

## Special Issue

# Folding and Design of $\alpha$ -Helical Proteins and Peptides: Theory Meets Nanomaterials, Biotechnology and Health

### Message from the Guest Editor

The most common secondary structure in globular proteins is the  $\alpha$ -helix, frequently occurring in the form of specific structural motifs such as coiled-coils and helical bundles. Being associated with a variety of functions, oligomerization states and protein topologies, the helical folding motifs have opened new avenues for the design and engineering of bio-inspired protein- or peptide-based nanostructures and functional biomaterials. Although our limited understanding of protein folding/ misfolding and oligomerization frequently presents major barriers in the development of  $\alpha$ -helical biomaterials, recent theoretical studies and experimental approaches are beginning to chart this new territory, leading to countless possibilities for functionalization and new nanomaterials. The aim of this Special Issue is to gather folding studies of  $\alpha$ -helical structural motifs along with rational design experiments and applications of protein-/peptide-based biomaterials. The authors are invited to submit manuscripts presenting theoretical, experimental and applied research. Both research and review articles are welcome.

### Guest Editor

Prof. Dr. Michael Kokkinidis

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### Deadline for manuscript submissions

closed (31 October 2021)



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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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### Editor-in-Chief

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