

PhD position – Genetics of paternal factors essential for embryogenesis

What's the use of sperm for embryogenesis? The Döring lab (http://www.molnut.uni-kiel.de/Englisch/index_engl1.html) at the University of Kiel, Germany, is a small group of researchers focusing on the identification and functional characterization of sperm-derived factors that are essential for embryogenesis. The PhD student will receive an intensive face-to-face training by the group leader in both practical and theoretical topics. Likewise, we complement the specialized issues during the doctoral phase through our broad expertise and knowledge in biomedicine and philosophy of science.

For our studies, we use the model nematode *C. elegans* and combine classical genetics with modern methods of developmental biology (e. g. 4-D microscopy), molecular biology (e. g. CRISPR/Cas9), and bioinformatics (e. g. whole genome sequencing data). We are equipped with excellent laboratory facilities (e. g. FACS-based worm-sorter, Laser-Scanning-/ 4-D microscopy) for the research with *C. elegans*. Research cooperation are in place nationally and internationally.

Duties

- Parental-effect tests on temperature-sensitive embryonic-lethal *C. elegans* mutants
- Phenotypical characterization of *C. elegans* mutant embryos using 4-D microscopy
- Characterization of sperm cells obtained from different *C. elegans* mutants
- Identification of phenotype causing alleles using whole genome sequencing or CRISPR/Cas-9 based generation of *C. elegans* mutants
- Biochemical identification, functional cellular expression, and localization of proteins encoded by paternal-effect genes
- Participation in the preparation and implementation of courses and lectures

Requirements

- An outstanding or special (e. g. a notable compilation of elective subjects) university degree (MSc) in nutritional science, biology, biochemistry, molecular biology, or other natural sciences (e. g. physics). An outstanding university degree (MSc) in bioinformatics or related courses is also qualifying
- Profound knowledge (e. g. advanced courses at school) in mathematics, chemistry, and/or physics
- Substantial computer skills (e. g. programming language)
- High intrinsic motivation, dedication to basic science, and venturesome
- Willingness to visit our partners in co-operation for research stays

Desirabilities

- Profound knowledge in classical genetics, developmental biology, biochemistry, and/or cell biology
- Practical experience with model organisms (e. g. bacteria, yeast, worm, fly)
- Applicants with a non-linear curriculum vitae (e. g. second-chance education) are welcome

Applications (in German or English language) with the usual documents (including the last higher school certificate) should be addressed before 2017/03/15 as a single pdf-document to sek@molprev.uni-kiel.de (Prof. Dr. Frank Döring, Department Molecular Prevention, Christian-Albrechts-University Kiel, Heinrich-Hecht-Platz 10, 24118 Kiel). The job interviews will be take place in the first half of April 2017. The vacant PhD position will be filled for three years starting from 2017/06/01. A later starting date is possible.