

Technology Transfer & Intellectual Property News

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New Invention Disclosures

University of Kansas Medical Center

“Use of Tumor Necrosis Factor (TNF) antagonists for the Treatment of Cancer”

Katherine F. Roby, Ph.D., Anatomy & Cell Biology

This invention is a new use for two currently commercially available products, Enbrel® and Remicade®. Currently these products are approved for the treatment of rheumatoid arthritis, including juvenile and psoriatic arthritis and Crohn’s Disease. The new use is for the treatment of cancer. Experiments are currently underway.

University of Kansas Lawrence Campus

“Phase Change Structural Wall Panel”

Mario Medina, Ph.D., Civil, Environmental and Architectural Engineering

This invention is a manufacture made from existing, commercially available materials that have been integrated in a specific fashion to significantly reduce the amount of heat that enters or leaves a building across its walls. A Phase Change Structural Wall Panel is a wall panel with two outer layers of structural sheathing material separated by an insulated core, in which phase-change materials have been incorporated to enhance the storage capabilities of the panel.

Flint Hills Scientific, L.L.C. (“FHS”)

A KUMC Start-Up Company

FHS is a Lawrence-based company specializing in the development of advanced and innovative mathematical algorithms for the analysis of complex signals, with a primary specialization in analysis of brain wave signals such as electroencephalograms (EEGs). The principals of FHS have succeeded in developing and patenting the world’s first and only algorithm for reliable short-term prediction of epileptic seizures. In validation studies performed to date, the accuracy of the method has been equal to expert visual analysis, the current “gold standard.” This platform technology will be incorporated into a wide range of products to benefit those suffering from epilepsy. FHS is currently developing a seizure warning device, which will remove the uncertainty of seizure occurrence - the primary factor of disability and injury for persons with epilepsy. In addition, FHS’ immediate R&D is focused on the development of portable and implantable devices for the automated blockage of seizures. These devices will use the output of the detection/prediction algorithm to selectively deliver a treatment only when and where it is needed. This approach will greatly increase therapeutic efficacy and minimize or abolish side effects in a highly cost effective manner.

The company has recently entered into collaborative research and development agreements with Argonne National Laboratory, Pacific Northwest National Laboratory, and Kansas City Plant National

Laboratory to develop devices for the treatment of neurological disorders. These devices will combine the diverse technical expertise and precision engineering capabilities of the national laboratories with the company’s proprietary algorithms for real-time analysis of complex biological signals, including methods for automatically detecting and controlling changes in brain state. FHS was also recently awarded a \$100K Phase I SBIR grant from the NIH entitled "Software Tools for Seizure Analysis and Prediction."

Executive Director’s Corner

Frequently Asked Question:

What is the Bayh-Dole Act, what prompted it, and why is it important to university technology transfer?

Enactment of the Bayh-Dole Act (P.L. 96-517), the "Patent and Trademark Act Amendments of 1980" on December 12, 1980 created a uniform patent policy among the many federal agencies that fund research. Bayh-Dole enables small businesses and nonprofit organizations, including universities, to retain title to materials and products they invent under federal funding. One major impetus for the bill was the inability of the federal government to transfer technologies for which it had assumed ownership. Hundreds of valuable patents were sitting unused on the shelf because the Government, which sponsored the research that led to the discovery, lacked the resources and links with industry needed for development and marketing of the inventions. Since U.S. industry also was not inclined to brave government bureaucracy to license patents from universities or from the government, limited technology transfer was accomplished by the publishing of research results, training of students for the workforce and some extension programs established by the land-grant universities. The ability to retain title to and license their inventions has been a healthy incentive for universities. Such incentive is needed, since participation in patent and licensing activities is time-consuming for faculty, and must be done in addition to research and teaching priorities. The number of U.S. patents issued to universities has increased sharply since Bayh-Dole was passed.

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