Imaging Bacterial Infections
A Premier Diagnostic Tool

From the laboratories of:
Mark Goodman, Ph.D. (Radiology)
W. Robert Taylor, M.D., Ph.D. (Cardiology)
Niren Murthy, Ph.D. (GT and UC Berkeley)

Cale Lennon, Director, Licensing
OTT Breakfast Club, December 10, 2013
Imaging Bacterial Infections

• CDC: 2 million hospital infections/yr in U.S.
• Late stage diagnosis with current techniques
• PET imaging (\(^{18}\)F-FDG)-poor specificity and sensitivity
• Unmet need: distinguishing between infection and inflammation at an early stage
Technology: Maltodextrin-Based Imaging Probes (MDPs)

Only bacteria internalize MDPs through the maltodextrin transporter
In Vivo Imaging of Bacterial Infections

High specificity and sensitivity

Distinguishes between active bacterial infection and inflammation

Business Strategy

• Potential markets
  – Implanted medical devices
    • Orthopedics
    • Cardiovascular Implantable Electronic Devices (CIEDs)
  – Chronic wound care
  – Lung cancer
  – Drug development

• Probe options (radiolabel, fluorophore, etc.)

• Preventative test yields better patient outcomes and reduced cost of care
Summary

• Addresses unmet need-rapid in vivo detection and imaging of bacterial infections

• Platform technology

• Start-up company formation
  – Scientific founders’ expertise: optical imaging systems, synthetic chemistry and cardiology
  – Focused, initial target market: imaging infections from CEIDs (cardiac pacemakers, ICDs, etc.)