

### **Diagnostics at Fraunhofer IMM**

# Precision microfluidics experts for microfluidic systems

# Application fields

### **Medical applications**

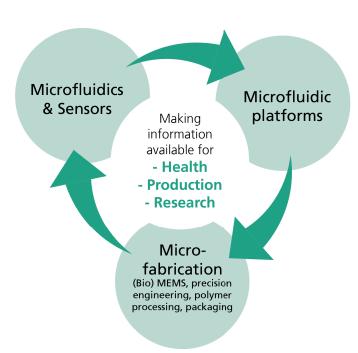
Analyzing small-volume biological samples or investigation of organ specific cells or biomarkers to screen, diagnose diseases, monitor health and improve treatments

### **Biotechnology applications**

Investigation of chemical, biological, and genetic materials in new drug and biomolecule discovery

### **Environmental applications**

Testing and analyzing plant and soil samples



## What makes us unique?

Our focus on an exciting new design, technology, process optimization or solution with a clear and informed understanding of the specific problem and the customer's needs!

### Our technology platform enables:

- Improved recapitulation of in vivo or in vitro conditions
- Unique and extremely sensitive diagnostic system
- Quantitative and validated microfluidic test method.
- Standardization of design and fabrication processes to emphasize scale-up, improve usability
- Improving usability and reducing the dependence on technical expertise, peripheral equipment, and laboratory infrastructure
- Refinement of materials, designs, and dynamic control systems to better recapitulate biology, physiology, and in vivo conditions without sacrificing usability

# **Precision Microfluidics Group**

## **Xiangping Li**

### **Expertise:**

- Research and development of organ-on-chips
- Development of Reusable PCR, Quantitative PCR, Droplet PCR, Digital PCR, Isothermal PCR platforms
- Development of microelectrode arrays
- Micro and nano fabrication

### **Business fields:**

- Reusable PCR systems
   Reduction of waste
   Enabling of automated operation
   Online / offline detection
- Organ-on-Chip (OOC)
   Development of organ-specific models for disease modeling, drug development and personalized medicine

## Taleieh Rajabi



### **Expertise:**

- Research and development of high-performance miniaturized microfluidic systems
- Project management
- Qualification and validation
- Process technology: Automation of development processes
- Innovation and marketing
- Agile methods

### **Business fields:**

- Novel microfluidics-based point-of-care diagnostics platform for disease specific biomarkers detection
- Validation and commercialization, approval of products
- Microfluidics for application in food technology and drug research

### **Precision Microfluidics Group's additional Expertise:**

- Microelectronics
- Measurement technology (electrochemical and optical sensors)

### Bioeconomy



Intelligent medicine

## Contact

Food industry

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