The Joint ENTIS and ETS Education Course: Hormones and Brain Development

Increasing knowledge delivers better insights into the complex interaction between maternal hormone status during pregnancy and fetal brain development. Whereas the critical role of maternal thyroid diseases has been known for long, the exact mechanism of action and its impact on brain development is still a matter of research.

Understanding the role of stress and stress hormones during pregnancy and their effects on infants' later life is a rather new field of research. Yet, the mechanisms how hormones can regulate human neurodevelopment are not completely clarified; and fetal consequences of maternal endocrine imbalances need further investigations. In addition, a number of hormonally active drugs and environmental disruptors might interfere with fetal neurobehavioral programming. It remains unclear how to reliably test these effects, understand their long term impact and relevance for human health.

The course is co-organized in collaboration with the European Network of Teratology Information Services (ENTIS) in order to provide a multifaceted viewpoint, from endocrinology and embryology to toxicology and clinical teratology.

Key learning objectives:

•update on the role of maternal thyroid function and subclinical iodine deficiency on the fetus.

•the interactions between prenatal stress, glucorticoid hormones and fetal brain development

•endocrine disruptors and neurobehavioral impairment: what is the weight of evidence?

•neurodevelopmental toxicity of chemicals and drugs; how to identify and assess endocrine-related effects?