy. His clinical interests are in the treatment of epilepsy as well as the evaluation and application of brain surgery for treatment of intractable epilepsy. He is the co-founder and Medical Director of Flint Hills Scientific, LLC.

Mark Frei, PhD

Flint Hills Scientific, LLC

Dr. Frei's research specialties are in the fields of modeling, prediction, and adaptive control of stochastic systems. He is the co-founder, Managing Director, and Technical Director of Flint Hills Scientific, LLC.

Flint Hills Scientific, LLC (FHS) was founded in 1995 in Lawrence, Kansas. The world's first and only algorithm for reliable short-term prediction of epileptic seizures has established FHS as the leader in real-time detection and

quantification of epileptic seizures. It is being used in the development of an intelligent medical device for the automated detection, warning, and control of epileptic seizures in collaboration with the world's leading implantable medical device company.

<http://www.fhs.lawrence.ks.us/>

Cancer Treatment Drug

Katherine F. Roby, PhD

Center for Reproductive Sciences
Kansas Masonic Cancer Research Institute
KU Medical Center

Dr. Roby is working with a team of research scientists from the KU Lawrence campus and Lawrence-based CritiTech, to develop a better delivery system for paclitaxel, a drug used to treat breast and ovarian cancers. Dr. Roby's research shows that a similar but newly formulated drug called Nanotax® is effective in treating ovarian cancer in mice without the serious side effects associated with the current formulation. Mice receiving Nanotax® survived more than 3-4 times longer as mice receiving the regular drug. Phase I clinical trials are planned at the University of Kansas Hospital.

CritiTech, started in Lawrence, Kansas, in 1997, conducts

R&D into the production of drugs using a patented process developed by KU researchers. The process allows CritiTech to make nanoparticles of existing drugs to enhance their delivery and effectiveness in humans and improve drug manufacturing and development. CritiTech uses this technology to produce Nanotax®, by making paclitaxel into smaller particles that allow it to be delivered with saline.

<http://www.crititech.com/>

Systems-Level Design Language

Perry Alexander, PhD

Information & Telecommunications Technology Center (ITTC)
University of Kansas

Dr. Alexander's primary research interest is modeling computer systems formally. In 1999, Dr. Alexander designed the Rosetta systems-level specification language with his colleagues David Barton and Peter Ashenden. Rosetta combines heterogeneous information traditionally spread across different languages in several environments into a single language environment. It uses mathematical models to allow electronic systems designers to predict and evaluate a system's

behavior prior to construction, and understand how intellectually distant design decisions can impact each other.

Cadstone, LLC, founded by Dr. Alexander with the help of ITTC and the Lawrence Regional Technology Center (LRTC), is a leading provider of systems-level design tools and services. The company offers a complete collection of Rosetta tools that support system specification, analysis, synthesis and integration.

<http://www.cadstone.com/>

HIV Vaccine

Opendra (Bill) Narayan, DVM, PhD

Marion Merrell Dow Laboratory of Viral Pathogenesis
Center for Biomedical Research Excellence (COBRE)
KU Medical Center

Dr. Narayan has developed a vaccine that prevents HIV from developing into AIDS in monkeys. If current trials in monkey animal models are successful, the research could proceed to clinical trials to be applied to patients who are already infected with HIV and are enrolled in antiretroviral therapy. A DNA vaccine, such as the one developed by Dr. Narayan, has several advantages: it is less expensive, with fewer side effects, and requires booster immunizations every few months instead of the frequent daily intake of antiretroviral drugs.

In 2002, ImmunoGenetix Therapeutics, Inc. of Lenexa, Kansas, was founded as an early stage biotechnology company to develop advanced DNA-based therapies for the prevention and treatment of viral infections, with a focus on HIV. The company has exclusive worldwide rights to the technologies being developed at the Marion Merrell Dow Laboratory of Viral Pathogenesis at the University of Kansas Medical Center.

<http://www.kumc.edu/microbiology/cobre.html>

Director's Corner

Jim Baxendale, MS, MBA

Anyone who's ever experienced cancer – personally, at home, in the workplace, or through a friend – knows how devastating it can be. Cancer also has an economic toll, of course, in terms of death, disability, and the cost of medical procedures.

KU wants to end cancer in Kansas, and has made enhanced treatment, research, prevention, and development of new therapeutics and diagnostics its highest priority. The KU Cancer Center, led by Roy Jensen, provides a joint framework for this initiative at the Lawrence and Medical Center campuses.

The KU Cancer Center hired Scott Weir in February as the first director of its Office of Therapeutics, Discovery, and Development. Scott has nearly 20 years of private sector experience in pharmaceutical research and development. He spent six years with Quintiles Inc. in Kansas City, Mo., first as executive director of biopharmaceutical sciences and later as vice president for early development and laboratory services. Prior to that, he held senior positions with Marion Laboratories and its successor companies. Most recently, Scott was senior director of preclinical technologies for Aptuit LLC, also in Kansas City.

KU's outstanding School of Pharmacy and its history of drug discovery and delivery research, plus other researchers at both campuses and the Stowers Institute for Medical Research, will provide Scott with plenty of innovative scientists to work with in his new role. As he notes, "KU is part of Greater Kansas City, an area that has everything necessary to advance drugs to market."

Scott will spend time on both campuses. He and I have already begun to structure a team that will review newly disclosed drug compounds and devise more formal product development and commercialization strategies. Scott Weir brings the knowledge and expertise that should help the KU Cancer Center be successful while building on KU's strong foundation of drug development and delivery.