

>>> ANNOUNCEMENT



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Bioengineered *in vitro* models of tumour microenvironments

ABSTRACT

Cells naturally produce and maintain their own three-dimensional microenvironment *in vivo*, which is critical for their functionality. In disease conditions such as cancer, the existing balance of the natural microenvironment is altered to promote the growth and expansion of malignant cells. Even though the importance of tumour microenvironment in cancer progression is well acknowledged, a vast majority of *in vitro* cancer research studies are performed using two-dimensional monolayer cell cultures, which do not fully mimic the native three-dimensional architecture of the tumour microenvironment. Therefore, there is a great need to bridge the gap between standard two-dimensional cancer research studies and *in vivo* animal models in cancer research. This talk will discuss how to apply biomaterials-based tissue-engineering concepts to design and manufacture biomimetic *in vitro* tumour microenvironments to study the different stages of cancer and its progression.

BIO

- Since 2013** Senior Postdoctoral Research Fellow, Science and Engineering Faculty (SEF), Institute of Health and Biomedical Innovation (IHBI), Queensland University of Technology (QUT), Brisbane, Australia
- 03/2008–05/2012** Head of Unit 'Tissue Engineering and Biomaterials', Centro de Estudios e Investigaciones Técnicas de Gipuzkoa (CEIT), San Sebastian, Spain
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- 01/2008–05/2012** Lecturer, School of Engineering of San Sebastian (TECNUN), University of Navarra, Spain
- 02/2005–02/2008** Visiting Scholar-Postdoctoral Fellow, Department of Bioengineering, University of California, Berkeley, USA
- 11/2004–05/2012** Research Fellow, Centro de Estudios e Investigaciones Técnicas de Gipuzkoa (CEIT), San Sebastian, Spain
- 2004** Ph.D. in Mechanical Engineering, Technical University of Munich (TUM), Garching, Germany
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- 2001** M.S. in Materials Engineering, School of Engineering (TECNUN), University of Navarra, San Sebastian, Spain
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Leibniz Institute of Polymer Research, Max Bergmann Center of Biomaterials Dresden
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