

Cologne Seminar Series on Ageing

Speaker: Prof. Claudio Joazeiro

Center for Molecular Biology (ZMBH), University of Heidelberg,
Germany



Thursday, 26 April, 2018, at 16:00

CECAD Research Center
Joseph-Stelzmann-Str. 26
Lecture hall, ground floor

Host: Thorsten Hoppe (CECAD)

Scientific Background:

- Professor, Center for Molecular Biology (ZMBH), University of Heidelberg, Germany, since 2016
- 2012-April 2018: Associate Professor, Department of Molecular Medicine, The Scripps Research Institute, La Jolla
- 2006-2012: Assistant Professor, Department of Cell Biology, The Scripps Research Institute, La Jolla
- 2000-2006: Principal Investigator at the Genomics Institute of Novartis, San Diego
- 1997-2000: Postdoc, The Salk Institute, San Diego
- 1996: PhD at the Department of Biology, University of California, San Diego

Title: ‘Ribosome-Associated Quality Control (RQC) and Neurodegeneration’

About Prof. Joazeiro’s talk:

My laboratory is interested in understanding how cells know when its macromolecular or structural components are aberrant or damaged, and then decide on ways to either correct or eliminate them. We study this issue in the context of protein quality control, a process critical to ensure proteome integrity and cellular fitness; further underscoring its relevance, defective protein quality control is a hallmark of neurodegenerative diseases.

In eukaryotes, key factors conferring specificity to protein quality control are molecular chaperones and E3 ubiquitin ligases. We had previously discovered an E3 ligase, Listerin/Ltn1, that is associated with ribosomes and marks certain aberrant proteins for proteasomal degradation co-translationally (Bengtson & Joazeiro 2010, Nature 467:470-3); this process is now known as Ribosome-Associated Quality Control (RQC). Moreover, we have found that Listerin mutation causes neurodegeneration in mice (Chu et al 2009, PNAS 106:2097-103), suggesting we may obtain new clues on mechanisms underlying neurodegenerative diseases by studying the RQC pathway. In my talk I will present an overview of our work aimed at elucidating fundamental RQC mechanisms, as well as discovering novel molecular mechanisms underlying neurodegeneration.

We are looking forward to an interesting talk and subsequent discussion with wine and cheese!



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