

A Preliminary Report on the Reinforcing Effects of Racemic  
3,4-methylenedioxyamphetamine in the Baboon

from

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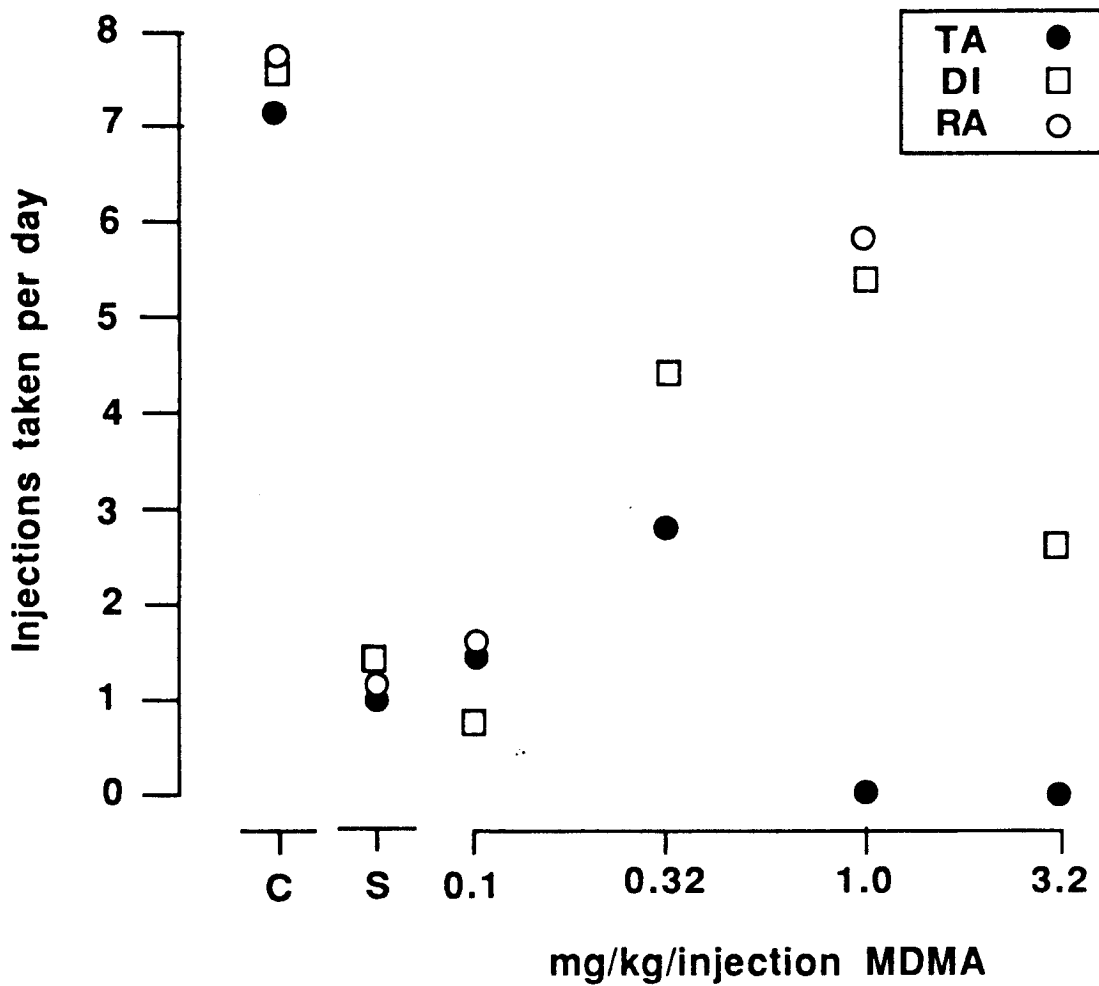
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The ability of various doses of racemic 3,4-methylenedioxymethamphetamine hydrochloride (MDMA) to maintain drug self-administration when substituted for cocaine (0.32 mg/kg/inj of the hydrochloride) in the baboon (*Papio anubis*) was examined using our standard intravenous drug self-injection substitution procedure, which has been described in detail previously (appended reprint: Griffiths, Brady and Bradford, 1979). MDMA was dissolved in saline, and the volume of injection was 5 ml. A maximum of 8 injections per day was available to the baboons.

As can be seen in the attached figure, the data obtained to date shows that MDMA maintained levels of self-administration above vehicle in all three baboons. These levels tended to be in the range of those maintained by l-MDA and below those maintained by cocaine, d-amphetamine and phencyclidine in previous experiments (appended reprints: Griffiths, et al 1979; Lukas, et al 1984). It is interesting that, in one baboon, certain doses of MDMA maintained levels of self-administration substantially below vehicle levels. This finding is consistent with the observations that drug self-injection procedures are not useful in predicting LSD-like hallucinogenic drug effects (appended reprint: Griffiths, et al 1979), and that MDMA has hallucinogenic activity. Overall, our preliminary results indicate that MDMA has moderate reinforcing efficacy.

As discussed elsewhere, the abuse liability of a compound is a positive interactive function of 1. the reinforcing efficacy, and 2. the adverse effects (appended reprint: Griffiths, et al 1985). If MDMA does indeed have hallucinogenic activity (a significant adverse effect), then the moderate reinforcing efficacy revealed in the present data would suggest that MDMA should be considered to be a compound having high abuse liability.



The points represent the mean of the last five days of the condition for each baboon, except for the cocaine points which represent the mean of the three days preceding drug substitution. Points above S are saline control points. Points above C are cocaine points.