Institut für Pharmakologie und Toxikologie
Fakultät für Medizin
Technische Universität München

Opportunities for Talents

To strengthen our team, we are offering 2

PhD positions on long non-coding RNA in cardiovascular research

About the institute

The Institute of Pharmacology and Toxicology is part of the Medical Faculty of the Technical University of Munich (TUM), one of the leading universities of Germany (rewarded with one of three clusters of excellence). The focus of our research is the mechanism of action of noncoding RNAs in the heart and their therapeutic applicability in cardiac disease. Our team excels in the preparation as well as the targeting of specific cardiac cells in vitro and in vivo. We have a longstanding expertise in the noncoding RNA field that is documented by a number of high-profile publications [1–3]. The newly established SFB (Sonderforschungsbereich) on “Non-coding RNA in the cardiovascular system” starting this summer aims to elucidate the function and mechanism-of-action of non-coding RNAs. To expand further into the analysis of long non-coding RNAs, we are looking for two motivated PhD students to join our group.

Our offer

The position is available as of now, we plan a PhD project to last between 3 and 4 years.
We offer thorough training in:

- Performing a wide spectrum of molecular, cell biology-related and computational methodologies and techniques, such as DNA cloning, viral transduction, RNA-detection methods, flow cytometry, generation and analysis of RNA-Seq data etc.
- Development of new methods and experimental plans.
- Writing and presenting your scientific work.
- Within the framework of the SFB, you will be able to attend to workshops (e.g. analysis of Next Gen sequencing data) and perform experiments in collaborating labs

In addition, you will

- Work closely with the project-leading PostDoc.
- Join a highly motivated and international team with a high PostDoc to student ratio.
- Operate state-of-the-art technologies and instruments, such as the Chromium (10x Genomics) for single cell sequencing, high content imaging system or a cell sorter.
- Join the TUM Graduate School and benefit from educational programs etc.
- Receive a 3-year contract with the possibility to prolong, payment according to TV-L (E13 / 65%).

Your qualifications

- You are a highly motivated student that takes great interest in research, is curious and excited to learn and optimize new methods and experimental approaches.
- Practical experience in molecular biology, cell culture and, ideally, RNA methodologies.
- You have a high degree of responsibility, are independent and enjoy working in a team.
- Good command of English (written and oral).
- M.Sc. or Diploma in Biochemistry, Biology, Molecular Biotechnology or a related discipline.

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Your application

TUM has been pursuing the strategic goal of substantially increasing the diversity of its staff. As an equal opportunity and affirmative action employer, TUM explicitly encourages nominations of and applications from women as well as from all others who would bring additional diversity dimensions to the university's research and teaching strategies. Preference will be given to disabled candidates with essentially the same qualifications.

Notes on data protection:
As part of your application for a position at the Technical University of Munich (TUM), you submit personal data. Please note our privacy policy in accordance with Art. 13 General Data Protection Regulation (DSGVO) http://go.tum.de/554159 for the collection and processing of personal data in the context of your application. By submitting your application, you confirm that you have read the data protection notices of TUM.

Please send your complete application documents (cover letter, C.V., recommendations/references, certificates) as a pdf file via email to the following address:

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2. Ganesan, J. *et al.* MiR-378 Controls Cardiac Hypertrophy by Combined Repression of Mitogen-Activated Protein Kinase Pathway Factors. *Circulation* **127,** 2097–2106 (2013).
3. Sassi Y, Avramopoulos P, Ramanujam D, Grüter L, Werfel S, Giosele S, Brunner AD, Esfandyari D, Papadopoulou AS, De Strooper B, Hübner N, Kumarswamy R, Thum T, Yin X, Mayr M, Laggerbauer B, Engelhardt S. Cardiac myocyte miR-29 promotes pathological remodeling of the heart by activating Wnt signaling. *Nat Commun*. 2017 Nov 20;8(1):1614. doi: 10.1038/s41467-017-01737-4.