

REGISTRATION

The participation in SMARTANTICANCER, NANOMISENE2023 is free of charges.

ORGANIZING COMMITTEE

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مركز البحث في الميكرو إلكترونيك و النانوتكنولوجيا
CENTER FOR RESEARCH IN MICROELECTRONICS & NANOTECHNOLOGY CRMN

NANO M I C R O S Y S T È M E S S A N T È E N V I R O N N E M E N T E N E R G I E
NANOMISENE LR16CRMN01

SMARTANTICANCER

International Workshop

SMART innovative
diAgNosis straTegies of CANCER
SMARTANTICANCER

NANOMISENE2023
December, 18th 2023



CONTEXT

The Workshop SMARTANTICANCER/NANOMISENE2023 is a continuity of the workshops and seminars organized by the NANOMISENE Lab Team on the topics NanoTechnology, Nano/Micro Systems and their applications for Health Care, Environment and food safety as well as Energy, since 2003 in ISSAT of Sousse, then in 2014 in collaboration with Tunisian Physics Society, 2015/2017 sessions as well as Sensors Days 2018/2019, CRMN of Sousse. SMARTANTICANCER is articulated in the context of the ongoing Tunisian - Moroccan RD project **SMART** bioplateformes pour le diAgNosTic précoce du **CANCER: SMARTANTICANCER**

SCIENTIFIC OBJECTIVES

The scientific objectives of the workshop are centered on innovative Nano/microSystems as well as imaging and Artificial Intelligence approaches development and their applications in cancer prevention, early-stage diagnosis and join multidisciplinary community of academic and medical players involved in Cancer diagnosis/treatment as well as civil society. The main objective is to better apprehend the complexity of cancer diagnosis/progress in different stages through the integration of nano/microsystems in embedded systems.

PROGRAM

The scientific program will alternate *Nanotechnology/Microtechnology/AI* and their applications in concrete cases studies of Breast, Lung, Skin, kidney..., cancers. The workshop will articulate:

An Opening session: 9h00-9h30

Prof. Chérif DRIDI

“Innovative strategies in Cancer Prevention & Diagnosis: NANOMISENE contribution”

Dr. Olfa GHARBI:

“AVAPACS association presentation”

1. Cancer biomarkers detection:

- MIPs as synthetic antibodies for the detection of cancerogenic compounds

Prof. Aziz AMINE, 9h30-10h00

(University Hassen II, MOROCCO)

- Innovative strategies for the sensing of cancer biomarkers

Prof. Nouredine RAOUAFI 10h00-10h30

(Faculty of Sciences Tunis, TUNISIA)

Coffee Break, 10h30-11h00

2. Lung Cancer Diagnosis:

- Early detection of lung cancer by exhaled breath analysis using gas sensors

Prof. Driss LAHEM, Ahmadou LY,

Marc DEBLIQUY, 11h00-11h30

(Materia Nova & Univ. of Mons, BELGIUM)

- Development of a Low Cost and Highly Sensitive Biosensor for Lung Cancer Biomarkers Detection

Dr. Chaker TLILI, 11h30-12h00

(IGIT, CAS, Chongqing, CHINA)

3. Early cancer Diagnostics:

- Innovative biosensors for miRNA cancer biomarker detection

Prof. Hasna MOHAMMADI, 12h00-12h30

(University Hassen II, MOROCCO)

- Strategies in multi-target biomarkers sensing for early cancer diagnostics.

Prof. Yaroslav KORPAN, 12h30-13h00

(Institute of MBG, NAS Ukraine, UKRAINE)

Lunch Break, 13h00-14h00

4. AI for Cancer detection :

Enhancing Cancer Detection: Integrating Machine Learning and Radiomics

Dr. Houneida SAKLY : 14h00-14h30

(CRMN technopole Sousse, TUNISIA)

5. Poster session (+ 5 min oral presentation):

1. Dr. M. MOSLAH, “Development of sustainable nanopatform for Simultaneous detection of cancer biomarkers”
2. H MOUSTAKIM, “Evolutionary Algorithm-Based Strategy for In-Silico Aptamer Development against Cancer-Linked Pesticides”
3. M. Ben ABDELKADER, “Design & development of acoustic MEMS for cancer diagnosis & remediation”
4. A. BLEL, “Green approach for multi-target cancer biomarkers sensing”
5. A. TRABELSI, “Multifunctional ternary hybrid Au@Pt-TiO₂ nanocomposite for medical applications”
6. F. BELKHIRIA, “Sustainable coating Innovative strategy in the battle against Lung cancer”