# **Special Issue**

# Nutrients for the Brain Across the Lifespan: Supporting Development, Function, and Healthy Aging

# Message from the Guest Editors

Nutrition is essential for brain health across the lifespan. From development to aging, diet shapes neurotransmission, glucose use, plasticity, and structure, influencing behavior and cognition. This Special Issue. "Nutrients for the Brain Across the Lifespan: Supporting Development, Function and Healthy Aging", highlights research on how nutrition sustains the brain throughout life. Genetic variants that affect nutritional status add complexity, influencing outcomes from prenatal stages to old age. Critical developmental windows are especially sensitive, with nutrients such as choline, iron, and omega-3 fatty acids exerting lasting effects on neural function. Nutrition also remains crucial for the aging brain, where supporting resilience, cognition, and neural health is a growing challenge. We invite contributions examining mechanistic pathways, applications of artificial intelligence in nutrition-brain research, and the influence of dietary patterns on brain health. Original research, methodological advances, and reviews are all welcome.

### **Guest Editors**

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### Deadline for manuscript submissions

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# **About the Journal**

# Message from the Editorial Board

Nutrients is an on-line open access journal that was first published in 2009. Nutrients adheres to rigorous peer-review and editorial processes and publishes only high quality manuscripts that address important issues related to the impacts of nutrients on human health. The Impact Factor of Nutrients has risen rapidly since its establishment and it is now ranked in the first quartile of journals publishing in the field of nutrition and dietetics research.

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