

PhD opportunity: ATPases in development

30.09.11

A PhD stipend is available at Centre of Excellence Membrane proteins in Health and disease, PUMPKIN, the Faculty of Science and Health Sciences, Aarhus University.

We seek outstanding applicants interested in the developmental biology. The proposed project seeks to investigate the role of ATPase during early development using mouse as a model system. The project will involve basic molecular techniques such as quantitative real-time PCR and cloning. Selected genes will be further analyzed in embryonic cells and more specialized approaches such as micromanipulations, microinjections, confocal analysis and siRNA-mediated knock-down will be undertaken (Albertsen *et al*, 2010; Doganli *et al*, 2010). The ATPase pumps represent membrane-spanning proteins that are essential for animal cell survival. The ATPases has been associated with numerous diseases. Previous studies revealed that one ATPase pump was required for blastocyst formation (Watson and Barcroft, 2001), while others have been implicated in male infertility (Wang *et al*, 2004; Xu *et al*, 2009). The aim of this project is to establish the function of selected ATPase in development. Many details such as pump distributions, localization and dynamics during the earliest steps of development have not been addressed.

The successful candidate should have a strong interest in development and experience. Applicants with experience with mouse models are preferred, but not required. The successful candidate will join the multi-disciplinary team with in the PUMPKIN Centre (www.pumpkin.au.dk).

The successful candidate must have good analytical skills and an interest in working with other disciplines. Excellent social and writing skills and the ability to solve technical problems independently are indispensable. Candidates must have a relevant Masters degree.

Application, salary etc.

Please email applications to Karin Lykke-Hartmann (kly@biokemi.au.dk). The application must include the following:

- Certified copies of Examinations papers, Master's and Bachelor diploma (Master's degree, enclose statement if necessary)
- Description of research interests (one page)
- Detailed CV, including personal contact information and a list of publications (if any)

It is a prerequisite that the chosen candidate apply for enrolment as a PhD student at The Graduate School of Health Sciences with the aim of completing a PhD program,

Aarhus University. The PhD student will be employed as a PhD fellow at the Faculty of Health Sciences, Aarhus University. The PhD fellowship is funded by a grant from the Danish Research supporting PUMPKIN.

For further information about the PhD fellowship and project, please contact associate professor Karin Lykke-Hartmann, Department of Biomedicine, Aarhus University.

- Albertsen, Teperek, Elholm, Füchtbauer, Lykke-Hartmann. 2010. *DNA Cell Biol.* 589-601.
- Doğanlı, Kjærgaard, Olsen, Oxvig, Füchtbauer, and Lykke-Hartmann. 2010. *DNA and Cell Biology.* 713-727.
- Watson AJ & Barcroft LC (2001) *Front Biosci* 6:D708-730 (in eng).
- Wang L, Beserra C, & Garbers DL. 2004. *Dev Biol* 267. 203-215.
- Xu P, *et al.* 2009. *J Cell Sci* 2866-2876