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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