INVITATION – PHD DEFENCE

LAURA LINNEA MÄÄTTÄ, MD

"Neurofilament Light Chain and Diabetic Polyneuropathy"

Wednesday January 17, 2024, at 14.00

At Steno Diabetes Center Aarhus, Aarhus University Hospital, Entrance A, Auditorium Verdensrummet (A201-170), Palle Juul-Jensens Boulevard 11, 8200 Aarhus N

The defence is public, in English and expected to last 2 hours.
After the defence, Steno Diabetes Center Aarhus and the Danish Pain Research Center will host a reception.

Assessment committee

- Professor Søren Nielsen (chairman and moderator of the defence)
  Steno Diabetes Center Aarhus, Aarhus University Hospital & Department of Clinical Medicine, Aarhus University, Aarhus, Denmark
- Professor Vincenza Spallone
  Università di Roma Tor Vergata, Dipartimento di Medicina dei Sistemi, Rome, Italy
- Professor Jørgen Rungby
  Steno Diabetes Center Copenhagen, Copenhagen, Denmark

Supervisors

- Professor Troels Staehelin Jensen (Main Supervisor)
  Danish Pain Research Center, Department of Clinical Medicine, Aarhus University, Aarhus, Denmark
- Professor Daniel Witte
  Steno Diabetes Center Aarhus, Aarhus University Hospital & Department of Public Health, Aarhus University, Aarhus, Denmark
- Clinical Associate Professor Tina Parkner
  Department of Clinical Biochemistry, Aarhus University Hospital & Department of Clinical Medicine, Aarhus University, Aarhus, Denmark
- Dr. Signe Toft Andersen
  Steno Diabetes Center Aarhus, Aarhus University Hospital, Aarhus, Denmark & Medical Department, Gødstrup Hospital, Herning, Denmark

AARHUS UNIVERSITY
HEALTH – DEPARTMENT OF CLINICAL MEDICINE
Danish Pain Research Center

PRESS RELEASE

PhD Defence: Laura Linnea Määttä, MD, from the Danish Pain Research Center, Department of Clinical Medicine, Aarhus University, and Steno Diabetes Center Aarhus, will defend her PhD thesis titled "Neurofilament Light Chain and Diabetic Polyneuropathy" on January 17, 2024, at 14.00. The defence is in English and will last approximately 2 hours.

Diabetic polyneuropathy (DPN) is one of the most common complications of diabetes. Yet, it remains out of reach for targeted medical intervention and often goes unnoticed until the nerve damage has reached a significant degree. Accurate and continuous evaluation of the peripheral nerve function is therefore pivotal for preventive purposes. Recent advances in the field of neuronal biomarkers have introduced the possibility of monitoring nerve function and integrity by blood-borne nerve-specific biomarkers whereof the most studied is the axonal cytoskeletal protein neurofilament light chain (NfL). NfL is released to the extra-cellular environment upon neuronal decay and has been widely studied in disorders of the central nervous system. Little is however known about NfL's biomarker potential in peripheral neuropathies such as DPN where the monitoring of peripheral nerve function could be aided by measurement of NfL levels in the blood.

A new PhD project from Aarhus University has investigated the biomarker potential of serum NfL (s-NfL) for the detection and monitoring of DPN in people with type 2 diabetes by exploring s-NfL levels in two unselected and unrelated cohorts with different severities of type 2 diabetes and DPN. The studies combined analysis of biobank material and clinical- and registry based data to elucidate cross-sectional and longitudinal associations between s-NfL and the presence, severity and development of DPN.

The defence is public and takes place on January 17, 2024, at 14.00 in Auditorium Verdensrummet (A201-170) at Steno Diabetes Center Aarhus, Aarhus University Hospital, Entrance A, Palle Juul-Jensens Boulevard 11, 8200 Aarhus N, and online.

The title of the project is "Neurofilament Light Chain and Diabetic Polyneuropathy".
For more information and for the link for online participation, please contact PhD student Laura Linnea Määttä, email: llm@clin.au.dk.

PRESSEMEDDELELSE

Ph.d.-forsvar: Laura Linnea Määttä, læge, fra Dansk Smerteforskningscenter, Institut for Klinisk Medicin, Aarhus Universitet, og Steno Diabetes Center Aarhus, vil forsvare sin ph.d.-afhandling med titlen "Neurofilament Light Chain and Diabetic Polyneuropathy" den 17. januar 2024 kl. 14.00. Forsvaret er på engelsk og vil cirka vare 2 timer.

Diabetisk polyneuropati (DPN) er en af de mest almindelige komplikationer ved diabetes. Ikke desto mindre mangler der fortsat målrettet behandling for DPN som ofte ikke opdages før nervebeskadigelsen har nået en betydelig grad. Nøjagtig og kontinuerlig evaluering af de perifere nervers funktion er således afgørende i forebyggende øjemed. Nylige fremskridt indenfor neuronale biomarkører har muliggjort monitorering af nervefunktion og -integritet ved hjælp af blodbårne nervespecifikke biomarkører. Af disse er det aksonale cytoskeletprotein neurofilament light chain (NfL) den mest undersøgte. NfL frigives til det ekstracellulære miljø ved nervecellehenfald og er blevet udbredt undersøgt ved sygdom i det centrale nervesystem. Vi ved imidlertid kun lidt om NfLs biomarkørpotentiale i perifere neuropatier som DPN hvor monitorering af de perifere nervers funktion muligvis kunne understøttes ved måling af NfL i blodet.

Et nyt ph.d.-projekt fra Aarhus Universitet har undersøgt biomarkørpotentialet af serum NfL (s-NfL) for detektion og monitorering af DPN hos personer med type 2-diabetes ved at udforske s-NfL niveauer i to forskellige kohorter af personer med type 2 diabetes og DPN. Studierne kombinerede analyse af biobank materiale og kliniske- og register baserede data for at belyse tværsnits- og longitudinale sammenhænge mellem s-NfL og tilstedeværelse, sværhedsgrad og udvikling af DPN.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 17. januar 2024 kl. 14.00 i Auditorium Verdensrummet (A201-170) ved Steno Diabetes Center Aarhus, Aarhus Universitetshospital, Indgang A, Palle Juul-Jensens Boulevard 11, 8200 Aarhus N, og online.

Titlen på projektet er "Neurofilament Light Chain and Diabetic Polyneuropathy".
For yderligere oplysninger samt for link til online deltagelse, kontakte venligst ph.d.-studerende Laura Linnea Määttä, e-mail: llm@clin.au.dk.