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# **Molecular Mechanisms of Exercise and Healthspan**

Collection Editor:

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## Dear Colleagues,

Message from the Collection Editor

Exercise is increasingly being recognized as a broadly effective intervention for the preservation of long-term functionality during the aging process, leading to the popularization of the phase, "exercise is medicine". Chronic exercise lowers the risk of many age-related diseases, including diabetes, heart disease, and several forms of cancer. Despite the many benefits of chronic exercise, the mechanistic requirements for these benefits to accrue are still not fully understood, and are a highly active research topic. As many patients are unable to execute demanding exercise programs, the identification of downstream mechanistic targets to deliver the benefits of chronic exercise pharmaceutically has a transformative potential for the treatment of age-related disease and for the maintenance of healthy aging. In this Topic Collection, we examine recent findings in diverse model systems that increase our understanding of the molecular outputs of exercise, as well as their requirements for the myriad benefits that exercise provides.

Dr. Robert Wessells *Guest Editor* 









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