

Effect of a new pyrimidine derivative, 2-(4-aminobenzenamine)-pyrimidine isolated from the bulbs of *Autonoë madeirensis*, in the rat vas deferens contractility

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*Autonoë madeirensis* (Menezes) Speta is a *Hyacinthaceae* endemic from the Madeira Archipelago (Portugal). From its bulbs we isolated a new compound: 2-(4-aminobenzenamine)-pyrimidine **[1]**. As pyrimidines have important effects in smooth muscle contraction we investigated the effect of the ethanolic extract and the effect of compound **[1]** in the rat vas deferens contractility. Compound **[1]** was obtained from fresh bulbs extracted with ethanol. The ethanolic residue was subjected to fractionation yielding the pure compound **[1]** identified by spectral data. Using isolated rat vas deferens, dose-response curves were obtained with phenylephrine (Phe) (1.0–32.0  $\mu$ M) in the absence and in the presence of the ethanolic extract and in the presence of compound **[1]**. Both ethanolic extract and compound **[1]** in concentrations devoid of effect shifted to the right the concentration-response curve of Phe, without changing the maximal effect. EC<sub>50</sub> values for Phe increased in the presence of compound **[1]** (5  $\mu$ M, 50  $\mu$ M and 100  $\mu$ M) and were respectively  $3 \pm 0.8 \mu$ M,  $4.6 \pm 0.7 \mu$ M and  $3.9 \pm 0.6 \mu$ M. These values are statistically different from EC<sub>50</sub> values obtained in the same vas in control conditions which were respectively  $2.2 \pm 0.8 \mu$ M,  $1.7 \pm 0.2 \mu$ M and  $1.5 \pm 0.1 \mu$ M. In the presence of the extract (0.3 and 1.2 mg/ml) the EC<sub>50</sub> values for Phe increased significantly and were respectively  $4.1 \pm 0.8 \mu$ M versus  $2.2 \pm 0.3 \mu$ M in control and  $4.6 \pm 0.9 \mu$ M versus  $1.7 \pm 0.2 \mu$ M in control. These results suggest that compound **[1]** antagonises the  $\alpha$ -adrenergic effects of Phe in the rat vas deferens.