

= Alexander Shulgin =

Alexander Theodore " Sasha " Shulgin (June 17 , 1925 ? June 2 , 2014) was an American medicinal chemist , biochemist , pharmacologist , psychopharmacologist , and author . He is credited with introducing MDMA (ecstasy) to psychologists in the late 1970s for psychopharmaceutical use and for the discovery , synthesis and personal bioassay of over 230 psychoactive compounds for their psychedelic and entactogenic potential .

In 1991 and 1997 , he and his wife Ann Shulgin authored the books PIHKAL and TIHKAL (standing for Phenethylamines and Tryptamines I Have Known And Loved) , which extensively described their work and personal experiences with these two classes of psychoactive drugs . Shulgin performed seminal work into the descriptive synthesis of many of these compounds . Some of Shulgin 's noteworthy discoveries include compounds of the 2C * family (such as 2C @-@ B) and compounds of the DOx family (such as DOM) .

Due in part to Shulgin 's extensive work in the field of psychedelic research and the rational drug design of psychedelic drugs , he has since been dubbed the " godfather of psychedelics " .

= = Life and career = =

Shulgin was born in Berkeley , California to Theodore Stevens Shulgin (1893 ? 1978) and Henrietta D. (Aten) Shulgin (1894 ? 1960) . His father was born in Russia , while his mother was born in Illinois . Both Theodore and Henrietta were public school teachers in Alameda County .

Shulgin began studying organic chemistry as a Harvard University scholarship student at the age of 16 . In 1943 he dropped out of school to join the U.S. Navy . While serving on USS Pope in the Navy during World War II , Shulgin was given a glass of orange juice by a nurse prior to surgery for a thumb infection . Shulgin drank the juice and , assuming that powder at the bottom of the glass was a sedative , fell asleep rapidly . Upon waking he learned that the powder was undissolved sugar . The experience made him aware of the influence of placebos over the human mind .

After serving in the Navy Shulgin returned to Berkeley , California , and in 1954 earned his Ph.D. in biochemistry from the University of California , Berkeley . Through the late 1950s Shulgin completed post @-@ doctoral work in the fields of psychiatry and pharmacology at University of California , San Francisco . After working at Bio @-@ Rad Laboratories as a research director for a brief period , he began work at Dow Chemical Company as a senior research chemist .

At this time he had a series of psychedelic experiences that helped to shape his further goals and research , the first of which was brought on by mescaline . " I first explored mescaline in the late ' 50s Three @-@ hundred @-@ fifty to 400 milligrams . I learned there was a great deal inside me . "

Shulgin later reported personal revelations that " had been brought about by a fraction of a gram of a white solid , but that in no way whatsoever could it be argued that these memories had been contained within the white solid ... I understood that our entire universe is contained in the mind and the spirit . We may choose not to find access to it , we may even deny its existence , but it is indeed there inside us , and there are chemicals that can catalyze its availability . "

Shulgin 's professional activities continued to lean in the direction of psychopharmacology , furthered by his personal experiences with psychedelics . But during this period he was unable to do much independent research . His opportunity for further research came in 1961 after his development of Zectran , the first biodegradable pesticide , a highly profitable product . In his book PIHKAL , Shulgin limits his pesticide days at Dow Chemical to one sentence in 978 pages . Dow Chemical Company , in return for Zectran 's valuable patent , gave Shulgin great freedom . During this time , he created and patented drugs when Dow asked , and published findings on other drugs in journals such as Nature and the Journal of Organic Chemistry . Eventually , Dow Chemical requested that he no longer use their name on his publications .

In late 1966 , Shulgin left Dow in order to pursue his own interests . He first spent two years studying neurology at the University of California , San Francisco School of Medicine , leaving to work on a consulting project . He set up a home @-@ based lab on his property , known as " the

Farm ", and became a private consultant . He also taught classes in the local universities and at the San Francisco General Hospital . Through his friend Bob Sager , head of the U.S. DEA 's Western Laboratories , Shulgin formed a relationship with the DEA and began holding pharmacology seminars for the agents , supplying the DEA with samples of various compounds , and occasionally serving as an expert witness in court . In 1988 , he authored a then @-@ definitive law enforcement reference book on controlled substances , and received several awards from the DEA .

= = Independent research = =

In order to work with scheduled psychoactive chemicals , Shulgin obtained a DEA Schedule I license for an analytical laboratory , which allowed him to synthesize and possess any otherwise illicit drug . Shulgin set up a chemical synthesis laboratory in a small building behind his house , which gave him a great deal of career autonomy . Shulgin used this freedom to synthesize and test the effects of potentially psychoactive drugs .

In 1976 , Shulgin was introduced to MDMA by a student in the medicinal chemistry group he advised at San Francisco State University . MDMA had been synthesized in 1912 by Merck and patented in 1912 as an intermediate of another synthesis in order to block competitors , but was never explored in its own right . Shulgin went on to develop a new synthesis method , and in 1976 , introduced the chemical to Leo Zeff , a psychologist from Oakland , California . Zeff used the substance in his practice in small doses as an aid to talk therapy . Zeff introduced the substance to hundreds of psychologists and lay therapists around the nation , including Ann (born Laura Ann Gottlieb) , whom Alexander Shulgin met in 1979 , and married in 1981 . It was her fourth marriage , and she had had four children .

After judicious self @-@ experiments , Shulgin enlisted a small group of friends with whom he regularly tested his creations , starting in 1960 . They developed a systematic way of ranking the effects of the various drugs , known as the Shulgin Rating Scale , with a vocabulary to describe the visual , auditory and physical sensations . He personally tested hundreds of drugs , mainly analogues of various phenethylamines (family containing MDMA , mescaline , and the 2C * family) , and tryptamines (family containing DMT and psilocin) . There are a seemingly infinite number of slight chemical variations , which can produce variations in effect ? some pleasant and some unpleasant , depending on the person , substance , and situation ? all of which are meticulously recorded in Shulgin 's lab notebooks . Shulgin published many of these objective and subjective reports in his books and papers .

In 1994 , two years after the publication of PIHKAL , the DEA raided his lab . The agency requested that Shulgin turn over his license for violating the license 's terms , and he was fined \$ 25 @,@ 000 for possession of anonymous samples sent to him for quality testing . In the 15 years preceding the publication of PIHKAL , two announced and scheduled reviews failed to find any irregularities . Richard Meyer , spokesman for DEA 's San Francisco Field Division , has stated that , " It is our opinion that those books are pretty much cookbooks on how to make illegal drugs . Agents tell me that in clandestine labs that they have raided , they have found copies of those books . "

Prior to his 2010 health issues , Shulgin had been working on a series of N @-@ allylated tryptamines including 5 @-@ MeO @-@ DALT and 5 @-@ MeO @-@ MALT .

= = Declining health and death = =

Shulgin spent most of his later life at the Farm in Lafayette , California . On April 8 , 2008 , at the age of 82 , he underwent surgery to replace a defective aortic valve . On November 16 , 2010 , he suffered a stroke , from which he largely recovered . Also at the close of 2010 , a skin @-@ grafting surgery saved his left foot from being amputated . Around this time , Shulgin began showing early signs of dementia , mostly severe loss of short @-@ term memory . With progression of the dementia since 2010 , his wife Ann Shulgin had been trying to sell part of their property to raise more money to cover care costs .

On April 17 , 2014 , Ann Shulgin reported on Facebook that her husband had developed liver

cancer , and in a May 31 update on Facebook she said that , although appearing frail , he seemed to be experiencing his last moments in peace and without pain . On June 2 , 2014 , Shulgin died at home in bed surrounded by family , at the age of 88 .

= = Societies = =

Shulgin was a member of Mensa International and frequently attended Mensa events in California .

= = = Books = = =

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