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# INSULIN PROMOTES VASCULAR SMOOTH MUSCLE CELL PROLIFERATION VIA MICRORNA-208 MEDIATED DOWN-REGULATION OF P21

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**Objective** However, the mechanisms through which insulin exerts this effect are not entirely known. We hypothesise that microRNAs might be involved in insulin-induced VSMC proliferation.

**Methods** VSMC proliferation was determined by [<sup>3</sup>H]-thymidine incorporation; microRNAs were determined by microRNA chips and real-time PCR; p21 expression was determined by immunoblotting.

**Results** We found that insulin increased VSMC proliferation and miR-208 expression. Overexpression of miR-208 increased basal and insulin-mediated VSMC proliferation. Although miR-208 inhibitor, by itself, it had no effect on VSMC proliferation.

**Conclusions** This study indicates that miRNAs, miR-208, in particular, are involved in the insulin-induced VSMC proliferation via down-regulation of its potential target, p21, a key member of CDK-inhibitory protein family.