

## Press release

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### Basic information

Name: Dmitrii Kamaev      Email: [kd@biomed.au.dk](mailto:kd@biomed.au.dk) Phone: 87169526

Department of: Biomedicine

Main supervisor: Christian Aalkjaer

Title of dissertation: The role of calcium-activated chloride channel ANO1 in the vasculature

Date for defence: 19 April 2017 at (time of day): 12:30 Place: Small Anatomical Auditorum 1231-424, Aarhus Universitet, Universitetsparken 230, Aarhus.

Press release (Danish)

#### Funktionen af det membran bundne protein ANO1 i blodkar

Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Dmitrii Kamaev, der forsvarede det d.19/04

Formålet med studiet var at forstå betydningen af det membran bundne protein ANO1 for blodkarrenes normale funktion og af blodkarrenes funktion ved sukkersyge. ANO1 er et protein, som tillader klorid ioner at passere cellernes membraner, når proteinet aktiveres af en calcium stining i cellerne. Proteinet formodes at regulere blodkarrenes kontraktion dvs deres diameter og er herigennem af betydning for blodgennemstrømningen i kroppens organer. Der er også belæg for at aktiviteten af ANO1 er ændret i forbindelse med blodtryksstigninger.

I projektet blev ANO1 funktionen undersøgt i tre dyre modeller hvor ANO1 mængden i cellemembranerne var ændret og det blev bekræftet at ANO1 påvirker blodkarrenes kontraktion. Det blev endvidere påvist at ANO1 har betydningen for udvikling af betændelsestilstande i blodkarvæggen.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 19/04 kl. 12.30 i Lille Anatomisk Auditorum 1231-424, Aarhus Universitet, Universitetsparken 230, Aarhus. Titlen på projektet er The role of calcium-activated chloride channel ANO1 in the vasculature. Ph.d.-studerende Dmitry Kamaev, email: [kd@biomed.au.dk](mailto:kd@biomed.au.dk), Phone +45 8716 9526.

Press release (English)

#### Functional study of a membrane channel protein ANO1 in arteries

The aim of this PhD study was to contribute to understanding of ANO1's involvement in physiology and pathophysiology of arteries. ANO1 is a calcium activated chloride channel that is suggested to be important for contractile function of arteries and is known to be involved in several pathological conditions among them experimental pulmonary hypertension and experimental essential hypertension.

The study was performed using three different animal models in which expression of ANO1 is altered in arteries. Results demonstrate that ANO1's involvement in the contractile process of arteries is multidirectional and is dependent on the animal model used for investigation. Results also demonstratelinks between ANO1 and innate immune system signaling in the vascular wall.

The project was carried out by Dmitry Kamaev, who is defending his dissertation on 19<sup>th</sup> of April.

The defence is public and takes place on 19<sup>th</sup> of April at Small Anatomical Auditorum 1231-424, Aarhus Universitet, Universitetsparken 230, Aarhus at 12:30. The title of the project is The role of calcium-activated chloride channel ANO1 in the vasculature. For more information, please contact PhD student Dmitry Kamaev, email: kd@biomed.au.dk, Phone +45 8716 9526.

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