Personal information

Name: Marco Angelozzi

Postion title: Research Staff Scientist I
Lefebvre lab
Department of Surgery, Division of Orthopaedics
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Short biography

I am a staff scientist in Dr. Veronique Lefebvre lab at the Children's Hospital of Philadelphia, and my research focuses on the pathophysiology of the skeleton. The main aim of my research is the identification of novel therapeutic targets and the development of innovative approaches for the treatment of skeletal disorders.

I started my studies in cellular and molecular biology and biotechnology at the University of Ferrara. My interest in skeletal biology developed during my training as an undergraduate/PhD student in the labs of molecular biology and biomaterials of Prof. Roberta Piva and Prof. Claudio Nastruzzi. During this time, I gained experience in the generation of three-dimensional (3D) constructs modeling bone and cartilage for use in tissue engineering applications or for studying in vitro the effects of therapeutic molecules on these tissues.

In 2017, I joined Dr. Lefebvre lab as a post-doc researcher at the Cleveland Clinic and moved with her to the Children's Hospital of Philadelphia in 2018. Here, I became interested in the transcriptional regulation of skeletal cells in development and disease. I took an interest in studying developmental diseases (namely SOXopathies) caused by genetic errors in genes encoding for the SOX transcription factors. In particular, my research focused on the SOXC genes (*SOX4*, *SOX11*, and *SOX12*) and their importance in building and maintaining high-quality bone tissues during embryogenesis and adulthood. Working as a post-doc in Dr. Lefebvre lab greatly advanced my scientific, technical, and management skills. It gave me access to cutting-edge techniques in the skeletal and molecular biology fields, including the use of transgenic mouse models and single-cell high-throughput technologies. It allowed me to present my work in relevant scientific meetings and high-impact publications.

Most recently, I became a research staff scientist, and took an interest in the pathophysiology of the growth plate cartilage and the development of therapeutic approaches for diseases affecting these structures. Particularly, I am currently working on developing genetic and pharmaceutical approaches for achondroplasia, the most common form of disproportionate short stature in humans.

Education and scientific appointments

2024 – present Research Staff Scientist I
Lefebvre lab, Department of Surgery/Orthopaedics, Children's Hospital of Philadelphia

2022 – 2024 Research Associate Scientist II
Lefebvre lab, Department of Surgery/Orthopaedics, Children's Hospital of Philadelphia

2017 – 2022 Post-doctoral Researcher
Lefebvre lab, Cleveland Clinic and Children's Hospital of Philadelphia

2014 –2017	PhD in Biomedical Sciences and Biotechnology University of Ferrara; Supervisor: Prof. Roberta Piva
2013	Second level degree in Biomolecular and Cellular Science University of Ferrara
2011	Bachelor degree in Biomolecular and Cellular Science University of Ferrara

List of selected publications

- **Angelozzi M**.*, Karvande A., & Lefebvre V. (2024) SOXC are critical regulators of adult bone mass. Nat Commun, 15(1), 2956. PMID: 38580651. *co-first and co-corresponding author.
- Molin A.N., Contentin R., **Angelozzi M.**, et al. (2024) Skeletal growth is enhanced by a shared role for SOX8 and SOX9 in promoting reserve chondrocyte commitment to columnar proliferation. Proc Natl Acad Sci U S A, 121(8). PMID: 38346197.
- **Angelozzi M.**, Pellegrino da Silva R., Gonzalez M.V. & Lefebvre V. (2022) Single-cell atlas of craniogenesis uncovers SOXC-dependent, highly proliferative, and myofibroblast-like osteodermal progenitors. Cell Rep, 40(2), 111045. PMID: 35830813.
- **Angelozzi M.,** Karvande A., Molin A.N. et al. (2022) Consolidation of the clinical and genetic definition of a SOX4- related neurodevelopmental syndrome. J Med Genet, 59(11), 1058-1068. PMID: 35232796.
- Haseeb A., Kc R., **Angelozzi M.**, et al. (2021) SOX9 keeps growth plates and articular cartilage healthy by inhibiting chondrocytes dedifferentiation/osteoblastic redifferentiation. Proc Natl Acad Sci U S A, 118(8). PMID: 33597301.
- **Angelozzi M.** & Lefebvre V. (2019) SOXopathies: a growing family of developmental disorders due to SOX mutations. Trends Genet, 35(9), 658-671. PMID: 31288943.
- **Angelozzi M.**, Penolazzi L., Mazzitelli S., et al. (2017) Dedifferentiated chondrocytes in composite microfibers as tool for cartilage repair. Front Bioeng Biotechnol, 5(35). PMID: 28660185.
- Lolli A., Narcisi R., Lambertini E., Penolazzi L., **Angelozzi M.**, et al. (2016) Silencing of anti-chondrogenic microRNA-221 in human mesenchymal stem cells promotes cartilage repair in vivo". Stem Cells, 34(7), 1801-11. PMID: 26930142.

Complete List of Published Work in MyBibliography:
https://www.ncbi.nlm.nih.gov/myncbi/marco.angelozzi.1/bibliography/public/

Honors

2022	Selected speaker, Bones and Teeth Gordon Research Seminar, 2022 Ventura (CA), USA
2022	Best poster award at 19th annual symposium of the Penn Center for Musculoskeletal Disorders, Philadelphia (PA), USA
2022	Recognition as "Emerging Innovators in Collaborative Research" at CHOP Research Institute, Philadelphia (PA), USA

2020	Best poster award at the Bones and Teeth Gordon Research Conference, Galveston (TX), USA
2019	Best poster award at the 16th annual symposium of the Penn Center for Musculoskeletal Disorders, Philadelphia (PA), USA
2017	Best PhD thesis in biomedical sciences and biotechnology, University of Ferrara, Italy