

Heffter Research Institute

Spring 2007 Update



WE ARE CONTINUING to make steady progress toward our goal of “medical psilocybin” in our multipronged approach.

At the Heffter Research Center, Zürich, our research team has developed a positron-emitting tracer molecule to image brain serotonin receptors using PET scanning technology. Since last July, they have been using this imaging molecule while administering different doses of psilocybin, and major effects are being observed. This study will provide information on the potential brain receptor changes induced by psilocybin. The effects of psilocybin on subjective mystical experience and cognitive tasks are also correlated to the PET data. We believe this work will be the first published study correlating visual illusions/hallucinations with neuroreceptor mechanisms.

This essential work will provide a foundation for the next planned study: to make similar measurements using psilocybin in patients with eating and obsessive-compulsive disorders. We then can observe how the treatment may have restored or altered the receptor maps obtained from the PET scans and how that correlates with improvements in their symptoms.

Our Zürich research center also has nearly completed a study into the experiential and neurophysiological effects of meditation. Sophisticated 3-D electroencephalogram (EEG) recordings have been made with both novice and experienced meditators under various conditions designed to tease out how Buddhist meditation practices affect the brain, including the experience of self, cognition, and visual perception. Eventually, the data will be compared to similar measurements of the effects of psilocybin, so that a comparison can be made between the effects on the brain of meditation and psilocybin.

The results of Dr. Francisco Moreno’s study at the University of Arizona, which was partly supported by MAPS, have now appeared in print in the *Journal of Clinical Psychiatry*, Vol 67, pp 1735-1740, 2006, “Safety, tolerability, and efficacy of psilocybin in 9 patients with obsessive-compulsive disorder.” Francisco tells us that the results were sufficiently positive that he is now seeking additional funding for an expanded study through a grant proposal to the National Institutes of Health. Other than the Russian research using ketamine for addiction treatment, which was also supported by Heffter and MAPS, the Arizona project was the first psychedelic treatment study in the world in more than 30 years.

Eight subjects have now participated in the Harbor-UCLA cancer study directed by Heffter board member Charles Grob, MD. Each subject received one psilocybin session and one placebo session. Grob says they “haven’t crunched the data yet, but our impression has been from staying in touch with our subjects that they all seem

to have benefited from the experience, particularly regarding mood regulation, anxiety control, and quality of life.” Eight subjects have completed their psilocybin sessions, and Grob and his team are actively seeking four additional subjects. Inclusion and exclusion criteria and contact information can be obtained at www.canceranxietystudy.org.

In addition to the planned psilocybin treatment study in Zürich, we are busy raising funds to support a proposed study led by Roland Griffiths, MD, using psilocybin to treat 44 cancer patients at Johns Hopkins School of Medicine. As many of you know, Griffiths recently published a study showing that when psilocybin is given to normal subjects, a high percentage of them experience mystical states with lasting positive changes in their lives. The new study will include early stage cancer patients, which will accelerate subject recruitment. Also, testing psilocy-

bin moved into legitimate medical practice. It should also be of sufficient statistical power to apply for grants from the NIH to fund expanded efficacy studies of psilocybin treatment.

Other news is that Peter Gasser, MD, and MAPS recently submitted their LSD treatment protocol to the Heffter Institute for scientific review. Our scientist-advisors provided technical comments to help the study prepare for the intense scientific scrutiny it is sure to receive due to the controversy over the beneficial use of LSD.

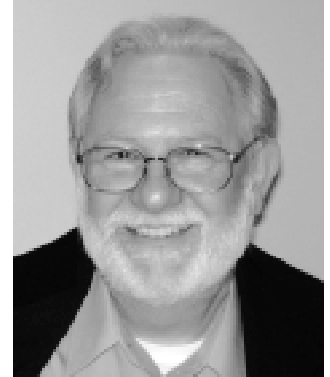
We continue to support a mix of both clinical and basic science applications to promote interest in psychedelic research and medicine among both the public and the scientific and medical establishments. Our approach involves not only the development of practical medical treatments, but also understanding the effects of psychedelics on human consciousness.

Our approach involves not only
the development of practical medical treatments,
but also understanding the effects of
psychedelics on human consciousness.

bin for anxiety and depression treatment in nonterminal cancer patients could later be expanded to patient populations battling other types of nonterminal illnesses.

We believe that the statistical sample from these psilocybin treatment studies will be large enough to provide some proof of efficacy of psilocybin for emotional problems. It is too soon to know how many subjects with a specific problem we will need before the Food and Drug Administration actually approves psilocybin for medical use, but the results of these studies should be sufficient to allow us to initiate the dialogue with FDA that will ultimately result in psilocybin being

Although our immediate goal is developing new treatments for unmet medical needs, we believe the perennial questions of who we are and why we are here are also highly worthy of support. MAPS members can consult our Web site heffter.org for the extensive list of research publications supported by the Heffter Research Institute. •



Dave Nichols, PhD

drdave@pharmacy.purdue.edu