



*Cases #484 and #729*

## **FcγRIIIa: A Novel Marker of Cardiovascular Risk**

Increased platelet reactivity has been associated with a greater risk of cardiovascular events. Despite this consistent association, individualized anti-platelet therapy, guided by platelet function testing has not yet shown to reduce the risk of cardiovascular events and intra-individual variability of the current indirect platelet function tests has been identified as the potential contributor to this lack of efficacy.

FcγRIIIa is expressed on the surface of platelets and amplifies the activation of platelets. Platelet expression of FcγRIIIa also provides a tangible link between systemic inflammation and increased platelet reactivity. In contrast to the current indirect platelet reactivity tests, expression of FcγRIIIa can be directly quantifiably measured and is not directly influenced by anti-platelet therapy.

Initial clinical testing has shown that post an initial myocardial infarction patients with platelet expression of FcγRIIIa > 11,000/platelet had an increased incidence of cardiovascular events odds ratio of 3.2 suggesting that it is a novel marker of increased platelet reactivity capable of identifying increased risk of cardiovascular events.

### **Applications:**

- Guide for individualized anti-platelet therapy.
- Patient identification for anti-inflammatory therapy.
- Patient identification for high-risk patients for clinical trials.

### **Advantages:**

- Direct assay of increased platelet reactivity and systemic inflammation.
- No intra-individual variability.
- Not influenced by anti-platelet therapy.

### **Intellectual Property and Development Status:**

US Non-Provisional Application 14/403,337

EPO Non-Provisional Application 13 793 724.9

US Provisional Application 62/660,627

Ready to initiate studies to demonstrate clinical utility to guide therapy.

### **References:**

*Accepted: FcγRIIIa: A Novel Marker of Cardiovascular Risk*

*Journal of the American College of Cardiology*

### **Inventors:**

David Schneider, M.D.

### **Contact Information:**

Kerry Elizabeth Swift

Technology Licensing Officer

Kerry.Swift@med.uvm.edu

802-656-8780