

PROGRAM

Thursday 20th

- 13:00-14:00 Registration and Poster Installation
14:00-14:15 Opening Session

1st Session: Basic research and new materials in the field of sensors and biosensors

Chairman: Prof. Manel del Valle

- 14:15-14:35 [OS 1.1](#) - M. Zea, A. Moya, M. Fritsch, E. Ramon, R. Villa, G. Gabriel – *IMB-CNM (CSIC)*
ENHANCED pH SENSOR PERFORMANCE ON ROUGH INKJET-PRINTED PLATINUM.
- 14:35-14:55 [OS 1.2](#) - J.C. Zuaznabar-Gardona, A. Fragoso – *NBG (URV)*
POLYDOPAMINE COATED CARBON NANO-ONIONS AS VERSATILE PLATFORM FOR (BIO)SENSING APPLICATIONS.
- 14:55-15:15 [OS 1.3](#) - A. Pascual-Escó, J. Alonso-Chamarro, M. Puyol – *GSB (UAB)*
SYNTHESIS AND CHARACTERIZATION OF HIGHLY LUMINESCENT CARBON DOTS FOR THE ANALYSIS OF HEAVY METALS.
- 15:15-15:35 [OS 1.4](#) - C. Léger, T. Di Meo, M. Aumont-Nicaise, C. Velours, D. Durand, I. Li de la Sierra-Gallay, H. van Tilbeurgh, N. Hildebrandt, M. Desmadril, A. Urvoas, M. Valerio-Lepiniec, P. Minard – *I2BC*
FROM BINDERS TO BIOSENSORS: A GENERIC APPROACH BASED ON ARTIFICIAL REPEAT PROTEINS.
- 15:35-15:55 [OS 1.5](#) - R. Alvarez, D. Capoferri, A. Yakoh, Michele Del Carlo, Dario Compagnone, Chailapakul, A. Merkoçi – *Nanobioelectronics and Biosensors Group (ICN2)*
ELECTRO-OPTICAL PLATFORMS FOR SENSING PURPOSES.
- 15:55-16:15 [OS 1.6](#) - M. Vallejo Perez, C. Ternon, N. Spinelli, V. Stambouli – *LMGP (Grenoble)*
TOWARDS APTANANONET-FET BIOSENSORS.
- 16:20-17:20 Coffee Break and Poster Session 1

2nd Session: Applications on food and industrial fields

Chairman: Prof. Jean Louis Marty

- 17:20-17:40 [OS 2.1](#) - Elsaadani Moez, Durand Noel, Sorli Brice, Montet Didier – *CIRAD (Montpellier)*
DETECTION AND QUANTIFICATION OF OCHRATOXIN A IN FOOD BY APTASENSOR.
- 17:40-18:00 [OS 2.2](#) - Marta Bonet-San-Emeterio, Noelia Felipe, Manel del Valle – *GSB (UAB)*
DEVELOPMENT OF A GRAPHENE-BASED ELECTROCHEMICAL AMINEOXIDASE BIOSENSOR.
- 18:00-18:20 [OS 2.3](#) - Vibol Sok, Alex Fragoso – *NBG (URV)*

**STUDY OF THE INHIBITORY EFFECT OF PESTICIDES ON MUSHROOM TYROSINASE
ACTIVITY FOR BIOSENSOR APPLICATIONS.**

18:20-18:40 [OS 2.4](#) - E. Martinez-Bassedas, A. Calvo-López, J. Alonso-Chamarro – *GSB (UAB)*
**ANALYTICAL MICROSYSTEM FOR THE POTENTIOMETRIC DETERMINATION OF
POTASSIUM IN WINE.**

21:00 Gala Dinner

Friday 21st

9:00-9:10 Opening Session

3rd Session: Applications on environmental monitoring

Chairman: Prof. Mònica Campàs

9:10-9:30 [OS 3.1](#) - Anna Toldrà, Karl B. Andree, Edgar Bertomeu Ana Roque, Noèlia Carrasco, Ignasi Gairín, Dolors Furones, Mònica Campàs – *IRTA (Sant Carles de la Ràpita)*
**ISOLATION AND DETECTION OF VIABLE OSTREID HERPESVIRUS (OsHV-1) FROM OYSTER
AND SEAWATER SAMPLES USING ANIONIC POLYMER-COATED MAGNETIC BEADS.**

9:30-9:50 [OS 3.2](#) - Maxime Puyo, Pierre Fau, Myrtil Kahn, Alix Sournia Saquet, Jérôme Launay, David Mesguich, Katia Fajerweg – *LCC-CNRS (Toulouse)*
**AMORPHOUS CARBON FUNCTIONALIZED WITH SILVER NANOPARTICLES BASED ON
METALORGANIC PRECURSOR FOR ELECTROCHEMICAL DETECTION OF PARA-
NITROPHENOL.**

9:50-10:10 [OS 3.3](#) - Ahmad Alawad, Georges Istamboulie, Carole Calas-Blanchard, Thierry Noguer –
Laboratoire BAE-LBBM (Perpignan)
**DEVELOPMENT OF AN APTASENSOR FOR TETRACYCLINE DETECTION IN AQUATIC
SYSTEMS.**

10:10-10:30 [OS 3.4](#) - Amani Ben Jrad, Hussein Kanso, Nicolas Inguibert, Thierry Noguer, Carole Calas-
Blanchard – *Laboratoire BAE-LBBM (Perpignan)*
NEW METAL COMPLEXES FOR THE LABELING OF AFFINITY BIOSENSORS.

10:30-10:50 [OS 3.5](#) - S. Leonardo, S. Almarza, A. Roque, K. B. Andree, M. Rambla-Alegre, S. Kiparissis, A.
Christidis, C. Flores, J. Caixach, K. Campbell, C.T. Elliott, K. Aligizaki, J. Diogène, M. Campàs
– *IRTA (Sant Carles de la Ràpita)*
**MAGNETIC BEAD-BASED IMMUNOASSAY FOR TETROTODOTOXIN DETECTION IN
JUVENILE PUFFER FISH *LAGOCEPHALUS SCLELERATUS* FROM THE NORTH AEGEAN SEA
(GREECE).**

10:50-11:10 [OS 3.6](#) - R. Pol, F. Céspedes, D. Gabriel, M. Baeza – *GSB (UAB)*
PRODUCTION OF SENSORS FOR QUALITY CONTROL IN BIOTECHNOLOGICAL REACTORS.

11:10-11:50 Coffee Break and Poster Session 2

4th Session: Applications on health and biomedical fields

Chairman: Prof. Ingrid Bazin

- 11:50-12:10 [OS 4.1](#) - I. Magriñá, M. Ortiz, A. Simonova, M. Hocek, I. Katakis, C. K. O'Sullivan – *INTERFIBIO (URV)*
DUPLEX ELECTROCHEMICAL DNA METHOD TO DETECT B. ANTHRACIS BASED ON TAILED PRIMERS, THE INCORPORATION OF FERROCENE LABELLED DATP AND SIGNAL AMPLIFICATION MEDIATED BY RUTHENIUM HEXAMINE.
- 12:10-12:30 [OS 4.2](#) - J. Marrugo, J. Samitier, M. Mir – *NL (IBEC)*
ALZHEIMER'S DISEASE DIAGNOSIS: A NON-INVASIVE APPROACH BASED ON AN ELECTROCHEMICAL IMMUNOSENSOR.
- 12:30-12:50 [OS 4.3](#) - Samuel Dulay, Monica Mir, Lourdes Rivas Torcates, Sandrine Miserere, Laura Pla, Sergio Berdún Marin, Míriam Illa, Josep Samitier – *NG (IBEC)*
IMPLANTABLE ARRAY FOR ISCHEMIA MONITORING IN FETUS.
- 12:50-13:10 [OS 4.4](#) - M. Carmen Bermudo, Mayreli Ortiz, Alex Fragoso, Ciara K. O'Sullivan – *(URV)*
ELECTROCHEMICAL SERUM ALBUMIN DETECTION BASED ON A LOW-COST SENSOR FOR POINT-OF-CARE DIAGNOSTICS.
- 13:10-13:20 Closure Session
- 13:30 Lunch

Thursday 20th

Poster Session 1

PS 1.1 - Mohga Khater, Alfredo de la Escosura-Muñiz, Daniel Quesada-González, Arben Merkoçi – *ICN2*
DETECTION OF PLANT VIRUS THROUGH IMPEDANCE SPECTROSCOPY USING GOLD NANOPARTICLE-MODIFIED ELECTRODES.

PS 1.2 - M. Gutiérrez-Capitán, M. Brull-Fontserè, C. Jiménez-Jorquera – *IMB-CNM, CSIC*
ELECTRONIC TONGUE BASED ON ELECTROCHEMICAL MICROSENSORS FOR THE ORGANOLEPTIC ANALYSIS OF DRINKING WATER.

PS 1.3 - S. Ben Aissa, G. Catanante, N. Raoufi, J-L. Marty – *Laboratoire BAE-LBBM (Perpignan)*
DISPOSABLE ELECTROCHEMICAL APTASENSORS FOR FLUOROQUINOLONES DETECTION.

PS 1.4 - Anna Toldrà, Karl B. Andree, Margarita Fernández-Tejedor, Jorge Diogène, Ioanis Katakis, Ciara K. O'Sullivan, Mònica Campàs – *IRTA (Sant Carles de la Ràpita)*
ELECTROCHEMICAL DETECTION OF THE TOXIC DINOFLAGELLATE *Ostreopsis ovata* BASED ON ISOTHERMAL DNA AMPLIFICATION SYSTEMS AND MAGNETIC BEADS AS SUPPORTS.

PS 1.5 - N. Serrano, X. Cetó, O. Núñez, M. Aragón, A. Gámez, C. Ariño, J. M. Díaz-Cruz – *UB*
SCREEN-PRINTED CARBON-BASED NANOMATERIALS ELECTRODES FOR THE DETERMINATION OF POLYPHENOLS IN THE CHARACTERIZATION OF PAPRIKA BY LIQUID CHROMATOGRAPHY WITH ELECTROCHEMICAL DETECTION.

PS 1.6 - O. Castilla, X. Cetó, N. Serrano, J. M. Díaz-Cruz – *UB*
SIMULTANEOUS VOLTAMMETRIC DETERMINATION OF IBUPROFEN, PARACETAMOL AND CAFFEINE IN WATER USING SCREEN-PRINTED CARBON-BASED NANOMATERIALS ELECTRODES.

PS 1.7 - M. Zaguirre, N. Serrano, J.M. Díaz-Cruz, M. Esteban, C. Ariño – *UB*
METAL IMPURITIES IN DRUGS: DETERMINATION OF IRIIDIUM USING SCREEN-PRINTED ELECTRODES.

PS 1.8 - L. Vidal, A. Pallarès Rusiñol, J. Salabert, M. González, A. Vallribera, R. M. Sebastián, M.I. Pividori – *GSB (UAB)*
BIOTINYLATED PHOSPHORUS DENDRIMERS. SYNTHESIS AND APPLICATION AS TEST LINE IN LATERAL FLOW ASSAYS.

PS 1.9 - J. Casasayas Cos, S. L. Moura, L. D. Sappia, M. Martì, M. I. Pividori – *GSB (UAB)*
MAGNETO-ACTUATED PLATFORMS FOR THE DETECTION OF ALKALINE PHOSPHATASE IN EXOSOMES FROM HUMAN OSTEOBLASTS.

PS 1.10 - Nassif Chahin, Mayreli Ortiz, Ciara K. O'Sullivan – *URV*
LOW COST PLATFORM FOR MULTIPLEXED DETECTION OF SNPS USING ELECTROCHEMICAL MELTING CURVE ANALYSIS.

PS 1.11 - A. Calvo-López, M. Puyol, J. Alonso-Chamarro – *GSB (UAB)*
NEW STRATEGY OF AUTOCALIBRATION FOR DISPOSABLE POTENTIOMETRIC POINT-OF-CARE ANALYZERS.

PS 1.12 - E. Colak, A. E. Serebryannikov, Alexander Petrov, Pavel V. Usik, E. Ozbay – *Ankara University*
LOW-PASS, BAND-PASS AND BAND-STOP TYPE SPATIAL FILTERING IN A PHOTONIC CRYSTAL.



Friday 21st

Poster Session 2

[PS 2.1](#) - E. Colak, A. E. Serebryannikov, Thore Magath, E. Ozbay – *Ankara University*
TWO DIFFERENT BEAM DEFLECTION MECHANISMS TOGETHER WITH UNIDIRECTIONALITY IN PHOTONIC STRUCTURES WITHOUT CORRUGATIONS UNDER OBLIQUE INCIDENCE.

[PS 2.2](#) - [D. Alzate](#), S. Cajigas, J. Orozco – *Universidad de Antioquia*
DEVELOPMENT OF NANOGENOSENSORS FOR DIFERENTIAL DIAGNOSIS OF VIRUSES.

[PS 2.3](#) - [S. Cajigas](#), D. Alzate, R. Palacio, J. Orozco – *Universidad de Antioquia*
NANOBIOCONJUGATES FOR AMPLIFICATION OF OPTICAL AND ELECTROCHEMICAL SIGNALS IN BIOSENSING.

[PS 2.4](#) - [M. Boronat](#), F. Busqué, J. Alonso, M. Puyol – *GSB (UAB)*
PRECONCENTRATION OF METAL IONS BY EDTA-MODIFIED MAGNETIC NANOPARTICLES IN A LAB ON A CHIP.

[PS 2.5](#) - [Munmi Marma](#), Manel del Valle – *GSB (UAB)*
IMPROVED SENSING OF CAPSAICIN WITH TIO₂ NANOPARTICLES MODIFIED EPOXY-GRAPHITE ELECTRODES.

[PS 2.6](#) - Farzad Torabi, A. González-Calabuig, [M. del Valle](#) – *GSB (UAB)*
VOLTAMMETRIC ELECTRONIC TONGUE FOR SIMULTANEOUS QUANTIFICATION OF BENZODIAZEPINE TERNARY MIXTURES.

[PS 2.7](#) - [Nihad Ahmed](#), Mayreli Ortiz, Ciara O'Sullivan, Ioanis Katakis – *URV*
INTEGRATED ELECTROCHEMICAL MICROFLUIDIC SYSTEM FOR MOLECULAR DIAGNOSTICS.

[PS 2.8](#) - [D. Quesada-González](#), A. Sena-Torralba, W. P. Wicaksono, A. de la Escosura-Muñiz, T. A. Ivandini, A. Merkoçi – *ICN2*
IRIDIUM OXIDE NANOPARTICLE-BASED LATERAL FLOW IMMUNOASSAY.

[PS 2.9](#) - A. González-Calabuig, [M. del Valle](#) – *GSB (UAB)*
ELECTRONIC TONGUE USING MODIFIED VOLTAMMETRIC SENSORS FOR QUANTIFICATION OF VOLATILE PHENOLS.

[PS 2.10](#) - [M. Alcaraz](#), A. Pallarès Rusiñol, M. Martí, M.I. Pividori – *GSB (UAB)*
LATERAL FLOW ASSAY OF INTERFERON GAMMA TRANSCRIPT AS A BIOMARKER OF INTRACELLULAR INFECTIONS.

[PS 2.11](#) - [Xhensila Shkempi](#), Marketa Svobodova, Thomas Schubert, Gernot Längst, Ciara K. O'Sullivan – *URV*
SELECTION AND CHARACTERIZATION OF A NOVEL DNA APTAMER FOR HISTONE 3.

[PS 2.12](#) - [N. Sandez](#), M. Berenguel-Alonso, J. Alonso-Chamarro – *GSB (UAB)*



**XXIII TRANSFRONTIER MEETING
ON SENSORS AND BIOSENSORS
TMSB 2018**

**REUSABLE CENTRIFUGO-MAGNETICALLY ACTUATED VALVE FOR CENTRIFUGAL
MICROFLUIDIC PLATFORMS.**

[PS 2.13](#) - [Jordi Rodríguez](#), Raquel Montes, J. Bastos – Arrieta, Mireia Baeza, Francisco Céspedes – *UAB*

**NEW AMPEROMETRIC SENSORS BASED ON RGO-NANOCOMPOSITES
FUNCTIONALIZED WITH METAL NANOPARTICLES FOR H₂O₂ QUANTIFICATION.**