

Docket #: S10-053

Inhibition of platelet and platelet-driven clotting activity

Prof. Jim Collman at Stanford and Dr. Paul Herrmann at Loma Linda Medical School have developed compositions and methods to inhibit platelet and platelet-driven clotting activity by a novel pathway. These compositions could be used to treat and prevent platelet activation and aggregation in a variety of conditions, such as coronary artery thrombosis, cerebrovascular thrombosis, and peripheral arterial disease (including preventing unwanted blood clotting from occurring following surgical procedures).

Ongoing Research

The inventors are evaluating compounds for effectiveness in functional assays for platelet and platelet-driven clotting.

Applications

- **Therapeutic** - to inhibit platelet activation, aggregation, thrombosis, or platelet activated coagulation for conditions such as:
 - coronary artery disease/myocardial infarct
 - cerebrovascular disease (stroke) and peripheral vascular disease
 - arterial or venous thrombosis, transient ischemic attacks, placental insufficiency
 - thromboses following surgical procedures
- Protection against pulmonary embolism

Advantages

- **Rapid reversal** of anticoagulated state
- Compounds appear to have **little toxicity**

Publications

- US Published Patent Application 20110301180, "[Reducing Platelet Activation, Aggregation and Platelet-Stimulated Thrombosis or Blood Coagulation by Reducing Mitochondrial Respiration](#)"
- Barile, C.J., Herrmann, P.C., Tyvoll, D.A., Collman, J.P., Decreau, R.A., and Bull, B.S., "[Inhibiting platelet-stimulated blood coagulation by inhibition of mitochondrial respiration](#)". PNAS 2012 ; published ahead of print January 30, 2012, doi:10.1073/pnas.1120645109

Patents

- Published Application: [20110301180](#)
- Issued: [9,918,964 \(USA\)](#)

Innovators

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