TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world’s most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the Cluster of Excellence "Physics of Life" (PoL), the Junior Research Group Data-Driven Modeling of Living Matter (Dr. Xingbo Yang) and the Chair of Cell and Tissue Control (Prof. Dr. Miki Matsuda, nee Ebisuya) offers a joint project position as

Research Associate / Postdoc (m/f/x)
(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting as soon as possible. The position is initially limited until December 31, 2025, with the option of extension in follow-up projects. The period of employment is governed by § 2 (2) the Fixed Term Research Contracts Act (Wissenschafterzeitvertragsgesetz - WissZeitVG). The Cluster of Excellence PoL (https://physics-of-life.tu-dresden.de/en) is an interdisciplinary research center at TUD dedicated to quantitative biology and biophysics. It is funded by the German Research Foundation (DFG) and offers a wide range of support structures, including state-of-the-art light microscopy and advanced bio-image data science facilities in the outstanding Dresden environment.

Tasks: Dr. Xingbo Yangs Junior Research Group (https://physics-of-life.tu-dresden.de/research/core-groups/yang) and the Prof. Dr. Miki Matsudas Chair (https://physics-of-life.tu-dresden.de/research/core-groups/ebisuya) jointly seek an independent, passionate, and motivated Postdoc to take on a novel and highly interdisciplinary project on the spatiotemporal measurement of mitochondrial metabolic flux in brain organoid zoo. This project is built upon a new metabolic imaging technique developed in the Dr. Xingbo Yangs Junior Research Group to measure mitochondrial metabolic fluxes in living cells with single and even subcellular resolution. The candidate will apply this technique to measure spatiotemporal metabolic fluxes in a unique brain organoid zoo across mammalian species (human, mouse, etc.) developed at Prof. Dr. Miki Matsudas Chair. The goal of the project is to test 1) whether metabolic heterogeneities are correlated with neural cell fates in developing organoids and 2) if there is any allometric scaling relation between cellular metabolic rate and animal body mass. Methods include live cell metabolic imaging, quantitative image analysis, genetic/biochemical perturbations, and biophysical modeling.

Requirements:
- university and PhD degree in physics, biology, biochemistry or related fields
- experience with metabolism research is an advantage
- experience with quantitative biology and biophysical modeling is desirable
- strong interest in working in an interdisciplinary environment
- excellent communication and presentation skills in English.
What we offer: We offer the opportunity to shape a novel and exciting research project at the interface of physics, biology and biochemistry, while developing your academic or professional career. You will be imbedded within the highly interactive, and interdisciplinary research environment of PoL and the wider Dresden Campus, which includes other high-quality scientific institutions. You will be presented with many opportunities for collaboration with our strong local and international collaborators. You will be exposed to world-class research on diverse topics through regular scientific seminars and occasional retreats. You will have the possibility to acquire project management skills, team leading skills, and teaching skills. You will be supported for fellowship application and career development. Employment conditions include a comprehensive package with full social benefits. Dresden offers a high-quality of life with a relatively low cost-of-living.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application (letter of motivation, CV with publication list, and contact details for 3 referees) with the usual documents by November 20, 2023 (stamped arrival date or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file to our administrative assistant Diana Stöhr with the subject “2023-postdoc-organoid-metabolism” to diana.stoehr@tu-dresden.de or to: TU Dresden, Exzellenzcluster “Physik des Lebens”, z. Hd. Diana Stöhr, Arnoldstr. 18, 01307 Dresden, Germany. Evaluation of the application will start immediately and the position will remain open until filled. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.