Mario Cannas

Curriculum vitae

PERSONAL DATA

Born in Torino (Italy), on 19.9.1954
Living in Torino, Italy
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BIO AND EDUCATION

Mario F. Cannas is the scientific responsible of the Human Anatomy Laboratory at the U.P.O.(University of Western Piedmont). He is Medicine Doctor (M.D.), and full professor of Human Anatomy. He directs the Research Center for Biocompatibility and Tissue Engineering of the Department of Health Sciences. In his activities are involved Associate Professors and Research Assistants, oriented toward the biocompatibility field, tissue engineering and implantology. The Research Center, that has different cell culture facilities (static and dinamic), and materials testing systems (Instron) and bioreactors (BOSE), oriented towards the tissue engineering, principally in the cardiovascular and orthopaedic areas of research.

UNIVERSITY CAREER

1984-1990	Researcher, University of University of Torino
1991-to day	Full Professor of Human Anatomy, University of Oriental Piedmont

ACADEMIC POSITIONS

2004-2008	Member of the Board of Directors, University of Oriental Piedmont

SCIENTIFIC POSITIONS

2002-	Expert of the European Commission
2014	External Expert of the European Commission BRITE
2007-actually	Revisor of MIUR (for FIRB, SIR, and PRIN programs)
2005-actually	Expert del Research Grants Council, Hong Kong
2011-actually	Expert of Queen's University a Belfast, UK,
2011-actually	Expert of Furlong Research Charitable Foundation, UK
2015-	Expert Horizon 2020 (Advisory Group, EX 2014D192156)

MAIN FIELDS OF INTEREST

1. Biocompatibility
2. Tissue Engineering

CURRENT ISSUES OF RESEARCH

1. Regulatory factors for osteoblasts and osteoclasts and its use in tissue engineering. :

Human primary osteoclasts and –blasts differentiation and bone resorption activity with different regulatory factors are studied, for tissue engineering (orthodontic and orthopaedic) applications. Also the complex interrelated regulatory pathways involved are studied.

2. Cell lines from adipose tissue used in regenerative medicine. :

Isolated, expanded, and differentiated (in vitro) cells from adipose tissue are studied. This line is oriented also to determine whether adipose tissue can act as a scaffold for cells naturally present at their anatomical site, or used as scaffold to deliver cells to the impaired area

3. Cytoscheleton in cells under mechanical forces. :

Mechanical forces play an important role in the organization, growth and function of tissues. Dynamic extracellular environment obtained with instruments (Instron), or bioreactor (as Bose), affects cells behavior by modifying their orientation and their cytoskeleton. A substrate deformation induces a dynamic change in cytoskeleton able to modify the entire morphology of the cells.

4. Experimental models for cardiovascular tissue-engineering approach

De-cellularized native tissue is used for the repair and replacement of blood vessels. This method uses blood cells on biological scaffolds, to maintain the complex three-dimensional structure of the extracellular matrix: biomechanical properties of the native tissues are reserved, without re-stenosis.

TOP FIVE PAPERS

1. BOCCAFOSCHI F., MOSCA C., BOSETTI M., CANNAS M.: (2011). The role of mechanical stretching in the activation and localization of adhesion proteins and related intracellular molecules. JOURNAL OF CELLULAR BIOCHEMISTRY, vol. 112(5), p. 1403-1409, ISSN: 0730-2312

2. RENO' F., CANNAS M.:(2006). UHMWPE and vitamin E bioactivity: An emerging perspective. BIOMATERIALS, vol. 27, p. 3039-3043, ISSN: 0142-9612

3. BOSETTI M., CANNAS M. : (2005). The effect of bioactive glasses on bone marrow stromal cells differentiation. BIOMATERIALS, vol. 26, p. 3873-3879,

4. BOSETTI M., MASSE' A., TOBIN E., CANNAS M.: (2002). Silver coated materials for external fixation devices: in vitro biocompatibility and genotoxicity. BIOMATERIALS, vol. 23, p. 887-892

5. CANNAS M., BERTINI G., PEVERARO A., QUAGLIA F.: (1982). Il Riflesso di Hoffmann: proposta di un modello grafico per lo studio e la diagnosi delle compressioni radicolari . CHIRURGIA DEGLI ORGANI DI MOVIMENTO, vol. 67, p. 687-691

FURTHER INFORMATION

1883-84 Assistant at the Orthopaedic Clinic, CTO Hospital, Torino
1987-88 Visiting Professor at Medical College of Ohio, Toledo, USA.