

## Press release

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### Basic information

Name: Marianne Agerlund Petersen

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Department of: Clinical Medicine

Main supervisor: Henrik Hasle

Title of dissertation: Exploring the Immunophenotype and Protein Expression Profile of Leukemic Stem Cells in Childhood Acute Myeloid Leukemia

Date for defence: 18<sup>th</sup> of Juni 2021 at (time of day): 2pm Place: C115-126/124, AUH/Zoom

Press release (Danish)

Exploring the Immunophenotype and Protein Expression Profile of Leukemic Stem Cells in Childhood Acute Myeloid Leukemia

I et nyt ph.d.-projekt fra Aarhus Universitet, Health undersøges abnormt udtrykte proteiner på og i stamceller fra børn med akut myeloid leukæmi (AML). Projektet er gennemført af Marianne Agerlund Petersen, MD, der forsvare det d. 18/06 2021.

AML er en heterogene hæmatologisk cancer med udbredte immunfænotypisk samt genetiske forskelle. Igennem de senere år har der været fokus på detektion af abnormt udtrykte proteiner så som overfladeantigener på leukæmiske blaster og stamceller, idet disse er mulige targets for fremtidig behandling. I denne ph.d. undersøges immunfænotypen af CD34+CD38- stamceller fra børn med AML ved hjælp af flowcytometri og sammenholdes med hæmatopoietiske stamceller fra raske børn. Derudover analyseres og sammenlignes den globale protein profil af oprensede stamceller og leukæmiske blaster fra børn med AML med hæmatopoietiske stam- og progenitorceller fra raske børn.

Forsvaret af ph.d.-projektet er offentlig og grundet Covid-19 restriktion, vil forvaret delvist blive afholdt som et web-forsvar via Zoom d. 18.juni 2021 kl 14. Kontakt venligst Marianne Agerlund Petersen for online deltagelse. Titlen på projektet er "Exploring the Immunophenotype and Protein Expression Profile of Leukemic Stem Cells in Childhood Acute Myeloid Leukemia". Yderligere oplysninger: Ph.d.-studerende Marianne Agerlund Petersen, e-mail: [marianne.agerlund@clin.au.dk](mailto:marianne.agerlund@clin.au.dk), tlf. 24604987.

Bedømmelsesudvalg:

Bjarne Kuno Møller, associate professor, MD, PhD (Formand), Department of Clinical Immunology, Aarhus University Hospital, Aarhus, DK

Sylvie Freeman, professor, MBChB, MRCP, PhD, FRCHPath, Institute of Immunology and Immunotherapy, University of Birmingham, Birmingham, UK

Hanne Vibeke Marquart, senior consultant, MD, PhD, Head of section for Diagnostic Immunology Tissue typing laboratory, Dept. of Immunology, section 7631, Copenhagen University Hospital, Copenhagen, DK

Press release (English)

Exploring the Immunophenotype and Protein Expression Profile of Leukemic Stem Cells in Childhood Acute Myeloid Leukemia

In this PhD project, the surface and intracellular protein expression patterns of stem cells from pediatric AML patients was investigated. The project was carried out by Marianne Agerlund Petersen, who is defending her dissertation on 18<sup>th</sup> of Juni 2021.

AML is a heterogeneous neoplasm characterized by a high degree of immunophenotypic and genetic variation. In the past decades, identification of proteins such as aberrant surface antigens expressed by leukemic blasts and stem cells has been ongoing as such proteins may potentially serve as specific targets for future therapeutic agents. In this PhD, the immunophenotype of CD34+CD38- stem cells from pediatric AML patients were investigated using flow cytometry and compared to hematopoietic stem cells from hematologically healthy children. In addition, proteomic profiling of purified stem and blast cells from children with AML was analyzed and compared with purified hematopoietic stem and progenitor cells subsets from healthy children.

The defence is public and due to the Covid-19 situation, the defence is partly online via Zoom on 18<sup>th</sup> of Juni 2021 at 2pm. Please contact Marianne Agerlund Petersen for online link. The title of the project is "Exploring the Immunophenotype and Protein Expression Profile of Leukemic Stem Cells in Childhood Acute Myeloid Leukemia". For more information, please contact PhD student Marianne Agerlund Petersen, email: marianne.agerlund@clin.au.dk, Phone +45 2460 4987.

Assessment committee:

Bjarne Kuno Møller, associate professor, MD, PhD (chairman and moderator), Department of Clinical Immunology, Aarhus University Hospital, Aarhus, DK

Sylvie Freeman, professor, MBChB, MRCP, PhD, FRCHPath, Institute of Immunology and Immunotherapy, University of Birmingham, Birmingham, UK

Hanne Vibeke Marquart, senior consultant, MD, PhD, Head of section for Diagnostic Immunology Tissue typing laboratory, Dept. of Immunology, section 7631, Copenhagen University Hospital, Copenhagen, DK

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