Laboratory: Neurochemistry

Speaker 1 : Helena Janíčková
Topic: Behavioural significance of cholinergic signalling in specific types of neurons

Annotation:
Cholinergic signalling through acetylcholine receptors modulates behaviour and cognitive processes. While the acetylcholine receptors are widely expressed in the brain, the impact of specific receptor types in specific neuronal populations can be very different. We aim to elucidate the expression, function and regulation of acetylcholine receptors in defined types of neurons to be ultimately able to shape the neuronal activity and behaviour through cholinergic signalling in a cell-type-specific manner.

Speaker 2: Alena Randáková
Topic: Mechanisms of selective modulation of individual subtypes of muscarinic receptors

Annotation:
The disruption of muscarinic signalling is frequently involved in various pathological. Selective modulation of individual muscarinic subtypes is necessary to avoid undesired side effects. High subtype homology of the orthosteric binding site makes a finding of affinity-based selective orthosteric ligands unattainable. Selective targeting is achievable by allosteric modulation and signalling bias.