DNR: SU-465-0126-26

Deadline: 2026-09-01

Postdoctoral researcher in genetic analysis of cell fate decisions during neural crest patterning

The Department of Molecular Biosciences, The Wenner-Gren Institute (MBW) conducts research on fundamental problems in molecular cell biology, integrative biology, and infection and immunology. The department offers a highly international and collaborative environment with access to state-of-the-art technologies and infrastructures, including SciLifeLab.

More information: Stockholm University MBW

Project description

Applying a lens of clonal analysis to study the epigenetic control of craniofacial shaping.

We are seeking a highly motivated postdoctoral researcher with strong computational and experimental skills to join the Erickson Lab. The project aims to understand how non-coding variants influence gene regulatory interactions to control the spatial patterning and shaping of the embryonic face.

The Erickson laboratory uses microscopy- and sequencing- based approaches to study the diversification of skeletal, connective, and neuronal tissues from the cranial neural crest during craniofacial formation. In this project, you will perform in vivo cell barcoding, apply multiplexed CRISPR-based perturbations and enhancer assays, and analyse multi-omics datasets using machine-learning based methods to model the epigenetic networks underlying normal versus anomalous cellular states in the embryo. The project is medically relevant because a mechanistic understanding is lacking for a large number of patients born with craniofacial anomalies.

The project is highly interdisciplinary and involves collaboration with Swedish and international partners.

Qualification requirements

Applicants should hold a PhD (or equivalent) in developmental biology, genetics, molecular biology, computational biology, bioinformatics, systems biology, biophysics, or a related field.

Selection criteria

The selection among eligible candidates will be based on their scientific excellence and ability to contribute to interdisciplinary research. The following criteria will be considered:

• Strong experimental background, including work with in vivo models, such as performing minor surgeries or gene delivery to embryos

• Experience with generating and/or analysing large-scale biological datasets (e.g. proteomics, transcriptomics, genomics)

• Computational biology competence, including data analysis in Python and/or R

• Interest in neural crest, cell fate decisions, spatial patterning, skeletal biology, or craniofacial development

• Familiarity with histology, confocal/light-sheet microscopy, whole mount staining, genomic library preparation, single-cell transcriptomics, flow cytometry (FACS), is a plus

• Experience with statistical modeling, machine learning, or advanced maths is an advantage

• Ability to work independently and collaboratively in an interdisciplinary environment

• Excellent communication skills in English

About the scholarship

The position is full-time and based at Stockholm University's Frescati Campus.

Stockholm University strives to be a workplace free from discrimination and with equal opportunities for all.

Contact For further information, please contact:

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Application

Please submit your application by sending an email to alek.erickson@su.se

The application should include:

• CV

• Cover letter describing research interests and motivation

• Contact details of references

Stockholm University contributes to the development of a sustainable democratic society through knowledge, enlightenment and the pursuit of truth.