

Skeletal muscle ageing is characterized by faulty degenerative/regenerative processes that promote the decline of its mass, strength, and endurance. In this study, we determined the differences in gene expression between aged muscle and very young muscle, where efficient muscle stem cell activation leading to muscle growth is ongoing. Notably, in old mice, we found a decline in the expression of genes that are involved in promoting muscle stem cell integrity. Moreover, this finding corresponded to the severe deficit in muscle stem cell activation that we also observed. Therefore, this work draws attention to the breakdown of key features required to maintain muscle stem cell function during the ageing process.

Reference: **Scimè A**, Desrosiers J, Trens F, Palidwor GA, Caron AZ, Andrade-Navarro MA, Grenier G. Transcriptional profiling of skeletal muscle reveals factors that are necessary to maintain satellite cell integrity during ageing. *Mech Ageing Dev.* 2009 Nov 12.

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