

Max Planck Institute for Molecular Biomedicine



MAX PLANCK GESELLSCHAFT

The Max Planck Institute for Molecular Biomedicine in Münster, Germany has openings for several **Postdoctoral Research Fellows** (position code 16-2018) in the Department Tissue Morphogenesis (Prof. Dr. Ralf H. Adams). Potential research areas include:

Mechanisms of artery formation

Arteries distribute blood into peripheral organs, are indispensable in the healthy organism and their dysfunction is the cause of several human disease conditions. Our work has recently provided new and exciting insights into the specification of arterial endothelial cells in the postnatal retina (Pitulescu et al. 2017, Nat Cell Biol. 19:915-927). The successful applicant will investigate novel candidate regulators of artery formation in different organs with a combination of genetic studies in mice, confocal and time-lapse microscopy, immunohistochemistry, cell/tissue culture, biochemistry, molecular biology, and bioinformatics.

Role of pericytes in tissue morphogenesis

Pericytes modulate the properties of endothelial cells and thereby contribute to vascular integrity. Recent work from our group has uncovered that pericytes also control lung development through the release of growth factor signals acting on pulmonary epithelial cells. The successful applicant will investigate organ-specific properties of pericytes and study the role of specific signals and pathways. Techniques include genetic approaches in mice, high-resolution imaging, single cell RNA sequencing, and ex vivo co-culture assays with pericytes and other cell types.

Crosstalk between blood vessels and bone-forming cells

Our recent work has provided fundamental insights into the structure and molecular properties of blood vessels in the skeletal system (Kusumbe et al. 2014, Nature 507:323-328). Key findings include the identification of a capillary subtype supporting osteoblast-lineage cells and bone formation, new insights into the organization of vascular niches for hematopoietic stem and progenitor cells, and the discovery of vascular changes in aging bone. The successful applicant will investigate the crosstalk between vascular cells, bone-forming cells and/or cells of the hematopoietic system with a set of powerful methods including advanced bone imaging utilizing confocal and two-photon microscopy.

We invite applications by enthusiastic, committed and highly talented scientists who wish to join our highly international team (<http://www.mpi-muenster.mpg.de/97660/team>). Funding is initially offered for three years with the possibility of extension. The salary is based on the standard German TVöD scale for civil servants and depends on experience. Extra administrative help will be available for foreign scientists. English is the working language in the institute.

The Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply. The Max Planck Society is also committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals.

More details about the Adams Department and the institute can be found here:

<http://www.mpi-muenster.mpg.de/96841/adams>

<http://www.mpi-muenster.mpg.de/en>.

Please send your application (with the position-code 16-2018) and CV preferentially in English and the names of 2 referees via email to:

career@mpi-muenster.mpg.de

or to:

Max Planck Institute for Molecular Biomedicine
Administration
Roentgenstrasse 20
48149 Muenster
Germany