

Training Opportunity for Portuguese Graduates

Call for applications 2019

Title	Duty Station
Developmental Biology: Cell shape and morphogenesis (Directors' Research, Leptin Group)	EMBL Heidelberg/Germany
Supervisor name and function Maria Leptin, Group Leader and EMBO Director	
Domain of activity and project Developmental Biology [Cell shape and morphogenesis: subcellular and supra-cellular mechanisms]. Measuring Physical and Material Properties of Cell Populations During Early Drosophila Development. A realistic understanding of any morphogenetic process is based on knowledge of biophysical properties of the developing tissue. Our lab is currently adapting two independent tools to measure physical properties of the cell populations during early development in fruit fly embryo. The first technique is based on injecting ferrofluids in developing embryo and measuring their response to an external magnetic field. The second technique uses Brillouin microscopy to investigate intracellular biomechanics by measuring tissue compressibility. The projects would require measurement of mechanical forces and development of a computational framework to understand these properties in the context of morphogenesis.	
Required education Engineering/Technical	
Knowledge, skills and any special requirements A background in Physics and/or Maths with interest in Biology	
Training opportunity for the Graduates Introduction to basic Drosophila genetics; Bioimaging and analysis; Computational modelling and Brillouin Microscopy.	
Further information (website) https://www.embl.de/research/units/directors_research/leptin/index.html	