



EMAPS

Advancing the Understanding and Treatment of Heart Diseases



Start
March 2021



Duration
48 months



Budget
€5 Mio



9 Partners
8 Countries

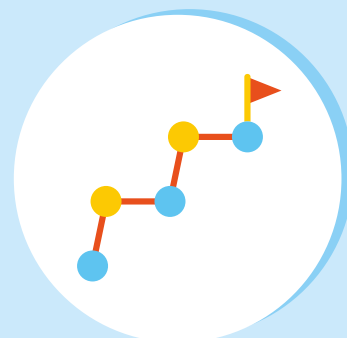


The Situation

- Cardiovascular diseases (CVD) are the leading cause of death in Europe and cost the EU economy EUR 210 billion annually.
- Potential drugs are tested on living tissue and animals, which do not behave like a human heart, leading to time-intensive and costly drug development processes and fewer approved drugs against CVDs.

Scientific Approach

- Creation of novel electroactive, elastic and bioactive scaffolds for 3D cell cultures
- Development of a miniaturized bioreactor for adult-like cardiac cells derived from human stem cells (hiPSC-derived cardiomyocytes) with improved maturation quality
- Development of 3D-printed multi-material heart-on-chip devices mimicking the functionality of a human heart



Our Goals

- Delivery of the most accurate heart models to date
- Elimination of animal testing for cardiovascular drug screening
- Fewer failed clinical trials due to early-stage drug efficacy and cardiotoxicity testing and less costly drug development processes
- Higher drug approval rate and overall fewer deaths due to CVDs

www.emaps-cardio.eu

