



## The First International Workshop on Exotic Flow Cytometry: *Checking Small Things... Better!* **ExoFlowMetry**

**13<sup>th</sup>-15<sup>th</sup> November, 2019 Rome**

13<sup>th</sup>-14<sup>th</sup> November 2019 - **ENEA Casaccia**, Via Anguillarese, Santa Maria di Galeria (Rome)

15<sup>th</sup> November 2019 - **Istituto Superiore Sanità**, Viale Regina Elena, Rome

The International Workshop will be focused on Flow Cytometry applications in fields others than bio-medicals, herewith named "exotic", as foods, environmental microbiology, plant and animal analysis and biotechnology where FC is giving an increasing and relevant contribution.

**Preliminary Program (DRAFT, as of September 09<sup>th</sup>, 2019)**

*(all presentation titles are subjected to modification)*

### Wednesday, November 13<sup>th</sup>, 2019

9.00 – 9.15 Registration

9.15 – 9.45 Opening and welcomes

#### ENVIRONMENTAL MICROBIOLOGY AND FOOD QUALITY

#### 9.45 – 13.30 SESSION 1 - Environmental Microbiology

Chairman: **Raffaella Casotti** (SNZ, Naples) **Stefano Amalfitano** (CNR, Rome)

##### Keynote Lectures (30min)

- **Boon Nico** "Flow cytometry fingerprinting as microbial community indicators in aquatic systems" - Ghent University (Belgium)
- **Müller Susann** "The ecology in the dynamics of microbial communities" – UFZ, Leipzig (Germany)

##### Invited Speakers (20min)

- **Besmer Michael** "High-resolution microbiological process monitoring in real-time with fully automated on-line flow cytometry" – EAWAG/onCyt, Zurich (Switzerland)
- **Casotti Raffaella** "High frequency flow cytometry for the monitoring of marine microbes" – SNZ, Naples (Italy)
- **Amalfitano Stefano** "Flow cytometry and water quality: new insights from the space research" – Water Research Institute, IRSA-CNR, Rome (Italy)
- **SELECTED CONTRIBUTION FROM ABSTRACTS** (15min)

Discussion



13.30 -15.00 **Lunch – Coffee & Poster session**

15.00 – 18.30 **SESSION 2 - Food Microbiology**

Chairman: **Annamaria Bevivino** (ENEA, Rome) **Diego Mora** (Univ. of Milan, Milan)

**Keynote Lecture:** (30min)

- **Ferrini Anna Maria** and **Bolzoni Giuseppe** *"Application of flow cytometry in the routine control of milk for the total bacterial count"* – ISS, Rome (Italy); IZLER, Brescia (Italy)

**Invited Speakers:** (20 min)

- **Arioli Stefania** *"Flow cytometry applications in food microbiology"* – UniMi, Milan (Italy)
- **Guzzon Raffaele** *"Flow cytometry application in winemaking..." (tentative title)* – Fondazione Mach, Trento (Italy)
- **Orlandini Silvia** *"Flow cytometry in the dairy sector: the role of ISO/IDF standardisation"* AEOS - ICAR and IBF (Italy)
- **SELECTED CONTRIBUTION FROM ABSTRACTS** (15min)

17.30 -18.00 **Innovative methodologies and practical applications** (*short communications*)

Chairman: **Massimo Sanchez** (ISS, Rome) and **Diego Mora** (Univ. of Milan, Milan)

- **Suarez Celia.** (Unisensor) *"Multi-class and multi-residue screening of antibiotics by Flow Cytometry Immunoassay"*
- **Moro Monica,** (Sacco System) *"Flow Cytometry to monitor and improve industrial production of starter cultures and probiotics"*

18.00 – 18.30 Discussion

**Thursday, November 14<sup>th</sup>, 2019**

## PLANT AND ANIMAL CYTOMETRY AND BIOTECH

09.30- 13.30 **SESSION 3 - Plant Biotech**

Chairman: **Jaroslav Doležel** (IEB, Olomouc), **Sergio Lucretti** (ENEA, Rome)

**Keynote Lectures** (30min)

- **Jaroslav Doležel** – *"Chromosome sorting helps to clone genes, sequence genomes and understand their spatial organization"*– IEB, Olomouc (CZ)
- **Galbraith David** – *"Future Flow: where will cytometry take us?"* ISAC and University of Arizona, Tucson AZ (USA)

**Invited speakers** (20min)



- **Giorgi Debora** "*FISHIS in FLOW: advances in plant flow molecular cytogenetics*" – ENEA, Rome (Italy)
- **Barcaccia Gianni (UNIPD)** "*Flow Cytometry Applied to Plant Reproductive Biology*" – Univ. of Padua, Padua (Italy)
- **Lucretti Sergio** "*Early in vitro screening of plant mutants by flow cytometry: looking at plants like microorganisms*" – ENEA, Rome (Italy)
- **SELECTED CONTRIBUTION FROM ABSTRACTS** (15min)

Discussion

13.30 -15.00 **Lunch – Coffee & Poster session**

15.00 – 18.00 **SESSION 4 – Animal Cytometry**

Chairman: **Enrique O'Connor** (Univ. of Valencia, Spain), **Claudia Zoani** (ENEA, Rome)

**Key Lecture:** (30min)

- **O'Connor Enrique** "*Applying flow cytometry to evaluate oxidative stress: new perspectives*" – Univ. of Valencia, Valencia (Spain)

**Invited Speakers** (20min)

- **Riondato Fulvio** "*Man's best friends and flow cytometry: dogs in the FCM lab*" – Univ. of Turin, Turin (Italy)
- **Martin Flajshans** "*The Use of flow cytometry for study of polyploidy in freshwater fish*" – University of South Bohemia, Ceske Budejovice (Czech Republic)
- **SELECTED CONTRIBUTION FROM ABSTRACTS** (15min)

16.30 -17.30 **New instruments, new possibilities...** (short communications)

Chairman: **David Galbraith** (ISAC and University of Arizona) and **Enrique O'Connor** (Univ. of Valencia, Spain)

- **Formaro Jorge** (Beckman Coulter Italia) *Title to be defined*
- **Böhner Steffen** (Sony Biotechnology) "*Sony's new ways in Flow Cytometry*"
- **Di Bernardino Marco** (Amphasys) "*Impedance Flow Cytometry: a versatile label-free and reliable alternative to determine viability at the single cell level (e.g. pollen and yeast)*"

17.30 – 18.00 Discussion

20.30 Social event

**Friday, November 15<sup>th</sup>, 2019**

**ExotiCASES: demonstrative and practical course**



9.00 – 16.30 **ISS Labs**

(preliminary)

- **Analisis & sorting of nanoparticles**  
Demonstrators: Massimo Sanchez, Valentina Tirelli, Luca Pasquini.....
  - **FISHIS- labelling, confocal analysis and flow sorting of Plant Chromosome and nuclei**  
Demonstrators: ENEA,ISS, ...
  - **Monitoring water quality in tap water**  
Demonstrators: Amalfitano, Casotti,...
  - **Evaluation of cell viability in food supplement marketed as probiotics**  
Demonstrators: Mora, Arioli...
  - **Evaluation of marine water quality...**  
Demonstrators: Balestra, Casotti.....
- others.....

11.00 -11.30 Coffee break

13.00 -14.00 Lunch

15.00 -16.00 Practicals (continue)

16.00-16.30 *Get Together with final remarks*

### **Subscription fees:**

Early birds registration (ends 30 September 2019):

Workshop only (2 days): **200 Euros**

Workshop and "Hands-on" (3 days): **250 Euros** (only 30 places available)

Late registration (after 30 September till 15 October 2019)

Workshop only: **250 Euros**

Workshop and "Hands-on": **350 Euros** (only 30 places available)

### **Registration and poster submission**

\*\*\*early bird registration by September 30th 2019\*\*\*

Participants may submit posters; the Scientific Board will select two (three) posters for prize (SIMTREA, SIMGBM, (...GIC) and an oral presentation (15min)

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