

Our skeletal muscles need oxygen and nutrients in order to contract efficiently. Therefore, it is crucial for them to have appropriate equipment in capillaries, the smallest blood vessels responsible for exchange between blood and tissues. Whereas the number of muscle capillaries is increased during endurance exercise training, several chronic diseases such as obesity or diabetes lead to the regression of some of these vessels. Murine double minute 2 (Mdm2) is a protein known to promote cancer when present in to high quantity within cells. Here, we have demonstrated that Mdm2 is required for the formation of new muscle capillaries during exercise training. Our study also shows that modulation of Mdm2 by exercise training is associated with the muscle capillaries in a rodent model of diabetes. This brings new insight into the mechanism that regulates the formation of new blood vessels in skeletal muscle. Further study will be required to determine whether Mdm2 represent a good therapeutic target to be modulated in the context of blood vessels alterations associated to metabolic diseases.

Roudier E, Forn P, Perry ME, Birot O. [Murine double minute-2 expression is required for capillary maintenance and exercise-induced angiogenesis in skeletal muscle.](#) FASEB J. 2012 Nov;26(11):4530-9.

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