Real-Time Ultrasound Lung Strain Measurement Device

Device to monitor fluid volume status and manage mechanical ventilation with sepsis patients

- **SPEED**: Real-time, minute-to-minute updates
- **NON-INVASIVE**: Safe, bedside application using ultrasound technology
- **MULTI-USE**: Monitor hydration + manage ventilation
- **SPECIFICITY**: Quantitative evaluation of lung function
- **EASY**: Requires little expertise to operate

**Potential Partners**
- Sonetics
- Epsilon Imaging
- GE Healthcare
- Pfizer

**Class II Device**
510(k) premarket notification

**License Technology**

**PROJECT MILESTONES**

- **MONTH 1 - In-Vitro**: Test tidal volume & FRC estimates of ventilated lung phantoms
- **MONTH 2 - In-Vitro**: Test ultrasound scanner with ventilated phantoms
- **MONTH 3 - In-Vitro & In-Vivo**: • Compare strain data from ultrasound/CT scans of ventilated phantoms
  • Perform ultrasound scans on normal patient
- **MONTH 4 - In-Vitro & In-Vivo**: • Perform matched ultrasound/CT scans with ventilated phantoms
  • Perform lung ultrasound scans on ventilated patients: 1 normal + 1 abnormal
- **MONTH 5 - In-Vitro & In-Vivo**: Repeat Month 4 to demonstrate reproducibility and refine methodology
- **MONTH 6 - In-Vitro & In-Vivo**: • Repeat Month 3 & 4 with ventilated phantoms, doubling experiments
  • Repeat Month 5 with ventilated patients