MAO inhibition by arylisopropylamines: The effect of oxygen substituents at the ?-position

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Twenty-nine arylisopropylamines, substituted at the ?-position of their side chain by an oxo, hydroxy, or methoxy group, were evaluated in vitro as MAO-A and MAO-B inhibitors. The oxo derivatives ('cathinones') were in general less active as MAO-A inhibitors than the corresponding arylisopropylamines, but exhibited an interesting MAO-B inhibiting activity, which was absent in the hydroxy, methoxy, and ?-unsubstituted analogues. These results suggest that selective affinity for the two MAO isoforms in this family of compounds is modulated not only by the aryl substitution pattern but also by the side-chain substituents on the arylalkylamine scaffold.