

## - PhD studentship (m/f/d) -

### Body-axes formation in the spider *Parasteatoda tepidariorum*

The laboratory of professor Prof. Dr. Siegfried Roth, at the Institute of Zoology of the Albertus-Magnus University of Cologne, Germany, is offering a 3-year PhD position. Salary according to German TV-L E13 (65%).

#### **Background:**

Chelicerates are the most basally branching clade of the arthropods, and include horseshoe crabs, sea spiders and arachnids (e.g. spiders and scorpions). Embryonic development of this group of animals is of special interest as they have evolved a very interesting mode of setting up the dorsoventral body axis. This mode involves the establishment of an organizer (called the cumulus) that is analogous to the organizers that can be found in vertebrate embryos (e.g. Spemann organizer of amphibian embryos). Similar to organizer transplantations in vertebrate embryos, transplantation of the cumulus is able to induce axis duplication in spider embryos.

The projects aims to better understand anteroposterior and dorsoventral body-axis formation in chelicerates as well as the formation, patterning and migration of the cumulus. The project will involve next generation sequencing, antibody generation, knockdown and overexpression studies in the common house spider *Parasteatoda tepidariorum*.

#### **Your profile:**

We are looking for a committed, talented and highly motivated PhD candidate with a MSc or an equivalent university degree in biology or a related discipline. The candidate should have a strong background/interest in evolutionary biology. Excellent communication and writing skills in English are essential.

Experience in handling and imaging embryos of arthropod species as well as being experienced in molecular biological techniques like gene cloning, performing protein overexpression and Western Blots would be beneficial.

Bioinformatic skills to analyse next generation sequencing data would be beneficial but are not mandatory.

#### **How to apply:**

Applications should include:

- (1) Letter of motivation (relevant skills, experience and research interests)
- (2) Curriculum vitae
- (3) Official MSc certificates
- (4) Contact details of academic references

Please submit your application electronically as a single PDF file until **June 16th, 2019** to Dr. Matthias Pechmann (Email: [pechmanm@uni-koeln.de](mailto:pechmanm@uni-koeln.de)).

The University of Cologne is an equal opportunities employer. Applications of women are especially encouraged. Handicapped candidates will be given priority in case of equal professional qualification.

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Contact Information:

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