



**PhD position in redox regulation
of mitochondrial calcium signalling in the Riemer lab
at the University of Cologne**

THE ENVIRONMENT: The Riemer Group (<http://riemerlab.uni-koeln.de/>) is part of the Institute for Biochemistry at the University of Cologne. Cologne is a vibrant city with a rich and dynamic cultural life. The University of Cologne is situated very close to the city centre. It is one of Germany's excellence universities with almost 50,000 students and a strong life sciences focus.

Research in the Riemer laboratory focuses on different aspects of redox biology. For example, we characterize the mechanisms of disulphide formation and hydrogen peroxide signalling in different cellular compartments. We are also interested in the physiological impacts of these processes for example in calcium and in metabolic signalling (Bien *et al*, Mol Cell 2010; Kojer *et al*, EMBO J 2012; Suzuki *et al*, Nature Comm. 2013 and Petrunaro *et al*, Cell Metabolism, 2015). To this end, we work with yeast and mammalian cells as well as purified proteins as model systems and apply a wide variety of biochemical, cell biological and biophysical approaches.

THE PROJECT: We recently characterized redox influences on mitochondrial calcium uptake in mammalian cells (Petrunaro *et al*, Cell Metabolism, 2015). We want to extend on this work by dissecting the role and therapeutic potential of the mitochondrial calcium uniporter (MCU) complex in human melanoma. We will thereby combine clinical, cell biological and biochemical aspects to understand the role of this complex and further IMS enzymes on melanoma pathobiology and drug resistance.

The project will be a collaborative effort with the Bogeski group in the Institute for Physiology at the University of Goettingen (Germany) offering many opportunities for teamwork and a broad spectrum of technical approaches ranging from redox biochemistry techniques over calcium imaging approaches to experiments with patient cell lines.

WHAT WE OFFER: We offer an exciting project, extensive training in different experimental techniques and concepts, and how to perform good and reliable science. We offer a competitive salary for a minimum of three years (according to the German TvL scale, initially a 50% E13 which can increase to 65% E13). The laboratory language in our international team is English (i.e. knowledge of German is not required). The PhD position is available from November 2017 or upon mutual agreement.

WHAT YOU SHOULD BRING ALONG: First and foremost, you should bring along enthusiasm for science, curiosity, the drive to push a project to a successful ending and the willingness for teamwork. You should hold a Master's degree in biology, biochemistry or another subject with a molecular life science background. During your Bachelor and Master studies you should have demonstrated outstanding performance. Experience with cell culture work and biochemical experiments is appreciated; knowledge of redox biochemistry is not required.

HOW TO APPLY: Please send the usual documents (cover letter describing your motivation and highlighting your expertise, contact details of referees, CV, certificates including university exams) to Jan (jan.riemer@uni-koeln.de). In case of further questions, please also contact Jan. The University of Cologne is an equal opportunities employer.