FCR 7

Office of the President
March 10, 2009

Members, Board of Trustees:

PATENT ASSIGNMENT REPORT

Recommendation: that the Board of Trustees accept the patent assignment report for the period October 1 through December 31, 2008.

Background: The March 4, 1997 meeting of 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.

Action taken: ☑ Approved ❑ Disapproved ❑ Other _____

PATENT ASSIGNMENT
QUARTERLY FOR THE PERIOD THROUGH DECEMBER 31, 2008

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: October 8, 2008
Title: "CCR3 Inhibition for Ocular Angiogenesis and Macular Degeneration"
Inventors: Dr. Jayakrishna Ambati (Ophthalmology)
Technical Description: The present invention relates to the suppression of ocular angiogenesis by inhibiting the CCR3 receptor.
Summary: Wet macular degeneration occurs when abnormal blood vessels grow in the retina of the eye. Wet macular degeneration accounts for 90% of legal blindness. The inventor has discovered the role of a protein, the CCR3 receptor, in wet macular degeneration, and proposed a method of treating the illness by inhibiting the protein's function.

2. **U.S. Patent Application Serial Number: (to be assigned)**
Filed: October 17, 2008
Title: "Method and System for Creating Three-Dimensional Spatial Audio"
Inventors: Drs. Jens Hannemann and Kevin Donohue (Electrical and Computer Engineering)
Technical Description: The present invention relates to sound signals encoded over multiple speakers to create the perception of specific spatial properties.
Summary: In artistic genre such as movies, it is important to create the impression that sound, such as a voice, originates from the appropriate place, such as the position occupied by an actor. Current methods are inadequate, in that they require a large amount of equipment, depend on the position of the listener, and do not preserve distance information in sound. The inventor has developed a method of sound reproduction that circumvents these problems.

3. **U.S. Patent Application Serial Number: (to be assigned)**
Filed: October 20, 2008
Title: "Crystallization and structure of a plant peptide deformylase"
Inventors: Drs. David Rodgers (Biochemistry), Lynette Dirk, Mark Williams and Robert Houtz (Horticulture)
Technical Description: This invention relates to the crystallization and structure of plant peptide deformylase and methods of using the structure.
Summary: Chemicals that target plant peptide deformylase are lethal to plants.. The inventors have identified the structure of plant peptide deformylase, greatly facilitating the search for new herbicides that target this protein in ways non-lethal to plants..

4. **U.S. Patent Application Serial Number: (to be assigned)**
Filed: October 29, 2008
Title: "Tetrakis-Quartenary Ammonium Salts and Methods for Modulating Neuronal Nicotinic Acetylcholine Receptors"
Inventors: Drs. Peter Crooks, Linda Dwoskin, Zhenfa Zhang and Marharyta Pivavarchyk (Pharmaceutical Sciences)
Technical Description: This invention relates to tetrakis-quartenary ammonium compounds that interact with nicotinic acetylcholine receptors.
Summary: Neurons affected by nicotine play an important role in the neural circuitry relevant to many neurological diseases, including myasthenia gravis, Parkinson's disease, Alzheimer's disease, schizophrenia, eating disorders, and drug addiction. Blocking the activity of neurons sensitive to nicotine is sometimes therapeutic. The inventors have produced compounds that block the activity of nicotine-sensitive neurons. The compounds of this invention should be useful in the treatment of a wide variety of diseases related to the action of nicotine.

5. **U.S. Patent Application Serial Number: (to be assigned)**
Filed: December 30, 2008
Title: "Fungal Desaturases and Related Methods"
Inventors: Drs. David Hildebrand, Surydevara Rao and John Thoguru (Plant and Soil Sciences)
Technical Description: This invention relates generally to fungal desaturases and methods of using them. In particular, the invention relates to novel nucleotide and amino acid sequences for mushroom desaturases and methods of using them to produce non-saturated fatty acids.
Summary: Recent studies have demonstrated that the consumption of unsaturated fatty acids produces health benefits, such as the reduction of cardiovascular disease. The inventors have discovered the structure of mushroom desaturase, an enzyme in mushrooms that produces unsaturated fatty acids. The discovery of this structure allows the enzyme to be introduced into other plants, causing the plants to produce more unsaturated fatty acids. The consumption of the altered plants will result in additional health benefits.

Patent Activities
Fiscal year to date as of December 31, 2008

Number of Patent Applications	20
Number of Patents Issued	9
Patent Income	$508,853