

Special Issue

Skeletal Muscle Aging: Mechanisms, Biomarkers, and Interventions

Message from the Guest Editor

Skeletal muscle aging is a complex and multifactorial process characterized by progressive atrophy, reduced contractile function, and impaired metabolic plasticity, ultimately leading to sarcopenia and frailty. The molecular hallmarks of aged muscle include mitochondrial dysfunction, increased reactive oxygen species production, chronic low-grade inflammation, and altered satellite cell dynamics. Recent advances in molecular biology have identified novel pathways governing mitochondrial quality control, protein homeostasis, and inflammatory signalling in aged skeletal muscle. However, numerous determinants involved in muscle aging remain unknown, highlighting the need to further investigate the molecular mechanisms underlying skeletal muscle aging. This Special Issue of the *International Journal of Molecular Sciences* gathers original research articles and reviews that dissect the molecular determinants of skeletal muscle aging, with the aim of identifying mechanistic insights and therapeutic strategies to preserve muscle function across the lifespan.

Guest Editor

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Message from the Editor-in-Chief

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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