

We are looking to support our rapidly growing team as soon as possible:

-PhD Student in AI-Driven -Digital Twins for Oncology (f/m/x)

Med I / CECAD

TV-L: 25 h/week (64,94%)

limited for 3 years according to WissZeitVG (Third-party funded project)

Your salary will be based on TV-L EG 13 pay scale

Your tasks

- We are looking for an enthusiastic PhD student to join our Integrated Cancer Research Laboratory at the CECAD Research Center in Cologne. The position is part of a newly funded project that aims to build and design digital twins for patients with cancer. The project builds on one of the largest and most comprehensively annotated longitudinal CLL research platforms worldwide, comprising well over 10,000 patients from prospective trials and registries of the German CLL Study Group (GCLLSG), with detailed clinical, genomic, transcriptomic and measurable residual disease (MRD) data. As a PhD student, you will help build a multimodal AI foundation model that integrates longitudinal clinical, genomic, transcriptomic and MRD data to construct “digital twins” of individual patients with CLL. Using self-supervised deep learning and representation learning techniques, you will develop models capable of forecasting disease trajectories, including relapse, treatment response, Richter transformation and second primary malignancies, and of simulating outcomes under different therapeutic scenarios. Through this work, you will contribute to a new generation of AI-driven, personalized risk prediction tools and help translate computational insight into improved care for patients with CLL.

Your future with us

We are one of the leading university hospitals in Germany and network research, teaching and health care at the highest level. That's why many things are a lot bigger for us: the spectrum of exciting development opportunities. The limitless openness with which specialists from all over the world work together here. Or our commitment as an employer to support all employees as best we can in reconciling their job with their goals and life situations.

This is the University Hospital of Cologne: Everything but ordinary.

Your future in detail

The Integrated Cancer Research Laboratory (www.al-sawaf-lab.com), led by Prof Othman Al-Sawaf and based at the CECAD and Department I of Internal Medicine, was founded in 2024 and is funded by a large Emmy-
Noether-Grant of the German Research Council (DFG). The focus of the lab is to integrate multimodal analyses to study the plasticity, evolution and prognosis of cancer with a special focus on hematological malignancies. To this end, the lab utilizes a unique biobank with blood and bone marrow samples from patients treated within large (>900

Your profile

- A Master’s degree in computer science, bioinformatics,
  physics, or a related field
- Excellent programming skills (Python, R)
- Proven experience with deep learning and machine learning
- Experience with computation on high performance cluster architectures is a plus
- Well organized and structured worker, open minded for
  close collaboration in an interdisciplinary team
- Excellent communication in English (written and speech)

Our offer

- A fully funded PhD position
- A great collaborative atmosphere on a modern campus with state-of-the-art core facilities
- Working and living in a great international city in the heart of Europe
- Access to one of the largest and most comprehensively
  annotated longitudinal CLL data platforms worldwide
- A highly motivated group with high national and international visibility of all team members
- Working in a network with academia and industry
- Regular active attendance of national and international scientific meetings
- Position is for a fixed term of 3 years, but with possible long-term prospects

patients) prospective clinical trials. The group is embedded in a network with many local collaborators, including the Collaborative Research Center (CRC) 1530 (https://sfb1530.de/) and the German CLL Study Group (GCLLSG), as well as many national and international partners in academia and industry. Would you like to join us or want to hear more? Feel free to reach out to
Dr Othman Al-Sawaf (othman.al-sawaf@uk-koeln.de) in case you have any questions or submit you application via the link below (including a detailed CV, list of publications, two references and a brief statement on your research interests).

Applications from female candidates are expressly welcome and will be given priority in the event of equal suitability, competence and professional performance. People with disabilities are welcome to apply and will be treated preferentially in the event of equal suitability and qualification.

Contact

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Geschäftsbereich Personal
Kerpener Str. 62
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Uniklinik Köln Karriere

Application deadline:

Job-ID: 8f1136tq

apply now

We look forward to receiving your application and getting to know you!