

## M.D. THESIS ABSTRACT

**Title of the study:** Delineation of signalling pathway in alpha adrenoceptor mediated vasorelaxation using goat arterial strips  
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### Objective of the study

This study aimed to determine if the alpha-adrenoceptor mediated vasorelaxant pathway described in small artery preparations by a recent publication<sup>1</sup> in our department, is present in large arteries too.

### Materials and Methods

Aortae were isolated from fresh goat hearts and cut into rings or longitudinal strips. The preparations were then suspended in an organ bath filled with ECF solution at 37°C and aerated with carbogen. One end of the aortic preparation was fixed to the organ bath and the other end to a force transducer connected to a data acquisition system, to record tension. Drugs were then added to the organ bath and any change in tension was recorded. Data analysis was done using SPSS v23. Change in tension within groups was analysed using Wilcoxon signed-rank test and between groups was analysed using Mann-Whitney U test.

### Results and conclusion

In both ring and longitudinal strips of aorta, phenylephrine caused vasoconstriction under normal and high NO environment, unlike in small arteries.

We conclude that there is no alpha-adrenoceptor mediated vasorelaxant pathway in aortic smooth muscle.

**Keywords:** Phenylephrine, vascular smooth muscle, vasorelaxation, aorta

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1. Raj RR, Subramani S. Phenylephrine Decreases Vascular Tension in Goat Arteries in Specific Circumstances. PLOS ONE. 2016 Jun 30;11(6):e0158551.