



HFSP AWARDS 2017

LONG-TERM FELLOWSHIPS

as approved by the Board of Trustees (March 17, 2017)

The HFSP fellowship program funds innovative, ground-breaking projects that have the potential to advance knowledge in the applicants' field of study or open a new approach to a research problem. High risk research is supported.

Long-term fellowships provide 3 years of support for applicants with a degree in the life science to obtain training in a new area of research in an outstanding laboratory of their choice in another country. Applicants are expected to broaden their horizon and to move into a new research field that is different from their doctoral studies or previous postdoctoral training.

Marine biochemist Uria Alcolombri addresses the highly relevant question of how microbes degrade organic matter in the ocean at the microscale level and will develop mathematical models to predict the conditions at which organic matter is remineralized in the ocean. Another exciting project by Alexander Hetherington investigates the evolution of plant roots which occurred twice and led to functionally different types of roots with implications on how different plants respond to different environments. In another highly ranked proposal, computational biologist Ariana Strandburg-Peshkin will use data from long-term field studies combined with high-resolution tracking methods to investigate how patterns of movement emerge in group-living animals like meerkats.

ALCOLOMBRI Uria BULGARIA/ISRAEL	From	Biological Chemistry Weizmann Institute Rehovot ISRAEL	<i>Unraveling the microscale mechanisms driving particle degradation in the ocean</i>
	To	Dept. of Civil, Environmental and Geomatic Engineering ETH Zurich SWITZERLAND	Supervisor: STOCKER Roman
AYDIN Halil TURKEY	From	Laboratory Medicine and Pathobiology University of Toronto CANADA	<i>The structural basis of heritable asthma and inflammatory disorders of sphingolipid synthesis</i>
	To	Department of Cellular Molecular Pharmacology UC San Francisco USA	Supervisor: WEISSMAN Jonathan
BATTICH Nicolas ARGENTINA/ITALY	From	Institute for Molecular Life Sciences University of Zurich SWITZERLAND	<i>A single-cell multi-omics approach to study mouse pre-implantation development</i>
	To	Hubrecht Institute Utrecht THE NETHERLANDS	Supervisor: VAN OUDENAARDEN Alexander
BENHAR BAR-ON Inbal GERMANY/ISRAEL	From	Department of Immunology Weizmann Institute Rehovot ISRAEL	<i>Systems-level analysis of the immune response to CNS injury: revealing targets for regeneration</i>
	To	Core Faculty Labs Broad Institute of MIT and Harvard Cambridge USA	Supervisor: REGEV Aviv
BERRY Scott AUSTRALIA	From	Department of Cell and Developmental Biology John Innes Centre Norwich UK	<i>Mechanisms underlying coordination of single-cell transcriptomes with cell volume and surface area</i>
	To	Institute of Molecular Life Sciences University of Zurich SWITZERLAND	Supervisor: PELKMANS Lucas

BIAN Wenjie CHINA	From	Institute of Neuroscience Shanghai Institutes for Biological Sciences CHINA	<i>Developmental roles of sleep and arousal circuits in shaping the cortical connectivity and functions</i>
	To	Department of Psychiatry and Behavioral Sciences Stanford University USA	Supervisor: DE LECEA Luis
BROCH TRENTINI Débora BRAZIL	From	IMP Vienna AUSTRIA	<i>Role of Listerin ubiquitin ligase in MHC-I antigen presentation</i>
	To	Dept. of Cellular Biochemistry MPI of Biochemistry Martinsried GERMANY	Supervisor: HARTL Franz-Ulrich
BRUNET Thibaut FRANCE	From	Developmental Biology Unit EMBL, Heidelberg GERMANY	<i>The pre-metazoan origins of animal cell contractility</i>
	To	Department of Molecular and Cell Biology UC Berkeley USA	Supervisor: KING Nicole
CAMACHO ZARCO Aldo Roman MEXICO	From	NMR-based Structural Biology Group MPI for Biophysical Chemistry Goettingen GERMANY	<i>Molecular basis of avian influenza polymerase adaptation to human hosts</i>
	To	Protein Dynamics and Flexibility Group Institute of Structural Biology Grenoble FRANCE	Supervisor: BLACKLEDGE Martin
CAVIN Jean-Baptiste FRANCE	From	INSERM University Paris Diderot FRANCE	<i>The regulation of intestinal barrier function: enteroendocrine cells, enteric glia and nerves</i>
	To	Department of Physiology and Pharmacology University of Calgary CANADA	Supervisors: SHARKEY Keith and MACNAUGHTON Wallace

CHANG Tao-Hsin TAIWAN	From	Wellcome Trust Centre for Human Genetics University of Oxford UK	<i>Identification of novel extracellular protein-protein interactions for the CNS vascularization</i>
	To	Molecular Biology and Genetics Johns Hopkins University Baltimore USA	Supervisor: NATHANS Jeremy
COUTANDIN Daniel GERMANY	From	Institute of Biophysical Chemistry Goethe University Frankfurt GERMANY	<i>Defining the structural basis for kinase inhibition and activation by the Hsp90 chaperone system</i>
	To	Department of Biochemistry and Biophysics UC San Francisco USA	Supervisor: AGARD David
CROCINI Claudia ITALY	From	National Institute of Optics National Research Council Sesto Fiorentino ITALY	<i>Assessment of the molecular mechanisms underlying regression of cardiac growth in pythons</i>
	To	BioFrontiers Institute University of Colorado Boulder USA	Supervisor: LEINWAND Leslie
CUI Haissi GERMANY	From	Department of Chemistry TU Munich GERMANY	<i>Elucidating Arginyl-tRNA synthetase moonlighting functions with mass spectrometry-based terminomics</i>
	To	Scripps Laboratories for tRNA Synthetase Research The Scripps Research Institute La Jolla USA	Supervisor: SCHIMMEL Paul
DEORA Tanvi INDIA	From	National Centre for Biological Sciences Bangalore INDIA	<i>Learning about touch: the neuromechanics of plant-pollinator interactions</i>
	To	Department of Biology University of Washington Seattle USA	Supervisors: DANIEL Thomas and BRUNTON Bing

DOERFEL Lili GERMANY	From	Dept. of Physical Biochemistry MPI for Biophysical Chemistry Goettingen GERMANY	<i>Small non coding RNAs in ribosome biogenesis</i>
	To	Integrative Structural and Computational Biology The Scripps Research Institute La Jolla USA	Supervisor: WILLIAMSON James
DRAYMAN Nir ISRAEL	From	Department of Cell Biology Weizmann Institute Rehovot ISRAEL	<i>Characterizing the innate immune response to viral infections in single cells</i>
	To	The Institute for Molecular Engineering University of Chicago USA	Supervisor: TAY Savas
ESPOSITO Emilia ITALY	From	Lewis-Sigler Institute for Genomic studies Princeton University USA	<i>Dynamic and quantitative transcriptome and epigenome analysis during somitogenesis</i>
	To	Developmental Biology Unit EMBL, Heidelberg GERMANY	Supervisor: AULEHLA Alexander
GABANYI Ilana BRAZIL	From	Laboratory of Mucosal Immunology Rockefeller University New York USA	<i>The impact of Nod2 signaling on brain activity and behavior</i>
	To	Perception and Memory Laboratory Institut Pasteur Paris FRANCE	Supervisor: LLEDO Pierre-Marie
GALLINI Sara ITALY	From	Department of Experimental Oncology European Institute of Oncology Milan ITALY	<i>Understanding the principles of tissue repair that accelerate tumor initiation</i>
	To	Department of Genetics Yale University New Haven USA	Supervisor: GRECO Valentina

GARZON-CORAL Carlos COLOMBIA	From	MPI of Molecular Cell Biology and Genetics Dresden GERMANY	<i>Revealing the molecular mechanisms underlying mechanotransduction at cadherin-catenin complexes</i>
	To	Department of Chemical Engineering Stanford University USA	Supervisor: DUNN Alexander
GEULA Shay ISRAEL	From	Department of Molecular Genetics Weizmann Institute Rehovot ISRAEL	<i>Deciphering the mechanisms regulating the aging of hematopoietic stem cells</i>
	To	Children's Research Institute University of Texas Southwestern Medical Center Dallas USA	Supervisor: MORRISON Sean
GEVA SAGIV Maya ISRAEL	From	Department of Physiology and Pharmacology Tel Aviv University ISRAEL	<i>Sleep's role in memory consolidation: intracranial human electrophysiology and electrical stimulation</i>
	To	Department of Neurosurgery UC Los Angeles USA	Supervisor: FRIED Itzhak
GOKHMAN David ISRAEL	From	Department of Genetics The Hebrew University Jerusalem ISRAEL	<i>Studying how cis- and trans-regulation shaped human muscles, using human-chimpanzee hybrids</i>
	To	Department of Biology Stanford University USA	Supervisors: FRASER Hunter and PETROV Dmitri
GONZALES Kevin Andrew PHILIPPINES	From	Department of Stem Cell and Regenerative Biology Genome Institute SINGAPORE	<i>Deriving adult-like hematopoietic stem cells from pluripotent stem cells</i>
	To	Department of Stem Cell Biology Harvard Medical School Boston USA	Supervisor: DALEY George

GUR-COHEN Shiri ISRAEL	From	Department of Immunology Weizmann Institute Rehovot ISRAEL	<i>Dissecting the spatiotemporal crosstalk between skin stem cells and the vascular capillary network</i>
	To	Laboratory of Mammalian Cell Biology and Development Rockefeller University New York USA	
GUZZO Mathilde FRANCE	From	Laboratoire de Chimie Bactérienne Aix-Marseille University FRANCE	<i>Intracellular signaling in response to starvation in <i>Caulobacter crescentus</i></i>
	To	Department of Biology MIT Cambridge USA	
HADJIVASILIOU Zena CYPRUS (EU)	From	Centre for Mathematics, Physics and Engineering University College London UK	<i>Resolving morphogen gradient formation and scaling: a unified theory using novel quantitative assays</i>
	To	Department of Biochemistry University of Geneva SWITZERLAND	
HENDRIKS Gerardus Johannes THE NETHERLANDS	From	FMI Basel SWITZERLAND	<i>Exploring the temporal dynamics of autosomal random monoallelic expression</i>
	To	Department of Cell and Molecular Biology Karolinska Institute Stockholm SWEDEN	
HETHERINGTON Alexander UK	From	Department of Plant Sciences University of Oxford UK	<i>Growth, form, and functional constraints across two independent evolutions of roots</i>
	To	School of Earth, Energy and Environmental Sciences Stanford University USA	

HOLBROOK-SMITH Duncan CANADA	From	Department of Cell and System Biology University of Toronto CANADA	<i>Interrogation of yeast receptors using a metabolomics-based chemical screening system</i>
	To	Institute of Molecular Systems Biology ETH Zurich SWITZERLAND	Supervisor: SAUER Uwe
HOLGUERA LÓPEZ Isabel María SPAIN	From	Department of Genome Dynamic and Function CSIC Madrid SPAIN	<i>Orderly assembly of neurons in the Drosophila motion vision circuits</i>
	To	Department of Biology New York University USA	Supervisor: DESPLAN Claude
IOANNOU Maria CANADA	From	Department of Neurology and Neurosurgery McGill University Montreal CANADA	<i>Imaging the molecular dynamics underlying neuron-glia communication</i>
	To	Janelia Research Campus Howard Hughes Medical Institute Ashburn USA	Supervisors: LIPPINCOTT-SCHWARTZ Jennifer and LIU Zhe
KADAVATH Harindranath INDIA	From	Structural Biology in Dementia German Center for Neurodegenerative Diseases Goettingen GERMANY	<i>Solution and solid state NMR investigations of protein folding on the ribosome</i>
	To	Structural and Molecular Biology University College London UK	Supervisor: CHRISTODOULOU John
KAMM John USA	From	Computer Science Division UC Berkeley USA	<i>Inference of ghost populations in demographic history</i>
	To	Computational Genomics Wellcome Trust Sanger Institute Cambridge UK	Supervisor: DURBIN Richard

KARA Eleanna GREECE	From	Alzheimer's Disease Research Unit Harvard Medical School Boston USA	<i>Identifying genetic modifiers of a-synuclein propagation in iPSc- derived mosaic neuronal cultures</i>
	To	Institute of Neuropathology University of Zurich SWITZERLAND	Supervisor: AGUZZI Adriano
KATHE Claudia GERMANY	From	Wolfson Centre for Age-Related Diseases King's College London UK	<i>Restoration of voluntary motor control after severe spinal cord injury with neurorehabilitation</i>
	To	Brain Mind Institute Ecole Polytechnique Fédérale de Lausanne SWITZERLAND	Supervisor: COURTINE Grégoire
KIENINGER Manuela Rebecka GERMANY	From	Evolutionary Biology MPI of Developmental Biology Tuebingen GERMANY	<i>How developmental control of genome duplication contributes to embryogenesis</i>
	To	Gurdon Institute Cancer Research UK Cambridge UK	Supervisor: ZEGERMAN Philip
KIM Tackhoon KOREA	From	Department of Biological Sciences Korea Advanced Institute of Science and Technology Daejeon KOREA	<i>Deciphering cancer cell plasticity by mammalian recombinase- based state machine (RSM)</i>
	To	Department of Biological Engineering MIT Cambridge USA	Supervisor: LU Timothy
KOSCHE Georg GERMANY	From	Neuroscience Institute New York University USA	<i>Detection of visual motion in the cortex</i>
	To	Department of Neurobiology FMI Basel SWITZERLAND	Supervisor: ROSKA Botond

KRIETENSTEIN Nils GERMANY	From	Biomedical Center LMU Munich GERMANY	<i>A genome-wide, biochemical approach to study the biology of chromosome folding</i>
	To	Department of Biochemistry and Molecular Pharmacology University of Massachusetts Medical School Worcester USA	Supervisor: RANDO Oliver
KYUNG Taeyoon KOREA	From	Bio-Imaging and Optogenetics Lab. Institute for Basic Science Daejeon KOREA	<i>Evolution-based approach to reprogram T cell signaling</i>
	To	Dept. of Biological Engineering MIT Cambridge USA	Supervisor: BIRNBAUM Michael
LÁZÁR Viktória HUNGARY	From	Institute of Biochemistry Biological Research Centre Szeged HUNGARY	<i>Exploring drug combinations inspired by soil bacteria communities</i>
	To	Department of Biology Technion, Haifa ISRAEL	Supervisor: KISHONY Roy
LI Lei CHINA	From	Institute of Genetics and Developmental Biology Chinese Academy of Science Beijing CHINA	<i>Mechanistic basis of plant autoimmunity</i>
	To	Department of Molecular Biology MPI for Developmental Biology Tuebingen GERMANY	Supervisor: WEIGEL Detlef
LIN Zhe Wang SINGAPORE	From	Department of Chemistry and Chemical Biology Cornell University, Ithaca USA	<i>The mechanisms and substrates of ribosome-associated quality control</i>
	To	Cell Biology Division MRC Laboratory of Molecular Biology Cambridge UK	Supervisor: HEGDE Ramanujan

LIU Dan CHINA	From	Laboratory of Dynamic Immunobiology Tsinghua University Beijing CHINA	<i>PS-PLA1 and LysoPS receptors as repressors of tumor-infiltrating T cell responses</i>
	To	Department of Microbiology and Immunology UC San Francisco USA	Supervisor: CYSTER Jason
LIU Gaowen CHINA	From	School of Biological Science Nanyang Technological University SINGAPORE	<i>Investigating the genetic basis and molecular mechanism of S. pombe mating preference</i>
	To	Department of Fundamental Microbiology University of Lausanne SWITZERLAND	Supervisor: MARTIN Sophie
LLORENS BOBADILLA Enric SPAIN	From	Department of Molecular Neurobiology German Cancer Research Center Heidelberg GERMANY	<i>Uncovering cellular plasticity in the injured brain</i>
	To	Department of Cell and Molecular Biology Karolinska Institute Stockholm SWEDEN	Supervisor: FRISÉN Jonas
LUO Yi-Jyun TAIWAN	From	Marine Genomics Unit Okinawa Institute of Science and Technology Graduate University JAPAN	<i>Molecular control of stem cell fate by Wnt signaling during whole-body regeneration</i>
	To	Department of Organismic and Evolutionary Biology Harvard University Cambridge USA	Supervisor: SRIVASTAVA Mansi
MAINGI Vishal INDIA	From	Department of Biochemistry University of Oxford UK	<i>Using DNA origami to create lipid discs for studying membrane protein interactions</i>
	To	Computer Science, Bioengineering, Computation and Neural Systems CalTech Pasadena USA	Supervisor: ROTHEMUND Paul

MIYAMOTO Daisuke JAPAN	From	Department of Environmental Medicine Nagoya University JAPAN	<i>In vivo imaging of synaptic plasticity through learning and sleep</i>
	To	Department of Psychiatry University of Wisconsin Madison USA	Supervisor: CIRELLI Chiara
NAGASAKA Kota JAPAN	From	Experimental Pathology Cancer Institute of the Japanese Foundation for Cancer Research Tokyo JAPAN	<i>Elucidation of the cohesin mediated spatial organization of chromatin structure</i>
	To	Dept. of Molecular and Cellular Biology IMP Vienna AUSTRIA	Supervisor: PETERS Jan-Michael
NAKAKI Fumio JAPAN	From	Department of Anatomy and Cell Biology Kyoto University Graduate School of Medicine JAPAN	<i>Integrative analysis of the role of mammalian Hox genes in tissue patterning</i>
	To	Multicellular Systems Biology Group CGR Barcelona SPAIN	Supervisor: SHARPE James
NGUYEN Phong AUSTRALIA	From	Australian Regenerative Medicine Institute Monash University Clayton AUSTRALIA	<i>Examining genome wide gene expression and regulation during cardiac regeneration in zebrafish</i>
	To	Hubrecht Institute for Developmental Biology and Stem Cell Research Utrecht THE NETHERLANDS	Supervisor: BAKKERS Jeroen
NOWOSAD Carla UK	From	Laboratory of Activation of Immune Receptors The Francis Crick Institute London UK	<i>Influence of commensal bacteria on germinal center formation and maintenance</i>
	To	Laboratory of Lymphocyte Dynamics / Laboratory of Mucosal Immunology Rockefeller University New York USA	Supervisors: VICTORA Gabriel and MUCIDA Daniel

OHNO Hayao JAPAN	From	Department of Biological Sciences University of Tokyo JAPAN	<i>Developmental strategies to cope with nutritional stress</i>
	To	Developmental Biology Program Sloan Kettering Institute New York USA	Supervisor: BAO Zhirong
PALLARES Luisa COLOMBIA	From	Evolutionary Genetics Department MPI for Evolutionary Biology Ploen GERMANY	<i>The genetic basis of gene expression robustness under dietary stress</i>
	To	Lewis-Sigler Institute for Integrative Genomics Princeton University USA	Supervisor: AYROLES Julien
PAWLUK April CANADA	From	Department of Biochemistry University of Toronto CANADA	<i>Selection and capture of foreign DNA by type II CRISPR-Cas systems</i>
	To	California Institute of Quantitative Biosciences UC Berkeley USA	Supervisor: DOUDNA Jennifer
PONCE-SALVATIERRA Almudena SPAIN	From	Nucleic Acid Chemistry MPI for Biophysical Chemistry Goettingen GERMANY	<i>Structure-functional studies of large viral and human non-coding RNAs involved in HIV infection</i>
	To	Structure and Function of lncRNA-Protein Complexes EMBL Grenoble FRANCE	Supervisor: MARCIA Marco
ROSENTHAL Raoul FINLAND/ISRAEL	From	MPI for Terrestrial Microbiology Marburg GERMANY	<i>Automated continuous evolution with reverse transcriptase</i>
	To	School of Engineering and Applied Science Harvard University Cambridge USA	Supervisor: WEITZ David

SADANANDAPPA Madhumala INDIA	From	Department of Genetics and Development National Centre for Biological Sciences Bangalore INDIA	<i>A mother's unusual legacy: transgenerational inheritance of social behavior in Drosophila</i>
	To	Department of Genetics Dartmouth College Hanover USA	
SCHECHTMAN-DRAYMAN Eitan ISRAEL	From	Hebrew University Jerusalem ISRAEL	<i>Promoting fear extinction in humans by capitalizing on targeted memory reactivation</i>
	To	Psychology Department Northwestern University Evanston USA	
SCHMIEDEL Jörn GERMANY	From	Institute of Pathology and Institute for Theoretical Biology Charité - Universitätsmedizin Berlin GERMANY	<i>Comprehensive analysis of expression-fitness functions (EFFs)</i>
	To	Genetic Systems Biology Unit CGR Barcelona SPAIN	
SHIPONY Zohar ISRAEL	From	Faculty of Mathematics and Computer Science Weizmann Institute Rehovot ISRAEL	<i>Mapping the enhancer regulatory landscape following ricin exposure</i>
	To	Department of Genetics Stanford University USA	
STRANDBURG-PESHKIN Ariana GERMANY/USA	From	Department of Ecology and Evolutionary Biology Princeton University USA	<i>Uncovering the drivers of collective movement at individual and group scales in meerkats</i>
	To	Department of Evolutionary Biology and Environmental Studies University of Zurich SWITZERLAND	

STRECKER Jonathan CANADA	From	Department of Molecular Genetics University of Toronto CANADA	<i>Investigating the mechanism of genome rearrangement in the ciliate Oxytricha</i>
	To	Broad Institute Cambridge USA	Supervisor: ZHANG Feng
SURANA Sunaina INDIA	From	Department of Chemistry University of Chicago USA	<i>Role of extracellular matrix in regulating neurotrophin uptake, transport and biological activity</i>
	To	Institute of Neurology University College London UK	Supervisor: SCHIAVO Giampietro
TORRENO-PINA Juan Andres SPAIN	From	The Institute of Photonic Sciences Polytechnic University of Catalonia Barcelona SPAIN	<i>Identifying germline precursors of HIV-1 broadly neutralizing antibodies by single cell RNA-seq</i>
	To	Ragon Institute of MGH, MIT and Harvard Harvard University Cambridge USA	Supervisor: BATISTA Facundo
VAN SCHOOTEN Kim THE NETHERLANDS	From	Biomedical Physiology and Kinesiology Simon Fraser University Burnaby CANADA	<i>Brain and brawn in balance: disentangling central and peripheral contributions to balance control</i>
	To	Neuroscience Research Australia University of New South Wales Sydney AUSTRALIA	Supervisors: DELBAERE Kim and LORD Stephen
VENTO TORMO Roser SPAIN	From	Cancer Epigenetics and Biology Programme Hospital Duran i Reynals L'Hospitalet de Llobregat SPAIN	<i>Dissecting the maternal/fetal cross-talk in human early pregnancy one cell at a time</i>
	To	Department of Cellular Genetics Wellcome Trust Sanger Institute Cambridge UK	Supervisor: TEICHMANN Sarah

WOLFF Philip GERMANY	From	Plant Biology Swedish University of Agricultural Sciences Uppsala SWEDEN	<i>Unravelling the molecular basis of epigenetic silencing: what defines a gene as a polycomb target?</i>
	To	Cell and Developmental Biology John Innes Centre Norwich UK	Supervisor: DEAN Caroline
WU Fabai CHINA	From	Department of Bionanoscience Delft University of Technology THE NETHERLANDS	<i>Energy budgeting of microbial players in global carbon and nitrogen cycles</i>
	To	Division of Geological and Planetary Sciences CalTech Pasadena USA	Supervisor: ORPHAN Victoria
ZHANG Kaihua CHINA	From	Center of Structure and Function of Receptors Shanghai Institute of Materia Medica CHINA	<i>Activation mechanism of the Smoothened receptor by single particle electron cryo-microscopy</i>
	To	Department of Biochemistry and Biophysics UC San Francisco USA	Supervisor: CHENG Yifan
ZOMER Anoek THE NETHERLANDS	From	Cancer Biophysics Hubrecht Institute Utrecht THE NETHERLANDS	<i>Investigating microenvironmental heterogeneity of genetically diverse glioblastomas</i>
	To	Department of Oncology University of Lausanne SWITZERLAND	Supervisor: JOYCE Johanna