We would like to invite you to **Anders Kjær's PHD Defence**:

Understanding the biology of glandular trichomes and use of **external stress** for improving the content of bioactive compounds in ***Artemisia annua*** L.

31 October 2012. 13:00 - 16.00
Canteen, Aarslev, finishing with a Reception

Program

13.00 - 13.05	Welcome by Martin Jensen and Carl Otto Ottosen
13.05 – 13.50	Anders Kjær presents 'Understanding the biology of glandular trichomes and use of external stress for improving the content of bioactive compounds in *Artemisia annua* L.'
13.50 – 14.00	Short break
14.00 – 16.00	Assessment committee questioning: Prof. Pedro Melillo de Magalhães, Dept. of Agrotechnology, CPQBA, University of Campinas. Brazil; Prof. Søren Brøgger Christensen, Dept. of Medicine Design and Pharmacology, Faculty of Health, Copenhagen University; Assoc. Prof. Carl Otto Ottosen, Food Science, Aarhus University (chairman).
16.00 - 17.00	Reception

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PhD project appetizer

Artemisia annua is one of the world's most important medicinal crops. The plants contain the compound artemisinin, which every year is administered to millions of people against malaria. Artemisinin further has the potential to be part of new pharmaceuticals against different viruses, cancer diseases, and infections of bacteria, fungi and protozoa in both humans and animals. The wild type of *Artemisia annua* only contains relatively small concentrations of artemisinin, and enormous research efforts have been invested in improving the artemisinin content and understanding the underlying mechanisms of the biosynthesis of artemisinin. The current project was aimed at creating a deeper understanding of the biology of the glandular trichomes, which produce the artemisinin, and the influence of external stress on factors related to glandular trichomes and the biosynthesis of artemisinin. The studies showed that, in the upper part of large plants, stress did enhance the formation of new trichomes, and thereby the production of artemisinin slightly. However, stress also promoted the maturation and subsequent automatic rupture of the trichomes on the older part of the plants, leading to an overall loss of compounds.

Main supervisor: Senior scientist, PhD Martin Jensen,
Dept. of Food Science, Aarhus University.
Co-supervisor: Senior scientist Kai Grevsen,
Dept. of Food Science, Aarhus University.

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