



The Max Planck Institute for Multidisciplinary Sciences is a leading international research institute of exceptional scientific breadth. With more than 40 research groups and some 1,000 employees from over 50 nations, it is the largest institute of the Max Planck Society.

The department of *Tissue Dynamics and Regeneration*, Dr. Jochen Rink, is inviting applications for a

PhD Student or Postdoctoral Fellow (f/m/d)

- on the mechanisms of organ size scaling -

Planarian flatworms lack a fixed body size. When fed, they grow; when starved, they literally shrink. As a result, they continuously scale their adult bodies between 0.5 mm and > 2.5 cm in length or between ~6000 and > 7 000 000 constituting cells. Reversible growth over such a wide size range exposes multiple fundamental unsolved questions, including the scalability of organ form and function in dynamic systems, the mechanistic origins of the famous $\frac{3}{4}$ exponent in metabolic scaling, or if and to what extent biological systems are “aware” of their size.

The branching epithelial network of the planarian intestine accomplishes both the digestion and distribution of ingested food. Understanding the branching laws and cell biological mechanisms that govern its growth and de-growth constitute fascinating challenges in their own right, which are almost certainly also deeply intertwined with the broader topics of metabolic scaling and size-sensing. The project combines volumetric imaging and quantitative image analysis to extract and understand the scaling laws of the planarian intestine. Established tools and techniques are available for querying the underlying molecular mechanisms of branching morphogenesis. The project incorporates an organic theory component in form of our long-standing collaboration with our friends and colleagues in the Jülicher department at MPI-PKS in Dresden. The later stages of the project offer many opportunities for branching out into other aspects of the scaling challenge, depending on personal interests.

Your profile

- You are passionate about the basic research endeavor and you are not afraid of pursuing your questions beyond the current scientific frontier.
- You hold either a Master’s degree or PhD in a broadly relevant subject area.
- You have research experience in one or more of the following: Confocal imaging, live imaging, model system research, image analysis, modeling, or quantitative metabolic analysis.
- You are self-motivated and independent and enjoy being part of an international and interdisciplinary work environment.

What we offer

- A wide range of offers to help you balance work and family life: on-campus kindergarten places including vacation care, parent-child offices, etc.
- Further training opportunities and free in-house language courses
- Spacious campus cafeteria with a wide range of meals (including vegan/vegetarian)
- Health management: free fitness and yoga room, sports groups, course offerings for an "active break"
- Initiatives for sustainability and a green environment with a new biotope



About us

We are a young department at the Max Planck Institute of Multidisciplinary Sciences, one of Germany's premier research campuses. Our research on planarians represents the organismal scale of biology at the institute, but we embrace the many research interfaces that this interdisciplinary campus can offer. Child care facilities, multiple PhD programs, and active student or postdoc research communities are important aspects of life on Campus. Our department is generously equipped with state-of-the-art imaging systems and high throughput liquid handling and we host a large zoo of planarian species for comparative analyses. We are a thoroughly international and interdisciplinary group of lively human beings that share a common passion for biology. We enjoy generous funding from the Max Planck Society and the proximity to picturesque Göttingen with its bustling student bars.

Payment and benefits are based on the German Public Service Payscale (TVöD Bund) guidelines. The starting date is flexible.

The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. The Max Planck Society strives for gender and diversity equality. We welcome applications from all backgrounds.

Application

Applications will be reviewed on a rolling basis until the positions are filled.

Please submit your application including cover letter (explaining background and motivation), CV, transcripts, and publication record, preferably via E-Mail as a single PDF file to

ausschreibung32-22@mpinat.mpg.de

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Information pursuant to Article 13 DS-GVO on the collection and processing of personal data during the application process can be found on our website below the respective job advertisement.