Issue: 4: THEW Update – May 2009

- Annual THEW Meeting sponsored by the FDA,
- ECGs with drug-induced TdPs coming into the warehouse,
- Alliance between the Telemetric and Holter ECG Warehouse (THEW) and High Performance Computing Consortium (HPC²),
- IBM BlueGene Supercomputer available for the THEW research activities,
- THEW enables research project with Academic European Centers,

On behalf of the THEW team, we would like to thank all speakers and registrants of THEW Meeting. The event was a success with more than 40 registered companies. The meeting was an opportunity to learn about the recent developments of our initiative of interest for the use of Holter and telemetric ECG in drug safety trials. If you would like to download presentations from this event: www.thew-pr.com

Developments from 2009 First Quarter:

More data in the THEW...

The THEW team is glad to announce the signature of the THEW Data Sharing Agreement of Munich (Germany). In this agreement, Munich University has agreed to share electrocardiographic data with our initiative. Once this data is loaded in the warehouse, researchers will have the access to high-resolution 24-hour Holter ECGs recorded in patients with drug-induced TdPs, as well as recordings from patients with congenital long QT syndrome who have experienced TdPs. All TdP events are fully recorded in the Holter files, they include post-TdP markers enabling the evaluation of ECG markers for the risk stratification of these patients or the triggering signs of TdPs. In addition, this agreement includes a set of short-term ECGs from a group of 34 cardiac patients with and without predisposition to drug-induced TdPs. All TdP markers could be evaluated to identify patients with an increased risk for TdPs.

Alliance between the Telemetric and Holter ECG Warehouse (THEW) with the High Performance Computing Consortium (HPC²)

The New York State Foundation for Science, Technology and Innovation’s (NYSTAR) program will provide storage resources to the THEW initiative. NYSTAR’s HPC² Cloud Computing program will provide the initial storage requirements for THEW as well as a lasting partnership. Through this collaboration, University of Buffalo will open a secure connection for the distribution of ECG data to the THEW Members. Dr. Couderc, Director of the THEW initiative, said, “This is great news for our initiative. The storage space allocated by the NYSTAR program will greatly increase the research capability of the THEW initiative.”
creation of a secured FTP server will facilitate the distribution of the THEW data. In particular, high-resolution Holter ECGs from the recent drug safety trial received from Roche included. One will be able to download quickly all this data from this remote server of the THEW, to benefit from the NYSTAR program.” Michael Ridley, Director of the NYSTAR program commented: “Having a world class cyber-infrastructure provided through HPC² to researchers in New York State allows innovative researchers like Dr. Couderc to focus on their research rather than the complexities of implementing high performance computing applications. HPC² members from the University at Buffalo is a well known expert and leader in deploying HPC resources for researchers like Dr. Couderc. Dr. Furlani’s expertise and assistance was a critical factor in this initiative. This partnership is a resounding success where both programs and University, well as the added benefit of New York State resources being used to their fullest potential.

IBM BlueGene Supercomputer available for the THEW research activities.

We are glad to announce that the THEW initiative received access to unique computer resources in the form of Blue Gene super computers currently hosted at the University of Rochester Center for High Performance Research. This supercomputer has 4096 cores providing a 13.9 TFlops system. It represents a tool for the validation of ECG-based technologies because thousand of Holter can be analyzed in a few minutes (for regular process). The THEW team is currently evaluating the appropriateness of the use of this resource. We expect this resource to be available for research activities before the end of the year.

THEW enables research activities in Europe…

The Academy of Sciences of Czech Republic and their Institute of Scientific Instrumentation are using data from the THEW for the validation of methods for the modeling of QT/RR cycles using surface electrocardiograms. The research proposal for this project has been reviewed and approved by members of the THEW Research Scientific Committee consisting of world experts in electrophysiology and individuals from the FDA.