

# FCR 8

Office of the President  
September 11, 2015

Members, Board of Trustees:

## PATENT ASSIGNMENT REPORT

Recommendation: that the Board of Trustees accept the patent assignment report for the period April 1 – June 30, 2015.

Background: At its March 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 ASSIGNMENTS  
FOR THE PERIOD April 1 – June 30, 2015

Patents

The following assignment on behalf of the Board of Trustees of the University of Kentucky Research Foundation has been executed:

1. **U.S. Patent Application Serial Number: 14/668,865**  
**Filed:** March 25, 2015  
**Title:** Halogenated Diarylacetylenes and Methods of Treating Cancer  
**Inventors:** Vitaliy M. Sviripa (Molecular and Cellular Biochemistry), Wen Zhang, Chunming Liu (Markey Cancer Center), and David Watt (Molecular and Cellular Biochemistry)  
**Technical Description:** This invention relates to the use of halogenated diarylacetylenes as antineoplastic agents.  
**Summary:** This invention discloses the pharmaceutical compositions of a family of fluorinated N,N-dialkylaminostilbene analogs (FIDAS agents) that inhibit the expression of Wnt target genes and repress colon cancer cell growth *in vivo* and *in vitro*. This invention also discloses a method for treating cancer by inhibiting cell growth and/or inhibiting tumor growth in humans, or treating diseases caused by hyperproliferating cells by administering an effective dose of one or more of the disclosed compositions along with a pharmaceutically acceptable carrier. It is predicted that the disclosed compounds should be effective in treating colorectal cancer, liver cancer, or prostate cancer.
  
2. **U.S. Patent Application Serial Number: 14/688,131**  
**Filed:** April 16, 2015  
**Title:** Proppant for Use in Hydraulic Fracturing to Stimulate a Well  
**Inventors:** Thomas Lee Robl and Anne Elizabeth Oberlink (Center for Applied for Energy Research)  
**Technical Description:** This invention relates to the use of fly ash in the fabrication of proppants, which stabilize the long horizontal wells generated during fracking for oil and gas.  
**Summary:** Oil and gas production via fracking requires the drilling of a long horizontal well, the fracturing of shale or siltstone by various methods, and the treatment of the well to stabilize the fractures. Stabilization is accomplished by pumping a slurry of natural or manufactured sand product, termed “proppant,” into the fractured zones to prop them open. This invention discloses the ranges for certain physical attributes that fly ash must fall within to function as component of proppant, including mean particle size, absolute density, bulk density, void volume, bulk specific volume, and hydraulic conductivity. The Class F fly ash used in the field tests was collected from dry deposits and from ponds. This fly ash-based proppant may be used alone or in combination with another coarser natural and synthetic proppant.

3. **U.S. Patent Application Serial Number: 14/717,152**  
**Filed:** May 20, 2015  
**Title:** Semi-synthetic Mithramycin Derivatives with Anti-Cancer Activity  
**Inventors:** Jurgen T. Rohr, Daniel Scott, Markos Leggas, Jhong-Min Chen, and Oleg V. Tosodikov (Pharmaceutical Sciences)  
**Technical Description:** This invention relates to the formulation and therapeutic administration of MTM SA derivatives for treatment of cancer.  
**Summary:** Mithramycin (MTM) is an aureolic acid natural product that has been used clinically against certain cancers. When a recent clinical trial tested its efficacy in the treatment of Ewing sarcoma, MTM was found to be highly toxic to non-Ewing cells. Thus, while MTM has high potential in the fight against cancer, a need exists for MTM analogues that are more selective against Ewing sarcoma and/or other cancers. This invention discloses multiple embodiments for MTM SA derivatives with high potential for selective targeting of cancer cells, as well as methods for screening MTM SA derivatives. This invention also discloses a therapeutic method for treating patients with a therapeutically effective dose of an MTM SA derivative by modulating the activity of a target erythroblast transformation-specific (ETS) transcription factor.

Patent Activities

Fiscal year to date as of June 30, 2015

Number of Patent Applications	9
Number of Patents Issued	31
Patent Gross Revenue	\$1,047,630.04