Ph.D. Position in Proteostasis Systems Biology  
(Code: #MB-JRC-COMBINE)

13th July 2016

The research group of Dr. Marc Brehme at the Joint Research Center for Computational Biomedicine (JRC-COMBINE) in Aachen, Germany is looking for a Ph.D. student, who would like to pioneer the exciting new field of proteostasis systems biology.

Protein homeostasis, or proteostasis, refers to a state of proteome balance and native function that is essential for cellular and organismal health. Proteostasis imbalances and collapse are increasingly implicated in a broad spectrum of disorders, including protein-misfolding diseases. The Proteostasis Network (PN) is an intricately regulated modular network of conserved processes that have evolved to maintain proteostasis. Recent work has identified a chaperome sub-network as a proteostasis safeguard in age-onset neurodegenerative diseases (Brehme et al, Cell Reports 2014). This project represents a unique opportunity to contribute to the systems-level elucidation of PN deregulation across the human diseasome, providing a rationale and testable hypotheses for PN based markers and therapeutic strategies. This interdisciplinary project will involve computational systems biology, mathematical modeling, dimension-reduction and graph theoretic approaches alongside collaborations with experimental and clinical partners. The Brehme group maintains a highly collaborative culture with the research groups of Julio Saez-Rodriguez and Andreas Schuppert. If you are willing to trail blaze, working in a young research group in an up-and-coming field of high biomedical relevance, at the intersection of academia, clinics and industry, and if you combine a biomedical background with coding skills, this opportunity is for you.

About JRC-COMBINE  • The Joint Research Center for Computational Biomedicine (JRC-COMBINE) is a joint initiative between RWTH Aachen University, RWTH Aachen University Hospital (UKA), and the Bayer AG, combining computational, mathematical modeling, and systems biology approaches with expertise from academia, industry and the clinics. We are dedicated to linking bench and bedside through computational models with translational potential for the clinics, and tangible benefit for industry.

Candidate requirements  • As an ideal candidate, your profile unites a background in a life sciences or biomedical subject area with strong practical experience in computational sciences, bioinformatics or engineering. Experience in data analysis and visualization, including strong practical knowledge in programming languages such as R and Python are a mandatory requirement. You should embrace interdisciplinary research at the intersection of computational sciences, molecular systems biology and clinical research in order to thrive in this position. You are highly motivated, driven and hard working with an inclusive cultural mindset and excellent interpersonal and communication skills. The working language at JRC-COMBINE is English.

Application details  • To apply, please send your CV and cover letter, clearly outlining your motivation to join, including names and contact information of 2 – 3 professional references mentioning #MB-JRC-COMBINE in the subject line to jobs@combine.rwth-aachen.de. The starting date is relatively flexible and can be discussed. Priority will be given to applications received by August 31st 2016.

For more information please visit http://www.combine.rwth-aachen.de.