

NP08 (Renstrom)

PhD student:

The overall aim of this position is to detail the roles of different voltage-gated Ca²⁺-channel subtypes in pancreatic hormone secretion, and eventually for the development of human type 2-diabetes.

Methods established in the lab include: single-cell assays of exocytosis (eg. patch clamp with capacitance measurements), hormone release assays, confocal and TIRF imaging, immunocytochemistry, microfluorimetry, as well as standard biochemistry and adenoviral gene transfer. Human genetic studies may also be relevant for the project and are performed in collaboration with groups in-house.

The applicant will initially be trained in patch clamp and cellular imaging techniques. A general interest in the (patho)physiology of excitable cells and related human disease is necessary. Previous experience in any relevant methods is considered an extra asset.

Post-doc position:

The overall aim of this position is to detail the roles of different voltage-gated Ca²⁺-channel subtypes in pancreatic hormone secretion, with initial focus on L-type CaV1.3 alpha-1D. Methods established include: single-cell assays of exocytosis (eg. patch clamp with capacitance measurements), hormone release assays, confocal and TIRF imaging, immunocytochemistry, microfluorimetry, as well as standard biochemistry and molecular biology (eg. RNA interference and adenoviral gene transfer). Human genetic studies may also be relevant for the project and are performed in collaboration with groups in-house.

The applicant should have a PhD degree, be willing to take responsibility and have a sincere interest in electrophysiology and in translating results to the benefit of human diabetes. Previous experience of one of the methods mentioned above is necessary; additional expertise relevant experience is considered an extra asset.