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Corrigendum

Corrigendum to 'Species comparison of adenosine and β-adrenoceptors in mammalian atrial and ventricular myocardium' [Eur. J. Pharmacol. Mol. Pharmacol. Sect. 246 (1993) 105–111]

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Abstract

The antagonist radioligand 1,3-[^{3}H]dipropyl-8-cyclopentylxanthine ([^{3}H]DPCPX) was used to characterize adenosine A_1 receptors in membrane preparations from atrial and ventricular myocardium of rat, rabbit and guinea pig. K_d values in crude membranes from guinea pig atria and ventricles (3.3 and 3.0 nM) were higher than those in the other species (ranges, 1.5–1.8) and 1.5–1.9 nM). B_{max} values were greater in atria than in ventricles in all four species, and in atria and ventricles of guinea pig (76 and 34 fmol/mg), than in the other species (ranges, 15–17 and undetectable to 12 fmol/mg). In contrast, guinea pig K_d and B_{max} values for β-adrenoceptors, which were labelled with (−)-3-[^{125}I]iodocyanopindolol, fell within the range of values for the other three mammalian species. In semipurified membrane preparations from pig, [^{3}H]DPCPX and the agonist radioligand [^{125}I]N^6-4-aminobenzyladenosine appeared to label a similar population of receptors and gave comparable K_d values in atria (0.73 and 0.66 nM) and in ventricles (0.57 and 0.70 nM). In semipurified preparations from pig, the agonist *R*-(−)-N^6-(2-phenylisopropyl)adenosine (R-PIA) displaced [^{3}H]DPCPX in a manner consistent with the presence of both high- and low-affinity adenosine A_1 receptors. The data from this study indicate that the density of adenosine A_1 receptors in atria is greater than in ventricles, but similar K_d values suggest that the A_1 receptor population is the same in the two cardiac tissues. Also, the data demonstrate that the [^{3}H]DPCPX antagonist binding characteristics of guinea pig myocardium differ from those in rat, rabbit and pig.

Keywords: Heart; Adenosine receptor; β-Adrenoceptor; Species difference; (Guinea pig); (Pig); (Rabbit); (Rat)

In the above article, it has come to our attention that the first sentence in Section 3.3 of the Results is incorrect. An inadvertent error was introduced into Table 2 of the article during preparation of the revised version. The value of B_{max} for rat ventricles should be 45.3 ± 2.6 fmol/mg, rather than 34.3 ± 2.6 fmol/mg, as printed. The difference between the correct value in rat ventricles and that in rat atria is significant ($P < 0.001$). However, a statistically significant difference in B_{max} between these tissues was not noted in the Table or in the text. Thus, the first sentence in Section 3.3 of the Results likewise is not correct, because it fails to note this significant difference. In place of the first sentence, the text should read:

'As determined with the antagonist radioligand [^{125}I]CYP, the β-adrenoceptor density was higher in rat atria compared with rat atria, and the binding affinity was higher in rabbit atria than in rabbit ventricles (Table 2). Other within-species comparisons were not significantly different.'

The ratio of the B_{max} values for rat, however, is correct as printed in Table 2. It was computed from the correct values of B_{max} for rat ventricles and atria.

Our apologies to the readers.

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