

# Identification of target factors associated with 'exercise-medicine'

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Exercise is the safest and most effective method of preventing sarcopenia. However, because of the risk of bone fractures in the elderly and bedridden patients, elucidation and application of the effects of exercise are desired. The applicant has discovered that muscle-resident mesenchymal progenitors sense the physical load induced by exercise via YAP/TAZ and that this sensing mechanism is responsible for muscle hypertrophy. In other words, the YAP/TAZ-dependent factors in mesenchymal progenitors mimics a part of exercise, which may lead to the prevention and treatment of sarcopenia. Therefore, with this project, we conducted research to explore the role of YAP/TAZ in mesenchymal progenitors in spontaneous locomotion, exercise, and muscle regeneration.