

Special Issue on Effects of Redox Disturbances on Motility, Contractility and Muscle Tissue Pathogenesis

CALL FOR PAPERS

Whether in health or in disease, reactive oxygen and nitrogen species (ROS/RNS) affect muscle status and function. On the one hand, a challenge is to appreciate acute effects on contractility and/or bioenergetics within a realistic functional context, effectively linking *in vitro* observations to *in vivo* conditions. On the other hand, chronic effects on indices of clinical significance are more difficult to clarify given the interplay of redox status variations, with systemic inflammation and autophagy but also with lifestyle factors such as nutrition and physical activity.

The aim of the present special issue is to provide novel data regarding the role played by redox disturbances in the development of muscle dysfunction acutely and in the long term (e.g., toxicity, bed-rest, denervation), stressing the awareness of these concepts for the monitoring, interpretation, and management of disease effects on muscle. Thus, both original research articles and review articles, especially systematic or meta-analysis ones, are appropriate. Moreover, descriptive articles that provide novel information relevant to human noncommunicable diseases (affecting either smooth, skeletal, or cardiac muscles) based on human studies or animal models are also considered. In addition, articles addressing technological challenges and innovations on the use of redox biomarkers and/or proposing new methodologies aimed to measure ROS/RNS *in vivo* would be also welcome.

Potential topics include but are not limited to the following:

- ▶ Direct (acute or chronic) effects of redox disturbances on contractility
- ▶ The interplay between autophagy and oxidative stress signaling on muscle metabolism
- ▶ Redox stress in models of chronic disease—progressive or end-stage
- ▶ Challenges and advancements in monitoring redox disturbances in striated muscle
- ▶ Efficacy of redox balance restoration strategies and therapeutic possibilities
- ▶ Mechanisms underlying oxidative stress in muscle tissue pathogenesis including mitochondrial defects, calcium signaling alteration, or reduction of antioxidant defenses
- ▶ Technical tools to measure redox homeostasis in muscle cells
- ▶ Innovative clinical trials for so-far-untreatable muscle diseases

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/omcl/erdc/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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