This project is co-financed by the European Union
and the Republic of Türkiye

UFUK AVRUPA

ICTürkiye2025
10 April, İstanbul

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ORGANIZATION: Middle East Technical University
ODTU MEMS Center

WORKSHOP NAME: Digital and Smart Health

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REPUBLIC OF TÜRKİYE
MINISTRY OF INDUSTRY
AND TECHNOLOGY

#NATIONAL TECHNOLOGY INITIATIVE

COMPETITIVE SECTORS PROGRAMME

TÜBİTAK

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## Description of the Organisation

ODTÜ

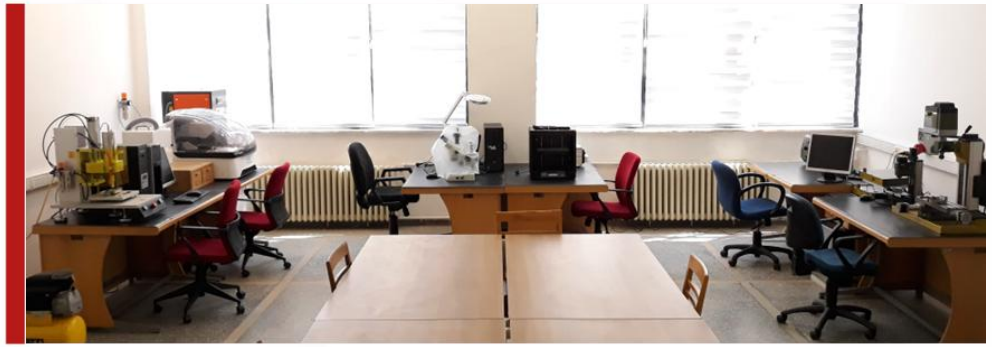
Middle East Technical University
Department of Mechanical Engineering
Micromanufacturing Laboratory

**ME Department**

- Solid Engineering Education: Provides strong academic programs.
- Active Research: Engages in diverse mechanical engineering research.
- Reputable Department: Produces well-trained engineers.

**Micromanufacturing Lab**

- Specialized in making polymer microfluidic devices
- PCB router, desktop CNC milling machines, desktop CNC lathe,plasma cleaner, injection molder, hot press, ultrasonic welder, 3D printers (SLA and FDM)



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# Description of the Organisation

ODTU MEMS Center

- National Research Infrastructure
- >40 researchers, 14 fellow academics
- >1000 $m^2$ cleanroom, <0.35 µm, 4'', 6'', 8'' wafer processing
- >20 years experience on image sensors, inertial sensors, RF MEMS, BioMEMS, microfluidics, packaging

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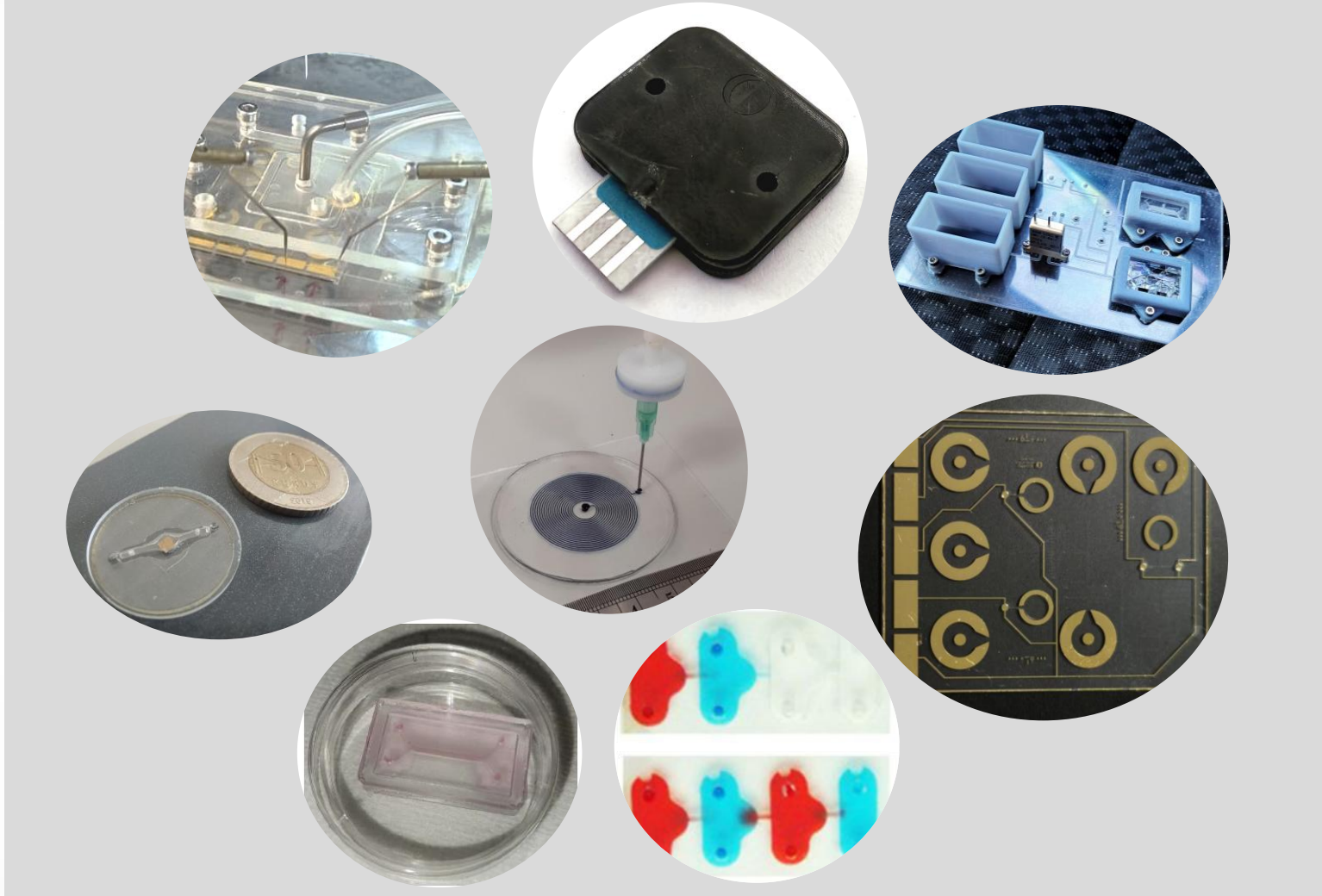
## Your Teams' Expertise

- Polymer micromanufacturing
- Capillary microfluidics
- Flow control
- Electrochemical sensors
- Surface Enhanced Raman Spectroscopy
- Organ chips



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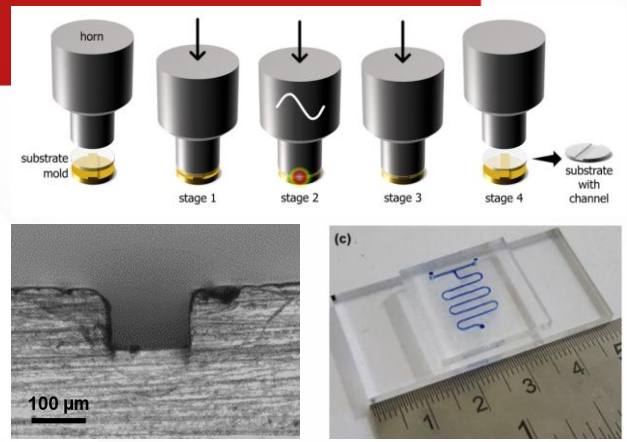
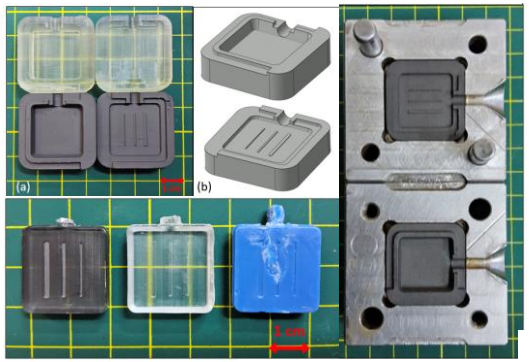
# Highlights of some research



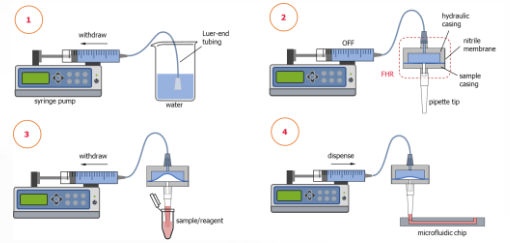

Ultrasonic assisted microfabrication

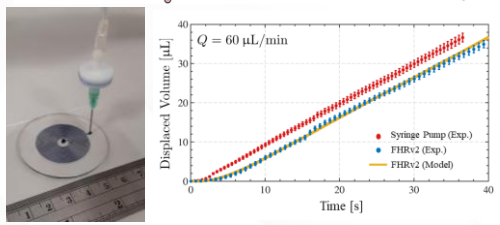



MAESTRO
Mikromedikal Teknolojiler Platformu

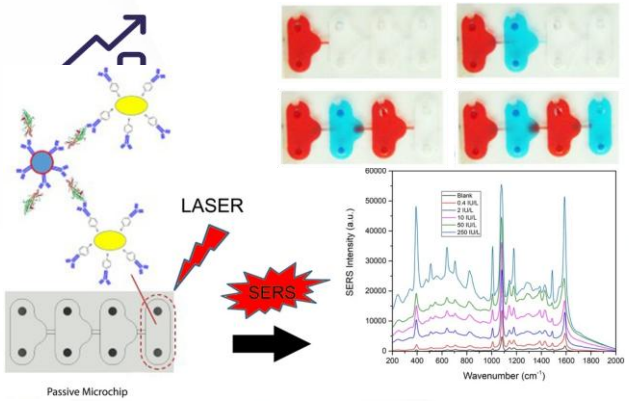
Funded by TÜBİTAK
1004 Excellence Center
Support Program

Polymer rapid tooling for injection molding




Zero dead volume interfaces (flexible hydraulic reservoir-FHR)




Capillary chips for sandwich immunoassays

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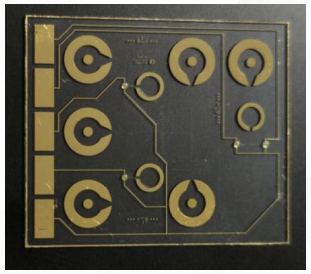
https://www.maestroplatformu.net/



## Ongoing Projects
## MAESTRO
## Micro Medical Technologies Platform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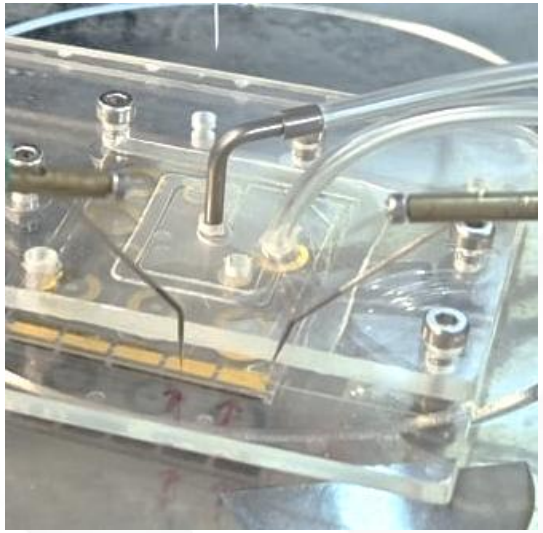
Assoc. Prof. Ender Yıldırım
Technology Manager, yender@metu.edu.tr


# MAESTRO
Mikromedikal Teknolojiler Platformu


Funded by TÜBİTAK
1004 Excellence Center Support Program

Start date: 26.12.2022
End date: 26.12.2026

**Developing BioMEMS based micro medical devices for diagnosis, prognosis, and theraphy of chronic/complex diseases**

IVD

Smart implants / Wearables / Prognostic devices

Organ-on-a-chip

**Executive partners**

arçelik

Sabancı Üniversitesi

TÜBİTAK MAM

İzmir Yüksek Teknoloji Enstitüsü 1992

glakoLens

ODTÜ MEMS

**Coordinator**

Yeditepe Üniversitesi AR-GE VE ANALİZ MERKEZİ YÜ-AGAM

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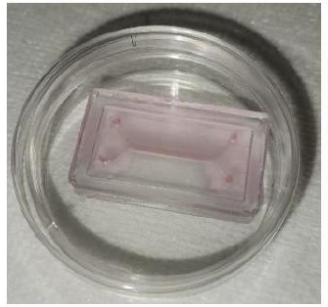
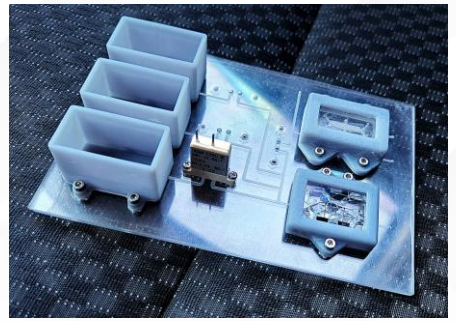
https://www.orchestra-project.eu/





## Ongoing Projects

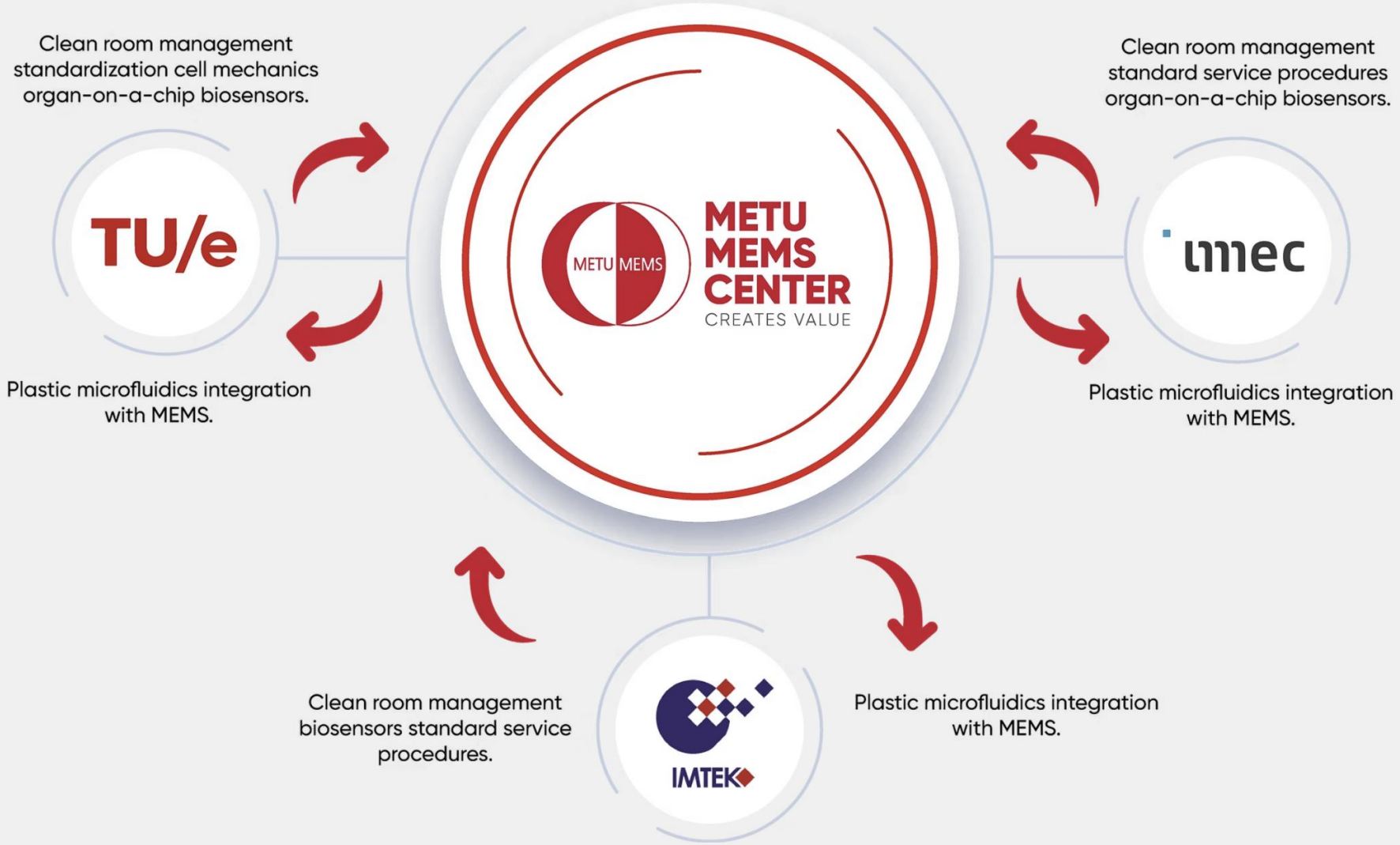
**OrChESTRA**

**Organ-on-a-Chip Focused Strategic Partnership**


This Project has received funding from the European Union's Horizon Europe Programme under grant agreement No 101079473.

OrChESTRA

Funded by the European Union



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