

FCR 17

Office of the President
March 6, 2007

Members, Board of Trustees:

PATENT ASSIGNMENT REPORT

Recommendation: that the Board of Trustees accept the patent assignment report for the period ending January 31, 2007.

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.

Action taken: Approved Disapproved Other _____

PATENT ASSIGNMENT
QUARTERLY FOR THE PERIOD
NOVEMBER 1, 2006 THROUGH JANUARY 31, 2007

Patents

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

- 1. U.S. Patent Application Serial Number: (to be assigned)**
Filed: November 1, 2006
Title: “Transgenic Mice for Bioassay of Prions from Deer and Elk with Chronic Wasting Disease”
Inventor: Dr. Glenn Telling (Microbiology and Immunology)
Technical Description: The invention relates to the use of transgenic constructs to produce models for the study of chronic wasting disease.
Summary: Chronic Wasting Disease (CWD) resembles Mad Cow Disease, but is found in deer and elk rather than cows. As with Mad Cow Disease, symptoms do not appear until late in the disease. Because healthy animals cannot be distinguished from those with early-stage disease, healthy animals within a diseased population must be destroyed to control the spread of the disease. Dr. Telling has invented a test for earlier detection of CWD. The test uses transgenic mice susceptible to CWD.
- 2. U.S. Patent Application Serial Number: (to be assigned)**
Filed: November 20, 2006
Title: “Hierarchical Quantization within a Vocabulary Tree”
Inventors: Drs. David Nister and Henrik Stewenius (Center for Visualization Science)
Technical Description: The present invention relates to computer vision techniques for object recognition and digital image retrieval using accessible databases of a large number of images to provide a means of lookup and retrieval of ‘visual word’ matches within one or more of the databases. More particularly, the invention is directed to an improved image retrieval technique employing a novel hierarchical feature/descriptor vector quantizer that effectively partitions feature space in a hierarchical manner, creating a quantized space that is mapped to integer encoding.
Summary: The inventors have developed an efficient means of finding copies of known files on the Internet. This is useful particularly for owners of copyright photographs and music. The owner can search the web for his or her photos and/or music and find examples of possible infringement of the copyright materials.

- 3. U.S. Patent Application Serial Number: (to be assigned)**
Filed: July 21, 2006
Title: “Continuous Production of Aligned Carbon Nanotubes”
Inventors: Drs. David Jacques and Rodney Andrews (Center for Applied Energy Research)
Technical Description: The present invention relates to apparatus for producing aligned carbon nanotubes, and more particularly to an apparatus for continuous production of aligned carbon nanotubes. The invention further relates to an apparatus for continuous production of aligned carbon nanotubes that does not require patterned substrates, and that further produce quantities of high quality, homogenous populations of aligned carbon nanotubes.
Summary: The development of hollow microscopic carbon tubes, or “nanotubes,” has led to research on appropriate uses. Sophisticated filters can be made by creating a fabric of many nanotubes aligned in parallel. The inventors have devised an efficient method of aligning nanotubes.
- 4. U.S. Patent Application Serial Number: (to be assigned)**
Filed: January 4, 2007
Title: “Methods and Compositions for Providing SA-Independent Pathogen Resistance in Plants”
Inventors: Drs. Pradeep Kachroo, Aarda Kachroo (Plant Pathology), and AC Chandra-Shekra (outside inventor)
Technical Description: The present invention relates to methods and compositions for modulating disease resistance in plants and transgenic plants.
Summary: An estimated 30 percent of crops are lost to disease. The inventors have developed a novel method of enhancing the disease resistance of plants. The method involves inhibiting production of fatty acids naturally found in plants.
- 5. U.S. Patent Application Serial Number: (to be assigned)**
Filed: December 13, 2006
Title: “Method for Reducing Nitrosamines in Tobacco”
Inventors: Drs. Terry Thomas, John Brandon, Andrew Bailey and Thomas Losty (Tobacco Research)
Technical Description: The invention relates to a method for reducing nitrosamines in tobacco.
Summary: Nitrosamines are cancer- causing agents in tobacco. While green tobacco does not contain them, nitrosamines form during the tobacco-curing process. The inventors have discovered a way to inhibit the formation of nitrosamines during curing by treating tobacco with ferrulic acid before curing.

- 6. U.S. Patent Application Serial Number: (to be assigned)**
Filed: November 22, 2006
Title: “Method of Treating the Chemotoxic Effect on the Brain of Chemotherapeutic Drugs”
Inventors: Drs. Jitbanjong Tangpong, Daret St. Clair and Mary Vore, (Toxicology), Allan Butterfield (Chemistry), Steven Estus (Physiology) and William St. Clair (Radiation Medicine)
Technical Description: This invention relates to a novel method of treating the chemotoxic effects of Adriamycin by administering a therapeutically effective amount of anti-Tumor Necrosis Factor-alpha antibody to a patient.
Summary: Adriamycin is a potent anticancer drug commonly used to treat a variety of cancers, including breast cancer. One unfortunate side effect of the drug is a persistent impairment of memory and concentration in the cancer patient. The inventors have developed a novel treatment to reduce this impairment. The treatment involves the therapeutic administration of anti-Tumor Necrosis Factor-alpha antibody.
- 7. U.S. Patent Application Serial Number: (to be assigned)**
Filed: December 29, 2006
Title: “Method for Treating Hypovolemic Shock”
Inventors: Dr. Peter Oeltgen (Pathology)
Technical Description: This invention relates to a method of treating hypovolemic and circulatory shock using Deltorphin-D_{variant}.
Summary: Shock, which refers to a reduction in blood flow and pressure, can deprive vital organs and tissues of oxygen, leading to bodily injury or death. Common causes of shock are blood loss (circulatory) and dehydration (hypovolemic). Dr. Oeltgen has discovered a novel way to prevent shock and its resulting injury by administering a therapeutic dose of the peptide Deltorphin-D_{variant} to an at-risk patient.
- 8. U.S. Patent Application Serial Number: (to be assigned)**
Filed: November 3, 2006
Title: “Methods and Compositions for the Treatment of Ocular Neovascularization”
Inventor: Dr. Jayakrishna Amati (Ophthalmology)
Technical Description: The present method relates to compositions and methods for the treatment or prevention of ocular neovascularization by reducing macrophage infiltration into the eye. The compositions of the invention include an antagonist of MCP-1 and/or CCR2 that blocks MCP-1 binding to or activation of CCR2y.
Summary: Age-related macular degeneration (AMD) is one of the leading causes of blindness. Blindness in AMD is caused by an over-growth of blood vessels in the eye, or neovascularization. Dr. Ambati has developed a novel treatment to inhibit or prevent neovascularization, and resulting blindness. The treatment involves the therapeutic application of drugs that block the action of MCP-1 and/or CCR2, two naturally occurring proteins.

9. **U.S. Patent Application Serial Number: (to be assigned)**
(This is a modification of application #3 that includes additional data. This modification is considered a separate application, though UK may receive a single patent.)
Filed: July 21, 2006
Title: “Continuous Production of Aligned Carbon Nanotubes”
Inventors: Drs. David Jacques and Rodney Andrews (Center for Applied Energy Research)
Technical Description: The present invention relates to apparatus for producing aligned carbon nanotubes, and more particularly to an apparatus for continuous production of aligned carbon nanotubes. The invention further relates to an apparatus for continuous production of aligned carbon nanotubes that does not require patterned substrates, and that further produce quantities of high quality, homogenous populations of aligned carbon nanotubes.
Summary: The development of hollow microscopic carbon tubes, or “nanotubes,” has led to research on appropriate uses. Sophisticated filters can be made by creating a fabric of many nanotubes aligned in parallel. The inventors have devised an efficient method of aligning nanotubes.

Patent Activities

Fiscal year to date as of January 31, 2007

Number of Patent Applications	25
Number of Patents Issued	13
Patent Income	\$425,627