

# Technology Transfer & Intellectual Property News

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## New Invention Disclosures

### University of Kansas Medical Center

#### **Invention: Pharmacogenomic Study Using Optical Thin-film Biosensor Chips**

Inventor: Yu-Jui Yvonne Wan, Professor of Pathology

This is a new application that uses DNA chips to predict drug metabolic rate and xenobiotic toxicity. The use of this tool will greatly enhance clinicians' ability to make informed decisions regarding the type of medications and dosing strategies, leading to significant enhancement of treatment effectiveness and increased patient satisfaction, decreased rate of relapse of deterioration, and long-term cost saving.

## Recently Issued Patents

### University of Kansas Lawrence Campus

#### **"Precipitation of proteins from organic solutions"** (U.S. Patent No. 6,562,952)

Inventors: Roger Rajewski, Bala Subramaniam, William K. Snavely, Fenghui Niu.

Micron-sized (1-10  $\mu\text{m}$ ) protein particles are often deemed necessary for drug delivery systems such as controlled release and direct aerosol delivery to the lungs. Consistent commercial production of small protein particles of this type can be difficult. For example, spray drying techniques often lead to thermal denaturation of the protein, while milling and similar processes yield unacceptably broad size distributions and/or denaturation. Lyophilization can give particles in the desired size range, but with a broad distribution and/or denaturation; moreover, not all proteins of interest can be lyophilized to stable products.

In an effort to overcome these problems, supercritical fluid precipitation processes have been employed. A process for forming small micron-sized protein particles is provided wherein a protein, a solvent system for the protein and an antisolvent for the protein solvent system in the antisolvent, thereby causing precipitation of the protein. Preferably, a solution of the protein in the solvent system is sprayed through a nozzle into a precipitation zone containing the antisolvent under near or supercritical conditions.

## Frequently Asked Question

### **Is a patent necessary for successful commercialization?**

No! We often license technologies that are not patented. Companies frequently license in biological materials for internal research use, such as mice, proprietary cell lines and vectors, in order to save the time and expense of creating such research tools themselves. New software discoveries and their source codes are often protected by copyright and/or trade secret.

## Executive Director's Corner

On Thursday, November 13<sup>th</sup> the University of Kansas held its first Technology Transfer Showcase. The event was sponsored by the Lawrence Regional Technology Center; Enterprise Center of Johnson County; Blackwell, Sanders, Peper, Martin; Kansas City Area Life Science Institute; Quintiles; Hovey, Williams; Shook, Hardy, Bacon; Stinson, Hecker, Morrison; Christenberry, Collett, and the Kansas Technology Enterprise Technology Corporation.

The purpose of the event was to honor the start-up companies that have formed to advance technologies developed on both the Lawrence and Kansas City campuses. In attendance were thirteen (13) KU start-up companies. The technologies being developed or marketed by these companies included, an AIDS vaccine candidate, agricultural remote sensors, prodrug compounds, compound to increase the solubility of drug compounds, aeronautical design software, online educational software, real-time software to detect television broadcasts, 3D technology, software to detect epileptic seizures, drug compounds to treat autoimmune diseases, methods to determine drug-drug interactions, particle-size reduction techniques for pharmaceuticals, and innovative solutions to current SoC (system on a chip) design problems facing the semi-conductor and CAD (computer aided design) industries

The dinner program included presentations by Chancellor Robert Hemenway, Tracy Taylor KTEC President, Andrew Parkinson President of Xenotech, and Karl Strohmeier Vice President of CYDex. Each KU start-up company was presented an award in appreciation for their efforts to bring KU licensed technologies to the marketplace.

**James G. Baxendale, MS, MBA**  
Executive Director  
[jbaxenda@kumc.edu](mailto:jbaxenda@kumc.edu)

**KU Medical Center Campus**  
Tele: (913)-588-1495  
Fax: (913)-588-8214

**KU Lawrence Campus**  
Tele: (785) 864-7783  
Fax: (785) 864-5738