

As German Research Center for Environmental Health, Helmholtz Zentrum München pursues the goal of developing personalized medical approaches for the prevention and therapy of major common diseases such as diabetes mellitus, allergies and lung diseases. To achieve this, it investigates the interaction of genetics, environmental factors and lifestyle.

HPC transforming discovery is an innovation campus with a startup culture, routed in the Helmholtz Zentrum München. HPC stands for the smart fusion of biomedical sciences, engineering and digitization in a research environment that has no parallel in Europe. Helmholtz pioneers pave the way for tomorrow's biomedical breakthroughs. Teams of top scientific talents from all over the world work together on the development of novel solutions that make a difference in the prevention, diagnosis and treatment of metabolic diseases. The focus of our identity is a pioneering spirit and an innovative research culture.

To support the efficient deployment of newly recruited Pioneer Teams we are now recruiting

## Two Postdoctoral Positions - Biomedical Science (f/m/diverse)<sup>2018/0568</sup>

### Job Description

Martinez-Jimenez laboratory aims to compare “molecular age” (predicted by molecular features such as DNA methylation, chromatin accessibility and cell-to-cell transcriptional variability) with conventional “chronological age” (defined by the age of an individual in time units, years). These molecular features will be used to decipher the impact of cellular variability on tissue function during ageing and chronic disease.

The Martinez-Jimenez laboratory is based on an integrative and collaborative approach, working closely with other groups in the Helmholtz Zentrum München. Martinez-Jimenez Lab integrates single-cell genomic approaches (transcriptomics, epigenomics and metabolomics) to study how ageing affects individual cells, different tissues and impact the health of the whole organism.

### Our Offer

At the Helmholtz Zentrum München, you can contribute together with leading researchers to the investigation of the development, prevention and treatment of environmental diseases such as diabetes, chronic lung diseases and allergies. In order to further promote your professional development, we offer extensive and targeted research training and career programmes. We support the reconciliation between work and private life with flexible working time models, occupational health management, day care facility for children, a childcare subsidy, Elder Care, as well as other counseling and support services.

The candidate will be integrated within the Helmholtz Zentrum München and will benefit of the revolutionary and multidisciplinary environment in the Helmholtz Pioneer Campus (HPC). HPC stands for the innovative fusion of biomedical sciences,

Within the Postdoc project you will have the following key responsibilities:

#### Research and scholarship

- Undertake basic research, preparing, setting up, conducting and recording the outcome of experiments and field work
- Conduct literature and database searches
- Contribute to the production of research reports and publications, as well as grant preparations and public engagement activities.
- Liaise with group leader to ensure that all control of hazardous substances, genetically modified organisms and other risk assessment documents are up to date.
- Present information on research progress and outcomes to bodies supervising research, e.g. steering groups, sponsors or members of research groups.
- Analyze and interpret the results of own research and generate original ideas based on outcomes.
- Set and maintain appropriate standard operating procedures
- Assist with reporting of in vivo procedures to the appropriate authorities.
- Maintain records on paper and electronically of all documents and experimental procedures

#### Teaching and learning support

- Assist in the supervision of students projects
- Provide limited supervision/instructions to classes
- Make internal and external contacts to develop knowledge and understanding and form relationships for future collaborations

#### Planning and organizing

- Co-ordinate own work with that of others to avoid conflict or duplication effort
- Contribute to the planning of research projects
- Create and maintain databases of laboratory chemicals, cell lines, tissues, etc as well as experimental protocols

#### Special knowledge and skills

engineering and digitization in a collaborative research environment with exceptional resources and leading-edge infrastructures. Personal development plans will be studied for each candidate individually to tailor their training and acquisition of competences during the stay in the lab. Benefits include 30 days holidays and additional Bavarian legal holidays.

Remuneration and benefits are in accordance with the collective agreement for the public service (TV EntgO Bund).

The position is initially limited to two years with the option of extension for up to five years.

The activity involves special knowledge and experience specific to own scientific skills.

As a holder of the Total E-Quality Award, we promote equality of opportunity. In order to increase the proportion of women in management positions, we would be pleased to receive corresponding applications. Qualified applicants with physical disabilities will be given preference.

We are looking forward to receiving your comprehensive online application (motivation letter, CV, contact details of at least 2 referees) as a single pdf until January 7, 2019

[Apply now](#)

Informal enquiries are strongly encouraged and should be addressed to Dr. Celia P. Martinez-Jimenez at [celia.martinez@helmholtz-muenchen.de](mailto:celia.martinez@helmholtz-muenchen.de) or on +49 (0) 89 3187 49863.

Helmholtz Zentrum München  
Deutsches Forschungszentrum für Gesundheit und Umwelt (GmbH)  
Helmholtz Pioneer Campus  
Ingolstädter Landstr. 1

85764 Neuherberg near Munich

- Employ cutting-edge functional genomics, experimental models and computational analyses (in collaboration with the Institute of Bioinformatics and Systems Biology - IBIS).
- Experience in molecular biology and tissue culture techniques
- Development and maintenance of mouse models and ageing colonies (including wild type and knock out mice).
- Develop and perform single-cell RNA-seq, single-cell ATAC-seq, single-cell metabolomics and combined omics methodologies using manual and liquid handling platforms.
- Expand the in vitro and in vivo models to study human chronic diseases using fresh or archived human samples
- Meticulous attention to detail in experimental design and execution is required

### **Your Qualifications**

- We are looking for a postdoctoral fellow interested in the molecular mechanisms of ageing at the single-cell level. This fully funded positions involve highly interdisciplinary research combining methods from mouse genetics, single-cell genomics and computational biology.
- You hold, or about to be awarded, with your PhD with an excellent publication record (including at least one first author, peer-reviewed research paper).
- Your PhD degree should be in either, Biology, Biochemistry, Biotechnology, Molecular Biology or related biomedical science
- It is essential to have proven experience with in vivo models including FELASA or equivalent certification.
- You should have strong experimental skills in either functional genomics and/or molecular biology.
- Experience in liver biology and FACS sorting is highly desirable.
- Strong organisational skills, self-driven to work independently, and with a positive and collaborative attitude to engage with biomedical and computational scientist, and clinical

colleagues.

- Fluent in written and spoken English



The award highlights  
our commitment of  
gender equality.

[www.helmholtz-muenchen.de/en](http://www.helmholtz-muenchen.de/en)

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RESEARCH FOR GRAND CHALLENGES