



Translational Center for Regenerative Therapies

—
Prof. Dr. Florian Groeber-Becker

Fraunhofer-Gesellschaft

At a glance

Applied research focusing on key future-relevant technologies and the commercialization of findings in business and industry. A trailblazer and trendsetter in innovative developments.

> 30,000
employees



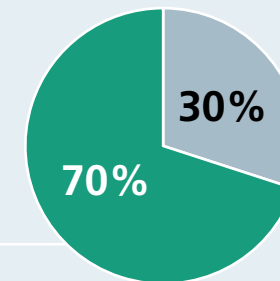
76 institutes
and research units



€3.4 billion business volume
€3.0 billion contract research



Industrial contracts
and publicly funded
research projects



Base funding from
Germany's federal
and state governments

Fraunhofer Translational Center Regenerative Therapies TLC-RT

Materials meets Biology meets Engineering



Bioreactors and lab automation

"We believe engineering empowers scientific advancements."

Dipl. Ing. Thomas Schwarz
Prof. Jan Hansmann
M. Ing. Shahbaz Tareq Bandesha



In vitro test systems

"We believe in challenging the status quo of what can be tested without the use of animal models."

Dr. Daniela Zdziebło
Dr. Christian Lotz



Biomaterials

"We believe in realizing complex and challenging biomaterial property profiles."

Dr. Sofia Dembski
Dr. Jörn Probst

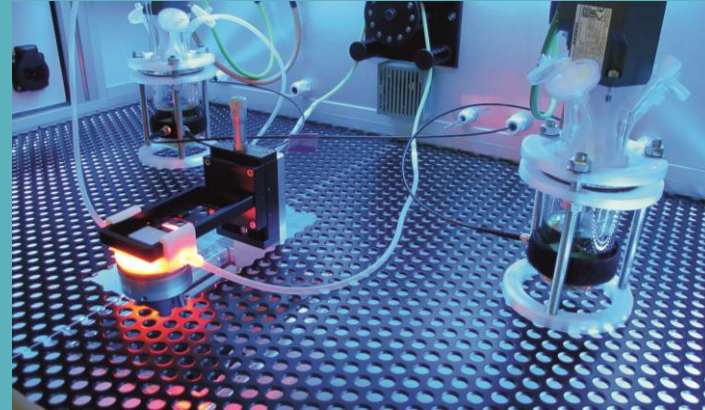
Lab automation and bioreactor technology

Portfolio



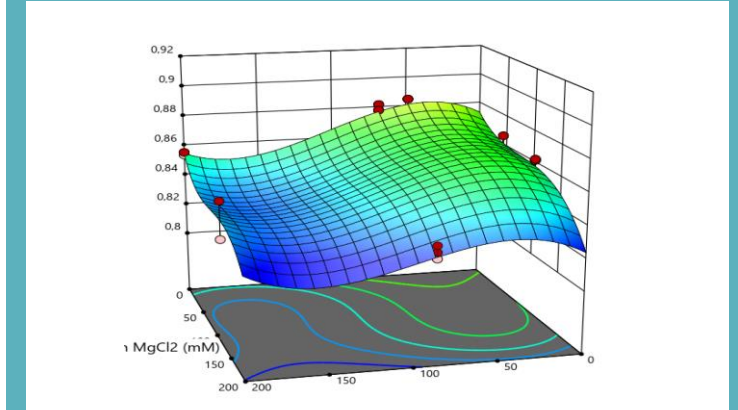
Automation

- Tailored systems
- Flexible automation
- Novel robotic tools
- Chemical and biological processes



Bioreactors

- Physiological culture
- Controlled culture conditions
- Scalable systems

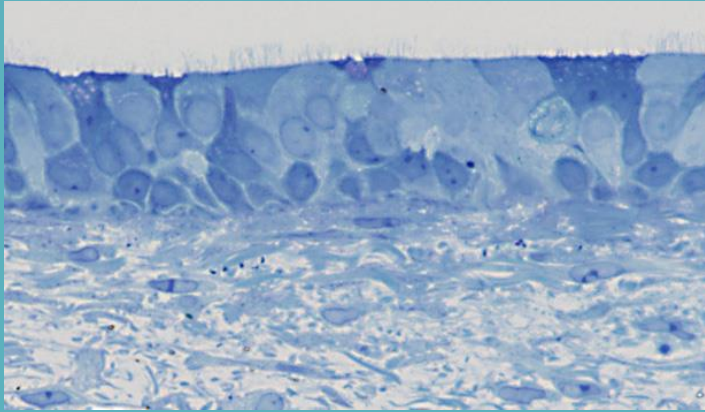


Data science

- Design of experience
- Process monitoring
- Machine learning
- Simulations

In vitro test systems

Portfolio



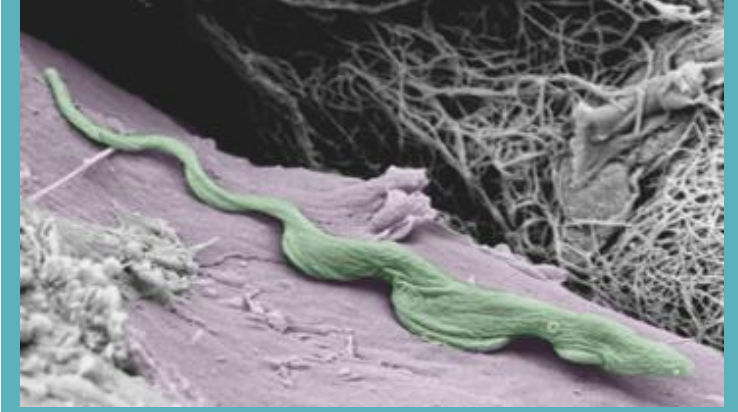
Human in vitro tissues

- Skin
- Eye
- Intestine
- Airways
- Innervation
- Neurovascular Unit



New approach methods

- Risk assessment
- Efficacy testing
- Preformulating evaluation
- Consultancy
- Customized assays

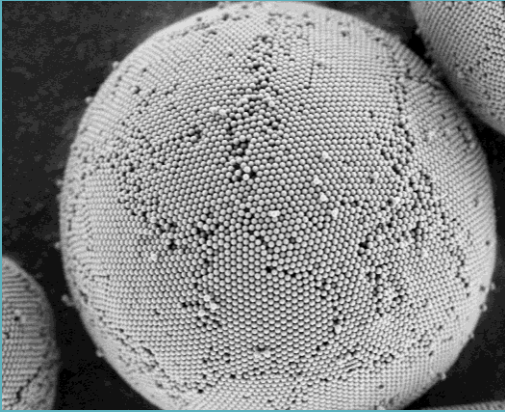


Tissue environment interaction

- Wound healing
- Tumor development
- Infection studies
- Genetic diseases
- Material
- Immune mediated diseases

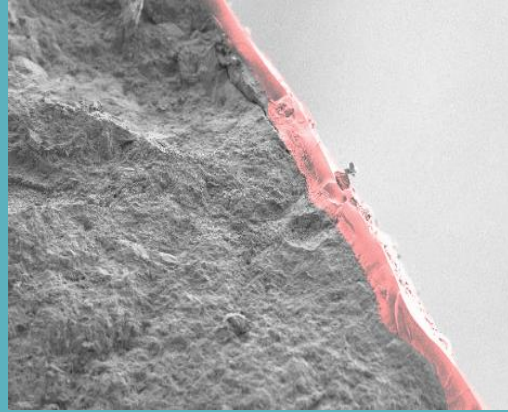
Biomaterials

Portfolio



Nano- and μ -particles

- Therapeutic particles
- Diagnostic particles
- Particular encapsulation
- Particular filler



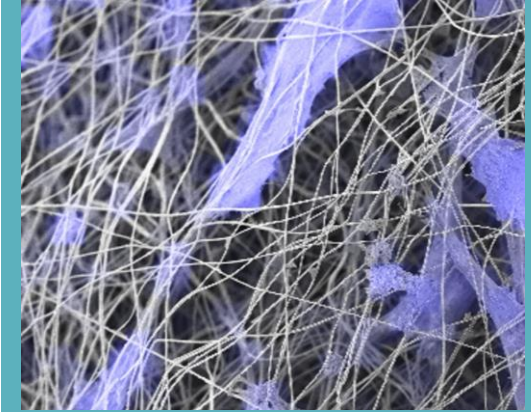
Biocompatible coating systems

- Protective coatings
- Drug delivery coatings
- Release coatings
- Functionalized coatings



Biodegradable fibres / membranes

- Wound therapeutics
- Drug delivery systems
- Implants



3D Bioprinting and in vitro scaffolds

- Synthetic matrices for tissue engineering
- Electrospinning
- Additive manufacturing