

## **Mr. Jason Kroh, CardioMEMS, Inc.**

### **Innovations in Microfabrication to Revolutionize Medical Management**

**Abstract:** Using microfabrication techniques, miniature wireless sensors have been developed with a form factor, durability, and lack of wires and batteries which allows the devices to be permanently implanted into the cardiovascular system. These sensors can be implanted using minimally invasive techniques and transmit hemodynamic data such as cardiac output, blood pressure, and heart rate which are critical to the management of cardiac diseases. Using radiofrequency (RF) energy the sensors transmit real-time data to an external electronics module which then communicates the information to the patient's physician. Physicians can use this information to improve the management of severe chronic cardiovascular disease. This technology was developed based on the belief that frequent, on-demand, real-time monitoring of vital information enables proactive patient management which holds the promise of reducing hospitalizations, improving a patient's quality of life and delivering more efficient and cost effective health care.

**Bio:** Jason Kroh is the Vice President of R&D at CardioMEMS, Inc., an Atlanta based medical device company that has developed a MEMS wireless sensing and communication technology designed to improve the management of chronic diseases. As one of the original employees of the company, he was responsible for the design and development of the company's proprietary electronics platform. Prior to joining CardioMEMS in 2001, Jason was the lead Electrical Engineer at Cybersonics, Inc. where he developed the actuating technology for an ultrasonic/sonic driller corer for NASA's Jet Propulsion Laboratory which was applied to medical applications such as lithotripsy and transcutaneous thrombolysis.

Jason holds a B.S. in Biomedical Engineering from Boston University and a M.S. in Electrical Engineering from Gannon University. He holds 23 US patents and has co-authored multiple technical papers on sensing and actuating technologies.