Synthesis and pharmacological characterization of new psychoactive substances

Summary: The illicit drug market has changed remarkably in the last decade, and a huge number of new psychoactive substances (NPS) have been labeled and marketed as legal highs, bath salts or research chemicals. NPS is a new term used to describe analogues of traditionally abused drugs, not controlled by the 1961 Single Convention on Narcotic Drugs of USA and most of them may have strong rewarding effects, be toxic, have abuse liability, and may be potentially lethal, posing an imminent threat to public health. However, information about long-term adverse effects or risks are still unknown or very limited.

The aim of this project is to synthesize new potentially psychoactive substances (NPS) and carry out their neuropharmacological characterization. Their mechanism of action will be studied, especially the potential to inhibit monoamine (dopamine, noradrenaline and/or serotonin) uptake and the interaction with monoamine transporters and receptors involved in drug abuse, as well as their psychostimulant and rewarding effects in animal models.

Director: Dr. Xavier Berzosa (xavier.berzosa@iqs.url.edu) / Dr. Raúl López Arnau (raullopezarnau@ub.edu)

Laboratory: Laboratory of Synthesis and Faculty of Pharmacy, University of Barcelona