

# **Microfluidic Flow Assay for Measuring Hemostatic Phenotypes**

Drs. Keith Neeves and Ryan Hansen Department of Chemical Engineering

**Description:** In this invention we report a method for measuring an individual's ability to form a blood clot. The assay consists of a micropatterned surface that induces clot formation and an array of microfluidic channels through which blood flows. The micropatterned surface contains two stimuli, one for inducing platelet adhesion and another for inducing the coagulation cascade. Most current bleeding assays test for either platelet function or coagulation, but not both. In addition, most of these conventional assays occur under static, or no flow, conditions. However, since blood is a moving fluid in the body, there are several advantages to studying it under flow in bleeding diagnostics.

# **Potential Areas of Application**

- Medical testing
- Laboratory use

# Main Advantages of this Invention

- Measures clotting ability in non-static state
- Test for both platelet function and coagulation

### Intellectual Property Status: Provisional Patent filed March 12, 2010

ID number: Patent application 13/045,404

**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, Suite 314 Golden, CO 80401 Phone: 303.384.2555 Fax: 303.273.3244 Email: wvaughan@mines.edu