

Prof. Rob Jelier
CMPG - Predictive Genetics and Multicellular Systems
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We are recruiting a PhD student with a background in experimental biology to work on self-organization in multicellular systems.

In the lab we use *C. elegans* embryogenesis as a model to understand how cells can achieve near invariant positioning as they form a complex multicellular system. In this project you will probe the embryo with quantitative microscopy and perturb it a.o. with temporal and spatial resolution using optogenetics. In the lab we search for new relevant molecular actors in positioning, and also explore the role of mechanics, cellular stiffness, adhesion and cell polarization. The research in the group is multi-disciplinary, which in practice means that the experiments and the imaging are supported by research on expanding the molecular biology toolbox, image processing and computational modeling.

The specific content of the PhD project will be developed collaboratively during the first months, with possible research questions related to optogenetic perturbation of cortical tension during morphogenesis or developing an innovative reverse genetic screen for robust cellular positioning. As a member of our team, the successful candidate will have the opportunity to work with state-of-the-art microscopy and computational tools, and collaborate with experts in the field.

The work in the lab revolves around fundamental biological questions using model organisms. We are part of the bioengineering faculty of KU Leuven, which has a strong record of combining advanced modeling with experimentation to study living systems for both applied and fundamental research. In Flanders there is an active community of *C. elegans* researchers, with 4 labs in Leuven. The lab is located on a beautiful campus just outside historic Leuven.

Profile

- Talented and enthusiastic molecular and cellular biology researcher. Master degree in biology, biotechnology, bioengineering, or similar. Good grasp of molecular and developmental biology as well as genetics with an interest in interdisciplinary work.
- Study results should show high aptitude and research interest
- Good communicative skills and a collaborative attitude
- Advanced command of English is required (knowledge of Dutch is not required)

Offer

- A high-profile project with great scientific potential
- Excellent scientific environment in top-ranked university, using state-of-the-art technology and methodology. We publish our research in top journals such as *Bioinformatics*, *E-life*, *Molecular Biology and Evolution*, *Nature Genetics*, *PLoS genetics and Cell Systems*, among others.
- Living in the beautiful medieval university town Leuven, a lively city situated in the heart of Europe, 20 km from Brussels
- Good remuneration and benefits
- Funding is guaranteed (4 years), but the successful candidate will be encouraged to apply for fellowships, such as those by the Flemish funding agency (FWO).
- Applicants should submit a detailed CV and a cover letter expressing your motivation and interest in the position.
- Contact details for two referees who can provide academic references (no letters).
- For further information or to apply you can contact Rob Jelier: Rob.Jelier@kuleuven.be
- KU Leuven JobSite link: <https://www.kuleuven.be/personeel/jobsite/jobs/60203939>