Doctoral (PhD) student position in Protein Degradation Pathways with focus on Autophagy

Do you want to contribute to top quality basic and medical research?

To be a doctoral student means to devote oneself to a research project under supervision of experienced researchers and following an individual study plan. For a doctoral degree, the equivalent of four years of full-time doctoral education is required.

The Research group

The Protein Degradation Pathways group, led by Assoc. Prof. Helin Norberg at the Department of Physiology and Pharmacology, studies the molecular mechanisms of the fundamental processes involving different Autophagic pathways, with the special focus on the Chaperone-Mediated Autophagy (CMA), a unique type of mammalian autophagy. The group is particularly interested in understanding the role of CMA in various human etiology and pathologies and how CMA activity may impact disease development and progression. The research group (1-2 students and postdoctoral fellows) collaborate with preclinical as well as clinical researchers within Karolinska Institutet, and with other national and international researchers. The group is located in an inspiring and interactive research environment in the top modern Biomedicum at Campus, Solna.

The doctoral student project and the duties of the doctoral student

The project has a focus on Investigating the potential therapeutic role of selective CMA activation: The studies will be conducted in 3 steps: 1) Understand of the role of CMA in etiology and pathology of human disorders, incl. cancer, cardiomyopathies; 2) Molecular characterization of how CMA process may affect or be affected in healthy vs pathogenic conditions, and 3) Test the impact of pharmacological and genetic modulation of CMA activation or inhibition on disease progression.

The doctoral student will study both basic science and translational project designed to study multiple disorders, including but not limited to human cancer and heart diseases. The project will involve integrative approaches consisting of cell biology, transcriptomics, bioinformatics, genetic, biochemical and molecular biological tools. The student will carry out in vitro work utilizing cell cultures and imaging, tissue analyses on clinical samples as well as mice tissues. The student will work independently as well as in a team, and will take part in all aspects of experimental planning and analysis of data generated, as well as preparation and presentation and publications. Importantly, the student is expected to plan and drive the research projects, perform experiments, analyze and interpret data, and present results as posters, in seminars/conferences and as research articles.
Further, the student will actively participate in regular group meetings, seminars and take part in routine work within the research team. The student is expected to take all mandatory PhD courses and actively participate in departmental teaching.

What do we offer?

A creative and inspiring environment full of expertise and curiosity. Karolinska Institutet is one of the world's leading medical universities. Our vision is to pursue the development of knowledge about life and to promote a better health for all. At Karolinska Institutet, we conduct successful medical research and hold the largest range of medical education in Sweden. As a doctoral student you are offered an individual research project, a well-educated supervisor, a vast range of elective courses and the opportunity to work in a leading research group. Karolinska Institutet collaborates with prominent universities from all around the world, which ensures opportunities for international exchanges. You will be employed on a doctoral studentship which means that you receive a contractual salary. Employees also have access to our modern gym for free and receive reimbursements for medical care.

Eligibility requirements for doctoral education

In order to participate in the selection for a doctoral position, you must meet the following general (A) and specific (B) eligibility requirements at latest by the application deadline.

It is your responsibility to certify eligibility by following the instructions on the web page Entry requirements (eligibility) for doctoral education.

1. **A) General eligibility requirement**
   You meet the general eligibility requirement for doctoral/third-cycle/PhD education if you:
   
   have been awarded a second-cycle/advanced/master qualification (i.e. master degree) or have satisfied the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded in the advanced/second-cycle/master level, or have acquired substantially equivalent knowledge in some other way in Sweden or abroad.*

   Follow the instructions on the web page Entry requirements (eligibility) for doctoral education.

   *If you claim equivalent knowledge, follow the instructions on the web page Assessing equivalent knowledge for general eligibility for doctoral education.

1. **B) Specific eligibility requirement**

   You meet the specific eligibility requirement for doctoral/third-cycle/PhD education if you:

   - Show proficiency in English equivalent to the course English B/English 6 at Swedish upper secondary school.

   Follow the instructions on the web page English language requirements for doctoral education.

Verification of your documents

Karolinska Institutet checks the authenticity of your documents. Karolinska Institutet reserves the right to revoke admission if supporting documents are discovered to be fraudulent. Submission of false documents is a violation of Swedish law and is considered grounds for legal action.

Skills and personal qualities

We are looking for a highly motivated, driven, enthusiastic and a professional candidate that beyond all, expresses a genuine research interest in the project and the research aims of the study. As we highly work in a collaborative research environment, the applicant should be able to work in a team and possess leadership qualities. Importantly, the applicants should be independent and self-driven to drive and manage the research projects and all tasks required.
The applicants should be able to maintain a positive attitude towards the workplace and the project throughout the duration of the doctoral degree.

A great ability to express themselves in speech and have excellent writing skills, including scientific writing in advanced level of English are required. Further, we highly seek for applicants with strong organizational skills yet be flexible to re-prioritize as needed. Solid theoretical and practical knowledge in cancer biology, heart disorders, cell and molecular biology as well as biochemistry is required. To qualify, the candidate must have hands-on research experience and practical expertise in human cell culture, primary cell cultures, biochemical and cell biology methodology (Western Blot, qPCR etc.), thus previous wet lab, cell culture and project management experience.

Candidates that possess previous work on autophagy pathways, will be prioritized. In addition, any previous experience with animal tissue work is highly assessed. The candidate’s personal skills will be highly valued and emphasis will be placed on personal skills, knowledge and abilities, as well as on documented previous work.

Terms and conditions
The doctoral student will be employed on a doctoral studentship maximum 4 years full-time.

Application process
Submit your application and supporting documents through the Varbi recruitment system. Use the button in the top right corner and follow the instructions.

Your application should contain the following documents. We prefer that your application is written in English, but you can also apply in Swedish:
- A personal letter and a curriculum vitae
- Degree projects and previous publications, if any
- Any other documentation showing the desirable skills and personal qualities described above
- Documents certifying your general eligibility (see A above)
- Documents certifying your specific eligibility (see B above)

Selection
A selection will be made among eligible applicants on the basis of the ability to benefit from doctoral education. The qualifications of the applicants will be evaluated on an overall basis.

Karolinska Institutet uses the following bases of assessment:
- Documented subject knowledge of relevance to the area of research
- Analytical skill
- Other documented knowledge or experience that may be relevant to doctoral studies in the subject.

All applicants will be informed when the recruitment is completed.

Want to make a difference? Join us and contribute to better health for all

Type of employment        PhD placement

Contract type        Full time
First day of employment Upon agreement

Salary Monthly salary

Number of positions 1

Working hours 100%

City Stockholm

County Stockholms län

Country Sweden

Reference number STÖD 2-3899/2021

- Helin Norberg, Head of section, helin.norberg@ki.se

Contact

Union representative

- Henry Wölling, SEKO, henry.wolling@ki.se
- Niklas Andersson, OFR, niklas.andersson@ki.se
- Göran Engberg, SACO, goran.engberg@ki.se

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