



UNIVERSITÀ
DEGLI STUDI
DELL'AQUILA



DISCAB
Dipartimento di Scienze
Cliniche Applicate
e Biotecnologiche

CURRICULUM VITAE DI

INFORMAZIONI PERSONALI	Nadia RUCCI Dipartimento di Scienze Cliniche Applicate e Biotecnologie (DISCB) Via Vetoio, Coppito 2 L'Aquila, 67100, Italia nadia.rucci@univaq.it
POSIZIONE ATTUALE	Professore Ordinario di Istologia (SSD BIOS-13/A), Responsabile del Laboratorio di Morfologia e Funzione dei Tessuti Scheletrici, Università dell'Aquila.
ISTRUZIONE E FORMAZIONE	Titoli: 2003: Specializzazione in Patologia Clinica, Università dell'Aquila; 1999: Dottorato di Ricerca in Scienze Endocrinologiche e Metaboliche, X ciclo, Università dell'Aquila; 1997: Abilitazione alla professione di Biologo; 1994: Laurea in Scienze Biologiche, Università di Roma "Sapienza". Soggiorni all'estero per training: 2003: (Agosto-Ottobre) ECTS Exchange Scholarship Grant, Leiden University Medical Center, The Netherlands. 2001: (January) Department of Medicine, Division of Endocrinology, University of Texas Health Science Center at San Antonio, TX, USA. Premi Internazionali: 2009: International Bone Research Association (IBRA) Robert Schenk Research Prize, "In recognition of her outstanding scientific achievement in the field of bone research"; 2004: Novartis Young Investigator Award, European Symposium on Calcified Tissues, Nice, France; 2003: 1) Novartis Young Investigator Award, European Symposium on Calcified Tissues, Rome, Italy; 2) Exchange Scholarship Grant, European Calcified Tissue Society; 2001: Travel grant, International Bone and Mineral Society and European Calcified Tissue Society, Madrid, Spain.
ESPERIENZA PROFESSIONALE ACCADEMICA	2024: Responsabile dello Stabulario di Ateneo; 2021: Membro della Commissione Paritetica, Università dell'Aquila; 2018-2020: Membro del Senato Accademico, in qualità di rappresentante dei Professori di II fascia; 2015- Responsabile del benessere animale e membro dell'Organismo preposto al Benessere Animale (OpBA) dello stabulario di Ateneo; 2014- Membro del Collegio di Dottorato di Ricerca in Medicina Sperimentale.



ATTIVITÀ DIDATTICA

2024: Docente di Citologia, Istologia ed Embriologia, Laurea Triennale in Biotecnologie, Università dell'Aquila;

2023-p: Docente di Istologia, Corso di Laurea in Tecniche di Laboratorio Biomedico (TLB), Università dell'Aquila;

2019-p: Docente di Istologia, Laurea in Medicina e Chirurgia, Università dell'Aquila;

2018-2019: Docente di Anatomia Funzionale, Laurea Magistrale in Scienza e Tecnica dello Sport, Università dell'Aquila;

2012-presente: Docente di Modelli Biotecnologici Sperimentali, Corso di Laurea Magistrale in Biotecnologie Mediche e Farmaceutiche e in Biotecnologie Mediche, Università dell'Aquila;

2012-2011: Docente di Cellule Staminali e Rigenerazione dei Tessuti, Corso di Laurea Magistrale in Biotecnologie Mediche, Università dell'Aquila;

2011-2010: Affidamento del corso di Diagnostica Molecolare previa selezione per titoli, Laurea Magistrale in Biotecnologie Mediche, Università dell'Aquila;

2009-2008: Affidamento del corso di Laboratorio Integrato 3 previa selezione per titoli, Laurea Triennale in Biotecnologie; Università dell'Aquila.

ATTIVITÀ SCIENTIFICA

Nel laboratorio di Morfologia e Funzione dei Tessuti Scheletrici coordinato dalla Prof.ssa Nadia Rucci, si svolgono attività di ricerca relative alla fisiopatologia del tessuto osseo, con particolare riferimento a patologie oncologiche, metaboliche e genetiche rare. Negli ultimi anni l'attività di ricerca è stata dedicata allo svolgimento dei seguenti progetti:

- 1) Studio dei meccanismi molecolari coinvolti nell'induzione della perdita di massa ossea nella Distrofia muscolare di Duchenne (DMD).
- 2) Studio dei meccanismi molecolari regolanti lo sviluppo delle metastasi ossee: identificazione di nuovi marcatori prognostici e di nuovi bersagli molecolari per lo sviluppo di approcci terapeutici alternativi.
 - 2.1 Le vescicole extracellulari come nuovo approccio per bersagliare le cellule tumorali nel microambiente osseo.
 - 2.2 Ruolo dell'emoglobina beta (HbB) nel carcinoma della mammella.
- 3) Studio degli effetti del ridotto carico meccanico sul tessuto osseo: identificazione di nuove molecole regolatrici.
 - 3.1 La Lipocalina 2 (Lcn2) come biomarcatore in patologie caratterizzate da un alterato turnover osseo.
 - 3.3 Ruolo della Preproencefalina 1 (Penk1) nel metabolismo osseo.

Finanziamenti come *Principal Investigator* (PI):

2024: Bando a cascata spoke 1 "genetic diseases" UNIMORE, PI per il progetto di Ricerca: "Evaluation of Serum and circulating EVs MYOKine profile in a Central Core Disease (CCD) mouse model overexpressing miR-486" acronimo "SEVMYOK"

2023: Responsabile di Unità del Progetto "*Spine Unit modeling coupled with high Throughput analysis (SUIT): targeting degeneration with cell secretome*" – PNRR-MAD-2022-12376354;

2020-: Associazione Italiana per la Ricerca sul Cancro (AIRC) per il progetto: "*Tumour extracellular vesicles educate the bone to promote their growth and metastasis: finding targetable pathways*";



	<p>2016-2018: <i>The French Muscular dystrophy Association (AFM)-Téléthon</i> per il Progetto: <i>“Bone phenotype in Duchenne muscular dystrophy: unveiling the role of LCN2 and implications for therapy”</i>;</p> <p>2015-2018: Finanziamento AIRC per il Progetto: <i>“Extracellular vesicles as new therapeutic approach to target bone tumour cells”</i>;</p> <p>2014-2011: Finanziamento AIRC per il Progetto: <i>“Role of Haemoglobin B in breast cancer: regulation of oxidative stress response and metastasis organotropism”</i>;</p> <p>2012: Fondazione CARISPAQ, finanziamento per il Progetto: <i>“Role of haemoglobin-B (HBB) in breast cancer: regulation of the response to the oxidative stress and of metastatic organotropism”</i>;</p> <p>2012-2011: V Premio di Ricerca STRODER/SIOMMMS per il progetto: <i>“Ruolo della Lipocalina 2 nel metabolismo osseo e possibili applicazioni terapeutiche”</i>;</p> <p>2003: Finanziamento Giovani Ricercatori (FI-GI-RI), Università dell’Aquila.</p> <p>Finanziamenti come Co-PI/Unità di Ricerca:</p> <p>2018-2021: Agenzia Spaziale Italiana (ASI) per il progetto: <i>“MARS-PRE: MARcatori biologici e funzionali per la biomedicina aStronautica di PREcisione”</i>;</p> <p>2013: My First AIRC Grant (MFAG) PI Dott.ssa Sofia Avnet, IRCCS Istituto Ortopedico Rizzoli, Bologna, in qualità di collaboratore, per il progetto: <i>“Photodynamic therapy and proton pump inhibitors for the treatment of pain in patients with bone metastases”</i>.</p> <p>Finanziamenti in qualità di Supervisor:</p> <p>2020-2022: Supervisore del Dr Marco Ponzetti, vincitore di una borsa di studio AIRC biennale per il progetto: <i>“Role of extracellular vesicle-shuttled miRNAs in the reprogramming of the breast cancer bone metastatic microenvironment”</i>;</p> <p>2019: Supervisore del Dr Marco Ponzetti, vincitore di una borsa di studio annuale AIRC per il progetto: <i>“Role of extracellular vesicle-shuttled miRNAs in the reprogramming of the breast cancer bone metastatic microenvironment”</i>;</p> <p>2015: Supervisore del Dr Alfredo Cappariello, <i>ECTS-New Investigator Research Grant</i> per il progetto: <i>“Extracellular vesicles as mediators of osteoporosis onset and progression”</i>.</p> <p>Brevetti Internazionali: Co-inventore del brevetto: <i>“Small interfering RNA (siRNA) for the therapy of type 2 (ADO2) Autosomal Dominant Osteopetrosis caused by CLCN7(ADO2 CLCN7-dependent) gene mutation”</i> (code N. WO2015177743A1, publication date 26/11/2015). <i>Europe: EP3145553A1, 29-03-2017; Canada: CA2949345A1, 26-11-2015; USA: US20170101644, 13-04-2017; Japan: JP2017521094 (A), 03-08-2017.</i></p>
<p>INCARICHI ORGANIZZATIVI E GESTIONALI</p>	<p>Organizzazione di Convegni:</p> <p>2019: <i>European Calcified Tissue Society (ECTS) PhD Training Course</i>, Bologna 7-10 Settembre 2019;</p> <p>2018-2021: <i>“Cancer and Bone Working Group” ECTS pre meeting</i>;</p> <p>2016: Membro del comitato locale per l’organizzazione del <i>43° Annual European Calcified Tissue Society Congress</i>, Roma, 14-16 Maggio 2016;</p> <p>2012: <i>ECTS Training Course: “Cancer and Bone: A guide for in vivo</i></p>



UNIVERSITÀ
DEGLI STUDI
DELL'AQUILA



DISCAB
Dipartimento di Scienze
Cliniche Applicate
e Biotecnologiche

experiments”, L’Aquila 12-14 Settembre 2012.

RUOLI EDITORIALI
AFFERENZA A SOCIETÀ
SCIENTIFICHE

Guest Editor:

2022: *Frontiers Oncology*, Special issue: “Extracellular Vesicles as Modulators of Cellular Adaptive Response and Resistance to Anti-Cancer Interventions”;

2019: *Biomolecules Journal*, Special issue: “Connecting the Bone with Other Organs: A Reciprocal Cross-Talk”. **2013:** *Inflammation & Allergy – Drug Targets*, Special issue: “Bone and Immune System cross-talk”.

Società Scientifiche Internazionali: *American Society for Bone and Mineral Research (ASBMR)*; *European Calcified Tissues Society (ECTS)*; *European Association for Cancer Research (EACR)*.

Revisioni per Riviste Internazionali: *Acta Biomaterialia*; *Aging Clinical Experimental Research*; *Archives Biochemistry and Biophysics*; *American J Physiology Cell Physiology*; *Anticancer Therapy*; *Biochimica et Biophysica Acta-Biomembranes (BBA-BMB)*; *Biochemical Journal*; *Biologia*; *Biotechnology and Applied Biochemistry*; *BioMedCentral Cancer*; *BioMedCentral Veterinary Research*; *BMC-Cancer*; *Bone*; *Breast Cancer Research and Treatment*; *British J Pharmacology*; *Calcified Tissue International*; *Cancers*; *Cancer Biomarkers*; *Cellular and Molecular Life Sciences*; *Clinical Cancer Research*; *Clinical and Development Immunology*; *Clinical Experimental Metastasis*; *Clinical Investigation*; *International Journal Molecular Science*; *Frontiers in Endocrinology*; *Future Oncology*; *J Bone and Mineral Research*; *J Bone Oncology*; *J Cellular Biochemistry*; *J of Cellular Physiology*; *J Endocrinology Investigation*; *J Experimental & Clinical Cancer Research*; *J Orthopaedic Research*; *Medical Principles and Practice*; *Microgravity Science and Technology*; *Osteoporosis International*; *PLOS ONE*; *Recent Patent on Biomarkers*.

Revisore di progetti di ricerca: *Austrian Science Fund*; *BONE CANCER RESEARCH TRUST*; *2017 ECTS Fellowship*; *2014 ECTS/Amgen Bone Biology Fellowship Award*; *Canadian Space Agency Life Science program*; *NOW/SRON User Support Programme Space Research, The Netherlands*; *ECTS/AMGEN Bone Biology Fellowship*; *The French National Research Agency (ANR)*.



ULTERIORI INFORMAZIONI
SOMMARIO RISULTATI
SCIENTIFICI

Scopus Author ID: 6603593136 <http://orcid.org/0000-0002-1371-8252>
H index: **41**; N. citazioni: **5138**; N. di pubblicazioni su riviste internazionali: **103**

Seminari su Invito:

2022: "New players in bone metastases: role of extracellular vesicles in the vicious circle"; 20th Forum in Bone and Mineral Research, Catania, Italy;

2021: "Basic Science Update: Extracellular Vesicles: Novel Players in Bone Metabolism"; 48th European Calcified Tissue Society Congress;

2020: 1) "Osteoclast in Bone Metastases: Player and Target"; 47th European Calcified Tissue Society Congress, Marsiglia, Francia.

2) "Bone metastases: from Stephen Paget to 2020"; German Priority Program μ bone, Dresda, Germania

2018: "Basic Science Update: Osteoclasts"; 45th European Calcified Tissue Society Congress, Valencia, Spagna.

2016: "Data Reproducibility and Good Laboratory Practice for Animal Studies"; RUBICON Webinar.

2015: "Animal Models for Osteotropic Tumours and Metastases"; ECTS-IBMS Post Doc Training, Rotterdam, The Netherlands.

2014: 1) "Bone Fragility: Physiopathology of Mineral Metabolism, Physiopathology of Bone Tissue"; "Sapienza" Università di Roma;

2) "Bone and CKD-MBD"; Ca-P School, "Sapienza" Università di Roma;

3) "Osteoporosis: a question of (un)balance"; SYBIL satellite symposium meeting, Rotterdam, The Netherlands;

4) "Cancer Stemness and Bone (The Dark Side of Stemness)"; INTERBONE Annual Symposium, Praga, Repubblica Ceca.

2012: 1) "Cancer and bone, a guide for in vivo experiments"; ECTS training workshop, L'Aquila;

2) "Osteoporosis", Meeting "Tra cuore e rene c'è di mezzo l'osso?" Policlinico Umberto I, Roma;

2011: 1) "Basi Biologiche del Danno Scheletrico"; Simposio: Patologie Gastrointestinali e Osso, SIOMMMS, XI Congresso Nazionale, Roma;

2) "Mechanisms of Bone Destruction by Cancer Cells"; Osteotropic cancers: new pathogenic and clinical aspects, Scuola di Specializzazione in Oncologia Medica, Università degli Studi di Bari "Aldo Moro".

2010: "Biology of Bone Metastases and New Pharmacological Targets"; IRCCS Istituto Tumori Giovanni Paolo II, Bari.

2009: "PRELP Inhibits the NF-kappaB Signalling and Impairs Osteoclastogenesis"; 3rd IBRA (International Bone Research Association) Scientific Seminar, Basel, Switzerland.

2007: "Biologia Molecolare del Rimodellamento Osseo"; Convegno Bone & Heart, Firenze.

2006: "Biology of Metastasis"; Mediterranean School of Oncology, Roma.

2005: "c-Src as a therapeutic target for bone metastases treatment"; Novartis Pharma, Basilea, Svizzera.

2002: "Bone Remodelling"; Università di Brescia, Facoltà di Farmacia.

Presentazioni Orali:

2015: 1) 4th Joint Meeting European Calcified Tissue Society (ECTS) & the International Bone and Mineral Society (IBMS), Rotterdam;

2) International Society of Cancer Metabolism (ISCaM), Venezia;

3) Austrian Society for Bone and Mineral Research (AuSBMR) meeting,



	<p>Vienna, Austria. 2012: 1) <i>Austrian Society of Bone and Mineral Research (AusBMR) meeting</i> Vienna, Austria,; 2) SIOMMMS, XII Congresso Nazionale, Bologna; 3) <i>Cancer Induced Bone Diseases (CIBD) meeting</i>, Lione, Francia; 4) <i>Italian Society for Space Biomedicine and Biotechnology (ISSBB) VI</i> Congresso Nazionale, Brindisi 5) <i>European Symposium on Calcified Tissues</i>, Stoccolma, Svezia; 6) <i>2nd IOF-ESCEO pre-clinical symposium</i>, Bordeaux, Francia 7) <i>XI Forum in Bone and Mineral Research</i>, Gazzada Schianno, Varese. 2011: 1) <i>ASBMR 33rd Annual Meeting</i>, San Diego, USA; 2) <i>3rd Joint Meeting European Calcified Tissue Society & the International Bone and Mineral Society</i>, Atene, Grecia; 2010: 1) SIOMMMS, X Congresso Nazionale, Brescia; 2) <i>XI Forum in Bone and Mineral Research</i>, Milano. 2009: <i>2nd IBMS Davos Workshop: Bone Biology & Therapeutics</i>, Davos, Svizzera. 2008: 1) <i>IV Forum in Bone and Mineral Research</i>, Napoli; 2) <i>European Symposium on Calcified Tissues</i>, Barcellona, Spagna. 2006: 1) <i>International Conference on Progress in Bone and Mineral Research</i>, Vien, Austria; 2) <i>ASBMR 28th Annual Meeting</i>, Philadelphia, USA; 3) <i>European Symposium on Calcified Tissues</i>, Prague, Czech Republic. 2005: 1) <i>European Symposium on Calcified Tissues</i>, Geneve, Switzerland; 2) <i>I Forum in Bone and Mineral Research</i>, Torino. 2004: 1) <i>European Symposium on Calcified Tissues</i>, Nice, France; 2) <i>Frontiers of Skeletal Biology</i>, Davos, Svizzera. 2003: 1) <i>International Conference on Progress in Bone and Mineral Research</i>, Vienna, Austria.</p>
<p>PUBBLICAZIONI SCIENTIFICHE SELEZIONE</p>	<ol style="list-style-type: none"> Schiavone ML, Crisafulli L, Camisaschi C, De Simone G, Liberati FR, Palagano E, Rucci N, Ficara F, Sobacchi C. Rankl genetic deficiency and functional blockade undermine skeletal stem and progenitor cell differentiation. <i>Stem Cell Res Ther.</i> 2024 Jul 6;15(1):203. Puri C, Dannenberg C, Ucci A, Ponzetti M, Pucci E, Silvestri L, Lau P, Frings-Meuthen P, Heer M, Rucci N, Teti A, Maurizi A. Pre-proenkephalin 1 is Downregulated Under Unloading and is Involved in Osteoblast Biology. <i>Calcif Tissue Int.</i> 2024 Mar 20. doi: 10.1007/s00223-024-01199-z. Online ahead of print. Ponzetti M, Rucci N, Falone S. RNA methylation and cellular response to oxidative stress-promoting anticancer agents. <i>Cell Cycle.</i> 22:870-905;2023. Ponzetti M, Ucci A, Puri C, Giacchi L, Flati I, Capece D, Zazzeroni F, Cappariello A, Rucci N, Falone S. Effects of osteoblast-derived extracellular vesicles on aggressiveness, redox status and mitochondrial bioenergetics of MNNG/HOS osteosarcoma cells. <i>Front Oncol.</i> 12:983254;2022. Giordano A, Rucci N, Falone S. Editorial: Extracellular vesicles as



- modulators of cancer cell adaptive responses linked to therapy resistance. *Front Oncol.* 12:1101103;2022.
6. Ponzetti M, Chinna Rao Devarapu G, Rucci N, Carlone A, Saggiomo V. HistoEnder: A 3D printer-based histological slide autostainer that retains 3D printer functions. *HardwareX.* 12:e00370;2022.
 7. Cappariello A, Muraca M, Teti A, **Rucci N**. Circulating extracellular vesicles express receptor activator of Nuclear Factor κ B Ligand and other molecules informative of the bone metabolic status of mouse models of experimentally induced osteoporosis. *Calcif Tissue Int.* 2022 Oct 25.
 8. Ucci A, **Rucci N**, Ponzetti M. Liquid biopsies in primary and secondary bone cancers. *Cancer Drug Resist.* 21:541-559;2022.
 9. Faraldi M, Sansoni V, Perego S, Gomasasca M, Gerosa L, Ponzetti M, **Rucci N**, Banfi G, Lombardi G. Acute changes in free and extracellular vesicle-associated circulating miRNAs and myokine profile in professional sky-runners during the Gran Sasso d'Italia vertical run. *Front Mol Biosci* 9:915080;2022.
 10. Ponzetti M, Ucci A, Maurizi A, Giacchi L, Teti A, **Rucci N**. Lipocalin 2 influences bone and muscle phenotype in the MDX mouse model of Duchenne muscular dystrophy. *Int J Mol Sci.* 23:958;2022.
 11. Cappariello A, **Rucci N**. Extracellular vesicles in bone tumors: how to seed in the surroundings molecular information for malignant transformation and progression. *Front Oncol.* 11:722922;2021.
 12. Di Benedetto P, Ruscitti P, Berardicurti O, Panzera N, Grazia N, Di Vito Nolfi M, Di Francesco B, Navarini L, Maurizi A, **Rucci N**, Teti AM, Zazzeroni F, Guggino G, Ciccia F, Dolo V, Alesse E, Cipriani P, Giacomelli R. Blocking Jak/STAT signalling using tofacitinib inhibits angiogenesis in experimental arthritis. *Arthritis Res Ther* 23:213;2021.
 13. Ucci A, Cappariello A, Ponzetti M, Tennant F, Loftus AEP, Shefferd K, Maurizi A, Delle Monache S, Teti A, **Rucci N**. Anti-osteoblastogenic, pro-inflammatory and pro-angiogenic effect of extracellular vesicles isolated from the human osteosarcoma cell line MNNG/HOS. *Bone* 153:116130;2021.
 14. Ponzetti M, Aielli F, Ucci A, Cappariello A, Lombardi G, Teti A, **Rucci N**. Lipocalin 2 increases after high-intensity exercise in humans and influences muscle gene expression and differentiation in mice. *J Cell Physiol.* 237:551-565;2022.
 15. Ponzetti M, **Rucci N**. Osteoblast differentiation and signaling: established concepts and emerging topics. *Int J Mol Sci.* 22:6651;2021.
 16. Maurizi A, Ponzetti M, Gautvik KM, Reppe S, Teti A, **Rucci N**. Lipocalin 2 serum levels correlate with age and bone turnover biomarkers in healthy subjects but not in postmenopausal osteoporotic women. *Bone Rep* 14:101059;2021. doi: 10.1016/j.bonr.2021.101059.
 17. Maurizi A, Ponzetti M, **Rucci N**. How the “seed” prepares the “soil”: the bone/bone marrow pre-metastatic niche. *J Cancer Metastasis Treat* 7:35;2021. DOI: 10.20517/2394-4722.2021.74
 18. Norwood I, Szondi D, Ciocca M, Coudert A, Cohen-Solal M, **Rucci**



- N**, Teti A, Maurizi A. Transcriptomic and bioinformatic analysis of Clcn7-dependent Autosomal Dominant Osteopetrosis type 2. Preclinical and clinical implications. *Bone*. 144:115828;2021. doi: 10.1016/j.bone.2020.115828.
19. Di Giminiani R, **Rucci N**, Capuano L, Ponzetti M, Aielli F, Tihanyi J. Individualized whole-body vibration: neuromuscular, biochemical, muscle damage and inflammatory acute responses. *Dose Response*. 18:1559325820931262;2020. doi: 10.1177/1559325820931262.
20. Ponzetti M, **Rucci N**. Switching homes: how cancer moves to bone. *Int J Mol Sci*. 21:4124;2020.
21. Loftus A, Cappariello A, George C, Ucci A, Shefferd K, Green A, Paone R, Ponzetti M, Delle Monache S, Muraca M, Teti A, **Rucci N**. Extracellular vesicles from osteotropic breast cancer cells affect bone resident cells. *J Bone Miner Res*. 35:396-412;2020.
22. Cappariello A, **Rucci N**. Tumour-derived extracellular vesicles (EVs): a dangerous “message in a bottle” for bone. *Int J Mol Sci*. 20:4805;2019.
23. Capulli M, Hristova D, Valbret Z, Carys K, Arjan R, Maurizi A, Masedu F, Cappariello A, **Rucci N**, Teti A. Notch2 pathway mediates breast cancer cellular dormancy and mobilisation in bone and contributes to haematopoietic stem cell mimicry. *Br J Cancer*. 2019 Jul;121(2):157-171. doi: 10.1038/s41416-019-0501-y.
24. Maurizi A, Capulli M, Curle A, Patel R, Ucci A, Côrtes JA, Oxford H, Lamandé SR, Bateman JF, **Rucci N**, Teti A. Extra-skeletal manifestations in mice affected by Clcn7-dependent autosomal dominant osteopetrosis type 2 clinical and therapeutic implications. *Bone Res*. 7:17;2019.
25. Marino S, de Ridder D, Bishop RT, Renema N, Ponzetti M, Sophocleous A, Capulli M, Aljeffery A, Carrasco G, Gens MD, Khogeer A, Ralston SH, Gertsch J, Lamoureux F, Heymann D, **Rucci N**, Idris AI. Paradoxical effects of JZL184, an inhibitor of monoacylglycerol lipase, on bone remodelling in healthy and cancer-bearing mice. *EBioMedicine*. 44:452-466; 2019.
26. Ponzetti M, **Rucci N**. Updates on osteoimmunology: what is new on the crosstalk between bone and immune system. *Front Endocrinol*. 10:236;2019.
27. **Rucci N**, Zallone A, Teti A. Isolation and generation of osteoclasts. *Methods Mol Biol*. 1914:3-19;2019.
28. Aielli F, Ponzetti M, **Rucci N**. Bone metastasis pain, from the bench to the bedside. *Int J Mol Sci*. 20:280;2019.
29. Sartoretto S, Gemini-Piperni S, da Silva RA, Calasans MD, **Rucci N**, Pires Dos Santos TM, Lima IBC, Rossi AM, Alves G, Granjeiro JM, Teti A, Zambuzzi WF. Apoptosis-associated speck-like protein containing a caspase-1 recruitment domain (ASC) contributes to osteoblast differentiation and osteogenesis. *J Cell Physiol*. 234:4140-4153;2019.
30. Maurizi A, **Rucci N**. The osteoclast in bone metastasis: player and target. *Cancers* 10:218;2018. doi: 10.3390/cancers10070218.
31. Marino S, Bishop RT, Capulli M, Sophocleous A, Logan JG, Mollat P,



- Mognetti B, Ventura L, Sims AH, **Rucci N**, Ralston SH, Idris AI. Regulation of breast cancer induced bone disease by cancer specific IKK β . *Oncotarget*. 9:16134-16148;2018.
32. Maurizi A, Capulli M, Patel R, Curle A, **Rucci N**, Teti A. RNA interference therapy for autosomal dominant osteopetrosis type 2. Towards the preclinical development. *Bone*. 110:243-354;2018.
33. Capulli M, Ponzetti M, Maurizi A, Gemini-Piperni S, Berger T, Mak TW, Teti A, **Rucci N**. A complex role for Lipocalin 2 in bone metabolism: global ablation in mice induces osteopenia caused by an altered energy metabolism. *J Bone Miner Res*. 33:1141-1153;2018.
34. Peramuhendige P, Marino S, Bishop RT, de Ridder D, Khogeer A, Baldini I, Capulli M, **Rucci N**, Idris AI. TRAF2 in osteotropic breast cancer cells enhances skeletal tumour growth and promotes osteolysis. *Sci Rep*. 8:39;2018. doi: 10.1038/s41598-017-18327-5.
35. Rucci N, **Teti A**. Osteomimicry: how the seed grows in the soil. *Calcif Tissue Int*. 102:131-140;2018. doi: 10.1007/s00223-017-0365-1.
36. Cappariello A, Loftus A, Muraca M, Maurizi A, **Rucci N**, Teti A. Osteoblast-derived extracellular vesicles are biological tools for the delivery of active molecules to bone. *J Bone Miner Res*. 33:517-533;2018. doi: 10.1002/jbmr.3332.
37. Di Pompo G, Lemma S, Canti L, **Rucci N**, Ponzetti M, Errani C, Donati DM, Russell S, Gillies R, Chano T, Baldini N, Avnet S. Intratumoral acidosis fosters cancer-induced bone pain through the activation of the mesenchymal tumor-associated stroma in bone metastasis from breast carcinoma. *Oncotarget*. 8:54478-54496;2017. doi: 10.18632/oncotarget.17091.
38. Ponzetti M, Capulli M, Angelucci A, Ventura L, Monache SD, Mercurio C, Calgani A, Sanità P, Teti A, **Rucci N**. Non-conventional role of haemoglobin beta in breast malignancy. *Br J Cancer*. 117:994-1006;2017. doi: 10.1038/bjc.2017.247.
39. Wright LE, Ottewell PD, **Rucci N**, Peyruchaud O, Pagnotti GM, Chiechi A, Buijs JT, Sterling JA. Murine models of breast cancer bone metastasis. *BoneKey Rep*. 5:804; 2016.
40. Veeriah V, Zanniti A, Paone R, 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. *Sci Rep*. 6:29880;2016. doi: 10.1038/srep29880.
41. Cappariello A, Ponzetti M, **Rucci N**. The "soft" side of the bone: unveiling its endocrine functions. *Horm Mol Biol Clin Investig*. 28:5-20;2016. doi: 10.1038/srep29880.
42. **Rucci N**, Teti A. The "love-hate" relationship between osteoclasts and bone matrix. *Matrix Biol*. 52-54:176-190;2016. doi: 10.1016/j.matbio.2016.02.009.
43. Thaler R, Maurizi A, Roschger P, Sturmlechner I, Khani F, Spitzer S, Rumpler M, Zwerina J, Karlic H, Dudakovic A, Klaushofer K, Teti A, **Rucci N**, Varga F, van Wijnen AJ. Anabolic and antiresorptive modulation of bone homeostasis by the epigenetic modulator sulforaphane, a naturally occurring isothiocyanate. *J Biol Chem*.



291:6754-71;2016. doi: 10.1074/jbc.M115.678235.

44. 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 Ther Nucleic Acids*. 4:e248;2015. doi: 10.1038/mtna.2015.21.
45. 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*. 46:58-69;2015. doi: 10.1016/j.biomaterials.2014.12.033.
46. **Rucci N***, Capulli M, Olstad OK, Önnérjörd 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. *Cancer Lett*. 358:67-75;2015. *Corresponding author. doi: 10.1016/j.canlet.2014.12.032.
47. **Rucci N**, Sanità P, Delle Monache S, Alesse E, Angelucci A. Molecular pathogenesis of bone metastases in breast cancer: proven and emerging therapeutic targets. *World J Clin Oncol*. 5:335-347;2014. doi: 10.5306/wjco.v5.i3.335.
48. **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. *J Bone Miner Res*. 30:357-368;2015. doi: 10.1002/jbmr.2341.
49. **Rucci N**, Angelucci A. Prostate cancer and bone: the elective affinities. *Biomed Res Int*. 2014:167035; 2014. doi: 10.1155/2014/167035.
50. Capulli M, Paone R, **Rucci N**. Osteoblast and osteocyte: games without frontiers. *Arch Biochem Biophys*. 561:3-12;2014. doi: 10.1016/j.abb.2014.05.003.
51. Capulli M, Olstad OK, Önnérjörd 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*. 29:1833-1846;2014. *Corresponding author; +Equal contributors. doi: 10.1002/jbmr.2206.
52. 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*. 25:681-92;2014. doi: 10.1007/s00198-013-2479-2.
53. metastasis spread in multiple organs. *J Bone Miner Res*. 27:2387-2398;2012. doi: 10.1002/jbmr.1686.
54. **Rucci N**, Takayanagi H. Editorial: bone and immune system cross-talk. *Inflamm Allergy Drug Targets*. 11:169;2012. doi: 10.2174/187152812800392779.