"Large scale data analysis and integration of human immune cells epigenomes and transcriptomes" within the ERA Chair project.

The Institute of Animal Reproduction and Food Research of Polish Academy of Sciences in Olsztyn, Poland is looking for three PhD students. The PhD students will be part of an interdisciplinary team of researchers led by Prof. Carsten Carlberg with the goal to investigate the effect of vitamin D and other nutritional compounds on changes of the epigenome and transcriptome of tissues and cell types of healthy and (pre)diseased individuals.

Professor Carlberg has expertise, projects and interests in gene regulation, epigenetics and vitamin D in the context of nutrigenomics, immunology and cancer.

Tasks:

- Transcriptome analysis of bulk and single cell RNA-seq data.
- Analysis of Nanopore sequence data for whole genome and methylome.
- Epigenome analysis of ATAC-seq, CUT&Tag data for H3K27ac and VDR.
- Integration of different layers of epigenome data with transcriptome data including the use of machine learning approaches.

Desired qualifications:

- A master degree in: Bioinformatics or Computer Science with some knowledge in bioscience, Biosciences (Biology/ Biochemistry/ Biotechnology) with Bioinformatics/ Statistics and/or Computer Sciences
- Knowledge in molecular biology particularly RNA-seq, ATAC-seq and/or ChIP-seq
- Experience with analysis of high-throughput ‘omics data

Additional Skills:

- High motivation to work in a multidisciplinary team;
- Proactive, motivated, showing initiative;
- Good work organization;
- Fluency in English in writing and speaking;
- Good writing and presentation skills;

Mandatory documents:

- Cover letter describing how they fit the position and their scientific interests and philosophy;
- CV – degrees and other completed courses, work experience and a list of degree projects/theses;
- Degree certificates and grades confirming that you meet the general and specific entry requirements;
- Interdisciplinary Doctoral School application form
- Interdisciplinary Doctoral School consent of processing of personal data

Details:

- **Location:** Poland, Olsztyn, Institute of Animal Reproduction and Food Research, Polish Academy of Sciences (IAR&FR PAS)
- **Research Profile:** PhD student
- **The PhD course length:** 48 months
- **Starting date:** October 1′ 2022
- **Scholarship:** 1200 EUR

Contact and application point:

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