

TNT2022 NANOBALKAN - SCHOOL OF NANOBIOSENSORS

TIRANA, ALBANIA, October 4th, 2022

TNT2022 SCHOOL OF NANOBIOSENSORS, TIRANA, ALBANIA

Organized by Catalan Institute of Nanoscience and Nanotechnology and Paperdrop Diagnostics, Barcelona, Spain

Objectives: Organized within the framework of TNT2022 NanoBalkan (Trends in Nanoscience and Nanotechnology) this School of Nanobiosensors aims to give to young scientists and other TNT participants some important and practical hints on the design and application of nanobiosensors. These represent small devices based on the use of nanomaterials with interest to be applied in health diagnostics, environment monitoring, safety security and other industries. Practical lectures and demonstrations by experts in the field are previewed followed by roundtable discussions and brainstorming related to R&D development in this field.

Venue: TNT2022 Venue (Tirana International Hotel & Conference Centre)

Participation: Based on inscription

Coordinated by:

Prof. Arben Merkoçi, ICN2, Barcelona, Spain

Dr. Claudio Parolo, ISGlobal, Barcelona, Spain

Dr. Daniel Quesada, Paperdrop Diagnostics, Barcelona, Spain

Dr. Ruslán Álvarez, ICN2, Barcelona, Spain

Dr. Giulio Rosati, ICN2, Barcelona, Spain

Dr. Andrew Piper, ICN2, Barcelona, Spain

TNT2022 NANOBALKAN - SCHOOL OF NANOBIOSENSORS

TIRANA, ALBANIA, October 4th, 2022

October 4th – School on Nanobiosensors

09:00 – 09:15 Prof. Arben Merkoçi – Welcome to the School on Nanobiosensors

BLOCK 1 - Biosensors for point-of-care applications

Chair: Dr. Andrew Piper

09:15 – 09:45 Prof. Ciara O’Sullivan – Multiplexed electrochemical detection of single nucleotide polymorphism in finger prick blood samples

09:45 – 10:15 Dr. Amadeo Sena – Design and fabrication of microarray-based biosensing platforms

10:15 – 10:45 – Coffee Break

BLOCK 2 - Tuning biosensor response

Chair: Ruslán Álvarez

10:45 – 11:15 Prof. Alessandro Porchetta – The Tyranny of Langmuir: strategies to tune, narrow and extend the dynamic range of biosensors

11:15 – 11:45 Dr. Alejandro Chamorro – The sequestration mechanism: a practical approach to narrow the dynamic range of biosensors and bioassays

11:45 – 12:15 Dr. Gabriel Ortega – Rational Design to Control the Binding of Biomolecular Receptors

12:15 – 14:00– Lunch Break

BLOCK 3 - Fabrication, modification and miniaturization of biosensors

Chair: Amadeo Sena

14:00 – 14:45 Dr. Giulio Rosati & Massimo Urban – Inkjet printing of electrochemical biosensors with consumer printers

14:45 – 15:15 Dr. Ruslán Álvarez – Adapting bioassays for point-of-care applications

15:15– 16:00 Dr. Andrew Piper – The Truth about Thiols

16:00 – 16:15 Prof. Arben Merkoçi – School concluding remarks