

# CURRICULUM VITAE

## PERSONAL INFORMATION

Name Biagio Palmisano  
Email biagio.palmisano@uniroma1.it

## PROFESSIONAL EXPERIENCE

### September 2020 – Present

PostDoc researcher – Prof. Mara Riminucci Laboratory, Department of Molecular Medicine, Sapienza University of Rome, Italy.

### January 2019 – March 2020

PostDoc Research Scientist – Prof. Gerard Karsenty Laboratory, Department of Genetics and Development, Columbia University Medical Center, New York (NY), USA

### November 2015 – October 2018

PhD fellow – Prof. Mara Riminucci Laboratory, Department of Molecular Medicine, Sapienza University of Rome, Italy.

### September 2014 – October 2015

MS thesis – Prof. Paolo Bianco laboratory, Department of Molecular Medicine, Sapienza University of Rome, Italy.

### September 2012 – December 2012

*MS thesis (Erasmus)* – Prof. Kirsch Gilbert Laboratory, Laboratoire d'Ingénierie Moléculaire et Biochimie Pharmacologique (LIMBP), Université de Lorraine, Metz, France.  
*Project: Synthesis of ATP-antagonists inhibitors of CDK2*

## EDUCATION

### November 2015 – October 2018

PhD fellowship in Innovative Technologies in Diseases of the Skeleton, Skin and Oro-Skull-Facial District – Curricula: Anatomic Pathology. Sapienza University of Rome. Ottimo cum laude

### January 2014 – October 2015

Master's degree in Medical Biotechnology. Sapienza University of Rome. 110/110 cum laude

### September 2010 – July 2013

Bachelor's degree in Biotechnology. Sapienza University of Rome. 110/110 cum laude

### September 2005 – July 2010

Scientific High School Diploma, 98/100

## GRANTS AND FELLOWSHIPS (AS PRINCIPAL INVESTIGATOR)

- Sapienza University Small Research Project 2023 “Connecting bone resorption to bone pain in Fibrous Dysplasia to unravel pathogenic mechanisms”; amount: 2.200 €
- SIOMMMS grant 2022: “*Exploring the role of Adiponectin-expressing bone marrow stromal osteoprogenitor cells in osteoporosis*”; amount: 30.000 €
- The Company of Biologists Sustainable Conference Funding 2023 “*Bone Marrow Adiposity Society Summer School 2023*”; amount: £ 2.000
- Sapienza University Small Research Project 2022 “*Analysis of the RANKL-expressing causative cells in the pathogenesis of Fibrous Dysplasia*”; amount: 2.796 €
- Orphan Disease Center, Million Dollar Bike Ride Pilot Grant Program Award 2021; “*Unraveling the role of Adiponectin-expressing bone marrow stromal cells in the cellular pathogenesis of Fibrous Dysplasia*”; amount: 53.791 \$
- Sapienza University Small Research Project 2021 “*Exploiting the potential of MMP-9 inhibition to*

*treat Fibrous Dysplasia of bone*"; amount: 2.250 €

- ECTS Basic/Translational Fellowship 2021; "*Zoledronate after Denosumab discontinuation in Fibrous Dysplasia: study in a mouse model of the human disease*"; amount: 10.000 €

## **PRESENTATIONS FOR NATIONAL AND INTERNATIONAL MEETINGS AND CONFERENCES**

- Plenary Oral Presentation: *A pathogenic role for brain-derived neurotrophic factor (BDNF) in Fibrous Dysplasia of bone*. ECTS 2024, 25-28 May 2024, Marseille, France.
- Invited webinar presentation: FD/MAS Alliance 2024 Research Update, 9 April 2024, Online.
- Invited oral presentation: *Exploring the role of Adiponectin-expressing bone marrow stromal osteoprogenitor cells in osteoporosis*. SIOMMMS 2023, 25-28 October 2023, Giardini-Naxos, Italy
- Invited oral presentation: *Insights from FD/MAS mouse model*. FD/MAS Alliance Community Conference 2023, 8-10 September 2023, Silver Spring, MA, USA.
- Selected oral presentation: *Zoledronate upon anti-RANKL discontinuation delays disease rebound and ameliorates bone pain in a mouse model of Fibrous Dysplasia*. ECTS 2023, 15-18 April 2023, Liverpool, United Kingdom.
- Selected oral presentation: *Targeting bone resorption ameliorates pain-like behavior in a mouse model of Fibrous Dysplasia*. Forum in Bone and Mineral Research, 27-28 October 2022, Catania, Italy.
- Selected oral presentation: *Different osteogenic potential of Adiponectin-Cre-targeted stromal cells in the skeleton*. BMAS 2022, 28-30 September 2022, Athens, Greece.
- Selected oral presentation: *Activated Gsa pathway and estrogens reveal different subsets of adiponectin-expressing osteoprogenitors within bone marrow stroma*. ECTS 2022, 7-10 May 2022, Helsinki, Finland.
- Invited oral presentation: *Bone Marrow Adiposity Society*. Open Forum: Academy synergy, ECTS 2022, 7-10 May 2022, Helsinki, Finland.
- Invited oral presentation: *Update on younger investigator initiatives*. Open Forum: Bone Marrow Adiposity, ECTS 2022, 7-10 May 2022, Helsinki, Finland.
- Selected oral presentation: *Denosumab-like anti-RANKL treatment reverts osteolytic and osteomalacic changes in a murine model of Fibrous Dysplasia*. SIOMMMS, 25-27 October 2018 Naples, Italy.
- Selected oral presentation: *Effects of Denosumab-like RANKL inhibition on bone resorption and osteomalacia in a murine model of Fibrous Dysplasia of bone*. XVIII Forum Bone and Mineral Research, 10-11 May 2018 Università Campus Bio-medico, Rome, Italy.
- Selected oral presentation: *Effects of RANKL inhibition in a mouse model of Fibrous Dysplasia of bone*. Fellow's Day SIOMMMS, 18 October 2017 Bologna, Italy.
- Selected oral presentation: *Fibrous Dysplasia: A roadmap to treatment enabled by discovery of unpredicted mechanisms in first in-class mouse models*. Second meeting Skeleton, 13 March 2017 Riva del Garda, Italy.

## **AWARDS AND HONOURS**

- Elected ECTS Academy member
- Travel grant, ECTS 2024, 25-28 May 2024, Marseille, France
- Best Poster award, SIOMMMS 2023, 25-28 October 2023, Giardini-Naxos, Italy
- Research poster award, FD/MAS Alliance Community Conference 2023, 8-10 September 2023, Silver Spring, MA, USA.
- Scholarship award, FD/MAS Alliance Community Conference 2023, 8-10 September 2023, Silver Spring, MA, USA.
- ECTS Maria Luisa Bianchi New Investigator award, ECTS 2023, 15-18 April 2023, Liverpool, United Kingdom.
- Best Poster award, SIOMMMS 2022, 13-15 October 2022, Bari, Italy

- Best abstract award, BMA 2022, 28-30 September 2022, Athens, Greece.
- Best abstract, SIOMMMS 2021, 28-30 October, Verona, Italy.
- ECTS Basic/Translational Fellowship 2021 award.
- Plenary poster presentation, ASBMR 2019, 20-23 September, Orlando, FL, USA.
- Travel grant, ASBMR 2019, 20-23 September 2019, Orlando, FL, USA.
- Best young researcher abstract, SIOMMMS 2018, 25-27 October 2018 Naples, Italy.

## **OTHER PROFESSIONAL APPOINTMENTS**

- 2024 – present: Elected member of the Scientific Board of SIOMMMS
- 2023: Committee member of the Third DiSVA-MaSBiC Symposium, 20-22 September 2023, Polytechnic University of Marche, Ancona, Italy.
- 2023 – present: Academic Editor on Editorial Board of Academia Biology
- 2023: Member of the Organizing committee of the 2<sup>nd</sup> Bone Marrow Adiposity Society Summer School 2023, virtual meeting, 4-6 September 2023.
- 2023 – present: Elected as SIOMMMS representative in the IFMRS board (International Federation Musculoskeletal Research Societies)
- 2023 – present: Member of FGL (Future Global Leaders)-IFMRS committee as BMAS representative
- 2023 – present: Member of the International Society for Bone Morphometry Early Investigator Committee (ISBM EIC)
- 2022 – 2023: Co-chair of the SIOMMMS young committee (Commissione Giovani SIOMMMS)
- 2022 – 2023: Chair of Bone Marrow Adiposity Society young committee (Next Generation BMAS)
- 2022 – present: Review Editor on the Editorial Board of Bone Research (specialty section of Frontiers in Endocrinology)
- 2021: Chair of the Organizing committee of the 1<sup>st</sup> Bone Marrow Adiposity Society Summer School 2021, virtual meeting, 6-8 September 2021.
- 2021 – 2023: Co-chair of YES, Young Edition SIOMMMS, 2021.
- 2018 – present: Executive Board Member of Bone Marrow Adiposity Society as Young Investigator Representative.
- 2017: Head conference manager of the 3<sup>rd</sup> International Meeting on Bone Marrow Adiposity (BMA 2017), Lausanne, 2017.

## **REVIEWER ACTIVITY:**

JOURNALS: JBMR, Comprehensive Physiology, Communication Biology, Stem Cells Translational Medicine, Bone Reports, Connective Tissue Research, Frontiers in Endocrinology, Frontiers in Cell and Developmental Biology, Genes, Nutrients, Minerva Endocrinology.

CONFERENCE ABSTRACTS: ISSCR 2024

AGENCIES: Czech Science: Foundation

## **TEACHING ACTIVITY:**

- Anatomy – Physiotherapy course at Sapienza University of Rome (2023-24), 3 CFU
- Histology – Physiotherapy course at Sapienza University of Rome (2023-24), 1 CFU
- Applied Biology – Physiotherapy course at Sapienza University of Rome (2022-23), 1 CFU

## **LANGUAGES**

ENGLISH – C1

ITALIAN – Mother tongue

## PUBLICATIONS

- Palmisano B**, Tavanti C, Farinacci G, Gosti G, Leonetti M, Donsante S, Giannicola G, Appelman-Dijkstra N, Corsi A, Ippolito E, Riminucci M. Bone pain in Fibrous dysplasia does not rely on aberrant sensory nerve sprouting or neuroma formation. *bioRxiv* 2024.07.18.603554; doi: 10.1101/2024.07.18.603554
- Palmisano B**, Del Vecchio A, Passaretti A, Stefano A, Miracolo G, Farinacci G, Corsi A, Riminucci M, Romeo U, Cicconetti A. Potential of combined red and near-infrared photobiomodulation to mitigate pro-osteoclastic and inflammatory gene expression in human mandibular osteogenic cells. *Lasers in Medical Sciences, In press*
- Palmisano B**, Corsi A, Riminucci M. Adiponectin expressing skeletal stem/progenitor cells in the bone and bone marrow homeostasis. *Current Opinion in Endocrine and Metabolic Research*, 2024, 100524, 35. doi: 10.1016/J.COEMR.2024.100524
- Palmisano B**, Tencerova M. Abstracts BMAS Summer School 2023-2nd Bone Marrow Adiposity Society Summer School Meeting 2023. *J Gerontol A Biol Sci Med Sci*. 2024 May 1;79(5):glad282. doi: 10.1093/gerona/glad282. PMID: 38581357.
- Donsante S, Pievani A, **Palmisano B**, Finamore M, Fazio G, Corsi A, Biondi A, Tomatsu S, Piazza R, Serafini M, Riminucci M. Modeling skeletal dysplasia in Hurler syndrome using patient-derived bone marrow osteoprogenitor cells. *JCI Insight*. 2024 Mar 8;9(5):e173449. doi: 10.1172/jci.insight.173449. PMID: 38456506; PMCID: PMC10972592.
- Corbella E, Fara C, Covarelli F, Porreca V, **Palmisano B**, Mignogna G, Corsi A, Riminucci M, Maras B, Mancone C. THBS1 and THBS2 Enhance the In Vitro Proliferation, Adhesion, Migration and Invasion of Intrahepatic Cholangiocarcinoma Cells. *Int J Mol Sci*. 2024 Feb 1;25(3):1782. doi: 10.3390/ijms25031782. PMID: 38339060; PMCID: PMC10855656.
- Palmisano B**, Farinacci G, Campolo F, Tavanti C, Stefano A, Donsante S, Ippolito E, Giannicola G, Venneri MA, Corsi A, Riminucci M. A pathogenic role for brain-derived neurotrophic factor (BDNF) in fibrous dysplasia of bone. *Bone*. 2024 Feb 6:117047. doi: 10.1016/j.bone.2024.117047.
- Amorim T, Trivanovic D, Benova A, Li H, Tencerova M, **Palmisano B**. Young minds, deeper insights: a recap of the BMAS Summer School 2023, ranging from basic research to clinical implications of bone marrow adipose tissue. *Biol Open*. 2024 Feb 15;13(2):bio060263. doi: 10.1242/bio.060263.
- Palmisano B**, Riminucci M, Karsenty G. *Interleukin-6 signaling in osteoblasts regulates bone remodelling during exercise*. *Bone*. 2023 Aug 14;176:116870. doi: 10.1016/j.bone.2023.116870.
- Colangelo L, Sonato C, Cipriani C, Pepe J, Farinacci G, **Palmisano B**, Occhiuto M, Riminucci M, Corsi A, Minisola S. Occipital bone and tumor-induced osteomalacia: a rare tumor site for an uncommon paraneoplastic syndrome. *Arch Osteoporos*. 2023 Jul 12;18(1):94. doi: 10.1007/s11657-023-01305-y.
- Donsante S, Siciliano G, Ciardo M, **Palmisano B**, Messina V, de Turrís V, Farinacci G, Serafini M, Silvestrini F, Corsi A, Riminucci M, Alano P. An *in vivo* humanized model to study homing and sequestration of *Plasmodium falciparum* transmission stages in the bone marrow. *Front Cell Infect Microbiol*. 2023 Apr 19;13:1161669. doi: 10.3389/fcimb.2023.1161669.
- Palmisano B**, Pace A, Colangelo L, Polimeni R, Sonato C, Messineo D, Minisola S, Magliulo G, Riminucci M, Corsi A. "Non-phosphaturic" Variant of Phosphaturic Mesenchymal Tumor of the Middle Ear Expressing Multiple Phosphatonins. *Ear Nose Throat J*. 2023 Jan 3:1455613221149635. doi: 10.1177/01455613221149635.
- Castoldi G, Carletti R, Ippolito S, Villa I, **Palmisano B**, Bolamperti S, Rubinacci A, Zerbini G, Meani M, Zatti G, di Gioia CRT. Angiotensin II Modulates Calcium/Phosphate Excretion in Experimental Model of Hypertension: Focus on Bone. *Biomedicines*. 2022 Nov 14;10(11):2928. doi: 10.3390/biomedicines10112928.
- Palmisano B**, Labella R, Donsante S, Remoli C, Spica E, Coletta I, Farinacci G, Dello Spedale Venti M, Saggio I, Serafini M, Robey PG, Corsi A, Riminucci M. Gsa<sup>R201C</sup> and estrogen reveal different subsets of bone marrow adiponectin expressing osteogenic cells. *Bone Res*. 2022 Jul 19;10(1):50. doi: 10.1038/s41413-022-00220-1.
- Dello Spedale Venti M, **Palmisano B**, Donsante S, Farinacci G, Adotti F, Coletta I, Serafini M, Corsi A, Riminucci M. Morphological and immunophenotypical changes of human bone marrow adipocytes in marrow metastasis and myelofibrosis. *Front Endocrinol (Lausanne)*. 2022 doi: 10.3389/fendo.2022.882379
- Labella R, Little-Letsinger S, Avilkina V, Sarkis R, Tencerova M, Vluga A, **Palmisano B**. Next Generation Bone Marrow Adiposity Researchers: Report From the 1st BMAS Summer School 2021. *Front Endocrinol (Lausanne)*. 2022 Apr 13;13:879588. doi: 10.3389/fendo.2022.879588.
- Palmisano B**, Labella R, Avilkina V, Little S, Sarkis R, Tencerova M, Veldhuis A. 1ST BONE MARROW ADIPOSITY SOCIETY (BMAS) SUMMER SCHOOL. in *1ST BONE MARROW ADIPOSITY SOCIETY (BMAS) SUMMER SCHOOL* (Frontiers Media SA, 2021). doi:10.3389/978-2-88971-006-5.
- Persichetti A, Milanetti E, **Palmisano B**, Di Filippo A, Spica E, Donsante S, Coletta I, Dello Spedale Venti M, Ippolito E, Corsi A, Riminucci M and Raimondo D. "Nanostring technology on Fibrous Dysplasia bone biopsies. A pilot study suggesting different histology-related molecular profiles." *Bone Rep*. 2021 Dec 9. doi: 10.1016/j.bonr.2021.101156.
- Donsante S, **Palmisano B**, Serafini M, Robey P, Corsi A, Riminucci M. "From stem cells to bone-forming cells" *Int J Mol Sci*. 2021 Apr 13. doi: 10.3390/ijms22083989

Corsi A, **Palmisano B**, Spica E, Di Filippo A, Coletta I, Dello Spedale Venti M, Labella R, Donsante S, Remoli C, Serafini M, Riminucci M. "Zoledronic Acid in a mouse model of human Fibrous Dysplasia: ineffectiveness on tissue pathology, formation of "giant-osteoclasts" and pathogenetic implications." *Calcif Tissue Int*. 2020 Sep 1. doi: 10.1007/s00223-020-00752.

Chowdhury S, Schulz L, **Palmisano B**, Singh P, Berger JM, Yadav VK, Mera P, Ellingsgaard H, Hidalgo J, Brüning J, Karsenty G. "Muscle-derived Interleukin 6 Increases Exercise Capacity by Signaling in Osteoblasts" *J Clin Invest*. 2020 Jun 1;130(6):2888-2902. doi: 10.1172/JCI133572.

Tratwal J, Labella R, Bravenboer N, Kerckhofs G, Douni E, Scheller E, Badr S, Karampinos D, Beck-Cormier S, **Palmisano B**, [...] Olaia Naveiras. "Reporting Guidelines, Review of Methodological Standards, and Challenges Towards Harmonization in Bone Marrow Adiposity Research. Report of the Methodologies Working Group of The International Bone Marrow Adiposity Society" *Front Endocrinol (Lausanne)*. 2020 Feb 28;11:65. doi: 10.3389/fendo.2020.00065. eCollection 2020.

**Palmisano B**, Spica E, Remoli C, Labella R, Di Filippo A, Donsante S, Bini F, Raimondo D, Marinozzi F, Boyde A, Robey P, Corsi A, Riminucci M. "RANKL Inhibition in Fibrous Dysplasia of Bone: A Preclinical Study in a Mouse Model of the Human Disease." *J Bone Miner Res*. 2019 Dec;34(12):2171-2182. doi: 10.1002/jbmr.3828. Epub 2019 Aug 21.

Corsi A, **Palmisano B**, Tratwal J, Riminucci M, Naveiras O. "Brief Report From the 3rd International Meeting on Bone Marrow Adiposity (BMA 2017)." *Front Endocrinol (Lausanne)*. 2019 May 28;10:336. doi: 10.3389/fendo.2019.00336. eCollection 2019.

Ruggieri M, **Palmisano B**, Fratocchi G, Santilli V, Mollica R, Berardi A, Galeoto G. "Validated Fall Risk Assessment Tools for Use with Older Adults: A Systematic Review" *Physical & Occupational Therapy in Geriatrics*, 36:4, 331-353, doi: 10.1080/02703181.2018.1520381

30/07/2024