PhD student position in spatial genome regulation by the environment

We are looking for a **PhD student** to join the recently established group of Dr. Daphne Cabianca, **Institute of Functional Epigenetics (IFE), Helmholtz Munich, Germany,** starting anytime from **autumn 2022 to spring 2023,** to decipher the role of spatial genome organization during early life environmental challenges. In our group and within IFE, you will find a scientifically stimulating international environment, with researchers coming from all over the world. Supported by an excellent infrastructure, you will aim to solve fundamental questions of epigenetics, molecular and organismal biology.
https://www.helmholtz-munich.de/ife/research/daphne-cabianca-environment-and-nuclear-organization/research/index.html

The spatial organization of chromatin within the nucleus is not random: active and inactive regions of the genome are spatially segregated, with silenced domains localizing at well-defined nuclear compartments.
What is the function of chromatin spatial organization?
In this project, you will use *C. elegans*, the only organism where it is currently possible to impair chromatin compartmentalization globally by mutating a single gene, to uncover the function of genome architecture in response to environmental inputs within a whole organism. In particular, you will determine whether i) chromatin compartmentation helps in the transcriptional response to unscheduled stimuli ii) a failure to spatially organize chromatin during early-life stress influences late-life phenotypes.

To achieve our goals, we combine high-resolution live microscopy, survival and developmental assays and cutting-edge molecular biology techniques like RNAseq, ChIPseq and CRISPR-Cas9 genome editing.

See publication: **Cabianca DS**, et al. Active chromatin marks drive spatial sequestration of heterochromatin in differentiated cells. **Nature 2019**, May;569(7758):734-739.

Your Qualifications

- Master's degree in molecular or cell biology or similar fields
- Wet lab experience and skills in molecular and cell biology
- Basic knowledge of bioinformatics tools
- Strong motivation and curiosity for science and epigenetics
- Excellent skills in spoken and written English

What we offer you

- A challenging and innovative scientific topic to be conducted in the vibrant scientific environment of the Helmholtz Center Munich (HMGU), a world-class biomedical research institute dedicated to understanding the molecular mechanisms of health and disease.
- Joining an excited young group that you can help thrive!
- The possibility to join the cutting-edge community of epigenetics researchers based in Munich.
- On site career-building programs to help you with your professional and personal development.
- A competitive salary and social benefits in accordance with the collective agreement for the public service (EG 13 65 % TV EntgO Bund).
- The position is funded for 3 years, but under certain circumstances an extension can be arranged.
- Munich, with its numerous lakes and its vicinity to the Alps, is one of the cities with the best quality of life worldwide. With its first-class universities, research institutes and a vibrant cultural life, Munich offers an intellectually stimulating environment.

Interested applicants should send a **CV**, a **cover letter**, detailing research interests and reasons for applying to the position, and contact details of at least 2 referees. Please submit all documents electronically to Daphne Cabianca: *daphne.cabianca@helmholtz-muenchen.de*