AARHUS UNIVERSITY

Press release

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Basic information

Name: Sakthidasan Jayaprakash Email: sjay@biomed.au.dk Phone: 91 68 86 21

Department of: Biomedicine

Main supervisor: Dr. Monika Golas, Associate Professor

Title of dissertation: Characterization of the chromatin associated protein complexes SIN3 and BAF

Date for defence: 25 August 2017 at (time of day): 13:00 Place: Biokemi aud 6 Bygning 1170 lokale 347

Press release (Danish)

Et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Sakthidasan Jayaprakash, der forsvarer det d. 25/08

Den genetiske information, DNA, er arrangeret i meget komplekse strukturer kaldet chromatin, som involverer binding af DNA til proteiner og proteinkomplekser. Mange af proteinkomplekserne er nøglefaktorer ved aktivering eller hæmning af genekspression. Disse proteinfunktioner er vigtige for fleksibelt at tilpasse en celles metabolisme til skiftende krav såvel som at muliggøre differentieringen i kroppens forskellige væv. Proteinkomplekserne Switch Independent 3 (SIN3) og BRG1 associated factor (BAF) har for eksempel vigtige roller i genregulering. I dette ph.d.-studie har vi udviklet en værktøjskasse til udtrykning og oprensning af proteiner. SIN3 og BAF proteinerne blev udtrykt og oprenset ved anvendelse af denne værktøjskasse. Komplekser blev samlet på en trinvis måde til at muliggøre deres molekylære karakterisering. Især beskrives interaktionerne mellem de enkelte underenheder af komplekserne, og vi undersøgte kompleksernes funktionelle aktivitet. Resultaterne præsenteret i dette ph.d.-studie giver molekylær indsigt i SIN3 og BAF komplekserne på molekylært niveau.
Forsvaret af ph.d.-projektet er offentligt og finder sted den 25/08 kl. 13 i Biokemi aud 6, Bygning 1170 lokale 347, Aarhus Universitet, Aarhus. Titlen på projektet er " Characterisation of the chromatin associated protein complexes SIN3 and BAF". Yderligere oplysninger: Ph.d.-studerende Sakthidasan Jayaprakash, e-mail: sjay@biomed.au.dk, tlf. 91688621.

Bedømmelsesudvalg: påfør de tre medlemmer af udvalget med navn, titel og arbejdssted

Press release (English)

The project was carried out by Sakthidasan Jayaprakash, who is defending his dissertation on 25 August 2017.

The genetic information, DNA, is arranged into highly complex structures called chromatin, which involves the association of the DNA with proteins and protein complexes. Many of the protein complexes are key factors in activation or inhibition of gene expression. These protein functions are important to flexibly adapt a cell's metabolism to changing requirements as well as to enable the differentiation into the different tissues of the body. The protein complexes Switch Independent 3 (SIN3) and BRG1 associated factor (BAF), for example, have important roles in gene regulation. In this PhD study, a toolbox has been designed for the recombinant expression and purification of

proteins. SIN3 and BAF proteins were expressed and purified using this toolbox. Complexes were assembled in a stepwise approach for their molecular characterization. In particular, the interactions between the individual subunits of the complexes could be described and the functional activity of the complexes studied. The results presented in this PhD study provide molecular insights into the SIN3 and the core subunits of BAF at a molecular level.

The defence is public and takes place on 25 August 2017 at 13:00 in Biochemistry auditorium 6, Building 1170, Aarhus University, Aarhus. The title of the project is "Characterization of the chromatin associated protein complexes SIN3 and BAF". For more information, please contact PhD student Sakthidasan Jayaprakash, email: sjay@biomed.au.dk, Phone 91 68 86 21.

Assessment committee:
Professor, Thomas Vorup-Jensen - chairman of the committee and moderator of the defence
Department of Biomedicine,
Aarhus University

Professor Ann-Kristin Östlund-Farrants
Department of Molecular Biosciences,
Stockholm University

Associate Professor Niels Erik Møllegaard
Department of Cellular and Molecular Medicine,
Copenhagen University

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