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## **Psychedelics – what they are, how they work and what their future is in medicine**

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Psychedelics are powerful psychoactive substances that alter perception, affect mood and cognitive functions. These are compounds of plant origin and were known for mankind from more than 10 000 years. Nowadays the renaissance in psychedelics interest is noted as they may have many medical applications in spite that they are placed into the most restrictive category of drugs after the passage of the Controlled Substances Act of 1970 in USA and the Convention on Psychotropic Substances of 1971 of the United Nations designed to control psychoactive drugs. The therapeutic application of psychedelics during the past ten years demonstrates their potential to cause rapid improvement in depression and anxiety but also to relieve pain. Psilocybin has been designated a „breakthrough therapy” for treatment-resistant depression by the United States Food and Drug Administration (FDA). Despite remarkable understanding of psychedelic drugs action and clinical trials indicating therapeutic potential, the neurobiological mechanisms by which psychedelics exert their action remain unknown.

Basic research on psychedelics was presented during the XL Winter School of the Maj Institute of Pharmacology, Polish Academy of Sciences, entitled „The medical future of psychedelics” (Krakow, 28th February – 2nd March, 2023). It is now summarized in the form of minireviews within this thematic issue of Kosmos.

*Krzysztof Gołębowski*

