Postdoctoral positions in
Protein structural dynamics and folding
using HDX-MS
Rega Institute, KU Leuven, Belgium

The Laboratory of Molecular Bacteriology, Rega Institute, Department of Microbiology, Immunology and Transplantation, KU Leuven (https://rega.kuleuven.be/bac/economou) wishes to recruit 2 postdoctoral fellows in the following projects:

a. Secretory protein non-folding and folding and how it is regulated by intrinsic and extrinsic (e.g. chaperones) factors.
b. Structural dynamics of membrane associated/embedded channels and motors.

The lab studies protein trafficking through the Sec and the Type III secretion systems (Tsirigotaki 2018 Structure; Chatzi 2017 JCellBio; Portaliou 2018 EMBO J; Saio 2014 Science 344, 6184; Gouridis 2013 Molecular Cell 52, 655; Chen 2011 Molecular Cell 44, 734; Gouridis 2009 Nature 462, 363; Gelis 2007 Cell 131, 756) and disordered/flexible human proteins involved in disease and chaperoning (e.g. Bcl-2 and IP3-regulate Ca^{2+} channel, prolyl oligopeptidase, γ-secretase; Monaco 2017 FEBS; Tsirigotaki 2017 SciReports). We use multi-disciplinary approaches that combine enzymology, protein chemistry, molecular genetics, biophysics, structural biology, single molecule FRET and mass spectrometries, in a very international environment.

Successful candidates should:

- hold a PhD in Chemistry or Biochemistry or Physics or a related degree
- have experience in using HDX-MS or other MS methods. Our lab MS, a Waters Synapt G2, is equipped with a nanoAcquity UPLC and HDX capabilities. We also have direct access to two Orbitraps: a Q-exactive and an Elite. We use MassLynx, PLGS, DynamiX and in-house developed software.
- be experienced in protein purification and biochemistry.
- have a genuine interest in research and scientific discovery and particularly in protein structural dynamics, protein interactions and folding.
- have a good command of English

Additional experience in biophysical methods and/or bioinformatics will be appreciated. Both positions are available immediately.

Applications, including: a) complete CV, b) list of scientific publications, c) short summary of performed research project(s) and hands-on experience with MS instruments and d) names and contact details of 2-3 referees, should be sent to:
Prof. Tassos Economou (tassos.economou@kuleven.be, subject: HDX_2020_LMB)