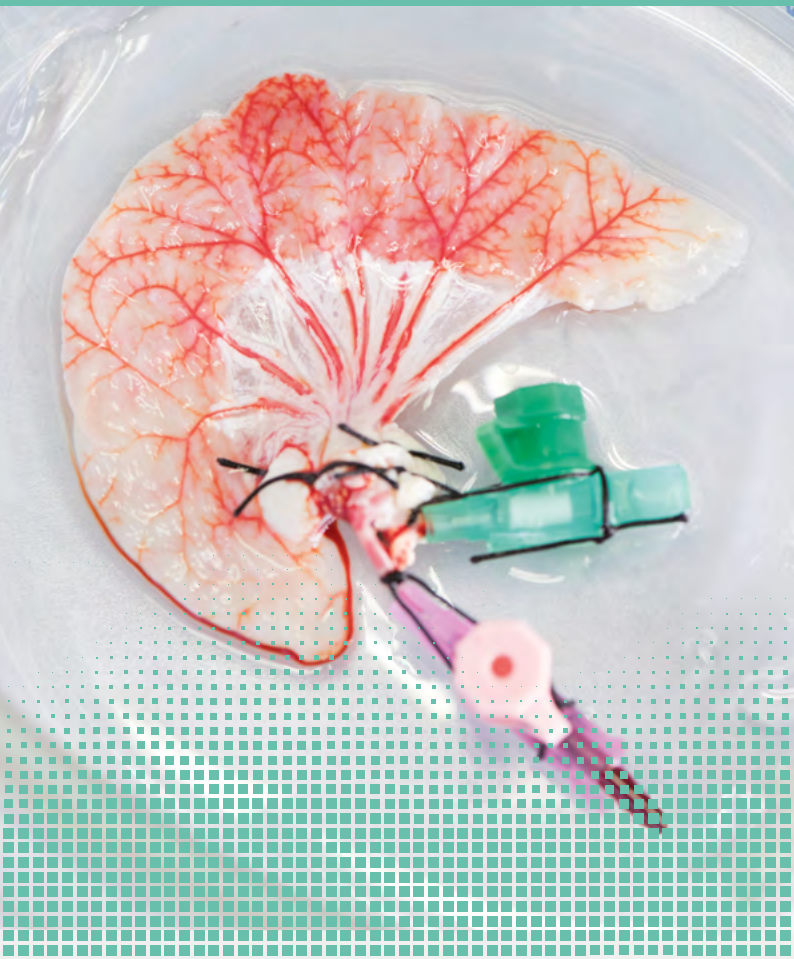
Fraunhofer
ACADEMY

Fraunhofer Online-Seminar

TISSUE ENGINEERING – A PRACTICAL SEMINAR ON 3D CELL CULTURE



TISSUE ENGINEERING – TOOLS FOR THE MEDICINE OF THE FUTURE

The Fraunhofer Institute for Silicate Research ISC is to hold a seminar on Tissue Engineering in cooperation with the Fraunhofer Institutes for Biomedical Engineering (IBMT), Toxicology and Experimental Medicine (ITEM) and the Chair for Tissue Engineering and Regenerative Medicine (TERM) of University Hospital Würzburg. The two-day online event will provide a comprehensive overview of the basics of 3D cell culture for tissue engineering – in terms of both the biology and materials science. And it will also offer an insight into practical applications, ranging from personalized test systems to the development and approval of cell-based therapies.

We have designed the seminar on the basis of many years of training experience in the major aspects in tissue engineering. Due to the dynamic progress of the field, we also adapt the course contents continuously.

Marco Metzger

Dr. Marco Metzger, Head of the Translational Center, Würzburg, Fraunhofer ISC

YOUR BENEFITS AT A GLANCE

- Insights into current industry-related development projects in the field of regenerative medicine, stem cell processing and biomedical engineering.
- Compact teaching of applied expertise in 3D tissue engineering, including biomaterials and process technology.
- Participants can select theoretical and practical topics according to their prior knowledge and specific interests.
- Teaching by experts with educational training and many years of experience in the field of tissue engineering in research and/or industry.

PROGRAM OVERVIEW AND TARGET GROUP

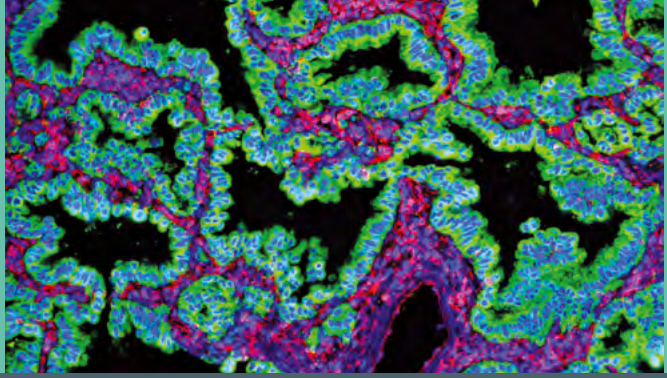
Overview

The Fraunhofer seminar on Tissue engineering will provide a compact review of the basics of tissue engineering – in terms of biology, bioprocessing and materials science. The two-day online seminar will also offer an insight into practical applications at Fraunhofer, ranging from personalized test systems to the development and approval of cell-based therapies.

Target Group

The seminar addresses qualified scientists, technical staff and managers from industry, research institutions, and academia. Sectors:

- Manufacturers of chemical/pharmaceutical products
- Cosmetics industry
- Manufacturers of medicinal products
- Health care (e.g. medical centers and hospitals)
- Manufacturing industry (e.g. food processing)



GENERAL INFORMATION

Format

Interactive live online sessions

Duration

Two-day online seminar, consisting of 4 learning units of 2.5 hours each, with short breaks in between and a final learning check

Fee

390 € per person (incl. seminar documents and online learning check)

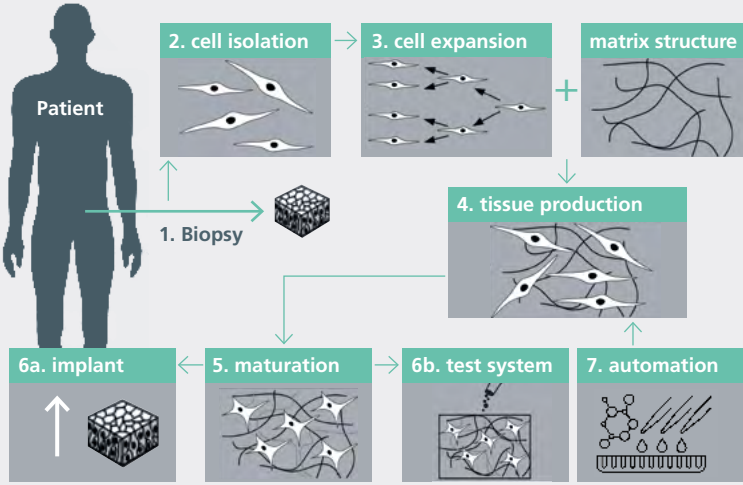
Dates and registration

www.academy.fraunhofer.de/tissue-engineering

STRUCTURE AND CONTENT

The two-day online seminar on "Tissue Engineering" will provide a comprehensive overview of the basics of tissue engineering – in terms of the biology, bioprocessing and materials science. It will also offer an insight into practical applications, ranging from personalized test systems to the development and approval of cell-based therapies.

Tissue Engineering



"Tissue engineering provides the tools for the medicine of the future: personalized therapies, from preclinical testing to cell-based tissue replacement."
Dr. Marco Metzger, Head of the Translational Center

Seminar content

The theoretical part comprises 4 modules of 2,5 hours, including:

- Cell biology of 3D tissue models
- Biological and synthetic substrate materials
- Process technology for the production of tissue models
- Quality management for 3D cell culture systems
- Clinical translation/GMP

The practical components are flexible. Participants can select modules according to their prior knowledge and specific interests e.g.

Module 1: Handling of stem cells and the growth of spheroid cultures

- Primary intestinal stem cells and organoid modeling
- Quality control
- Carrying out swelling assays

Module 2: Applications in tissue engineering

- Primary skin cells and creation of 3D transwell models
- Noninvasive methods of quality control
- Toxicity assay according to the OECD Guideline

The practical part includes videos and live streams from the original laboratory with an experienced researcher allowing virtual interaction and troubleshooting with the participants.

DO YOU HAVE ANY QUESTIONS...

about the seminar?

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about further similar programs?

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