Colorado School of Mines
Office for Technology Transfer

High-Throughput Optical Deformability Measurement

Dr Jeff Squire, Dr. David Marr, Rob Applegate, Tor Vestad.

Departments of Chemical Engineering and Physics

Description: This invention provides a method to measure cell deformability in a dynamic, flowing system, using an integration of novel laser configurations within a microfluidic system. This optical stretching is able to distinguish between normal, cancerous and metastatic mouse fibroblast and human breast epithelial cells. A correlation between this method and other methods used has been observed, with the new method being more sensitive in identify specific cell types.

Potential Areas of Application

- Medical research
- Medical diagnostics

Main Advantages of this Invention

- More sensitive than most methods
- Ability to use in a dynamic, flowing system
- Doesn't require careful storage or the disposal of cytotoxic reagents

Intellectual Property Status: Patent pending

ID number: US Patent Application 12/167,136

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

Contact

William Vaughan
Director, Technology Transfer
Colorado School of Mines
1500 Illinois Street
Guggenheim Hall, Room 306a
Golden, CO 80401
Phone: 303.384.2555
Fax: 303.273.3244
Email: wvaughan@mines.edu