Molding and actuating hydrogels for organ on chip development

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Organ on chip represents a next generation of *in vitro* biological models with a great potential in biology, biophysics and clinical application. In this context, mimicking the extracellular matrix composition, architecture as well as the forces experienced by the organ is crucial. In this talk, I will discuss how these different aspects can be implemented on chip to replicate *in vivo* conditions, and how they can be tuned to investigate their effects on the organ physiology.