

BIOSENSOR FOR A BETTER ENVIRONMENT

IRTA - Torre Marimon, Caldes de Montbui

17th of September of 2013

PRESENTATION

Biosensor technology is a rather young and interdisciplinary research field, which has experienced an unprecedented development in the recent years, linked to the miniaturization of **electronics** and **photonics**, the developments in **molecular biology**, and the advancement of new **nano-materials**.

Parallely, biosensing applications have progressively expanded from medical uses towards a wider range of **biotechnology processes**, including those related with food and water supply and, in general, with the **quality of the environment**. The prospects of on-line and in-situ detection of target microbes and microbial products will revolutionize environmental management and monitoring and, thus, have a beneficial impact on global human health and wealth.

The present workshop is aimed as a **communication platform** on the state-of-the-art and future trends in biosensing techniques. A panel of **internationally renowned experts** will present a series of keynote speeches on their latest developments, with a clear view on practical applications for the environment.



VENUE

The workshop will take place on Tuesday the 17th of September in Torre Marimon (30 Km North from the centre of Barcelona), a heritage-listed building which more than a century ago held one of the first modern agronomical schools in Spain. This historical site currently harbors the headquarters of IRTA (Catalan Institute for Research and Technology in Food and Agriculture).

Address: IRTA - Torre Marimon, Caldes de Montbui (Barcelona)

Coordinates: 41° 36' 47.71"N - 2° 10' 9.57"E

Web: <http://www.irta.cat/en-us/rit/centres/pages/torremarimon.aspx>

TARGET AUDIENCE

The program has been carefully designed to fulfill the interests of **scientists** and **engineers** working in the fields of biosensor technology, biotechnology, and environmental sciences. **Professionals** and **students** with an interest on biosensors, either as developers and/or end users, are most welcome to this meeting.

REGISTRATION

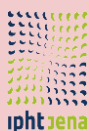
The registration to the workshop must be done by contacting the secretary (biosensors@irta.cat) **before the 7th of September**. Participation fee is 60€ (VAT included) for professionals and 30€ for undergraduate students (a digitized copy of the student card or a verifiable document must be provided). This price includes the workshop lunch and coffee breaks, as well as a pendrive with digital docs on the presentations. **Poster presentations** (with flash presentations) are welcome at no extra costs. Participants will receive a certificate of attendance.

Payment by bank transfer must be received and processed before the event, to the following account number:

Account holder: INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTÀRIES
Bank name: BANC SABADELL
Country: SPAIN
IBAN Number: (ES66) 00810028660001183926
BIC/SWIFT Code: BSABESBB

Please, indicate "AQUATEST" and your name.

PARTNERS



FUNDING



The project **Advanced microbial QUALity monitoring and hygienization TEchniques for Secure water Trading (AQUATEST)** is an initiative of the program for the **Development and Integration of Indian and European Research (NEW-INDIGO)**

WORKSHOP PROGRAMME

Event Time	Author Presentation title
08:30	Registration and welcoming
Opening 09:15	<u>Francesc Prenafeta</u> (IRTA, Spain) <i>Biosensors for environmental biotechnology and monitoring: a new opportunity for improving human health and wealth</i>
Session 1: Novel developments in DNA detection Chair: Wolfgang Fritzsche	
9:45	<u>Laura Lechuga</u> (ICN2, CSIC & CIBER-BBN, Spain) <i>Photonic nanobiosensors for sensitive and label-free detection of DNA and RNA</i>
10:10	<u>Syed Hashsham</u> (EGR-MSU, USA) <i>Gene-Z and iDx: Simple, multiplexed, wireless POU platforms for microbial safety of water</i>
10:35	<u>Romain Quidant</u> (ICFO, Spain) <i>An integrated plasmonic platform for label-free multiplexed sensing in complex media</i>
11:00	Poster session (with flash presentations) & Coffe break
Session 2: Nanoparticle and optical techniques Chair: Kumkum Gupta	
12:00	<u>Wolfgang Fritzsche</u> (IPHT, Germany) <i>Single nanoparticle biosensorics</i>
12:25	<u>Joan J. Carvajal</u> (URV, Spain) <i>Upconverting nanoparticles: new nanothermometers for the biological range of temperatures</i>
12:50	<u>Valerio Pruneri</u> (ICFO, Spain) <i>Low cost and integrated approaches to biological and environmental optical detection</i>
13:15	Lunch
Session 3: Specific applications in biomedicine and food safety Chair: Laura Lechuga	
14:00	<u>Marc Massa</u> (LEITAT, Spain) <i>Vaccine monitoring biosensors</i>
14:25	<u>Anagnostis Argiriou</u> (INA-CERTH, Greece) <i>Comparison of DNA techniques for food pathogen detection and food traceability</i>
14:50	<u>Rishi Shanker</u> (CSIR-IITR, India) <i>Detection of water-borne pathogenic bacteria: source waters and non-point sources of pollution</i>
15:15	Coffe break & Poster session
Session 4: Uses in environmental biotechnology and monitoring Chair: Francesc Prenafeta	
16:00	<u>Marinel·la Farré</u> (IIQAB-CSIC, Spain) <i>Real time monitoring of SEA contaminants by an autonomous lab-on-a-chip biosensor</i>
16:25	<u>Beatriz Prieto-Simón</u> (GSB-UAB, Spain) <i>Electrochemical biosensors as early alert screening tools for water quality assessment</i>
16:50	<u>Mònica Campàs</u> (IRTA, Spain) <i>Biosensors at IRTA: Detecting toxins from aquatic media</i>
17:30	Open round table Workshop closure

