

Gamete and embryo-fetal origins of adult diseases**He-Feng Huang and Jian-Zhong Sheng (eds.), 2014****Springer Science Business Media, Heidelberg, Germany****ISBN: 978-94-007-7771-2****Pages: 222 + IX; Figures: 7;****Color figures: 1; € 118.99**

By putting together the most advanced evidences supporting the 'gamete and embryo-fetal origins of adult diseases' the two editors, Prof. He-Feng Huang and Prof. Jian-Zhong Sheng (Hangzhou, People's Republic of China) did a great work. The idea that adult's health condition is heavily affected by the health conditions experienced at preceding developmental steps (gametes, embryos and fetuses) is a notion that comes back nearly 100 years ago, when a milestone paper by Kermack, McKendrick and McKinlay was published on *Lancet*. There, the authors showed a clear falling rate of deaths in UK and Sweden from 1751 till 1930: childhood poverty clearly influences the adult's health and the intra-uterine environment clearly affect the infant's health. A brief history of the causal relationship between pre- and post-natal health and how the healthy conditions during embryo-fetal and neonatal periods are affecting the adult health is presented by the Editors in their preface to the book. Spanning from the Kermack *et al.*'s

paper till the 1989's paper by Barker, Osmond and Law (showing that lower birth- and 1-year weights are associated with stroke and coronary heart disease in adults), the Editors present what it is now-a-day known as the *Barker hypothesis* ('the roots of cardiovascular disease lay in the effects of poverty on the mother and undernutrition in fetal life and early infancy') with the necessary epigenomics explanations of these relationships recently suggested (2010) by Motrenko 'Embryo-fetal origin of diseases: new approach on epigenetic reprogramming' (*Archiv Perinatal Med* 16:11-15).

The book consists of ten chapters where, taking advantages of experimental, clinical and epidemiological evidences, it is illustrated how long-visionary were the Barker and Motrenko hypothesis: the origin of each of the main human diseases is looked from the gamete/embryo/fetal health perspective. The first three chapters unavoidably deal with the gamete physiology, embryonic physiology and the adverse intrauterine environment as a prerequisite to understand the following chapters, where the human leading death causes are illustrated on these premises. Chapter four illustrates which are the evidences supporting the gamete/embryo-fetal origin of type 2 diabetes with a very interesting presentation about the 'thrifty' phenotype and genotype history, particularly related to specific ethnicity determinants, done by one of the editor himself with two other colleagues (He-Feng Huang with Guo-Lian Ding and Shen Tian). The epi-

demiological evidences closely relating adult cardiovascular diseases with the intrauterine conditions are illustrated in chapter 5, while chapter 6 (the most extensive chapter) illustrates those relating gamete/embryo-fetal origins of tumors. Obesity (chapter 7), mental disorders (chapter 8) and infertility (chapter 9) are equally interesting papers in which Prof. He-Feng Huang is stressing some distinctive traits of the origin of each of these diseases in relation to the early life conditions.

Considering the always increasing use of assisted reproduction techniques with the necessary manipulation of gametes, it is a very good idea that of devoting an entire chapter to the presentation of the evidences till now accumulated relating 'Assisted Reproductive Technology and Gamete/Embryo-Fetal Origins of Diseases' (chapter 10).

There is an astonishing number of bibliographic references, with an overall number of 1355 references, distributed among the ten chapters of the book: well done! There is another additional great merit to tell about the editorial efforts of this book: that's of having no one table, no one graphic, just figures!

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