Michela Bosetti

BIO AND EDUCATION

Master degree in Pharmacy (110/110 cum laude) and specialized in Toxicology at the University of Milan; after 4 years of PhD in Molecular Medicine, enrolled as research leader group and assistant Professor in Human Anatomy at the University of Eastern Piedmont and from 2015 as Associate Professor at the School of Pharmacy.
Qualified as Full Professor in Human Anatomy (2012, DD n. 22/2012)
Qualified as Full Professor in Human Anatomy (2023 DD n. 553/2021)

Coauthor of 100 scientific publications (82 in international journals).
Overall impact factor >200, citations >2600, *h*-index 25.
PubMed: https://www.ncbi.nlm.nih.gov/pubmed/?term=%22Bosetti+M%22
Scopus: https://www.scopus.com/authid/detail.uri?authorId=7003556339

Most relevant collaborations:
- BIOSS and Institute for Macromolecular Chemistry, Freiburg (Prof. P. Shastri)
- Inserm U957: lab. Physiopathologie de la Résorption Osseuse, Nantes (Prof. P. Layrolle)
- Istitute of Protein and Biochemistry, CNR Napoli (Prof. G. Peluso, Prof. U. Galderisi)
- Biomedical Materials Group, School of Parmacy, Brighton (Prof. M. Santin)
- Corin Group, Gloucester (Dr. S. Alfonsi, CEO)
- Lipogems spa, Milan (Prof. C. Tremolada)
- Diabetes Research Institute, University of Miami, FL, USA (Prof. C. Ricordi)

Member of the Editorial Board of Journal CellR4. Reviewer for: Acta Biomaterialia; Tissue Engineering; J. Tissue Eng. Regen. Med.; Journal Cellular Physiology, Connective Tissue Research.

UNIVERSITY CAREER

2015 -present Associate Professor of Human Anatomy, University of Piemonte Orientale, School of Pharmacy 2001-2014 Assistant Professor of Human Anatomy, University of Piemonte Orientale, School of Pharmacy 1994-2000 Research contract, University of Piemonte Orientale, School of Medicine

MAINFIELDS OF INTEREST

Her research interests include the development and evaluation of novel biomaterials and tissue regeneration of bone and cartilage
Keywords: Regenerative Medicine; Tissue Engineering; Biocompatibility; Cartilage; Bone; Nanoparticles; Arterial skeletonization

CURRENT ISSUES OF RESEARCH

1. Microfragmented adipose tissue (lipoaspirate) as autologous natural scaffold rich in stem cells to be used in tissue-defects repair. Studies on its activity as cell-based therapy and as paracrine factor in regenerative medicine applications and studies on its therapeutic potential as antibacterial and analgesic factor.
2. Studies on the activity of growth factors on the differentiation of human bone cells (osteoblasts, osteoclasts and chondrocytes) and on human mesenchymal stem cells (from bone marrow and adipose tissue).
3. Development of injectable active scaffolds for in-situ tissue regeneration (medicated with growth factors or nanoparticles binding miRNA or siRNA).
4. Role of mechanical stretching and inflammatory factors on bone cells differentiation and activity: bone development in vessel wall.
5. Citotoxicity, genotoxicity, biocompatibility and bioactivity of materials used in surgery.
6. Inflammatory activity of biomaterials (chemiluminescence activation, cytokine release, complement activation, MIF test, morphological evaluations).

CURRENT FUNDED PROJECTS

1. 2026_2028 SUST-STAM (INTERREG Italia-Svizzera)

2. 2023-2025: principal investigator in the project “Is it possible to improve the success rate of cellular therapy based on MSCs” (PRIN-2022)
3. 2019-2020: principal investigator in the project “High added-value bioactive polyphenols recovered from waste of olive oil production” (Cariplo-Economia Circolare)
4. Local Grant 2018 (ex 60%) “Lipoaspirate as biological scaffold with antimicrobic and bioactive properties in wound healing”
5. PRIN 2012 “Nanotechnology to change the programs of bone development in the vessel wall for the prevention and treatment of pathologies associated with ectopic arterial calcification”

TOP FIVE PAPERS

1. M. Bosetti, A. Borrone, A. Follenzi, F. Messaggio, C. Tremolada, M. Cannas “Human lipoaspirate as autologous injectable active scaffold for one-step repair of cartilage defects” Cell Transplantation,
2. A. Calarco, M. Bosetti, S. Margarucci, L. Fusaro, E. Nicolì, O. Petillo, M. Cannas, U. Galderisi, G. Peluso “The genotoxicity of PEI-based nanoparticles is reduced by acetylation of polyethylenimine amines in human primary cells” Toxicology Letters, 218:10-17 (2013).
3. M. Bosetti, F. Boccafoschi, M. Leigheb, M. Cannas, “Effect of different growth factors on human osteoblasts activities: a possible application in bone regeneration for tissue engineering” Biomol Eng 24:613-618 (2007).
4. M. Bosetti, M. Cannas, “The effect of bioactive glasses on bone marrow stromal cells differentiation” Biomaterials, 26:3873-3879 (2005).
5. M. Bosetti, A. Massè, E. Tobin, M. Cannas, "Silver coated materials for external fixation devices: in vitro biocompatibility and genotoxicity", Biomaterials, 23, 887-892 (2002).

AWARDS

1994: Grant for the academic career from CRV Foundation
1995: Award for the best presentation of young researcher at the Society of Biomaterials Congress.
1999: Research fellow and deputy in BRITE-EURAM III Project BE-97-4384; BRPR-CT97-0494 (Bioactive phospholipid-based osteointegrative orthopaedic biomaterials).

