UNIKLINIK KÖLN

Master/Bachelor Thesis Project

Mitochondria, as a central hub for metabolism, are affected in a wide variety of human diseases but also during normal ageing. Mitochondrial quality control mechanisms work at different levels, where mitophagy and its variants are critical to remove dysfunctional mitochondria. We base our research on the molecular mechanisms governing mitochondria quality control and how this is related to several human diseases:

i) we have identified the molecular players involved in targeting mutated mtDNA from the mitochondrial network without affecting the total mitochondrial pool. We aim to characterize better this process known as piecemeal mitophagy.

ii) we investigate the role of GDAP1 and Frataxin in the interphase of mitochondria and endoplasmic reticulum. Human mutations on these genes are linked to Charcot-Marie-Tooth disease and Friederich Ataxia respectively,

For these projects, we are seeking for highly motivated students to perform her/his Master or Bachelor thesis. We offer a friendly atmosphere in a small but successful group and provide access to state of the art equipment, either in our lab or in the central facilities of CECAD and the ZMMK.

If you are interested, please contact Dr. David Pla Martín (dplamart@uni-koeln.de) or Prof. Rudolf Wiesner (rudolf.wiesner@uni-koeln.de) and send your CV and motivation letter. After a probation period, we may be able to offer financial support.