

## Special Issue

# Signalling Pathways in Skeletal Muscle Differentiation, Histogenesis and Repair

### Message from the Guest Editor

This Special Issue aims to highlight recent and current research on signalling pathways regulating skeletal muscle differentiation, histogenesis, and remodelling. Skeletal muscle is a dynamic tissue capable of responding to a large variety of physiological stimuli by adjusting muscle fiber growth, size, metabolism, and function. Numerous recent studies have expanded our knowledge of the signalling pathways regulating these processes. It is now clear that the maintenance of muscle homeostasis depends on tightly regulated processes, involving endocrine/paracrine and cell–cell contact interactions. Alterations in any of these processes can lead to unsuccessful repair following direct mechanical trauma (acute injury) or after secondary damage due to aging or genetic neuromuscular defects. On the other hand, the formation of skeletal muscle during embryonic development and postnatal life serves as a paradigm for stem and progenitor cell maintenance, lineage specification, and terminal differentiation. An integrative view of all aspects of muscle differentiation is paramount for a comprehensive understanding of muscle formation and maintenance.

### Guest Editor

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