PERSONAL INFORMATION

Marta Checchi

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Born date 27/04/1988 | Nationality Italiana

WORK EXPERIENCE

From november 2020 to today — TECHNICAL ADMINISTRATIVE STAFF (PTA cat. funzionari F0 - settore 8)
University of Modena e Reggio Emilia - Department of Biomedical, Metabolic and Neural Sciences - Section of Human Morphology

March– September 2019 — Collaborator
University of Modena e Reggio Emilia - Department of Biomedical, Metabolic and Neural Sciences - Section of Human Morphology

October 2015 – February 2019 — PhD Student
University of Modena e Reggio Emilia - Department of Biomedical, Metabolic and Neural Sciences - Section of Human Morphology

May – July 2018 — Internship for PhD Student
Bioingénierie Tissulaire (BioTis) INSERM U1026 – University of Bordeaux – France

March – Dicember 2014 — Collaborator
Rizzoli Orthopaedic Institute (IOR) - Codivilla Putti Research center - Laboratory for preclinical and Surgical Studies - Bologna

EDUCATION AND TRAINING

October 2015 - February 2019 — PhD in Molecular and Regenerative Medicine — EQF 8
University of Modena and Reggio Emilia – Modena (Italy)

- **Experimental doctoral thesis** entitled "In vitro and in vivo characterization of the novel natural biomaterial, the" scleral ossicles ", for the improvement of bone regeneration processes" (Title awarded February 20, 2019).

January 2016 — Professional qualification examination for Biologist
University of Parma – Parma (Italy)

2012 - 2014 — Master's Degree in Molecular and Industrial Biotechnology class LM08 Industrial Biotechnology — EQF 7
Alma Mater Studiorum - University of Bologna – Bologna (Italy)

- **Experimental thesis** entitled "Micro and nano-structuring of surfaces for the control of cell growth" (Title achieved December 19, 2014)

2007 - 2012 — Bachelor's Degree in Biotechnology - class 1 Biotechnology — EQF 6
Alma Mater Studiorum - University of Bologna – Bologna (Italy).

- **Experimental thesis** entitled "Cryoloop and cryotop: evaluation of the efficiency of two different supports" conteinerless" in the vitrification of cat embryos" (Title obtained March 21, 2012).

2002 - 2007 — High School Diploma — EQF 4
“Niccolò Copernico” State Scientific High School – Bologna

PERSONAL SKILLS

Mother tongue: Italian

Other language

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
Inglese				
B2	B2	B2	B2	B2

Exam "Cambridge English - ESOL Skills for Life (writing) Entry 3 QCF"
Exam – B2 level

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

- Preparation of scientific report scientifici for field expert and non;
- Collaboration in the drafting of scientific projects;
- Preparation of theoretical/practical internships for students and short orientation seminars;
- Collaboration in the organisation of congress events for an audience of specialists in bone regenerative medicine;
- Correlator of three-year/master's theses;
- Drafting of laboratory protocols including notions of safety;
- Reporting of scientific projects;
- Review of scientific articles.

Job-related skills

- Cell culture:
  - Maintenance, processing and differentiation of cell lines and primary cultures;
  - Biocompatibility and cell viability assays on materials;
  - Handling of ex-vivo material;
- Molecular biology techniques
  - RNA extraction and quantification from cells and tissue;
  - Protein extraction, SDS-PAGE and western blot;
  - Sample preparation for mass spectrometry analysis and data processing using proteomics and interactomics databases.
- Microscopy techniques:
  - Fluorescence and immunofluorescence light microscope;
  - Scanning Electron Microscope (SEM Hitachi S4000 and ESEM QUANTA200-FEI) and related sample preparation;
  - Stereomicroscopy.
- Histology techniques:
  - Processing of biological samples, paraffin embedding, microtomy and histological and immunohistochemical staining.
- Chorio-allantoic Membrane (CAM) assay:
  - Preparation of in ovo angiogenic assays and subsequent data analysis.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Basic user	Independent user

Levels: Basic user - Independent user - Proficient user
Digital competences - Self-assessment grid

Details of the software used

- Excellent command of Microsoft Office suite tools (word processor, spreadsheet, presentation software) – ECDL Diploma 7 modules
- Excellent knowledge of Microsoft Windows XP, Vista, 7, 8 and 10 operating systems; good knowledge of iOS operating systems
- Excellent knowledge and use of web applications, email services and scientific content research
- Good command of "Lightroom" digital processing programs acquired as an amateur photographer; good knowledge of "ImageJ", Nikon "NIS Elements" and Biorad "Image Lab" image analysis/acquisition programs
- Good familiarity with data structure graphic analysis programs: "Origin" and GraphPad Prism"
- Use of Panther, David and String proteomics/interatomics databases.

Driving licence A3 e B

ADDITIONAL INFORMATION

Publications The research activity led to the publication of 13 articles in international journals, 1 chapter in an international book and 1 article in national journal
h-index: 5 (Scopus) – 49 Citations

- Colucci G, Sacchi F, Checchi M, Barbalinardo M, Chiarini F, Bondioli F, Palumbo C, Messori M. Development and 3D Printing of AESO-Based Composites Containing Olive Pit Powder. 2025 J. Compos. Sci. 9(9):479. https://doi.org/10.3390/jcs9090479
- Barbalinardo M, Ferretti M, Stanzani V, Chiarini F, Zanoni I, Paganelli F, Checchi M, Truocchio S, Corradini M, Lo Vasco V.R, Cavani F, Reggiani Bonetti L, Bellucci D, Cannillo V, Palumbo C. Magnesium and strontium-enriched bioactive glasses: superior biocompatibility and angiogenesis, beyond the gold standard. Biomat. Adv. 177:214379 https://doi.org/10.1016/j.bioadv.2025.214379
- Anesi, A.; Negrello, S.; **Checchi, M**.; Di Bartolomeo, M.; Salvatori, R.; Cavani, F.; Palumbo, C.; Ferretti, M. Piezosurgery versus Reciprocating Saw: Qualitative Comparison of the Morphology of Cutting Surfaces in Ex Vivo Human Bone. 2024 *Appl. Sci*., 14, 2203. https://doi.org/10.3390/app14052203
- Corradini M, **Checchi M**, Benincasa M, Ferretti M, Cavani F, Palumbo C, et al. Specific Subcellular Localization of Phosphoinositide-Specific Phospholipase C enzymes in Different Human Osteosarcoma Cell Lines. 2024 *J. Cell Signal*. 5(1):1-9 https://dx.doi.org/10.33696/Signaling.5.107
- Palumbo, C.; Sisi, F.; **Checchi, M**. CAM Model: Intriguing Natural Bioreactor for Sustainable Research and Reliable/Versatile Testing. 2023 *Biology*, 12:1219. https://doi.org/10.3390/biology12091219
- Ferretti, M., Cavani, F., Lo Vasco, V.R., **Checchi, M**., Truocchio, S., Davalli, P., Frassineti, C., Rizzi, F., Palumbo, C. Unexpected Absence of Skeletal Responses to Dietary Magnesium Depletion: Basis for Future Perspectives? 2023 *Biomedicines* 11:655. doi:10.3390/biomedicines11030655
- Corradini M., **Checchi M.**, Ferretti M., Cavani F., Palumbo C., Lo Vasco V.R. Endoplasmic reticulum localization of phosphoinositide specific phospholipase C enzymes in U-73122 cultured human osteoblasts. 2023 *AIMS Biophysics* 10 (1):25-49. doi: 10.3934/biophy.2023004
- Stanzani V, Giubilini A, **Checchi M**, Bondioli F, Messori M, Palumbo C. Eco-sustainable approaches in bone tissue engineering: evaluating the angiogenic potential of different PHBH-nanocellulose composites with the CAM assay. 2022 *Adv. Eng. Mater*. doi.org/10.1002/adem.202200934
- **Checchi M**, Stanzani V, Truocchio S, Corradini M, Ferretti M, Palumbo C. From morphological basic research to proposals for regenerative medicine through a translational perspective. 2022 *IJAE* 126(1):139-145 doi: 10.36253/ijae-13727
- Casoni SD, Romanelli A, **Checchi M**, Truocchio S, Ferretti M, Palumbo C, Lo Vasco V.R . Expression and Localization of Phosphoinositide-Specific Phospholipases C in Cultured, Differentiating and Stimulated Human Osteoblasts. *J Cell Signal*. 2022 3(1):44-61.

doi:10.33696/Signaling.3.067

- Smargiassi A, Bertacchini J, **Checchi M**, Potì F, Tenedini E, Montosi G, Magarò M.S, Amore E, Cavani F, Ferretti M, Grisendi G, Maurel B. D, Palumbo C. WISP-2 expression induced by Teriparatide treatment affects in vitro osteoblast differentiation and improves in vivo osteogenesis. 2020 *Mol. Cell. Endocrinol.* 513: 110817 doi:10.1016/j.mce.2020.110817
- **Checchi M**, Bertacchini J, Cavani F, Magarò MS, Reggiani Bonetti L, Pugliese GR, Tamma R, Ribatti D, Palumbo C. Scleral ossicles: angiogenic scaffold, a novel biomaterial for regenerative medicine applications. 2019 *Biomat. Sci.* 8 (1): 413-425 doi: 10.1039/C9BM01234F
- Ferretti M, Cavani F, Roli L, **Checchi M**, Magarò MS, Bertacchini J, Palumbo C. Interaction among Calcium Diet Content, PTH (1-34) Treatment and Balance of Bone Homeostasis in Rat Model: The Trabecular Bone as Keystone. 2019 *Int J Mol Sci* 20 (3): doi: 10.3390/ijms20030753.
- **Checchi M**, Bertacchini J, Grisendi G, Smargiassi A, Sola A, Messori M, Palumbo C. Proposal of a Novel Natural Biomaterial, the Scleral Ossicle, for the Development of Vascularized Bone Tissue In Vitro. 2017 *Biomedicines* 6 (1). doi: 10.3390/biomedicines6010003.
- Bertacchini J, Benincasa M, **Checchi M**, Cavani F, Smargiassi A, Ferretti M, Palumbo C. Expression and functional proteomic analyses of osteocytes from Xenopus laevis tested under mechanical stress conditions: preliminary observations on an appropriate new animal model. 2017 *J Anat.* 231 (6): 823-834. doi:10.1111/joa.12685
- Smargiassi A, Bertacchini J, **Checchi M**, Cavani F, Ferretti M, Palumbo C. Biocompatibility Analyses of Al_2O_3-Treated Titanium Plates Tested with Osteocyte and Fibroblast Cell Lines. *Biomedicines*. 2017 5 (2). doi: 10.3390/biomedicines5020032

eBook

- Ferretti M, Cavani F, **Checchi M**, Magarò M.S, Amore E, Bertacchini J, Palumbo C. Capitolo Trabecular Bone as Keystone for the Interplay Among Calcium Diet Content, PTH(1-34) Treatment and Balance of Bone Homeostases in Rat Model. 2019 *Top 5 Contributions in Molecular Sciences 2nd edition*.

Oral Communications

- SCAFFY Workshop (Brescia 2017): “Scleral Ossicles: A proposal of natural scaffold to obtain vascularized 3D constructs for critical-size bone defect healing” organized by Prof. S. Mitola and Dr. R. Ronca – University of Brescia.
- 73rd National Anatomy and Histology Congress (SIAI-Naples 2019): The scleral ossicles as "triggering template" inside 3D-matrices: naturally decellularized biomaterials proposed to improve bone regeneration processes in critical-sized defects.

Honours and awards

- **1st prize poster** of the **Ambrosiana Publishing House** - 70th SIAI Congress (September, 2016) - **Checchi M**, Smargiassi A, Ferretti M, Sena P, Benincasa M, Cavani F, Sola M, Ranieri A, Mitola S, Palumbo C. "Preliminary observation on scleral ossicles in performing functionalized 3D vascularized scaffold for critical size bone defecting healing".

Teaching

2024

- Thematic seminars for high school students entitled: "Journey inside the chicken egg: the chorio-allantoic membrane (CAME) as a bioreactor"
- Public public engagement Project: “WEL-ASA – Ricerca e WELfare animale: divulgazione di approcci sostenibili per la sperimentazione pre-clinica, con Alternative alla Sperimentazione Animale”

2014: Area Project promoted by CNR Bologna: SperimEstate "Macro, micro, Nano: from visible to invisible"

2018: Expert in Human Anatomy (BIO / 16) in the Degree Course in Nursing at the University of Modena and Reggio Emilia

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all’art. 13 del D. Lgs. 196/2003 e all’art. 13 GDPR 679/16.

DATE

Modena 22/09/2025

FIRMA