

How does one go about performing research with psychedelics?

By David E. Nichols, Ph.D. President, Heffter Research Institute

Stated succinctly, you have two broad options: Medicine and Science. Under Medicine, I continue to believe that physicians with a psychiatry residency and research experience will make the greatest contributions to the field of psychedelics. This is a long and difficult row to hoe, however, and few choose it. But this option allows you ultimately to work with humans, where the results are most dramatic and have the greatest impact. Rats cannot tell you if they see the white light!

Under Science, you again have two broad options: Pharmacology and Chemistry (loosely defined). In pharmacology, one might study the behavioral effects (usually in rats) or the neurochemical effects of substances. You could choose a whole animal behavioral approach (e.g. in Dr. Mark Geyer's lab at UC-San Diego), a systems/neuronal approach (Dr. George Aghajanian at Yale who does unit cell recording... tedious but interesting), or a more molecular approach (e.g. Dr. Elaine Sanders-Bush at Vanderbilt or Dr. Bryan Roth at Case- Western Reserve) that would involve the expression of receptors, structure of receptors, etc. I do some behavioral work at Purdue, but we use behavior more as a screen to guide our chemistry.

In chemistry, my lab at Purdue is, I would argue, the major place (but perhaps I have a bias!). Dr. Richard Glennon at Virginia Commonwealth has done a lot of chemistry of psychedelics but more recently has focused on some other areas. Despite the romance and popularity that attend to natural drugs and herbal remedies, there is no academic department I know of that focuses on the ethnopharmacology of psychoactive drugs or psychedelics. There is a big natural products group at the University of Illinois at Chicago, but they are mostly working on anticancer drugs (as, in fact, are most natural products groups these days).

Getting into this field is extremely difficult and requires a lot of patience. You are swimming upstream because there is no recognized value to these substances at government funding agencies except as drugs of abuse. You have to find some niche to get funded. It is very hard, even for one with a respectable and already-established track record.

You can, however, enter this research with a Ph.D. that has nothing to do with psychedelics at all. My own son just completed a Ph.D. in drosophila genetics. He is now going to do a postdoctoral fellowship in a laboratory studying the molecular regulation of the 5-HT_{2A} receptor, the site with which psychedelics seem to interact. This will take another two to three years. Although I have no idea what he will do after that, he would have the training to enter an academic path and then to study the molecular biology of any brain receptors he chose, including perhaps continuing work on the 5-HT_{2A} receptor. Thus, he could end up doing research on psychedelics, even though he started out with fruit fly genetics.

I think one must have dedication, and motivation must be very strong to begin study for an advanced degree with the ultimate objective of doing psychedelic research. I have had three students who came here with the idea they would work in this area, and none of them have. One is now doing DNA sequencing work, another is a computational chemist, and the third became disillusioned with academic life at a small private college and went into professional pharmacy. Some begin with curiosity as a result of personal experience, but quickly lose interest, get married, have families and revert to more "normal" pursuits once the lustre wears off.

You will also find you have no real colleagues. If you were in cancer or HIV research, or were working on the human genome project, for example, you would be part of a large science community, with many colleagues of similar interest. If you do psychedelic research, and that is all you do (I have some other more mainstream research in addition to the psychedelic work), you have perhaps half a dozen people world-wide who share your research interests. Perhaps not surprisingly, you may develop a sort of cult following, but that kind of adoration is not particularly fulfilling. People occasionally tell me that my name is known all over the world in the "psychedelic community." While that may be true, it doesn't get recognition within the scientific community, which is my workplace, comprised of my peers. What you want is recognition from them that you are doing good work. You are unlikely to get it, so your rewards must come from within yourself, and you must believe that someday the value of your work will become clear to other people, because that is unlikely to occur in your own lifetime. It will help if you are the sort of person who can deal easily with delayed gratification.

I know I have painted a fairly unglamorous picture. I have done that because those who begin graduate school with the idea that psychedelic research will be glamorous and fun burn out quickly. You're simply not going to get the strokes you'd get if you did more mainstream work. If you have long term vision and believe in what you are doing, it has its rewards. I love my work. My graduate students and I have a lot of fun together. But sometimes it is lonely. I hope that someday things will turn around and someone will be grateful that I did what I did. But I think it takes a particular kind of stoic personality to survive much adversity on the strength of that kind of belief!

If you choose that path, then you are fully informed and you will not be disappointed later when you start encountering the expected obstacles.

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