

## Albert Hofmann, the Father of LSD (1906–2008)

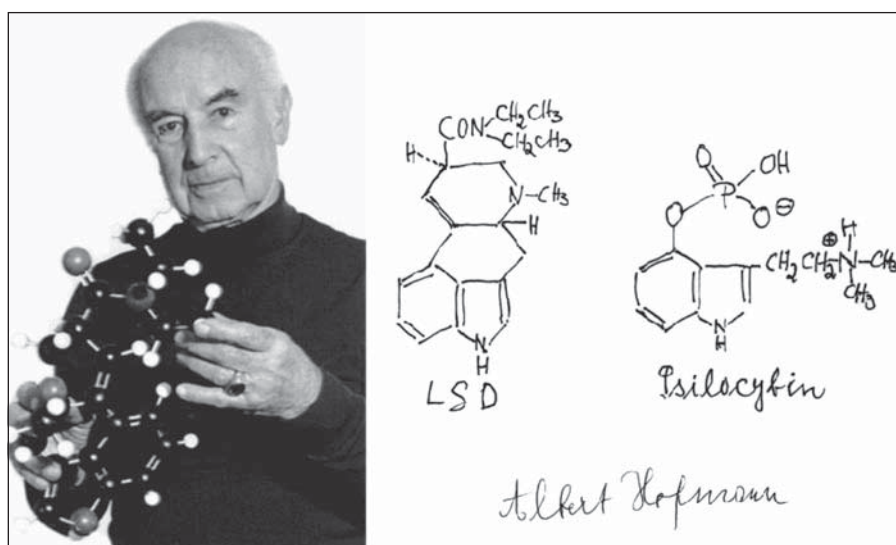
Paolo Fusar-Poli Stefan Borgwardt

Neuroimaging Section, Department of Psychological Medicine, Institute of Psychiatry, London, UK

Dr. Albert Hofmann, the brilliant Swiss synthetic chemist, was best known for fathering the compound lysergic acid diethylamide (LSD), one of the most powerful psychotropic substances known, on April 16, 1943.

Hofmann's discovery of the effect of LSD in Basel came 5 years after his original synthesis of the molecule in 1938, LSD-25, which was set aside as he continued with other derivatives. Four years later, he resynthesized LSD-25 because he felt he might have missed something the first time around. That day, he became the first human

to experience 'an extremely stimulated imagination' caused by an accidental ingestion of LSD. Three days later, on April 19, 1943, he decided to verify his results by intentionally ingesting LSD. This day has become known as 'Bicycle Day' as Hofmann experienced an incredible bicycle ride on his way home from the lab. LSD was initially hailed as a wonder drug for use in psychoanalysis, particularly for gaining insights into schizophrenia; but in the 1960s, it came to be seen by Harvard's Timothy Leary and others as a pathway to spiritual enlightenment,



**Fig. 1.** Molecular structures of LSD and psilocybin, written by Dr. Albert Hofmann. Images courtesy of David Smith ([www.stainblue.com](http://www.stainblue.com)).

and then as a major recreational drug. Thus, LSD suddenly became Hofmann's 'problem child' [1] and in 1966, the United States banned its use, followed by most other countries.

In addition to his discovery of LSD, he succeeded in synthesizing the active compounds used by the Mazatec shamans in the *Psilocybe mexicana* sacred 'magic mushrooms' (psilocybin) and in morning glory seeds (lysergic acid monoamide and lysergic acid hydroxyethylamide) plus other amides that became drugs: Methergine, used to treat postpartum hemorrhaging, Hydergine and Dihydroergot used to stabilize circulation and blood pressure. He wrote more than 100 scientific articles and was the author or co-author of a number of books [1–3].

Albert Hofmann, known as the 'father of LSD', stayed with Sandoz as Director of the Pharmaceutical-Chemical

Research Laboratories Basel until his retirement in 1971. Then he continued to write, lecture, and play a leading role as an elder in the psychedelic community until his death at the age of 102 near Basel, Switzerland.

## References

- 1 Hofmann A: LSD: My Problem Child. New York, McGraw-Hill, 1980.
- 2 Hofmann A: Ride through the Sierra Mazateca in search of the magic plant Ska Maria Pastora; in Riedlinger TJ (ed): The Sacred Mushroom Seeker: Essays for R Gordon Wasson. Portland, Dioscorides Press, 1990, ethnomycological studies No 11, pp 115–127.
- 3 Schultes RE, Hofmann A: The Botany and Chemistry of Hallucinogens. Springfield, Thomas, 1973.