



Maria Skłodowska Curie Actions - Research and Innovation
Staff Exchange

H2020-MSCA-RISE-2020 - SAFEMILK

Workshop

Optical Methods in Biosensing

Program and Abstracts



Athens, October 23, 2023

Picture at the cover page: View on the Acropolis (free download from <https://creazilla.com/nodes/63361-acropolis-of-athens-clipart>)

Workshop

Optical Methods in Biosensing

Athens, Greece, October 23, 2023

Program and Abstracts

Organized by:
Department of Chemistry, National and Kapodistrian
University of Athens <http://www.chem.uoa.gr>



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Institute of Nuclear & Radiological Sciences and
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in the framework of

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The aim of the workshop is to provide an overview of optical analytical biosensing methodologies for the rapid and sensitive detection of different target analytes (small molecules, proteins and cells). The workshop brings together academic experts in fundamental and applied aspects in optical analytical methods. The meeting will be held in person, but also on-line participation will be possible. Invited lectures and oral presentations are planned to present the different aspects of developments in the area.

The workshop School is organized in the framework of the project "Innovative technology for milk safety" (SAFEMILK) funded by European Commission under the programme H2020- MCSA-RISE-2022, Project No. 101007299.

ORGANIZING COMMITTEE

Anastasios Economou- Chairman
Sotirios Kakabakos- co-Chairman
Panagiota Petrou
George Tsekenis
Leda Bousiakou
Christos Kokkinos
Michailia Aggelopoulou

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PROGRAM

Monday, October 23, 2023

- 9:30-9:40 **Prof. Anastasios Economou**, Welcome and introduction
- 9:40-10:15 **Prof. Joseph Wang**, Wearable Sensors and Biosensors
- 10:15-10:50 **Prof. Michael Thompson**, Chemiluminescence-based biosensor detection of biomarkers for cancer
- 10.50-11:25 **Prof. Tibor Hianik**, Colorimetry based on nanoparticles. Principles and application for analysis of food quality and safety
- 11:25-12.00 **Prof. Theodore Christopoulos**, DNA-based food authentication and traceability
- 12:00-13:00 **Lunch Break**
- 13:00-13:25 **Dr. Michailia Aggelopoulou**, Label-free detection of detrimental compounds and bacteria in food using optical interferometric immunosensors
- 13:25-13.50 **Dr. Judit Sülle**, Detection of mastitis-causing pathogens using conventional plating methods and real-time PCR assays
- 13:50-14.05 **Dr. Veronica Subjakova**, The study of thermodynamic properties and secondary structure of DNA aptamers specific to penicillin
- 14:05-14:20 **Dr. Varvara Pagkali**, Development of quantitative instrument-free paper-based immunosensor for the determination of carcinoembryonic antigen in human serum
- 14:20-14:35 **Dr. Tamas Szabo**, Preparation and physical characterization of liposomes with built-in bacterial lipopolysaccharide
- 14.35-14.50 **Ms. Ioanna Tsogka**, Development of a lateral flow immunosensor for rapid on-site quantitative detection of carcinoembryonic antigen in human serum
- 14:50-15:05 **Coffee Break**
- 15:05-15:20 **Ms. Dimitra Kourti**, Detection of harmful agents in milk with a photonic immersible immunosensor

- 15.20-15.35 **Mr. Kristof Jakab**, Conformational Changes of an Oxytetracycline Aptamer in Solution Phase and Surface-Immobilized Form: Investigating the Effect of pH and Target-Binding
- 15.35-15.50 **Ms. Electra Mermiga**, Development of an aptamer-based chromatographic strip assay for the rapid and sensitive detection of OTA in food samples
- 15.50-16.05 **Ms. Zuzana Garaiová**, Study of the physical properties of β -casein micelles in the presence of DNA aptamers and curcumin for cancer targeting
- 16.05-16.20 **Dr. Henrietta Buzas**, Human health risk assessment of aflatoxin M1 in drinking milk in Hungary
- 16.20-16.35 **Mr. Nikitas Melios**, Multiplexed aptamer-based detection of antibiotics and AFM1 in milk with the use of a Lab-on-a-cartridge system
- 16.35-16.50 **Dr. Panagiota Petrou**, Investigation of different aptamer immobilization approaches through spectroscopic and Surface plasmon resonance (SPR) measurements
- 16.50-17.00 **Dr. Sotirios Kakabakos**, Closing Remarks

Abstracts of Lectures

Edited by

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