



Fetal Nutrition and Neuro-Development

Guest Editor:

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Deadline for manuscript
submissions:

closed (31 January 2021)

Message from the Guest Editor

Neurodevelopment during embryo and fetal development relies on a precise control of proliferation, differentiation and migration of the several types of neural cells that constitute the different brain areas. These processes are determined by internal programs but they are also responsive to external cues, among which nutrient availability. Cellular differentiation of neural stem/progenitor cells relies on the expression of lineage specific genes. This process is strictly regulated at the pre- and post-transcriptional level but the influence of environmental cues, especially nutrients, on these regulatory systems is still very poorly characterized.

The purpose of this special issue is to investigate the impact of maternal nutrition or metabolic status (including obesity and special diets such as vegetarian or vegan) on fetal neurodevelopment. Emphasis will be placed on the cellular and molecular mechanisms, including cellular energy metabolism, epigenetics or epitranscriptomics, by which nutrients reaching the fetus may influence key neurodevelopmental milestones and affect brain function.





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Message from the Editor-in-Chief

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