

### 3D bioprinting – a Swiss army knife for tissue engineering.

Already established bioengineering tools like extrusion-based 3D bioprinting hold the potential to revolutionise disease modeling and thereby the advancement of novel therapeutic strategies. In the context of oncology, our work has focused on the development and characterisation of colorectal cancer (CRC) models. We have carried out a proof-of-principle drug screening and have developed personalised medicine strategies. Importantly, the same technology and similar laboratory algorithms can lay the foundations of a new era in regenerative medicine. Our research efforts and results in this aspect are aimed at generating biocompatible cartilage implants. The introduction of improved innovative bioprinting techniques and materials in order to obtain such constructs can open new horizons in reconstructive surgery and transplantation.