

# FCR 10

Office of the President  
September 14, 2010

Members, Board of Trustees:

## PATENT ASSIGNMENT REPORT

Recommendation: that the Board of Trustees accept the patent assignment report for the period April 1 through June 30, 2010.

Background: At its March 4, 1997 meeting, the Board of Trustees authorized the University of Kentucky Research Foundation to conduct all future copyright and patent filings and prosecutions. Quarterly reports on patent and copyright applications are to be submitted to the Finance Committee of the Board.

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Action taken:     Approved     Disapproved     Other \_\_\_\_\_

PATENT ASSIGNMENT  
QUARTERLY FOR THE PERIOD THROUGH JUNE 30, 2010

Patents

The following assignments on behalf of the Board of Trustees of the University of Kentucky Research Foundation have been executed:

- 1. U.S. Patent Application Serial Number: (to be assigned)**  
**Filed:** September 30, 2009  
**Title:** “Indole compounds and their use as radiation sensitizing agents and chemotherapeutic agents”  
**Inventors:** Drs. Peter Crooks and Narsimha Penthala (Pharmaceutical Sciences), Thirupathi Yerramreddy, Michael Freeman, Sekhar Konjeti, and Ajay Singh (Outside Inventors)  
**Technical Description:** This invention relates to the fields of radiation sensitizers and chemotherapeutic agents.  
**Summary:** Radiation therapy is one method used to treat cancer. Because radiation is harmful to both healthy cells and cancer cells, it is desirable to increase the sensitivity of cancer cells to radiation, so that a lower dose can be used. The inventors have developed compounds and methods which can increase the radiation sensitivity of targeted cells. These compounds and methods may potentially make radiation therapy less toxic.
- 2. U.S. Patent Application Serial Number: (to be assigned)**  
**Filed:** April 1, 2010  
**Title:** “High-activity mutants of butylcholinesterase for cocaine hydrolysis and method of generating the same”  
**Inventors:** Drs. Chang-Guo Zhan, Hoon Cho and Hsin-Hsiung Tai (Pharmaceutical Sciences)  
**Technical Description:** This invention relates to butylcholinesterase variant polypeptides, and in particular, butylcholinesterase mutants with amino acid substitutions.  
**Summary:** Cocaine is a highly addictive substance. Drugs such as cocaine that are resistant to metabolic breakdown are often more addictive than those readily broken down. The inventors have enhanced the ability of the butylcholinesterase enzyme to metabolize cocaine. The inventors anticipate that this enhanced enzyme can be used to treat cocaine addiction.
- 3. U.S. Patent Application Serial Number: (to be assigned)**  
**Filed:** April 20, 2010  
**Title:** “Drug class for the treatment of cancer”  
**Inventor:** Dr. Rolf Craven (Molecular and Biomedical Pharmacology)  
**Technical Description:** This invention relates generally to the compositions, methods and combination therapies for the treatment of cancer. More

specifically, this invention relates to compositions comprising small molecule ligands to Pgmrc1 which can be used to inhibit tumor growth.

**Summary:** Cancer has long been, and continues to be, a leading cause of death. The inventors have discovered compounds that appear to inhibit cancerous tumor growth through identifiable cellular mechanisms. The inventors anticipate that these compounds will be useful as a treatment for cancer.

**4. U.S. Patent Application Serial Number: (to be assigned)**

**Filed:** May 15, 2010

**Title:** “Square tube mirror-based imaging system”

**Inventor:** Dr. Fuhua Cheng (Computer Science)

**Technical Description:** This invention relates generally to the art of 3D imaging. More specifically, this invention relates to devices and methods for generating stereoscopic images and image-plus-depth utilizing a single imager and image.

**Summary:** Conventional imaging systems for producing 3D images require two cameras, each of which obtains images of a scene from different angles. The inventors have developed a method of producing 3D images from a single camera using a system of reflectors to provide dimensional information. This single camera method will reduce the expense of 3D imaging.

**5. U.S. Patent Application Serial Number: (to be assigned)**

**Filed:** June 22, 2010

**Title:** “Intranasal opioid compositions, delivery devices, and methods of using same”

**Inventor:** Dr. Daniel Wermeling (Pharmacy Practice and Science)

**Technical Description:** This invention relates to the formulation of opioid compositions for nasal delivery, delivery devices, and methods of using same.

**Summary:** The management of pain is an important aspect of medical treatment. Opioids are a major class of drugs used to treat pain and are primarily administered by injection. The inventor has formulated opioids for delivery through nasal inhalation.

Patent Activities  
Fiscal year to date

Number of Patent Applications	30
Number of Patents Issued	31
Patent Receipts	\$2,290,560