Introduction to a new psilocybin study

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Since the 1980s scientists have become intensly re-engaged in researching the basic questions of efficacy, side-effects and toxicity (i.e. in Europe: Gouzoulis, Hermle, Kovar, Vollenweider). Several projects have also begun or are planned on how psychedelics can be used as adjuncts to psychotherapy. A new german study with psilocybin is planned for next year. The influence of synthetic psilocybin (0,2 mg/kg bodyweight) on twenty-four physician volunteers will be explored using psychometric and other tests under special set and setting conditions. Ultimately, the objective of the research team is to explore the utility of psilocybin as an adjunct to psychotherapy and for the self-exploration and training of mental health professionals.

Hanscarl Leuner, the famous German psychiatrist, psychotherapist and former director of the European College for the Study of Consciousness (ECSC) researched psycholytic psychotherapy in the 1960s and 70s. After his official permission to use psychedelics as adjuncts to psychotherapy expired, he tried persistently to re-open the doors for research projects on psychedelics until his death in 1996. The roots of our project reach back to this effort; Leuner was the one who called us together in 1995. In this pilot study we have decided to work exclusively with healthy physicians, because, in Germany, it is much easier to get official permission to start research project with psychedelic substances on human beings when the subjects are medical professionals. These substances are strictly prohibited in Germany. Psychopathological, psychodynamic, pharmacokinetic and metabolic-toxicological examinations will be conducted. We want to make a contribution to the research on the paradigm of model-psychosis and to the biological and psychological research on substance-related dependency. In recent years the use of psychedelics in Europe and other industrialized countries has increased. Thus, the influence of special set and setting patterns on psychiatric and psychological aspects, on affectivity and the motivation for using/abusing psychedelics are other spheres of interest.

The research on the individual motivation for the consumption of psychedelics is of great scientific and public interest for public health and drug abuse prevention strategies. Psilocybin is not a so-called "designer drug," but looking in at its effects, it is comparable. The simultaneous consumption of different psychoactive substances may occur because the motivation to use each drug may be similar in some aspects. The effects of psilocybin on the human body and mind are well known and it seems to be a very safe substance to study when investigating motivations for using psychoactive substances.

Conclusion:

In our viewpoint our project is a continuation of the research of Gouzoulis, Hermle, Kovar, Leuner, Spitzer and others. We are honored by the participation of our board of advisors: Prof. Dittrich, Dr. Hermle, Prof. Kovar and Prof. Scharfetter. It is encouraging to see the resumption of the impressive work of Stan Grof and others, who assisted "the human encounter with death" with psychedelics in the past. Looking at the Internet it seems as if there is a psychedelic research revival all over the world. The short acting designer psychedelics (for example CZ-74 and LE-25) are especially interesting, because of their ability to provide the positive aspects of psychedelic expriences with minimal negative side effects. I hope that we will be able to explore other new short acting-psychedelics in the following years that could be useful as adjuncts to psychotherapy. •

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Update: Salvia Divinorum Experiment

IN THE DOSE establishment phase of this study we have tested subjects on 1/2 gram, 1.0 gram, 1.5 grams and 2.0 grams of dried and crumbled *Salvia divinorum* leaves. We had a hard time coming up with a placebo. Dried comfrey leaves are a very close duplicate, but they lack the bitterness of *Salvia*. We had a breakthrough in July when we found that if you wash dried and crumbled *Salvia* leaves in two changes of water—2 full glasses of water per gram—the bitterness of it is gone. The active ingredient Salvinorin-A is insoluble in water. When treated in this way you cannot tell *Salvia divinorum* from comfrey leaves prepared in the same way.

Almost everyone liked the 1.0 gram level for meditation. The half-gram dose was rarely detected by anyone. The 2.0 gram dose was too strong for meditation. Effects from the dried *Salvia* leaves soaked and washed in water and then placed under the tongue were as follows. The actual technique is to chew the leaves every five minutes or so and return them to under the tongue.

0.5 grams… half of the subjects noticed a slight effect... a clearer than normal mind that is free from distractions. The other half noticed nothing at all.

1.0 grams… everyone noticed it when they were in a quiet room with no distractions. Mind is clear and meditation is unusually easy with few distracting thoughts. This dose was only detected by anyone when they were trying to meditate. The effect made it easier tc oncentrate without thoughts… a definite plus for meditation. If they, however, listened to music or did some activity they could not notice any effect at all.

1.5 grams… half of subjects notice a trance like state beginning to happen. Effect is slight but it inhibits meditation for some.

2.0 grams produced a slightly trance like effect for some people with time distortion. Generally people found that level too strong for meditation. The effect was enjoyable however… a bit dream like and time seemed to slow down.

So those are the casual results from the dose establishment phase of the study. The next step will be the double blind study.

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New ketamine study published

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Psychedelic effects of ketamine in healthy volunteers: relationship to steady-state plasma concentrations.
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Background: Ketamine has been associated with a unique spectrum of subjective "psychedelic" effects in patients emerging from anesthesia. This study quantified these effects of ketamine and related them to steady-state plasma concentrations.

Methods: Ketamine or saline was administered in a single-blinded crossover protocol to 10 psychiatrically healthy volunteers using computer-assisted continuous infusion. A stepwise series of target plasma concentrations, 0, 50, 100, 150, and 200 ng/ml were maintained for 30 min each. After 20 min at each step, the volunteers completed a visual analog (VAS) rating of 13 symptom scales. Peripheral venous plasma ketamine concentrations were determined after 28 min at each step. One hour after discontinuation of the infusion, a psychological inventory, the hallucinogen rating scale, was completed.

Results: The relation of mean ketamine plasma concentrations to the target concentrations was highly linear, with a correlation coefficient of $R = 0.997$ ($P = 0.0027$). Ketamine produced dose-related psychedelic effects. The relation between steady-state ketamine plasma concentration and VAS scores was highly linear for all VAS items, with linear regression coefficients ranging from $R = 0.93$ to 0.99 ($P < 0.024$ to $P < 0.0005$). Hallucinogen rating scale scores were similar to those found in a previous study with psychedelic doses of N,N-dimethyltryptamine, an illicit LSD-25-like drug.

Conclusions: Subanesthetic doses of ketamine produce psychedelic effects in healthy volunteers. The relation between steady-state venous plasma ketamine concentrations and effects is highly linear between 50 and 200 ng/ml.