**PROGRAMME AND LECTURERS**

**INTRODUCTION**
Human Implantation: The last barrier in assisted reproduction technologies

**ART AND ImPLANTATION**
Evaluation of gamete and embryo parameters highly predictive for human embryo implantation
Oocyte and embryo wastage in ART: it is in the seed, not in the soil

**MOLECULAR ASPECTS**
Basic aspects of human implantation
- Genomics of human endometrial receptivity
- Molecular roadmap to implantation
- In vitro models of human implantation
- New approach in co-culture systems to increase implantation rate

**IMMUNOLOGICAL ASPECTS**
Embryo invasion phase: the same strategy used by cancer cells
- Immune cells in uteroplacental tissues throughout pregnancy
- HLA-G, angiogenesis and uterine vascular remodeling in early pregnancy
- T cell-cytokines in normal pregnancy and in recurrent pregnancy loss
- Defective implantation: Laying the blueprint for pregnancy complications
- Immuno-regulation in normal pregnancy and pre-eclampsia

**GENETIC ASPECTS**
The influence of male factor on human implantation
Endometriosis and implantation
- Genetic and post-genomic investigation on gametes and embryos: age, life style and environmental factors conditioning

**POETIC TOUCH**
According to legend, Erice, son of Venus and Neptune, founded a small town on top of a mountain (~750 metres above sea level) more than three thousand years ago. The founder of modern history — i.e. the recording of events in a methodical and chronological sequence as they really happened without reference to mythical causes — the great Thucydides (~480 B.C.), writing about events connected with the conquest of Troy (1183 B.C.) said: «After the fall of Troy some Trojans on their escape from the Achaei arrived in Sicily by boat and as they settled near the border with the Sicilians all together they were named Elymi: their towns were Segesta and Erice.» This inspired Virgil to describe the arrival of the Trojan royal family in Erice and the burial of Anchise, by his son Enea, on the coast below Erice. Homer (~1000 B.C.), Theocritus (~300 B.C.), Polybius (~200 B.C.), Virgil (~19 B.C.), Horace (~20 B.C.), and others have celebrated this magnificent spot in Sicily in their poems. During seven centuries (XIII-XIX) the town of Erice was under the leadership of a local oligarchy, whose wisdom assured a long period of cultural development and economic prosperity which in turn gave rise to the many churches, monasteries and private palaces which you see today.

In Erice you can admire the Castle of Venus, the Cyclopean Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is at present a mixture of ancient and medieval architecture. Other masterpieces of ancient civilization are to be found in the neighbourhood: at Motya (Phoenician), Segesta (Elyman), and Selinunte (Greek). On the Aegean Islands — theatre of the decisive naval battle of the first Punic War (264-241 B.C.) — suggestive neolithic and paleolithic vestiges are still visible: the grottoes of Favignana, the carvings and murals of Levanzo. Splendid beaches are to be found at San Vito Lo Capo, Scopello, and Cornino, and a wild and rocky coast around Monte Cofano: all at less than one hour’s drive from Erice.

More information about the «Ettore Majorana» Foundation and Centre for Scientific Culture can be found on the WWW at the following address:

http://www.csems.infn.it