Rapid Determination of Bacteremia & Antibiotic Resistance in Sepsis

Direct detection of microbial DNA allows physicians to quickly identify the right drug for the right bug, to treat sepsis patients.

**Technology**
- **SPEED**: Rapid 3-hour bedside diagnostic vs. 24-72 hour blood culture
- **MULTI-USE**: Bacterium identification + antibiotic resistance profile
- **SPECIFICITY**: Narrow antibiotic regimen for personalized treatment and improved care
- **SENSITIVITY**: Identify bacteria at low concentrations and without prior culture growth
- **EASY**: Reliable and easy to perform test

**Potential Partners**
- Airstrip
- Nico Technologies
- Genetech
- Nanosphere

**Class II Device**
- PMA regulatory pathway

**Commercialization Roadmap**
- **License Technology**
- **PROJECT MILESTONES**
  - **MONTH 1**: Design & synthesize PCR primers for target bacteria
  - **MONTH 2**: Confirm efficacy of PCR primers & synthesize gold nanorods
  - **MONTH 3**: Modify & couple nanorods to PCR primers
  - **MONTH 4**: Test nanorod-primer couples in whole human blood
  - **MONTH 5**: Determine limits for bacteria detection & accuracy of test with whole human blood

**Team**
- **Principal Investigators**
  - J. Scott VanEpps, MD, PhD
  - Nicholas Kotov, PhD
- **Competitive Advantage**
  - SPEED
  - MULTI-USE
  - SPECIFICITY
  - SENSITIVITY
  - EASY