



VIII ECOP-ISOP JOINT MEETING 2019 28 JULY - 02 AUGUST - ROME ITALY

SUNDAY 28 JULY

AUDITORIUM FORI IMPERIALI

- 14:00/20:00 **Registration** (Lobby)
- 18:00/20:00 **Welcome Cocktail** (pool garden space)

FORO CLAUDIA

15:00/18:00 **ISOP_EC meeting**

MONDAY 29 JULY

AUDITORIUM FORI IMPERIALI

- 08:30/09:00 **OPENING - Aurelio Serrano Delgado - Avelina Espinosa - Maria Cristina Angelici**
- 09:00/10:00 **PLENARY LECTURE** ISoP Honorary Member (by ISoP)
Introduction **John Dolan**

Tom Fenchel

Size, Shape and Function among Protozoa

10:00/10:30 **Coffee break**

10:30/12:30 **SYMPOSIUM** on Ciliate in memory of Denis Lynn (by FEPS & ISoP)
Chair **Pierangelo Luporini - Roberto Docampo**

10:30/11:00 **Alan Warren** - *The biology and systematics of peritrich ciliates: old concepts and new findings*

11:00/11:30 **Rebecca Zufall** - *Amitosis and the Evolution of Asexuality in Tetrahymena Ciliates*

11:30/12:00 **Sabine Agatha** - *The biology and systematics of oligotrichean ciliates: new findings and old concepts*

12:00/12:30 **Laura Utz** - *Ciliate diversity and ecological interactions in Neotropical environments*

12:30/13:30 **Lunch**

FORO ADRIANO

- 13:30/15:45 **Oral Session**
ECOLOGY & BIOGEOGRAPHY 1
Chair **Jun Gong - Luciana Burdman**
- 13:30/13:45
Katherine Dobosh
Tracking genotypic changes in Paramecium isolates between ponds and seasons in Ulster County, NY, USA

FORO TRAIANO

- Oral Session**
DIVERSITY & SPECIATION 1
Chair **Renate Radek - Yana Eglit**
- 13:30/13:45
Stephan Majda
Genome comparison in Chrysophyceae reveal huge genetic diversity

FORO COSTANTINO

- SYMPOSIUM** (by FEPS)
Chair **John Dolan - Hartmut Arndt**
- Protist diversity and function in the dark ocean - challenging the paradigms of deep-sea ecology

FORO AURELIA

- Oral Session**
TAXONOMY & PHYLOGENY 1
Chair **Clément Duckert - Valentina Serra**
- 13:30/13:45
Yuji Inagaki
Phylogenomic analysis assessing the positions of "orphans" including Microheliella maris

MONDAY 29 JULY

FORO ADRIANO

13:30/15:45

Oral Session

ECOLOGY & BIOGEOGRAPHY 1

13:45/14:00

Hunter Hines

Flagship ciliates from freshwaters and soil, a Florida case study.

14:00/14:15

Toshinobu Suzuki

Structure and molecular composition of the kinetocyst in the centrohelid heliozoan Raphidiophrys contractilis

14:15/14:30

Paolo Boschi

Modern three-dimensional (3D) imaging techniques in light (LM) and electron microscopy (EM)

14:30/14:45

Luciana Burdman

Testate amoebae diversity in Tierra del Fuego peatlands: how many are we missing?

14:45/15:00

Xiaoteng Lu

Bottom-up vs. top-down control of two contrasting freshwater ciliates

15:00/15:15

Huesna Oeztoprak

Through the magnifying glass – the global diversity of Rhogostomidae and their environmental drivers

FORO TRAIANO

Oral Session

DIVERSITY & SPECIATION 1

13:45/14:00

Renate Radek

Three novel oxymonad lineages from the Australian termite Porotermes adamsoni

14:00/14:15

Luis Javier Galindo

Phylogenomic analysis of the Nucleariidae amoebae, the earliest-diverging lineage of Holomycota

14:15/14:30

Jeremy G. Wideman

A single-cell genome reveals diplomid-like ancestry of kinetoplastid mitochondrial gene structure

14:30/14:45

Dayana Salas-Leiva

Carpediemonas membranifera has an unusually modified machinery for processing and segregating DNA.

14:45/15:00

Lucie Gallot-Lavallée

Massive, unprecedented intein content in two Anaeramoeba genomes reveals new aspects of intein mobility in eukaryotes.

15:00/15:15

Ilya Udalov

Diversity of Fornicates in the view of environmental V4 and V9 datasets: contrasting taxonomic composition and putative new clades

FORO COSTANTINO

SYMPOSIUM (by FEPS)

Protist diversity and function in the dark ocean - challenging the paradigms of deep-sea ecology

13:30/14:00

John Dolan

Protistan Microzooplankton in the Mesopelagic Mediterranean Sea

14:00/14:30

Andrew Gooday

Biodiversity and biogeography of deep-sea benthic foraminifera and their possible roles in bathyal and abyssal ecosystems

14:30/15:00

Alexandra Schoenle

Global distribution and unique protist communities in the deep sea

FORO AURELIA

Oral Session

TAXONOMY & PHYLOGENY 1

13:45/14:00

Franciane Cedrola

Systematic Review of the Family Blepharocorythidae Hsiung (Ciliophora, Entodiniomorpha)

14:00/14:15

Boo Seong Jeon

Morphology and phylogeny of two new parasitoids of the marine dinoflagellates, Tuberculatum coatsi and Parvilucifera sp. (Alveolata, Perkinsozoa)

14:15/14:30

Dagmar Jirsová

Let's get physical: intense connection between nucleus and mitochondria in a bicosoecid

14:30/14:45

Konstantina Mitsi

Phylogenomic reconstruction of Holozoa through the lens of metagenomics: The genome of the first filasterean parasite provides insights into the unicellular ancestry of animals

14:45/15:00

Venkata Mahesh Nitla

Integrative taxonomic study of four species of extremophilic ciliates of the genus Plagiopyla, underpinning the revision of the family Plagiopylidae (Plagiopyleae: Plagiopylida)

MONDAY 29 JULY

FORO ADRIANO

13:30/15:45

Oral Session

ECOLOGY & BIOGEOGRAPHY 1

15:15/15:30

Ji Yeon Sung

The fate of SAR11 and Roseobacter by marine heterotrophic flagellates

Discussion

FORO TRAIANO

Oral Session

DIVERSITY & SPECIATION 1

15:15/15:30

Sergio A. Muñoz-Gómez

Nephromyces represents a diverse and novel lineage of the Apicomplexa that has retained apicoplasts

15:30/15:45

Yana Eglit

Waking a sleeping giant: morphology, life history observations, and molecular phylogeny of Wagnerella borealis Mereschkowsky 1878 (Gymnosphaerida)

FORO COSTANTINO

SYMPOSIUM (by FEPS)

Protist diversity and function in the dark ocean - challenging the paradigms of deep-sea ecology

15:00/15:30

Hartmut Arndt

Flagellates, ciliates and amoebae may occupy all niches of deep-sea microbial life

Discussion

FORO AURELIA

Oral Session

TAXONOMY & PHYLOGENY 1

15:00/15:15

Clément Duckert,

Dating the radiation of the euglyphid testate amoebae with fossils and DNA

15:15/15:30

Valentina Serra

Integrating traditional descriptions with the holobiont concept and genomics analyses in the "next generation taxonomy" approach: Euplotes vanleeuwenhoekii sp. nov. as case study

15:30/15:45

Alexandra Rybarski,

Biodiversity and adaptation of protists to extreme aquatic environments in the Atacama Desert

15:45/16:00

Coffee break

16:00/18:00

Oral Session

ECOLOGY & BIOGEOGRAPHY 2

Chair **David Montagnes - Gaytha Langlois**

16:00/16:15

Taylor R. Sehein

Resolving protistan parasite and host interactions in a coastal tidal pond using a high-resolution time series

16:15/16:30

Florine Degruene

Richness and composition of soil Cercozoan communities exhibit different European scale biogeographical patterns

Oral Session

DIVERSITY & SPECIATION 2

Chair **Tikhonenkov Denis - Ryan Gawryluk**

16:00/16:15

Ryoma Kamikawa

Plastoquinone-mediated electron transport in a non-photosynthetic plastid of the heterotrophic green alga Hyalagonium sp.

16:15/16:30

Gordon Lax

Exploring the deep evolutionary history of phagotrophic euglenids with single-cell transcriptomics

SYMPOSIUM (by FEPS)

Chair **Cristina Miceli - Helena Soares**

From genomics to flagellar and ciliary structures and cytoskeleton dynamics

16:00/16:30

Jack Sunter

Genome wide tagging in trypanosomes uncovers flagellum asymmetries

Oral Session

PARASITISM 1

Chair **Elena Nassonova - Oksana Kamyshatskaya**

16:00/16:15

Elena Nassonova

Microsporidia from protists: diversity, morphology and phylogeny

16:15/16:30

Oksana Kamyshatskaya

Ultrastructural affinities of Nucleophaga amoebae (Opisthokonta: Rozellomycota): from Rozella to Microsporidia.

MONDAY 29 JULY

FORO ADRIANO

16:00/18:00 **Oral Session**

ECOLOGY & BIOGEOGRAPHY 2

16:30/16:45

Gaytha Langlois

Ciliate Diversity on Heron Island Reef, GBR - Patterns and Changes

16:45/17:00

Magali Schweizer

Comparison between molecular and morphological identifications of Foraminifera (Rhizaria) from oxic and anoxic sites in the Gulf of Mexico near the Mississippi River Delta

17:00/17:15

Jun Gong

Coupling ribotypes to phenotypic plasticity in ciliated protists

17:15/17:30

Mingyang Ma

*Isolation and evaluation of a novel strain of *Chlorella sorokiniana* that resists grazing by the predator *Potriochromonas malhamensis**

17:30/17:45

Ina Maria Deutschmann

Disentangling environmental effects in microbial association networks

17:45/18:00

David JS Montagnes

Does Tetrahymena like it hot? Evolution of thermal responses at a generic level

FORO TRAIANO

Oral Session

DIVERSITY & SPECIATION 2

16:30/16:45

Denis Tikhonenkov

A novel lineage of predatory protists sheds light on the origin of photosynthetic eukaryotes: a morphological perspective

16:45/17:00

Ryan Gawryluk

A novel lineage of predatory protists sheds light on the origin of photosynthetic eukaryotes: a genomic perspective

17:00/17:15

Miguel M. Sandin

Time calibrated morpho-molecular classification of Radiolaria

17:15/17:30

Sabine Schiwitza

Spotlight on Nudiform Choanoflagellates - an Evolutionary Paradox

17:30/17:45

Mattia Greco

Assessing the occurrence and the origin of SSU rDNA Intragenomic polymorphism in planktonic foraminifera

17:45/18:00

Frank Nitsche

Mutation rates of choanoflagellate and ciliate species from the Atacama Desert based on molecular clock analysis

FORO COSTANTINO

SYMPOSIUM (by FEPS)

From genomics to flagellar and ciliary structures and cytoskeleton dynamics

16:30/17:00

Dorota Wloga

Deciphering the molecular mechanisms that coordinate ciliary outer doublet complexes - search for "missing links"

17:00/17:30

Elena Soares

*From centrosomal microtubule anchoring and organization to basal body positioning: *tbccd1* an elusive protein*

17:30/17:45

Ewa Joachimiak

Central pair proteins in cilia beating regulation

17:45/18:00

Discussion with interventions

FORO AURELIA

Oral Session

PARASITISM 1

16:30/16:45

Winiffer D Conce Alberto

*Investigating *Paramecium caudatum* Susceptibility to *Holospora undulata* Infection*

16:45/17:00

Eric Salomaki

Phylogenomics and comparative transcriptomics of secondarily free-living diplomonads

17:00/17:15

Anna I. Ganyukova

*Host-parasite relationships of blastocystidia *raabei* in the true bug *Coreus marginatus**

17:15/17:30

Lúcia S. L. Safi

Revisiting an old affair: Zoothamnium intermedium (Precht, 1935) and copepod relationships in Chesapeake Bay

17:30/17:45

Courtney W Stairs

*The salmon pathogen *Spironucleus salmonicida* induces necrosis of salmon kidney cells in vitro*

17:45/18:00

Neuhauser Sigrid

Insight into phytomyxea-host interactions with a combination of RNAseq and in-situ mRNA visualization

18:00/19:00 **Poster Session 1**

19:00/20:00 **ISoP Meeting**

AUDITORIUM FORI IMPERIALI

09:00/10:00 **PLENARY LECTURE** ISoP Past-President (by ISoP)
Introduction **Avelina Espinosa**

David Bass

Micro-eukaryotes in animal and plant microbiomes: ecologies of disease?

10:00/10:30 **Coffee break**

10:30/12:30 **SYMPOSIUM ISOP ADVANCES** (by ISoP)
Chair **Luciana Santoferrara - George McManus**
Ten years of metabarcoding: what have we learned and how do we move forward?

10:30/11:00 **Luciana Santoferrara** - *Strengths and Limitations of Metabarcoding for Assessing Protist Communities*

11:00/11:30 **Fabien Burky** - *Long metabarcoding of the eukaryotic rDNA operon to phylogenetically and taxonomically resolve environmental diversity*

11:30/12:00 **Ramiro Logares** - *Hypothesis testing and inference of ecological patterns from large marine metabarcoding datasets*

12:00/12:30 **Sabine Filker** - *Metabarcoding as a basis to study the diversity and ecophysiology of halophilic microeukaryotes*

12:30/13:30 **Lunch**

FORO ADRIANO

13:30/15:30 **Oral Session**

METABARCODING

Chair **Cedrick Berney - David Bass**

13:30/13:45

Mariarita Caracciolo

Seasonality of benthic and pelagic protists in permanently-mixed marine habitats: analysed through 18S rDNA metabarcoding

13:45/14:00

Jaeho Choi

Comparative analyses of the V4 and V9 regions of 18S rDNA for assessment of eukaryotic diversity estimated from field surveys using the Illumina platform

FORO TRAIANO

Oral Session

RESPONSE TO ENVIRONMENTAL STRESS

Chair **Francesco Catania - Maxime Lepretre**

13:30/13:45

Aurelio Serrano

Different sodium tolerance of functional membrane pyrophosphatase orthologs in freshwater and saltwater microalgae

13:45/14:00

Maxime Leprêtre

Immune impacts of Cryptosporidium parvum within a non-target model, Dreissena polymorpha

FORO COSTANTINO

SYMPOSIUM (by ISoP)

Chair **Michelle Leger - Sebastìan Najle Najle**

All Roads Lead to Rome: Comparing Molecular and Cellular Paths to Eukaryotic Multicellularity

13:30/14:00

Pauline Schaap

Evolution of multicellularity in the Amoebozoan lineage

14:00/14:30

Alexander K. Tice

Comparing paths to multicellularity in amoeboid protists

FORO AURELIA

Oral Session

PARASITISM 2

Chair **Shweta V. Pipaliya - Petr Táborský**

13:30/13:45

Eleanor Senior

In silico analysis of potential vaccine candidates for Tritrichomonas foetus, the causative agent of bovine tritrichomoniasis.

13:45/14:00

Tomo Nozaki

A novel parasite-secreted lysine and glutamic acid rich protein 2 (KERP2) from Entamoeba histolytica infiltrates the host nucleus and regulates the host-parasite relationship

FORO ADRIANO

13:30/15:30

Oral Session

METABARCODING

14:00/14:15

Manon Hohlfeld

ILLUMINATING the deep sea - Patterns of protist diversity in abyssal depths

14:15/14:30

Raphael Morard

Integrative framework to handle metabarcoding data: a guideline illustrated by planktonic foraminifera.

14:30/14:45

Quentin Blandenier

Using High Throughput Sequencing DNA metabarcoding to assess diversity patterns of Nebela (Amoebozoa; Arcellinida) along an elevation gradient

14:45/15:00

Robin S. Sleith

Surveying microbial eukaryote diversity in phytotelmata habitats

15:00/15:15

Cédric Berney

EukBank: a community resource to explore the Earth eukaryotic diversity

15:15/15:30

Cédric Berney

UniEuk (universal taxonomic framework for eukaryotes): advances and future

FORO TRAIANO

Oral Session

RESPONSE TO ENVIRONMENTAL STRESS

14:00/14:15

Vera Kalinina

Localization of Nutrient Transporters in Native and Ecdysing Cells of the Dinoflagellate Prorocentrum minimum

14:15/14:30

Hwan Su Yoon

Transcriptome analysis of light stress condition in Paulinella micropora, an amoeba with nascent photosynthetic organelles

14:30/14:45

Francesco Catania

Sex enhances survival in Paramecium

14:45/15:00

Valerio Vitali

Thermo-plasticity of Programmed DNA Elimination in Paramecium tetraurelia

15:00/15:15

Khaoula Ettahi

Coding Content in Complete Mitochondrial Genome of Pleurostomum flabellatum and Extreme-Halophiles Codon Preference

FORO COSTANTINO

SYMPOSIUM (by ISoP)

All Roads Lead to Rome: Comparing Molecular and Cellular Paths to Eukaryotic Multicellularity

14:30/15:00

Thibaut Brunet

Insights into the origin of animal contractile cells from choanoflagellates

15:00/15:30

Laszlo Nagy

Not all follow the same road: fungi took a unique evolutionary route to multicellularity.

FORO AURELIA

Oral Session

PARASITISM 2

14:00/14:15

Herbert J. Santos

A lineage-specific mitochondrial membrane protein possibly involved in mitochondria-endosome membrane contact site in Entamoeba histolytica

14:15/14:30

Shweta V. Pipaliya

Comparative genomic analysis of the Rab GTPases in Giardia intestinalis and its Fornicata relatives

14:30/14:45

Petr Táborský

Comparison of Cryptosporidium proliferans and C. muris genomes

14:45/15:00

Hazel Farthing

Can protozoa control water borne parasites?

15:00/15:15

Mohammad Reza Mahmoudi

Blastocystis hominis and Cryptosporidium spp Infections among Immunocompromised and Immunocompetent Individuals in Guilan-Iran

15:15/15:30

Mohammad Reza Mahmoudi

Survey of Free Living Amoeba, the Genus of Acanthamoeba in Ophthalmology, Organ Transplant and Chemotherapy Wards in Educational Hospitals of Guilan-Iran -2018

15:30/16:00 **Coffee break**

FORO ADRIANO

16:00/17:30 **Oral Session**
ECOLOGY & BIOGEOGRAPHY 3
 Chair **Aurelio Serrano** -
Francisco La Torre

16:00/16:15

Anders K. Krabberød

PIDA: The planktonic protist interaction database

16:15/16:30

Anja Scherwass

Everything is everywhere? Comparison of ciliate communities in seven different German rivers and their role in the elimination of potentially pathogenic bacteria

16:30/16:45

Francisco Latorre

Single-cell genomics illuminates the eco-evolution of a cosmopolitan lineage of tiny ocean grazers

16:45/17:00

Renata Matoničkin Kepčija

Periphytic Ciliate Colonization in two Tufa-depositing Systems

FORO TRAIANO

Oral Session
GENOMIC & TRANSCRIPTOMIC 1
 Chair **Feng Gao** - **Vladimir Hampl**

16:00/16:15

Vladimír Hampl

Genome and transcriptome drafts of the heterotrophic euglenoid Rhabdomonas costata provides first insights into its mitochondrial metabolism

16:15/16:30

Paulo G. Hofstatter

Evolution of meiosis and sex in eukaryotes

16:30/16:45

Michelle M. Leger

Evolution of cell death machinery in holozoan protists

16:45/17:00

Elizabeth Hunter

Investigation of the effect of bacterial endosymbionts on life strategy transitions within phylum Apicomplexa

FORO COSTANTINO

SYMPOSIUM ISOP ADVANCE
 (by ISoP/Moore Foundation)
 Chair **Virginia Edgcomb** - **Julius Lukas**

Applications of Genetic Tools for Advancing Research on Marine Protists

16:00/16:30

Binnypreet Kaur

Diplonema papillatum, a representative of the highly diverse and abundant marine microeukaryotes, can be genetically manipulated

16:30/17:00

Ross Waller

Transforming Dinozoa: steps forward and steps back.

FORO AURELIA

Oral Session
TAXONOMY & PHYLOGENY 2
 Chair **Tomas Pànek** -
Michael Gruber

16:00/16:15

Matthew Brown

Phylofisher: A phylogenetically aware pipeline for phylogenomic dataset construction

16:15/16:30

Zhao-Rong Lun

Species identification and phylogenetic analysis of Leishmania isolated from patients, vectors and hares in Xinjiang Autonomous Region, The People's Republic of China

16:30/16:45

Roberto Júnio Pedroso Dias

Recent contributions to the morphology, ecology and molecular phylogeny of ciliates (Alveolata, Ciliophora) from the southern Brazil

16:45/17:00

Kristina X Terpis

The evolutionary history of photosynthetic stramenopiles is revealed by transcriptomics of undersampled photosynthetic lineages

FORO ADRIANO

16:00/17:30 **Oral Session**

ECOLOGY & BIOGEOGRAPHY 3

17:00/17:15

Mami Nomura

A biosilica-related protein newly identified from a rhizarian testate amoeba: a key enzyme of eukaryotic silica-biomineralization?

FORO TRAIANO

Oral Session

GENOMIC & TRANSCRIPTOMIC 1

17:00/17:15

Wei-Jen Chang

Genes differentially expressed between Cryptocaryon irritans theront cells derived from 1 and 10 hrs post-encystment

17:15/17:30

Ryuji Yanase

Microtubule dynamics in the haptonema of haptophyte algae

FORO COSTANTINO

SYMPOSIUM ISOP ADVANCE

(by ISoP/Moore Foundation)

Applications of Genetic Tools for Advancing Research on Marine Protists

17:00/17:30

Fatma Gomaa

Tools for stable integrative transfection of Bodo saltans: A micro-eukaryote with polycistronic peptide coding genes

17:30/18:00

Jackie Collier

Successful genetic manipulation of the thraustochytrid Aurantiochytrium limacinum and challenges extending to other labyrinthulomycetes

FORO AURELIA

Oral Session

TAXONOMY & PHYLOGENY 2

17:00/17:15

Karin Jaškea

The net-like heterotrophic amoeba Leukarachnion sp. PRA-24 (Ochromyxa, Stramenopiles) has a cryptic plastid

17:15/17:30

Michael Gruber

Tintinnid's First Top Model: Ultrastructural Insights into the Oral Cilia-ture of Schmidingerella meunieri (Alveolata, Ciliophora)

17:30/19:00 **PROTIST AS MODEL & BIOINDICATORS**

Chair **Federico Buonanno - Terue Harumoto**

17:30/17:45

Sebastián R. Najle

Exploring signatures of spatial cell type differentiation in Capsaspora owczarzaki, a close relative of animals

17:45/18:00

Frederick Spiegel

The great "life cycle" scam

18:00/18:15

Vesna Gulin

Reactivated channels along tufa barrier as favorable habitat for colonization of microfauna

MOLECULAR & CELL BIOLOGY 1

Chair **Natalia Guminska - Agnes Weiner**

17:30/17:45

Tamara Smutná

Unexpected function of cytosolic Fe-Fe hydrogenase from Trichomonas vaginalis

17:45/18:00

Mariia Berdieva

Cyclic Polyploidy and Chromatin Extrusion in Amoeba proteus and Related Species

18:00/18:15

Tomáš Pánek

A peculiar plastid in a novel lineage of non-photosynthetic Chlamydomonadales

TAXONOMY & PHYLOGENY 3

Chair **Alexey Smirnov - Yonas Tekle**

17:30/17:45

Caesar Al Jewari

Systematic assessment of congruence in multi-gene data

17:45/18:00

Yonas I. Tekle

Born to crawl – New phylogenomic tree of Amoebozoa based on genome wide data analysis

18:00/18:15

Alexei Kostygov

A peculiar trypanosomatid lineage with biflagellated cells

TUESDAY 30 JULY

FORO ADRIANO

17:30/19:00

Oral Session

**PROTIST AS MODEL
& BIOINDICATORS**

18:15/18:30

Wonho Yih

Inter-annual variability of summer phytoplankton community at oil spill coasts including the Hebei Spirit oil spill site near Taeanhaean National Park, Korea

18:30/18:45

Giulia M. Ribeiro

Detection of potential low-oxygen adaptations in free-living testate amoeba using a transcriptomic approach.

18:45/19:00

Solenn Mordret

Dinoflagellates can like it cool and mixed

FORO TRAIANO

Oral Session

MOLECULAR & CELL BIOLOGY 1

18:15/18:30

Claudio Slamovits

Expression of heterologous genes in dinoflagellates. Can the nut be cracked?

18:30/18:45

De-Hua Lai

Basal body protein BBP1 in Trypanosome brucei contributes to the recruitment of tyrosinated α -tubulin in basal bodies and assembly of pro-basal body

18:45/19:00

Goro Tanifuji

Non-photosynthetic Cryptomonas conducts inorganic carbon fixation?

FORO COSTANTINO

SYMPOSIUM ISOP ADVANCE

(by ISoP/Moore Foundation)

Applications of Genetic Tools for Advancing Research on Marine Protists

18:00/18:30

Cristina Miceli

Transfection and reverse genetics in marine ciliates with highly amplified nanochromosomes

Discussion

FORO AURELIA

Oral Session

TAXONOMY & PHYLOGENY 3

18:15/18:30

Seung In Park

New classification of Cyanidiophyceae (Rhodophyta) based on compa

18:30/18:45

Alexey Smirnov

Born to crawl – the origin and evolution of Amoebozoa

18:45/19:00

Louis Graf

Further investigations on the Phaeothamniophyceae using a multigene phylogeny, with descriptions of five new species.

19:00/20:00 **FEEPS meeting**

AUDITORIUM FORI IMPERIALI

09:00/10:00 **PLENARY LECTURE** (by FEPS)
Introduction **Maria Cristina Angelici**

Sergey Skarlato
Adaptation Strategies of the Invasive Bloom-Forming Dinoflagellates in Brackish Waters

10:00/10:30 **Coffee break**

10:30/12:30 **SYMPOSIUM** (by FEPS)
Chair **Joel Dacks - Maria Cristina Angelici**
Free-living amoeba and neglected pathogen protozoa: health emergency signals?

10:30/11:00 **Joel Dacks** - *A comparative 'omics approach to pathogenicity in the Brain-eating amoeba, Naegleria fowleri*

11:00/11:30 **Julia Walochnik** - *Pathogenicity in Acanthamoeba*

11:30/12:00 **Patrick Scheid** - *Free living amoebae as pathogens and as vectors of endocytobionts*

12:00/12:30 **Adriana Calderaro** - *Intestinal protozoa searching for a disease or for a doctor?*

12:30/13:30 **Lunch**

FORO ADRIANO

13:30/15:30 **SYMPOSIUM** (by FEPS)
Chair **Marina Gramiccia - Luigi Gradoni**
Host-Parasite Interactions in Vector-borne Protozoan Infections

13:30/14:10
Gad Baneth
Babesia species of Domestic Dogs – Where do they Fit in the Piroplasmid World?

14:10/14:50
Paul Bates
New Leishmania Parasites and New Vectors

FORO TRAIANO

Oral Session
MOLECULAR & CELL BIOLOGY 2
Chair **Virginia Egdcomb - Shan Gao**

13:30/13:45
Shan Gao
Characterizing the DNA N6-adenine Methyltransferase AMT1 in the Unicellular Eukaryote Tetrahymena thermophila

13:45/14:00
Marcel D. Solbach
Diversity of endosymbiotic bacteria in Thecofilosea (Cercozoa, Rhizaria)

14:00/14:15
Natalia Gumińska
Splicing pathway of nuclear transcripts in Euglena gracilis

FORO COSTANTINO

SYMPOSIUM (by FEPS)
Chair **Panagiotis Karanis - Maria Cristina Angelici**
Waterborne infections of protozoan origin: how much do we really know?

13:30/14:00
Panagiotis Karanis
Waterborne Protozoan Infections: Health Problem Dimension Worldwide

14:00/14:30
Melissa Palos Ladeiro
Mollusc Bivalves as Indicators of contamination of water bodies by protozoan parasites.

FORO AURELIA

Oral Session
GENOMIC & TRANSCRIPTOMIC 2
Chair **Anna Karnokowska - Matthew Brown**

13:30/13:45
Feng Gao
Genome analyses of the new model protist Euplotes vannus focusing on genome rearrangement and mating type determination

13:45/14:00
Kacper Maciszewski
Four genomes, three different structures: a study of plastid genomes of Dictyochophyceae reveals unusual variability in their organization

WEDNESDAY 31 JULY

FORO ADRIANO

13:30/15:30 **SYMPOSIUM** (by FEPS)

Host-Parasite Interactions in Vector-borne Protozoan Infections

14:50/15:30

Anna Olivieri

Plasmodium development in the mosquito midgut. A molecular and cellular view

FORO TRAIANO

Oral Session

MOLECULAR & CELL BIOLOGY 2

14:15/14:30

Adriana Vallesi

The pheromone genes of the ciliate Euplotes generate multiple transcripts by alternative intron splicing and sense-antisense transcription

14:30/14:45

Jan Pyrih

Mitochondria of some protist lineages have retained the bacterial signal peptide recognition particle-based protein targeting machinery

14:45/15:00

Aleksandra Kozyczkowska

Corallochytrium limacisporum, a newly emerging model system to address questions of animal origin

15:00/15:15

Kristína Záhonová

Mitochondrial metabolism of anaerobic amoeba Pelomyxa schiedti

15:15/15:30

Jana Pilátová

On the Chemical Nature of Intracellular Inclusions in the Eustigmatophyte - Vacuoloviride crystalliferum Using In-Situ Analysis by Raman Microscopy

FORO COSTANTINO

SYMPOSIUM (by FEPS)

Waterborne infections of protozoan origin: how much do we really know?

14:30/15:00

Judit Plutzer

New directions in parasite detection: micro- and macrofluidic platforms

15:00/15:30

Maria Cristina Angelici

Waterborne Protozoan Infections in the Climatic Changes Era

FORO AURELIA

Oral Session

GENOMIC & TRANSCRIPTOMIC 2

14:00/14:15

Anzhelika Butenko

Comparative Genomics Sheds Light on the Evolution of Metabolism and Molecular Features in Euglenozoa

14:15/14:30

Alejandro Jiménez-González

Rewinding the metabolism of diplomonads

14:30/14:45

Zoltán Füßy

Vertebrate retortamonads share features of anaerobic metabolism with relative diplomonads

14:45/15:00

Alfredo Leonardo

Porfírio-Sousa

Phylogenetic reconstruction reveals expansions of the Rab GTPase gene family in Amoebozoa.

15:00/15:15

Agnes K.M. Weiner

Using single-cell 'omics to study population genetics and genome evolution of Arcellinida

15:15/15:30

Seungho Kang

The integrin-mediated adhesome complex, essential to multicellularity, is present in the most recent common ancestor of animals, fungi and amoebae.

16:00/23:00 **Historical Promenade & Social Dinner**

16.00 Departure by private bus from the Congress venue -23.00 Departure by private bus to the Congress venue.

AUDITORIUM FORI IMPERIALI

09:00/10:00 **PLENARY LECTURE** (by FEPS)
Introduction **Giulio Petroni**

Sergey Fokin

Prof. H.-D. Goertz and his contribution to our knowledge of protozoan symbiosis

10:00/10:30 **Coffee break**

10:30/12:30 **SYMPOSIUM** (by FEPS)
Chair **Martina Schrällhammer - Giulio Petroni**
Symbiosis in Ciliates: H.-D. Görtz And His Legacy

10:30/10:50 **Bettina Sonntag** - *Life in cooperation: a win-win situation for single cells and scientists*

10:50/11:02 **Lisa Siegmund** - *About escaping and staying: a lab model for studying endosymbiotic origins*

11:02/11:14 **Elena Sabaneyeva** - *H.-D. Gortz: a Study to Be Continued, or An Emerging Human Pathogen Occurring in Ciliates*

11:14/11:34 **Michele Castelli** - *Comparative genomics of endosymbionts of ciliates offers new perspectives on Rickettsiales evolution*

11:34/11:46 **Maria Rautian** - *First complete genome of Holospora-like bacterium Gortzia yakutica*

11:46/11:58 **Lidya Bright** - *Identification of factors involved in the early Paramecium host response to Holospora infection through expression and evolutionary analysis*

11:58/12:18 **Alexey Potekhin** - *Occasional passengers or functional consortia? Terra incognita of free-living ciliates microbiomes*

12:18/12:30 **Claudia Vannini** - *Unravelling the Ecology of Microbial Symbioses by Culture-Independent Single-Cell Microbiomics*

12:30/13:30 **Lunch**

FORO ADRIANO

13:30/15:45 **Oral Session**

TAXONOMY & PHYLOGENY 4

Chair **Enrique Lara - Sabine Agatha**

13:30/13:45

Rubén González-Miguéns

Shedding light on chaotic shells: Re-assessing biodiversity in genera Centropyxis and Arcella (Amoebozoa: Arcellinida) based on phylogenetic and morphometric data

13:45/14:00

Yelisei Mesentsev

Phylogeny and evolution of thecamoebid amoebae (Amoebozoa, Discosea, Thecamoebida)

FORO TRAIANO

WORKSHOP

(by SIP/ISOP Grant-in-aid)

Protistological Sciences dissemination

Chair **Cristina Miceli -**

Claudia Vannini

13:30/14:00

Alan Warren

Protists are for everyone: a personal overview of knowledge dissemination and promoting public awareness

14:00/14:15

Genoveva Esteban

Microscope madness – the excitement of public engagement with protists

FORO COSTANTINO

SYMPOSIUM (by ISoP)

Chair **Aditee Mitra Swansea**

Per Juel Hansen

Mixotrophic Planktonic Protists: Living with the “Perfect Beast”

13:30/14:00

Diane Stoecker

Mixotrophs - food webs and harmful algal blooms

14:00/14:30

George McManus

Mixotrophs and challenges for experimental studies

FORO AURELIA

Oral Session

SYMBIOSIS & ENDOSYMBIOSIS

Chair **Sergey Fokin -**

Letizia Modeo

13:30/13:45

Anna M. G. Novák Vanclová

Novel proteins and reorganized protein import in the secondary plastid of Euglena gracilis

13:45/14:00

Anna Karnkowska

Insights into the evolution of plastids of Euglenophyta

THURSDAY 01 AUGUST

FORO ADRIANO

13:30/15:45

Oral Session

TAXONOMY & PHYLOGENY 4

13:45/14:00

Ekaterina Volkova

The Cryptic Biodiversity of the Genus Paramoeba (Amoebozoa, Dactylopo-
dida)

14:00/14:15

Maximilian Ganser

Capsules – Unique Organelles Cha-
acterising Specific Tintinnid Ciliate
Clades (Alveolata, Ciliophora)

14:15/14:30

Kirill Lotonin

Improving the phylogeny of Amoebo-
zoa: new hypothesis on the position of
Stygamoeba and Vermistella (Discosea)

14:30/14:45

Sergei Fokin

Copemetopus mystakophoros sp. nov.
a new representative of the ciliate
genus from brackish water pond on Li-
gurian sea coastline (Tuscany, Italy)

14:45/15:00

Komal Kamra

Ciliate life in River Yamuna

15:00/15:15

Iván García-Cunchillosa

Towards a new phylogeny of the
order Trichiales (Myxomycetes,
Amoebozoa)

15:15/15:30

Alastair Simpson

Cultivation and phylogenetic diversity
of colponemids, a crucial assemblage
for inferring alveolate evolution.

FORO TRAIANO

WORKSHOP

(by SIP/ISOP Grant-in-aid)

Protistological Sciences dissemination

14:15/14:30

Komal Kamra

Introducing the Fascinating World of
Ciliates to Undergraduate Students

14:30/14:45

Hunter Hines

Cell-fies: using Instagram to share
microbiology with a global audience

14:45/15:00

Federico Buonanno

Protists as model organisms for bio-
logy teaching

15:00/15:15

Emanuela Samaritani

The hidden world of diatoms-inspi-
ringing children to learn about the won-
ders of nature

Discussion with planned interventions

15:15/15:30

Dolan John

Lessons from Proto-Outreach: Reha-
bilitation of Digusting Microbes

15:30/15:45

Anush Kosakyan

Introducing the amazing world of
protists through photography and vi-
deography

FORO COSTANTINO

SYMPOSIUM (by ISoP)

Mixotrophic Planktonic Protists: Li-
ving with the “Perfect Beast”

14:30/15:00

Fabrice Not

Mixotrophs and challenges for mole-
cular biology

15:00/15:30

Aditee Mitra

Challenges for modelling the perfect
beast

Discussion

FORO AURELIA

Oral Session

SYMBIOSIS & ENDOSYMBIOSIS

14:00/14:15

Lukas V. F. Novak,

Path towards amitochondriality:
Comparative genomics of Preaxo-
styla flagellates

14:15/14:30

Alexandra Beliavskaia

Searching for rare protists: evalua-
ting different strategies for finding
hidden symbiotic biodiversity in Ar-
thropoda

14:30/14:45

Miroslav Macek

Mexican Euplotes euryhalinus cya-
nobacteria-grazing vs. possible sym-
biont acquisition

14:45/15:00

Leandro Gammuto

Multidisciplinary characterization of
a novel ciliate endosymbiont: “Candi-
datus Pinguicoccus supinus” a verru-
comicrobial species with highly
reduced genome

15:00/15:15

Martina Schrollhammer

More than the sum of its parts: unco-
vering the ‘killer trait’ symbiosis bet-
ween Paramecium and its R-body
producing endosymbionts

15:15/15:30

Felicitas E. Flemming

Sunbathing paramecia - how much
influence have its algal endosym-
bionts on photoaccumulative beha-
viour

Discussion

15:45/16:00

Coffee break

THURSDAY 01 AUGUST

FORO ADRIANO

16:00/18:00

Oral Session

MICROBIOME

Chair **Micah Dunthorn - Laura Utz**

16:00/16:15

Dandan Zhao

Eukfinder: a specialized pipeline for identifying and assembling eukaryotic genomes from metagenomic data

16:15/16:30

Brittany M. Ott

Investigations Into Toxic Dinoflagellate Relationships: A Tale of Gambierdiscus

16:30/16:45

Elena Selivanova

An influence of protists on a structure of the halophilic prokaryotic community

16:45/17:00

Gillian H. Gile

Genome size evolution in Parabasalia

17:00/17:15

Marit F. M. Bjorbækmo

Characterising the Diversity of Microeukaryotes Associated with Seaweeds (Phaeophyceae)

17:15/17:30

Caterina R. Giner

Marked changes in diversity and activity of picoeukaryotes with depth in the global ocean

17:30/17:45

Magali Schweizer

Molecular identification of kleptoplastic Foraminifera (Rhizaria) and their microbiome from photic and aphotic habitats

FORO TRAIANO

Oral Session

TAXONOMY & PHYLOGENY 5

Chair **Kenneth Dumack - Anush Kosakyan**

16:00/16:15

Stas Malavin

Some insights into the structure of genotype T4 in Acanthamoeba

16:15/16:30

Vasily Zlatogursky

Neglected beauty: do "heliozoa" deserve more attention?

16:30/16:45

Sanea Sheikh

Invention, expansion, and theft, the evolution of multicellularity in Acrasis kona

16:45/17:00

Johana Rotterova

Where oxygen is not popular – anaerobiosis in SAL super-group (Ciliophora)

17:00/17:15

Celine Petitjean

Rooting the eukaryotic radiation with new models of genome evolution.

17:15/17:30

Andrew J. Roger

Evolution of Mitochondria and Endosymbionts in Anaerobic Protists

17:30/17:45

Yasuhide Nakamura

Skeletal structure and phylogeny of Phaeodaria (Cercozoa, Rhizaria)

FORO COSTANTINO

SYMPOSIUM (by FEPS)

Chair **Adriana Vallesi**

Sandra Pucciarelli

Bioactive molecules from protists: perspectives in Biotechnology

16:00/16:40

Marco Mangiagalli

Life under stress: ice binding proteins and superoxide dismutases from an Antarctic ciliate

16:40/17:20

Angelo Fontana

Function and biotechnological research of metabolites from marine protists

17:20/18:00

Federico Buonanno

Structural modification of the protozoan toxin climacostol for biotechnological applications

FORO AURELIA

WORKSHOP

Chair **Giuliano Scalzi**

Cristina Miceli

Carrers for young scientists

16:00/16:15

Giuliano Scalzi

Funding and career for Scientists – Opportunities at the European Research Council

16:15/16:30

Vladimír Hampl

Amitochondriates – ERC consolidator grant

16:30/16:45

Irene Ricci

My First ERC: How To Manage Joy and Pain

16:45/17:00

Dorota Wloga

Grant proposals – when to start and what to think about while writing

17:00/17:15

Jonathan Z. Kaye

Funding opportunities at the Gordon and Betty Moore Foundation, a part of the constellation of science philanthropies based in the U.S.

Discussion with interventions

THURSDAY 01 AUGUST

	FORO ADRIANO	FORO TRAIANO	FORO COSTANTINO	FORO AURELIA
16:00/18:00	Oral Session MICROBIOME 17:45/18:00 Maria Cristina Angelici <i>Blastocystis in the human gut microbiome: Italian cases study</i>	Oral Session TAXONOMY & PHYLOGENY 5 17:45/18:00 Noemi Fernandes <i>A multigene timescale and diversification dynamics of Ciliophora evolution</i>	SYMPOSIUM (by FEPS) Bioactive molecules from protists: perspectives in Biotechnology	WORKSHOP Carrers for young scientists
18:00/19:00	Poster session 2			
				19:00/20:00 SIP meeting

FRIDAY 02 AUGUST

	AUDITORIUM FORI IMPERIALI
09:00/10:00	PLENARY LECTURE Hutner Award Winner 2019 (by ISoP) Introduction David Montagnes Micah Dunthorn Equating OTUs with Species Diversity
10:00/10:30	Coffee break
10:30/12:30	SYMPOSIUM (by FEPS) Chair Anush Kosakyan - Enrique Lara <i>Systematics of amoeboid protists</i> 10:30/10:50 Enrique Lara - « Shallow » (species-level) diversity in Arcellinida, a ground for ecological research 10:50/11:10 Anush Kosakyan - Deep evolution of arcellinid testate amoebae: challenges and promises 11:10/11:30 Kenneth Dumack - Shedding light on the taxonomy of elusive rhizarian taxa illuminates rhizarian evolution and ecology 11:30/11:50 Joaquina María García-Martín - Disentangling the systematics of the order Physarales (Myxomycetes, Amoebozoa): an integrated approach using morphology and 11:50/12:10 Alexander Kudryavtsev - What's in a Name? - Importance of Morphology and Taxonomic Accuracy for the Evolutionary Studies in Naked Lobose Amoebae (Amoebozoa) Discussion
12:30/13:30	Students Awards & CLOSING REMARKS - Chair David Montagnes - Maria Cristina Angelici