

## Press release

Please fill in this form and return it to [graduateschoolhealth@au.dk](mailto:graduateschoolhealth@au.dk) in Word format no later than three weeks prior to your defence.

### Basic information

Name: Lotte Sahin Levison    Email: [lotlev@rm.dk](mailto:lotlev@rm.dk) Phone: 26807160

Department of: Clinical Medicine

Main supervisor: Henning Andersen

Title of dissertation: Epidemiological studies of adult and childhood Guillain-Barré syndrome  
- Diagnostic validity, incidence, and association with infection -

Date for defence: 30.10.2020 at (time of day): 14.30 Place: Auditorium J116-113, Indgang J, Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N

Press release (Danish)

Epidemiologiske studier af Guillain-Barré syndrome hos voksne og børn

Fredag d. 2. oktober kl. 14:30 forsvarer Lotte Sahin Levison sin ph.d.-afhandling med titlen "Epidemiological studies of adult and childhood Guillain-Barré syndrome - Diagnostic validity, incidence, and association with infection -"

Guillain-Barré syndrom (GBS) er en sjælden form for akut nervebetændelse, der udvikles grundet at kroppens immunforsvar angriber nerverne. I 25% af tilfældene er respiratorbehandling nødvendig, og trods behandling dør 2-3% i den akutte fase af sygdommen. Særligt akutte infektioner, men også andre påvirkninger af kroppen, herunder vaccinationer, operationer og tumorer, er tidligere sat i forbindelse med en øget risiko for at udvikle GBS. De nøjagtige årsagsmekanismer for GBS er ukendte, og man kender ikke den langsigtede udvikling (tidstendenser) af GBS forekomsten i Danmark, og den detaljerede aldersspecifikke forekomst af GBS blandt børn ligesom det fortsat er uvidst, hvor meget og hvor længe risikoen for at udvikle sygdommen er forhøjet efter akutte infektioner.

Formålene for denne afhandling var for det første at bestemme kvaliteten af diagnosekoderne for GBS i Landspatientsregisteret. Dernæst var formålet at bestemme forekomsten af GBS mellem 1987 og 2016 samt at undersøge kliniske karakteristika hos børn med GBS. Herudover var formålet at undersøge risikoen for at udvikle GBS efter hospitals- og samfundsbehandlede infektioner, især med fokus på den tidsmæssige sammenhæng. Resultaterne præsenteres i et nyt ph.d.-projekt fra Aarhus Universitet, Health.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 30/10 2020 kl. 14.30 i auditorium J116-113, Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N. Titlen på projektet er "Epidemiological studies of adult and childhood Guillain-Barré syndrome - Diagnostic validity, incidence, and association with infection -".

Yderligere oplysninger: Ph.d.-studerende Lotte Sahin Levison, e-mail: [lotlev](mailto:lotlev), tlf. 26807160.

Bedømmelsesudvalg: påfør de tre medlemmer af udvalget med navn, titel og arbejdssted

Press release (English)

Epidemiological studies of adult and childhood Guillain-Barré syndrome  
- Diagnostic validity, incidence, and association with infection -

Friday 30 October at 14:30, Lotte Sahin Levison defends her PhD dissertation entitled  
“Epidemiological studies of adult and childhood Guillain-Barré syndrome  
- Diagnostic validity, incidence, and association with infection -”.

Guillain-Barré syndrome (GBS) is a rare type of acute polyneuropathy, caused by an immune system attack against the peripheral nerves. In about 25% of cases, mechanical ventilation is necessary, and even with intensive treatment, approximately 2-3% die in the acute phase of the disease. Particularly acute infections, but also other factors triggering the immune system, including vaccinations, surgeries and tumors, have previously been associated to an increased risk of developing GBS. The exact causal mechanisms of GBS are still unknown, and so far, the long-term development (time trends) of GBS incidence in Denmark and the detailed age-specific incidence of GBS among children have not been clarified. Furthermore, the magnitude and duration the association between acute infections and subsequent GBS development it is still uncertain. The purposes of this dissertation are, firstly, to determine the quality of the diagnostic codes for GBS in the Danish National Patient Register. Next, to investigate the incidence of GBS during a 30-year period (1987-2016) and to examine clinical characteristics in children with GBS. Additional purpose is to investigate the association between hospitalized and community-treated infections and the risk of subsequent GBS development, focusing on the temporal relationship. The results are presented in a new PhD project from Aarhus University, Health.

The defence is public and takes place on 30/10 2020 at 14.30 in auditorium J116-113, Aarhus Universitetshospital, Palle Juul-Jensens Boulevard 165, 8200 Aarhus N. The title of the project is  
Epidemiological studies of adult and childhood Guillain-Barré syndrome  
- Diagnostic validity, incidence, and association with infection -  
For more information, please contact PhD student Lotte Sahin Levison, email: lotlev@rm.dk, Phone +45 26807160.

Assessment committee:  
Frede Donskov, MD, PhD, DMSc, Professor (chairman)  
Department of Oncology  
Aarhus University Hospital, Denmark

David Gaist, MD, PhD, DMSc, Professor  
Department of Neurology  
Odense University Hospital, Denmark

Helmar C. Lehmann, MD, PhD, DMSc, Professor  
Department of Neurology  
University Hospital Cologne, Germany

## **Permission**

By sending in this form:

- I hereby grant permission to publish the above Danish and English press releases.
- I confirm that I have been informed that any applicable inventions shall be treated confidentially and shall under no circumstances whatsoever be published, presented or mentioned prior to submission of a patent application, and that I have an obligation to inform my head of department and the university's Patents Committee if I believe I have made an invention in connection with my work. I also confirm that I am not aware that publication violates any other possible holders of a copyright.