

Tullia Maraldi

Biographical

Born: 10/04/1976 – Bologna - Italy
Nationality: Italian
Marital status: married

Email: tullia.maraldi@unimore.it

Scientific research career

24/11/2014 Scientific Qualification as Associate Professor in Histology (BIO17)

2021 Scientific Qualification as Full Professor in Histology (BIO17)

Current position

Associate Professor in Histology since September 2021

Education

1994 Classical High School “L. Galvani”, Bologna, Italy,
High School Diploma
2000 University of Bologna
Degree in Pharmaceutical Chemistry and Technology, graduation mark
110/110
2005 PhD in Biochemistry 21/06/2005 Department of Biochemistry “G.
Moruzzi” University of Bologna

Attended courses

2002 Institute of Normal and Pathological Cytomorphology, CNR of Bologna
"Optical and confocal microscopy"
2002 Institute of Normal and Pathological Cytomorphology, CNR of Bologna
"Image Processing"
2003 Real Time PCR & Genomic Assays Applied Biosystem - Bologna
2003 Basic Electrophoresis Seminar Tour Amersham Biosciences - Bologna
2004 Sunrise Free Radical School dell'XI Annual Meeting of the Society for
Free Radical Biology and Medicine
2008 Course Syllabus - Bench to Bedside Cancer Research- Catania
2022-National legislation and ethics level 1 (modules 1 and 2) DM 5/8/2021
2022-Biology and management of laboratory animals (modules 3.1,4,5,6.1,7)
DM 5/8/2021
2022-Ethics and project concept (modules 9,10,11) DM 5/8/2021

Teachings

She holds the part of Histology for:
the Degree Course in Medicine and Surgery (3 CFU)
Dentistry and Dental Prosthetics (4 CFU)
Principles of regenerative medicine for Bioengineering for innovation in
medicine (3 CFU) at the University of Modena and Reggio Emilia.

Research experiences	1999/2000 Thesis at the Department of Biochemistry “G. Moruzzi”, University of Bologna 2005 4 months stay in the Molecular Signalling Laboratory directed by Dr. Martin Bootman in The Babraham Institute, Cambridge, UK.
Scientific techniques and skills acquired	Cell culture technique, UV-VIS spectroscopy, fluorescent spectroscopy, fluorescent microscopy, cytofluorimetry, immunoblotting, immunoprecipitation, 2DE, transfection techniques, radiochemical enzyme assay, laser confocal microscopy, PCR, RT-PCR.
Affiliation to Scientific Societies	Società Italiana di Biochimica dal 2003-2006 Società Italiana di Anatomia e Istologia since 2012 Oxygen Club of California in 2012 Società Italiana di Istochimica since 2022
Affiliation to Doctoral Schools	from 2009 to 2013 she joined the doctoral school in "Biomedical sciences - PDFR Human and molecular morphological sciences" of the University of Bologna as external teacher. since 2017 she adheres to the doctoral school in "Clinical and experimental medicine (CEM)"
Activity of Project Reviewer	2020 auditor for UK research and innovation funded projects 2018 MIUR auditor (REPRISE)
Scientific Publications	The research led to 84 scientific publications in international journals reported on PubMed and more than 50 communications at national and international congresses. She has received 4 awards for her scientific activity and has been invited on 11 occasions to present her studies orally. h-index = 30 (source Scopus); Total IF=335 Results of the VQR 2011-2014: the only product to present, as the three-year period includes a period of maternity leave, is excellent.
Awards for Research Activities	2025-The scientific contribution to the XXIV Convegno ed Assemblée Collegio dei Docenti di Istologia ed Embriologia Umana CROSSTALK AMONG NEURONS, MUSCLE AND BONE: IN VITRO MODEL OF TRIPLE CULTURE Martina Gatti, Francesca Beretti, Carla Palumbo, Matilde Y. Follo, Tullia Maraldi was the Winner of a Scholarship 2015-The scientific contribution to the 69 th National Congress of the Italian Society of Anatomy and Histology BILAYERED SCAFFOLD COLONIZED WITH DENTAL PULP STEM CELLS FOR OSTEOCHONDRAL TISSUE ENGINEERING APPLICATION Laura Bertoni, Manuela Zavatti, Elisa Resca, Tullia Maraldi, Francesca Beretti, Gianluca Carnevale, Alessandra Pisciotta and Anto De Pol was the Winner of a Scholarship 2007- The scientific contribution to the 52 th National Congress of the Italian Society of Biochemistry and Molecular Biology, entitled VEGF INDUCED ROS GENERATION FROM NAD(P)H OXIDASES PROTECTS HUMAN

**Oral
Communications
at National and
International
Meetings**

LEUKEMIC CELLS FROM APOPTOSIS Tullia Maraldi, Cecilia Prata, Diana Fiorentini, Laura Zambonin, Laura Landi and Gabriele Hakim, was the winner of a scholarship

2001- The scientific contribution to the VIII National Congress of the Italian Society of Cardiovascular Research, entitled INVOLVEMENT OF PKC IN GLUCOSE TRANSPORT ACTIVATION BY SIMULATED ISCHEMIA IN H9C2 VENTRICULAR MYOBLASTS Giulio Agnetti, Emanuele Giordano, Diana Fiorentini, Tullia Maraldi, Francesca Bonavita, Francesca Bonafè, Chiara Gamberini, Gabriele Hakim, Laura Landi, Carlo Guarnieri and Carlo Marcello Calderara was the Winner of a Scholarship

National seminars:

16th National Meeting "A. Castellani" of PhD students in Biochemistry, Brallo di Pergola (PV) 10-13 June 2003 "Acute regulation of passive glucose transport in cell lines of megakaryocytic origin"

SIB Congress Ferrara, 15-18 September 2003 "Involvement of intracellular calcium in the modulation of GLUT1 activity in M07 cells"

SIB Congress 2005 Riccione "Induction of apoptosis in a human leukaemic cell line by a combined superoxide dismutase/catalase mimetic"

SIB Congress 2006 Riccione "Regulation of ROS-induced Ca²⁺ signaling by Bcl-2"

STEM CELL Research Meeting Ferrara 20 - 22 June 2012 "Human Amniotic Fluid and Dental Pulp Stem Cells supported by collagen scaffold repair critical size bone defects in vivo promoting neo-vascularization"

2014 Workshop in Reggio Emilia at the Arcispedale S. Maria Nuova "Origin, conservation and use of adult human stem cells: what future?"

2020 Conference "Morphology and its surroundings – 3rd national meeting" 26 September 2020 – "In vitro therapeutic effect of Amniotic Fluid Stem Cells extracellular vesicles on 5xFAD model of Alzheimer disease"

2021 March 30 webinar on Aging and Stem Cells organized by Stem Cell Research Italy- "Oxidative Stress and Neuroinflammation in Alzheimer's Disease: In Vitro Therapeutic Effect of Amniotic Fluid Stem Cells Extracellular Vesicles"

International seminars:

February 2005 Babraham Institute, Cambridge, UK "Glucose transport in different cell systems".

28 April 2009 UCL Institute of Child Health, London, UK "Osteogenic Differentiation on three dimensional biomaterials of stem cells isolated from different sources".

November 11, 2021 International Webinar on Amniotic Fluid and Placental Membranes as Sources of Stem Cells. "Oxidative Stress and neuroinflammation in Alzheimer's Disease: In Vitro Therapeutic Effect of Amniotic Fluid Stem Cells Extracellular Vesicles"

8-10 June 2022, Stem Cell Research Italy, Genoa ""Extracellular vesicles derived from amniotic fluid stem cells protect from oxidative stress occurring in degenerative diseases".

Organization of national and international seminars:

November 11, 2021 International Webinar on Amniotic Fluid and Placental Membranes as Sources of Stem Cells.

SIAI Congress Modena, 11-13 September 2023

**National
Collaborations**

The research created during the doctoral period carried out at the Department of Biochemistry of Bologna has allowed to maintain a long-lasting collaboration with prof. Silvana Hrelia, prof. Cecilia Prata and prof. Cristina Angeloni (Alma Mater Studiorum): studies focused on the role of reactive oxygen species and antioxidant molecules in different tissues have led to numerous publications.

Thanks to the contacts established during the doctoral period and, at a later time, being part of the INNATA network (Italian Network for Perinatal Cells) collaborations have been established both with groups of histologists, as the one directed by prof. Laura Bonsi (Alma Mater Studiorum), with the one directed by prof. Roberta di Pietro (University of Chieti) and with prof. Giampiero La Rocca (University of Palermo), both with researchers in related scientific sectors such as anatomy, with prof. Matilde Y. Follo (Alma Mater Studiorum) and with prof. Valentina Russo (University of Teramo). the network of collaborations has extended to other scientific fields such as medical genetics (prof. Ivana Antonucci, University of Chieti), analytical chemistry (prof. Barbara Roda, Alma Mater Studiorum), biochemistry (prof. Marco Giorgio, University of Padua) and applied biology (prof. Ornella Parolini, Catholic University, Rome). Besides leading to the production of collaboration publications, these relationships have allowed the presentation of projects of a national character, among which two PRIN projects were financed.

**International
Collaborations**

Thanks to the contacts established during study and research stays at foreign institutions and subsequent collaborations, Prof. Maraldi has maintained profitable scientific relations with international research groups. These relationships, besides leading to the production of publications in collaboration, have allowed the doctoral students followed by the doctor (as co-tutor) to spend mobility periods in the following prestigious research laboratories:

Babraham Institute, Cambridge, Uk, Dr. Martin Bootman

Ulc, Institute of Child Health, Uk, Dr Paolo De Coppi (Phd Elisa Resca)

European Research Institute of Biology and Aging, Groningen, NL, Prof. Marco De Maria (PhD student Francesca Casciaro)

Stem Cell Institute, Leuven, Belgium, Prof. Maurilio Sampaolesi (PhD student Martina Gatti)

Editorial Board membership

Since 2011 she has been a member of the Editorial board for the World Journal of Stem Cells

Since 2011 Lead Guest Editor of a Special Issue on “Dietary Polyphenols and Their Effects on Cell Biochemistry and Pathophysiology” for Oxidative Medicine and Cellular Longevity

Since 2013 Guest Editor for a Special Issue on "Redox Signaling in Degenerative Diseases: From Molecular Mechanisms to Health Implications" for BioMed Research International

Since 2014 Lead Guest Editor of a Special Issue on “ROS and Stem Cells” for Oxidative Medicine and Cellular Longevity

Since 2015 she has been a member of the Editorial board for Oxidative Medicine and Cellular Longevity

2020 Guest Editor of a Special Issue on "Strategies to Counteract Oxidative Stress and Inflammation in Chronic-Degenerative Diseases" for the International Journal of Molecular Sciences. The second edition opened in 2021

Since 2020 Guest Editor of a Special Issue on " Amniotic Fluid and Placental Membranes as Sources of Stem Cells: Progress and Challenges" for the International Journal of Molecular Sciences. The second edition opened in 2021.

Since 2021 she has been a member of the Editorial board for the International Journal of Molecular Sciences.

Since 2023 she has been a member of the Editorial board for Biomedicines and managed as Gest Editor a Special Issue “Advanced Research of Stem Cells for Regenerative Medicine”.

Since 2024 Guest Editor of a Special Issue on Frontiers in Cell and Developmental Biology, section Stem Cell Research: “Stemness and ROS: Redox Signaling and Regulation in Stem Cell Biology”

Funded Scientific Projects

2000: Young Researchers Project: Transduction of the redox-dependent signal and regulation of passive glucose transport - Project Manager

PRIN 2002 protocol 2002 2038342_003 24 staff involved

PRIN 2004 protocol 2004 038243_004 24 staff involved

PRIN 2006 protocol 2006 033539_005 staff involved

2008 Manodori Foundation of Reggio Emilia – prot. n. 893 – “Mater, ZAR1, FOXL2: fundamental proteins in the maturation of the ovarian follicle and in the early stages of embryonic development. - staff involved

Prin 2009 prot. 200938xjla_002: Interactions between inositide-dependent signaling and reactive oxygen species in the nucleus: from experimental to clinical – research unit manager

2009 ISS agreement n. 527/b4/2 ITALY-USA program "Oncological pharmacogenomics" - staff involved

FIRB program agreements 2010 RBAP10Z7FS_003: "Multipotent stem cells isolated from the human extrahepatic biliary tree and their differentiation into liver and pancreatic cells: pre-clinical studies and potential clinical applications" - staff involved

2010 - Arcispedale S.Maria Nuova Reggio Emilia "Indicators of oocyte quality evaluated through ultrastructural and cytochemical proteomic techniques for the preservation and use of germinal cells in medically assisted procreation (map)". - staff involved

2011 ISS – agreement n. 527/tr1.a – “Melanoma initiator cells: identification of specific sub-populations of tumor and biological characterization through proteomics” - staff involved

2016 FAR grant of the university department - "Optimization of the cryo-conservation and expansion of stem cells from amniotic fluid aimed at clinical applications" - PI

PRIN 2017 protocol n 2017rsafk7 – “Immunomodulatory properties of the amniotic stromal cell secretome: from multi-omics profiling to nanotechnology-aided delivery for controlled release in osteoarthritis” – co-PI

Miur Fund for Financing Basic Research activities from 01/11/2017 - PI

FAR 2017 "The c-Met signal pathway as a potential diagnostic and therapeutic target for some types of metastasizing melanoma"- co-PI

2018 FAR grant of the university department – research fellowship holder on the topic “Effect of exosomes of amniotic fluid stem cells on Alzheimer's disease progression and A β -induced neuronal death” - PI

2020 Carpi foundation – “Effect of exosomes of amniotic fluid stem cells on Alzheimer's disease” (prot. n. 2020.0062) - PI

2021 FAR grant of the university department – Microglia as a therapeutic target to contrast the progression of Alzheimer's disease: effect of exosomes secret by amniotic fluid stem cells. - PI

2021 "Call for the financing of mobility actions for young researchers of the university of Modena and Reggio Emilia 2021" responsible and owner of the funding used by Dr Gatti for a research period in Belgium.

2021 Third university mission - CELMET project - From a cell to human tissues: metamorphosis of a stem cell - PI

2022 FAR grant of the university department for equipment. – co-PI

2022 FAR grant of the university department for research project "Neurotoxic effects of the coronavirus: potential implications in the worsening of the symptoms of Alzheimer". – PI

2023 FAR grant - “Nuclear envelope remodeling through lamin A modulation as a novel therapeutic strategy in pediatric bone sarcoma malignancy”- co-PI

2023 FAR FOMO: Crosstalk among neurons, muscle and bone on a chip: impact of stem cell derived extracellular vesicles on osteosarcopenia. - PI

2024 FAR grant of the university department – Amniotic fluid stem cells from the second and third trimester: stem potential, proteome and MiRNome analysis”- PI

2025 FAR grant of the university department for equipment. - PI

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July 2026

