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Epigenetic Safety after Assisted Reproductive Technologies

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Message from the Guest Editor

Assisted reproductive technologies (ART) provide great benefits for many couples struggling with infertility problems. Although the vast majority of children born as a result of ART are healthy, an association between ART and epigenetic changes has been documented. Human and animal studies indicate that certain aspects of ART, such as hormonal stimulation or in vitro culture systems, may cause epigenetic deregulation during the periconceptual period of gamete maturation and early embryonic development, which may lead to phenotypic changes such as low birth weight or an increased prevalence of metabolic and cardiovascular disease later in adult life (the Developmental Origins of Health and Disease (DOHaD) concept).

Epidemiological studies in human also suggest that subfertility predisposes to epigenetic deregulation. As the use of ART increases worldwide, it is crucial to understand the mechanism(s) underlying the association between ART and epigenetics as this would allow for taking precautions in order to realize the safe and ethical use of ART.



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Special Issue



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Message from the Editor-in-Chief

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