

## Special Issue

# The Role of Heat Shock Proteins: From Molecular Mechanisms to Therapeutics: 2nd Edition

### Message from the Guest Editor

Many heat shock proteins (HSPs) are essential for survival and play a critical role as molecular chaperones in maintaining cellular proteostasis through the integration of protein folding and degradation pathways. However, it is becoming generally accepted that HSPs have additional cellular functions beyond their role in proteostasis, and we are only just beginning to understand their biological function from a whole-of-organism perspective. HSPs are also linked to a range of different human disorders and infectious diseases, with changes in their expression and localization linked to disease pathology. While HSPs are highly conserved from bacteria to humans, structure–function studies are revealing subtle yet distinct differences across species and between normal and diseased cells. Hence, HSPs are now considered *bona fide* drug-targets in the fight against disease and infection. Contributions to this Special Issue will provide new insights into the mechanisms of action of HSPs, deepen our understanding of their biological role in health and disease, and reveal novel HSP-based therapeutic opportunities, especially innovative drug discovery insights.

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### Guest Editor

Prof. Dr. Gregory Blatch

The Vice Chancellery, The University of Notre Dame Australia,  
Fremantle, WA, Australia

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### Deadline for manuscript submissions

closed (20 October 2025)



## International Journal of Molecular Sciences

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