Efficacy

Rat thoracic aortic rings

Ex vivo studies with isolated arteries are useful models used to study the effects of several agents, such as vasoactive and vasoconstrictor substances in the vessels of *naïve* animals or submitted to different injury models[1].

Species, strain, sex*: Rattus norvegicus* (Sprague Dawley or Wistar Hannover) male or female
Number of animals/group: 4 to 6 animals
Route of administration: upon request
Treatment mode: upon request

Main read-outs: concentration-response curves for agonists/antagonists, half maximal effective concentration (EC_{50}), half maximal inhibitory concentration (IC_{50}), competition of antagonists (Schild analysis) in intact aortic rings or without endothelium.

Validation Data

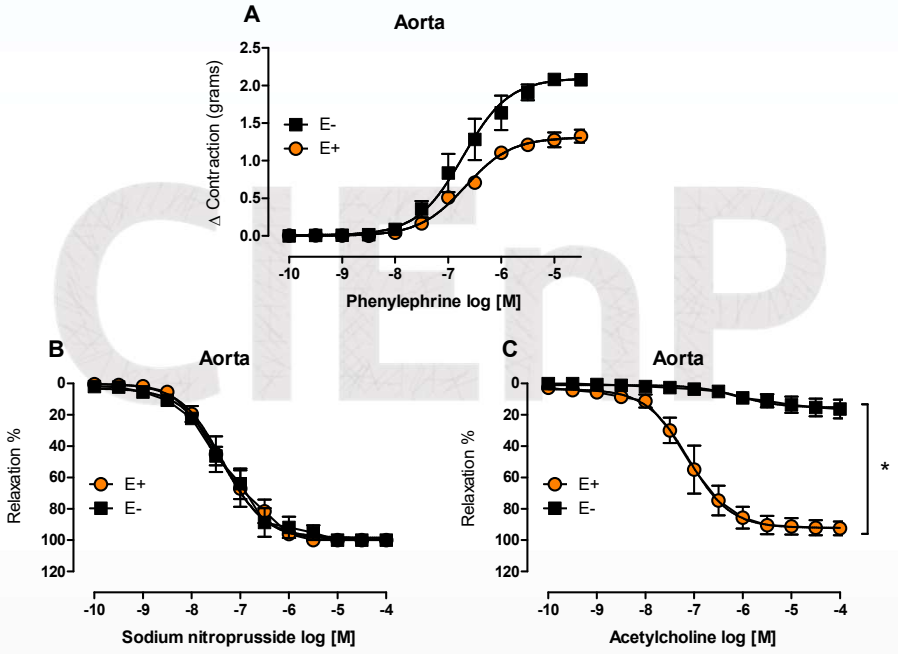

Figure: Effect of phenylephrine (A), sodium nitroprusside (B) and acetylcholine (C) in endothelium-intact (E+) and endothelium-denuded (E-) on male rat aortic rings. Cumulative concentration-response curves to phenylephrine, sodium nitroprusside and acetylcholine were constructed. In (B) and (C) the aorta were pre-contracted with phenylephrine (1 µM) and exposed to sodium nitroprusside and acetylcholine. Values of EC50 for phenylephrine were 2,1 M (E+; 1,5 – 2,8) 10-7 M and 1.9 (E-; 1,3-2,8) 10-7 M. The values of IC50 for sodium nitroprusside were 4,4 (E+; 3.2 - 6.2) and 4,4 (E-; 3,0-6,0) 10-8 M and for acetylcholine $7.6x10^{-8}$ M (E+). Results are expressed as mean ± S.E.M of rings from 4-6 animals per curve. Statistical analysis was performed using T-student. *$P < 0.05$ compared with E+ group.

Rat colony from Charles River Laboratories is breed and maintained in SPF conditions. The project includes study plan and final report. Raw data are inspected by quality assurance unity. The experimental procedures was previously approved by the CIEnP Committee on the Ethical Use of Animals

References:

1 FURCHGOTT, R.F.; ZAWADZKI, J.V. The obligatory role of endothelial cells in the relaxation of arterial smooth muscle by acetylcholine. Nature. 1980 v. 288, p. 373-376

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