

PATRIZIA D'AMELIO



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Curriculum vitae

Personal information	Current/past positions
<i>Nationality</i> Italian	2012-until now Assistant Professor , Dept of Medical Science, University of Turin, Italy
<i>Place/date of birth</i> Turin, Italy 3 rd May 1974	2010-2012 Assistant Professor , Dept of Surgical and Medical Disciplines, University of Turin, Italy
1 child, Emanuele, date of birth 19 th June 2002	2007-2010 Post-Doctoral Research Scientist , Department of Internal Medicine, University of Turin, Italy
<i>Hobbies</i> : I've a passion for marine aquarium	
<i>Sports</i> : alpinism, canyoning	

Education

2004-2007	Ph.D. in Physiopathology (University of Turin, Italy)
1999-2007	Specialization in Internal Medicine (University of Turin, Italy)
1993-1999	Degree in Medicine and Surgery (University of Turin, Italy)
Research activity:	Osteoimmunology (role of immune system in in post-menopausal osteoporosis and in bone erosions in rheumatoid arthritis)
	Diagnosis and epidemiology of osteoporosis
	Bone biomechanics
	Bone cell biology

Physiopathology of bone metastases

Sarcopenia

Non pharmacologic approach to demented patients (doll therapy)

Role of nutrition in successful aging

**International
collaboration**

Prof Pacifici at Emory University of Atlanta (GA,USA) on the relation between immune system and bone

Prof. S. Ralston at University of Edinburg (UK).on genome wide association studies (GWAS) in major osteoporotic fractures and in response to anti-osteoporotic drugs

Prof. T De Vries at University of Amsterdam on developing a successful educational program for Early Stage careers Researchers (ESR) within the consortium IMMUNOCLAST

Research Performance

- *Publications:* **61** publications in refereed international indexed journals with **over 1100 citations, H index 18**

6 book chapters (2 international book, 4 national).

- *Meetings:* over **60 invited lectures** at national and international meetings

Over **80 oral or poster presentations** at national and international meetings

- *Patent:* Image analyses software to detect osteoclast ability to resorb bone in vitro (**patent TO2006A00565 2006**)
- *Awards :*the applicant obtained **11 Young Investigator Awards** between 1999 and 2015. Best presentation award for the start-up Novaicos iSrl obtained on 20th January 2017.
- *Co-founder* of the start-up Novaicos iSrl, the start-up aims to develop new drugs against post-menopausal bone loss and cancer induced bone loss.

Funding ID: individual grants

2019-2024 WP5 leader with NOVAICOS srl in the project **“Active aGelng and Osteoporosis: The next challenge for smarT nanobIOMaterials and 3D technologies” (GIOTTO)** Prof. C. Vitale-Brovarone PI (5.650 Mio Euros)

2017-2020 Partner in the project **“Role of the ICOS/ICOSL system in Frailty Syndrome”** (380000 Euros)

2014-2016	Principal Investigator in the project: “Autoreactive T cells in peripheral blood of patients affected by severe form of osteoporosis” . (60000 Euros)
2012-2014	Principal Investigator in the project: “The role of T cells in postmenopausal bone loss: focus on autoreactive T cells in peripheral blood of patients affected by severe form of osteoporosis” . (50000 Euros)
2007-2009	Principal Investigator in the project: “Osteocytes and bone structure in osteoporotic fractures” . (40000 Euros)

Grants in which I had a major role in writing the project include:

2012-2015	Co-investigator in the project: “Relevant organ Models for the INvestigation of age related Diseases (MIND)” within a hub of researcher (coordinator Prof G. Ciardelli) founded by Italian Ministry for University and Research (1.259.941 Euros)
2007-2010	“Evaluation of cut out risk in femoral prostheses” founded by “CRT” bank 50000 Euros
2008-2010	“Study of circulating osteoblast lineage cells in relation with teriparatide therapy” founded by Ely Lilly 20.000 Euros
2008-2011	“Effect of in vivo alendronate on in vitro spontaneous osteoclastogenesis in postmenopausal osteoporosis” founded by Merk Sharp and Dohme 20.000 Euros.
2010-2012	“Energy metabolism and the skeleton: reciprocal interplay” founded by Nycomed 90000 Euros
2010-2013	“Effects of cholecalciferol on T cells and osteoclasts formation in early rheumatoid arthritis” founded by “Compagnia di San Paolo” bank 50000 Euros

Supervision Activities and Teaching

Since 2006	Course on bone metastases physiopathology at “master for prostatic oncology”
Since 2008	Courses on bone diseases and bone bone metabolism for MD students-
Since 2008	Courses on bone diseases and bone bone metabolism for post graduate MD (geriatrics)
Since 2011	Courses on geriatrics for nurses (coordinator of the course)
Since 2011	Course on research methodology at master for ulcers treatment
Since 2016	Courses on geriatrics for psychologists

Supervision activities

- 22 **MD students** (2 ongoing)
- 7 **nurses**
- 7 **post-graduate students** specialist in geriatrics and internal medicine
- 3 **biomedical engineers** (Stefano Brianza is actually CEO at Biomech Innovation (Switzerland))
- 4 **PhD**
- 3 **psychologist** (2 on going)

Editorial activity

- Associated Editor of Clinical Reviews in Bone and Mineral Metabolism, guest editor of a special issue on osteoimmunology.
- Member of the Editorial Board of World Journal of Orthopaedics.
- Member of the Editorial Board of Advances in Medicine
- Member of the Editorial Board of International Journal of Orthopaedics
- Member of the Editorial Board of International Journal of Endocrinology
- Member of the Editorial Board of Frontiers in Endocrinology, guest editor of a special issue on osteoimmunology (2015) and of a special issue on “Bone as endocrine target and organs” 2017

PUBLICATIONS ON INDEXED JOURNALS.

1. **Densitometric study of developing femur.** Panattoni G.L., D'Amelio P., Di Stefano M., Sciolla A., Isaia G.C. *Calcif. Tissue Int.*, 1998 64: 133-6.
2. **Ossification centers of human femur.** Panattoni G.L., D'Amelio P., Di Stefano M., Isaia G.C. *Calcif. Tissue Int.*, 2000 Apr;66:255-258.
3. **Haptoglobin genotype as risk factor for postmenopausal osteoporosis.** Pescarmona G.P., D'Amelio P., Morra E., Isaia G.C.. *Journal of Medical Genetics*. 2001; 38 : 636-637.
4. **High Density Lipoproteins (HDL) in women with postmenopausal osteoporosis: a preliminary study.** D'Amelio P., Pescarmona G.P., Gariboldi A., Isaia G.C.. *Menopause*. 2001;8:429-32.
5. **Densitometric study of human developing dry bones: a review.** D'Amelio P., Panattoni G.L., Isaia G.C. *Journal of Clinical Densitometry*.2002; 5:73-78.
6. **Densitometric study of dry human mandible.** D'Amelio P., Panattoni G.L., Di Stefano M., Nassisi R., Violino D., Isaia G.C.. *J Clin Densitom*. 2002; 5:363-7.
7. **Effects of potassium citrate supplementation on bone metabolism** Marangella M, Di Stefano M, Casalis S, Berutti S, D'Amelio P, Isaia GC. *Calcif Tissue Int*. 2004; 74:330-5.
8. **Spontaneous osteoclast formation from peripheral blood mononuclear cells in postmenopausal osteoporosis.** D'Amelio P., Grimaldi A., Pescarmona G.P., Tamone C., Roato I., Isaia G. *FASEB J*. 2005;19:410-2.
9. **Cross-sectional geometrical properties of distal radius and ulna in large, medium and toy breed dogs.** Brianza S.Z.M., Delise M., Ferraris M.M., D'Amelio P., Botti P. *J of Biomechanics* 2006;39:302-11.
10. **Effects of lifestyle and risk factors on Bone Mineral Density in a cohort of Italian women: suggestion for a new decision rule.** D'Amelio P., Tamone C., Pluviano F., Di Stefano M., Isaia G.. *Calcif Tissue Int*. 2005;77:72-8.
11. **Is leptin the link between fat and bone?** Isaia GC, D'Amelio P., Di Bella S, Tamone C. *J Endocrinol Invest*. 2005;28(10 Suppl):61-5.
12. **Immune system and bone metabolism: does thymectomy influence postmenopausal bone loss in humans?** D'Amelio P., Grimaldi A., Bernabei P., Pescarmona GP, Isaia G. *Bone*. 2006 Sep; 39:658-65
13. **Hypovitaminosis D in internal medicine inpatients.** Corino A, D'Amelio P, Gancia R, Del Rizzo P, Gabasio S, Limone P, Isaia G. *Calcif. Tissue Int*. 2007;80:76-80
14. **Health-related quality of life in severe osteoporosis.** D'Amelio P, Di Stefano M, Isaia G. *Aging Clin Exp Res* 2007;19(3 Suppl):28-30.
15. **Preoperative localization of parathyroid adenoma with sonography and 99m-TC sestamibi scintigraphy in primary hyperparathyroidism.** Grosso I, Sargiotto A., D'Amelio P., Tamone C., Gasparri G., Limone P., De Filippi P.G, Picciotto G, Isaia G. *J Clin Ultrasound*. 2007 May;35(4):186-90.

16. **Role of a regional centralized referral centre for metabolic bone diseases** Di Stefano M., D'Amelio P., Isaia GC. Aging Clin Exp Res 2007;19(3 Suppl):31-32
17. **Allometric scaling and biomechanical behaviour of the bone tissue: an experimental intraspecific investigation.** Brianza S. Z.M, D'Amelio P., Pugno N., Delise M, Bignardi C., Isaia G. Bone. 2007 ;40(6):1635-42.
18. **Protein intake: the impact on calcium and bone homeostasis.** Isaia GC, D'Amelio P., Di Bella S, Tamone C. J Endocrinol Invest.2007; 30(6 Suppl):48-53
19. **Risedronate reduces osteoclast precursors and cytokine production in postmenopausal osteoporotic women.** D'Amelio P., Grimaldi A, Di Bella S, Tamone C, Brianza SZM, Ravazzoli MGA, Bernabei P, Cristofaro MA, Pescarmona GP, Isaia G. JBMR 2008; 23:373-379
20. **Bone mineral density and Singh index predict bone mechanical properties of human femur.** D'Amelio P., Rossi P, Isaia G, Lollino N, Castoldi F, Girardo M, Dettoni F, Sattin F, Delise M, Bignardi C. Connect Tissue Res. 2008;49(2):99-104.
21. **Estrogen deficiency increases osteoclastogenesis up-regulating T cells activity: a key mechanism in osteoporosis.** D'Amelio P., Grimaldi A., Di Bella S., Brianza S.Z.M., Cristofaro M.A., Tamone C., Giribaldi G., Ulliers D., Pescarmona G.P. , Isaia G. Bone. 2008 Jul;43:92-100..
22. **HDL cholesterol and bone mineral density in normal-weight postmenopausal women: is there any possible association?** D'Amelio P., Di Bella S, Tamone C, Ravazzoli M, Cristofaro MA, Di Stefano M, Isaia G. Panminerva medica 2008;50(2):89-96.
23. **Role of iron metabolism and oxidative damage in postmenopausal bone loss.** D'Amelio P., Cristofaro MA, Tamone C, Morra E, Di Bella S, Isaia G, Grimaldi A, Gennero L, Gariboldi A, Ponzetto A, Pescarmona GP, Isaia GC. Bone 2008, (43):1010-1015.
24. **Osteoclasts are active in bone forming metastases of prostate cancer patients.** D'Amelio P., Roato I. , Gorassini E., Grimaldi A., Bonello L., Fiori C., Delsedime L., Tizzani A., De Libero A., Isaia G., Ferracini R.. PLoS One. 2008;3(11):e3627..
25. **The osteoprotegerin/RANK/RANKL system: a bone key to vascular disease.** P. D'Amelio, G. Isaia and G.C. Isaia J Endocrinol Invest. 2009, (32 suppl). 4-9.
26. **Alendronate reduces osteoclast precursors in osteoporosis.** D'Amelio P., Grimaldi A, Cristofaro MA, Ravazzoli M, Molinatti PA, Pescarmona GP, Isaia G. Osteoporosis International 2010; 2: 1741-1750.
27. **Iron Metabolism Markers and Haptoglobin Phenotypes in Susceptibility to HSV-1 or/and HSV-2 Lesion Relapses .** L Gennero, MA Roos, P D'Amelio, T Denysenko, E Morra, K Sperber, V Ceroni, M Panzone, F Lesca, E De Vivo, A Grimaldi, ML Gabetti, A Ponzetto, GP Pescarmona, A Pugliese. Cell Biochem Funct. 2010 28: 142-148. DOI: 10.1002/cbf.1633
28. **The role of circulating bone cell precursors in fracture healing.** D'Amelio P., Cristofaro MA, Grimaldi A, Ravazzoli M, Pluviano F, Grosso E, Pescarmona GP , Isaia GC. Calcif Tissue Int 2010 86:463-469
29. **Osteoclastogenesis in peripheral blood mononuclear cell cultures of periprosthetic osteolysis patients and the phenotype of T cells localized in periprosthetic tissues.** Roato I, Caldo D , D'Amico

- L, D'Amelio P, Godio L, Patanè S, Astore F, Grappiolo G, Boggio M, Scagnelli, Molfetta L, Ferracini R. *Biomaterials*. 2010;31:7519-25.
30. **Analysis of vitamin D receptor expression and clinical correlations in patients with ovarian cancer.** Silvagno F, Poma CB, Realmuto C, Ravarino N, Ramella A, Santoro N, D'Amelio P, Fuso L, Pescarmona G, Zola P. *Gynecol Oncol*. 2010;142-8.
 31. **Multinucleated giant cells with an osteoclast phenotype derived from caprine peripheral blood mononuclear cells.** G Pisoni, P D'Amelio, F Sassi, G Manarolla, L Scaccabarozzi, C Locatelli, N Mazzocchi, M Baruscotti, D DiFrancesco, P Moroni. *Veterinary J*. 2011 189: 361-363
 32. **Bone and bone marrow pro-osteoclastogenic cytokines are up-regulated in osteoporosis fragility fractures.** D'Amelio P., Roato I, D'Amico L, Veneziano L, Suman E, Sassi F, Bisignano G, Ferracini R, Gargiulo G, Castoldi F, Pescarmona G P., Isaia GC. *Osteoporosis International* 2011; 22: 2869-2877.
 33. **Microdamage accumulation changes according to animal mass: an intraspecies investigation.** Brianza SZ.M., D'Amelio P., Pugno N, Zini E, Zatelli A, Pluviano F, Cabiale K, Galloni M, Isaia GC. *Calcif Tissue Int*. 2011 88:409-15..
 34. **Iloprost modulates the immune response in systemic sclerosis.** D'Amelio P., Cristofaro M A., D'Amico L, Veneziano L, Roato I, Sassi F, Bisignano G, Saracco M, Pellerito R, Patanè S, Ferracini R, Pescarmona GP., Isaia GC. *BMC Immunology* 2010, 11:62.
 35. **Teriparatide increases the maturation of circulating osteoblast precursors.** P. D'Amelio, C Tamone, F Sassi, L D'Amico, I Roato, S Patanè, M Ravazzoli, L Veneziano, R Ferracini, GP Pescarmona, GC Isaia. *Osteoporosis International Osteoporos Int*. 2012;23:1245-53..
 36. **Clinical characteristics and incidence of first fracture in a consecutive sample of postmenopausal women attending osteoporosis centres: the PROTEO-1 study.** Isaia G.C., Braga V., Minisola S., Bianchi G., Del Puente A, Di Matteo L., Pagano Mariano G., Latte V.M., D'Amico F., Bonali C., D'Amelio P. *J Endocrinol Invest*. 2011;34:534-40.
 37. **Impact of a phone follow-up program on persistence with teriparatide or PTH 1-84 treatment.** C Tamone, G Fonte, A Panico, PA Molinatti, P D'Amelio, GC Isaia *Calcif Tissue Int*. *Calcif Tissue Int*. 2012 Apr;90(4):272-8
 38. **Platelet vitamin D receptor is reduced in osteoporotic patients.** D'Amelio P, Cristofaro MA, De Vivo E, Ravazzoli M, Grosso E, Di Bella S, Aime M, Cotto N, Silvagno F, Isaia GC, GP Pescarmona. *Panminerva Med*. 2012 Sep;54(3):225-31.
 39. **Prevalence of post menopausal osteoporosis in Italy and validation of decision rules for referring women for bone densitometry.** D'Amelio P., Spertino E., Martino F., Isaia G.C.. *Calcif Tissue Int*. 2013;92:437-43
 40. **Bone metastases in gastric cancer follow a RANKL-independent mechanism.** D'Amico L, Satolli MA, Mecca C, Castiglione A, Ceccarelli M, D'Amelio P., Garino M, De Giuli M, Sandrucci S, Ferracini R, Roato I. *Oncology reports* 2013;29(4):1453-8.
 41. **The use of Raloxifene in osteoporosis treatment.** D'Amelio P, Isaia G C. *Expert Opinion on Pharmacotherapy* 2013 ;14:949-56

42. **Primary breast cancer stem-like cells metastasise to bone, switch phenotype and acquire a bone tropism signature.** D'Amico L, Patanè S, Grange C, Bussolati B, Isella C, Fontani L, Godio L, Cilli M, D'Amelio P, Isaia G, Medico E, Ferracini R, Roato I. *British Journal of Cancer* 2013;108:2525-36.
43. **The interplay between the bone and the immune system.** G Mori, P D'Amelio, R Faccio, G Brunetti. *Clin Dev Immunol.* 2013;2013:720504. doi: 10.1155/2013/720504.
44. **Editorial The Crosstalk between the Bone and the Immune System: Osteoimmunology.** G Brunetti, G Mori, P D'Amelio, R Faccio. *Clinical and Developmental Immunology* Volume 2013, <http://dx.doi.org/10.1155/2013/617319>.
45. **The immune system and postmenopausal osteoporosis.** D'Amelio P. *Immunol Invest.* 2013;42:544-54..
46. **Improving adherence to and persistence with oral therapy of osteoporosis.** Bianchi ML, Duca P, Vai S, Guglielmi G, Viti R, Battista C, Scillitani A, Muscarella S, Luisetto G, Camozzi V, Nuti R, Caffarelli C, Gonnelli S, Albanese C, De Tullio V, Isaia G, D'Amelio P, Broggi F, Croci M. *Osteoporos Int.* 2015
47. **Effect of intermittent PTH treatment on plasma glucose in osteoporosis: A randomized trial.** D'Amelio P, Sassi F, Buondonno I, Spertino E, Tamone C, Piano S, Zugna D, Richiardi L, Isaia GC. *Bone.* 2015 Mar 27;76:177-184. doi: 10.1016/j.bone.2015.03.018
48. **Treatment with intermittent PTH increases Wnt10b production by T cells in osteoporotic patients.** D'Amelio P, Sassi F, Buondonno I, Fornelli G, Spertino E, D'Amico L, Marchetti M, Lucchiari M, Roato I, Isaia G C. *Osteoporos Int.* 2015;26:2785-91. doi: 10.1007/s00198-015-3189-8
49. **IL-17A is increased in humans with primary hyperparathyroidism and mediates PTH-induced bone loss in mice.** Li J*, D'Amelio P*, Robinson J, Walker LD, Vaccaro C, Luo T, Tyagi AM, Yu M, Reott M, Sassi F, Buondonno I, Adams J, Weitzmann MN, Isaia GC, Pacifici R. *Cell Metabolism* 2015;22:799-810. doi: 10.1016/j.cmet.2015.09.012. * these authors contributed equally to the paper
50. **Male Osteoporosis in the Elderly.** P D'Amelio, GC Isaia. *International J of Endocrinology* Article ID 907689, 8 pages, 2015. doi:10.1155/2015/907689
51. **Inappropriate Proton Pump Inhibitor Prescription in Elderly Adults: As Usual As Dangerous.** Bergamo D, Pastorino A, Greppi F, Versino E, Bo M, D'Amelio P, Pezzilli MS, Furno E, Isaia G. *J Am Geriatr Soc.* 2015;63:2198-9. doi: 10.1111/jgs.13691
52. **C-met inhibition blocks bone metastasis development induced by renal cancer stem cells.** D'Amico L, Belisario D, Migliardi G, Grange C, Bussolati B, D'Amelio P, Perera T, Dalmasso E, Carbonare LD, Godio L, Comoglio P, Trusolino L, Ferracini R, Roato I. *Oncotarget.* 2016 Jun 14. doi: 10.18632/oncotarget.9997.
53. **ICOS-Ligand Triggering Impairs Osteoclast Differentiation and Function In Vitro and In Vivo.** Gigliotti CL, Boggio E, Clemente N, Shivakumar Y, Toth E, Sblattero D, D'Amelio P, Isaia GC, Dianzani C, Yagi J, Rojo JM, Chiochetti A, Boldorini R, Bosetti M, Dianzani U. *J Immunol.* 2016 Oct 19. pii: 1600424.
54. **Castration-Resistant Prostate Cancer Cells by Nanobubbles and Extracorporeal Shock.** Waves. Marano F, Rinella L, Argenziano M, Cavalli R, Sassi F, D'Amelio P, Battaglia A, Gontero P, Bosco O,

Peluso R, Fortunati N, Frairia R, Catalano MG. PLoS One. 2016 Dec 21;11(12):e0168553. doi: 10.1371/journal.pone.0168553.

55. **Vitamin D and immunomodulation in early rheumatoid arthritis: a randomized double-blind placebo-controlled study.** Buondonno I, Rovera G, Sassi F, Rigoni MM, Lo Mater C, Parisi S, Pellerito R, Isaia GC, D'Amelio P. PLoS One 2017 Jun 5;12(6):e0178463. doi: 10.1371/journal.pone.0178463. eCollection 2017.
56. **Gut Microbiota, Immune System and Bone.** D'Amelio P, Sassi F. CTI 2017 doi: 10.1007/s00223-017-0331-y
57. **Regulatory T cells are expanded by teriparatide treatment in humans and mediate intermittent PTH-induced bone anabolism in mice.** Yu M, D'Amelio P, Tyagi AM, Vaccaro C, Li J, Hsu E, Buondonno I, Sassi F, Adams J, Weitzmann M. N, DiPaolo R, Pacifici R. EMBO Rep. 2018 Jan;19(1):156-171
58. **Identification of a novel locus on chromosome 2q13, which predisposes to clinical vertebral fractures independently of bone density.** Alonso N, Estrada K, Albagha OME, Herrera L, Reppe S, Olstad OK, Gautvik KM, Ryan NM, Evans KL, Nielson CM, Hsu YH, Kiel DP, Markozannes G, Ntzani EE, Evangelou E, Feenstra B, Liu X, Melbye M, Masi L, Brandi ML, Riches P, Daroszewska A, Olmos JM, Valero C, Castillo J, Riancho JA, Husted LB, Langdahl BL, Brown MA, Duncan EL, Kaptoge S, Khaw KT, Usategui-Martín R, Del Pino-Montes J, González-Sarmiento R, Lewis JR, Prince RL, D'Amelio P, García-Giralt N, Nogués X, Mencej-Bedrac S, Marc J, Wolstein O, Eisman JA, Oei L, Medina-Gómez C, Schraut KE, Navarro P, Wilson JF, Davies G, Starr J, Deary I, Tanaka T, Ferrucci L, Gianfrancesco F, Gennari L, Lucas G, Elosua R, Uitterlinden AG, Rivadeneira F, Ralston SH. Ann Rheum Dis. 2017 Nov 23. pii: annrheumdis-2017-212469. doi: 10.1136/annrheumdis-2017-212469. [Epub ahead of print]
59. **Editorial: Bone: Endocrine Target and Organ.** Brunetti G, D'Amelio P, Wasniewska M, Mori G, Faienza MF. Front Endocrinol (Lausanne). 2017 Dec 19;8:354
60. **Type 2 diabetes affects bone cells precursors and bone turnover.** Sassi F, Buondonno I, Luppi C, Spertino E, Stratta E, Di Stefano M, Ravazzoli M, Isaia G, Trento M, Passera P, Porta M, Isaia GC, D'Amelio P. BMC Endocr Disord. 2018 Aug 8;18(1):55.
61. **Vitamin D: nutrient, hormone and immunomodulatory.** F Sassi, C Tamone, P. D'Amelio. Nutrients. 2018 Nov 3;10(11). pii: E1656. doi: 10.3390/nu10111656