

PhD position in AI and multimodal digital liver pathology

Ref. BAP-2026-622

A full-time PhD position is available for an enthusiastic and highly motivated researcher to develop artificial intelligence methods for the multimodal analysis of chronic liver disease and liver cancer. The position is based in the Govaere Research Group at the Department of Imaging & Pathology, Faculty of Medicine, KU Leuven, and is embedded in a close collaboration with Prof. Jeroen Dekervel, with co-supervision by Prof. Asier Antoranz.

The Govaere Research Group is part of the Laboratory of Translational Cell and Tissue Research and is fully embedded in the pathology department at KU Leuven and University Hospitals Leuven. We study chronic liver disease using patient-derived tissue, digital pathology and molecular profiling, with strong links to hepatology, oncology, pathology, radiology and computational biology. The group is also connected to the KU Leuven Institute for Single Cell Omics (LISCO).

<https://govaerelab.com/>

<https://gbiomed.kuleuven.be/english/research/50000677>

Project

The project aims to develop and validate AI models that combine information from digitised histopathology slides with molecular datasets to predict biologically and clinically relevant features of liver disease. Where suitable datasets are available, MRI-derived information may also be incorporated to extend the approach towards multimodal prediction.

The research will span the inflammation-to-cancer continuum, including metabolic dysfunction-associated steatohepatitis (MASH), alcohol-associated steatohepatitis (ASH) and hepatocellular carcinoma (HCC). Rather than focusing on a single cell type or disease stage, the project will investigate how tissue morphology, molecular programmes and imaging phenotypes jointly capture disease mechanisms, progression and heterogeneity (reference Boesch M et al Nature Genetics 2026).

Research will include:

- Curation, quality control and harmonisation of whole-slide images and linked clinical and molecular datasets.
- Development of computational pathology workflows using deep learning, self-supervised learning, foundation models and/or multiple-instance learning.
- Integration of image-derived features with transcriptomic, spatial-omics, genomic, proteomic or other molecular profiles.
- Exploration of multimodal models incorporating radiological data, particularly MRI, where appropriate.
- Biological interpretation and visualisation of model predictions in close interaction with pathologists, clinicians and molecular researchers.
- Robust evaluation of model performance, generalisability and interpretability using reproducible and well-documented computational workflows.

Key tasks

- Complete a doctoral training programme and conduct original research leading to a PhD in AI and digital pathology for chronic liver disease and HCC.
- Develop, train and evaluate machine-learning and deep-learning models for whole-slide pathology and multimodal biomedical data.
- Work with large, heterogeneous datasets and contribute to data preprocessing, quality control, annotation and documentation.
- Collaborate closely with researchers and specialists in pathology, hepatology, oncology, radiology, molecular biology and biomedical AI.
- Communicate progress and results to the supervisory team and present findings at national and international scientific meetings.
- Prepare scientific manuscripts and contribute to collaborative research outputs and funding applications where appropriate.
- Contribute to the wider academic environment, for example by supporting master's students or educational activities.

Profile

Essential:

- You hold a master's degree in computer science, artificial intelligence, bioinformatics, computational biology, statistics or a closely related field.
- You have strong programming skills, preferably in Python; proficiency in R is an additional asset.
- A solid foundation in machine learning, deep learning, statistics or data science.
- Motivation to work at the interface of AI, pathology and translational liver research, and commitment to completing a doctorate within four years.
- Excellent spoken and written English.
- Ability to work independently while contributing effectively to a multidisciplinary team.
- Strong analytical, organisational and communication skills.

Desirable:

- Experience in computer vision, digital pathology or whole-slide image analysis.
- Experience with self-supervised learning, vision or multimodal foundation models, multiple-instance learning, image-omics integration or explainable AI.
- Familiarity with molecular or spatial-omics analysis, multimodal data integration, radiomics or MRI analysis.
- Prior knowledge of pathology, chronic liver disease or cancer biology; this is welcome but not required.
- Being eligible to apply for a FWO PhD fellowship. See following link for criteria. <https://www.fwo.be/en/support-programmes/phd-fellowships/#>

Offer

- A full-time PhD position for one year, extendable after a positive evaluation, with funding foreseen for a total of four years.
- A multidisciplinary project with access to clinically relevant human datasets and expertise in pathology, molecular profiling, hepatology, oncology, radiology and AI.
- Primary supervision by Prof. Olivier Govaere, in collaboration with Prof. Jeroen Dekervel and with co-supervision by Prof. Asier Antoranz.
- Access to state-of-the-art computational and research infrastructure at KU Leuven.
- Training in computational pathology, multimodal data integration, scientific communication and transferable skills through the KU Leuven doctoral programme.
- Opportunities to collaborate with national and international research groups and present work at scientific meetings.
- A challenging job as part of a small, dynamic and rapidly moving team performing cutting edge research at the forefront of translational science.
- Remuneration according to the KU Leuven scholarships: <https://www.kuleuven.be/personeel/jobsite/en/phd/phd-information#working-conditions>

The PhD can begin as soon as possible, with flexibility in consultation with the supervisor.

Interested?

For more information please contact Prof. dr. Olivier Govaere, mail: olivier.govaere@kuleuven.be.

You can apply for this job no later than November 17, 2026 via the online application tool :

<http://www.kuleuven.be/eapplyingforjobs/light/60770661>

KU Leuven strives for an inclusive, respectful and socially safe environment. We embrace diversity among individuals and groups as an asset. Open dialogue and differences in perspective are essential for an ambitious research and educational environment. In our commitment to equal opportunity, we recognize the consequences of historical inequalities. We do not accept any form of discrimination based on, but not limited to, gender identity and expression, sexual orientation, age, ethnic or national background, skin colour, religious and philosophical diversity, neurodivergence, employment disability, health, or socioeconomic status. For questions about accessibility or support offered, we are happy to assist you at <[a href="https://www.kuleuven.be/wieiswie/en/person/g0003537"](https://www.kuleuven.be/wieiswie/en/person/g0003537) >this email address.