

Perinatal Biomagnetism 2009, First International Workshop on the clinical usefulness of Biomagnetism in Perinatal Medicine.

June 18, 2009 (HE34). Perinatal Biomagnetism 2009 was the 1st International Workshop dedicated to demonstrating the usefulness of Biomagnetism in Perinatal Medicine to clinicians interested in new technologies and translational medicine. The workshop was held in Chieti, Italy, on April 4, 2009. It was organized by Prof. Silvia Comani (University of Chieti, Italy), and co-chaired by Prof. Silvia Comani and Prof. Janette Strasburger (Medical College of Wisconsin - USA) (see Fig. 1).



Fig. 1. Prof. Silvia Comani and Prof. Janette Strasburger during the welcome address at the beginning of the workshop.

The general purpose of the workshop was to address critical issues related to monitoring of fetal and neonatal well-being and surveillance using biomagnetic methods and equipment. The focus was on the development of detection and imaging technologies, the investigation of physiological and pathological functions, and possible novel clinical applications. Furthermore, the specific purpose of the workshop was to disseminate information on the advantages and disadvantages of magnetocardiography (MCG) and magnetoencephalography (MEG), and on their clinical usefulness for clinicians, such as obstetricians, perinatologists, pediatricians, pediatric neurologists and pediatric cardiologists.

Leading scientists from Italy, Germany, Finland and USA presented an updated overview of the state-of-the-art of MCG and MEG technology and application in Fetal and Neonatal Medicine. The workshop program consisted of two plenary lectures and two scientific sessions, one dedicated to MCG and another to MEG. In particular, the first plenary lecture, given by Prof. Franco Chiarelli (University of Chieti, Italy), focused on the usefulness of biomagnetism for the early and more precise diagnosis of epilepsy or rare brain diseases in children. The second plenary lecture, given by Prof. Jens Hauelsen (University of Ilmenau, Germany), presented the most recent systems and techniques used to record bio-magnetic fields. During the two scientific sessions dedicated to MCG and MEG, the most recent recording techniques, analysis methods and clinical applications in Perinatal Medicine were presented. The Workshop was concluded with a round table during which the clinical usefulness of Biomagnetism was compared with that

of techniques routinely used in the clinical setting, such as ultrasound or ECG/EEG. Recommendations for future directions of research were also drawn. Finally, 28 contributed papers provided a larger view on the ongoing research in the field. A PDF copy of the Abstract Booklet can be downloaded [here](#), and the workshop website can be visited by linking to <http://pb2009.udanet.it>.

Although “Perinatal Biomagnetism 2009” was the very first workshop dedicated to this very specific scientific topic, it was attended by more than 100 participants, many of whom were clinicians and came from countries spread all over the world: Brazil, Finland, Germany, Israel, South Korea, Romania, Serbia, The Netherlands, and the United States.

The Workshop took place at the Center for Excellence on Ageing Sciences (Ce.S.I.), which is one of the two Medical Research Centers of the "Gabriele d'Annunzio" University of Chieti-Pescara (Italy). The Center's mission is to promote multidisciplinary research and scientific collaboration between Italian and foreign Universities and research centers. It is set on the campus of the University of Chieti-Pescara, and it hosts a comfortable Conference Hall professionally equipped for projections and presentations, an annexed hall for posters and a prestigious lounge where coffee beaks and lunch can be served. Figure 2 shows three snapshots of the facility.



Fig. 2. The exterior (left) and the lounge (center) of the Center for Excellence on Ageing Sciences (Ce.S.I.) of the "Gabriele d'Annunzio" University of Chieti-Pescara, Italy. A view of the Campus of the "Gabriele d'Annunzio" University (left).

The University Campus is close to Chieti, a nice old town in the Abruzzi region, facing the two highest mountains of the Appennini mountain chain and situated only 15 km from Pescara, a more modern town on the Adriatic Sea. Chieti traces its history back to the pre-Roman era, and a fine Romanesque cathedral (11th cent.) as well as a 14th century tower can be admired downtown (Fig. 3).



Fig. 3. The beautiful mountains of Abruzzi (left) and the Romanesque cathedral (11th cent.) of ancient Chieti (right).

In the opinion of many participants, the event was useful, well organized and successful. This positive feedback motivated the organizers to contemplate organizing a similar follow-up meeting in 2011, possibly in Wisconsin (USA).