

## News Release

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### **SUDDEN CARDIAC ARREST RISK DETECTED BY WEDENSKY MODULATION**

*Results of Harbinger Medical study are presented at European Cardiology meeting, and show Wedensky Modulation detects near term lethal arrhythmia risk in heart attack patients*

**Munich, Germany – August 29, 2008** – Harbinger Medical Inc. of Minneapolis, Minnesota USA today announced the results of a study presented at the 2008 European Society of Cardiology meeting in Munich. Two abstracts by the study's primary investigator Dr. Peter Brady, FRCP, Mayo Clinic, Rochester MN, showed that Harbinger's Wedensky Modulation Index identified more than 80 percent of all life-threatening arrhythmic events that occurred in the study population.

The Harbinger ICD Patient (HIP) study culminated years of research into Wedensky Modulation, a spectral analysis of sub-threshold stimulation to alternating cardiac cycles. The HIP study enrolled 329 myocardial infarction (heart attack) patients with recently implanted ICDs, separated into two groups based on their Wedensky Modulation Index (WMI<sub>RT</sub>). The 162 patients in the WMI<sub>RT</sub>-High group (WMI<sub>RT</sub> > 0.5) were 64 percent more likely to experience a life-threatening arrhythmia compared to the 106 patients in the WMI<sub>RT</sub>-Low group (WMI<sub>RT</sub> ≤ 0.5).

"We are strongly encouraged by these results. WMI may be used to help physicians identify patients who are at higher near-term risk for SCA," said principal investigator Dr. Peter Brady of the Mayo Clinic in Rochester. "This information may also help reluctant high-risk patients understand the importance of considering ICD therapy."

Wedensky Modulation describes cardiac tissue response to sub-threshold stimulation. A Wedensky Modulation Index (WMI) is derived from the spectral analysis of Wedensky Modulation by applying sub-threshold electrical stimulation to alternating cardiac cycles and comparing the stimulated and non-stimulated beats. Specific segments of the cardiac cycle may be analyzed. WMI<sub>R</sub>, WMI<sub>T</sub>, and WMI<sub>RT</sub> are indices derived from the R-wave, T-wave and the combined R- and T-waves respectively. The HIP study was stopped at 12 months upon reaching its primary end-point based on WMI<sub>R</sub> (P < 0.01) with 268 patients completing at least 6 months of follow-up. Each patient's WMI<sub>R</sub>, WMI<sub>T</sub>, and WMI<sub>RT</sub> were measured using data from Harbinger Medical Inc.'s MI-1000 system. The two abstracts presented at the ESC Congress 2008 were entitled:

- 1) Non-invasive Risk Stratification Using Wedensky Modulation to Determine Cardiac Electrical Vulnerability Late After Myocardial Infarction;
- 2) Wedensky Modulation Index and Ejection Fraction Combined Provide Better Risk Stratification of Post-MI Patients.

Additional information about these abstracts can be found at [www.harbingermmedical.com](http://www.harbingermmedical.com)

Sudden Cardiac Arrest (SCA) is a sudden, abrupt loss of heart function, usually caused

by chaotic activity of the heart known as ventricular fibrillation (VF). SCA takes the lives of approximately 850,000 people each year in the United States and Europe. ICD therapy is highly effective in preventing death from SCA. However, SCA remains the second largest killer in the US after cancer because of the difficulty of reliably identifying patients at elevated risk of SCA. "WMI has been proven to predict near term risk of SCA in post-MI patients currently indicated for an ICD. WMI is a noninvasive, easy to use test with tremendous potential clinical utility," said Dr. Brady. "Ultimately WMI may even show similar positive predictive value for any patients at elevated risk for SCA, regardless of other risk factors."

**About Harbinger Medical Inc.** Located in suburban Minneapolis, Minnesota, Harbinger Medical Inc. is dedicated to identifying patient susceptibility to dangerous arrhythmias. Harbinger Medical has published more than 50 abstracts, articles, and book chapters. The MI-1000 is an FDA approved non-invasive system, which administers a test in about 20 minutes where patients are not required to accelerate their heart rate.

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