

## Press release

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### Basic information

Name: Randi Istrup Juul Email: [randi.istrup@clin.au.dk](mailto:randi.istrup@clin.au.dk) Phone: 784 55310

Department of: Clinical Medicine

Main supervisor: Professor Jakob Skou Pedersen

Title of dissertation: Site-specific hotspots recurrently mutated across cancer – A genome-wide pan-cancer screen for non-coding drivers and the potential use in ctDNA detection

Date for defence: 10.12.2021 at (time of day): 10:00 Place: The ground floor auditorium, Department of Molecular Medicine, Aarhus University Hospital, Brendstrupgårdsvej 21A, 8200 Aarhus N and Online

Press release (Danish)

**Karakterisering og anvendelse af positioner i DNA'et der ses muteret i mange kræftpatienter**

Kræft er den hyppigste dødsårsag både på verdensplan og i Danmark. Det er vigtigt at opdage kræft på et så tidligt stadie som muligt da det normalt giver en bedre prognose for patienten. Derudover vil det være en fordel at kunne tilbyde allerede eksisterende behandlinger til flere patienter. Det overordnede formål med dette ph.d.-projekt var at finde og karakterisere positioner i DNA'et der ses muteret på tværs af kræftpatienter. Vi søger at identificere genregulerende kræftgivende mutationer blandt disse positioner, hvilket potentielt kan inkludere flere patienter i eksisterende behandlinger. Derudover undersøger vi om sådanne positioner er egnet til at finde kræft på et tidligt stadie via en blodprøve. Resultaterne er sammenfattet i et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Randi Istrup Juul, der forsvare det den 10. december 2021.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 10. december 2021 kl. 10.00 i Auditoriet på plan 0, Molekylærmedicinsk Afdeling, Aarhus Universitetshospital, Brendstrupgårdsvej 21A, 8200 Aarhus N og online. Titlen på projektet er "Site-specific hotspots recurrently mutated across cancer – A genome-wide pan-cancer screen for non-coding drivers and the potential use in ctDNA detection". For yderligere oplysninger, kontakt venligst Ph.d.-studerende Randi Istrup Juul, e-mail: [randi.istrup@clin.au.dk](mailto:randi.istrup@clin.au.dk), tlf: 78455310.

Bedømmelsesudvalg:

Associate Professor Ditte Demontis (chairman and moderator of the defence)

Department of Biomedicine, Aarhus University, Aarhus, Denmark

Group Leader Anders Jacobsen Skanderup

Genome Institute of Singapore, Agency for Science, Technology and Research, Singapore

Associate Professor Elena Papaleo

Department of Health Technology, Technical University of Denmark, Kgs. Lyngby, Denmark

Press release (English)

**Characterization and use of DNA positions that are recurrently mutated across cancer patients**

Cancer is the leading cause of death both world-wide and in Denmark. It is important to diagnose cancer in as early a stage as possible as it usually results in a better prognosis for the patient. Furthermore, it will be advantageous to be able to offer already existing treatments to more patients. The overall aim of this PhD project was to find and characterize positions in the DNA that are recurrently mutated across cancer patients. We sought to identify gen-regulating cancer-causing

mutations among these positions, which potentially could allow inclusion of further patients in existing treatments. Furthermore, we investigate if such positions can be used to identify cancer at early stages using a blood sample. The results are described in a new PhD project from Aarhus University, Health. The project was carried out by Randi Istrup Juul, who is defending her dissertation on December 10<sup>th</sup>, 2021.

The defence is public and takes place on December 10<sup>th</sup>, 2021 at 10 AM in the ground floor auditorium, Department of Molecular Medicine, Aarhus University Hospital, Brendstrupgårdsvej 21A, 8200 Aarhus N and online. The title of the project is "Site-specific hotspots recurrently mutated across cancer – A genome-wide pan-cancer screen for non-coding drivers and the potential use in ctDNA detection". For more information, please contact PhD student Randi Istrup Juul, email: randi.istrup@clin.au.dk, Phone +45 78455310.

Assessment committee:

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Group Leader Anders Jacobsen Skanderup  
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Associate Professor Elena Papaleo  
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