



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

13th-15th November, 2019 Rome

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

15th November 2019 - **Istituto Superiore Sanità**, Viale Regina Elena, Rome

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

Program

Wednesday, November 13th, 2019

9.00 – 9.15 **Registration**

9.15 – 9.45 **Opening:**

Giovanni D'Arena, President, Italian Society of Cytometry - GIC

Marco Crescenzi, Director "ISS Core Facilities", Istituto Superiore di Sanità

Massimo Iannetta, Head "Biotechnologies and Agro-industry" Division, ENEA

Eugenio Benvenuto, Head, Biotechnology Lab., ENEA

ENVIRONMENTAL MICROBIOLOGY AND FOOD QUALITY

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

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

Keynote Lectures (40min)

- **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)

DISCUSSION



ITALIAN NATIONAL AGENCY FOR NEW TECHNOLOGIES,
ENERGY AND SUSTAINABLE ECONOMIC DEVELOPMENT



Italian Society of Cytometry





- 11.20 11.40 Coffee break

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: Vignola Marta et Al.** "Counting cells in water filters " – Newcastle and Glasgow, (U.K.)

DISCUSSION

13.00 -14.30 **Lunch – Coffee & Poster session**

14.30 - 18.00 **SESSION 2 - Food Microbiology**

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

Keynote Lecture: (40min)

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

Invited Speakers: (20min)

- **Arioli Stefania** "Flow cytometry applications in food microbiology" – UniMi, Milan (Italy)
- **Orlandini Silvia** "Flow cytometry in the dairy sector: the role of ISO/IDF standardization" AEOS - ICAR and IBF (Italy)
- **Guzzon Raffaele** "Flow cytometry application in winemaking: actuality and perspectives" – Fondazione Mach, Trento (Italy)
- **SELECTED: Palomba Emanuela et Al.** "A cytofluorimetric analysis of a *S. cerevisiae* population cultured in a fed-batch bioreactor" SZN, Naples (Italy)

16.30 - 16.50 Light coffee

16.50 -17.30 **Innovative methodologies and practical applications** (short communications 15min)

Chairperson: **Sanchez Massimo** (ISS, Rome) and **Mora Diego** (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"
- **Pietrelli Loris, Sighicelli Maria** Nano- and Microplastics as new emerging pollutants: can Flow Cytometry be a useful technique to trace them? ENEA, Rome (Italy)

DISCUSSION

18.00 - Departure to Roma



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Thursday, November 14th, 2019

PLANT AND ANIMAL CYTOMETRY AND BIOTECH

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

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

Keynote Lectures (40min)

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

DISCUSSION

11.00 - 11.20 Coffee break

Invited speakers (20min)

- **Giorgi Debora** *"FISHIS in FLOW: advances in plant flow molecular cytogenetics in cereals "* – 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 single cells and microorganisms"* – ENEA, Rome (Italy)

DISCUSSION

12.50 -14.30 **Lunch – Coffee & Poster session**

14.30 – 18.00 **SESSION 4 – Animal Cytometry**

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

Key Lecture (40min)

- **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)
- **Leter Giorgio** *"Sperm Flow Cytometry: impact of environmental toxicants on sperm health"* – ENEA, Rome (Italy)

16.10 -17.10 **New instruments, new possibilities...** (short communications 15min)

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

- **Di Berardino 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)"*
- **Biedermann Björn** (rqMicro) *"Rapid & reliable quantification of pathogens by flow cytometry"*
- **Formaro Jorge** (Beckman Coulter Italia) *"Technology behind Cytoflex Platform"*
- **Böhner Steffen** (Sony Biotechnology) *"Sony's new ways in Flow Cytometry"*

17.10 – 18.00 Discussion

18.00 – Departure to Roma

19.00 – 23.00 Social event

Visit to: GALLERIA BORGHESE: a magnificent collection of Italian fine art masterworks preserved in a beautiful and well maintained renaissance Villa in Roma downtown
https://en.wikipedia.org/wiki/Galleria_Borghese).

Dinner at: Restaurant & Pizzeria "Fiore di Zucca" a Roman way of cooking at walking distance from Galleria Borghese (<https://www.facebook.com/fioredizuccaroma/>)

- Transport back to Hotel Globus will be provided



Friday, November 15th, 2019

Istituto Superiore Sanità, Viale Regina Elena, Rome

ExotiCASES: demonstrative and practical course

08.30-9.00 **Registration – ZAMPIERI HALL**

9.00-13.30

Participants will be divided in two groups and will turn between the different demonstrations. Each participant will take part in every demonstration.

Analysis & sorting of nanoparticles (ISS lab)

(Sanchez Massimo, Tirelli Valentina)

FISHIS- labelling and Flow sorting of Plant Chromosomes (ISS lab)

(Lucretti Sergio, Giorgi Debora, Farina Anna)

Cecchetti Serena and Spadaro Francesca will provide the support for **confocal microscopy** during the sorting sessions

Detection of microbial populations in freshwater samples and probiotics (Zampieri Hall)

(Amalfitano Stefano, Arioli Stefania, Schiessl Konstanze)

Detection and analysis of microalgae and bacteria in seawater samples (Zampieri Hall)

(Balestra Cecilia, Casotti Raffaella, Silovic Tina)

11.00 -11.30 coffee break (Zampieri Hall)

13.30 -14.30 Lunch (Zampieri Hall)

14.30 -15.30 Fast detection of cell viability and counting (yeast, pollen) (Zampieri Hall)

(Marco Di Berardino)

15.30-16.00 Discussion and Conclusions

TEACHERS:

AMALFITANO STEFANO

CNR IRSA, Monterotondo, Roma

ARIOLI STEFANIA

Università degli Studi di Milano, Milano

BALESTRA CECILIA

Stazione Zoologica Anton Dohrn, Napoli

CASOTTI RAFFAELLA

Stazione Zoologica Anton Dohrn, Napoli

CECCHETTI SERENA

Istituto Superiore di Sanità, Roma

DI BERARDINO MARCO

Amphasys, Root, Svizzera



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FARINA ANNA
GIORGI DEBORA
LUCRETTI SERGIO
SANCHEZ MASSIMO
SPADARO FRANCESCA
TIRELLI VALENTINA

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Location:

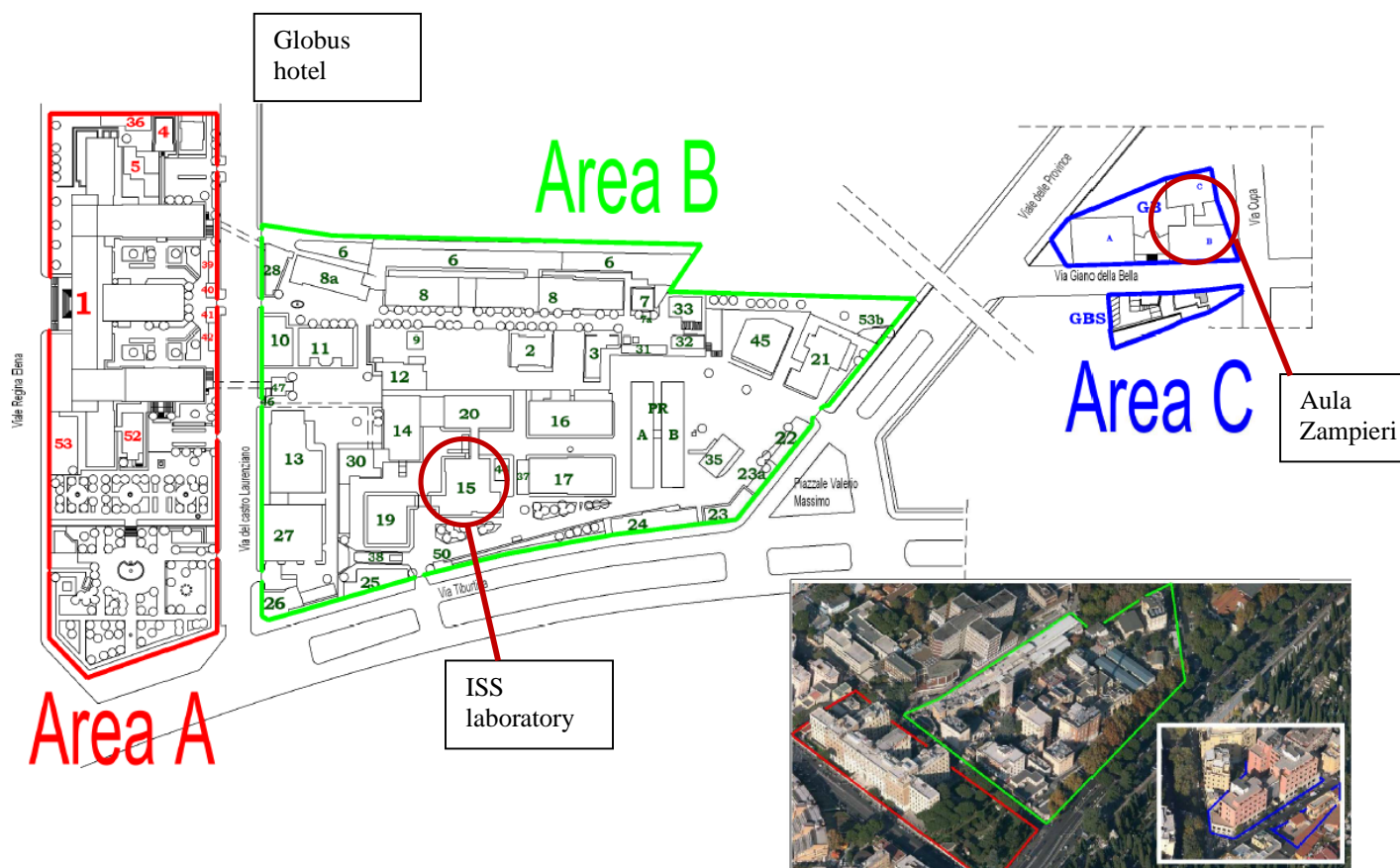
ISTITUTO SUPERIORE DI SANITA'

-**Aula Zampieri** (Zampieri Hall)

Entrance from Via Giano della Bella, 34

-**ISS laboratory**: Flow Cytometry and Microscopy Area (ed. 15 piano A, room 5, 6)

Entrance from Via del Castro Laurenziano 25





Subscription fees:

Early birds registration (ends 31 October 2019):

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

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

Late registration (after 31 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*** *Extended till October 31st 2019*

Participants may submit abstracts and posters; the Scientific Board will select an abstract for prize (SIMTREA) and a second one for special mention by GIC; both of them will be allowed as oral presentations (15min)



Scientific Board

AMALFITANO STEFANO - CNR IRSA

ARIOLI STEFANIA - UniMI

BARCACCIA GIANNI - UniPD

BEVIVINO ANNAMARIA - ENEA

BOON NICO - Gent Univ. BE

CASOTTI RAFFAELLA - SZN

DOLEZEL JAROSLAV IEB Ceck Rep.

FERRINI ANNA MARIA - ISS

FLAJSHANS MARTIN S. Bohemia Univ. Ceck Rep.

GALBRAITH DAVID Arizona Univ. AZ

GIORGI DEBORA - ENEA

GUZZON RAFFAELE - FEM Trento

LUCRETTI SERGIO - ENEA

MORA DIEGO - UniMI

MULLER SUSANN - UFZ Leipzig GER

O'CONNOR JOSE ENRIQUE Valencia Univ. SPAIN

RIONDATO FULVIO - UniTO

SANCHEZ MASSIMO - ISS

TIRELLI VALENTINA - ISS

ZOANI CLAUDIA - ENEA

Local Organizing Committee

BALESTRA CECILIA - SZN

CARELLA CINTIA - ISS

CECCHETTI SERENA - ISS

FARINA ANNA - ENEA

D'ANDREA MARCO - ENEA

DEL SIGNORE GIUSEPPINA - ENEA

PRESENTI OMBRETTA - ENEA

SPADARO FRANCESCA - ISS

VOLPE SILVESTRO - GIC

Scientific Secretary

DE VITA RAFFAELE - GIC

LUCRETTI SERGIO - ENEA

TIRELLI VALENTINA - ISS

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FAQ about the Workshop EXOFLOWMETRY 2019

Location:

November 13-14, 2019 at the ENEA Casaccia Research Centre;
November 15, 2019 at the ISS, Flow Cytometry Core Facility

Registration and Logistics:

www.italymeeting.it

<http://eshop.italymeeting.it/store/index.php?language=en>

A) How to get to the Workshop place:

By Workshop BUS, starting from Hotel Globus Best Western, which is quite close to Rome Railways Central Station “Termini”.

GLOBUS Hotel [Address](#): Viale Ippocrate, 119, 00161 Roma RM

[Phone](#): 0039- 06 445 7001

<https://www.globushotel.com/>

Our BUS will start at 8.00 a.m. from Hotel and will go straight to ENEA Casaccia Research Centre (about 30 km North West Roma, <http://www.enea.it/en/enea/research-Centres>)

Bus should arrive at 9.00 a.m. about, but traffic in Roma could be rather “dense” and we could experience some delay to get to ENEA.

We will return by the same bus at Globus Hotel at 7.30 p.m. about.

On Friday 15th November, practicals will be held at the National Institute of Health – ISS, located at walking distance from hotel GLOBUS (see https://www.iss.it/?page_id=3271).

Our recommendation is to room at Globus Hotel, and booking by the Workshop Agency ITALYMEETING (www.italymeeting.it)

B) How to get to the Social Event:

On 14th November, the social event will consist of two parts coupling Italian Culture and Food Testing on the same evening. Tickets will be available on the first day at the Workshop information desk at the indicative price of 60,00 Euros. Bus will stop first at the event place, then it will continue to the Globus Hotel.

How to get out of the Workshop

Globus Hotel is close to the Rome Railways Station “Termini” (see GOOGLE for more details) from which the shuttle train “Leonardo” runs to Fiumicino Airport (see

https://www.trenitalia.com/en/services/fiumicino_airport.html). Public transports stop just in front of the hotel (bus 301. Tickets at the Workshop desk, tabacconists, newspaper kiosks and cafe shops; bus fare 1.50Euros).

For public transport informations see: <https://www.atac.roma.it/index.asp?lingua=ENG>).

C) Surviving during the Workshop

Breakfasts will be served at the Hotel from 7.00 to 7.45 a.m.

Coffee breaks at 11.00 a.m. and Lunches at 13.30 a.m.

13th November 2019 dinner is up to the participants (several restaurants and pizzeria are available near the Globus Hotel and at moderate costs)

14th November 2019 a social event and dinner will be organized, participation on a voluntary basis, tickets available at the Workshop desk, price 60,00 Euros.