Special Issue

Carnitine: An Interesting Molecule in Metabolism, Pathophysiology and Nutrition

Message from the Guest Editors

Carnitine is a natural molecule involved in several metabolic processes in virtually all living organisms. In humans, it plays a well-known role in cell bioenergetics, since it is part of the carnitine shuttle that allows fatty acids to enter the mitochondrial matrix for □-oxidation. Carnitine is also involved in other important functions: participating to peroxisomal fatty acid oxidation, regulating the CoA/acyl-CoA balance among the different cell compartments, shuttling acyl units for VLDL assembly in the endoplasmic reticulum, avoiding acetyl-CoA trapping in mitochondria during glucidic metabolism, helping the excretion of some drugs as carnitine derivatives. In addition, carnitine also plays important roles in the metabolism of microorganisms and plants.

This Special Issue will collect the most recent findings on carnitine, with the purpose of providing a comprehensive and updated overview of this interesting molecule. We welcome submissions of original research papers and reviews from different disciplines including biochemistry and molecular biology, cell biology, genetics, nutrition, medical sciences, plant science, and microbiology.

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As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts and novel materials. Pushing the boundaries of the discipline, we invite papers on multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

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