

## **Biographies**

Dr. Kevin Chalut, Dr. Thierry Jaffredo, Dr. Fabienne Lescroart

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### **Dr. Kevin CHALUT**

Principal Investigator / Group Leader, Cambridge Stem Cell Institute  
University of Cambridge, UK

<https://www.stemcells.cam.ac.uk/people/pi/chalut>



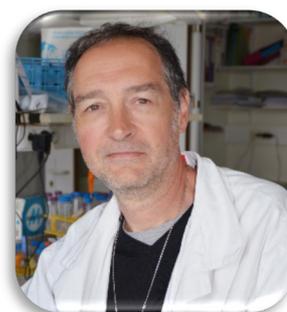
Kevin Chalut graduated from Albion College in the USA with a degree in Physics, then went on to do a PhD at Duke University in Accelerator Physics. After doing postdoctoral work in Optics and Biomedical Engineering, he started his lab at the Physics Department at the University of Cambridge as a Royal Society Research Fellow in 2011. He moved to the Cambridge Stem Cell Institute as a Principal Investigator in 2013, leading a team of Physicists and Biologists probing how fate transitions are regulated both in stem cells and development.

His main research aim is to understand how cell fate transitions work, and his lab uses the tools and concepts of physical biology to do this. They use statistical physics to investigate the dynamics of cell fate transitions, i.e. how do cells get from state A to state B. They also use mechanics and molecular biology to investigate how mechanical signalling directs cell fate choice, both in terms of cellular identity and positioning within a developmental context. Their primary objective is to bring together physics, engineering and biology to better understand development and how to control stem cells.

### **Dr. Thierry JAFFREDO**

Director of Research CNRS, Team leader « Migration et différentiation de haématopoïétiques » Department of Developmental Biology, Sorbonne Université.

<http://www.ibps.upmc.fr/fr/Recherche/umr-biologie-developpement/migration-differentiation-cellules-souches-hematopoietiques>



Thierry Jaffredo obtained his PhD in 1989 at UPMC Paris, following by work on oncogenes and development at the “Institut d’Embryologie de Nogent sur Marne” headed by Pr. Nicole le Douarin in the team of Dr. Françoise Dieterlen and a Post-doc at the Institut Pasteur, Lille. In 2002, Thierry established his own group at Sorbonne Université. His research is focusing on hematopoietic stem cell development using avian, mouse and human embryo models with a special interest to the interactions between haematopoietic stem cells and their niches. He was among the first to demonstrate that haematopoietic production in the embryonic aorta was occurring from hemogenic endothelial cells and was able to trace the progeny of the hemogenic endothelium using non-replicative retroviral vectors. He explored the dynamics of endothelium in the aorta, the role of the somites and the transient production of haematopoiesis associated with the exhaustion of the hemogenic endothelium. In recent years, Thierry developed systems biology approaches to identify gene networks operating during haematopoietic stem cell-niche cell interactions and showed the role of extracellular vesicles in the hematopoietic support. He developed a robust in vitro system recapitulating the endothelial to haematopoietic transition and demonstrated the existence of a haemogenic endothelium in the late foetal/young adult bone marrow in birds and mammals. He is now implementing new strategies to study cellular and molecular interactions in the leukemic niche. Thierry is director of Research 1st class at the CNRS, Deputy Director of the department of Developmental Biology Sorbonne Université, Team leader « Migration et differentiation of haematopoietic stem cells ». Thierry served as task force delegate for the ISEH and is involved in the organisation and writing of the “European Hematology Association Roadmap for European Research” to promote Haematology research through Europe and a board member of the French Society for Stem Cell Research.

### **Dr. Fabienne LESCROART**

ATIP\_AVENIR Team leader « Physiopathological specification of the cardio-pharyngeal mesoderm » UMR 1251 - Marseille Medical Genetics.

<https://www.marseille-medical-genetics.org/fr/f-lescroart/>



Fabienne Lescroart obtained her PhD in Developmental Biology in 2011 from the Paris 6 University, in the laboratory of Pr. M. Buckingham where she showed the existence of common progenitors for a subset of neck or head muscles and a subset of myocardium. She then pursued her scientific career as a post-doctoral fellow at the Free University of Brussels (ULB) in Belgium, in the laboratory of Pr. C. Blanpain where she studied the lineage potential of the earliest cardiac progenitors and developed skills in single cell transcriptomics. She joined the Marseille Medical Genetic unit in august 2017 and was recruited as a Research Associate (CRCN) at INSERM in the team led by Dr. S. Zaffran in 2018. She is laureate of the ATIP-Avenir program 2019 and thus became team leader in January 2020. Her work mainly focuses on the specification of early cardiac progenitors and more generally of the cardiopharyngeal mesoderm.