



CURRICULUM VITAE

Mattia Capulli, PhD in Biotechnology
Born in L'Aquila (Italy), October 14th 1981,
Italian citizenship



ADDRESS

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DEGREE

2003 Bachelor's degree in Biotechnology summa cum laude, University of L'Aquila, Italy
2005 Master's degree in Medical Biotechnology summa cum laude, University of L'Aquila, Italy
2010 PhD in Biotechnology, excellent, University of L'Aquila, Italy

PRESENT POSITION

2015-present Assistant professor of Histology, Department of Biotechnological and Applied Clinical Sciences" University of L'Aquila, Italy.

PAST POSITIONS

2004-2005 Student Training at the Department of Experimental Medicine" University of L'Aquila, Italy.
2006-2010 Studentship, "Bone Biopathology Lab. Department of Experimental Medicine" University of L'Aquila, Italy.
2010-2011 Italian Foundation for Cancer Research (FIRC) fellows.
2011-2012 Italian Society for Cancer Research (AIRC) fellows.
2012-2013 PostDoc, Marie Curie Fellow, Department of Medicine Endocrinology, Columbia University, New York, USA. Supervisor: Prof Stavroula Kousteni
2013-2015 Research Fellow, "Bone Biopathology Lab. Department of Biotechnological and Applied Clinical Sciences" University of L'Aquila, Italy. Supervisor: Prof Anna Teti

TEACHING

2016-2017 Professor of Anatomy, University of L'Aquila, School of Sport Sciences, L'Aquila, Italy.
2012-present Exam committee member of Anatomy and Histology, School of Biotechnology University of L'Aquila, Italy.
2011-present Collaboration course of Biotechnological Experimental Models, University of L'Aquila School of Biotechnology, L'Aquila, Italy.
2008-2009 Collaboration course of Integrated Laboratory 3, University of L'Aquila School of Biotechnology, L'Aquila, Italy.

AWARDS

2016 Young Investigator Travel Award "38th American Society of Bone and Mineral Research (ASBMR) Annual meeting" Atlanta, US
2016 Travel Award "43rd European Symposium on Calcified Tissues" Rome, Italy
2016 Travel Award "2016-IBMS Herbert Fleisch Workshop" Bruges, Belgium
2015 Young Investigator Award "7th International conference on children bone health (ICCBH), Salzburg, Austria
2015 Travel Award "42nd European Symposium on Calcified Tissues" Rotterdam, the Netherlands
2014 SIOMMMS Prize 2014 "14th National congress Italian Society of Osteoporosis, Mineral Metabolism and Skeletal Diseases (SIOMMMS), Rome, Italy"
2014 Young Investigator Travel Award "36th American Society of Bone and Mineral Research (ASBMR) Annual meeting" Houston, Texas, US
2014 Travel Award "41st European Symposium on Calcified Tissues" Prague, Czech Republic
2012 Travel Award "39th European Symposium on Calcified Tissues" Stockholm, Sweden
2012 Travel Award "6th EFF Fellows Forum on Metabolic Bone Diseases" Minneapolis, Minnesota, US
2012 Young Investigator Travel Award "34th American Society of Bone and Mineral Research (ASBMR) Annual meeting" Minneapolis, Minnesota, US
2011 Travel Award 14/09/2011 "5th EFF Fellows Forum on Metabolic Bone Diseases" San Diego, California, US
2011 Best Abstract Prize "11th National congress SIOMMMS" Rome, Italy
2010 Travel Award "37th European Symposium on Calcified Tissues" Glasgow, UK
2010 SIOMMMS Prize 2010 "10th National congress Italian Society of Osteoporosis, Mineral Metabolism and Skeletal Diseases (SIOMMMS)" Brescia, Italy

- 2010 Young Investigator Award "32nd American Society of Bone and Mineral Research (ASBMR) Annual meeting" Toronto, Canada
- 2009 New Investigator Award "36th European Symposium on Calcified Tissues" Vienna, Austria
- 2008 Poster Prize "3rd Congress Italian Society for Space Biomedicine and Biotechnology (ISSBB)" Udine, Italy
- 2008 Travel Award "35th European Symposium on Calcified Tissues" Barcelona, Spain
- 2008 Poster Prize "35th European Symposium on Calcified Tissues" Barcelona, Spain
- 2008 Travel Award "3rd Endocrine Fellows Foundation (EFF) Fellows Forum on Metabolic Bone Diseases" Montreal, Canada
- 2008 Presentation Prize "4th Forum in mineral research" Napoli, Italy
- 2007 Travel Award "Breast Cancer and Metastasis Conference (MetaBre/BRECOSM)" Rome, Italy

RESEARCH SUPPORT

- 2016 European Calcified Tissue Society Academy Grant
- 2012 Marie Curie Fellowship 2012
- 2011 AIRC fellowship 2011/2012 Mariuccia Borrini "New experimental strategies to treat breast cancer bone metastases."
- 2009 FIRC fellowship 2009/2010 Starwood Hotels & Resorts Worldwid "Trattamento sperimentale delle metastasi ossee da tumori solidi."
- 2009 European Calcified Tissue Society (ECTS) Postdoctoral fellowship 2009 "New experimental antiresorptive therapy for osteoporosis using the heparin binding domain of the matrix protein PRELP."

INTERNATIONAL COMMITTEES

- 2016-2021 ECTS Academy board member and treasurer
- 2015-2016 Member of the young investigator committee of the International Bone and Mineral Society (IBMS)
- 2016 ECTS2016 Local Organiser Committee member

PATENT

- 2015 Small interfering rna (sirna) for the therapy of type 2 (ado2) autosomal dominant osteopetrosis caused by clcn7 (ado2 clcn7-dependent) gene mutation. Patent code WO 2015177743 A1

PEER REVIEWED PUBLICATIONS

1. Veeriah V, Zanniti A, Chatterjee S, Rucci N, Teti A, **Capulli M**. Interleukin-1 β , lipocalin 2 and nitric oxide synthase 2 are mechano-responsive mediators of mouse and human endothelial cell-osteoblast crosstalk. *Scientific Report* 2016.
2. **Capulli M**, Maurizi A, Ventura L, Rucci N, Teti A. Effective small interfering RNA therapy to treat CLCN7-dependent autosomal dominant osteopetrosis type 2. *Mol Therapy — Nucleic Acids* 4, e248, 2015
3. Cappariello A, Paone R, Maurizi A, **Capulli M**, Rucci N, Muraca M, Teti A. Biotechnological approach for systemic delivery of membrane Receptor Activator of NF- κ B Ligand (RANKL) active domain into the circulation. *Biomaterials* 46 (2015) 58e69
4. Rucci N*, **Capulli M***, Olstad OK, Önnarfjord P, Tillgren V, Gautvik KM, Heinegård D, Teti A. The α 2 β 1 binding domain of chondroadherin inhibits breast cancer-induced bone metastases and impairs primary tumour growth: A preclinical study. ***equal contributors** *Cancer Lett.* 2014 Dec 18. pii: S0304-3835(14)00787-3.
5. Marino S, Logan JG, Mellis D, **Capulli M**. Generation and culture of osteoclasts. *Bonekey Rep.* 2014 Sep 10;3:570
6. Rucci N*, **Capulli M***, Piperni SG, Cappariello A, Lau P, Frings-Meuthen P, Heer M, Teti A. Lipocalin 2: A New Mechanoresponding Gene Regulating Bone Homeostasis. ***equal contributors** *J Bone Miner Res.* 2014 Aug 12
7. **Capulli M**, Paone R, Rucci N. Osteoblast and osteocyte: Games without frontiers. *Arch Biochem Biophys.* 2014 May
8. **Capulli M**, Olstad OK, Önnarfjord P, Tillgren V, Muraca M, Gautvik KM, Heinegård D, Rucci N, Teti A. The C-Terminal Domain of Chondroadherin: A New Regulator of Osteoclast Motility Counteracting Bone Loss. *J Bone Miner Res.* 2014 Feb 24.
9. Sanità P, **Capulli M**, Teti A, Galatioto GP, Vicentini C, Chiarugi P, Bologna M, Angelucci A. Tumor-stroma metabolic relationship based on lactate shuttle can sustain prostate cancer progression. *BMC Cancer.* 2014 Mar 5;14(1):154.

10. Alam I, Gray AK, Ichikawa S, Chu K, Mohammad KS, Capannolo M, **Capulli M**, Muraca M, Teti A, Econs MJ, Del Fattore A. Generation of the first Autosomal Dominant Osteopetrosis Type II (ADO2) disease model. *Bone*. 2014 Feb;59:66-75.
11. Del Fattore A, Cappariello A, **Capulli M**, Rucci N, Muraca M, De Benedetti F, Teti A. An experimental therapy to improve skeletal growth and prevent bone loss in a mouse model overexpressing IL-6. *Osteoporos Int*. 2013 Aug 14.
12. Rucci N*, **Capulli M***, Ventura L, Angelucci A, Peruzzi B, Tillgren V, Muraca M, Heinegård D, Teti A. The N-Terminal domain of Proline/arginine-rich and leucine-rich repeat protein is a novel antagonist of bone loss. ***equal contributors**. *J Bone Miner Res*. 2013 Apr 4. doi: 10.1002/jbmr.1951.
13. **Capulli M**, Angelucci A, Driouch K, Garcia T, Clement-Lacroix P, Martella F, Ventura L, Bologna M, Flamini S, Moreschini O, Lidereau R, Ricevuto E, Muraca M, Teti A, Rucci N. Increased expression of a set of genes enriched in oxygen binding function discloses a predisposition of breast cancer bone metastases to generate metastasis spread in multiple organs. *J Bone Miner Res*. 2012 Nov;27(11):2387-98. doi: 10.1002/jbmr.1686.
14. Cardone RA, Greco MR, **Capulli M**, Weinman EJ, Busco G, Bellizzi A, Casavola V, Antelmi E, Ambruosi B, Dell'Aquila ME, Paradiso A, Teti A, Rucci N, Reshkin SJ. NHERF1 acts as a molecular switch to program metastatic behavior and organotropism via its PDZ domains. *Mol Biol Cell*. 2012 Jun;23(11):2028-40.
15. Rufo A, Del Fattore A, **Capulli M**, Carvello F, De Pasquale L, Ferrari S, Pierroz D, Morandi L, De Simone M, Rucci N, Bertini E, Bianchi ML, De Benedetti F, Teti A. Mechanisms inducing low bone density in Duchenne muscular dystrophy in mice and humans. *J Bone Miner Res*. 2011 Aug;26(8):1891-903. doi: 10.1002/jbmr.410.
16. Rucci N, **Capulli M**, Rufo A, Teti A. The effect of microgravity on osteoblast metabolism. *Basic Applied Myology* 2009 19:139-149.
17. Salerno M, Cenni E, Fotia C, Avnet S, Granchi D, Castelli F, Micieli D, Pignatello R, **Capulli M**, Rucci N, Angelucci A, Del Fattore A, Teti A, Zini N, Giunti A, Baldini N. Bone-targeted doxorubicin-loaded nanoparticles as a tool for the treatment of skeletal metastases. *Curr Cancer Drug Targets*. 2010 Nov;10(7):649-59.
18. Rucci N, Rufo A, Alamanou M, **Capulli M**, Del Fattore A, Ahrman E, Capece D, Iansante V, Zazzeroni F, Alesse E, Heinegård D, Teti A. The glycosaminoglycan-binding domain of PRELP acts as a cell type-specific NF-kappaB inhibitor that impairs osteoclastogenesis. *J Cell Biol*. 2009 Nov 30;187(5):669-83.
19. **Capulli M**, Rufo A, Teti A, Rucci N. Global transcriptome analysis in mouse calvarial osteoblasts highlights sets of genes regulated by modeled microgravity and identifies a "mechanoresponsive osteoblast gene signature". *J Cell Biochem*. 2009 May 15;107(2):240-52.
20. Pierroz DD, Rufo A, Bianchi EN, Glatt V, **Capulli M**, Rucci N, Cavat F, Rizzoli R, Teti A, Bouxsein ML, Ferrari SL. Beta-Arrestin2 regulates RANKL and ephrins gene expression in response to bone remodeling in mice. *J Bone Miner Res*. 2009 May;24(5):775-84.

INVITED LECTURES

- 2016 Sybil workshop 2016, Rome, Italy
2014 Sybil workshop 2014, Rotterdam, The Nederland's
2012 ECTS training workshop "Cancer and bone, a guide for in vivo experiments", L'Aquila, Italy
"The osteocytes" L'Aquila, Italy
2011 "Il futuro per passione" L'Aquila, Italy

INTERNATIONAL JOURNALS REVIEWER (selected journals):

Archives of Biochemistry and Biophysics, British Journal of Pharmacology, Calcified Tissue International, Clinical and Developmental Immunology, The Biochemical Journal, Inflammation & Allergy Drug Targets, Endocrine, Journal of Developmental Biology and Tissue Engineering, Journal of Cancer Research and Experimental Oncology, Journal of Bone and Mineral Research

GRANT REVIEWER

The French National Research Agency (ANR)

ABSTRACT REVIEWER

European Calcified Tissue Society annual meeting (2016, 2017)
American Society for Bone and Mineral Research, annual meeting (2017)

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base art. 13 del D. Lgs. 196/2003.

MATTIA CAPULLI, PhD

