



My Cell Fight
human immune system
on-a-chip

MYCELLFIGHT: DEVELOPING A CHIP-BASED HUMAN IMMUNE SYSTEM

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Background

Every human is unique. This impacts each person's individual immunological response to a drug or chemical.

Humans have 600 to 700 lymph nodes, or tiny organs that play a central role in protecting us from foreign bodies.

To date, there is no artificial immune system that can reproduce human immune reactions in vitro (outside a living organism). The biotechnological hurdles are simply too great – too complex and too close to tissue formations, with too many possible biological immune responses. Moreover, there is enormous variability from person to person.

The objective of MyCellFight is to develop an automated immune chip.

This chip is expected to predict the individual biological immune responses of up to 100 people of all ages.

In this way, the Fraunhofer-Gesellschaft will make advances in animal-testing-free biomedical research.

Focus

On the basis of a strategic field analysis as well as a market and needs analysis, the researchers at Fraunhofer IMW are developing concrete options for the commercial exploitation of this innovative product/service offering.

Client:

Fraunhofer-Gesellschaft

Project Duration:

3/1/2018 – 28/2/2021

Project Partners:

