

**CURRICULUM VITAE OF
PIERANGELO GEPPETTI, M.D.
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Personal

Name	Pierangelo Geppetti
Nationality	Italian
Professional address	Department of Health Sciences, University of Florence Viale Piaraccini 6, 50139 Florence, Italy
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Education

March 1978	Degree in Medicine and Surgery
1978	Internship in Internal Medicine, Santa Maria Nuova Hospital, University of Florence, Florence, Italy
1979	Internship in Paediatrics, Santa Maria Nuova Hospital, University of Florence, Florence, Italy
1979-1980	Grant from the University of Florence for training in Clinical Pharmacology in the Institute of Internal Medicine, Division of Clinical Pharmacology.
1983	Specialization in Endocrinology, University of Florence, Florence, Italy
1991-1993	Fellowship Cardiovascular Research Institute, and Clinical Pharmacology, Division of Clinical Pharmacology, Department of Medicine, University of California, San Francisco

Academic Position

2002-Present	Professor of Clinical Pharmacology, Department of Health Sciences, University of Florence
2013-2020	Chairman, Department of Health Sciences, University of Florence
2016-2019	Chairman, College of Department Directors, University of Florence
1998-2002	Associate Professor of Pharmacology, Department of Experimental and Clinical Medicine, Section of Pharmacology, University of Ferrara
1996-1998	Assistant Professor of Pharmacology, Department of Experimental and Clinical Medicine, Section of Pharmacology, University of Ferrara
1981- 1996	Assistant Professor of Clinical Pharmacology, Department of Medicine and Clinical Pharmacology, University of Florence, Florence

Other Positions

2013 - 2015	Chairman, Ethics Committee, University Hospital Careggi
2016-present	Director, Department of Research, University Hospital Careggi
2010-present	Head, Headache Center, University Hospital Careggi

Visits or stays in research laboratories abroad

6-7, 1982 Department of Pharmacology, Oxford University, Oxford, UK
4-6, 1983 Section de Pharmacologie Immunologique, Laboratoire d'Etude
des Medicaments, CEA, Gif-sur-Yvette, France
1991-1993 Cardiovascular Research Institute and Department of Medicine,
University of California, San Francisco, CA and
Division of Clinical Pharmacology, Department of Medicine,
University of California, San Francisco

Scientific Society Memberships

PG is or has been member of the American Society for Clinical Pharmacology and Therapeutics; British Pharmacological Society; European Neuropeptide Club; Italian Pharmacological Society (Section of Clinical Pharmacology); European Association for Clinical Pharmacology and Therapeutics (Member of the Board); Italian Society for the Study of Headaches (Member of the Board, President); Italian Association for the study of Pain (AISD, Member of the Board); Member of the IUPHAR Committee for Receptor Classification.

Editor of Scientific Journals

Pain; Cough; Molecular Pain; Frontiers in Pain Pharmacology; Journal of Headache and Pain; Journal of Molecular Neuroscience; Journal of Occupational Medicine and Toxicology; Pain Research and Treatment; Pulmonary Pharmacology; British Journal of Pharmacology (Previous); Physiological Reviews (Previous).

Reviewer for Scientific Institutions

Wellcome Trust; British Council; Swiss National Science Foundation; Dutch Asthma Foundation; European Respiratory Society; Research Foundations – Flanders; Agencie Nationale de la Recherche - France; Neurological Foundation New Zealand; Biotechnology and Biological Sciences Research Council-UK; Fonds de la Recherche Scentifique-FNRS, Belgium.

Prominent Grants

Some Current and Previous Grants

European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No. 835286) 'Schwann cell Option for chronic pain eradication'

Fondazione Ente Cassa Risparmio Firenze 'Human Brain Optical Mapping: an Interplay between functional and structural connectomics in healthy and diseased brain'

Chiesi Pharmaceuticals 'New drugs for the treatment of Chronic obstructive pulmonary disease'

Italian Institute of Technology (IIT) 'TRPA1 Channel in Nociceptive Neurons: Target Validation and Identification of Antagonists for Intractable Pain' 2010-2013

Tuscany Region-Health 2009 'Validation of the TRPA1 channel expressed by primary sensory neurons as a novel target in pain transmission and identification of TRPA1 antagonists as innovative medicine for intractable pain' 2011-2013

Tuscany Region -POR CREO FESR 2007-2013. 'Synthesis and determination of the electrophilic and antioxidant potential of new TRPA1 receptor ligands' 2014-2018

Tuscany Region Public call for research in the Nutraceutical (DD 650/2014)
'Polyphenols and flavonoids as pain relievers and antitussives' 2015-2017

Istituto Toscano Tumori-Grant proposal 2013 'Aromatase inhibitors induced pain via the activation of the TRPAI channel' 2016-2018

Publications (Scopus)

Original Publications and Reviews	Reviews	437
	Total Citations:	23,559
	H-Index:	81

Technology Transfer

2020 Founder of FloxNext Srl, Spinoff of the University of Florence

SELECTED 50 ORIGINAL AND REVIEW ARTICLES

1. Bevan S, **Geppetti P**. Protons, small stimulants of capsaicin-sensitive sensory nerves. *Trends Neurosci*, 1994; 17:509-512.
2. Ricciardolo FLM, **Geppetti P**, Mistretta A, Nadel JA, Bellofiore S, Sapienza MA, Di Maria GU. Randomised double-blind placebo-controlled study of the effect of inhibition of nitric oxide synthesis in bradykinin-induced asthma. *Lancet* 1996; 348:374-377.
3. Rosenecker J, Hong K, Zhang W, Lausier J, **Geppetti P**, Yoshihara S, Papahadjopoulos D, Nadel JA. Increased liposome extravasation in selected tissues: effect of substance P. *Proc. Natl. Acad. Sci. USA* 1996; 93:7236-7241.
4. Bertrand C, **Geppetti P**. Tachykinin and kinin receptor antagonists: therapeutic perspectives in allergic airway disease. *Trends Pharmacol Sci*, 1996, 17:255-259.
5. Lu B, Figini M, Emanuelli C, **Geppetti P**, Grady EF, Gerard NP, Ansell J, Payan DG, Gerard C, Bunnett NW. The control of microvascular permeability and blood pressure by neutral endopeptidase. *Nature Med*, 1997; 3:904-907.
6. Ricciardolo FLM, Di Maria GU, Sapienza MA, Mistretta A, **Geppetti P**. Impairment of bronchoprotection by NO in severe asthma. *Lancet*, 1997, 350: 1297-1298.
7. Sturiale S, Barbara G, Qiu B, Figini M, **Geppetti P**, Gerard N, Gerard C, Grady EF, Bunnett NW, Collins SM. Neutral endopeptidase (EC 3.4.24.11) terminates colitis by degrading substance P. *Proc Natl Acad Sci U S A* 1999; 96: 11653-11658.
8. Steinhoff M, Vergnolle N, Young SH, Tognetto M, Ennes H, Trevisani M, Amadesi S, Hollenberg MD, Wallace JL, Caughey GH, Mitchell SE, Williams, LM, **Geppetti P**, Mayer EA, Bunnett NW. Agonists of proteinase-activated receptor 2 induce inflammation by a neurogenic mechanism. *Nature Med.*, 2000; 6:151-158.
9. Ricciardolo FLM, Steinhoff M, Amadesi S, Guerrini R, Tognetto M, Trevisani M, Bertrand C, Bunnett NW, Fabbri LM, Salvadori S, **Geppetti P**. Presence and Bronchomotor Activity of Protease Activated Receptor-2 (PAR-2) in Guinea Pig Airways. *Am J Respir. Crit. Care Med.*, 2000 161:1672-1680.
10. Tognetto M, Amadesi S, Harrison S, Creminon C, Trevisani M, Carreras M, Matera M, **Geppetti P**, Bianchi A. Anandamide Excites Central Terminals of Dorsal Root Ganglion Neurons via Vanilloid Receptor-1 (VR-1) Activation. *J Neurosci*. 2001 Feb 15:1104-1109.
11. Amadesi S, Moreau, Tognetto M, Springer J, Trevisani M, Naline E, Advenier C, Fisher A, Vinci D, Mapp C, Miotto D, Cavallero G, **Geppetti P**. NK₁ Receptor Stimulation Causes Contraction and Inositol Phosphate Increase in Medium Size Human Isolated Bronchi. *Am J Respir Crit Care Med*. 2001 Apr;163(5):1206-11.
12. Trevisani M, Smart D, Gunthorpe MJ, Tognetto M, Barbieri M, Campi B, Amadesi S, Gray J, Jerman JC, Brough SJ, Owen D, Smith GD, Randall AD, Harrison S, Bianchi A, Davis JB, **Geppetti P**. Ethanol elicits and potentiates nociceptor responses via the vanilloid receptor-1. *Nat Neurosci*. 2002, 5:546-51.
13. Milia, A.F., Salis, M.B., Stacca, T., Pinna, A., Madeddu, P., Trevisani, M., **Geppetti, P.** & Emanuelli, C. Protease-activated receptor-2 stimulates angiogenesis and accelerates hemodynamic recovery in a mouse model of hindlimb ischemia. *Circ Res*, 2002, **91**, 346-52.
14. Tognetto, M., D'Andrea, M.R., Trevisani, M., Guerrini, R., Salvadori, S., Spisani, L., Daniela, C., Andrade-Gordon, P., **Geppetti, P.** & Harrison, S. (2003). Proteinase-activated receptor-1 (PAR-1) activation contracts the isolated human renal artery in vitro. *Br J Pharmacol*, 2003, **139**, 21-7.

15. Trevisani, M., Amadesi, S., Schmidlin, F., Poblete, M.T., Bardella, E., Maggiore, B., Harrison, S., Figueroa, C.D., Tognetto, M., Navarra, G., Turini, A., Bunnet, N.W., **Geppetti, P.** & De Giorgio, R. Bradykinin B2 receptors mediate contraction in the normal and inflamed human gallbladder in vitro. *Gastroenterology*, 2003 **125**, 126-35.
16. Trevisani, M., Milan, A., Gatti, R., Zanasi, A., Harrison, S., Fontana, G., Morice, A.H. & **Geppetti, P.** Antitussive activity of iodo-resiniferatoxin in guinea pigs. *Thorax*, 2004, **59**, 769-72.
17. Van Der Stelt M, Trevisani M, Vellani V, De Petrocellis L, Schiano Moriello A, Campi B, McNaughton P, **Geppetti P**, Di Marzo V. Anandamide acts as an intracellular messenger amplifying Ca²⁺ influx via TRPV1 channels. *EMBO J.* 2005, 24:3026-37.
18. Gazzieri D, Trevisani M, Tarantini F, Bechi P, Masotti G, Gensini GF, Castellani S, Marchionni N, **Geppetti P**, Harrison S. Ethanol dilates coronary arteries and increases coronary flow via transient receptor potential vanilloid 1 and calcitonin gene-related peptide. *Cardiovasc Res.* 2006, 70:589-99.
19. Szallasi A, Cruz F, **Geppetti P.** TRPV1: a therapeutic target for novel analgesic drugs? *Trends Mol Med.* 2006 12:545-54.
20. Tugnoli V, Capone JG, Eleopra R, Quatralo R, Sensi M, Gastaldo E, Tola MR, **Geppetti P.** Botulinum toxin type A reduces capsaicin-evoked pain and neurogenic vasodilatation in human skin. *Pain.* 2007, 130:76-83.
21. Trevisani M, Siemens J, Materazzi S, Bautista DM, Nassini R, Campi B, Imamachi N, Andrè E, Patacchini R, Cottrell GS, Gatti R, Basbaum AI, Bunnett NW, Julius D, **Geppetti P.** 4-Hydroxynonenal, an endogenous aldehyde, causes pain and neurogenic inflammation through activation of the irritant receptor TRPA1. *Proc Natl Acad Sci USA.* 2007 104:13519-24.
22. Materazzi S, Nassini R, Andrè E, Campi B, Amadesi S, Trevisani M, Bunnett NW, Patacchini R, **Geppetti P.** Cox-dependent fatty acid metabolites cause pain through activation of the irritant receptor TRPA1. *Proc Natl Acad Sci U S A.* 2008, 105:12045-50.
23. Andrè E, Campi B, Materazzi S, Trevisani M, Amadesi S, Massi D, Creminon C, Vaksman N, Nassini R, Civelli M, Baraldi PG, Poole DP, Bunnett NW, **Geppetti P**, Patacchini R. Cigarette smoke-induced neurogenic inflammation is mediated by alpha,beta-unsaturated aldehydes and the TRPA1 receptor in rodents. *J Clin Invest.* 2008, 118:2574-82.
24. Nassini R, Materazzi S, Andrè E, Sartiani L, Aldini G, Trevisani M, Carnini C, Massi D, Pedretti P, Carini M, Cerbai E, Preti D, Villetti G, Civelli M, Trevisan G, Azzari C, Stokesberry S, Sadofsky L, McGarvey L, Patacchini R, **Geppetti P.** Acetaminophen, via its reactive metabolite N-acetyl-p-benzo-quinoneimine and transient receptor potential ankyrin-1 stimulation, causes neurogenic inflammation in the airways and other tissues in rodents. *FASEB J.* 2010 24:4904-16.
25. Nassini R, Gees M, Harrison S, De Siena G, Materazzi S, Moretto N, Failli P, Preti D, Marchetti N, Cavazzini A, Mancini F, Pedretti P, Nilius B, Patacchini R, **Geppetti P.** Oxaliplatin elicits mechanical and cold allodynia in rodents via TRPA1 receptor stimulation. *Pain.* 2011 152:1621-31.
26. Materazzi S, Vriens J, Prenen J, Benemei S, De Siena G, la Marca G, Andrè E, Preti D, Avonto C, Sadofsky L, Di Marzo V, De Petrocellis L, Dussor G, Porreca F, Tagliabue S, Scafati O, Appendino G, Nilius B, **Geppetti P**, Nassini R. The 'headache tree' via umbellulone and TRPA1 activates the trigeminovascular system. *Brain* 2012 135:376-90.
27. Tozzi A, de Iure A, Di Filippo M, Costa C, Caproni S, Pisani A, Bonsi P, Picconi B, Cupini LM, Materazzi S, Geppetti P, Sarchielli P, Calabresi P. Critical role of calcitonin gene-related peptide receptors in cortical spreading depression. *Proc Natl Acad Sci U S A.* 2012 109(46):18985-90.

28. Trevisan G, Materazzi S, Fusi C, Altomare A, Aldini G, Lodovici M, Patacchini R, **Geppetti P**, Nassini R. Novel therapeutic strategy to prevent chemotherapy-induced persistent sensory neuropathy by TRPA1 blockade. *Cancer Res.* 2013 73:3120-31.
29. Alemi F, Kwon E, Poole DP, Lieu T, Lyo V, Cattaruzza F, Cevikbas F, Steinhoff M, Nassini R, Materazzi S, Guerrero-Alba R, Valdez-Morales E, Cottrell GS, Schoonjans K, **Geppetti P**, Vanner SJ, Bunnnett NW, Corvera CU. The TGR5 receptor mediates bile acid-induced itch and analgesia. *J Clin Invest.* 2013 123:1513-30.
30. Lieu T, Jayaweera G, Zhao P, Poole DP, Jensen D, Grace M, McIntyre P, Bron R, Wilson YM, Krappitz M, Haerteis S, Korbmacher C, Steinhoff MS, Nassini R, Materazzi S, **Geppetti P**, Corvera CU, Bunnnett NW. The bile acid receptor TGR5 activates the TRPA1 channel to induce itch in mice. *Gastroenterology.* 2014 147:1417-28.
31. Benemei S, Fusi C, Trevisan G, **Geppetti P**. The TRPA1 channel in migraine mechanism and treatment. *Br J Pharmacol.* 2014 171:2552-67.
32. Steinhoff MS, von Mentzer B, **Geppetti P**, Pothoulakis C, Bunnnett NW. Tachykinins and their receptors: contributions to physiological control and the mechanisms of disease. *Physiol Rev.* 2014 94:265-301
33. Nassini R, Materazzi S, Benemei S, **Geppetti P**. The TRPA1 channel in inflammatory and neuropathic pain and migraine. *Rev Physiol Biochem Pharmacol.* 2014;167:1-43.
34. Fusi C, Materazzi S, Benemei S, Coppi E, Trevisan G, Marone IM, Minocci D, De Logu F, Tuccinardi T, Di Tommaso MR, Susini T, Moneti G, Pieraccini G, **Geppetti P**, Nassini R. Steroidal and non-steroidal third-generation aromatase inhibitors induce pain-like symptoms via TRPA1. *Nat Commun.* 2014 8;5:5736.
35. Nassini R, Fusi C, Materazzi S, Coppi E, Tuccinardi T, Marone IM, De Logu F, Preti D, Tonello R, Chiarugi A, Patacchini R, **Geppetti P**, Benemei S. The TRPA1 channel mediates the analgesic action of dipyrone and pyrazolone derivatives. *Br J Pharmacol.* 2015 172:3397-411
36. **Geppetti P**, Veldhuis NA, Lieu T, Bunnnett NW. G Protein-Coupled Receptors: Dynamic Machines for Signaling Pain and Itch. *Neuron.* 2015 18;88:635-49.
37. Trevisan G, Benemei S, Materazzi S, De Logu F, De Siena G, Fusi C, Fortes Rossato M, Coppi E, Marone IM, Ferreira J, **Geppetti P**, Nassini R. TRPA1 mediates trigeminal neuropathic pain in mice downstream of monocytes/macrophages and oxidative stress. *Brain.* 2016 139:1361-77.
38. De Logu F, Tonello R, Materazzi S, Nassini R, Fusi C, Coppi E, Li Puma S, Marone IM, Sadofsky LR, Morice AM, Susini T, Terreni A, Moneti G, Di Tommaso M, **Geppetti P**, Benemei S. TRPA1 mediates aromatase inhibitor-evoked pain by the aromatase substrate androstenedione. *Cancer Res.* 2016 Dec 6:7024-7035.
39. Benemei S, De Logu F, Li Puma S, Marone IM, Coppi E, Ugolini F, Liedtke W, Pollastro F, Appendino G, **Geppetti P**, Materazzi S, Nassini R. The anti-migraine component of butterbur extracts, isopetasin, desensitizes peptidergic nociceptors by acting on TRPA1 cation channel. *Br J Pharmacol.* 2017 174:2897-2911.
40. Jensen DD, Lieu T, Halls ML, Veldhuis NA, Imlach WL, Mai QN, Poole DP, Quach T, Aurelio L, Conner J, Herenbrink CK, Barlow N, Simpson JS, Scanlon MJ, Graham B, McCluskey A, Robinson PJ, Escriou V, Nassini R, Materazzi S, **Geppetti P**, Hicks GA, Christie MJ, Porter CJH, Canals M, Bunnnett NW. Neurokinin 1 receptor signaling in endosomes mediates sustained nociception and is a viable therapeutic target for prolonged pain relief. *Sci Transl Med.* 2017 31 (392).
41. Yarwood RE, Imlach WL, Lieu T, Veldhuis NA, Jensen DD, Klein Herenbrink C, Aurelio L, Cai Z, Christie MJ, Poole DP, Porter CJH, McLean P, Hicks GA, **Geppetti P**, Halls ML, Canals M, Bunnnett

NW. Endosomal signaling of the receptor for calcitonin gene-related peptide mediates pain transmission. *Proc Natl Acad Sci U S A*. 2017 114:12309-12314

42. De Logu F, Nassini R, Materazzi S, Carvalho Gonçalves M, Nosi D, Rossi Degl'Innocenti D, Marone IM, Ferreira J, Li Puma S, Benemei S, Trevisan G, Souza Monteiro de Araújo D, Patacchini R, Bunnnett NW, **Geppetti P**. Schwann cell TRPA1 mediates neuroinflammation that sustains macrophage-dependent neuropathic pain in mice. *Nat Commun*. 2017 8:1887.
43. Marone IM, De Logu F, Nassini R, De Carvalho Goncalves M, Benemei S, Ferreira J, Jain P, Li Puma S, Bunnnett NW, **Geppetti P**, Materazzi S. TRPA1/NOX in the soma of trigeminal ganglion neurons mediates migraine-related pain of glyceryl trinitrate in mice. *Brain*. 2018 Jul 6. 141(8):2312-2328.
44. De Logu F, Landini L, Janal MN, Li Puma S, De Cesaris F, Geppetti P, Nassini R. Migraine-provoking substances evoke periorbital allodynia in mice. *J Headache Pain*. 2019 20(1):18
45. De Logu F, Li Puma S, Landini L, Portelli F, Innocenti A, de Araújo DSM, Janal MN, Patacchini R, Bunnnett NW, **Geppetti P**, Nassini R. Schwann cells expressing nociceptive channel TRPA1 orchestrate ethanol-evoked neuropathic pain in mice. *J Clin Invest*. 2019 129:5424-5441.
46. De Logu F, Trevisan G, Marone IM, Coppi E, Padilha Dalenogare D, Titiz M, Marini M, Landini L, Souza Monteiro de Araujo D, Li Puma S, Materazzi S, De Siena G, **Geppetti P**, Nassini R. Oxidative stress mediates thalidomide-induced pain by targeting peripheral TRPA1 and central TRPV4. *BMC Biol*. 2020 18:197.
47. De Logu F, De Prá SD, de David Antoniazzi CT, Kudsí SQ, Ferro PR, Landini L, Rigo FK, de Bem Silveira G, Silveira PCL, Oliveira SM, Marini M, Mattei G, Ferreira J, Geppetti P, Nassini R, Trevisan G. Macrophages and Schwann cell TRPA1 mediate chronic allodynia in a mouse model of complex regional pain syndrome type I. *Brain Behav Immun*. 2020 88:535-546.
48. Romagnoli S, Peris A, De Gaudio AR, **Geppetti P**. SARS-CoV-2 and COVID-19: From the Bench to the Bedside. *Physiol Rev*. 2020 100:1455-1466.
49. De Logu F, Marini M, Landini L, Souza Monteiro de Araujo D, Bartalucci N, Trevisan G, Bruno G, Marangoni M, Schmidt BL, Bunnnett NW, Geppetti P, Nassini R. Peripheral Nerve Resident Macrophages and Schwann Cells Mediate Cancer-induced Pain. *Cancer Res*. 2021 26:3326.2020.
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