



International  
**Human Frontier  
Science Program**  
Organization

# **21<sup>st</sup> HFSP Awardees Meeting**

**A Hybrid Event**

Sunday, 28 August - Thursday, 1 September 2022  
Institut Pasteur, Paris, France

# Programme

Times correspond to Central European Time (CET)

Online talks are indicated by the symbol 

## Science & Art: Breath

### An artistic journey through the lens of breath

Performed by Gloria Benedikt, Marietta Kro and Robert Weithas

*Monday, 29 August at 18:30*

This year's meeting will feature an exciting artistic performance that explores how science and art can come together to support the transformation towards sustainability.

While centuries in the making, the current moment of crisis has led to a pointed question that lies at the core of human survival: how can we breathe again? Can cooperation avoid the looming global tragedy? Connecting evolutionary biology and ecology with pressing social defects, three artists explore how we got here, what we can do, and where we can go.

You will find more information at <https://www.gloriabenedikt.com/>.



Gloria Benedikt



Marietta Kro



Robert Weithas

## Sunday, 28 August

- 17:30 Early badge pick-up  
*foyer Novotel Paris Vaugirard Montparnasse*
- 18:30 Welcome Reception  
*Novotel Paris Vaugirard Montparnasse*

## Monday, 29 August

9:00-9:25 **Opening Remarks**  
*Shigekazu Nagata, President of HFSP*   
*Stewart Cole, President of Institut Pasteur*  
*Jacques Demotes-Mainard, Ministry of Higher Education, Research and Innovation, France*  
*Pavel Kabat, Secretary-General of HFSP*

9:25-9:30 **Introduction to event platform**

### Oral Session 1 (Chair: Guntram Bauer)

9:30-9:50 **How do termite queens and kings stay healthy for decades?**  
*Mireille Vasseur Cognet, Institute of Ecology and Environmental Sciences of Paris (iEES), France*  
*Research Grant-Program 2018*

9:50-10:10 **Lipid synthesis inside membrane vesicles toward the construction of self-propagating artificial cells**  
*Yutetsu Kuruma, Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan*  
*Research Grant-Program 2020*

10:10-10:30 **Evolutionary mechanics of adhesive bonds essential for hearing**  
*Marcos Sotomayor, Ohio State University, Columbus, USA*  
*Research Grant-Program 2018*

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10.30-11:00 **Coffee Break**

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### Oral Session 2 – Hybrid Session (Chair: Guntram Bauer)

11:00-11:20 **MIDI4MITO: midichloria mitochondrii, unique intramitochondrial bacterium and novel tool to explore mitochondria**  
*Aaron Jex, The Walter and Eliza Hall Institute, Parkville, Australia*  
*Research Grant-Early Career 2017*

11:20-11:40 **Segregation of excitatory and inhibitory postsynaptic densities via phase separation**  
*Mingjie Zhang, Hong Kong University of Science and Technology, Kowloon, Hong Kong*   
*Research Grant-Program 2019*

11:40-12:00 **Encoding of sexual satiety by persistent activate limbic ESR2 neurons**  
*Ying Li, The Chinese Institute for Brain Research, Beijing, China*   
*Career Development Award 2019*

12:00-12:20 **Regulation with cell size ensures mitochondrial DNA homeostasis during cell growth**  
*Kurt Schmoller, Helmholtz Zentrum München, Neuherberg, Germany*   
*Career Development Award 2019*

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12:20-13:40 **Lunch Break**

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**Oral Session 3 (Chair: Almut Kelber)**

13:40-14:00 **Efficient autonomous navigation for insect-machine hybrid system**

*Doan Tat Thang Vo, University of Freiburg, Germany*

*Cross-Disciplinary Fellowship 2019*

14:00-14:20 **Self-organisation of organoids: experiments and theory**

*Daniel Riveline, IGBMC, Strasbourg University, Illkirch-Graffenstaden, France*

*Research Grant-Program 2018*

14:20-14:40 **Bioelectronic system for in vivo recordings of the enteric nervous system**

*Alexander Boys, University of Cambridge, UK*

*Cross-Disciplinary Fellowship 2020*

14:40-15:00 **Dissecting the genetic underlying of self-organization in artificial embryos**

*Alexandre Mayran, Ecole Polytechnique federale de Lausanne (EPFL), Switzerland*

*Long-Term Fellowship 2019*

**2022 HFSP Nakasone Award Ceremony and Lecture**

**Introduction** *Pavel Kabat, Secretary-General HFSP*

15:00-15:40 **Molecular chaperones: role in protein folding and proteostasis**

*F. Ulrich Hartl, Max Planck Institute of Biochemistry, Martinsried, Germany*

15:40-16:20 **Chaperonin-mediated protein folding**

*Arthur L. Horwich, Yale University, New Haven, USA*



16:20-18:30 **Poster Session 1 (Physical and Online)**

*with refreshments*

18:30-19:00 **Science & Art: Breath**

**An artistic journey through the lens of breath**

*Performed by Gloria Benedikt, Marietta Kro and Robert Weithas*

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20:00 **Conference Dinner** at Ciel de Paris, Tour Montparnasse

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## Tuesday, 30 August

7:00-8:30 **Poster Session 2** (Online Session)

### Oral Session 4 (Chair: Barbara Pauly)

9:00-9:20 **The shrinking of the shrew – understanding the mechanism behind reversible brain size changes**

*John Nieland, Aalborg University, Denmark*  
*Research Grant-Program 2019*

9:20-9:40 **Evolutionary conserved regulation of peroxisome biogenesis by protein kinase C**

*Triana Amen, Swiss Federal Institute of Technology, Lausanne, Switzerland*  
*Long-Term Fellowship 2021*

9:40-10:00 **Combining new method development and empirical studies to characterize the evolutionary changes in human and pathogen genetic diversity due to colonization of the new world**

*Emilia Huerta-Sanchez, Brown University, Providence, USA*  
*Research Grant-Early Career 2019*

10:00-10:20 **Small fat droplets are rigid, indent the nucleus, dilute the lamina, and cause rupture**

*Dennis Discher, University of Pennsylvania, Philadelphia, USA*  
*Research Grant-Program 2017*

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10:20-10:50 **Coffee Break**

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### Oral Session 5 (Chair: Daniel Rivelino)

10:50-11:10 **Proteostatic tuning underpins the evolution of novel multicellular traits during long-term experimental evolution**

*Juha Saarikangas, University of Helsinki, Finland*  
*Research Grant-Early Career 2020*

11:10-11:30 **Exploring diel activity patterns, ecology, and genetics across hyper-diverse Lake Tanganyikan cichlids**

*Annika Nichols, University of Basel, Switzerland*  
*Long-Term Fellowship 2019*

11:30-11:50 **Graphene based ultra-sensitive mass change detector; towards single molecule protein sequencing**

*Sang Wook Lee, Ewha Womans University, Seoul, Republic of Korea*  
*Research Grant-Program 2019*

11:50-12:10 **Linking structural dynamics of the repeat-protein scaffold PR65 to its allosteric mechanics and its function in the multi-subunit enzyme PP2A**

*Ivet Bahar, University of Pittsburgh School of Medicine, USA*  
*Research Grant-Program 2020*

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12:10-13:30 **Lunch Break**

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13:30-14:30 **2021 HFSP Nakasone Award Ceremony and Lecture**

**Introduction Pavel Kabat, Secretary-General HFSP**

**A fluid paradigm for biological organization**

**Clifford Brangwynne, Princeton University and the Howard Hughes Medical Institute, USA**

**Oral Session 6 - Online Session (Chair: Martin Reddington)**

14:30-14:50 **Modelling the impact of plant hydraulics and non-structural carbohydrate on forest responses to drought**

**Peter Cox, University of Exeter, UK**

*Research Grant-Program 2020*



14:50-15:10 **Decoding the biomechanics of flight-tone based acoustic communication in mosquitoes**

**Rajat Mittal, Johns Hopkins University, Baltimore, USA**

*Research Grant-Program 2019*



15:10-15:30 **A complete rRNA catalog, the human ribome, associates with development, aging, and cancer**

**Daphna Bup Rothschild, Stanford University, USA**

*Long-Term Fellowship 2020*



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15:30-15:50 **Coffee Break**

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**Oral Session 7 - Online Session (Chair: Guntram Bauer)**

15:50-16:10 **Fighting force and experience combine to determine contest success in a warlike mammal**

**Patrick Green, University of California, Santa Barbara, USA**

*Long-Term Fellowship 2019*



16:10-16:30 **Tumors within context: understanding tumor immune interactions using spatial transcriptomics**

**Michal Polonsky, California Institute of Technology, Pasadena, USA**

*Long-Term Fellowship 2019*



16:30-16:50 **Behaviorally optimized representations of space and time in the rodent brain**

**Emilio Kropff, Leloir Institute, Buenos Aires, Argentina**

*Research Grant-Early Career 2018*



16:50-17:10 **Transparent and flexible electrode arrays for mapping circuit origins of travelling waves in awake behaving mice**

**Krishna Jayant, Purdue University, West Lafayette, USA**

*Research Grant-Early Career 2020*



17:10-19:00 **Poster Session 3 (Physical and Online)**  
*with refreshments*

## Wednesday, 31 August

7:00-8:30 **Poster Session 4** (Online Session)

### Oral Session 8 - Online Session (Chair: *Guntram Bauer*)

9:00-9:20 **Synthetic morphogenesis driven by conditional gene activation in a human pluripotent embryonic population**

*Manon Valet*, Dresden University of Technology, Germany  
Cross-Disciplinary Fellowship 2020



9:20-9:40 **Cellular senescence: an unintended twist for gene and cell therapy applications**

*Rafaella Di Micco*, San Raffaele Hospital, Milan, Italy  
Career Development Award 2019



9:40-10:00 **Computational approaches to investigate the mechanisms of aging**

*Cyril Lager*, University of Liverpool, UK  
Cross-Disciplinary Fellowship 2019



10:00-10:20 **Sensory error drives fine motor adjustment in echolocating bats**

*Jinhong Luo*, Central China Normal University, Wuhan, China  
Career Development Award 2019



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10:20-10:50 **Coffee Break**

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10:50-12:00 **Special Session: The shared values of HFSP**

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12:00-13:40 **Lunch Break**

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### Oral Session 9 (Chair: *Valerie Ego-Stengel*)

13:40 – 14:00 **Covalent modification and regulation of proteins by CO<sub>2</sub>**

*David Voadlo*, Simon Fraser University, Burnaby, Canada  
Research Grant-Program 2020

14:00-14:20 **Morphological instability of growing three-dimensional bacterial colonies**

*Alejandro Martínez Calvo*, Princeton University, USA  
Cross-Disciplinary Fellowship 2021

14:20-14:40 **Modulating a single TFBS in an enhancer: from atomic contacts to quantitative variation in enhancer activity**

*Nicolas Gompel*, Ludwig Maximilian University Munich, Planegg-Martinsried, Germany  
Research Grant-Program 2018

14:40-15:00 **Label-free metabolic imaging during stem cell differentiation and zebrafish embryo development by fluorescence lifetime microscopy of endogenous biomarkers**

*Chiara Stringari*, Ecole Polytechnique, CNRS, Palaiseau, France  
Research Grant-Early Career 2017

15:00 -15:20 **Electromechanical photophysics of GFP packed inside viral protein cages probed by force-fluorescence hybrid single-molecule microscopy**  
*Pedro J. De Pablo, Universidad Autónoma de Madrid, Spain*  
*Research Grant-Program 2018* 

15:20-18:00 **Poster Session 5** (Physical and Online)  
*with refreshments*

## **2022 HFSP Nakasone Award Ceremony and Lecture**

**Introduction** *Pavel Kabat, Secretary-General HFSP*

18:00-19:00 **Cell atlases as roadmaps in health and disease**  
*Aviv Regev, Genentech, a member of the Roche Group, South San Francisco, USA* 

## Thursday, 1 September

7:00-8:30 **Poster Session 6** (Online Session)

### Oral Session 10 (Chair: Barbara Pauly)

9:00-9:20 **Role and function of osteoderms in lizards**  
**Mehran Moazen**, University College London, UK  
Research Grant-Program 2019

9:20-9:40 **The repeatability of the genetic mechanisms underlying behavioral evolution**  
**Erik Andersen**, Northwestern University, Evanston, USA  
Research Grant-Program 2019

9:40-10:00 **Mapping binding sites onto protein structures with interpretable geometric deep learning**  
**Jérôme Tubiana**, Blavatnik School of Computer Science, Tel Aviv University, Israel  
Cross-Disciplinary Fellowship 2019

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10:00-10:40 **Coffee Break**

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### Oral Session 11 (Chair: Almut Kelber)

10:40-11:00 **Deep-brain fluorescence imaging with multi-color three-photon microscopy**  
**Yusaku Hontani**, University of Zurich, Switzerland  
Cross-Disciplinary Fellowship 2019

11:00-11:20 **Evolution of the amino acid alphabet was adaptively shaped by biophysical constraints of foldability and RNA-binding**  
**Klara Hlouchova**, Charles University, Prague, Czech Republic  
Research Grant-Early Career 2019

11:20-11:40 **The regulatory mechanism behind limb heterochrony during tetrapod evolution**  
**Meng Zhu**, Harvard University, Boston, USA  
Long-Term Fellowship 2020



11:40-12:00 **Closing Remarks**  
**Pavel Kabat**, Secretary-General of HFSP

# Posters

## Onsite Posters

Posters should be mounted on the poster board corresponding to the number of the poster in the list below. Note that onsite posters will also be presented online (the online reference is in brackets). Times for both onsite and online presentations are indicated for each poster.

### Poster Session 1 - Monday

1. **ALGORITHMIC FIREWORKS: QUANTITATIVE VISUALIZATION OF SIGNALING AND FATE SPECIFICATION IN LIVE HUMAN STEM CELL COLONIES**  
*Andrew Cohen*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220046)
2. **THREE CLASSES OF CARDIOMYOCYTE ADAPTATION TO CHRONIC VIRAL INFECTION**  
*Cameron Griffiths*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220021)
3. **SPONTANEOUS ROTATION OF CELL DOUBLET IN 3D AS A TUG-OF-WAR BETWEEN CELL POLARITIES**  
*Tristan Guyomar*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220095)
4. **EMERGENT CHIRALITY IN ACTIVE SOLID ROTATION OF PANCREAS SPHERE**  
*Tzer Han Tan*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220185)
5. **REGULATION OF PATHOLOGICAL OSTEOCLASTOGENESIS IN ARTHRITIS**  
*Tetsuo Hasegawa*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220182)
6. **ATP-DEPENDENT STRUCTURAL DISCRIMINATION OF VIRAL AND CELLULAR RNA BY MDA5**  
*Alba Herrero Del Valle*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220036)
7. **STRUCTURAL DAMAGE TO AXONS RESULTING FROM REPETITIVE MECHANICAL MOTION**  
*Henry Hess*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220030)
8. **TEMPORAL MASKING UNDERLIES REDUCED SPEECH DISCRIMINATION IN NOISE AT HIGH SOUND INTENSITIES**  
*Chengjie Gary Huang*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220052)
9. **CAUSAL INFERENCE OF SUBCELLULAR SIGNALING CIRCUITS BY THE TREATMENT-RESPONSE PARADIGM**  
*Jaewon Huh*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220153)
10. **DIFFERENT WAYS THROUGH THE MAZE: IMMUNE CELL MIGRATION IN COMPLEX ENVIRONMENTS - CANCELLED**  
*Theresa Jakuszeit*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220088)
11. **MULTIPLEXED DNA-PAINT SUPER-RESOLUTION IMAGING OF IMMUNE CHECKPOINT RECEPTORS**  
*Ralf Jungmann*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220173)

12. **ELEVATED TEMPERATURE FATALLY DISRUPTS THE LOCAL NUCLEAR DENSITY IN EARLY DROSOPHILA EMBRYO**  
*Girish Kale*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220051)
  
13. **NOVEL CDK SENSORS TO UNDERSTAND THE G2/M TRANSITION ACROSS CELLULAR COMPARTMENTS IN LIVE SINGLE CELLS**  
*Nitin Kapadia*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220085)
  
14. **COMPUTATIONAL ELECTROPHYSIOLOGY SIMULATIONS TO UNRAVEL THE MECHANISM OF ULTRASOUND-STIMULATED NEUROMODULATION**  
*Wojciech Kopec*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220096)
  
15. **THE TRANSCRIPTIONAL AND REGULATORY IDENTITY OF ERYTHROPOIETIN PRODUCING CELLS**  
*Bjoert Katrinardottir Kragesteen*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220075)
  
16. **THE VARIATION OF BITE FORCE WITH MANDIBULAR OPENING ANGLE IN INSECTS – A BIOMECHANICAL ANALYSIS**  
*David Labonte*  
**Onsite:** Monday at 16:20 - 18:30
  
17. **HYDROCARBONS INDUCE CYANOBACTERIAL MEMBRANE CURVATURE REQUIRED FOR LIGHT-TO-DARK THYLAKOID REMODELLING**  
*David Lea-Smith*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220039)
  
18. **HUMAN NEURON SUBTYPE ENGINEERING THROUGH COMBINATORIAL PATTERNING WITH SINGLE CELL TRANSCRIPTOMICS READOUTS**  
*Hsiu-Chuan Lin*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220121)
  
19. **GENERIC RULES OF LUMEN INITIATION AND FUSION IN EPITHELIAL SPHEROIDS AND ORGANOID**  
*Linjie Lu*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220093)
  
20. **HALLUCINATING PROTEIN ASSEMBLIES**  
*Lukas Milles*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220073)
  
21. **NKCC1 ACTIVITY COORDINATES CELL VOLUME CHANGE AND F-ACTIN ASSEMBLY TO DETERMINE GLIOBLASTOMA MIGRATION IN CONFINED SPACES**  
*Michael Murrell*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220068)
  
22. **DISCOVERING RNA SELF-REPRODUCERS BY IN SILICO AND IN VITRO SCREENING**  
*Philippe Nghe*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220102)
  
23. **HIGH-THROUGHPUT DIRECTED EVOLUTION OF AMINOACYL-TRNA SYNTHETASES USING MRNA-DISPLAY**  
*Shota Nishikawa*  
**Online:** Wednesday at 7:00 - 8:30 (HFSP-220124)

24. **MULTIPLEXED SINGLE-CELL SPATIAL GENE EXPRESSION PROFILING IN WHOLE-MOUNT PLANT TISSUE**  
*Tatsuya Nobori*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220044)
25. **RELEVANCE OF STIMULI IS REPRESENTED IN ANTERIOR CINGULATE CORTEX DURING A CONTEXT SHIFTING TASK**  
*Gergo Orban*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220144)
26. **COMPACTION AND ORGANIZATION OF MACRO-H2A CONTAINING HETEROCHROMATIN**  
*Arnold Ou*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220009)
27. **USE OF SHIGELLA-SEPTIN INTERACTIONS TO EXPLORE BIOPHYSICAL DETERMINANTS IN CELL-AUTONOMOUS IMMUNITY**  
*Gizem Ozbaykal-Guler*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220042)
28. **LIPIDS IN THE BRAIN: INVESTIGATION OF LIPID-MODULATED MEMBRANE RECEPTORS BY BIOMOLECULAR SIMULATIONS AND MACHINE LEARNING**  
*Santeri Paajanen*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220176)
29. **COMPARTMENTALIZATION OF SIGNALING IN T CELL MICROVILLI**  
*Xiaolei Su*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Wednesday at 7:00 - 8:30 (HFSP-220020)

### Poster Session 3 – Tuesday

30. **DEVELOPING GENOMIC TOOLS TO REVEAL HIDDEN TRANSPORT MECHANISMS IN GIBBERELLIN HOMEOSTASIS**  
*Hussam Nour-Eldin*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220015)
31. **TRANSCRIPTIONAL PROGRAM OF GOLGI BIOGENESIS**  
*Roman Polishchuk*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220079)
32. **DE NOVO DESIGN OF RECONFIGURABLE PROTEIN ASSEMBLIES**  
*Florian Praetorius*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220152)
33. **BIOVANOIDS - INTESTINAL ORGANOID-BASED BIOAVAILABILITY PLATFORM TO STUDY NUTRIENT-(MAL)ABSORPTION OF THE GUT**  
*Elena S. Reckzeh*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220054)
34. **DECODING THE EPITHELIAL STEM CELL-NICHE CROSSTALK IN SKIN HEALTH AND INFLAMMATION**  
*Daniel Rosenblum*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220034)
35. **CELL-TYPE-SPECIFIC DYNAMICS UNDERLIE CELLULAR GROWTH VARIABILITY IN PLANTS**  
*Anne-Lise Routier-Kierzkowska*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220053)
36. **RETINAL GANGLION CELL REINNERVATION OF THALAMIC TARGET STRUCTURES**  
*Tobias Ruff*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220114)
37. **SENESCENT CELLS INDUCE CELLULAR REPROGRAMING TO ENABLE CNIDARIAN WHOLE BODY REGENERATION**  
*Miguel Salinas Saavedra*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220002)
38. **LIFE-SUSTAINING, ANCESTRAL TIM-BARRELS THROUGH IN VIVO LIBRARY SCREENING**  
*Jose Manuel Sanchez-Ruiz*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220166)
39. **CELL DENSITY CONTROLS SIGNAL PROPAGATION WAVES IN A MULTICELLULAR SYNTHETIC GENE CIRCUIT - CANCELLED**  
*Marco Santorelli*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220171)
40. **SYMMETRY BREAKING IN INTESTINAL ORGANOID FORMATION**  
*Cornelia Schwyer*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220028)
41. **COLLECTIVE TISSUE PUSHING AND SQUEEZING DRIVES TROPHOBLAST PATTERNING IN THE BLASTOCYST**  
*Giovanni Sestini*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220032)

42. **INVESTIGATING THE ROLE OF HYDROCARBONS IN CYANOBACTERIAL MEMBRANE CURVATURE INDUCTION USING MOLECULAR DYNAMICS SIMULATIONS**  
*Zahra Shadfar*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220059)
43. **ELUCIDATING THE DEVELOPMENT OF BIOLOGICAL OPTICAL NANOSTRUCTURES**  
*Matthew Shawkey*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220077)
44. **MICROFABRICATED TOOLS TO STUDY EMBRYONIC PATTERNING IN VITRO**  
*Benoit Sorre*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220151)
45. **HOW DO CEPHALOPODS BITE? THE BIOMECHANICS OF A COMPLEX FEEDING SYSTEM**  
*Louise Souquet*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220142)
46. **FORAGING PREFERENCES OF OSMIA CORNIFRONS BEES TO CAPSELLA RECOMBINANT PLANT LINES VARY WITH FLORAL TRAITS**  
*Jaya Sravanthi Mokkaapati*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220074)
47. **DENSITY HOMEOSTASIS AND MASS VOLUME COUPLING IN PROLIFERATING MAMMALIAN CELLS**  
*Nishit Srivastava*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220136)
48. **REVEALING AUTOLYTIC MECHANISMS OF SIEVE ELEMENT DIFFERENTIATION BY IMPROVED PHLOEM INDUCTION SYSTEM**  
*Yuki Sugiyama*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220178)
49. **EVOLUTION OF NEURAL CIRCUIT DYNAMICS AND BRAIN COMPUTATIONS IN ASTYANAX BLIND CAVE FISH**  
*German Sumbre*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Wednesday at 15:00 -18:00 (HFSP-220142)
50. **EVALUATING FLUORESCENT REPORTERS IN SUB-CELLULAR COMPARTMENTS OF GREEN ALGAE CHLAMYDOMONAS REINHARDTII TO INVESTIGATE THE MECHANISM OF CO<sub>2</sub> SENSING**  
*Catherine Sutherland*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220189)
51. **SHRINKING SHREWS – THE PIVOTAL ROLE OF THE SPLEEN IN METABOLIC FLUCTUATIONS UNDERLYING REVERSIBLE SIZE CHANGES**  
*William Thomas*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220191)
52. **MAPPING BINDING SITES ONTO PROTEIN STRUCTURES WITH INTERPRETABLE GEOMETRIC DEEP LEARNING - CANCELLED**  
*Jérôme Tubiana*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220010)
53. **A PRECISE MOLECULAR SWITCH THAT BALANCES DNA REPAIR IN E. COLI**  
*Maxence Vincent*  
**Online:** Thursday at 7:00 - 8:30 (HFSP-220018)

54. **MECHANISMS OF 5'UTR-MEDIATED TRANSLATIONAL DYSREGULATION IN CANCER**  
*Ramona Weber*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220112)
55. **LEECH MODELS FOR INTEGRATING MOLECULAR AND PHYSIOLOGICAL APPROACHES TO STUDYING BEHAVIOR AND THE SPECIFICATION OF NEURONAL PHENOTYPES**  
*David Weisblat*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220155)
56. **3D ATOMIC-SCALE MOVIES OF MOLECULAR MACHINES IN ACTION**  
*Shimon Weiss*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220062)
57. **SYNTHETIC CO-EVOLUTION OF PROTEIN-PROTEIN INTERACTIONS**  
*Aerin Yang*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220162)
58. **NANOSCALE MEMBRANE TOPOGRAPHY ENGINEERING FOR CURVATURE-GUIDED PROTEIN ACCUMULATION AT CELL SURFACE**  
*Wenting Zhao*  
**Onsite:** Tuesday at 17:10 - 19:00 and **Online:** Thursday at 7:00 - 8:30 (HFSP-220024)

## Poster Session 5 – Wednesday

59. **CRY1A CRYPTOCHROME HAS THE CHARACTERISTICS OF A RECEPTOR FOR AVIAN MAGNETOSENSING**  
*Margaret Ahmad*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220091)
60. **SYNTHETIC PROTEIN-BASED CIRCUITS AND BIOELECTRONIC BIOLOGICAL SYSTEMS**  
*Kirill Alexandrov*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220070)
61. **SEA SPRAY ALLOWS FOR EPILITHIC COLONIZATION OF EXTREME RADIOPHILES IN THE ATACAMA DESERT**  
*Armando Azua-Bustos*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220025)
62. **SYNAPTIC SCALING TO MAINTAIN NEURONAL DYNAMICS AND PROPAGATE INFORMATION**  
*J r mie Barral*  
**Onsite:** Wednesday at 15:00 - 18:00
63. **EXPLOITING THE SPATIAL TOLERANCE OF MULTIVALENT INTERACTIONS FOR SELECTIVE IMMUNE STIMULATION WITH DNA NANOMATERIALS**  
*Maartje Bastings*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220122)
64. **CEREBELLAR GRANULE CELL TEMPORAL REPRESENTATIONS**  
*Franziska Bender*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220146)
65. **ASCIDIAN DEVELOPMENT AND CYTOPLASMIC REORGANISATIONS: DISSECTING THE MECHANISMS THAT PATTERN DEVELOPMENTAL DETERMINANTS AND SHAPE EMBRYONIC DEVELOPMENT**  
*Madison Bolger-Munro*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220086)
66. **THE ROLE OF TRANSPOSABLE ELEMENT IN THE EVOLUTION OF INSECT SOCIAL COMPLEXITY**  
*Erich Bornberg-Bauer*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220090)
67. **WHOLE-BRAIN MAPPING OF BRAIN REGIONS RECRUITED BY IMPRINTED AND UNFAMILIAR OPPOSITE-SEX ODORS IN FEMALE MICE**  
*Serena Bovetti*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220135)
68. **COMPUTATIONAL EXPLORATIONS OF COLLECTIVE DYNAMICS: BACTERIA AND ANTS**  
*Kimberly Bowal*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220147)
69. **HISTOLOGICAL AND IMMUNOHISTOCHEMICAL HETEROGENEITY: DEVELOPMENT AND TISSUE LEVEL DIVERSITY OF LIZARD OSTEODERMS**  
*Shreya Rai*  
**Onsite:** Monday at 16:20 - 18:30 and **Online:** Tuesday at 17:10 - 19:00 (HFSP-220192)
70. **EPIGENOMIC MECHANISMS OF SURVIVAL TO THE POLAR NIGHT IN THE DIATOM FRAGILARIOPSIS CYLINDRUS**  
*Christopher Bowler*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220149)

71. **CORTICAL NEURONAL ASSEMBLIES COORDINATE WITH EEG MICROSTATE DYNAMICS DURING RESTING WAKEFULNESS**  
*Richard Boyce*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220033)
72. **UNRAVELLING THE MOLECULAR DETAILS OF INFLUENZA VIRUS RNA TRANSPORT**  
*Jean-Baptiste Brault*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220154)
73. **THE GENETICS OF NUMERACY AND EVOLUTIONARY BASIS OF NUMBER: CAN FISH COUNT?**  
*Caroline Brennan*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220117)
74. **MEGAPIXEL CAMERA ARRAYS FOR HIGH RESOLUTION IMAGING OF FREELY BEHAVING NEMATODES**  
*Andre Brown*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Monday at 16:20 - 18:30 (HFSP-220057)
75. **MAPPING THE POST-SYNAPTIC DENSITY - CANCELLED**  
*Adam Claridge-Chang*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220167)
76. **PRECISE COUPLING OF ULTRASOUND WAVES WITH LIPID BILAYERS FOR MECHANISTIC STUDIES OF ULTRASOUND NEUROMODULATION**  
*Tiago Costa*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220125)
77. **THE TWO FACES OF DENDRITIC CELLS IN CANCER**  
*Guillaume Darrasse-Jeze*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220113)
78. **CLONAL REPLACEMENT SUSTAINS LONG-LIVED GERMINAL CENTERS PRIMED BY RESPIRATORY VIRUSES**  
*Renan De Carvalho*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220056)
79. **UNIFIED FRAMEWORK FOR PERCEPTUAL DECISION MAKING**  
*Mathew Diamond*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220100)
80. **CORTICAL CLOSED-LOOP BRAIN-MACHINE INTERFACE REQUIRES BIOMIMETIC SENSORY FEEDBACK**  
*Valerie Ego-Stengel*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220143)
81. **OPTICAL METHODS FOR VISUALIZATION OF NERVE CELL COMMUNICATION**  
*Francisco Fernandez De Miguel*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220172)
82. **A NEW LAND SURFACE CONDUCTANCE SCHEME FOR CLIMATE PROJECTIONS**  
*Peter Franks*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220164)
83. **NANOPORE-BASED ASSESSMENT OF THE BINDING OF MELANIN TO SPECIFIC PROTEINS**  
*Kevin Freedman*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220158)

84. **MECHANISTIC MODEL OF MAPK SIGNALING REVEALS HOW REWIRING AND ALLOSTERY CONTRIBUTE TO DRUG RESISTANCE**  
*Fabian Froehlich*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220109)
85. **DISCOVERY OF DE NOVO SINGLE-STRAND RNA BINDING PEPTIDES**  
*Kosuke Fujishima*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220150)
86. **A NOVEL MINIMALLY INVASIVE ENDOSCOPE FOR RECORDING ACTIVITY IN DEEP BRAIN REGIONS OF FREELY-BEHAVING MICE**  
*Sylvain Gigan*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220148)

## Online Posters

87. **SPONTANEOUS ADAPTATION OF ION SELECTIVITY IN A BACTERIAL FLAGELLAR MOTOR**  
*Matthew Baker*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220127)
88. **A MULTI-DOMAIN CONNECTOR LINKS THE OUTER MEMBRANE AND CELL WALL IN PHYLOGENETICALLY DEEP-BRANCHING BACTERIA - CANCELLED**  
*Tanmay Bharat*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220169)
89. **EMERGENCE OF ANIMAL-LIKE TISSUE IN RESPONSE TO CELL CONFINEMENT OF SINGLE-CELLED ARCHAEA**  
*Alex Bisson*  
**Online:** Monday at 16:20 - 18:30 (HFSP-220168)
90. **PHOTOBHAVIOUR IN CORAL LARVAE**  
*Emelie Brodrick*  
**Online:** Monday at 16:20 - 18:30 (HFSP-220180)
91. **A ROLE FOR HEAT SHOCK PROTEINS AND CELLULAR AGING IN THE EVOLUTION OF MULTICELLULAR SIZE AND CELL DIFFERENTIATION IN SNOWFLAKE YEAST - CANCELLED**  
*Anthony Burnetti*  
**Online:** Monday at 16:20 - 18:30 (HFSP-220107)
92. **TRANS-INTERACTION OF GENETIC RISK LOCI 6P24.1 AND 10Q11.21 IS ASSOCIATED WITH ENDOTHELIAL DAMAGE**  
*Christine Cheung*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220049)
93. **SELF ORGANIZATION OF MICROTUBULE NETWORK BY OPPOSING MOTORS**  
*Wei Xiang Chew*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220027)
94. **NOVEL TRYPANOSOMA BRUCEI HETEROGENEITY IS ASSOCIATED TO TISSUE INVASION AND ADAPTATION**  
*Mariana De Niz*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220012)
95. **INTEGRATING DIVERSE DATA IN THE STUDY OF MASSIVE SHARKS**  
*Mason Dean*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220181)
96. **INTRINSIC DISORDER PROMOTES PROTEIN REFOLDABILITY AND ENABLES RETRIEVAL FROM BIOMOLECULAR CONDENSATES**  
*Stephen Fried*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220006)
97. **PRODUCTION OF VIRAL-LIKE PROTEINS IN THE DEVELOPING MOUSE LIMB LEADS TO CONGENITAL MALFORMATION - CANCELLED**  
*Juliane Glaser*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220139)
98. **PLASMA FOCUSED ION BEAM-SCANNING ELECTRON MICROSCOPY TO STUDY BONE CELLULAR AND SUB-CELLULAR NETWORK POROSITY**  
*Kathryn Grandfield*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220156)

99. **UNRAVELING THE UNDERLYING MECHANISM OF ULTRASOUND-STIMULATED NEUROMODULATION**  
*Andreas Hartel*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220029)
100. **DEVELOPING TOOLS FOR EXPLORING THE CELLULAR BASIS OF CORAL BLEACHING**  
*Ke Hu*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220156)
101. **MAPPING THE BIOGEOGRAPHY OF THE GUT MICROBIOME: FROM SPATIAL ECOLOGY TO DISEASE RESISTANCE**  
*Martin Jahn*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220099)
102. **MINIATURIZED TWO PHOTON MICROSCOPE CAPABLE OF DEEP BRAIN IMAGING IN FREELY BEHAVING ANIMALS**  
*Seungwon Jeong*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220101)
103. **RESURRECTING ANCIENT METABOLISMS IN THE LABORATORY**  
*Betul Kacar*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220103)
104. **MATERIAL ANALOGUES OF PERCEPTUAL MEMORY**  
*Nathan Keim*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220157)
105. **REVEALING THE INTERPLAY OF GENETICS AND BIOMECHANICS IN BUTTERFLY SCALE MORPHOGENESIS**  
*Mathias Kolle*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220065)
106. **IDENTIFICATION OF CELL CYCLE DEPENDENT POST-TRANSLATIONAL MODIFICATIONS OF MAMMALIAN SWI/SNF CHROMATIN REMODELING COMPLEXES**  
*Shany Koren-Hauer*  
**Online:** Monday at 16:20 - 18:30 (HFSP-220022)
107. **TOWARDS UNDERSTANDING THE MOLECULAR MECHANISM OF NORAD-MEDIATED MAINTENANCE OF GENOME STABILITY IN HUMANS**  
*Ananthanarayanan Kumar*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220067)
108. **SEARCHING FOR HYPOXIA SENSORS WITHIN OXYGEN-DEPENDENT ENZYMES**  
*Li Li*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220023)
109. **DEFINING HOW WATER DEFICIT SIGNALS CONTROL FLOWERING TIME ADAPTATION**  
*Damiano Martignago*  
**Online:** Wednesday at 7:00 - 8:30 (HFSP-220063)
110. **ADAPTABILITY OF EGG-LAYING BEHAVIOR IN Aedes Aegypti**  
*Yunusa Mohammed Garba*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220137)
111. **PIEZO1 ACTIVATES NON CANONICAL EGFR ENDOCYTOSIS AND SIGNALING**  
*Carlos Pardo-Pastor*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220017)

112. **STRUCTURE AND BIOPHYSICS OF DISORDERED DOMAINS MEDIATING RNP GRANULES**  
*Sapun Parekh*  
**Online:** Wednesday at 7:00 - 8:30 (HFSP-220140)
113. **OXYGEN DRIVEN COLONY SPREADING AND MICROPHASE SEPARATION OF EUKARYOTIC CELLS**  
*Jean-Paul Rieu*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220003)
114. **DENGUE VIRUS MEMBRANE FUSION: NEW TOOLS AND LIPID COFACTORS**  
*Rahul Roy*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220097)
115. **DIFFUSION AND MOLECULAR ASSEMBLY ON POLYMER-CROWDED MEMBRANES**  
*Rahul Roy*  
**Online:** Wednesday at 7:00 - 8:30 (HFSP-220098)
116. **IDENTIFICATION OF CANDIDATE GENES FOR DROUGHT TOLERANCE IN RICE BY GENOME-WIDE ASSOCIATION STUDY**  
*Kumpei Shiragaki*  
**Online:** Tuesday at 7:00 - 8:30 (HFSP-220183)
117. **STRESS, B CELLS AND CARDIOVASCULAR DISEASE**  
*Sumnima Singh*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220016)
118. **A PLANT-INSPIRED SOFT ACTUATOR TRANSFORMS FROM RIGID BEAM TO FLEXIBLE HINGLESS JOINT**  
*David Sleboda*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220019)
119. **ORGANOID MORPHOGENESIS AT VARIOUS LUMINAL PRESSURE AND PROLIFERATION RATE IN A MULTICELLULAR PHASE-FIELD MODEL**  
*Sakurako Tanida*  
**Online:** Thursday at 7:00 - 8:30 (HFSP-220072)
120. **DEVELOPING A NEW TRIGGERED ACRYLAMIDE PROXIMITY (TRAP) PROBE FOR SPECIFIC FLUOROGENIC PROTEIN LABELING**  
*Kelvin Tsao*  
**Online:** Thursday at 7:00 - 8:30 (HFSP-220038)
121. **PROGRAMMING INTERCELLULAR SIGNALS WITH PROTEIN CIRCUITS**  
*Alexander Vlahos*  
**Online:** Monday at 16:20 - 18:30 (HFSP-220066)
122. **PIEZO1 BALANCES THE CONVERSION OF BONE MARROW MESENCHYMAL STEM CELLS TO OSTEOBLASTS AND ADIPOCYTES**  
*Baile Wang*  
**Online:** Thursday at 7:00 - 8:30 (HFSP-220145)
123. **TRANSPOSABLE ELEMENT ACTIVITY DRIVES THE EVOLUTION OF ANIMAL ZINC-FINGER GENES - CANCELLED**  
*Jonathan Wells*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220160)

124. **NATURAL VARIATION IN GROWTH AND FLOWERING TIME RESPONSES TO DROUGHT AND ABA IN ARABIDOPSIS THALIANA**  
*Xiaoyu Weng*  
**Online:** Tuesday at 17:10 - 19:00 (HFSP-220184)
125. **G4ATLAS: A COMPREHENSIVE TRANSCRIPTOME-WIDE G-QUADRUPLEX DATABASE**  
*Haopeng Yu*  
**Online:** Wednesday at 15:00 -18:00 (HFSP-220141)
126. **A NEW METHOD FOR ULTRA-LOCAL THERMAL CONTROL OF A SINGLE LIVING CELL**  
*Vadim Zeeb*  
**Online:** Thursday at 7:00 - 8:30 (HFSP-220128)
127. **TOWARD BRAIN IMAGING IN FREELY WALKING DROSOPHILA**  
*Doan Tat Thang Vo*  
**Onsite:** Wednesday at 15:00 - 18:00 and **Online:** Tuesday at 7:00 - 8:30 (HFSP-220193)