



CoAGE

Join us as a PhD student!

You are thinking of doing your PhD in the Life Sciences and are interested in research topics like healthy ageing and age-associated diseases? The Cohorts for Healthy Ageing (CoAGE) is offering **talented scientists** the chance to work on **cutting edge research projects in the field of ageing research and epidemiological studies**.

You will be part of the CoAGE graduate programme. This programme focuses on investigating the causes of age-related diseases, such as cardiovascular diseases, diabetes and cancer, and why they often occur together. CoAGE brings together experts who are studying healthy ageing and age-related diseases to address current issues in an interdisciplinary manner. Each of these experts leads one of the major German ageing studies and will supervise a CoAGE PhD student where the study is located.

PhD position on 'Multi-organ ageing clocks' in Bonn, Germany

Ageing is a major risk factor for most chronic non-communicable diseases, including neurodegenerative and cerebrovascular diseases. However, the effects of aging vary among individuals and can even differ between organ systems. Consequently, biological age serves as a more informative marker of aging compared to chronological age. Initial aging clocks were derived from blood-based molecular markers, including epigenetic, proteomic, metabolic, and inflammation clocks. More recently, estimating biological age at the organ system level has become possible thanks to advances in machine learning and the accessibility of phenotypical data from large population cohorts. However, the reproducibility of these clocks across studies is limited.

This PhD thesis aims to enhance the estimation of biological age across the CoAGE cohorts and explore the relation of the biological age gap across different organ systems. We will establish a German multi-organ clock and validate it against proxies of health status (e.g., the frailty index) and molecular aging clocks to assess its potential as an aging biomarker. Finally, we will investigate its potential in predicting cardio- and cerebrovascular and neurodegenerative diseases across German cohorts.

Supervision: Monique Breteler (DZNE Bonn); [The Rhineland Study](#)

Requirements

Are you an ambitious scientist looking to push the boundaries of research while interacting with colleagues from multiple disciplines and cultures? Would you like to employ **bioinformatics and cutting-edge computational biology** to advance translational research? Then joining CoAGE is your opportunity to give your scientific career a flying start!

Further requirements:

- Master or equivalent
- Interactive personality & good command of English
- 2 letters of reference
- background in bioinformatics, biostatistics or data science is a plus

What else you need to know

- **Starting Date:** 01.10.2024
- **Duration:** 3 years
- **Deadline:** 31.08.2024

Have we sparked your interest?

To apply, please send a **single PDF file** containing your cover letter, CV, certificates and at least two professional references to coage-recruiting@imb.de. In your email, **please specify the project for which you are applying**. IMB is an equal opportunity employer.

Declaration of Consent and Data Protection

By sending us your application, you are consenting to us saving your personal data in order to carry out the selection process. You can find more information on data protection and retention periods at <https://www.imb.de/jobs/data-protection>.