

**Organ-on-a-Chip technology:  
the new paradigm in physiologically relevant cell  
culture for drug testing**



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Organ-on-a-Chip technology is a new paradigm in drug testing. The technology has as its aim to raise the physiological relevance of traditional cell culture by combining this with microfluidic techniques. Organs-on-a-Chip are 3D tissues that capture the complexity of in vivo tissues including 3D morphology, extracellular matrix embedment, multiple cell types, vascular structure and perfusion flow. In this presentation I will elaborate on human models for the nervous system, the kidney, gut and liver as well as their applicability for toxicity testing and disease modelling.

## Short Biography

### Dr Paul Vulto

Paul Vulto (Dordrecht, 1977) is a life science executive and entrepreneur, who held positions in the Netherlands, Germany, Italy and Japan. Paul is co-founder and Managing Director of the company MIMETAS that develops organ and tissue models on-a-chip for drug testing and therapy selection. MIMETAS has grown to over 60 employees in four years' time and works with the majority of large pharmaceutical companies. Paul holds a cum Laude Master's degree in Electrical Engineering from Twente University (the Netherlands) and a cum Laude PhD degree in Microsystems Engineering from Freiburg University (Germany). Paul is a co-author on over 30 peer-reviewed publications and inventor on 15 patent applications.

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