Special Issue

Biochemistry and Molecular Biology of Vitamin D and Its Analog

Message from the Guest Editors

Previous studies have shown that vitamin D exerts vitamin D receptor (VDR)-mediated genomic and non-genomic actions, as well as VDR-independent effects. Recently VDR-independent effects of 25(OH)D3 on lipid metabolism by inducing degradation of SREBP/SCAP have been reported, as have ligand-independent effects of the VDR on the hair cycle. Thus, at least five types of effects of vitamin D and/or the VDR should be considered, namely: (1) VDR-dependent effects of 1,25D (VDR-1,25(OH)2D3), (2) VDR-independent effects of 1,25D (non VDR-1,25(OH)2D3), (3) VDR-dependent effects of 25D (VDR-25(OH)D3), (4) VDR-independent effects of 25D (non VDR-25(OH)D3), and (5) ligand-independent effects of VDR (VDR-no ligand).

Several thousand vitamin D analogues have been synthesized, and many have been studied in clinical trials, including for treating type I rickets, osteoporosis, psoriasis, and pancreatic cancers and so on. But in many cases, their precise molecular mechanisms are not fully understood. In this Special Issue, we focus on the molecular mechanisms of vitamin D, its analogues and/or VDR actions leading to drug discovery, and nutritional supplements for disease prevention in the future.

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Deadline for manuscript submissions

closed (31 March 2022)

Biomolecules

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/87936

Biomolecules
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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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