



Virginia Commonwealth University

Applications:

- Anticoagulant for thrombotic and cardiovascular disorder therapy
- Anticoagulant for surgery and kidney dialysis
- Anticoagulant coatings

Advantages:

- Novel mode of action (both direct and indirect)
- Less (if any) side effects
- Readily synthesized
- Anticoagulation can be reversed with FDA approved drug
- Inhibition of coagulation nearly equivalent to low molecular weight heparin

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“NOVEL HEPARIN-LIKE ANTICOAGULANTS” VCU # 08-49

Market Need:

Heparin, a naturally occurring anticoagulant, is the most commonly used agent to treat thrombotic disorders, to prevent coagulation during surgery, and to coat medical devices that come into contact with blood or plasma. The market for heparin is estimated at \$6 to 10 billion for the U.S. alone. Yet heparins are plagued with severe, sometimes fatal, clinical side-effects including enhanced bleeding risk, adverse immunological reactions, patient-to-patient response variability, and heparin-induced thrombocytopenia and osteoporosis.

Technology Summary:

Researchers at VCU have developed three oligomers that are potent inhibitors of coagulation with nearly equivalent anticoagulation activity as heparin. These oligomers are easily synthesized and possess a novel mode of action. Furthermore, their activity is readily reversed with the FDA approved drug sucrose octasulfate. These oligomers are promising alternatives to heparin, potentially alleviating the severe side effects of anticoagulation therapy.

Inventors:

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Technology Status:

Provisional patent application has been filed and foreign rights are available.