Preface

Drug abuse and dependence continue to be problems that plague our society. Of particular concern is the consequence of intrauterine exposure of the fetal brain to addictive substances. The long-term effects of fetal drug exposure depend on a number of factors including the dose, duration and diversity of the drugs involved. The socio-economic environment during the child's formative years influences the expression of such insults, adding another layer of complexity to the analysis. Nonetheless, that prenatal drug exposure can adversely impact development of the brain and behavior is not disputable. However, a concise presentation of current clinical and scientific findings on developmental effects of prenatal drug exposure is lacking. This special issue assembles reviews and original papers written by leading experts in the field on the neuro-developmental consequences of prenatal drug exposure. The articles cover a wide range of drugs including cocaine, amphetamine, methylphenidate, nicotine, MDMA (ecstasy) and ethanol. A wide range of technology, from non-invasive brain imaging to behavioral analysis is represented. The articles report findings from research on human subjects as well as preclinical animal models to capture a consensus that is now evolving regarding the deficits common to experimental animals and humans exposed to drugs of abuse during critical periods of brain development. By bringing together these multiple perspectives, we hope that this special issue will be a valuable resource for neuroscientists and clinicians alike.

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