MDMA Neurotoxicity Update – New Data from Drs. Ricaurte and McCann to Consider

THE RESULTS of Dr. Ricaurte and Dr. McCann's multi-year study were first presented at a neurosciences conference in mid-November,1993 and will be reported on in more detail in the next issue of the MAPS newsletter. The study found that the MDMA-experienced group (of which I was a member) had on average 30% lower levels of a serotonin metabolite in their spinal fluid than did the control group. Interestingly enough, the only functional and behavioral differences between the MDMA group and the controls were that the MDMA users "reported less impulsive and hostile personality traits, and greater constraint and control". As Drs. Ricaurte and McCann point out, these differences are generally considered positive. Furthermore, these findings are perplexing in that the generally held view is that lower serotonin levels lead to more hostile and impulsive behavior, not less. As with most MDMA neurotoxicity studies so far, this one raises more questions than it resolves. More research is required to sort out the findings.

One difficulty in interpreting the results of this study is that comparing people to matched controls is as much art as science. People are wonderfully unique, especially so when it comes to serotonin. Finding a perfectly matched control is almost impossible since the normal level of brain neurotransmitters varies enormously between individuals. Nevertheless, comparing people who have used MDMA many times in the past to matched controls who have not used MDMA does have some advantages over a controlled study administering only a few doses of MDMA to its subjects. In a matched control study, people who have used MDMA a substantial number of times can be evaluated (Dr. Ricaurte's group averaged over 50 doses), making any serotonin changes caused by MDMA more likely to be noticed. Data from both sorts of studies, with matched controls or subjects as their own control, will be needed to assess more fully MDMA's complex and fascinating effects.

Neurotoxicity Potential is Optional

If someone were seriously concerned about neutralizing the possibility of serotonin changes (though I think the evidence doesn't justify the effort), animal research has shown that combining the prescription drug Prozac with MDMA prevents neurotoxicity, even when Prozac is taken up to six hours after the MDMA. This works because Prozac binds to the same serotonin re-uptake sites which can be damaged by MDMA metabolites (though only when MDMA is administered at doses higher than the standard therapeutic or non-medical amount). The presence of Prozac at the re-uptake sites prevents the neurotoxic MDMA metabolites from binding, eliminating its potential effect on the re-uptake sites. An interesting paper by Dr. McCann and Dr. Ricaurte discusses the effects of the MDMA/Prozac combination (Journal of Clinical Psychopharmacology, 13 (3): pp. 214-217, 1993.) ■

FDA Approves Human Studies with Ibogaine

THE FIRST FDA-approved studies into the physiological and psychological effects of ibogaine in humans will take place at the University of Miami under the direction of Dr. Juan Sanchez-Ramos and Deborah Mash, Ph.D. The ibogaine study is intended primarily to gather data about safety, leaving studies of efficacy for the next stage of research (assuming the drug is considered safe enough for further trials).

These trials are designed as classic dose-response studies in which the effects of very small doses of a drug are thoroughly monitored before increasingly larger doses are tested. Generally, the doses range from "too little" to "too much". Dose levels often include placebo, below any noticeable threshold, barely noticeable, less than standard, average, large, and somewhat more than is comfortable. This study design is basically the same as that used by Dr. Rick Strassman in his research with DMT, and that he will soon use in his upcoming studies of psilocybin. Dr. Charles Grob's Phase 1 MDMA protocol is also a dose-response study. Even the medical marijuana study may also be conducted with this design.

After the Phase 1 trials with ibogaine are complete, perhaps a year or so after they begin, Phase 2 trials will start to explore the use of ibogaine in the treatment of cocaine addiction. MAPS made a small donation of $1,000 to support Drs. Sanchez-Ramos and Mash in their efforts to secure FDA-approval for the ibogaine protocol. It was a pleasure to direct some of MAPS ' limited resources to the ibogaine project .The study of the use of psychedelics in the treatment of substance abuse is one of the most powerful ways of contributing to a cultural shift away from demonizing drug addicts, and psychedelic drugs. Perhaps in time we will see a popular recognition that both drug addicts and psychedelic drugs may yet have positive contributions to make to society when given the option of supportive cultural contexts. ■