



HFSP AWARDS 2021

RESEARCH GRANTS

Research Grants, Program and Early Career (previously Young Investigators), provide 3 years of support for international teams involving at least two countries. Preference is given to intercontinental collaborations (rather than all N. American or all European teams). All team members are expected to broaden the character of their research compared to their ongoing research programs and interact with teams bringing expertise that is very different from their own so as to create novel approaches to problems in fundamental biology. All members of an Early Career team must be within 5 years of establishing their independent research group and no more than 10 years from their doctoral degree. Program Grant teams may consist of team members at any stage of their career as independent investigators.

Program and Early Career Grants are listed separately, alphabetically. The first named for each award is the Principal Investigator. Nationality is in parentheses when different from country in which the laboratory is located.

RESEARCH GRANT-PROGRAM

Understanding how genetic and physical fluidity drive adaptive behavior in a multinucleate organism

ALIM Karen	Physics Dept. Technische Universität München Garching b. Munich	GERMANY
ROPER Marcus	Dept. of Mathematics University of California, Los Angeles	USA (UK)
ROZEN Daniel	Institute of Biology Leiden University	THE NETHERLANDS (USA)

Adaptation of photosynthetic membranes to environmental change

BENNETT Doran	Dept. of Chemistry Southern Methodist University Dallas	USA
CROCE Roberta	Dept. of Physics and Astronomy/ Biophysics of Photosynthesis Vrije Universiteit Amsterdam	THE NETHERLANDS (Italy)
ENGEL Benjamin	Helmholtz Pioneer Campus Helmholtz Zentrum Munich Neuherberg	GERMANY (USA)

Memory - from material to mind

DIAMOND Mathew	Tactile Perception and Learning Lab International School for Advanced Studies (SISSA), Cognitive Neuroscience Sector Trieste	ITALY
BARAK Omri	Faculty of Medicine and Network Biology Research Laboratories Technion - Israeli Institute of Technology Haifa	ISRAEL
KEIM Nathan	Dept. of Physics Pennsylvania State University University Park	USA

RESEARCH GRANT-PROGRAM

The role of bone cellular and sub-cellular porosity network connectomics on calcium homeostasis

GRANDFIELD Kathryn	Dept. of Materials Science and Engineering McMaster University Hamilton	CANADA
CARRIERO Alessandra	Dept. of Biomedical Engineering The City College of New York	USA (Italy)
GOURRIER Aurélien	Lab. for Interdisciplinary Physics - LIPHY CNRS, Université Grenoble Alpes St Martin d'Herès	FRANCE

Assembling and recombining the Arabidopsis centromeres

HENDERSON Ian	Dept. of Plant Sciences University of Cambridge	UK
KAKUTANI Tetsuji	Dept. of Biological Sciences The University of Tokyo	JAPAN
SCHATZ Michael	Depts of Computer Science and Biology Johns Hopkins University Baltimore	USA

Structural damage to axons resulting from repetitive mechanical motion

HESS Henry	Biomedical Engineering Columbia University New York	USA (Germany)
KAKUGO Akira	Faculty of Science Hokkaido University / Graduate School of Science Sapporo	JAPAN
RAFFA Vittoria	Dept. of Biology Università di Pisa	ITALY
SHEFI Orit	Faculty of Engineering Bar-Ilan Institute of Nanotechnology and Advanced Materials, Bar-Ilan University Ramat Gan	ISRAEL

RESEARCH GRANT-PROGRAM

Darwin rwinDa: rewinding and rerunning evolution to study innovation in action

HOCHBERG Georg Karl Albert	Evolutionary Biochemistry group Max Planck Institute for Terrestrial Microbiology Marburg	GERMANY
BEEBY Morgan	Dept. of Life Sciences Imperial College London	UK
CARY Craig	Thermophile Research Laboratory University of Waikato Hamilton	NEW ZEALAND
PEDACI Francesco	Dept. of Biophysics and Bioengineering/Centre de Biochimie Structurale CNRS UMR 5048 - UM - INSERM U 1054 Montpellier	FRANCE (Italy)

Understanding the cellular mechanics of coral bleaching

HU Ke	Center for Mechanisms of Evolution Arizona State University Tempe	USA (China)
INABA Kazuo	Shimoda Marine Research Center University of Tsukuba Shizuoka	JAPAN

Decoding acoustic communication in mosquitoes: from distortion products to vector control

KAMIKOUCHI Azusa	Graduate School of Science Nagoya University	JAPAN
ALBERT Joerg	Ear Institute University College London	UK (Germany)
BOZOVIC Dolores	Dept. of Physics and Astronomy University of California Los Angeles	USA
CHEN Chun-Hong	Institute of infectious diseases and Vaccinology National Health Research Institutes Zhunan	CHINESE TAIPEI

RESEARCH GRANT-PROGRAM

Revealing the interplay of genetics and biomechanics underlying butterfly scale morphogenesis

KOLLE Mathias	Dept. of Mechanical Engineering Massachusetts Institute of Technology Cambridge	USA (Germany)
NADEAU Nicola	Dept. of Animal and Plant Sciences The University of Sheffield	UK
WILTS Bodo	Adolphe Merkle Institute / Soft Matter Physics University of Fribourg	SWITZERLAND (Germany)

The biology of left-right asymmetry - linking structural determinants to ecology and evolution

LENHARD Michael	Institute for Biochemistry and Biology University of Potsdam	GERMANY
BARRETT Spencer C.H.	Dept. of Ecology and Evolutionary Biology University of Toronto	CANADA
DEINUM Eva	Dept. of Mathematical and Statistical Methods (Biometris) Wageningen University & Research	THE NETHERLANDS
ILLING Nicola	Dept. of Molecular and Cell Biology University of Cape Town Rondebosch	SOUTH AFRICA

Maintenance, homeostasis and heredity of mitochondria and their genomes

MANLEY Suliana	Dept. of Institute of Physics Ecole Polytechnique Federale de Lausanne (EPFL)	SWITZERLAND (USA)
BADRINARAYANAN Anjana	National Centre for Biological Sciences TIFR Bangalore	INDIA
MARSHALL Wallace	Dept. of Biochemistry and Biophysics University of California San Francisco	USA
PAULSSON Johan	Dept. of Systems Biology, HMS Harvard University Boston	USA (Sweden)

RESEARCH GRANT-PROGRAM

How do malaria mosquitoes swarm and mate? The functional biology of mating swarms

MUIJRES Florian	Experimental Zoology Group Wageningen University	THE NETHERLANDS
DIABATE Abdoulaye	Laboratoire de Parasitologie Entomologie Institut de Recherche en Sciences de la Santé DRO, Centre Muraz Bobo Dioulasso	BURKINA FASO
MUELLER Ruth	Unit Entomology Institute of Tropical Medicine Antwerp	BELGIUM (Germany)
RIFFELL Jeffrey	Dept. of Biology University of Washington Seattle	USA

Transcriptional program of Golgi biogenesis

POLISHCHUK Roman	Cell Biology and Disease Mechanism Program Telethon Institute of Genetics and Medicine (TIGEM) Pozzuoli	ITALY (Russia)
DE BOER Jan	Dept. of Biomedical Engineering Eindhoven University of Technology	THE NETHERLANDS
KHODJAKOV Alexey	Lab. of Cellular and Molecular Basis of Diseases Wadsworth Center Albany	USA

The shaping of life by oxygen: from single cell to multicellular dynamics

RIEU Jean-Paul	Institute of Light and Matter University Claude Bernard Lyon 1 Villeurbanne	FRANCE
SAWAI Satoshi	Dept. of Basic Science Graduate School of Arts and Sciences, University of Tokyo	JAPAN
WEST Christopher	Dept. of Biochemistry & Molecular Biology University of Georgia Athens	USA

RESEARCH GRANT-PROGRAM

Friends with benefits? A holistic approach to diffuse mutualism in plant-pollinator interactions

SICARD Adrien	Plant Biology Dept. Swedish University of Agricultural Sciences Uppsala	SWEDEN (France)
GROZINGER Christina	Dept. of Entomology Center for Pollinator Research, Penn State University University Park	USA
RISSE Benjamin	Computer Vision and Machine Learning Systems Group Faculty of Mathematics and Computer Science, University of Münster	GERMANY

The aphrodisiac gut: defining the factors promoting yeast mating within insect intestines

STEFANINI Irene	Dept. of Life Sciences and Systems Biology University of Turin	ITALY
NEW Elizabeth	School of Chemistry University of Sydney	AUSTRALIA
POLIN Marco	Mediterranean Institute For Advanced Studies (IMEDEA) CSIC-University of Balearic Islands Esporles	SPAIN (Italy)
SEGRE' Daniel	Graduate Program in Bioinformatics Boston University	USA (Italy)

Evolution of neural circuit dynamics and brain computations in Astyanax blind cave fish

SUMBRE German	Dept. of Biology Ecole Normale Superieure Paris	FRANCE (Argentina)
GJORGIEVA Julijana	Computation in Neural Circuits Group Max Planck Institute for Brain Research Frankfurt am Main	GERMANY (Macedonia)
KEENE Alex	Dept. of Biological Science Florida Atlantic University Jupiter	USA

RESEARCH GRANT-PROGRAM

Teratology in microfossils as a proxy for understanding mass-extinctions through time

VANDEBROUCKE Thijs	Dept. of Geology Ghent University	BELGIUM
LOMAX Barry	Dept. of Agriculture & Environmental Science University of Nottingham	UK
LOOY Cindy	Dept. of Integrative Biology Museum of Paleontology University of California, Berkeley	USA (The Netherlands)
VAN DE SCHOOTBRUGGE Bas	Dept. of Earth Sciences Utrecht University	THE NETHERLANDS

How a single cell shapes a shoot

VERNOUX Teva	Laboratoire Reproduction et Developpement des Plantes Ecole Normale Supérieure de Lyon	FRANCE
BRADY Siobhan	Dept. of Plant Biology and Genome Center University of California, Davis	USA (Canada)
SMITH Richard S.	Dept. of Computational and Systems Biology John Innes Centre Norwich	UK
ZURBRIGGEN Matias	Institute of Synthetic Biology - CEPLAS University of Duesseldorf	GERMANY

Feathers as structures and sensors: understanding mechanosensing in bird flight

WINDSOR Shane	Dept. of Aerospace Engineering University of Bristol	UK (New Zealand)
PERKEL David	Dept. of Biology & Otolaryngology University of Washington Seattle	USA
WOOLLEY Sarah	Dept. of Biology McGill University Montreal	CANADA (USA)

RESEARCH GRANT-EARLY CAREER

How life got moving: reconstructing and re-evolving the bacterial flagellar motor, piece-by-piece

BAKER Matthew	School of Biotechnology and Biomolecular Science University of New South Wales Kensington	AUSTRALIA
KACAR Betul	Dept. of Molecular and Cellular Biology & Astronomy University of Arizona Tucson	USA
MATZKE Nicholas	School of Biological Sciences University of Auckland	NEW ZEALAND (USA)
MCNALLY Luke	School of Biological Sciences University of Edinburgh	UK (Ireland)

Multi-scale functional investigations into mechanosensing response in archaea

BISSON Alex	Dept. of Biology Brandeis University Waltham	USA (Brazil)
ALVA KULLANJA Vikram	Dept. of Protein Evolution - Protein Bioinformatics Group Max Planck Institute for Developmental Biology Tuebingen	GERMANY (India)
BHARAT Tanmay	Sir William Dunn School of Pathology University of Oxford	UK (India)

Coupling movement and metabolism in plant stomatal cells: a multiscale and multiphysics approach

CHEUNG Lily	Dept. of Chemical and Biomolecular Engineering Georgia Institute of Technology Atlanta	USA
RAISSIG Michael	Centre for Organismal Studies Heidelberg University	GERMANY (Switzerland)
ROUTIER-KIERZKOWSKA Anne-Lise	IRBV, Departement of Biological Sciences University of Montreal	CANADA (France)

The bacterial biofilm as a multicellular organism: from molecules to populations

DURHAM William	Dept. of Physics and Astronomy University of Sheffield	UK (USA)
BERGERON Julien	Randall Division of Cell and Molecular Biophysics King's College London	UK (France)
TSENG Boo Shan	School of Life Sciences University of Nevada Las Vegas	USA
WHITNEY John	Dept. of Biochemistry McMaster University Hamilton	CANADA

Conferring carnivorous plant-like traits by single gene transfers

FUKUSHIMA Kenji	Dept. of Botany I University of Würzburg	GERMANY
BAUER Ulrike	School of Biological Sciences / Mechanical Ecology Lab University of Bristol	UK (Germany)
RENNER Tanya	Dept. of Entomology The Pennsylvania State University University Park	USA

Unraveling the fundamental mechanisms of neuromodulation by focused ultrasound

HARTEL Andreas	Bioelectronic System Lab Columbia University New York	USA (Germany)
COSTA Tiago	Dept. of Microelectronics/Bioelectronics Delft University of Technology	THE NETHERLANDS (Portugal)
KOPEC Wojciech	Dept. of Theoretical and Computational Biophysics Max Planck Institute for Biophysical Chemistry Goettingen	GERMANY (Poland)

T cell microvillus as a new signaling organelle

SU

Xiaolei

Dept. of Cell Biology
Yale School of Medicine
New haven

USA
(China)

BOTTANELLI

Francesca

Institute of Biochemistry
Freie Universität Berlin

GERMANY
(Italy)

ZHAO

Wenting

School of Chemical and Biomedical Engineering
Nanyang Technological Unviersity
Singapore

SINGAPORE
(China (Hong Kong))