



## **Vivometrics Lifeshirt System Used In Study Involving Children And Parents Affected By 9/11**

### **Research By Mount Sinai School of Medicine and Jewish Board of Family and Children's Services Hopes to Shed Light on Effects of Posttraumatic Stress Caused By Terrorist Attacks**

VENTURA, Calif. Ð September 12, 2005 Ð VivoMetrics, Inc. in partnership with the Mount Sinai School of Medicine Child and Family Resilience Program and the Jewish Board of Family and Children's Services Center for Trauma Program Innovation, announced today that they will be collaborating in a planned research project that will use the VivoMetrics LifeShirt System to study the effects of posttraumatic stress on cardiologic response in young children and parents who were affected by the 9/11 terrorist attacks.

The VivoMetrics LifeShirt™ is the first non-invasive, ambulatory monitoring system that continuously collects, records, and analyzes a broad range of cardiopulmonary parameters. Study participants will wear the lightweight, machine washable garment with embedded sensors to record cardiac activity during an active sequence of interactive dyadic tasks. Participants include mothers and children ages 4-9 exposed to the attacks and the planned research will be integrated into a larger, on-going study of infants and toddlers within this same demographic.

The planned study's three main objectives are to compare cardiac reactivity between trauma-exposed children with post-traumatic stress disorder (PTSD) and those without; compare cardiac reactivity between trauma-exposed mothers with PTSD and those without; and determine whether maternal PTSD predicts child cardiac reactivity. It is hoped that the LifeShirt System will be able to provide more accurate results than traditional recording methods because it allows for unrestricted activity by participants and reduces the risk of sensor and lead disruption during the study.

"Unfortunately many children are struck by PTSD following a tragic event in their lives," said Paul Kennedy, CEO of VivoMetrics. "VivoMetrics is pleased to work with the Mount Sinai School of Medicine and the Jewish Board of Family and Children's Services on the planned study with children directly affected by the events of 9/11 in order to help further our understanding of this disorder."

"Without the LifeShirt System, much of the proposed work would be impossible to complete," said Dr. Claude Chemtob, Ph.D. of Mount Sinai School of Medicine and principal investigator of the study. "Our major concern was the fact that past studies measured children's heart rates by using a monitor that was clipped to the earlobe. While basic vital signs could be measured, heart rate variability - a very significant

factor in childhood PTSD could not be recorded. The LifeShirt System gives us the ability to measure variability, giving us a better view of what is occurring upon exposure to set stimuli."

"To our knowledge, this study will be the first to assess physiology during mother-child interactions, which are believed to be vital in moderating the impact of trauma in affected children," said Dr. Robert Abramovitz of the Jewish Board of Family and Children's Services and co-principal investigator of the Infant, Toddler 9/11 study. "The LifeShirt System is crucial to researching the parameters that have been set forth in the study, and we're excited to be working with VivoMetrics to improve the lives of children affected by 9/11 and many other forms of stressful traumas."

Stacey Williams  
Director of Marketing  
VivoMetrics Inc.  
805.275.5864  
[swilliams@vivometrics.com](mailto:swilliams@vivometrics.com)

Aimee Corso  
WeissComm Partners  
for VivoMetrics  
310.780.2661  
[acorso@weisscommpartners.com](mailto:acorso@weisscommpartners.com)