Special Issue

Muscle Function and Neuromuscular Disorders: AI and Biomechanics in Diagnosis and Rehabilitation

Message from the Guest Editors

This Special Issue focuses on the use of artificial intelligence (AI), machine learning, and biomechanical analysis to address a variety of muscle-related pathophysiologies. By integrating computational techniques, researchers and clinicians can gain new insights into muscle degeneration, function regulation, and personalized rehabilitation strategies, which are essential for maintaining and restoring muscle health. This Special Issue aims to publish original research and review articles exploring the impact of neuromuscular disorders on muscle function and repair. Topics of interest include AI-driven muscle imaging analysis, predictive modeling for muscle degeneration, and biomechanical approaches for improved rehabilitation outcomes. Topics of interest for this Special Issue:

- AI-based analyses of muscle function and degeneration in neuromuscular disorders;
- The biomechanical modeling of muscle movement and gait for diagnostic and therapeutic purposes;
- Machine learning models predicting muscle repair and recovery in disorders such as muscular dystrophy and myopathies

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About the Journal

Message from the Editor-in-Chief

Muscles is a publishing platform that promotes discoveries related to the realm of neuromuscular disorders (genetic and acquired neuromuscular disorders in man) and relevant cell and animal models. The journal aims to be a publishing venue that disseminates scientific papers with emphasis on multidisciplinary approaches to understand the complexities and interactions occurring on a variety of metabolic, endocrinological and neurogenic disorders. Papers on sarcopenia, exercise and atrophy/hypertrophy of muscles will be given space and attention, as will clinical trials and possible pharmacological interventions. A rapid turnaround time and full open access provide the opportunity to make research results immediately available to scientific communities and the general public.

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