



İSTANBUL PROJECT ACADEMY



MARMARA ÜNİVERSİTESİ
İNNOVASYON VE TEKNOLOJİ
TRANSFER UYGULAMA VE
ARAŞTIRMA MERKEZİ





Health Care
Doctor
Hospital
Pharmacist
Nurse
Dentist
First Aid
Surgeon
Emergency



MEDICAL



MEDICAL

Horizon Europe Cluster 1: Health Brokerage Event



MEDICAL



Project Idea / Field of Expertise :

Developing highly sensitive and rapid in vitro diagnostic devices

Organisation Name:

Optical Imaging and Biosensing Laboratory at Bar Ilan University

Addressed Topic(s) & Call(s):

HORIZON-HLTH-2023-TOOL-05-08: Pandemic preparedness and response: In vitro diagnostic devices to tackle cross-border health threats

HORIZON-HLTH-2024-DISEASE-08-12: Pandemic preparedness and response: Maintaining the European partnership for pandemic preparedness

HORIZON-HLTH-2024-DISEASE-03-13-two-stage: Validation of fluid-derived biomarkers for the prediction and prevention of brain disorders

HORIZON-HLTH-2024-DISEASE-03-11-two-stage: Pandemic preparedness and response: Adaptive platform trials for pandemic preparedness



**ISTANBUL
PROJECT
ACADEMY**

Optical Imaging and Biosensing Laboratory – Bar Ilan University

- *Our lab specializes in rapid and highly sensitive detection of biomarkers, including antibodies, proteins, and specific nucleic acid sequences (e.g., RNA or DNA sequences).*
- *We have developed a patented magnetic modulation biosensing technology that sophisticatedly combines fluorescent and magnetic tagging of target molecules. By concentrating the magnetic beads to the laser beam and manipulating them from side to side, we increase the concentration of the fluorescently labeled target molecules and separating them from the constant background noise. We have demonstrated the analytical and clinical performance of the technology for rapid and highly sensitive serological assays (West Nile, Dengue, Zika, SARS-CoV-2), molecular assays (SARS-CoV-2, Cancer, Strep. A), and other pathogens.*
- *The work in the lab has led to several patent applications and grants that were awarded by different funding sources. Based on the saliva-based molecular assay that was developed in the lab, the Israeli Ministry of Health initiated in October 2021 the first and only test run in Israel for the validation of extraction-less saliva-based PCR tests*



Our project idea / expertise



- *We have extensive experience in developing in-vitro diagnostic technologies and in rapid detection of biomarkers in various fields.*
- *We have strong collaborations with the Israeli Central Virology Laboratory and several hospitals in Israel.*
- *We have conducted multiple clinical trials in Israel and the US.*
- *We collaborate with many laboratories around the world, including United states and Vietnam.*



Contact details



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THANK YOU...



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