Current grants, ongoing research projects with Bert Müller as PI

Funding via Swiss National Science Foundation Division II - Mathematics, Natural sciences and Engineering (205321_150164)

**Multi-modal matching of two-dimensional images with three-dimensional data in the field of biomedical engineering** (Information Sciences)
Duration from 01.11.2013 to 31.10.2016
Approved amount: CHF 158'900

**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PIs:** Simone Hieber, Biomaterials Science Center, University of Basel, Philippe Cattin, Medical Image Analysis Center, University of Basel
**Employee:** Natalia Chicherova

Funding via Swiss National Science Foundation Division CoRe - Interdivisional co-ordination and co-operative research (CR23I2_147172)

**Micro- and nanoanatomy of human brain tissues** (other disciplines of physics)
Duration from 01.09.2013 to 31.08.2016
Approved amount: CHF 300'000

**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PIs:** Magdalena Müller-Gerbl, Anatomy, University of Basel, Oliver Bunk, Swiss Light Source, Paul Scherrer Institute, Oliver Bieri, Radiology, University Hospital Basel
**Employees:** Georg Schulz, Anna Khimchenko

Funding via Swiss National Science Foundation Division II - Mathematics, Natural sciences and Engineering (200021_135496)

**Tomography of microvascular structures in murine brain tumors** (Condensed Matter Physics)
Duration from 01.01.2013 to 31.12.2015
Approved amount: CHF 165'516

**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PI:** Simone Hieber, Biomaterials Science Center, University of Basel
**Employee:** Peter Thalmann

Funding via Swiss National Science Foundation Division II - Mathematics, Natural sciences and Engineering (200021_135496)

**Nanostructures for artificial muscles (NAM)** (Condensed Matter Physics)
Duration from 01.09.2011 to 31.08.2014
Approved amount: CHF 234'482

**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PI:** Gabor Kovacs, Mechanical Systems Engineering, Swiss Federal Laboratories for Materials Science and Technology
**Employee:** Florian Weiss

Funding via Swiss National Science Foundation National Research Program 62 ‘Smart Materials’ (406240_126090)

**NO-Stress, a specific coronary vasodilator – nano-container for tailored NO release** (Cardiovascular Research)
Duration from 01.02.2010 to 31.01.2015
Approved amount: CHF 543'548

**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PIs:** Till Saxer, University Hospitals Geneva, Andreas Zumbühl, Chemistry Department, University of Fribourg
**Employees:** Margaret Holme, Marzia Buscema, Georg Schulz, (Andreas Weinberger)

Funding via nano-tera.ch (SmartSphincter)

**Smart muscles for incontinence treatment**
Duration from 01.04.2013 to 31.03.2016
Approved amount: CHF 2'208'000

**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PI:** Lukas Brügger, University Hospital Berne, Philippe Büchler, University of Berne, Franc Hetzer, Hospitals Schaffhausen, Urs Sennhauser, Swiss Federal Laboratories for Materials Science and Technology
**Employee:** Tino Töpper, (Elisa Fattorini, Bekim Osmani)
Current grants, ongoing research projects with Bert Müller as Co-PI

Funding via Swiss National Science Foundation National Center of Competence in Research (NCCR Nanoscience) (51NF40-144617)

**Remineralisation of carious lesions by self assembled peptide supra-molecular networks and hydroxyapatite nanocrystals**
Duration from 01.06.2012 to 31.05.2014
Approved amount: CHF 243'000
**PI:** Uwe Pieles, Institute for Chemistry and Bioanalytics, University of Applied Sciences and Arts Northwestern Switzerland
**Co-PIs:** Bert Müller, Biomaterials Science Center, University of Basel
**Employees:** Hans Deyhle, Iwona Dziadowiec

Funding via Swiss National Science Foundation National Research Program 62 ‘Smart Materials’ (406240_126123)

**Porous shape-memory-scaffolds as mechanically active bone implants** (Materials Science)
Duration from 01.02.2010 to 30.06.2014
Approved amount: CHF 447'667
**PI:** Michael de Wild, Institute for Chemistry and Bioanalytics, University of Applied Sciences and Arts Northwestern Switzerland
**Co-PIs:** Bert Müller, Biomaterials Science Center, University of Basel, Ivan Martin, Tissue Engineering, University Hospital Basel
**Employees:** Therese Bormann, (Ralf Schumacher, Waldemar Hoffmann)
Completed research projects with Bert Müller as PI

Funding via Swiss National Science Foundation R'EQUIP (316030_133802)

**Micro- and Nanotomography (other disciplines of physics)**
Duration from 01.03.2011 to 31.07.2012
Approved amount: CHF 320'000
**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PIs:** Magdalena Müller-Gerbl, Anatomy, University of Basel, Ivan Martin, Tissue Engineering, University Hospital Basel, Philippe Cattin, Medical Image Analysis Center, University of Basel, Christoph Kunz, Department of Surgery, University Hospital Basel

Funding via Swiss National Science Foundation Division CoRe - Interdivisional co-ordination and co-operative research (CR23I2_125406)

**High-resolution 3D imaging of the human brain post mortem (other disciplines of physics)**
Duration from 01.04.2009 to 30.06.2012
Approved amount: CHF 312'968
**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PIs:** Magdalena Müller-Gerbl, Anatomy University of Basel, Klaus Scheffler Max-Planck-Institute Tübingen, Germany, Philippe Cattin, Medical Image Analysis Center, University of Basel, Franz Pfeiffer, Physics Department Technical University Munich, Germany
**Employees:** Georg Schulz, Martha Imholz

Funding via Swiss Nanoscience Institute (DICANS)

**Disposable cantilever sensors for biomedicine**
Duration from 01.11.2007 to 30.06.2012
Approved amount: CHF 500'000
**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PIs:** Uwe Pieles, Institute for Chemistry and Bioanalytics, University of Applied Sciences and Arts Northwestern Switzerland, Jens Gobrecht, Paul Scherrer Institute, Felice Battiston, Concentris GmbH
**Employees:** Jasmin Althaus, Prabitha Urwyler, Joachim Köser

Funding via State Secretariat for Education, Research and Innovation SERI (Cotutelles de thèse, D10_2-06)

**Plasma-activated polymer films for mesenchymal stem cell differentiation**
Duration from 01.10.2010 to 22.05.2012
Approved amount: CHF 10'000
**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Co-PI:** Kirsten Peters, Medical Faculty, University of Rostock, Germany
**Employee:** Jasmin Althaus

Funding via Swiss National Science Foundation Division II - Mathematics, Natural sciences and Engineering (200021_127297)

**High-resolution phase contrast micro computed tomography of soft tissues (Condensed Matter Physics)**
Duration from 01.09.2009 to 31.12.2011
Approved amount: CHF 127'930
**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Employee:** Sabrina Lang

Funding via Swiss National Science Foundation National Center of Competence in Research (NCCR Co-Me) (P2_TP04/09)

**Imaging the tumor vessel tree down to the capillary level (tumor vessel tree)**
Duration from 01.01.2008 to 31.08.2009
Approved amount: CHF 70'700
**PI:** Bert Müller, Biomaterials Science Center, University of Basel
**Employee:** Sabrina Lang
Completed research projects with Bert Müller as Co-PI

Funding via Swiss Nanoscience Institute (NANOCURE)

**Remineralisation of carious lesions by self-assembled, supra-molecular networks and hydroxyapatite nanocrystals**
Approved amount for Biomaterials Science Center: CHF 41'500
**PI:** Uwe Pieles, Institute for Chemistry and Bioanalytics, University of Applied Sciences and Arts Northwestern Switzerland
**Co-PIs:** Bert Müller, Biomaterials Science Center, University of Basel
**Employees:** Hans Deyhle

Funding via Commission of Technology and Innovation (CTI) – (9712.2 PFLS-LS)

**Artificial muscles to control the flow in hollow organs**
Duration from 01.12.2008 to 30.11.2010
Approved amount for Biomaterials Science Center: CHF 220'000
**PI:** Piergiorgio Tozzi, Cardiovascular Surgery, University Hospital Lausanne
**Co-PIs:** Bert Müller, Biomaterials Science Center, University of Basel
**Employees:** Shpend Muskolaj