
Tuesday, September 18

11.00-13.00 **Registration**

13.30-14.00 **Opening & Welcome**

Eugenio Gaudio – Rector, Sapienza University of Rome

Gennaro Ciliberto – FISV President

14.00-15.00 **The EMBO Keynote Lecture**

FISV Lecture Riccardo Cortese

Chair: Valeria Poli (Turin)

Wolf Reik (The Babraham Institute, Cambridge and University of Cambridge, UK)
Single Cell Epigenome Landscape of Development and Ageing

15.00-17.00 **Plenary Symposium**

The Circadian Clock. A Living Organism's Best Friend in a Spinning World

Chairs: Alex Costa (Milan), Rodolfo Costa (Padua),

Amita Sehgal (Howard Hughes Medical Institute and University of Pennsylvania, USA)
How Do Clocks Control Behavior and Physiology: Insights from a Small Animal Model

Jay C. Dunlap (Geisel School of Medicine at Dartmouth, Hanover, NH, USA)
The Regulatory Network Governing Global Responses to Changes in Light and Time

Alex A. R. Webb (University of Cambridge, UK)
Dynamic Adjustment of Circadian Oscillators

17.00-17.30 **Coffee Break**

17.30-19.30 **Round Table**

Which Future for the Smart Biotechnologies

Wednesday, September 19

8.30-11.30 Short Talks by Participants (Session I)

1. **Environmental Microbiology and Biotechnology**
Chairs: Duccio Cavalieri, Teresa Rinaldi
2. **Genomics, Proteomics and Systems Biology**
Chairs: Rita Casadio, Paolo Provero
3. **Chromosome Biology, Cell Division and Cell Cycle**
Chairs: Giovanni Cenci, Giulia Guarguaglini
4. **Transcriptional Mechanisms and Epigenetic Modifications**
Chairs: Giacomo Donati, Aymone Gurtner
5. **Oncogenes and Tumor Suppressors**
Chairs: Sara Cabodi, Miriam Martini
6. **Photosynthesis, Metabolism and Environmental Stress**
Chairs: Cinzia Berteà, Nicola Tomasi
7. **Genetics of Microorganisms**
Chair: Francesco Imperi, Renato Fani
8. **DNA Replication, Repair and Recombination**
Chairs: Antonio Musio, Ennio Prosperi
9. **Non-coding RNA**
Chairs: Alessandro Fatica, Francesca Orso
10. **Plant Nutrition and Biofortification**
Chairs: Laura De Gara, Anita Zamboni
11. **Cellular Stress, Apoptosis and Autophagy**
Chairs: Daniela Barilà, Lucia Morbidelli

11.30-12.00 Coffee Break

12.00-13.00 Plenary Lecture

Chair: Omar Rota-Stabelli (Trento)

Alexei Maklakov (University of East Anglia, Norwich, UK)

Beyond Energy Allocation: Functional Trade-offs in the Biology of Ageing

13.00-13.15 SARTORIUS Short Talk

T. Claudio Bencivenga (Milan)

IncuCyte® S3: Live-Cell Analysis System

13.15-14.30 Lunch and Posters Viewing (Session I)

14.30-16.30 Plenary Symposium

Oxidative Stress, Protein Damage and Repair: Implications in Health and Disease

Chairs: Alessandra Polissi (Milan), Roberto Sitia (Milan)

Frédéric Barras (Institut Pasteur, Paris, France)

Protein Homeostasis Control: Fighting ROS Damages by Repairing Oxidized Proteins

Roberto Sitia (Università Vita-Salute San Raffaele, Milan)

Tuning Redox Signaling in and Between Cells

Alessandro Giuffrè (CNR-IBPM, Rome)

Energy, Redox Status and Gasotransmitters: Poisons at Work!

Anna Teresa Palamara (Sapienza University of Rome)

Herpes Simplex Virus-1 (HSV-1) Recurrent Infections Induce Neurodegenerative Markers in Mice.

Role of Oxidative Damages in the Brain

16.30-17.00 Coffee Break

17.00-19.00 **Parallel Symposia**
1. Emergence and Spread of Archaic and Modern Humans: News from Bones and Genomes

Chairs: Antonio Torroni (Pavia), Luca Sineo (Palermo)

Giorgio Manzi (Sapienza University of Rome)

The Evolution of the Genus *Homo* Has Been Driven by a Series of Geographical Dispersals

Robert Foley (University of Cambridge, UK)

Evolution of *Homo sapiens* in Africa: Integrating Genes, Fossils and Behaviour

Carles Lalueza-Fox (CSIC-University Pompeu Fabra, Barcelona, Spain)

Genomics of the Bell Beaker Phenomenon and the Transformation of Western Europe

Cristian Capelli (University of Oxford, UK)

Recent, Ancient and Archaic Genomic Signatures in the Italian Population

2. Genetic and Epigenetic Mechanisms Regulating Transgenerational Inheritance

Chairs: Michele Morgante (Udine), Antonella Russo (Padua)

Marco Barchi (University of Rome Tor Vergata)

Molecular Mechanisms Underlying X-Y Chromosomes Segregation Errors During Meiosis

EMBO Young Investigator Lecture
Nicola Iovino (Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany)

Epigenetic Inheritance Through the Germline in *Drosophila*
James Hackett (EMBL, Monterotondo, Rome)

Genetic and Epigenetic Control of the Mammalian Germline

EMBO Young Investigator Lecture
Isabel Bäurle (University of Potsdam, Germany)

Chromatin Regulation of Heat Stress Memory in Plants

3. Proteins as Drug Target and Drugs, and Protein Degradation as a Therapeutic Strategy

Chairs: Alberto Boffi (Rome), Andrea Mozzarelli (Parma)

Giuseppe Zanotti (University of Padua)

Structural Determination of Proteins of *Helicobacter pylori* Relevant for Bacterial Surviving and Pathogenicity

Antonella Isacchi (Nerviano Medical Sciences, Milan)

Kinases as Drug Targets: State of the Art and Future Perspectives

Barbara Pioselli (Chiesi Pharmaceuticals, Parma)

The Birth of an Enzyme Replacement Therapeutic Drug

Alessio Ciulli (University of Dundee, Scotland, UK)

Drug Design for Targeted Protein Degradation

4. Crossing Biological Barriers, in Health and Disease

Chairs: Massimo Masserini (Milan), Vito De Pinto (Catania)

Francesca Re (University of Milano-Bicocca)

Modeling the Blood-Brain Barrier (BBB) in Healthy and Diseased States

Giovanni Tosi (University of Modena and Reggio Emilia)

Crossing the Blood-Brain Barrier: Nanomedicine Jump

Valeria Dall'Asta (University of Parma)

Cationic Amino Acid Transport: Physiology and Pathology

Krisztina Herédi-Szabó (SOLVO Biotechnology, Budaörs, Hungary)

Challenges and Opportunities to Develop Drugs Traversing Biological Barriers



19.00-21.00 Societies' Time

AGI

19:00 Premio AGI "Ferruccio Ritossa" 2018 e presentazione del lavoro premiato

19:20 Premio Dottorato AGI/Zanichelli 2018 e presentazione del lavoro premiato

19:40 Assemblea dei Soci AGI

SIMAG

Assemblea dei Soci

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SIBV

Premi 2018:

- SIBV Seed Grants

- Giovani Biologi Vegetali

Assemblea Sociale

Thursday, September 20

8.30-11.30 Short Talks by Participants (Session II)

- 12. Development, Differentiation and Ageing**
Chairs: Daniele Condorelli, Fulvio Della Ragione
- 13. Metabolism and its Regulation in Health and Diseases**
Chairs: Mauro Magnani, Luigi Palmieri
- 14. Human Genetics and Genomic Diversity**
Chairs: Alessandro Achilli, Luca Pagani
- 15. Neurobiology and Neuropharmacology**
Chairs: Giulia Piaggio, Giorgio Racagni
- 16. Immunology and Host-Pathogen Interaction**
Chairs: Fiorentina Ascenzioni, Cristina Parolin
- 17. Biotransformations**
Chairs: Loredano Pollegioni, Raffaele Porta
- 18. Stem Cells, iPS, Cancer Stem Cells**
Chairs: Gianni Cuda, Gabriele Stocco
- 19. Nutrition Biochemistry**
Chairs: Francesco Bonomi, Silvana Hrelia
- 20. Evolutionary Biology**
Chairs: Giorgio Manzi, Marco Oliverio
- 21. Glycoconjugates**
Chairs: Alberto Passi, Alessandro Prinetti
- 22. Plant Development and Disease**
Chairs: Franco Faoro, Michela Zottini

11.30-12.00 Coffee Break

12.00-13.00 Plenary Lecture

Chair: Mario Pezzotti (Verona)

Luis Herrera Estrella (LANGE BIO, Mexico)
Genetically Modified Plants: Past, Present and Future

13.00-14.30 Lunch and Posters Viewing (Session II)

14.30-16.30 Plenary Symposium

Life is Also a Matter of Taste and Smell

Chairs: Roberto Barale (Pisa), Guglielmina Nadia Ranzani (Pavia)

Wolfgang Meyerhof (Saarland University, Homburg, Germany)

Different tongues for different people? - Genetics of bitter taste receptors and perceptual differences in individuals and the population

Catia Sternini (UCLA, Los Angeles, CA, USA)

Gut Bitter Taste Receptors as Sensors of Luminal Content

Paolo Gasparini (University of Trieste)

Genes and Food Preferences and Their Role in Personal Choices, Lifestyle and Health

Darren Logan (Wellcome Trust Sanger Institute, Cambridge, UK)

Do You Smell What I Smell? The Genetics of Olfaction

16.30-17.00 Coffee Break

17.00-19.00 **Parallel Symposia**

1. RNA Biology

Chairs: Irene Bozzoni (Rome), Salvatore Oliviero (Turin)

Dan Dominissini (Sheba Medical Center & Tel-Aviv University, Israel)
Controversies in Epitranscriptomics

Danny Incarnato (IIGM, Turin)
Dissecting the RNA Structurome to Decipher *in Vivo* RNA Folding Dynamics

Gian Gaetano Tartaglia (Centre for Genomic Regulation and ICREA, Barcelona, Spain)
Prediction of Protein-RNA Networks

Julie Martone (Sapienza University of Rome)
Lnc-049, a Cytoplasmic Long Non-coding RNA Involved in Muscle Differentiation

2. Inflammation and Disease

Chairs: Carlo Riccardi (Perugia), Paolo Pinton (Ferrara)

Cecilia Garlanda (Humanitas University, Milan)
IL-1R8, a Negative Regulator of Inflammation and Checkpoint Molecule

Francesco Di Virgilio (University of Ferrara)
ATP: The Quintessential DAMP

Maria Lina Bernardini (Sapienza University of Rome)
PAMPs: Linking Bacterial Recognition and Inflammatory Response

Stefano Bruscoli (University of Perugia)
Glucocorticoid and B Lymphocytes Function: Role of Glucocorticoid-Induced Leucine Zipper (GILZ)

3. Carbon Cycle and Climate Change: the Future

Chairs: Luca Espen (Milano), Sergio Esposito (Napoli)

Maria De Nobili (University of Udine)
Soil, the Second Active Planet Scale Interface: Effects and Perspectives of Climate Change

Nick Ostle (Lancaster University, UK)
Climate Change and Soil Biotic Carbon Cycling

Mauro Centritto (IVALSA, CNR, Florence)
Evolution of Stomatal and Mesophyll Conductance: Implications for Carbon and Water Exchange in Drylands

Rémi Lemoine (CNRS and University of Poitiers, France)
Flux of Carbon from Leaves to Roots in Plants Under Environmental Stress

21.00

Social Dinner

Friday, September 21

8.30-10.30 Plenary Symposium

Farming for Pharming: Plants as Biofactories (in the Production of Vaccines, Antibiotics, Anticancer)

Chairs: Eugenio Benvenuto (Rome), Franco Faoro (Milan)

George P. Lomonossoff (John Innes Centre, Norwich, UK)

Plant-Based Expression of Virus-Like Particles and Their Use in Biomedicine and Bionanotechnology

Emanuela Noris (CNR, Torino)

Transient expression of anticancer and antiviral antigens in plants

Julian K-C. Ma (St. George's, University of London, UK)

Antibodies and Antibody Engineering in *Nicotiana tabacum* for managing Global Human Infectious Diseases

Selene Baschieri (ENEA Centro Ricerca Casaccia, Rome)

Plant-Derived Vaccines and Smart Drugs

Linda Avesani (University of Verona)

Plant-Made Nanomaterials for Diagnosis and Therapy

10.30-11.30 Plenary Lecture

Chair: Bianca Colonna (Rome)

Josep Casadesús (University of Seville, Spain)

Waddington's Landscapes in the Microbial World

11.30-12.00 Coffee Break

12.00-14.00 Plenary Symposium

Regulatory Network Dynamics: from Interaction to Function

Chairs: Matteo Barberis (Amsterdam, The Netherlands), Pierluigi Martelli (Bologna)

FEBS National Lecturer - Luis Serrano Pubul (Centre for Genomic Regulation, Barcelona, Spain)

Comprehensive Systems Analysis of the Transcriptome and its Regulation of a Genome Reduced Bacterium

Matteo Barberis (University of Amsterdam, The Netherlands)

Deciphering Yeast Physiology by a Multi-Scale Framework Integrating Cell Cycle and Metabolism

Davide Cacchiarelli (TIGEM, Napoli)

Understanding Transcription Factors Biology Through Genomics

Adil Mardinoglu (KTH Royal Institute of Technology, Stockholm, Sweden)

The Employment of Systems Biology in Treatment of Liver Diseases

15.00-17.00 Societies' Time

SIBV

Elevator Pitch Session

Premio Assunta Baccarini Melandri

SIMGBM

Assemblea Generale dei Soci

Riunione PO BIO/10