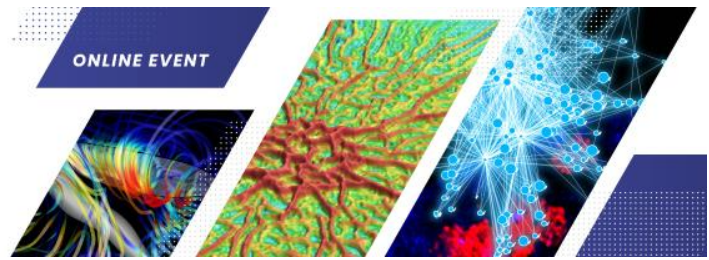




**20TH HFSP
AWARDEES
MEETING**

5-8 July 2021



20th HFSP AWARDEES MEETING

an online event

5 - 8 July 2021

Posters

Poster session 1: Monday, 5 July (15:00 – 16:05 CEST)

1. **Metabolic control of transcriptional dynamics during adipogenic differentiation in human mesenchymal stem cells**
Lorena AGUILAR ARNAL, Dept. of Molecular Biology and Biotechnology, Institute of Biomedical Sciences, UNAM - National Autonomous University of Mexico, Mexico City, Mexico
Young Investigator Grant 2017
2. **Label-free metabolic imaging during adipogenic differentiation in human mesenchymal stem cells**
Chiara STRINGARI, Lab. for Optics and Biosciences, Ecole Polytechnique, National Center for Scientific Research CNRS, Palaiseau, France
Young Investigator Grant 2017
3. **Poetic meter helps memory formation; with Ariosto but not with Dante**
Sara ANDRETTA, Dept. of Cognitive Neuroscience, International School for Advanced Studies (SISSA), Trieste, Italy
Program Grant 2016
4. **Letter position dyslexia in reading of fingerspelling in two deaf signers**
Neta HALUTS, Language and Brain Lab, Sagol School of Neuroscience and School of Education, Tel Aviv, Israel
Program Grant 2016
5. **Investigating the role of muscle in post-embryonic patterning in *Nematostella vectensis***
Marie ANZO, Developmental Biology Unit, EMBL, Heidelberg, Germany
Long-Term Fellow 2019
6. **Extracellular crosslinking mass spectrometry reveals HLA class I – HLA class II interactions on the cell surface**
Gad ARMONY, Dept. of Chemistry, Utrecht University, the Netherlands
Long-Term Fellow 2018
7. **Causal role for sleep-dependent reactivation of learning-activated sensory ensembles for fear memory consolidation**
Sara ATON, Dept. of Molecular, Cellular and Developmental Biology, University of Michigan, Ann Arbor, USA
Young Investigator Grant 2017
8. **The tired hippocampus: memory engrams in the sleep-deprived brain**
Robbert HAVEKES, Groningen Institute for Evolutionary Life Sciences, Neurobiology Expertise Group, Faculty of Science and Engineering, University of Groningen, the Netherlands
Young Investigator Grant 2017
9. **Cell-cell contact formation and wnt/ β -catenin signalling in echinoderm embryos**
Vanessa BARONE, Scripps Institute of Oceanography, University of California, San Diego, La Jolla, USA
Long-Term Fellow 2019

10. **Evolution via somatic genetic variation in multicellular species**
Iliana BAUMS, Dept. of Biology, Pennsylvania State University, University Park, USA
Program Grant 2020
11. **Cerebellar granule cell synaptic representation of behaviour**
Franziska BENDER, Dept. of Neuroscience / Dynamic Neuronal Imaging, Institut Pasteur, Paris, France
Long-Term Fellow 2019
12. **A high energy phosphate jump – from pyrophospho-inositol to pyrophospho-serine**
Rashna BHANDARI, Lab. of Cell Signalling, CDFD, Hyderabad, India
Program Grant 2016
13. **Characterizing the activity and function of neural assemblies occurring in the hippocampus during rapid eye movement sleep**
Richard BOYCE, INMED U1249, Institut de Neurobiologie de la Méditerranée, Marseille, France
Long-Term Fellow 2018
14. **Development of a platform for monitoring neural signals in the gut**
Alexander BOYS, Dept. of Chemical Engineering and Biotechnology, University of Cambridge, UK
Cross-Disciplinary Fellow 2020
15. **Handling OXPHOS structural heterogeneity and metabolic plasticity - establishment of techniques to test monoallelic expression and selection mechanism of OXPHOS subunits**
Tasnim ARROUM, Dept. of Biology, Westfälische-Wilhelms-Universität Münster, Institute of Molecular Cell Biology, Münster, Germany
Program Grant 2018
16. **In silico protein models of OXPHOS respiratory complexes**
Jose Luís CABRERA, Myocardial Pathophysiology area, Centro Nacional de Investigaciones Cardiovasculares Carlos III (FSP), Madrid, Spain
Program Grant 2018
17. **Handling OXPHOS structural heterogeneity and metabolic plasticity**
José Antonio ENRÍQUEZ, Myocardial Pathophysiology area, Centro Nacional de Investigaciones Cardiovasculares Carlos III (FSP), Madrid, Spain
Program Grant 2018
18. **OXPHOS diversity regulation at transcriptional level**
Pablo HERNANSANZ, Myocardial Pathophysiology area, Centro Nacional de Investigaciones Cardiovasculares Carlos III (FSP), Madrid, Spain
Program Grant 2018
19. **Establishing Hydra oligactis as a model for regeneration and aging**
Sergio Esteban CAMPOS RODRIGUEZ, Dept. of Molecular and Cellular Biology, University of California, Davis, USA
Long-Term Fellow 2020

20. **Diving into the cerebrospinal fluid to understand its impact on the geometry of the body axis and of the spine in vertebrates**
Yasmine CANTAUT-BELARIF, Paris Brain Institute (ICM), France
Program Grant 2018
21. **Light on an axial sensory system detecting spinal curvature**
Adeline ORTS-DEL'IMMAGINE, Paris Brain Institute (ICM), France
Program Grant 2018
22. **Hyaluronidase-1-mediated glycocalyx impairment underlies endothelial abnormalities in polypoidal choroidal vasculopathy**
Christine CHEUNG, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore
Young Investigator Grant 2019
23. **Physical determinants for the coexistence of nematic and polar network states in mitotic spindles**
Wei Xiang CHEW, Dept. of Cell and Developmental Biology, Centre for Genomic Regulation, Barcelona, Spain
Cross-Disciplinary Fellow 2020
24. **Mechanisms of infrasound detection in birds: a phylogenetic comparative test of middle and inner ear anatomical structures**
Susana CLUSELLA-TRULLAS, Dept. of Botany and Zoology, Stellenbosch University, South Africa
Young Investigator Grant 2017
25. **Linking infrasound to seabird movement decisions**
Samantha PATRICK, Seabird Ecology Group, Marine Biology, School of Environmental Sciences, University of Liverpool, UK
Young Investigator Grant 2017
26. **Engram epigenetics – a CRISPR-based approach to identify genes for the treatment of remote traumatic fear memories**
Davide CODA, Laboratory of Neuroepigenetics, Brain and Mind Institute, École Polytechnique Fédérale de Lausanne, Switzerland
Long-Term Fellow 2020
27. **Defining how water deficit signals control flowering time adaptation**
Lucio CONTI, Dept. of Biosciences, Università degli studi di Milano, Milan, Italy
Program Grant 2019
28. **Metabolic control of nuclear trafficking and mRNA splicing via arg-tRNA synthetase**
Haissi CUI, Scripps Laboratories for tRNA Synthetase Research, The Scripps Research Institute, La Jolla, USA
Long-Term Fellow 2017
29. **Uncovering new factors in vertebrate fertilization using proximity biotinylation**
Victoria DENEKE, Pauli Lab, Research Institute of Molecular Pathology, Vienna, Austria
Long-Term Fellow 2020

30. **Insect pollinators use active tactile sensing to interact with plants**
Tanvi DEORA, Dept. of Biology, University of Washington, Seattle, USA
Long-Term Fellow 2017
31. **Bioconvective chaos shapes dynamics and lifetime of harmful algal blooms**
Jayabrata DHAR, FSTC - Physics of Living Matter, University of Luxembourg, Luxembourg
Cross-Disciplinary Fellow 2019
32. **Drug repurposing screen identifies masitinib as a broad coronavirus 3CL inhibitor that blocks SARS-CoV-2 replication in vivo**
Nir DRAYMAN, Institute for Molecular Engineering / S. Tay Laboratory, University of Chicago, USA
Long-Term Fellow 2017
33. **Microtubule self-organization, cell division, and the evolution of meristem structure**
Jacques DUMAIS, Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibáñez, Viña del Mar, Chile
Program Grant 2018
34. **Defining the capacity of cells to keep the proteome folded over space and time**
Simon EBBINGHAUS, Institut für Physikalische und Theoretische Chemie, Braunschweig Integrated Centre of Systems Biology (BRICS), Technische Universität Braunschweig, Germany
Program Grant 2017
35. **Genomic basis of mechanosensation: exploring the origins and evolution of hearts and brains**
Eric EDSINGER, Molecular Neurobiology Laboratory, The Salk Institute, La Jolla, USA
Program Grant 2017
36. **Origins of cell types and integrative systems in metazoa: insights from single-cell genomics, metabolomics and behavioral pharmacology across phyla**
Leonid L. MOROZ, Dept. of Neuroscience, University of Florida, The Whitney laboratory for Marine Bioscience, St. Augustine, USA
Program Grant 2017
37. **Mechanisms of resistance to ionising radiation in Drosophila neural stem cells**
André EID, Physiology and Metabolism Laboratory, The Francis Crick Institute, London, UK
Long-Term Fellow 2018
38. **Expanding the regulatory role of KRAB zinc finger proteins through RNA interactions**
Christina ERNST, Laboratory of Virology and Genetics, École Polytechnique Fédérale de Lausanne, Switzerland
Long-Term Fellow 2019
39. **Cryo-EM analysis of a membrane protein embedded in the liposome**
Xiao FAN, Dept. of Molecular Biology, Princeton University, USA
Long-Term Fellow 2020

40. **The nervous system of the leech as a broad-range model for neurobiology research**
Francisco FERNANDEZ DE MIGUEL, Instituto de Fisiología Celular-Neurociencias, Universidad Nacional Autónoma de México, Ciudad de Mexico, Mexico
Program Grant 2019
41. **Microbiome mediated plasticity promotes thermal adaptation in *Nematostella vectensis***
Sebastian FRAUNE, Institut für Zoologie und Organismische Interaktionen, Heinrich-Heine Universität Düsseldorf, Germany
Young Investigator Grant 2016
42. **Non-refoldability is pervasive across the *E. coli* proteome**
Stephen FRIED, Dept. of Chemistry, John Hopkins University, Baltimore, USA
Young Investigator Grant 2019
43. **Exploration of RNA-binding motifs in limited amino acid sequence space**
Kosuke FUJISHIMA, Earth-Life Science Institute, Tokyo Institute of Technology, Japan
Young Investigator Grant 2019
44. **Physics of parasitism: Plasmodium senses environmental elasticity during transmission of malaria**
Friedrich FRISCHKNECHT, Parasitology Unit, Center for Infectious Diseases, University of Heidelberg Medical School, Germany
Young Investigator Grant 2016
45. **Causal deconvolution of a thermodynamic model of MAPK signaling explains adaptive and genetic resistance to targeted drugs in BRAF-mutant cancers**
Fabian FROEHLICH, Laboratory of Systems Pharmacology, Harvard Medical School, Boston, USA
Long-Term Fellow 2019
46. **Random peptides are a source of cellular novelty and assume various cellular functions**
Idan FRUMKIN, Dept. of Biology, Massachusetts Institute of Technology, Cambridge, USA
Long-Term Fellow 2018
47. **Diversity and function of GPCRs in Choanoflagellates**
Alain GARCIA DE LAS BAYONAS, Dept. of Molecular and Cell Biology, University of California, Berkeley, USA
Long-Term Fellow 2020
48. **Sticky PI, an AI-powered smart insect trap for community chronoecology**
Quentin GEISSMANN, Dept. of Microbiology and Immunology, University of British Columbia, Vancouver, Canada
Long-Term Fellow 2019
49. **Regulation of spindle pole architecture by the microtubule focusing machineries**
Romain GIBEAUX, Institute of Genetics and Development of Rennes (IGDR), UMR6290 CNRS / University of Rennes 1, France
Career Development Award 2019

50. **Development of a semi-field system for quantitative tracking of *Anopheles gambiae* olfactory preference**
Diego GIRALDO SANCHEZ, Dept. of Molecular Microbiology and Immunology, Johns Hopkins University, Baltimore, USA
Long-Term Fellow 2019
51. **Expression of an endogenous retrovirus in the developing mouse limb drives severe malformation**
Juliane GLASER, Development and Disease Research Group, Max Planck Institute for Molecular Genetics, Berlin, Germany
Long-Term Fellow 2019
52. **Universal surface patterning mechanisms in plants and animals: an integrative study of dynamics of material properties, stress and size with relation to surface patterns**
Beverley GLOVER, Dept. of Plant Sciences, University of Cambridge, Cambridge University Botanic Garden, UK
Program Grant 2017
53. **Immune response during lactation after anti-SARS-CoV2 mRNA vaccine**
Yarden GOLAN MAOR, Dept. of Bioengineering, University of California, San Francisco, USA
Long-Term Fellow 2020
54. **Self-organized morphogenesis of an in vitro human neural tube**
Eyal KARZBRUN, Kavli Institute for Theoretical Physics, University of California, Santa Barbara, USA
Long-Term Fellow 2018
55. **Revealing uncharacterized molecular pathways for cancer cell fitness through a genetic screen of the cancer transcriptome**
Duygu KUZUOGLU OZTURK, Department of Urology, Helen Diller Family Comprehensive Cancer Center, University of California, San Francisco, USA
Long-Term Fellow 2016
56. **Mechanisms of actin force production in clathrin-mediated endocytosis revealed by integrating mathematical modeling with in situ cryo-electron tomography**
Daniel SERWAS, Dept. of Molecular and Cell Biology, University of California, Berkeley, USA
Long-Term Fellow 2018
57. **Molecular mechanism of biased signaling in a prototypical G protein-coupled receptor**
Carl-Mikael SUOMIVUORI, Dept. of Computer Science, Stanford University, USA
Long-Term Fellow 2018
58. **Biomechanical induction of a human primitive streak**
Manon VALET, Center for Studies in Physics and Biology, The Rockefeller University, New York, USA
Cross-Disciplinary Fellow 2020
59. **Understanding the antimicrobial mechanism of silver**
Yong WANG, Dept. of Physics, University of Arkansas, Fayetteville, USA
Cross-Disciplinary Fellow 2014

Poster session 2: Tuesday, 6 July (13:45 – 14:50 CEST)

60. **Predicting lapses of attention with sleep-like slow waves**
Thomas ANDRILLON, Paris Brain Institute, Paris, France
Long-Term Fellow 2018
61. **How do fish process visual motion cues to orient in their environment?**
Aristides ARRENERG, Institute for Neurobiology, Systems Neurobiology, University of Tuebingen, Werner Reichardt Centre for Integrative Neuroscience, Tuebingen, Germany
Young Investigator Grant 2018
62. **Do you see what I see? Developing transgenic tools in cichlid fish to quantify neural activation and visually guided behaviors**
Scott JUNTTI, Dept. of Biology, University of Maryland, College Park, USA
Young Investigator Grant 2018
63. **Investigation of visual circuit adaptations to natural environmental motion in zebrafish and African cichlids**
Tod THIELE, Dept. of Biological Sciences, University of Toronto Scarborough, Canada
Young Investigator Grant 2018
64. **A modular electrochemical biosensing platform for small molecule detection**
Adam DAMRY, Research School of Chemistry, Australian National University, Canberra, Australia
Cross-Disciplinary Fellow 2020
65. **Deazaguanine derivatives protect dsDNA phages from host restriction enzymes**
Valérie DE CRÉCY-LAGARD, Dept. of Microbiology and Cell Science, University of Florida, Gainesville, USA
Geoffrey HUTINET, Dept. of Microbiology and Cell Science, University of Florida, Gainesville, USA
Program Grant 2018
66. **Novel approaches to understanding sleep from a single neuron to the whole brain**
Daniel FORGER, Dept. of Mathematics, University of Michigan, Ann Arbor, USA
Program Grant 2018
67. **Data-driven discovery of control mechanisms coordinating locomotor behaviours**
Adam GOSZTOLAI, Brain Mind Institute and Institute of Bioengineering, École Polytechnique Fédérale de Lausanne, Switzerland
Cross-Disciplinary Fellow 2020
68. **Comparative whole-genome approach to identify traits underlying microbial interactions**
Hans-Peter GROSSART, Dept. of Limnology of Stratified Lakes, Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Potsdam University, Stechlin, Germany
Program Grant 2016
69. **Spirals and asters direct supracellular organization in nematic tissues**
Pau GUILLAMAT, Laboratory of Integrative Cell and Tissue Dynamics, Institute for Bioengineering of Catalonia, Barcelona, Spain
Cross-Disciplinary Fellow 2018

70. **An extended DNA-free intranuclear compartment organizes centrosomal microtubules in malaria parasite**
Julien GUIZETTI, Centre for Infectious Diseases / Parasitology Unit, Heidelberg University Hospital, Germany
Career Development Award 2018
71. **CAMKII activation persistently segregates postsynaptic proteins via liquid phase separation**
Yasunori HAYASHI, Dept. of Pharmacology, Graduate School of Medicine, Kyoto University, Japan
Program Grant 2019
72. **Trans-synaptic assemblies link synaptic vesicles and neuroreceptors**
Vladan LUCIC, Dept. of Molecular Structural Biology, Max Planck Institute of Biochemistry, Martinsried, Germany
Program Grant 2019
73. **Direct single-cell RNA kinetics measurements in thousands of cells with NASC-seq2**
Gerardus Johannes HENDRIKS, Karolinska Institute, Stockholm, Sweden
Long-Term Fellow 2017
74. **Insight into the connectome of the learning and memory network of the octopus**
Binyamin HOCHNER, Dept. of Neurobiology, Silberman Institute of Life Sciences, Hebrew University, Jerusalem, Israel
Program Grant 2019
75. **Multicolor three-photon fluorescence imaging deep in living mouse brain**
Yusaku HONTANI, Dept. of Applied and Engineering Physics, Cornell University, Ithaca, USA
Cross-Disciplinary Fellow 2019
76. **Mechanisms underlying neural misrepresentations of speech in hearing loss across different sound level intensities**
Chengjie HUANG, Ear Institute, University College London, UK
Long-Term Fellow 2019
77. **Linking structural dynamics of the repeat-protein scaffold PR65 to its allosteric mechanics and its function in the multi-subunit enzyme PP2A**
Laura ITZHAKI, Dept. of Pharmacology, University of Cambridge, UK
Program Grant 2020
78. **Multi-timescale representations of rat behavior**
Kanishk JAIN, Dept. of Biology, Emory University, Atlanta, USA
Young Investigator Grant 2018
79. **Sequential variational autoencoders for simultaneously recorded neural and behavioural data**
Auguste SCHULZ, Machine Learning in Science, Cluster of Excellence "Machine Learning", Faculty of Mathematics and Natural Sciences, University of Tübingen, Germany
Young Investigator Grant 2018

80. **Molecular mechanisms of survival to the long polar night in the diatom *Fragilariopsis cylindrus***
Nathalie JOLI, Ecology and Evolutionary Biology Section, Institute of Biology, ENS Paris, CNRS UMR8197, Paris, France
Program Grant 2016
81. **Locus coeruleus broadcasts visuomotor errors across neocortex**
Rebecca JORDAN, Dept. of Neurobiology, Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland
Long-Term Fellow 2019
82. **Probing consequences of climate change: embryonic development at elevated temperature in flies**
Girish KALE, Centre for Organismal Studies, University of Heidelberg, Germany
Long-Term Fellow 2019
83. **Genome evolution and the control of transposable elements during germline development in *Drosophila***
Felipe KARAM TEIXEIRA, Dept. of Genetics, University of Cambridge, UK
Career Development Award 2018
84. **Wireless closed-loop optogenetics across the entire dorsoventral spinal cord in ecological environments**
Claudia KATHE, Laboratory of Prof. Grégoire Courtine, École Polytechnique Fédérale de Lausanne, Switzerland
Long-Term Fellow 2017
85. **Signal-switchable chimeric enzymes used for mimicking boolean logic gates**
Evgeny KATZ, Dept. of Chemistry & Biomolecular Science, Clarkson University, Potsdam, USA
Program Grant 2018
86. **Direct electron transfer of pyrroloquinoline quinone-dependent glucose dehydrogenase (PQQ-GHD) based on carbon nano-onions-modified glassy carbon electrodes**
Ciara O' SULLIVAN, Dept. of Chemical Engineering, Universitat Rovira i Virgili, ICREA, Tarragona, Spain
Program Grant 2018
87. **Towards structural characterisation of the RNA M6A writer machinery**
Migle KAZLAUSKIENE, Dept. of Biochemistry, University of Zurich, Switzerland
Long-Term Fellow 2019
88. **Is the morphological diversity of lizard osteoderms paralleled by a wide range of biomechanical properties?**
Loïc KÉVER, Dépt. Adaptations du Vivant, UMR 7179 C.N.R.S/M.N.H.N, Paris, France
Program Grant 2019
89. **The histology and evolution of lizard osteoderms: microstructural diversity of a skin-based skeletal system**
Catherine WILLIAMS, Dept. of Biomedical Sciences, University of Guelph, Canada
Program Grant 2019

90. **A metabolomic view of phosphate starvation responses in *Saccharomyces cerevisiae***
Geundon KIM, Dept. of Biochemistry, University of Lausanne, Epalinges, Switzerland
Long-Term Fellow 2019
91. **Role of post-translational modifications of mammalian SWI/SNF chromatin remodeling complexes in human disease**
Shany KOREN-HAUER, Dept. of Chemistry, Princeton University, USA
Long-Term Fellow 2020
92. **Hypoxia adaptation in Tibetan population unravels the identity and regulation of epo-producing renal cells**
Bjoert Katrinardottir KRAGESTEEN, Dept. of Immunology, Weizmann Institute of Science, Rehovot, Israel
Long-Term Fellow 2019
93. **Unraveling the function of orphan lysosomal transporters implicated in neurodegenerative disease**
Alvin Chun Yin KUK, Cardiovascular and Metabolic Disorders Programme, Duke-NUS Medical School, Singapore
Long-Term Fellow 2020
94. **Bottom-up construction of a minimal synthetic cell**
Yutetsu KURUMA, X-star, Japan Agency for Marine-Earth Science and Technology, Kanagawa, Japan
Program Grant 2020
95. **Whole-brain mapping of brain activity induced by imprinted cues**
Chiara LA ROSA, Dept. of Life Sciences and Systems Biology, University of Turin, Italy
Program Grant 2020
96. **Sexual imprinting on the brain**
Sarah M. ZALA, Konrad Lorenz Institute of Ethology, Veterinary Medicine University, Vienna, Austria
Program Grant 2020
97. **The mechanics and energetics of insect herbivory: from cutting 'machines' to ecosystem structure**
David LABONTE, Dept. of Bioengineering, The Imperial College of Science, Technology and Medicine, London, UK
Young Investigator Grant 2020
98. **A murine atlas of age-related changes in intercellular communication**
Cyril LAGGER, Institute of Life Course and Medical Sciences, University of Liverpool, UK
Cross-Disciplinary Fellow 2019
99. **Raman microspectroscopy of marine microbial communities through time**
Zachary LANDRY, Institut für Umweltingenieurwissenschaften - GWH, ETH Zurich, Switzerland
Long-Term Fellow 2018

100. **Plant responses to climate change through space and time**
Patricia LANG, Dept. of Biology, Stanford University, USA
Long-Term Fellow 2019
101. **A cold stress inducible PERK-OGT-TOM70 axis controls mitochondrial protein import and cristae formation**
Pedro LATORRE-MURO, Dept. of Cancer Biology, Dana-Farber Cancer Institute / Harvard Medical School, Boston, USA
Long-Term Fellow 2019
102. **The origin and evolution of the mitochondrial MutS gene in octocorals**
Dennis LAVROV, Dept. of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, USA
Program Grant 2019
103. **C-terminal endonuclease domain in the octocoral mitochondria MutS protein**
Somnath MONDAL, Institut Européen de Chimie et Biologie, University of Bordeaux, U1212, CNRS UMR5320, Pessac, France
Program Grant 2019
104. **Multiple losses of MSH1, gain of mtMutS, and other changes in the MutS family of DNA repair proteins in animals**
Viraj MUTHYE, Dept. of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, USA
Program Grant 2019
105. **Tracking calcium dynamics and protein secretion by Choroid plexus epithelial cells**
Maria LEHTINEN, Dept. of Pathology, Boston Children's Hospital, USA
Program Grant 2018
106. **Cortical-like dynamics in recurrent circuits optimized for sampling-based probabilistic inference**
Mate LENGYEL, Computational and Biological Learning Lab, Dept. of Engineering, University of Cambridge, UK
Program Grant 2018
107. **Continuous multiplexed population representations of task context in the mouse primary visual cortex**
Gergo ORBAN, Computational System Neuroscience Lab, MTA Wigner Research Centre for Physics, Budapest, Hungary
Program Grant 2018
108. **Lipids in the brain: modulation of GPCR activity by lipids**
Ilpo VATTULAINEN, Dept. of Physics, University of Helsinki, Finland
Program Grant 2019
109. **Searching for hypoxia sensors within the class of O₂-dependent enzymes**
Li LI, Dept. of Pharmaceutical Chemistry, University of California, San Francisco, USA
Cross-Disciplinary Fellow 2020

110. **Pre-birth tissue specific immune education**
Ai Ing LIM, National Institute of Allergy and Infectious Disease, National Institutes of Health, Bethesda, USA
Long-Term Fellow 2018
111. **NGN2 induces diverse neuronal lineages from human pluripotency**
Hsiu-Chuan LIN, Human Retina and Organoid Development Group, Institute of Molecular and Clinical Ophthalmology Basel, Switzerland
Long-Term Fellow 2020
112. **Sensory errors drive compensatory vocal behaviours in echolocating bats**
Jinhong LUO, School of Life Science, Central China Normal University, Wuhan, People's Republic of China
Career Development Award 2019
113. **Nature-inspired robotic technology: dung beetle-like robot that can perform complex locomotion and object transportation on various terrains**
Poramate MANOONPONG, Embodied Artificial Intelligence & Neurorobotics Lab, Centre for BioRobotics, The Maersk Mc-Kinney Moller Institute, The University of Southern Denmark, Odense, Denmark
Program Grant 2017
114. **Mucociliary clearance and non-equilibrium transport by active coating materials**
Arnold MATHIJSEN, Dept. of Physics and Astronomy, University of Pennsylvania, Philadelphia, USA
Cross-Disciplinary Fellow 2017
115. **Distributional reinforcement learning in the dopamine system**
Sara MATIAS, Dept. of Molecular and Cellular Biology, Harvard University, Cambridge, USA
Long-Term Fellow 2018
116. **Deconstructing settlement decision-making in coral larvae**
Mikhail MATZ, Dept. of Integrative Biology, The University of Texas at Austin, USA
Program Grant 2020
117. **BRAIN-SEQ or neural system at the single-cell resolution: insights in the origins of neuronal centralization and memory mechanisms**
Leonid L. MOROZ, Dept. of Neuroscience, University of Florida, The Whitney laboratory for Marine Bioscience, St. Augustine, USA
Program Grant 2017
118. **Movement ecology of ocean wanderers in relation to infrasound**
Samantha PATRICK, Seabird Ecology Group, Marine Biology, School of Environmental Sciences, University of Liverpool, UK
Young Investigator Grant 2017
119. **The receptor kinase SRF3 coordinates iron-defense-growth tradeoff in plants**
Matthieu PLATRE, Department of Plant Biology, The Salk Institute for Biological Studies, La Jolla, USA
Long-Term Fellow 2019

Poster session 3: Wednesday, 7 July (13:45 – 14:50 CEST)

120. **Integrating materials, behavior, robotics and architecture in giant filter-feeding sharks**
Mason DEAN, Dept. of Zoology, Trinity College Dublin, Ireland
Program Grant 2020
121. **Neurons in the dorso-central pallium of zebrafish respond to change in visual numerosity**
Andrea MESSINA, School of Biological and Chemical Sciences, Queen Mary University of London, UK
Program Grant 2017
122. **De novo design of protein mechanics**
Lukas MILLES, Institute for Protein Design, University of Washington, Seattle, USA
Cross-Disciplinary Fellow 2020
123. **Nanostructure tools for studying protein structure and assembly**
Carsten MIM, Dept. of Structural Biotechnology, School of Technology and Health, KTH Royal Technical Institute, Huddinge, Sweden
Young Investigator Grant 2016
124. **In vivo imaging of synaptic renormalization during post-learning sleep**
Daisuke MIYAMOTO, Laboratory for Sleeping-Brain Dynamics, Research Center for Idling Brain Science, University of Toyama, Japan
Long-Term Fellow 2017
125. **Regulatory T cells promote innate inflammation following skin barrier breach**
Joshua MOREAU, Dept. of Dermatology, University of California, San Francisco, USA
Long-Term Fellow 2018
126. **Miniaturized deep activity recording with high throughput (MiniDART)**
Claudio MORETTI, Lab. Kastler-Brossel, Sorbonne Université, UPMC-ENS, Paris, France
Program Grant 2020
127. **Brain evolution demystified: on the origin of the everted neocortex-homolog in zebrafish**
Thomas MUELLER, Division of Biology / Mueller-lab, Kansas State University, Manhattan, USA
Program Grant 2019
128. **Filament nucleation tunes mechanical memory in active polymer networks**
Michael MURRELL, Dept. of Biomedical Engineering, Yale University / Systems Biology Institute, West Haven, USA
Young Investigator Grant 2018
129. **Imaging influenza virus RNA genome assembly with high spatial and temporal resolutions inside infected cells**
Nadia NAFFAKH, Dept. of Virology, Institut Pasteur, Paris, France
Program Grant 2019

130. **Somite surface tension buffers imprecise segment lengths to ensure increased precision and left-right symmetry**
Sundar NAGANATHAN, Institute of Bioengineering, École Polytechnique Fédérale de Lausanne, Switzerland
Long-Term Fellow 2016
131. **Cohesin mediates sister chromatid cohesion independently of DNA loop extrusion**
Kota NAGASAKA, Jan-Michael Peters lab, Molecular and Cellular Biology, Research Institute of Molecular Pathology, Vienna, Austria
Long-Term Fellow 2017
132. **Molecular mechanisms of microtubule nucleation in plant cells**
Masayoshi NAKAMURA, Institute of Transformative Bio-Molecules, Nagoya University, Japan
Career Development Award 2017
133. **Engineering enzymes to study the role of lysine acylation in chromatin structure and dynamics**
Heinz NEUMANN, Dept of Chemical Engineering and Biotechnology, University of Applied Sciences Darmstadt, Germany
Program Grant 2017
134. **How likely is the emergence of (autocatalytic) self-reproducing RNAs?**
Philippe NGHE, Laboratoire de Biochimie, ESPCI, Paris, France
Young Investigator Grant 2019
135. **Exploring sleep ecology and genetics across hyperdiverse lake Tanganyikan cichlids**
Annika NICHOLS, Biozentrum, University of Basel, Switzerland
Long-Term Fellow 2019
136. **Evolution of gene function, regulation and expression in a unique wintering strategy**
William THOMAS, Dept. of Ecology and Evolution, SUNY Stony Brook, USA
Program Grant 2019
137. **Developmental plasticity as a novel predisposing factor for tumorigenesis**
Ilaria PANZERI, Center for Epigenetic, Van Andel Research Institute, Grand Rapids, USA
Long-Term Fellow 2018
138. **A mechanochemical gradient driving germ layer segregation during zebrafish gastrulation**
Diana PINHEIRO, Laboratory of Morphogenesis in Development, Institute of Science and Technology Austria, Klosterneuburg, Austria
Long-Term Fellow 2018
139. **How T cells avoid traffic jams**
Jérémy POSTAT, Dept. of Physiology, Faculty of Medicine, McGill University, Montreal, Canada
Long-Term Fellow 2019
140. **De novo design of dynamic proteins**
Florian PRAETORIUS, Dept. of Biochemistry, University of Washington, Seattle, USA
Long-Term Fellow 2019

141. **Dynamics of epithelial monolayers on curved surfaces**
Jacques PROST, Dept. of Physicochimie, Institut Curie - UMR168, Paris, France
Program Grant 2018
142. **Live imaging of the hyperthermophilic archaeon *Sulfolobus acidocaldarius* identifies complementary roles for two ESCRTIII homologues in ensuring a robust and symmetric cell division**
André PULSCHEN, MRC Laboratory for Molecular Cell Biology, University College London, UK
Long-Term Fellow 2019
143. **Ultrafast amplitude modulation for molecular and hemodynamic ultrasound imaging**
Claire RABUT, Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, USA
Cross-Disciplinary Fellow 2020
144. **Cholesterol, mTOR and facultative stem cells: new regulators of bone catch-up growth**
Alberto ROSELLO DIEZ, Australian Regenerative Medicine Institute, Monash University, Clayton, Australia
Career Development Award 2019
145. **Discovery of distinct ribosomes and their contribution to human health, disease and aging**
Daphna ROTHSCILD BUP, Dept. of Genetics, Stanford University, USA
Long-Term Fellow 2020
146. **Investigating adult brain reinnervation using a biohybrid retinal ganglion cell multielectrode array**
Tobias RUFF, Laboratory of Biosensors and Bioelectronics, Institute for Biomedical Engineering, ETZ F82, ETH Zurich, Switzerland
Long-Term Fellow 2020
147. **Identifying the function of FOXP2 assemblies during neural crest differentiation and implications for human speech**
Shady SAAD, Dept. of Chemical and Systems Biology, Stanford University, USA
Long-Term Fellow 2018
148. **Mechanisms of cellular reprogramming in cnidarian whole body regeneration**
Miguel SALINAS SAAVEDRA, Centre of Chromosomal Biology / Uri Frank Laboratory, National University of Ireland, Galway, Ireland
Long-Term Fellow 2020
149. **Exploring de novo functionalities in a resurrected ancestral TIM-barrel**
Jose Manuel SANCHEZ RUIZ, Dept. of Physical Chemistry, Faculty of Sciences, University of Granada, Spain
Program Grant 2017
150. **MIDI4MITO: midichloria mitochondrii, unique intramitochondrial bacterium and novel tool to explore mitochondria**
Davide SASSERA, Dept. of Biology and Biotechnology, University of Pavia, Italy
Young Investigator Grant 2017

151. **Aster repulsion drives short-ranged ordering in the *Drosophila* syncytial blastoderm**
Timothy SAUNDERS, Mechanobiology Institute and Dept. of Biological Sciences, National University of Singapore, Singapore
Young Investigator Grant 2016
152. **Multiple memories can be simultaneously reactivated during sleep as effectively as a single memory**
Eitan SCHECHTMAN-DRAYMAN, Dept. of Psychology, Northwestern University, Evanston, USA
Long-Term Fellow 2017
153. **Why don't plants get sunburn?**
Gabriela SCHLAU-COHEN, Dept. of Chemistry, Massachusetts Institute of Technology, Cambridge, USA
Young Investigator Grant 2017
154. **Coordination of mitochondrial homeostasis with cell size**
Kurt SCHMOLLER, Institute of Functional Epigenetics, Helmholtz Zentrum München GMBH, Neuherberg, Germany
Career Development Award 2019
155. **Unraveling phosphatidylethanolamine transport and metabolism by combining chemistry and biology tools**
Clémence SIMON, Dept. of Biochemistry, University of Geneva, Switzerland
Long-Term Fellow 2020
156. **Biomechanics of rapid plant movement**
David SLEBODA, Dept. of Physiology, McGill University, Montreal, Canada
Long-Term Fellow 2020
157. **Interplay of active and thermal fluctuations in biopolymer dynamics**
Andrew J. SPAKOWITZ, Dept. of Chemical Engineering, Stanford University, USA
Program Grant 2020
158. **Modulation of single cell volume and mass growth by intrinsic and extrinsic factors**
Nishit SRIVASTAVA, UMR144/Systems Cell Biology of Cell Polarity and Cell Division, Institut Curie, Paris, France
Long-Term Fellow 2018
159. **Quantifying the pairwise fighting behavior of zebrafish in 3D**
Greg STEPHENS, Physics of Living Systems and Molecular Biophysics, Dept. of Physics and Astronomy, Vrije Universiteit Amsterdam, the Netherlands
Program Grant 2016
160. **Cellular substrates of complex behavior**
Jeffrey Todd STREELMAN, School of Biological Sciences, Georgia Institute of Technology, Atlanta, USA
Program Grant 2019

161. **Intrinsic spatiotemporal dynamics modulate visual responses in the superior colliculus**
Anton SUMSER, Dept. of Neuroethology, Institute of Science and Technology Austria,
Klosterneuburg, Austria
Long-Term Fellow 2018
162. **Precise temperature manipulation reveals heat hypersensitivity of ryanodine receptor type 1**
Madoka SUZUKI, Institute for Protein Research, Osaka University, Japan
Program Grant 2018
163. **A new approach to measuring the temperature gradient in nanoscopic volumes of aqueous media**
Vadim ZEEB, Cytotechnology Lab, Institute of Theoretical and Experimental Biophysics,
Russian Academy of Sciences, Pushchino, Moscow region, Russia
Program Grant 2018
164. **Towards the interface of heterotypic interactions between amyloid- β and tau in Alzheimer's disease**
Einav TAYEB-FLIGELMAN, Dept. of Chemistry and Biochemistry and Biological Chemistry,
University of California, Los Angeles, USA
Long-Term Fellow 2018
165. **Can T cells form traffic jams?**
Johannes TEXTOR, Dept. of Tumour Immunology, Radboud University Medical Center,
Nijmegen, the Netherlands
Program Grant 2020
166. **Manipulation of network activity in the spinal cord by single cell stimulation via nanoscale photodiodes**
Agnes THALHAMMER, Dept. of Neurobiology - Neuron Physiology and Technology lab,
International School for Advanced Studies (SISSA), Trieste, Italy
Program Grant 2019
167. **BONZEB: open source, modular software tools for high resolution zebrafish tracking and analysis**
Tod THIELE, Dept. of Biological Sciences, University of Toronto Scarborough, Canada
Young Investigator Grant 2018
168. **Compositional identity and robustness of compartmentalized self-reproducing catalytic RNAs**
Shashi THUTUPALLI, Simons Centre for the Study of Living Machines, National Centre for
Biological Sciences, Tata Institute for Fundamental Research, Bangalore, India
Young Investigator Grant 2018
169. **Global analysis of protein folding stability using cDNA display**
Kotaro TSUBOYAMA, Dept. of Pharmacology, Feinberg School of Medicine, Northwestern
University, Chicago, USA
Long-Term Fellow 2020

170. **ScanNet: a geometric deep learning framework for functional annotation of protein structures**
Jérôme TUBIANA, Edmond J. Safra Center for Bioinformatics, Blavatnik School of Computer Science, Tel Aviv University, Israel
Cross-Disciplinary Fellow 2019
171. **Spatio-temporal control over neuronal activity in an innate social behavior circuit**
Amit VINOGRAD, Division of Biology, California Institute of Technology, Pasadena, USA
Long-Term Fellow 2019
172. **Identification of transcribed sequence elements that govern transcriptional output**
Hanneke VLAMING, Dept. of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, USA
Long-Term Fellow 2018
173. **Covalent modification and regulation of proteins by CO₂**
David VOCADLO, Depts. of Molecular Biology & Biochemistry and Chemistry, Simon Fraser University, Burnaby, Canada
Program Grant 2020
174. **Activin signaling regulates the tradeoff between immunity and regeneration in chimeric planarians**
Bo WANG, Dept. of Bioengineering, Stanford University, USA
Young Investigator Grant 2019
175. **3D atomic-scale movies of molecular machines in action**
Shimon WEISS, Dept. of Chemistry and Biochemistry, Dept. of Physiology, University of California, Los Angeles, USA
Program Grant 2019
176. **Rapid evolution of a chromosome four-restricted family of zinc finger genes in zebrafish**
Jonathan WELLS, Dept. of Molecular Biology and Genetics, Cornell University, Ithaca, USA
Long-Term Fellow 2019
177. **Investigating biological solar panels using surface chemistry techniques**
Mary WOOD, Laboratory of NanoBiotechnology, École Polytechnique Fédérale de Lausanne, Switzerland
Cross-Disciplinary Fellow 2019
178. **Deconvolving multiplexed histone modifications in single cells**
Jake YEUNG, A. van Oudenaarden Laboratory, Hubrecht Institute for Developmental Biology and Stem Cell Research, Utrecht, the Netherlands
Long-Term Fellow 2019

Poster session 4 - alumni posters: Thursday, July 8 (12:25–13:30 CEST)

179. **Cholinergic MECP2 expression enables whole-brain network transitions by arousal**
Pietro ARTONI, Dept. of Neurobiology, Boston Children's Hospital, USA
Cross-Disciplinary Fellow 2015
180. **Cell number variation in sensory neurons shapes olfactory perception**
Thomas AUER, Center for Integrative Genomics, University of Lausanne, Switzerland
Long-Term Fellow 2015
181. **Collective behavior emerges from genetically controlled simple behavioral motifs in zebrafish**
Armin BAHL, Dept. of Molecular and Cellular Biology, University of Konstanz, Germany
Long-Term Fellow 2016
182. **Cargo transport by treadmilling FtsZ cytoskeleton**
Natalia BARANOVA, Institute of Science and Technology Austria (IST Austria), Klosterneuburg, Austria
Long-Term Fellow 2016
183. **FLYPAD: dissecting the complex structure of feeding to identify the underlying mechanisms**
Rory BERESFORD, Chamaplimaud Research, Fundacao Champalimaud, Lisbon, Portugal
Program Grant 2012
184. **DNA nanotechnology based emerging technologies for biological and biomedical applications**
Dhiraj Devidas BHATIA, Dept. of Biological Engineering, Indian Institute of Technology Gandhinagar, India
Long-Term Fellow 2014
185. **Human X chromosome reactivation: chromatin and transcriptional dynamics during human pluripotent reprogramming**
Irene CANTONE, Division of Epigenetics, University of Naples Federico II, Naples, Italy
Long-Term Fellow 2010
186. **Immature olfactory sensory neurons provide behaviorally useful sensory input to the olfactory bulb**
Claire CHEETHAM, Dept. of Biological Sciences, University of Pittsburgh, USA
Long-Term Fellow 2011
187. **Towards the computational design of genetically encodable nanomachines**
Alexis COURBET, Dept. of Biochemistry, University of Washington, Seattle, USA
Long-Term Fellow 2016
188. **Real-time monitoring of feeding and other activities in aphids by laser speckle contrast imaging**
Martin DRUCKER, Equipe ViVe, INRAE, UMR 1131 SVQV, Colmar, France
Program Grant 2015

189. **An ectopic cervical thymus and no thymic involution until midlife in naked mole-rats**
Stephan EMMRICH, University of Rochester, USA
Long-Term Fellow 2016
190. **Nutrient levels and trade-offs control diversity in a model seasonal ecosystem**
Amir EREZ, Center for the Physics of Biological Function, Hebrew University of Jerusalem, Israel
Cross-Disciplinary Fellow 2014
191. **Towards a physics of living materials**
Sebastian FUERTHAUER, Center for Computational Biology, CCB, Flatiron Institute, New York, USA
Cross-Disciplinary Fellow 2014
192. **Evolutionary repairing DNA replication**
Marco FUMASONI, Dept. of Molecular and Cellular Biology / Murray Lab., Instituto Gulbenkian de Ciência, Oeiras, Portugal
Long-Term Fellow 2016
193. **Wild animal oral microbiomes reflect the history of human antibiotics use**
Katerina GUSCHANSKI, Dept. of Ecology and Genetics/Animal Ecology, Institute of Evolutionary Biology, School of Biological Sciences, University of Edinburgh, UK
Long-Term Fellow 2011
194. **Nucleosome induced homology recognition in chromatin**
Jonathan G. HEDLEY, Dept. of Chemistry, Imperial College London, UK
Program Grant 2010
195. **Flamingo: putting advanced microscopy in the hands of biologists**
Jan HUISKEN, Dept. of Medical Engineering, Morgridge Institute for Research, Madison, USA
Cross-Disciplinary Fellow 2006
196. **Characterizing the roles of circorner1 in synaptic plasticity**
Pak Kan Jacque IP, Sur Laboratory, The Chinese University of Hong Kong, Hong Kong
Long-Term Fellow 2014
197. **New binding partners to cyanobacteriochromes for optogenetic applications**
Jaewan JANG, Dept. of Chemistry, University of Toronto, Canada
Long-Term Fellow 2011
198. **Individual differences in zebrafish exploratory behavior are influenced by strain and sex**
Justin KENNEY, Program in Neurosciences and Mental Health, Wayne State University, Detroit, USA
Long-Term Fellow 2014
199. **Localized phosphorylation of RNA polymerase II by G1 cyclin-CDK promotes cell cycle entry**
Mardo KOIVOMAGI, Dept. of Biology, Stanford University, East Palo Alto, USA
Long-Term Fellow 2014

200. **Metabolic control of DNA methylation in naive pluripotent cells**
Graziano MARTELLO, Dept. of Molecular Medicine, University of Padova, Italy
Long-Term Fellow 2010
201. **Phase separation of synapsin, alpha-synuclein and synaptic vesicles**
Dragomir MILOVANOVIC, Molecular Neuroscience, German Center for Neurodegenerative Diseases (DZNE), Berlin, Germany
Long-Term Fellow 2016
202. **Exploring the efficacy of naturally occurring biflavone based antioxidants towards the inhibition of the SARS-CoV-2 spike glycoprotein mediated membrane fusion**
Samiran MONDAL, Dept. of Chemistry, Rammohan College, Kolkata, India
Cross-Disciplinary Fellow 2012
203. **Signalling mechanisms involved in the activity-dependent modulation of the slow afterhyperpolarising current, SIAHP, in hippocampal neurons**
Paola PEDARZANI, UCL Neuroscience, Physiology and Pharmacology, University College London, UK
Program Grant 2010
204. **A limbic circuit selectively linking active escape to food suppression**
Estefania PEREIRA CARDOSO AZEVEDO, Laboratory of Molecular Genetics, The Rockefeller University, New York, USA
Long-Term Fellow 2015
205. **Cortical actin cytoskeleton organization and dynamics modulate endothelial cell mechanoresponse to haemodynamic forces**
Li-Kun PHNG, Laboratory for Vascular Morphogenesis, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan
Long-Term Fellow 2010
206. **P-MAZE: an automatized flexible platform for navigation and memory studies in mice**
Juan PABLO QUINTANILLA, Dept. of Functional & Systems Neurobiology, Instituto Cajal CSIC, Madrid, Spain
Program Grant 2013
207. **A colonial chordate, Botryllus schlosseri, as a model for mammalian hematopoietic and immune systems**
Benyamin ROSENTAL, Dept. of Microbiology, Immunology, and Genetics, Regenerative Medicine and Stem Cell Research Center, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel
Long-Term Fellow 2014
208. **Immuno-saber: highly multiplexed and sensitive in situ protein imaging with signal amplification**
Sinem SAKA, Genome Biology Unit, EMBL, Heidelberg, Germany
Long-Term Fellow 2016

209. **Deep subsurface microbial community structure response to fluid residence time and physical substrate composition**
Haley SAPERS, California Institute of Technology, Pasadena, USA
Cross-Disciplinary Fellow 2016
210. **Genome-wide survey of mutations influencing protein abundances in yeast**
Olga SCHUBERT, Dept. of Human Genetics / Kruglyak Lab., University of California, Los Angeles, USA
Long-Term Fellow 2016
211. **Laser-assisted electron microscopy: the laser phase plate and beyond**
Osip SCHWARTZ, Weizmann Institute of Science, Rehovot, Israel
Cross-Disciplinary Fellow 2016
212. **Coexistence and extinction due to surfing phage infections in a spatially expanding bacterial colony**
Godwin STEPHENSON, Simons Centre for the Study of Living Machines, National Centre for Biological Sciences, Bangalore, India
Cross-Disciplinary Fellow 2012
213. **Programming multicellular patterns with synthetic cell-cell signaling**
Satoshi TODA, Nano Life Science Institute, Kanazawa University, Japan
Long-Term Fellow 2016
214. **The gut microbiota of environmentally enriched mice regulates visual cortical plasticity**
Paola TOGNINI, Laboratory of Biology, University of Pisa, Italy
Long-Term Fellow 2013
215. **Shear force activation of nociceptors underlies mechanical nociception**
Yang XIANG, Dept. of Neurobiology, University of Massachusetts Medical School, Worcester, USA
Young Investigator Grant 2014
216. **Supercoiling and looping promote DNA base accessibility and coordination among distant sites**
Lynn E. ZECHIEDRICH, Dept. of Molecular Virology and Microbiology, Biochemistry, Pharmacology, Baylor College of Medicine, Houston, USA
Program Grant 2010
217. **Shedding light onto the structural secrets inside pluripotent stem cells in real-time**
Jennifer ZENKER, Australian Regenerative Medicine Institute (ARMI), Monash University, Clayton, Australia
Long-Term Fellow 2015