In-vitro cell cultures are often proposed as “Alternatives” to animal tests, but they are still inadequate to reproduce human pathophysiology. This is mainly due to the technological limitations of the standard equipment used in cell culture laboratories, such as the lack of a 3D micro-architecture, the static environment and the absence of cross talk between different tissues.

The IVTech mission is to provide technology and services to allow the implementation of relevant advanced in-vitro models.

It’s a pleasure to announce the 8th workshop on 3D advanced in-vitro models, focused on the design of multi-organ and dynamic in-vitro tests using IVTech technology. Moreover, the very last trend in research, we will show how to use a bioprinter machine (BioX by Cellink AB, commercialized by Twin Helix) in cooperation with our products, in order to realize a highly correlated in-vitro model with the human reality.

Overview of the workshop

Theoretical training
- Introduction on the use of bioreactors & bioprinter
- Introduction on the tissue model design for drug and nano-toxicity studies in dynamic conditions.

Hands-on experience
- Practical demonstration of IVTech products as platforms to implement advanced in-vitro models
- Hands-on experience to develop a 3D & dynamic in-vitro model, using IVTech products
- Practical demonstration of the BioX (by Cellink AB, commercialized by Twin Helix) to realize a complex scaffold
Workshop key points

• Introduce the practice and use of innovative cell culture systems to design meaningful in-vitro experiments
• Show how to implement 3D in-vitro models under dynamic conditions, using IVTech LiveBox1
• Show how to implement dynamic in-vitro models of physiological barriers, using IVTech LiveBox2
• Show how to apply dynamic conditions to the cells environment using IVTech LiveFlow
• Provide the participants with a practical experience on multi-organ in-vitro model design to obtain physiologically relevant results
• Experiment Real-time monitoring by imaging and media sampling, and routine end-point analyses, using JuLi™ Stage (by NanoEnTek Inc. http://www.julistage.com/, commercialized in Italy by Twin Helix)
• Show how to print a 3D scaffold using the BloX (by Cellink AB, https://cellink.com)