

## Press release

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### Basic information

Name: Thor Haahr Email: [thohaa@rm.dk](mailto:thohaa@rm.dk) Phone: 27885402

Department of: Clinical Medicine

Main supervisor: Peter Humaidan, Professor, DMSc

Title of dissertation: Diagnosis and treatment of abnormal vaginal microbiota to improve reproductive outcomes in IVF patients

Date for defence: 22.4.2021 at (time of day): 11 Place: online, Zoom

Press release (Danish)

Diagnose og behandling af abnorm vaginal mikrobiota blandt patienter i reagensglasbehandling

Denne afhandling diskuterer kvindens genitale mikrobiota og dets potentielle indvirkning på graviditetsresultater efter reagensglasbehandling (IVF-behandling). Afhandlingen introducerer infertilitet som et folkesundhedsspørgsmål med fokus på Danmark. Dernæst diskuteres generelle succesrater efter IVF-behandling, og den stigende udfordring det er at undersøge og bevise forbedringer af succesrater i forhold til standardbehandlingen. Herefter fokuserer afhandlingen på sit hovedemne om det genitale mikrobiota og introducerer emnet i en IVF-sammenhæng. Dette efterfølges af en diskussion af metoder og resultater i de originale arbejder, der er udført under dette MD/PhD-stipendium fra 2016-2021. Det indledende fokus for PhD-projektet har været at etablere et diagnostisk værktøj til at identificere IVF-kvinder med risiko for dårligere graviditetsresultater på baggrund af en potentiel infektiøs ætiologi. Hypotesen er at bruge det vaginale mikrobiota som en proxy til at identificere et dysbiotisk mikrobiota i livmoderen, som kan hæmme det befrugtede ægs implantation. Det er endnu for tidligt at konkludere om diagnose og behandling af abnorm vaginal mikrobiota, som præsenteret i denne afhandling, skal indføres i fremtidig IVF-behandling, men forhåbentlig kan denne afhandling bidrage til at forstå både den nuværende viden samt de fremtidige forskningsspørgsmål. Ph.d.-projekt er udført ved Aarhus Universitet, Health. Projektet er gennemført af Thor Haahr, der forsvaret det d. 22/4 2021

Forsvaret af ph.d.-projektet er offentligt og finder sted den 22/4 2021 kl. 11 på Zoom. Titlen på projektet er "Diagnosis and treatment of abnormal vaginal microbiota to improve reproductive outcomes in IVF patients". Yderligere oplysninger: Ph.d.-studerende Thor Haahr, e-mail: [thohaa@rm.dk](mailto:thohaa@rm.dk), tlf. 27885402.

Bedømmelsesudvalg:

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David MacIntyre (opponent)

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Press release (English)

This dissertation discusses the genital tract microbiota and its potential impact on reproductive outcomes of in vitro fertilization (IVF) treatment. First, the dissertation introduces infertility as a public health issue in a societal context and with a focus on Denmark which is the setting of this PhD. Next, the dissertation turns to success-rates in IVF treatment, describing the challenge of building evidence for “add-ons” to improve the standard IVF treatment. Finally, the dissertation takes on its main subject of genital tract microbiota, introducing the subject in the context of IVF, followed by a discussion of methods and results in the original work performed over the years of this MD/PhD scholarship from 2016-2021. The initial focus of the PhD project has been to establish a diagnostic tool to identify IVF women at risk of a poor reproductive outcome due to a potential infectious aetiology. The core idea is to use the vaginal microbiota as a proxy to identify a dysbiotic endometrial microbiota – due to ascending infection - which would hamper embryo implantation, and thus successful pregnancy. The jury is still out considering whether diagnosis and treatment of abnormal vaginal microbiota as presented herein should be considered for future IVF treatment, but hopefully this dissertation will clarify the current knowledge and future needs.

The project was carried out by Thor Haahr, who is defending his dissertation on 22/4 2021.

The defence is public and takes place on 22/4 at Aarhus University online at Zoom. The title of the project is Diagnosis and treatment of abnormal vaginal microbiota to improve reproductive outcomes in IVF patients. For more information, please contact PhD student Thor Haahr, email: thohaa@rm.dk, Phone +45 27885402.

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