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An Extracellular Matrix-like hydrosccaffold for 3D cell culture to bring the gap between in vitro & in vivo: focus on cancer models

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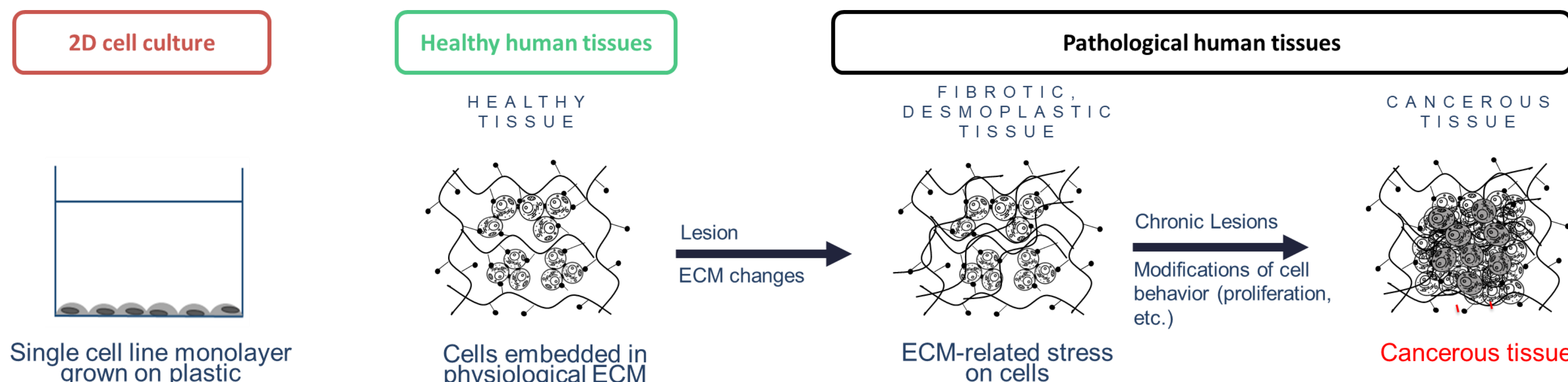
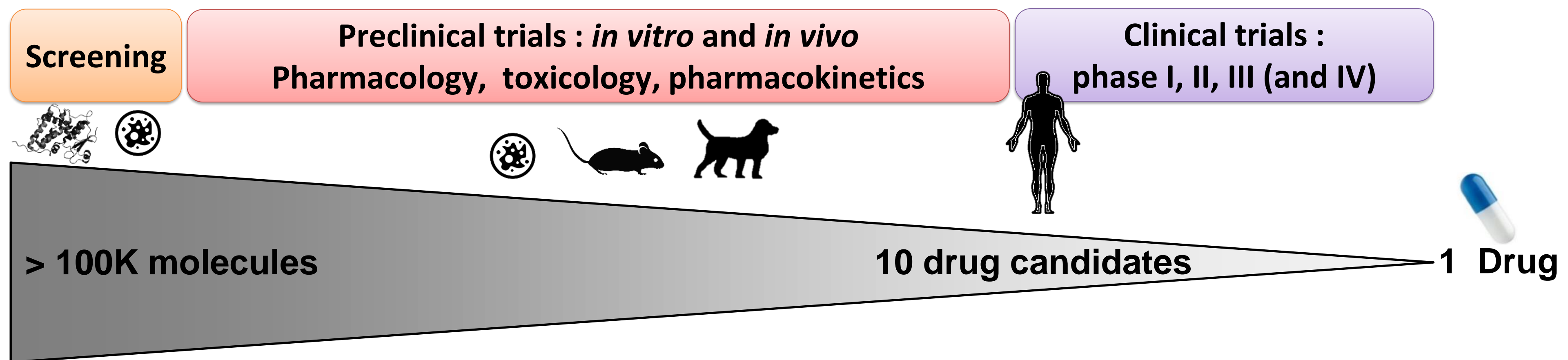
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Introduction

- Low success rate in drug discovery : 90% of failure in clinical trials (safety and efficacy)

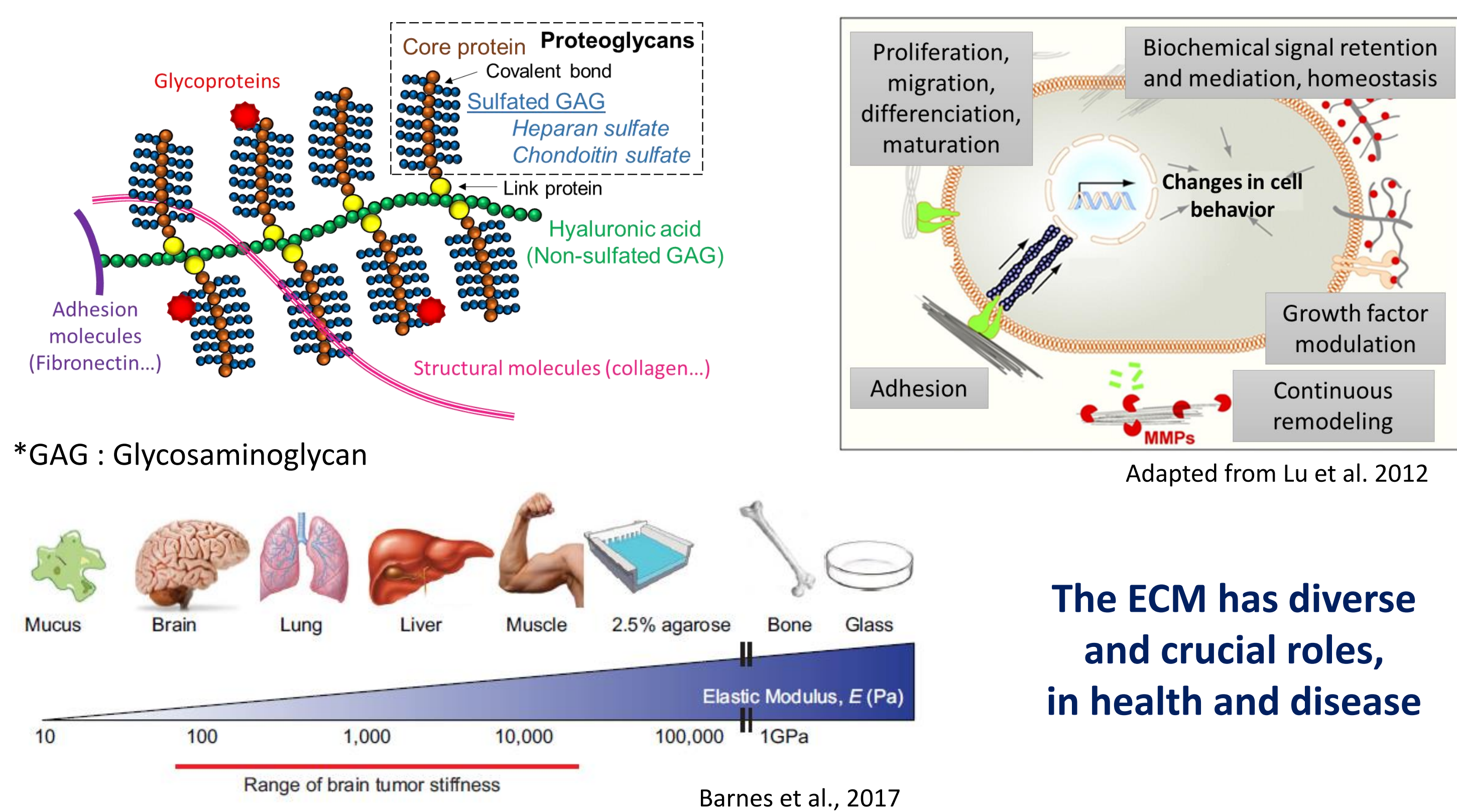
→ Lack of relevance of preclinical models

- Animals: inter-species differences
- *In vitro* models : too simple, don't take into account the microenvironment, including the Extracellular Matrix (ECM)

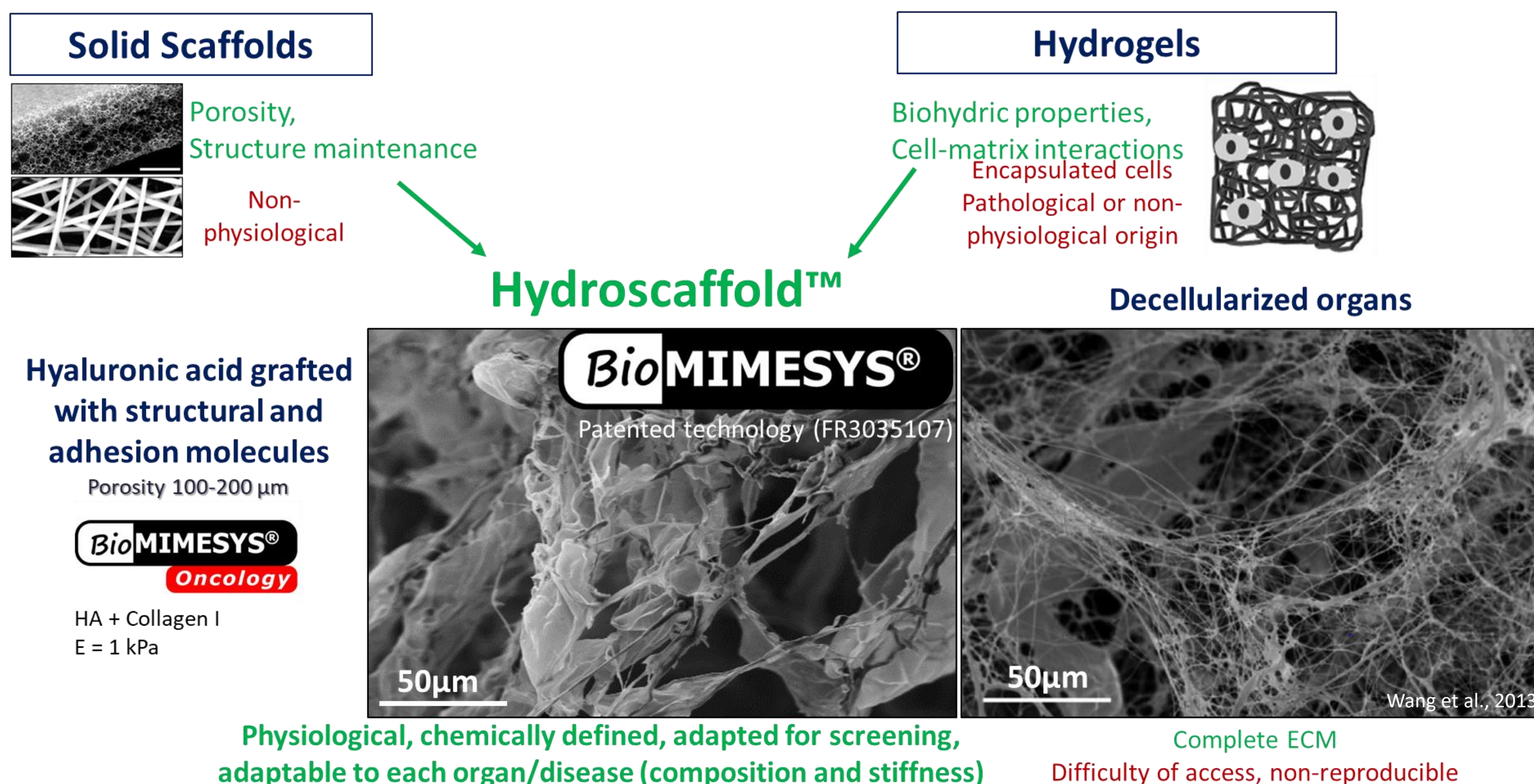


Goal : To improve the predictivity of *in vitro* models by taking into account the 3D cell organization and the microenvironment

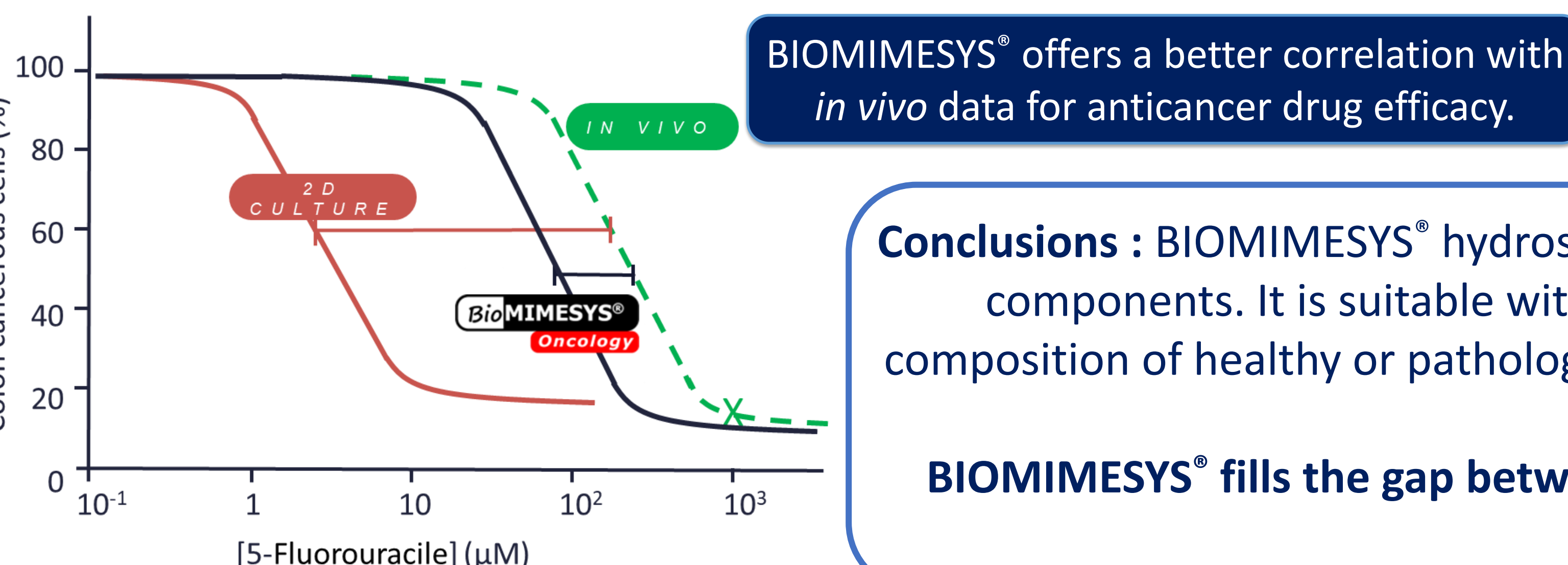
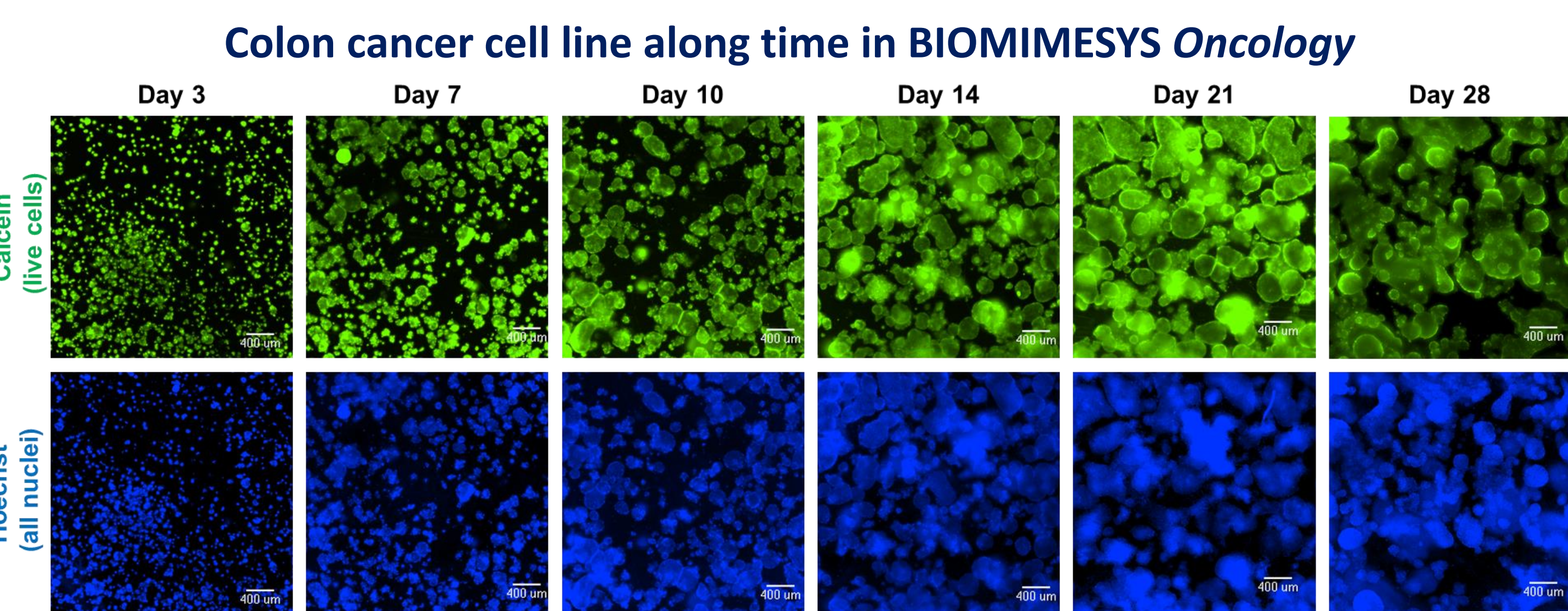
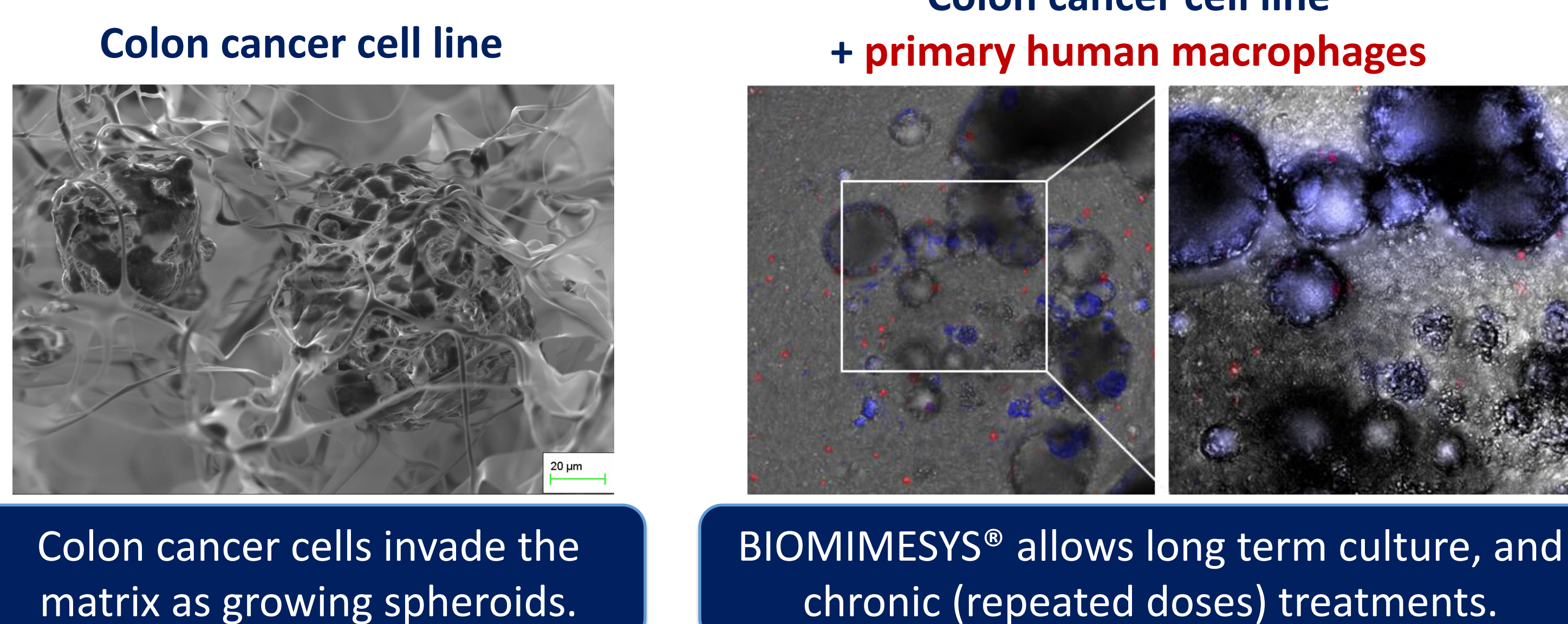
What is the Extracellular Matrix (ECM) ?



What is BIOMIMESYS® hydrosccaffold™ ?



Results: 1. Colon Cancer



Conclusions : BIOMIMESYS® hydrosccaffold™ reproduces the ECM. It is suitable with High Content Screening platforms. It reproduces the stiffness and the composition of healthy or pathological tissues, including cancer, and allows a better *in vivo/in vitro* correlation.

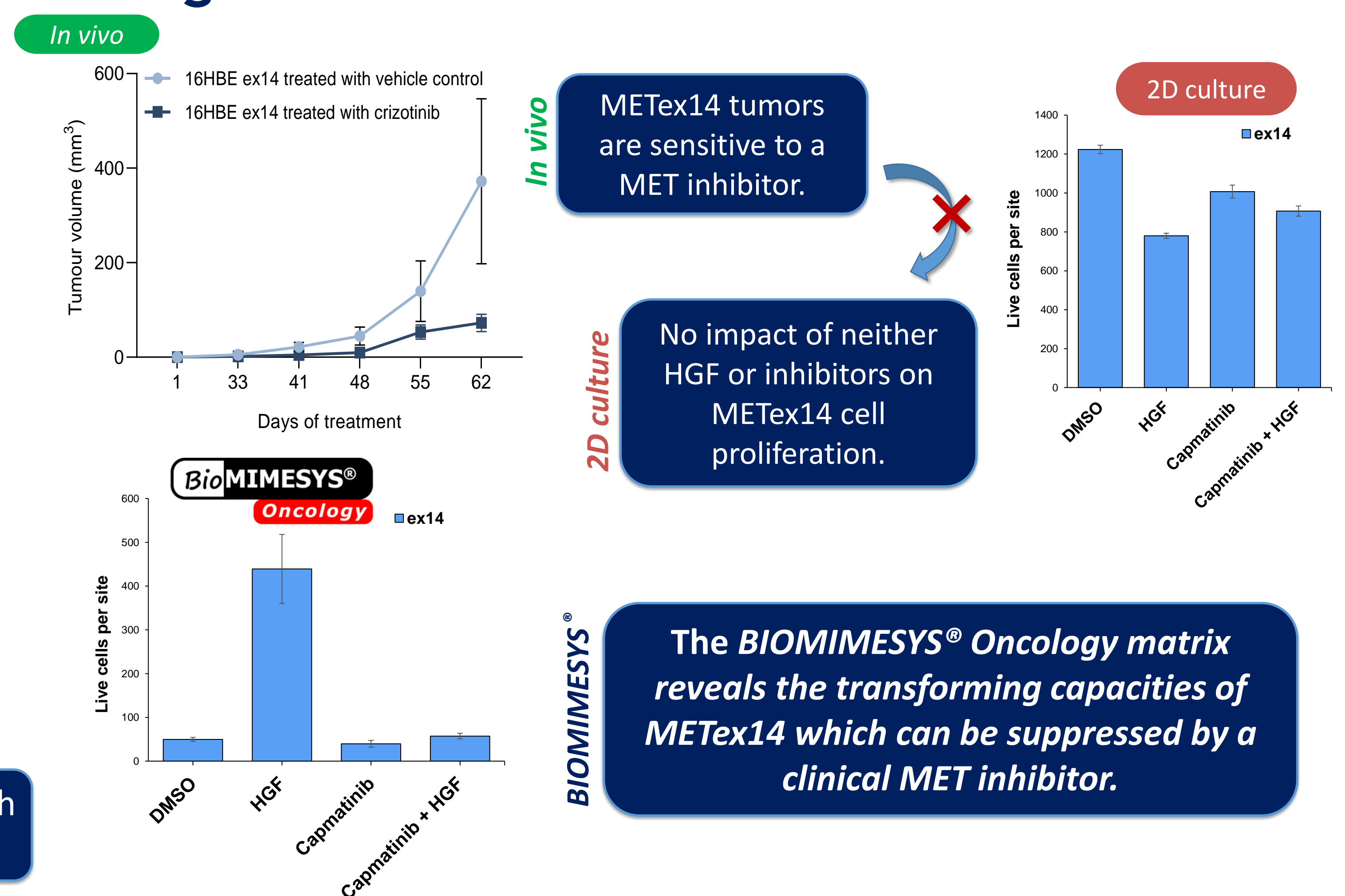
BIOMIMESYS® fills the gap between 3D cell culture systems and *in vivo* for a higher predictability of your cancer models, by reproducing the ECM.

Applications and methods

BIOMIMESYS® is compatible with robotic platforms and with main downstream analytical technologies :

- **Translucent :** microscopy, spectrometry
- **Biodegradable :** flow cytometry
- **Porous :** PCR, western blot, ELISA
- **Solid :** histological techniques

2. Lung Cancer



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