

CURRICULUM VITAE

Jessika Bertacchini

Personal Statistics

Date of Birth: April 3rd, 1980

Place of Birth: Pavullo (MO)

Nationality: Italian Citizen

Education

2008: PhD Human Morphological and Molecular Sciences, University of Bologna, Italy.

2004: MS in Pharmaceutical Biotechnology (University of Modena, Italy).

Position Held

2019 - Associate Professor BIO/16-Anatomy, University of Modena and Reggio Emilia, Italy.

2016 - 2019: fixed-term researcher (RTD/B) BIO/16-Anatomy, University of Modena and Reggio Emilia, Italy.

2008 - 2016: post-Doc researcher Signal Transduction Laboratory, Section of Histology, University of Modena and Reggio Emilia, Italy.

2009: visiting scientist Signal Transduction Unit, Beth Israel Deaconess Medical Center, Department of Pathology, (Boston, MA, U.S.A).

2008: visiting scientist George Mason University, Center for Applied proteomics and molecular medicine (Manassas, VA, U.S.A).

2007: research Fellowship from the Italian Ministry of University and Research (FIRB), (Research Project: Nuclear Signaling: Functional Proteomics Analysis of Specific Inositide-dependent Substrates).

2005 - 2008: PhD Human Morphological and Molecular Sciences, Department of Human Anatomical Sciences, University of Bologna, Italy (PhD Thesis Research Project: Lamin A Ser404 Is a Nuclear Target of Akt Phosphorylation in C2C12 Cells).

Societies

SIAI - Italian Society of Anatomy and Histology Italian

ABCD - Italian Association of Cell Biology and Differentiation

Award

2011 - AACR'S San Francisco meeting: Targeting PI3K/mTOR Signaling in Cancer conference - Scholar-in-Training Award.

Organizer of the following workshop

2013 - Phosphorylation, Signaling and Disease: Targets and Targeting, Modena, Italy.

Invited Lecturer "Feedbacks and adaptive capabilities of signaling networks in Acute Myelogenous Leukemia"

Professional affiliations

CNR Institute of Molecular Genetics "Luigi Luca Cavalli-Sforza", Unit of Bologna, 40136 Bologna, Italy;

Academic service

2021- Member of the Council of the Department of Surgery Medicine Dentistry and Morphological Sciences with interest in Transplantation, Oncology and Regenerative Medicine – University of Modena and Reggio Emilia.

2021- Member of the Scientific Research Committee of the Department of Surgery Medicine Dentistry and Morphological Sciences with interest in Transplantation, Oncology and Regenerative Medicine – University of Modena and Reggio Emilia.

2022-2023-2024 Vice-president of the degree course in Dental Hygienist, University of Modena, and Reggio Emilia.

2024-2025 Member of the Technical-Scientific Committee, PRIN 2022 PNRR projects.

2025 Member of the Register of GEV Evaluation Experts: VQR 20-24

Academic teaching activity

2018-

Holder of Human Anatomy teaching for:

- ✓ Obstetrician (3CFU)
- ✓ Dental Hygiene Degree (3CFU)
- ✓ Cardiovascular perfusion Degree (3CFU)
- ✓ Nursing (4CFU)

Public Engagement activity

2021- Interaction activity with the school. Anatomy laboratory for Summer Camp 2021

2022- Health Protection Programme. Anatomy Bases and Clinical Contexts. Volunteer Ambulance Association. ANPAS

2023-2024-2025: Interaction activity with the school. Project: meeting with the expert “Journey into the Human Body”. Secondary School.

Advisor activity

2017-2022: 3 PhD Students in Molecular and Regenerative Medicine program - University of Modena and Reggio Emilia.

2019-2022: 2 Postdoctoral Fellow, Department of Surgery Medicine Dentistry and Morphological Sciences with interest in Transplantation, Oncology and Regenerative Medicine – University of Modena and Reggio Emilia.

2019-2021: 1 MSc in Pharmaceutical chemistry and technology, University of Modena and Reggio Emilia.

2017-2021: 4 BSc in Biotechnology, University of Modena and Reggio Emilia.

2022-2023: 4BSc in Nursing Degree Course, University of Modena and Reggio Emilia.

PhD faculty

Component of the Faculty of the PhD School in Molecular Biology and Regenerative Medicine. PhD student’s supervisor. University of Modena and Reggio Emilia, Italy.

Editorial activity

2018: Special Issue Lead Guest Editor “Bone Cells and Related Interactions”, Biomedicines.

2020: Special Issue Lead Guest Editor “Bone Tissue Regeneration: Biology and Strategies”, Biomedicines.

2022: Craniofacial Biology and Dental Research, Frontiers in Physiology.

2023-2025: Associate Editor, Cellular Biochemistry, Frontiers Molecular Biosciences.

Grants

2015 PI of the Project “Targeting PI3K/Akt/mTor signaling pathway in Acute Leukemia” in collaborazione con Najmaldin Saki, Ph.D. -Assistant Professor of Hematology & Blood Banking, Head Of Clinical Laboratory Department, Allied Health Sciences School, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

2016 Co-PI NETFOLD PROJECT; ITALIA-ISRAELE.

2017: PI of the FAR2017 (Local Department Project); University of Modena and Reggio Emilia. Title: Functionalization of 3D-printed constructs engineered for double-use: i) recovering “critical-size” bone defects, ii) studying cell signaling modifications involved in bone regeneration.

2018: Unit PI of the project MIUR-PRIN 2017. Title: “Epigenetic Regulation of Nuclear Inositides in Bone Marrow Microenvironment and MDS/AML Progression: New Targets, Therapy and Drugs”.

2019: Co-PI of the FAR 2019, (Local Department Project); University of Modena and Reggio Emilia. Title: Microfluidics-based 3D cell culture models for bone regeneration.

2021: Co-PI of the Project CARISBO (Local Foundation) Title: “New strategies in Osteosarcoma research”.

2023: Researcher staff member in the Cure-CMD 2022 Research Grant. Title: Targeting Primary Cilium-Related Molecular Pathways to Correct Tendon Cell Defects in Collagen VI Congenital Muscular Dystrophies; Congenital Muscular Dystrophy Association”.

2024: Unit -PI of the project MIUR-PRIN 2024 Title: “ENHANCE: Engineering of nanoparticles by harnessing the biomolecular corona for cancer therapy”

Research activity

The overall research activity of Jessika Bertacchini in a temporal succession has involved the fields of cell signaling focused on RAS - PI3K/Akt/mTOR - MAPK and Wnt signaling in diverse pathologies. Cellular signaling is a complex ballet of molecules interacting and stimulating surrounding proteins, lipids, and ions, resulting in cytoskeletal reorganization, modulation of differentiation and induction of gene expression. During the first years of her scientific path, the research activity was focused on morphological evaluation of nuclear stability and the analysis of cellular signaling mechanisms in muscular physiology, carrying to the identification of a regulatory mechanism between the PI3K/Akt pathway and nuclear Lamins. The expertise on cell signaling was then addressed in the cancer field, mainly looking to the hematological malignancies, colon and prostate tumors. In particular, the focus was the analysis of the mechanisms downstream the resistance development to chemotherapeutic drugs and to RTK's and PI3K inhibitors. Recently, the colon cancer was investigated from two point of view, first one about the prognostic value of autoantibody in a large cohort of patients and the secondly regarding a proposal of an alternative approach for integrative medicine in colon cancer associated treatments. Thanks to an interdisciplinary scientific approach, the research gradually moved to the study of the molecular signaling events on cell proliferation and differentiation in numerous medical applications, including medical devices, tissue engineering, and regenerative medicine. To control cellular behavior at the biomaterial or scaffold interface, many studies have employed surface modifications that mimic the extracellular matrix. In particular, the signaling mechanism downstream the Wnt pathway were been investigated in physiological conditions and upon drugs treatment inducing aging disease. Of note, recently the focus is addressing to the analysis of new molecular regulators acting in the cross talk between muscle and bone, two of the mainly tissues involved in regeneration processes.

Bibliometric indexes (Scopus Source)

Publications: 53
H-Index: 20

Modena, 10/07/25

Firma
A handwritten signature in black ink, written over a horizontal line. The signature is cursive and appears to read "Jeko Soeelmu". Above the signature, the word "Firma" is printed in a small, sans-serif font.

