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## Overexpression of MyoD Attenuates Denervated Rat Skeletal Muscle Atrophy and Dysfunction

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### ABSTRACT

Nerve injury commonly contributes to irreversible functional impairment, reconstruction of the function of muscle is big challenge. In denervated skeletal muscle, therapid expression of MyoD mRNA and protein also occurs during early postdenervation, which suggested that the function of denervation-induced MyoD may be to prevent denervation-induced skeletal muscle atrophy. However, the detail mechanism is not clear. Therefore, in this study, we established a stable-transfected MyoD L6 cell line. After the operation for cutting the rats' tibial nerve, the MyoD-L6 cells were injected in the gastrocnemius, the function of the gastronemius was monitored. It was found that injected the MyoD-L6 cells could attenuate the muscle atrophy and dysfunction. Therefore, overexpression of MyoD could serve as a new therapy strategy to cure denervation-induced dysfunction of skeletal muscle.

### KEYWORDS

MyoD; Denervation; Rat Skeletal Muscle; Atrophy; Dysfunction

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