UNIVERSITÀ DEGLI STUDI DELL'AQUILA

DISCAB
Dipartimento di Scienze Cliniche Applicate e Biotecnologiche

CURRICULUM VITAE

PERSONAL INFORMATION	Nadia RUCCI, PhD Department of Biotechnological and Applied Clinical Sciences (DISCAB) Address (work): via Vetoio, Coppito 2 City: L'Aquila postal code: 67100 Nation: Italy E-mail address (work): **nadia.rucci@univaq.it**

CURRENT POSITION	Full Professor of Histology and Embryology (SSD BIOS-13/A) and Head of the Skeletal Diseases Laboratory, University of L'Aquila, L'Aquila, Italy

EDUCATION OTHER QUALIFICATIONS	**Education:** **2003:** Specialization in Clinical Pathology, University of L'Aquila, Italy; **1999:** PhD in Endocrinology and Metabolic Diseases, University of L'Aquila; **1997:** Qualified as Biologist, University of L'Aquila; **1994**: Bachelor's in Biology, Sapienza University of Rome, Italy. **Stages:** **2003:** (August-October) Exchange Scholarship Grant, Leiden University Medical Centre (LUMC), The Netherlands; **2001**(January) Department of Medicine, Division of Endocrinology, University of Texas Health Science Centre at San Antonio, TX, USA. **Awards:** **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.

ACADEMIC APPOINTMENTS	**2026:** Member of the Research Committee, DISCAB; **2024:** Head of the Animal facility; **2021:** member of the parithetic Committee, University of L'Aquila; **2018-2020:** member of the Academic Senate, University of L'Aquila; **2015-present:** Head of the Welfare Animal Committee, University of L'Aquila; **2014-present:** Member of the Board of the PhD in Experimental Medicine, University of L'Aquila.

TEACHING EXPERIENCE	**2024-present** Course of **Histology and Embryology**, School of Biotechnology, University of L'Aquila, Italy; **2023-present:** Course of **Experimental Biotechnological Models**, School of Pharmaceutical and Medical Biotechnologies, University of L'Aquila; **2023-present**: Course **of Histology**, School of Biomedical Laboratory Science, University of L'Aquila; **2019-present:** Course of **Histology,** School of Medicine and Surgery, University of L'Aquila; **2018-2019:** Course of **Functional Anatomy**, School of Sport Science and Technology, University of L'Aquila; **2012-2023:** Course of **Experimental Biotechnological Models**, School of Medical Biotechnologies, University of L'Aquila, Italy; **2012-2011**: Course of **Stem cells and tissue regeneration**, School of Biotechnology, University of L'Aquila; **2011-2010:** Course of **Molecular Diagnostic**, School of Biotechnology, University of L'Aquila; **2009-2008:** Course of **Integrated Laboratory 3**, School of Biotechnology, University of L'Aquila.

RESEARCH ACTIVITIES	**Research field:** Prof Nadia Rucci research is mainly focused on bone physiopathology, with regards to oncologic (i.e. bone metastases and osteosarcoma), metabolic (i.e. postmenopausal and mechanical unloading related osteoporosis) and genetic diseases (i.e. Duchenne muscle dystrophy and osteopetrosis). During the last years, the following research projects have been developed: 1) Investigation of the bone microenvironment players involved in osteosarcoma development and metastatisation. 1) Study of the molecular mechanisms involved in bone loss occurring in patients affected by Duchenne Muscle Dystrophy (DMD). 2) Study of the molecular mechanisms regulating bone metastases development: identification of new prognostic markers and molecular targets to develop alternative therapeutic approaches. 2.1 Extracellular vesicles as a new approach to target tumour cells in the bone microenvironment. 2.2 Role of Haemoglobin beta (HbB) in breast cancer. 3) Study of the effects of mechanical unloading on bone tissue: unveiling new bone mass regulators. 3.1 Lipocalin 2 (Lcn2) as biomarker of unloading induced bone loss. 3.2 Role of Lcn2 in bone metabolism. 3.3 Role of Preproenkephalin 1(Penk1) in bone metabolism. **Research Support as Principal Investigator (PI):** **2024: S**poke 1 "genetic diseases" UNIMORE, PI for the project: "Evaluation of Serum and circulating EVs MYOKine profile in a Central Core Disease (CCD) mouse model overexpressing miR-486" (SEVMYOK) **2023:** "*Spine Unit modeling coupled with hIgh Throuhgput analysis (SUIT): targeting dgeneration with cell secretome*" – PNRR-MAD-2022-12376354; **2020-2025**: Italian Association of Cancer Research (AIRC) for the research project: "Tumour extracellular vesicles educate the bone to promote their growth and metastasis: finding targetable pathways" **2016-2018:** The French Muscular dystrophy Association (AFM)-Téléthon for the research project: "Bone phenotype in Duchenne muscular dystrophy: unveiling the role of LCN2 and implications for therapy"; **2015-2018**: AIRC funding for the research project "Extracellular vesicles as new therapeutic approach to target bone tumour cells"; **2014-2011**: AIRC funding for the research project: "Role of Haemoglobin B in breast cancer: regulation of oxidative stress response and metastasis organotropism"; **2012:** CARISPAQ foundation for the research project: "Role of haemoglobin-B (HBB) in breast cancer: regulation of the response to the oxidative stress and of metastatic organotropism"; **2012-2011:** 5th Research award STRODER/SIOMMMS for the research project: "Role of lipocalin 2 in bone metabolism and potential therapeutic applications"; **2003:** Young Researcher Grant (FI-GI-RI), Department of Experimental Medicine, University of L'Aquila, Italy.

	Research Support as Co-PI/Research unit: **2018-2021**: Italian Space Agency (ASI) for the research project: "MARS-PRE: biological and functional MARkers for astronautics and precision medicine"; **2013:** My First AIRC Grant (MFAG) PI Dr. Sofia Avnet, Rizzoli Orthopaedic Institute, Bologna for the research project: "Photodynamic therapy and proton pump inhibitors for the treatment of pain in patients with bone metastases"; **Research Support as Supervisor:** **2020-2022:** Supervisor of Dr Marco Ponzetti, recipient of the AIRC fellowship (2 years) for the project: "Role of extracellular vesicles shuttled miRNAs in the reprogramming of breast cancer bone metastatic microenvironment"; **2019:** Supervisor of Dr Marco Ponzetti, recipient of the AIRC fellowship(1 year) for the project: "Role of extracellular vesicles shuttled miRNAs in the reprogramming of breast cancer bone metastatic microenvironment"; **2015**: Supervisor of Dr Alfredo Cappariello, ECTS-New Investigator Research Grant for the research project: "Extracellular vesicles as mediators of osteoporosis onset and progression". **International Patent:** "Small interfering RNA (siRNA) for the therapy of type 2 (ADO2) Autosomal Dominant Osteopetrosis caused by CLCN7(ADO2 CLCN7-dependent) gene mutation" (code N. WO2015177743A1, publication date 26/11/2015). Europe: EP3145553A1, 29-03-2017; Canada: CA2949345A1, 26-11-2015; USA: US20170101644, 13-04-2017; Japan: JP2017521094 (A), 03-08-2017. Role: co-inventor.
RESPONSIBILITY IN ACADEMIC ACTIVITIES	

EDITORIAL BOARD, EDITORIAL ACTIVITIES, SOCIETY MEMBERSHIP	**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" **International Scientific Societies:** American Society for Bone and Mineral Research (ASBMR); European Calcified Tissues Society (ECTS); European Association for Cancer Research (EACR). **Reviewer for international Journals:** 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; PLOSONE; Recent Patent on Biomarkers. **Grants Reviewer:** 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). **Organisation of meetings:** **2019:** 13th European Calcified Tissue Society (ECTS) PhD Training Course, Bologna 7-10 September 2019; **2018-2021:** "Cancer and Bone Working Group" ECTS pre meeting; **2016:** Local committee for the 43rd Annual European Calcified Tissue Society Congress, Rome, 14-16 May 2016; **2012:** ECTS Training Course: "Cancer and Bone: A guide for in vivo experiments", L'Aquila 12-14 September 2012.
SCIENTIFIC ACHIEVEMENTS BIBLIOMETRIC INDICATORS	**Scopus Author ID:**660359313 **http://orcid.org/0000-0002-1371-8252** H index: **46**; cytations: **6025** **Invited Lectures:** **2025:** "Meet the expert: EVs in the Crosstalk Between Bone Cells" ECTS Congress, 23-25 Maggio, Innsbruck, Austria; **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,* Marseille, France. 2) *"Bone metastases: from Stephen Paget to 2020"; German Priority Program µbone,* Dresda, Germany **2018:** *"Basic Science Update: Osteoclasts"; 45th European Calcified Tissue Society Congress,* Valencia, Spain. **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" University of Rome; *2) "Bone and CKD-MBD"; Ca-P School,* "Sapienza" University of Rome; *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, Prague, Czech Republic**.** **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,* Rome; **2011:** 1) "Basi Biologiche del Danno Scheletrico"; Simposio: Patologie Gastrointestinali e Osso, SIOMMMS, XI National Congress, Rome; 2) "Mechanisms of Bone Destruction by Cancer Cells"; Osteotropic cancers: new pathogenic and clinical aspects, Scuola di Specializzazione in Oncologia Medica, University of 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, Florence.* **2006:** *"Biology of Metastasis"; Mediterranean School of Oncology,* Roma. **2005:** *"c-Src as a therapeutic target for bone metastases treatment"; Novartis Pharma,* Basilea, Switzerland. **2002:** "Bone Remodelling"; Università di Brescia, Facoltà di Farmacia. **Oral Communications:** **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,* Wien, Austria; **2012:** *1) Austrian Society of Bone and Mineral Research (AusBMR) meeting* Vienna, Austria*;* *2)* SIOMMMS, XII National Congress, Bologna; *3) Cancer Induced Bone Diseases (CIBD) meeting,* Lyon, France; *4) Italian Society for Space Biomedicine and Biotechnology (ISSBB) VI* National Congress, Brindisi, Italy *5) European Symposium on Calcified Tissues,* Stockholm, Sweden; *6) 2nd IOF-ESCEO pre-clinical symposium, Bordeaux,* France; *7) XI Forum in Bone and Mineral Research, Gazzada Schianno,* Varese. **2011:** *1) ASBMR 33rd Annual Meeting, San Diego, USA;* *2) 3rd Joint Meeting European Calcified Tissue Society & the International Bone and Mineral Society,* Atene, Grecia; **2010:** 1) SIOMMMS, X National Congress, Brescia; *2) XI Forum in Bone and Mineral Research,* Milan, Italy; **2009:** *2nd IBMS Davos Workshop: Bone Biology & Therapeutics,* Davos, Switzerland; **2008:** *1) IV Forum in Bone and Mineral Research,* Napoli, Italy; *2) European Symposium on Calcified Tissues,* Barcelona, Spain; **2006: 1***) International Conference on Progress in Bone and Mineral Research, Vien, Austria;* *2) ASBMR 28th Annual Meeting, Philadelphia, USA;* *3) European Symposium on Calcified Tissues, Prague, Czech Republic;* **2005:** *1) European Symposium on Calcified Tissues, Geneve, Switzerland;* *2)* I Forum *in Bone and Mineral Research,* Torino*, Italy;* **2004:** *1) European Symposium on Calcified Tissues, Nice, France;* *2) Frontiers of Skeletal Biology,* Davos, Switzerland; **2003:** *1) International Conference on Progress in Bone and Mineral Research,* Wien, Austria.
PUBLICATIONS	**INTERNATIONAL PEER REVIEW PUBLICATIONS** 1. Al-Jeffery A, Zeng F, Sophocleous A, Marino S, Ponzetti M, Capulli M, Paul A, Plevin R, Fowles ACM, Mackay SP, **Rucci N**, Idris AI. Differential effects of a first-in-class IKK$_\alpha$ inhibitor on trabecular and cortical bone in a human prostate cancer xenograft model. *Calcif Tissue Int* 117:122;2026. doi: 10.1007/s00223-026-01558-y. **2.** Maurizi A, Pucci E, Patrizii P, Silvestri L, **Rucci N***, Capulli M. Generation of a P4hbY393C mouse model of cole-carpenter syndrome and therapeutic proof-of-concept. *Life Sci* 402:124593;2026. doi: 10.1016/j.lfs.2026.124593. ***Corresponding author.** 3. Bevacqua E, Granata V, Panetta D, Longo E, Prašek M, Sanchez PJ, Violi F, Giacchi L, Bertola L, Tromba G, Santillo M, **Rucci N**, Recordati C, Mazziotti G, Morenghi E, Menale C, Sobacchi C. DPP3 deficiency impacts bone quality and

sensitizes to metabolic alterations. *Bone* 210:117951;2026. doi: 10.1016/j.bone.2026.117951.

4. Giacchi L, Ucci A, Zelli V, Compagnoni C, Pucci E, Tessitore A, Ponzetti M, **Rucci N**. Effect of osteoblast-derived extracellular vesicles on osteosarcoma cells' transcriptional profile: role of shuttled miRNAs. *Biomedicines* 14:1039;2026. doi: 10.3390/biomedicines14051039.
5. Ligotti ME, Scalia E, Scilabra SD, Pinto ML, Gallo A, Vazzana R, Cuscino N, Re OL, Pipia C, Amico G, Lopa S, Colombini A, Ippolito V, Maurizi A, **Rucci N**, Agnese V, Conaldi PG, Moretti M, Miceli V, Bulati M. Priming-Dependent Modulation of Secretome in placenta- and adipose-derived mesenchymal stromal/stem cells: toward cell-free immunoregenerative therapies for osteochondral and degenerative joint diseases. *Stem Cell Rev Rep* 22:2453-73;2026. doi: 10.1007/s12015-026-11122-8.
6. Giacchi L, Ucci A, Pucci E, Lancia L, Pulcini F, Delle Monache S, **Rucci N***, Ponzetti M. Extracellular vesicles from osteotropic triple-negative breast cancer cells transfer miRNAs to bone cells reducing collagen expression and bone matrix mineralisation. *Pharmaceutics* 18:317;2026. doi: 10.3390/pharmaceutics18030317. ***Corresponding author.**
7. Giacchi L, Pucci E, **Rucci N**. From bench to bedside: advancements in precision oncology and drug discovery for osteosarcoma. *Cancers (Basel).* 18:561;2026. doi: 10.3390/cancers18040561.
8. Ucci A, Giacchi L, Cufaro MC, Puri C, Ciocca M, Di Ferdinando F, Del Boccio P, Cappariello A, **Rucci N**. Human osteosarcoma cell secretome impairs neonatal mouse calvarial osteogenic cells functions and modifies the nanoparticles-derived protein profile. *Life Sci* 379:123837;2025. doi: 10.1016/j.lfs.2025.123837.
9. Di Nicola N, Giacchi L, Vandone M, Crucianelli M, Guidoni L, Colombo V, **Rucci N**, Lazzarini A. Targeted delivery of lidocaine in breast cancer cells via zeolitic imidazolate framework-8 nanoparticles. *Chemphyschem* 26:e2401128;2025. doi: 10.1002/cphc.202401128.
10. Ucci A, Giacchi L, **Rucci N**. Primary bone tumors and breast cancer-induced bone metastases: in vivo animal models and new alternative approaches. *Biomedicines* 12:2451;2024. doi: 10.3390/biomedicines12112451.
11. 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. *Stem Cell Res Ther* 15:203;2024. doi: 10.1186/s13287-024-03803-3.
12. 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. *Calcif Tissue Int* 114:524-34;2024 doi: 10.1007/s00223-024-01199-z.
13. Ponzetti M, **Rucci N**, Falone S. RNA methylation and cellular response to oxidative stress-promoting anticancer agents. *Cell Cycle* 22:870-905;2023. doi: 10.1080/15384101.2023.2165632
14. Cappariello A, Muraca M, Teti A, **Rucci N.** Circulating extracellular vesicles express receptor activator of Nuclear Factor κB Ligand and other molecules informative of the bone metabolic status of mouse models of experimentally induced osteoporosis. *Calcif Tissue Int* 112:74-91;2023. doi.org/10.1007/s00223-022-01032-5.
15. 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. *Front Oncol* 12:983254;2022. doi: 10.3389/fonc.2022.983254. ***Correspinding author.**
16. 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. doi: 10.3389/fonc.2022.1101103.
17. 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. doi: 10.1016/j.ohx.2022.e00370.
18. Ucci A, **Rucci N**, Ponzetti M. Liquid biopsies in primary and secondary bone cancers. *Cancer Drug Resist* 21:541-59;2022. doi: 10.20517/cdr.2022.17.
19. Faraldi M, Sansoni V, Perego S, Gomarasca 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. doi: 10.3389/fmolb.2022.915080.

20. 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. doi: 10.3390/ijms23020958.
21. 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. doi: 10.3389/fonc.2021.722922.
22. 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. doi: 10.1186/s13075-021-02587-8.
23. 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. doi: 10.1016/j.bone.2021.116130.
24. 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. doi: 10.1002/jcp.30501.
25. Ponzetti M, **Rucci N**. Osteoblast differentiation and signaling: established concepts and emerging topics. *Int J Mol Sci* 22:6651;2021. doi: 10.3390/ijms22136651.
26. 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.
27. 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
28. 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.
29. 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.
30. Ponzetti M, **Rucci N**. Switching homes: how cancer moves to bone. *Int J Mol Sci* 21:4124;2020. doi: 10.3390/ijms21114124.
31. 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. doi: 10.1002/jbmr.3891.
32. Cappariello A, **Rucci N**. Tumour-derived extracellular vesicles (EVs): a dangerous "message in a bottle" for bone. *Int J Mol Sci* 20:4805;2019. doi: 10.3390/ijms20194805.
33. 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* 121:157-71;2019. doi: 10.1038/s41416-019-0501-y.
34. 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. Doi: 10.1038/s41413-019-0055-x.
35. 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* 44:452-66;2019. doi: 10.1016/j.ebiom.2019.05.048.
36. Ponzetti M, **Rucci N**. Updates on osteoimmunology: what is new on the crosstalk between

bone and immune system. *Front Endocrinol* 10:236;2019. doi: 10.3389/fendo.2019.00236.

37. **Rucci N**, Zallone A, Teti A. Isolation and generation of osteoclasts. *Methods Mol Biol* 1914:3-19;2019. doi: 10.1007/978-1-4939-8997-3_1.
38. Aielli F, Ponzetti M, **Rucci N**. Bone metastasis pain, from the bench to the bedside. *Int J Mol Sci* 20:280;2019. doi:10.3390/ijms20020280.
39. 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* 234:4140-53;2019. doi:10.1002/jcp.27226.
40. Maurizi A, **Rucci N**. The osteoclast in bone metastasis: player and target. *Cancers* 10:218;2018. doi: 10.3390/cancers10070218.
41. 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 IKKβ. *Oncotarget* 9:16134-16148;2018. doi: 10.18632/oncotarget.24743.
42. 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. doi:10.1016/j.bone.2018.02.031.
43. 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* 33:1141-53;2018. doi:10.1002/jbmr.3406.
44. 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.
45. **Rucci N**, Teti A. Osteomimicry: how the seed grows in the soil. *Calcif Tissue Int* 102:131-40;2018. doi: 10.1007/s00223-017-0365-1.
46. 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* 33:517-33;2018. doi: 10.1002/jbmr.3332.
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L'AQUILA, 7TH OCTOBER 2026

Nadia Rucci