

## PROGRAM GRANTS

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### **Control of cell migration and polarity by a mechanosensory complex linking adhesion and microtubules**

<b>AKHMANOVA</b> Anna	Div. of Cell Biology Faculty of Science Utrecht University	THE NETHERLANDS
<b>GOULT</b> Benjamin	School of Biosciences University of Kent Canterbury	UK
<b>TANENTZAPF</b> Guy	Dept. of Cellular & Physiological Sciences The University of British Columbia Vancouver	CANADA
<b>YAN</b> Jie	Dept. of Physics and Mechanobiology Institute National University of Singapore	SINGAPORE (CHINA)

### **Complete cell lineage trees inferred by in situ genotyping of induced somatic mutations**

<b>AVEROF</b> Michalis	Institut de Génomique Fonctionnelle de Lyon (IGFL) CNRS, Lyon	FRANCE (GREECE)
<b>LEE</b> Je H.	Cancer Centre/Lee Lab. Cold Spring Harbor Lab.	USA
<b>TELFORD</b> Maximilian J	Dept. of Genetics, Evolution and Environment University College London	UK

### **Green life in the dark**

<b>BABIN</b> Marcel	CERC-Remote Sensing of Canada's New Arctic Frontier Faculté des sciences et de génie, Université Laval	CANADA
<b>BOWLER</b> Chris	Ecology and Evolutionary Biology Section Institute of Biology, ENS Paris	FRANCE (UK)

### **Physical, computational and biological approaches of filopodia formation mechanism**

<b>BASSEREAU</b> Patricia	Physical Chemistry Curie Curie Institute CNRS, Paris	FRANCE
<b>LAPPALAINEN</b> Pekka	Institute of Biotechnology University of Helsinki	FINLAND
<b>VOTH</b> Gregory	Dept. of Chemistry The University of Chicago	USA

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### **Development, functions, and evolution of transparency in butterflies: an interdisciplinary approach**

<b>ELIAS</b> Marianne	Institute of Systematics and Evolution of Biodiversity CNRS - National Center for Scientific Research MNHN - National Museum of Natural History, Paris	FRANCE
<b>BERTHIER</b> Serge	INSP - Institut des NanoSciences de Paris Université Pierre et Marie Curie	FRANCE
<b>PATEL</b> Nipam	Dept. of Molecular Cell Biology and Dept. of Integrative Biology Univeristy of California, Berkeley	USA

### **Single cell-resolution imaging and optogenetics in the amygdala fear circuits in behaving animals**

<b>EMILIANI</b> Valentina	Neurophotonic lab. University Paris Descartes, CNRS	FRANCE (ITALY)
<b>BOYDEN</b> Ed	Media Lab and McGovern Institute MIT, Cambridge	USA
<b>KATZ</b> Ori	Dept. of Applied Physics The Selim and Rachel Benin School of Computer Science & Engineering The Hebrew University of Jerusalem	ISRAEL
<b>LI</b> Bo	Dept. of Neuroscience Cold Spring Harbor Lab.	USA (CANADA)

### **Understanding curiosity: a combined behavioral, biological and computational theory**

<b>GOTTLIEB</b> Jacqueline	Dept. of Neuroscience Columbia University New York	USA
<b>KIDD</b> Celeste	Kidd Lab, Dept. of Brain and Cognitive Sciences University of Rochester	USA
<b>OUDEYER</b> Pierre-Yves	INRIA Flowers Lab. INRIA Bordeaux Sud-Ouest, Talence	FRANCE

**Multi-scale analysis of membrane neurotransmitter cross-talk in the physiopathological brain**

**GROC**  
Laurent  
Institut interdisciplinaire de Neurosciences  
University de Bordeaux  
CNRS-UMR 5297, Bordeaux  
FRANCE

**IKEGAYA**  
Yuji  
Lab. of Chemical Pharmacology  
Graduate School of Pharmaceutical Sciences  
The University of Tokyo  
JAPAN

**LIU**  
Fang  
Dept. of Molecular Neuroscience  
Centre for Addiction and Mental Health  
Toronto  
CANADA

**Interactions among marine microbes as they grow and die: linking experiments and genome-scale models**

**GROSSART**  
Hans-Peter  
Dept. of Limnology of Stratified Lakes  
Leibniz-Institute of Freshwater Ecology and  
Inland Fisheries  
Potsdam University, Stechlin  
GERMANY

**SEGRE'**  
Daniel  
Graduate Program in Bioinformatics  
Boston University  
USA  
(ITALY)

**SHER**  
Daniel  
Marine Biology labs  
University of Haifa  
ISRAEL

**VOSS**  
Maren  
Dept. of Biological Oceanography  
Leibniz Institute Baltic Sea Research  
Rostock  
GERMANY

**Nuclear actin assembly in chromatin structure and dynamics for cell cycle control and reprogramming**

**GROSSE**  
Robert  
Institute of Pharmacology  
Faculty of Medicine, University of Marburg  
GERMANY

**KAIDI**  
Abderrahmane  
School of Cellular and Molecular Medicine  
University of Bristol  
UK

**MIYAMOTO**  
Kei  
Dept. of Genetic Engineering  
Faculty of Biology-Oriented Science and Technology  
Kinki University  
Wakayama-Ken  
JAPAN

**Mouse lemur: a novel neuroscience model system to study cortical circuits**

<b>HUBER</b> Daniel	Dept. of Basic Neurosciences University of Geneva	SWITZERLAND
<b>KIM</b> Jinhyun	Center for Functional Connectomics Korea Institute of Science and Technology Seoul	KOREA
<b>PIFFERI</b> Fabien	Mecanismes Adaptatifs et Evolution Equipe BIOADAPT, CNRS-MNHN Musée National d'Histoire Naturelle, Brunoy	FRANCE

**A comprehensive approach towards the chemistry & biology of polyphosphate: the forgotten biopolymer**

<b>JESSEN</b> Henning	Institute of Organic Chemistry Faculty of Chemistry and Pharmacy Albert-Ludwigs-University, Freiburg	GERMANY
<b>BHANDARI</b> Rashna	Lab. of Cell Signalling Centre for DNA Fingerprinting and Diagnostics, Hyderabad	INDIA
<b>WENDER</b> Paul	Dept. of Chemistry Stanford University	USA

**Real-time tracking and imaging of neuronal dynamics in freely moving vertebrates**

<b>JUDKEWITZ</b> Benjamin	Bioimaging and Neurophotonics Lab. Charité Berlin (Humboldt University) Cluster of Excellence NeuroCure, Berlin	GERMANY
<b>PORTUGUES</b> Ruben	Group of Sensorimotor Control Max Planck Institute of Neurobiology Martinsried	GERMANY (SPAIN)
<b>SMITH</b> Spencer	Dept. of Cell Biology and Physiology University of North Carolina Chapel Hill	USA

**Telling time with a noisy clock: mechanism of cell-intrinsic temporal regulation of gene expression**

<b>KORSWAGEN</b> Hendrik	Hubrecht Institute Royal Netherlands Academy of Arts and Sciences University medical Center Utrecht	THE NETHERLANDS
<b>FELIX</b> Marie-Anne	Institute of Biology (IBENS) ENS Paris	FRANCE
<b>MUGLER</b> Andrew	Dept. of Physics Purdue University West Lafayette	USA

**Constructing accessory lymph nodes in situ for control of mammary carcinoma**

<b>LUDEWIG</b> Burkhard	Medical Research Center / Institute of Immunobiology Kantonsspital St. Gallen	SWITZERLAND
<b>KOH</b> Gou Young	Center for Vascular Research Institute of Basic Research (IBS) Graduate School of Medical Science and Engineering KAIST, Daejeon	KOREA
<b>YUN</b> Seok-Hyun	Wellman Center for Photomedicine Massachusetts General Hospital Harvard Medical School, Cambridge	USA (KOREA)

**Architecture/force relationship and migration mechanics of macrophage podosomes**

<b>MARIDONNEAU- PARINI</b> Isabelle	Institute of Pharmacology and Structural Biology Université Toulouse III, CNRS	FRANCE
<b>BAUMEISTER</b> Wolfgang	Dept. of Structural Biology Max-Planck-Institute of Biochemistry Martinsried	GERMANY
<b>CHEN</b> Christopher S.	Dept. of Biomedical Engineering Boston University	USA
<b>COX</b> Susan	Randall Division of Cell and Molecular Biophysics King's College London	UK

**Neural mechanisms underlying the visual analysis of intent**

<b>MARTINEZ</b> Aleix	Dept. of Electrical and Computer Engineering The Ohio State University Columbus	USA
<b>GIESE</b> Martin	Dept. of Cognitive Neurology Hertie Institute for Clinical Brain Research, Center for Integrative Neuroscience, Tuebingen	GERMANY
<b>TSAO</b> Doris	Division of Biology California Institute of Technology Pasadena	USA

**Completing the cycle: lighting up the central dogma for a predictive understanding of genetic clocks**

<b>OATES</b> Andrew	Dept. of Cell and Developmental Biology University College London	UK (AUSTRALIA)
<b>CHICA</b> Roberto	Dept. of Chemistry University of Ottawa	CANADA
<b>GARCIA</b> Hernan	Dept. of Molecular & Cell Biology and Dept. of Physics University of California Berkeley	USA (ARGENTINA)

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### **“Seeing” voices: the role of multimodal cues in vocal learning**

<b>RIEBEL</b> Katharina	Dept. of Biology Leiden University	THE NETHERLANDS (GERMANY)
<b>HALFWERK</b> Wouter	Dept. of Ecology and Evolution Smithsonian Tropical Research Institute Balboa	PANAMA (THE NETHERLANDS)
<b>SCHARFF</b> Constance	Neurobiology and Behaviour Group Dept. of Biology, Chemistry and Pharmacy Institute of Biology, Free University Berlin	GERMANY

### **Imaging cellular function noninvasively with genetically engineered reporters for hyperpolarized MRI**

<b>SHAPIRO</b> Mikhail	Dept. of Chemical Engineering California Institute of Technology Pasadena	USA
<b>SCHRÖDER</b> Leif	Dept. of Molecular Imaging Leibniz-Institute for Molecular Pharmacology (FMP) Berlin	GERMANY

### **The physics of social behavior in the 3-dimensional shoaling of zebrafish, *Danio rerio***

<b>STEPHENS</b> Greg	Dept. of Physics and Astronomy Vrije Universiteit Amsterdam	THE NETHERLANDS (USA)
<b>MASAI</b> Ichiro	Developmental neurobiology unit Okinawa Institute of Science and Technology Graduate University Onna	JAPAN
<b>SHAEVITZ</b> Joshua	Dept. of Physics and the Lewis-Sigler Institute for Integrative Genomics Princeton University	USA

### **Analog computations underlying language mechanisms**

<b>TREVES</b> Alessandro	Dept. of Cognitive Neuroscience SISSA (International School for Advanced Studies) Trieste	ITALY
<b>FRIEDMANN</b> Naama	Language and Brain Lab. School of Education Tel Aviv University	ISRAEL
<b>MONASSON</b> Remi	Lab. of Theoretical Physics ENS, Paris	FRANCE

## PROGRAM GRANTS

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### **The first mammalian model for vocal learning: a molecular, neural and comparative approach in bats.**

**VERNES**  
Sonja  
Language and Genetics Dept.  
Max-Planck Institute for Psycholinguistics  
Nijmegen  
THE NETHERLANDS

**FIRZLAFF**  
Uwe  
Dept. of Animal Sciences  
Technische Universität München  
Freising  
GERMANY

**WIEGREBE**  
Lutz  
Dept. of Neurobiology  
Biocenter  
University of Munich, Planegg-Martinsried  
GERMANY

**YARTSEV**  
Michael  
Dept. of Bioengineering  
Berkeley University  
USA  
(ISRAEL)

### **Mechanisms of dynamic GPCR transmembrane signaling**

**WAGNER**  
Gerhard  
Dept. of Biological Chemistry and  
Molecular Pharmacology  
Harvard Medical School  
Boston  
USA  
(GERMANY)

**PLÜCKTHUN**  
Andreas  
Dept. of Biochemistry  
University of Zurich  
SWITZERLAND  
(GERMANY)

### **Optimization of metabolic flux in the hummingbird: from enzymes to ecology**

**WELCH**  
Kenneth  
Dept. of Biological Sciences  
University of Toronto Scarborough  
Toronto  
CANADA

**TIMP**  
Winston  
Dept. of Biomedical Engineering  
Johns Hopkins University  
Baltimore  
USA

**VALLE**  
Mikel  
Structural Biology Unit  
Center for Cooperative Research in Biosciences  
CICbioGUNE,  
Derio  
SPAIN

**WONG**  
G. William  
Dept. of Physiology  
Johns Hopkins University  
Baltimore  
USA

## YOUNG INVESTIGATORS

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### Dissecting cytoskeletal dynamics across the malaria parasite lifecycle – RENEWAL APP.

<b>BAUM</b> Jake	Dept. of Life Sciences Imperial College London	UK
<b>FRISCHKNECHT</b> Friedrich	Parasitology Unit, Center for Infectious Diseases University of Heidelberg Medical School	GERMANY
<b>HOUDUSSE</b> Anne	Structural Motility Group Institut Curie - CNRS Paris	FRANCE
<b>KOVAR</b> David	Dept. of Molecular Genetics and Cell Biology The University of Chicago	USA

### Examining the causal role of spindle oscillations in memory consolidation

<b>BENDOR</b> Daniel	Dept. of Experimental Psychology University College London	UK (USA)
<b>HALASSA</b> Michael	Neuroscience Institute New York University School of Medicine	USA

### Neuroanatomy of fat discerned with whole body optoacoustic and fluorescence imaging

<b>DOMINGOS</b> Ana	Obesity lab. Gulbenkian Institute for Science Oeiras	PORTUGAL
<b>COHEN</b> Paul	Lab. of Molecular Metabolism The Rockefeller University New York	USA
<b>RAZANSKY</b> Daniel	Institute for Biological and Medical Imaging Helmholtz Center Munich and Technical University of Munich	GERMANY (ISRAEL)

### Building from scratch: How nanomaterials can help resolve membrane scaffold geometry and function

<b>LAU</b> K. H. Aaron	Dept. of Pure and Applied Chemistry University of Strathclyde Glasgow	UK
<b>MIM</b> Carsten	Dept. of Structural Biotechnology School of Technology and Health KTH Royal Technical Institute, Huddinge	SWEDEN (GERMANY)
<b>YAMEEN</b> Basit	Lab. of Nanomedicine and Biomaterials Dept. of Anesthesiology Brigham and Women Hospital Harvard Medical School Boston	USA (PAKISTAN)



## YOUNG INVESTIGATORS

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### Impact of horizontal gene transfer on natural ecosystems

<b>MIYAZAKI</b> Ryo	Bioproduction Research Institute National Institute of Advanced Industrial Science and Technology (AIST) Tsukuba	JAPAN
<b>ENGEL</b> Philipp	Dept. of Fundamental Microbiology University of Lausanne	SWITZERLAND (GERMANY)
<b>SANCHEZ</b> Alvaro	Dept. of Ecology and Evolutionary Biology Yale University New Haven	USA (SPAIN)

### Beyond the genome: impact of microbial communities and epigenetic regulations for adaptation

<b>REITZEL</b> Adam	Dept. of Biological Sciences University of North Carolina at Charlotte	USA
<b>FORET</b> Sylvain	Dept. of Evolution, Ecology and Genetics Research School of Biology The Australian National University, Acton	AUSTRALIA
<b>FRAUNE</b> Sebastian	Zoological Institute, Lab. Prof. Bosch Christian-Albrechts University Kiel	GERMANY

### Reconstitution of cell polarity and axis determination in a cell-free system

<b>TELLEY</b> Ivo A.	Physical Principles of Nuclear Division-Lab Fundação Calouste Gulbenkian Instituto Gulbenkian de Ciência Oeiras	PORTUGAL (SWITZERLAND)
<b>LOOSE</b> Martin	Life Sciences Dept. Institute of Science and Technology Austria (IST Austria), Klosterneuburg	AUSTRIA (GERMANY)
<b>MAURER</b> Sebastian	Dept. of Cell and Developmental Biology Center for Genomic Regulation (CRG) Barcelona	SPAIN (GERMANY)
<b>SAUNDERS</b> Timothy	Mechanobiology Institute and Dept. of Biological Sciences National University of Singapore	SINGAPORE (UK)