



# Ethnopharmacology of *Amanita muscaria*

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Fly agaric, *Amanita muscaria* is one of the first entheogens known to humankind. It was used by shamans, mostly in Siberia, for ritualistic and recreational purposes. Many scientists look for its presence in folklore in forms of dwarfs or Santa Claus, and also in sacred texts of culture, for instance Indian Vedas. They even try to find in it the genesis of Christianity.

Contrary to the popular opinion, *A. muscaria* is not poisonous, and after having undergone appropriate kitchen processing it can be consumed without risk of psychoactive effects, what has been practised locally through generations in multiple countries such as France, Russia, Japan and the United States. Recreational users of Fly agaric, who still exist today, describe the psychoactive effects of its fruiting body as macropsia, which means disturbances in the perception of size of objects.

Some researchers, in those peculiar hallucinations, seek for the origins of legends about dwarfs or elves, or inspirations for some fragments of Lewis Carroll's "Alice's Adventures in Wonderland." In the areas where Fly agaric was used for shamanic ritualistic purposes, there are regional folklore inspired creams and ointments produced which contain Fly agaric extracts. Those cosmetics are dedicated to various dermatological issues, and they are indicated for alleviating muscle and joint pain.

Modern science uses *A. Muscaria* derivative substances such as ibotenoic acid and muscimol in neuropharmacological examinations in order to cause reversible inactivation of the hippocampus or to get better understanding of the GABAergic system. In in vitro conditions and through tests on rats muscimol's tumour cells inhibiting properties had been found. Scientist also try to find application for this substance in the treatment of epilepsy resist to pharm-



acological treatment and Alzheimer's disease.

### References

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