

WWW.ARTIVASC.EU

EUROPEAN PROJECT »ARTIVASC 3D«

## CONSORTIUM

The Consortium consists of 16 partners from 7 different countries including research institutes, universities, medical hospitals, SMEs and industries.



### PROJECT COORDINATOR

Dr. Arnold Gillner  
Phone +49 241 8906-148  
arnold.gillner@ilt.fraunhofer.de

### PROJECT MANAGER

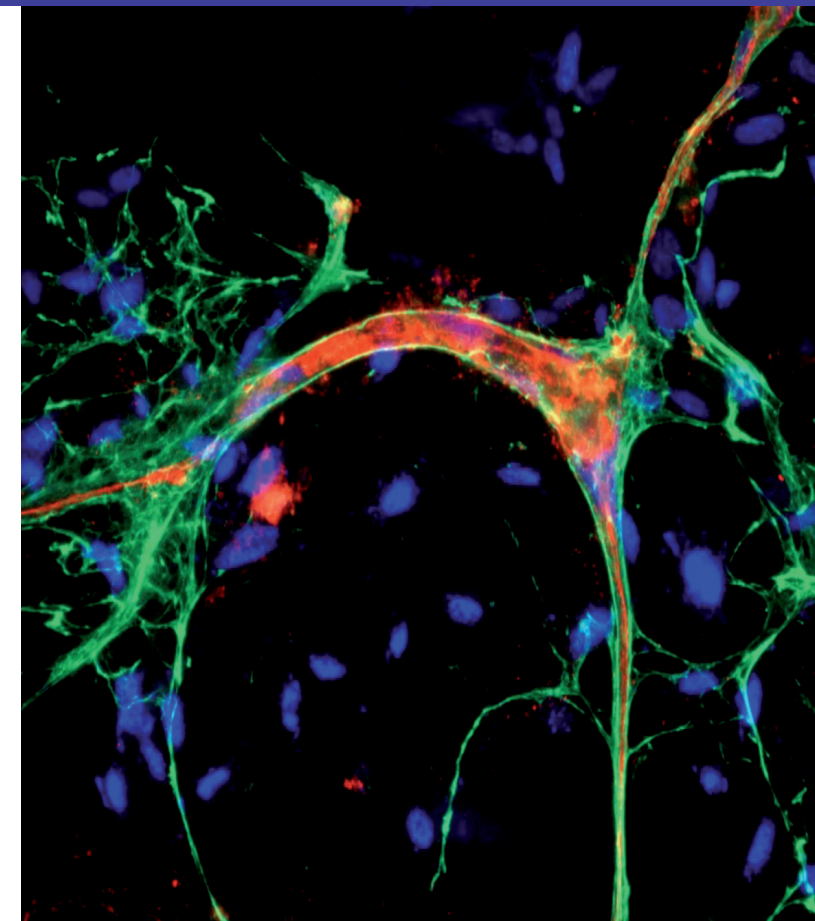
Dipl.-Biol. Nadine Seiler  
Phone +49 241 8906-605  
nadine.seiler@ilt.fraunhofer.de

Fraunhofer Institute for Laser Technology ILT  
Steinbachstraße 15  
52074 Aachen, Germany  
[www.ilt.fraunhofer.de](http://www.ilt.fraunhofer.de)

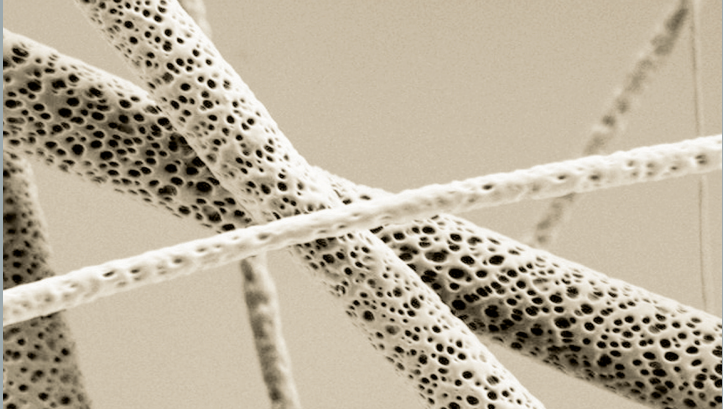
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## ARTIFICIAL VASCULARISED SCAFFOLDS FOR 3D-TISSUE REGENERATION



# EU-PROJECT »ARTIVASC«



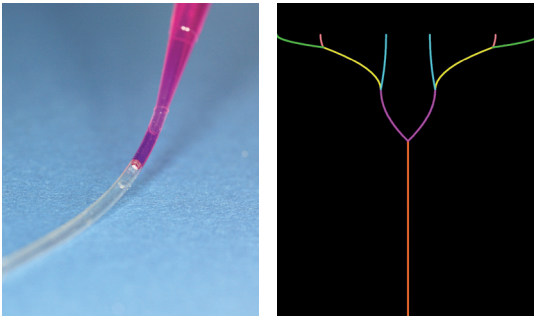
Porous electrospun fibers.

## PROJECT AIMS

ArtiVasc 3D will provide micro- and nano-scale based manufacturing and functionalisation technology for the generation of fully vascularised bioartificial tissue that enables entire nutrition and metabolism. The bioartificial vascularised skin engineered in ArtiVasc 3D will, for the first time, allow 3-layered tissue replacement with fat, dermis and epidermis.

## APPLICATIONS

- In vitro skin model for pharmaceutical and chemical research
- In vivo model system for skin replacement



Left: Small vasculature filled with medium.  
Right: Bifurcated blood vessel simulation.

## KEY PROJECT ORGANISATION

To achieve its project aims the ArtiVasc consortium is going to combine expertise in the following three domains:

### Material, Design and Functionalization

- Degradable and non-degradable materials
- Modelling and Design
- Biofunctionalization

### Process and Machine Development

- Inkjet
- Laser processing
- Electrospinning

### Tissue Generation and Validation

- Cell cultivation
- Vascularization
- In vitro and in vivo testing

Cover photo: Isolated pericytes of vascular structures (Immunofluorescence).

## PROJECT DETAILS

Acronym	ArtiVasc 3D
Start Date	November 1, 2011
End Date	October 31, 2015
Duration	48 months
Project Budget	10,5 million euro
EC Funding	7,8 million euro
Type	Large-scale integrating project
Call	FP7-NMP-2010-LARGE-4
	Development of standard scaffolds for the rational design of bioactive materials for tissue regeneration

