

## Press release

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### Basic information

Name: Christophe Henri Valdemar Duez      Email: christophe.duez@gmail.com Phone: 20701125

Department of: Clinical Medicine

Main supervisor: Professor Hans Kirkegaard

Title of dissertation: "Neurological prognostication after cardiac arrest using EEG and biomarkers – with a focus on prolonged targeted temperature management"

Date for defence: 15<sup>th</sup> of march at (time of day): 14 Place:

Aarhus University Hospital, Skejby,  
Universitetstorvet, indgang J3  
Auditory J116-113  
Palle Juul Jensens Boulevard 161  
8200 Aarhus N

### Press release (Danish)

Forudsigelse af overlevelse efter hjertestop ved måling af hjernens elektriske aktivitet med EEG samt biomarkører i blodet – med særligt fokus på forlænget kølebehandling

Når nogen får et hjertestop er der groft sagt tre udfald, man kan risikere at dø med det samme, man kan være heldig at vågne op hurtigt efter hjertestoppet, eller også kan der ske det at man forbliver i en komatøs tilstand fordi hjernen er påvirket af den iltmangel der har fundet sted. Det kan være meget svært at udtales sig med sikkerhed om hvem der vågner op igen herefter.

PhD-forsvaret baseres på 4 videnskabelige artikler hvor de to første undersøger hjernens elektriske reaktion på stimulation og præsenterer en ny og kvantitativ metode til forudsigelse af overlevelse efter hjertestop baseret på denne reaktion. Den tredje artikel handler om brugen af to hjernespecifikke blodprøver til forudsigelse af overlevelse under standard og forlænget køling og den fjerde artikel sammenligner to metoder til at klassificere hjernens elektriske aktivitet og disse metoders potentiale til forudsigelse af overlevelse under standard og forlænget køling. Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Christophe Duez, der forsvarer det d. 15/03 2019

Forsvaret af ph.d.-projektet er offentligt og finder sted den 15/03 2019 kl. 14 i auditorium J116-113, Aarhus Universitet, Palle Juul Jensens Boulevard 161, 8200 Aarhus N. Titlen på projektet er "Neurological prognostication after cardiac arrest using EEG and biomarkers – with a focus on prolonged targeted temperature management". Yderligere oplysninger: Ph.d.-studerende Christophe Duez, e-mail: chriduez@rm.dk, tlf. 24899534.

### Bedømmelsesudvalg:

Hans Friberg, Professor, Department of Clinical Sciences, Lund Universitetshospital  
Lars Rasmussen, Akut medicinsk professor i HovedOrtocentrets Anæstesi og Operationsklinik, Rigshospitalet

Chairman of the comitee: Hans Eiskjær, professor, Institut for Klinisk Medicin - Hjertesygdomme, Aarhus Universitetshospital

### Press release (English)

"Neurological prognostication after cardiac arrest using EEG and biomarkers – with a focus on prolonged targeted temperature management"

When someone suffer a heart attack, three outcomes are possible; some die instantly, others wake up in the minutes after the arrest and the rest remain in a comatose state due to the brains reaction to the hypoxic ischemic incident. It can be very difficult to predict who survives this state of coma.

The PhD-defence is based on four scientific papers. The two first describe and explore the brains electrical reaction to stimulation and presents a new and quantitative method to outcome prediction after cardiac arrest using this reaction. The third paper describes the prognostic value of two brain-specific biomarkers and the impact of prolonged targeted temperature management on their prognostic value and the fourth paper compares two systems used to classify the electrical activity of the brain, their prognostic value and how prolonged targeted temperature management influences their predictive value. The project was carried out by Christophe Duez, who is defending her/his dissertation on 15/03 2019.

The press release - ending with: The defence is public and takes place on 15/03 2019 at 14.00 in auditory J116-113 at Aarhus University Hospital, Palle Juul Jensens Boulevard 161, 8200 Aarhus N. The title of the project is "Neurological prognostication after cardiac arrest using EEG and biomarkers – with a focus on prolonged targeted temperature management". For more information, please contact PhD student Christophe Duez, email: chriduez@rm.dk, Phone +45 24899534.

**Assessment committee:**

Hans Friberg, Professor, Department of Clinical Sciences, Lund Universitetshospital  
Lars Rasmussen, Akut medicinsk professor i HovedOrtocentrets Anæstesi og Operationsklinik,  
Rigshospitalet

Chairman of the comitee: Hans Eiskjær, professor, Institut for Klinisk Medicin - Hjertesygdomme,  
Aarhus Universitetshospital

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