

Heffter Research Institute

The Heffter Research Institute was incorporated as a tax exempt organization in late 1993. In 1994, the Heffter site on the World Wide Web was established at: <http://www.heffter.org>.



**Heffter
Research
Institute**

Research
at the Frontiers
of the Mind

In the past year, 18,000 people have visited the site 27,000 times. The site offers free information to the public along with links to other sites with information on psychedelics. Many visitors have made inquiries, which are answered on an individual basis. About 300 inquiries have received individual replies since 1995. Production of the Institute's scientific journal, *The Heffter Review of Psychedelic Research*, began in 1997, with publication of the first volume occurring in 1998.

The Institute has initiated an awards program to encourage academic research scientists to work in the field. The first Heffter Award for Outstanding Clinical Research was presented to Dr. Franz Vollenweider, M.D. at the University of Zürich for his work with MDMA, ketamine, and psilocybin. A second award for Outstanding Pre-Clinical Research was presented to Dr. Elaine Sanders-Bush, Ph.D. at Vanderbilt University. Dr. Sanders-Bush has carried out elegant fundamental work on signal transduction mechanisms and regulation of serotonin 5-HT_{2A} and 5-HT_{2C} receptors, the former being the presumed target for the action of psychedelic agents.

The Institute has awarded over \$150,000 in grants during the past four years. In that time we have worked closely with MAPS, co-funding small projects together and identifying joint interests. In 1995, almost \$9,000 was awarded to support a conference in Bra-

zil on research findings about the psychopharmacology of ayahuasca, in conjunction with the União do Vegetal, a Brazilian church that utilizes ayahuasca as a sacrament in their legally sanctioned religious ceremonies. In

1997, almost \$24,000 was provided to a team of individual researchers led by Board Member Dennis McKenna, Ph.D. to discover the phytochemical chemotypes of the Hawaiian varieties of *Kava*, a psychoactive beverage used socially and ritually in the South Pacific that has begun to find medical use in recent years. A three-year, \$15,000 grant has been given to Dr. Evgeny Krupitsky, M.D., Ph.D. in St. Petersburg, Russia, to fund a clinical research trial on the use of ketamine to treat heroin addiction. Dr. Krupitsky had reported dramatic results with the same technique in the treatment of alcoholism over the past decade. This project is also co-sponsored with MAPS.

Due to recent generous gifts from donors, 1998 was an active year. A grant of \$30,000 was awarded to Drs. John Halpern, M.D. and Harrison Pope, M.D. of Harvard University for their study, "Neuropsychological Evaluation of a Peyote Consuming Population." This study compares many aspects of neuropsychological function in Native American Church members who have consumed peyote for many years with a matched control group. It is the first controlled study of the neuropsychological effects of long-term peyote use. After awarding the Heffter grant, the National Institute on Drug Abuse (NIDA) provided a matching \$30,000. It is anticipated that the data generated will lead to a large NIDA-funded study of peyote use among Native Americans. Providing seed

money to spark government or foundation support for psychedelic research is central to the Institute's research strategy. \$21,000 was awarded to Dr. Russell Poland, Ph.D. at the Harbor-UCLA Medical Center to evaluate a non-invasive method for measuring potential neurotoxicity of MDMA in humans. This project will test the feasibility of a method to more directly compare the toxicity in rats to measures of brain neurochemicals in humans, using magnetic resonance brain scanning techniques. Such information would be important to determine the risks and safety of future human clinical trials with MDMA.

The Institute's most recent grant was a \$56,000 award to Dr. Franz Vollenweider for the study, "Investigations Into the Role of Serotonin, Dopamine and Norepinephrine in the Modulation of Mood, Sensorimotor Gating and Psychomotor Drive by MDMA in Humans." This study will determine the importance of serotonin and dopamine neurotransmitter systems in the mechanism of action of MDMA by giving MDMA along with drugs that block those systems and then measuring the results. Data will be collected from psychophysiological tests as well as from subjects' reports on rating scales of mood and altered states of consciousness. Previous studies by Dr. Vollenweider and Heffter Board member Dr. Mark Geyer, Ph.D. have found that MDMA decreased the inhibition of an acoustic startle response by a brief "prepulse" sound in rats, but increased it in humans. This study provided the first clear evidence of a difference in the behavioral effects of MDMA in animals versus humans, and indicated that more human psychedelic research was needed. The new study will further elucidate the neurophysiological mechanism of action of MDMA in humans.

In addition to the research support described above, the Institute has hired an Executive Director, James Thornton, J.D. Mr. Thornton has successfully litigated lawsuits on environmental protection and raised substantial funds to support environmental causes, in addition to being a teacher of meditation and writer of the newly released book, *A Field Guide to the Soul*. Dr. George Greer, M.D., a Heffter Board member, has become Medical Director to coordinate research plans, in addition to continuing to oversee the daily operation of the Institute with the new Managing Director, Lynette Herring, M.S. Additional personnel and expanded activities are required as we make the commitment to move to a new level of activity that involves a collaborative research agreement with the University Psychiatric Hospital in Zürich. A new Heffter Institute branch in Zürich will facilitate proposed clinical studies of several psychedelics, whose major aim is to test the efficacy of psychedelics in a variety of well-recognized psychiatric disorders. A Zürich clinic will also provide the necessary facilities for ongoing basic clinical research with psychedelics. Dr. Franz Vollenweider is providing direction to the research efforts in Zürich.

All in all, the Heffter Institute hopes to achieve some very critical milestones in the near future. We have put into place the necessary elements to allow us to move as quickly as possible into clinical studies that would potentially establish "proof of principle", necessary to move toward full scale clinical trials. Through the efforts of Dr. Vollenweider, the hospital director Prof. Dr. Hell, and a dialogue with Swiss Officials, we hope to develop suitable medical protocols and establish clinical models that will move us toward the legitimate use of psychedelics in medicine. •