

## Abstract

Charles University in Prague

Faculty of Pharmacy in Hradec Králové

Department of Pharmacology and Toxicology

Candidate: Aneta Grosová

Supervisor: doc. PharmDr. Jana Pourová, Ph.D.

Title of diploma thesis: Cathinones - recreational stimulants and their effects

In this thesis, I address the issue of synthetic cathinones (SCs), which were first synthesized in the 1920s and initially explored for potential medical applications. By the early 21st century, these substances had become popular as recreational drugs due to their easy accessibility, low cost, and initially legal status.

In the thesis, I particularly discuss the toxicokinetics and toxicodynamics of selected derivatives, classifying them into groups based on various properties. The work also deals with their chemical structure and its numerous variations, which not only allow for circumvention of the law but also lead to the creation of derivatives with various properties. Included are findings on the adverse effects of these drugs, and I also describe the effects that make them sought after by users. Additionally, I provide a brief history and the current situation on the market in Europe and the Czech Republic.

The information was gathered from numerous studies found on online databases, particularly PubMed, PubChem, Web of Science, and Google Scholar. I also used statistical data from the website of the National Anti-Drug Centre and the European Monitoring Centre for Drugs and Drug Addiction, as well as several existing reviews.