

# **Ettore Majorana Centre** **International School of Bioelectromagnetics “Alessandro Chiabrera”**

*Director of the school: F. Bersani (University of Bologna,I)*

The Centre for Scientific Culture in Erice (Sicily, Italy) is named after the great Italian scientist Ettore Majorana. Antonino Zichichi, the director of the Centre, has said: “At Erice, those who come in order to follow a certain School are called ‘students’, but actually they are young people who have successfully completed their University studies and who come to Erice in order to learn what the new problems are. However, what is distinctive for Erice is the spirit animating all participants: students no less than teachers. The prime objective is to learn. The student listens to the lectures and after the lunch break comes the most amusing part: the discussion session.”

Topics in Bioelectromagnetics have come to Erice many times in the past, especially in the 1980s, with international courses and workshops on non-ionising radiation, and today many participants of those courses contribute greatly to the development of this research field.

Following the request of the European Bioelectromagnetics Association (EBEA) and the Inter-University Centre for the study of the Interaction between Electromagnetic Fields and Biosystems (ICEmB), The Ettore Majorana Centre has established a Permanent School of Bioelectromagnetics, named after Alessandro Chiabrera, who is considered as a master by the young scientists of the two associations.

## **1<sup>st</sup> COURSE: “Methodology in bioelectromagnetic experimental investigations”**

Erice (Sicily, Italy): April 21-28, 2004

Directors of the School:

Prof. Ferdinando Bersani  
Department of Physics  
Via Berti Pichat 6/2, Bologna (Italy)  
Tel. +39 (0)51 2095122  
Fax +39 (0)51 209 5050

Bernard Veyret  
Laboratoire PIOM CNRS /EPHE  
Université de Bordeaux I  
ENSCPB  
Av Pey Berland  
33607 Pessac cedex France  
Phone/fax: +33 5 40 00 66 29

The first Course of the School will be devoted to the methodology needed in designing and performing experimental studies in Bioelectromagnetics. In view of the ongoing health risk assessment of electromagnetic field exposure, the quality of experimental investigations is of utmost importance. The main topics of the Course will be dosimetry and exposure systems, methods and problems of specific *in vivo* and *in vitro* studies, experimental planning and data analysis. All areas of interest will be covered in lectures, seminars and discussions where senior scientists will share with participants their own experience, and in a final round table organised by the leaders of the new European programme EMF-NET.

**Cost of the course:** 1200 € including food and lodging.

**Application:** Interested candidates should send an e-mail to the Directors of the Course at the following e-mail address:

[EBEA-ICEmBSchool@ICEmB.it](mailto:EBEA-ICEmBSchool@ICEmB.it) with the following information:

- A short Curriculum Vitae
- Scientific interest of the candidate
- For young Researchers: letter of recommendation of a Senior Scientist by e-mail (attached Word or PDF file)

In case of acceptance the candidate will be informed by e-mail.

The participation fee can be paid directly into the Bank Account of the Erice E. Majorana Centre indicating the motivation (Participation to the first Course of the International School of Bioelectromagnetics “Alessandro Chiabrera”) or directly to the School on arrival in Erice.

Bank Account: Banco di Sicilia, Erice

Bank Code for National participants (BBAN): T0102081850000410041482

Bank code for International participants (IBAN): IT40T0102081850000410041482

For further details: [www.ccsem.infn.it](http://www.ccsem.infn.it) (Ettore Majorana Centre) and [www.ebea.org](http://www.ebea.org)

## Preliminary Programme

Arrival: April 20<sup>th</sup> ; Course: April 21<sup>st</sup> to April 27<sup>th</sup> (free day: April 25<sup>th</sup>);Departure: April 28<sup>th</sup>

Introduction to the course  
Introduction to physics of RF  
RF exposure systems *in vitro* and *in vivo*  
RF experimental dosimetry  
Introduction to physics of ELF  
ELF exposure systems *in vitro* and *in vivo*  
ELF experimental dosimetry  
Seminar: Microdosimetry  
Experimental planning and statistical analysis  
Analysis of cellular functions  
Cellular signalling  
Genotoxic effects *in vitro*  
Seminar: Thermal and non thermal effects  
Genotoxic effects *in vivo*  
Carcinogenesis *in vivo*  
Cancer related, non genotoxic effects *in vitro*  
Electrophysiological measurements *in vitro*  
Behaviour and nervous system  
Gene expression  
Genomics and proteomics  
Seminar: Research needs  
Oral presentations and posters of participants  
Round Table: Quality Assurance in Bioelectromagnetic  
Investigations

F. Bersani & B. Veyret  
G. D'Inzeo (*University of Rome, I*)  
N. Kuster (*ETH, Zurich, CH*)  
O. Gandhi (*University of Utah, USA*)  
F. Bersani (*University of Bologna, I*)  
G. Lovisolo (*ENEA, Rome, I*)  
G. Lovisolo (*ENEA, Rome, I*)  
M. Liberti (*University of Rome, I*)  
G. Le Pape (*University of Tours, F*)  
I. Lagroye (*University of Bordeaux, F*)  
R. Luben (*University of California, USA*)  
M.R. Scarfi (*CNR, Naples, I*)  
R. Glaser (*Von Humboldt Univ, Berlin, D*)  
Vijayalaxmi (*University of Texas, USA*)  
J. Juutilainen (*University of Kuopio, FIN*)  
I. Lagroye (*University of Bordeaux, F*)  
M. Mazzanti (*University of Rome, I*)  
R. De Seze (*INERIS, Paris, F*)  
C. Ventura (*University of Bologna, I*)  
C. Maerker (*Heidelberg, D*)  
M. Repacholi (*WHO, Geneva, CH*)

Organised by the EC FP6 Coordination action  
EMF-NET