The Consortium consists of 16 partners from 7 different countries including research institutes, universities, medical hospitals, SMEs and industries.
EU-PROJECT »ARTIVASC«

**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

**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

**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

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

Left: Small vasculature filled with medium.

Right: Bifurcated blood vessel simulation.