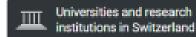
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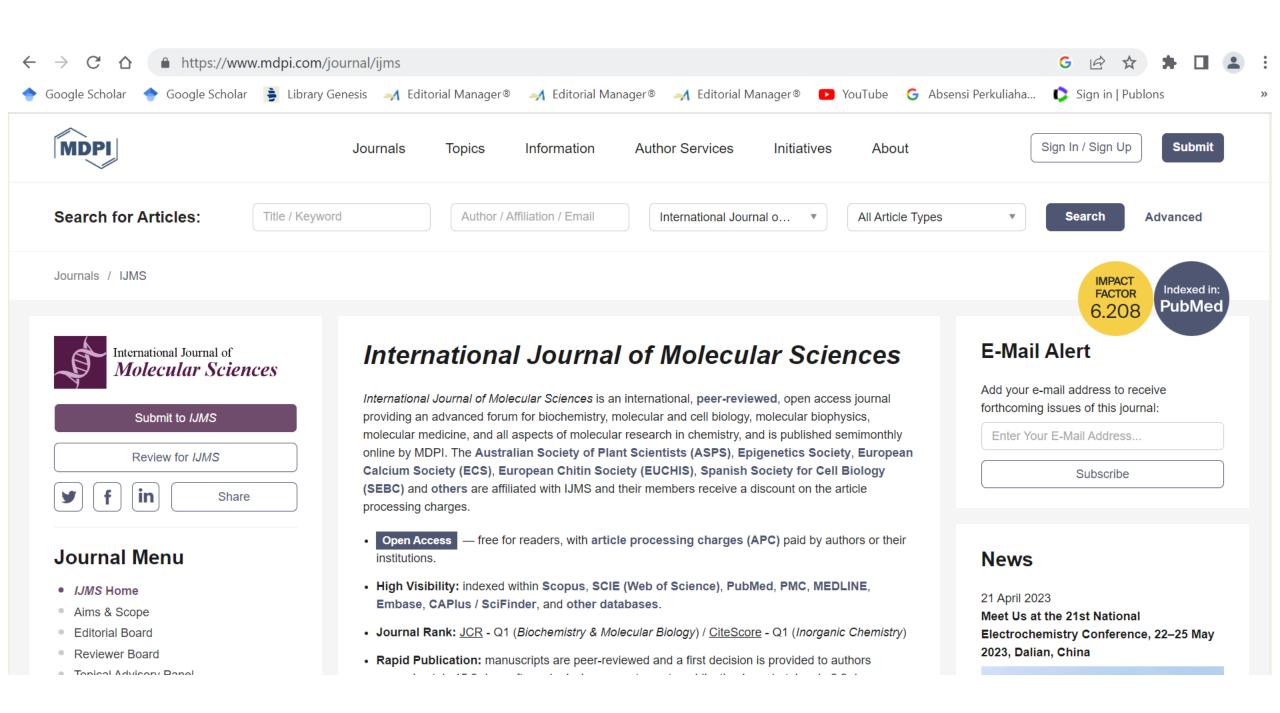


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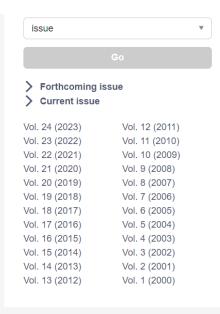
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Interests: food recycling; plant enzyme inhibitors; protein structure and function; recombinant proteins; seed germination; seed storage proteins

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Co-Guest Editor

Department of Food, Environmental and Nutritional Sciences, University of Milan, DISMA, Via G Celoria 2, I-20133 Milan, Italy Interests: food allergens; structural investigation methodologies

Special Issue Information

Dear Colleagues,

Disentangling the relationship between protein structure and function continues to be a priority not only in several fields of structural biology, including molecular biology, biochemistry, and protein engineering, but also in plant physiology and food sciences, including new industrial applications.

It is a well-established fact that even minor structural variations of a protein may dramatically affect its function and its capacity to interact with other molecules, no matter which structural level is involved. Moreover, protein conformation is influenced, and can be modified, by its environmental surrounding. This is especially true for plant proteins that find applications in several complex systems.

Today, there is an increasing interest in plant proteins. Plants are able to accumulate—in specialized reserve tissues—huge amounts of proteins with unique and interesting structural features.

Apart from their natural biology, their nutritional impact, and their relevance to the food industry, plant proteins find applications in a variety of non-food systems. These are usually complex systems, where the interactions between different components are key factors that determine and influence some typical features of the final product.

This Special Issue aims to collect, from the broadest context, the current status about plant proteins and to contribute to their exploitation and valorization. Research papers and reviews that expand knowledge about the molecular determinants driving their structure—function relationships, including in vivo and in vitro interactions with other proteins and other macromolecules, as well as their potential for innovative applications in all fields, taking into account bioactivities implicated in human nutrition and health, are welcome.

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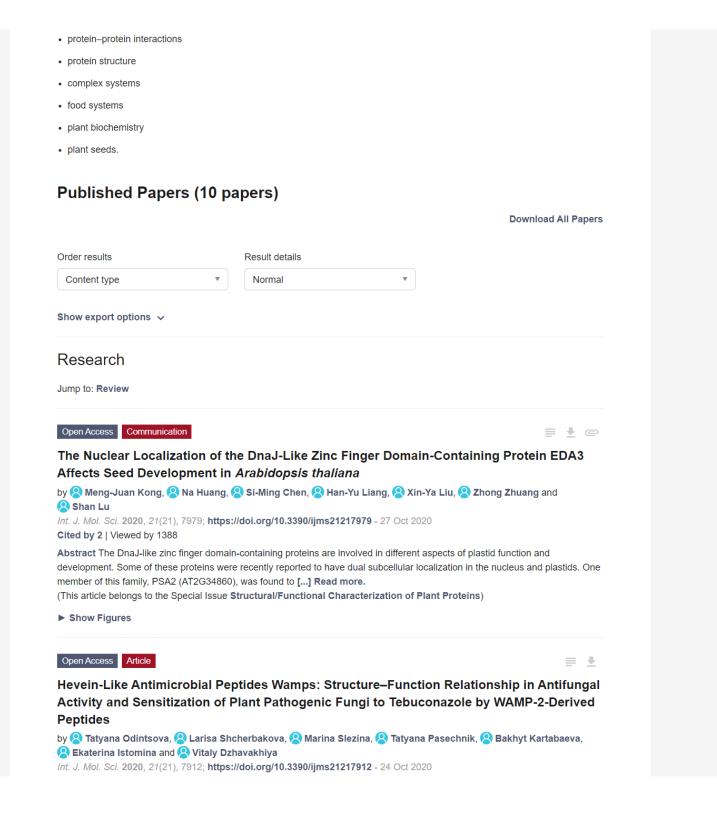
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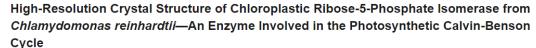


Abstract Hevein-like antimicrobial peptides (AMPs) comprise a family of plant AMPs with antifungal activity, which harbor a chitin-binding site involved in interactions with chitin of fungal cell walls. However, the mode of action of hevein-like AMPs remains poorly understood. This work reports the structure–function [...] Read more.

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by Stefano De Benedetti, Elisabetta Galanti, Systematical Capraro, Chiara Magni and Alessio Scarafoni Int. J. Mol. Sci. 2020, 21(19), 7305; https://doi.org/10.3390/ijms21197305 - 03 Oct 2020

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Abstract γ-conglutin (γC) is a major protein of *Lupinus albus* seeds, but its function is still unknown. It shares high structural similarity with xyloglucan-specific endo-glucanase inhibitor proteins (XEGIPs) and, to a lesser extent, with *Triticum aestivum* endoxylanase inhibitors (TAXI-I), active against fungal glycoside hydrolases [...] Read more.

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by 🎡 Luis Morales-Quintana, 🙆 Dina Beltrán, 😩 Ángela Mendez-Yañez, 😩 Felipe Valenzuela-Riffo, 😩 Raúl Herrera and 🚳 María Alejandra Moya-León

Int. J. Mol. Sci. 2020, 21(9), 3380; https://doi.org/10.3390/ijms21093380 - 11 May 2020

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Abstract Xyloglucan endotransglycosylase/hydrolases (XTHs) are cell wall enzymes with hydrolase (XEH) and/or endotransglycosylase (XET) activities. As they are involved in the modification of the xyloglucans, a type of hemicellulose present in the cell wall, they are believed to be very important in different processes, [...] Read more.

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Roles of Organellar RNA-Binding Proteins in Plant Growth, Development, and Abiotic Stress Responses

by A Kwanuk Lee and A Hunseung Kang

Int. J. Mol. Sci. 2020, 21(12), 4548; https://doi.org/10.3390/ijms21124548 - 26 Jun 2020

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Abstract Organellar gene expression (OGE) in chloroplasts and mitochondria is primarily modulated at post-transcriptional levels, including RNA processing, intron splicing, RNA stability, editing, and translational control. Nucleus-encoded Chloroplast or Mitochondrial RNA-Binding Proteins (nCMRBPs) are key regulatory factors that are crucial for the fine-tuned regulation [...] Read

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Int. J. Mol. Sci. 2020, 21(7), 2550; https://doi.org/10.3390/ijms21072550 - 06 Apr 2020

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