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**Presynaptic M<sub>1</sub> muscarinic receptor modulates spontaneous release of acetylcholine from rat basal forebrain slices**

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Spontaneous release of acetylcholine (ACh) from rat basal forebrain slices in the presence of cholinesterase inhibitor was directly determined using a specific radioimmunoassay for ACh. The release was calcium dependent. A consistent amount of ACh release was observed throughout the experiment. Atropine ( $10^{-8}$  to  $10^{-5}$  M) and pirenzepine ( $10^{-7}$  to  $10^{-5}$  M) enhanced spontaneous ACh release. These findings indicate the presence of an M<sub>1</sub> muscarinic autoreceptor that modulates spontaneous release of ACh in the rat basal forebrain.

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