Master project: Structural biology on ionotropic glutamate receptors

Are you interested in this research areas?

- Important receptors in our central nervous system and diseases such as Alzheimer's disease, epilepsy and depression
- How potential new drugs bind to the receptors
- Structure-based drug design and how receptor selectivity can be achieved



Do you want to get experience with some of these methods?

- Protein expression in bacteria and protein purification (key methods in industry)
- Protein structure determination using X-ray crystallography
- Structure analysis of protein-drug complexes

If yes, then we have the right project for you

- You are always welcome to contact us and to discuss possibilities (see contact persons below)
- You will have great impact on the project and which methods you want to focus on
- We can provide you with examples of previous master projects

Three examples of previous master projects:

- Expression and purification of the kainate receptor subunit GluK5 ligand binding domain Structural basis for understanding the functional role of the ligand-binding-domain of the GluD2 receptor
- Studies of the thermodynamic properties involved in the binding of D-serine to a novel GluD2-construct
- Structural study of six new positive allosteric modulators targeting ligand-binding domains of GluA2 and GluK1 receptors

Contact persons: Associate professor Karla Frydenvang, karla.frydenvang@sund.ku.dk and Professor Jette Sandholm Kastrup, jsk@sund.ku.dk