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Antihypertensive drug development based on direct effects of statins on vascular smooth muscle

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In addition to the lipid-lowering effects, statins have direct effects on the blood vessel, which also contribute to the decrease of morbility and mortality of cardiovascular disease. It is well known that inhibition of HMG-CoA reductase CoA reduces production of isoprenoid intermediates in the cholesterol biosynthetic pathway, but also deceases post-translational modifications of various signaling proteins, such as RhoA. This effect on peripheral tissues or cells likely contributes to non-lipid-lowering effects by statins. Therefore, we have examined the direct effects of statins on vascular smooth muscle *In vitro* and *In vivo*. Our studies have established that myocardin, a coactivator of serum response factor (SRF), may become the target for drug development to hypertension treatment.

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