atom, O atom and aromatic ring. This model suggests that higher-affinity ligands for the pirenzepine site could be developed if the relative orientation of the N^+-containing ring were restricted to the common position found in the four structures: pirenzepine, (+)-biperiden, dexetimide and atropine.

The structural comparisons of chiral ligands for the pirenzepine site show both that structural differences in the two types of binding sites are not evident and that structural similarities in the ligands are not detected by the torsion angles of the consistent conformation for anticholinergics. Since the chiral ligands for both of the pirenzepine binding sites are structurally superimposable, the difference between these sites must arise from factors other than simple shape recognition; these factors may be related to induced conformational changes in either the receptor or the ligand. The ligands compared in this study have a close structural match which belies the wide variation in the values of the torsion angles of the consistent anticholinergic conformation. This discrepancy suggests that more detailed models that compare overall shapes and juxtapose similar heteroatoms are required so that a range of chemical types of ligands for a common receptor can be compared.

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