Autoradiographic localization of benzomorphan binding sites in rat brain

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The benzomorphan subpopulation of opiate binding sites was labeled by [3H]diprenorphine in the presence of unlabeled ligands selected to quench ? and ? opiate binding sites. The distribution of benzomorphan binding sites was then localized autoradiographically. Areas particularly enriched in these sites were nucleus solitarius, nucleus ambiguus, substantia gelantinosa of the trigeminal nerve, the habenula, and the medial nucleus of the amygdala. Within hippocampal formation, binding was relatively enhanced in the pyramidal and granule cell layers. Within the basal ganglia, binding was greatest in the dorsomedial caudate nucleus and least in the globus pallidus. No 'patches' of increased binding were present in the striatum. The interstitial nucleus of the stria terminalis and the medial preoptic nucleus also showed significant binding. This distribution differs from the distributions of ?, ? and ? opiate binding and is quite similar to the distribution of ?-endorphin immunoreactivity.