

## Press release

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### Basic information

Name: Mathias J. Holmberg Email: [mathias.holmberg@clin.au.dk](mailto:mathias.holmberg@clin.au.dk) Phone: 53 70 31 70

Department of: Clinical Medicine

Main supervisor: Hans Kirkegaard

Title of dissertation: Cardiac Arrest: A Need for New Therapies

Date for defence: 21. august 2020 at (time of day): 14.00 Place: Virtuelt

Press release (Danish)

Et behov for nye interventioner i hjertestop

På trods af en positiv udvikling af hjertestopbehandling inden for de sidste 50 år er hjertestop forbundet med en dårlig prognose. Den tilgrundliggende evidens for behandlingen af hjertestop er ofte utilstrækkelig, og der er et behov for nye interventioner for at kunne forbedre overlevelsen efter hjertestop.

Formålet med undersøgelserne i denne afhandling var at beskrive udviklingen af antallet af hjertestop over en 10-årig periode i USA, tilvejebringe ny evidens omkring brugen af atropin og adrenalin ved hjertestop og undersøge effekten af en ny intervention til behandling af patienter, der har genvundet spontan cirkulation efter hjertestop.

Undersøgelserne i denne afhandling giver ny indsigt i sygdomsbyrden efter hjertestop og peger på behovet for høj kvalitetsforskning og nye interventioner for at kunne forbedre prognosen efter hjertestop. Projektet er gennemført af Mathias J. Holmberg, der forsvarede det d. 21. august 2020.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 21. august 2020 kl. 14. Titlen på projektet er "Cardiac Arrest: A Need for New Therapies". Yderligere oplysninger: Ph.d.-studerende Mathias J. Holmberg, e-mail: [mathias.holmberg@clin.au.dk](mailto:mathias.holmberg@clin.au.dk), tlf. 53 70 31 70.

Bedømmelsesudvalg:

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Professor, Jerry P. Nolan, MD, FRCA, FFICM, FRCP, FCEM  
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Press release (English)

A need for new therapies in cardiac arrest

Despite advancement in the management of cardiac arrest over the past 50 years, mortality and morbidity remains poor. A large number of cardiac arrest therapies are supported only by limited evidence and there is a need for new interventions to improve outcomes after cardiac arrest.

The goal of the studies included in this PhD dissertation were to report on the public health burden of cardiac arrest, provide more robust data on cardiac arrest therapies, and study a novel post-cardiac arrest therapy targeting mitochondrial injury.

These studies provide new insight into the burden of cardiac arrest, for which there remains a need for high-quality research and new interventions to improve outcomes. The project was carried out by Mathias J. Holmberg, who is defending his dissertation on August 21, 2020.

The defence is public and takes place on August 21, 2020 at 2pm. It is possible to attend the defense virtually. A zoom link can be obtained upon request from Mathias J. Holmberg. The title of the project is "Cardiac Arrest: A Need for New Therapies". For more information, please contact PhD student Mathias J. Holmberg, email: mathias.holmberg@clin.au.dk, Phone 53 70 31 70.

Assessment committee:

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