

Curriculum vitae - Fiorella BIASI

Personal details

Born in Bari

Nationality: Italy

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Educations

1980 Degree in Biological Sciences.

1985 Specialization Diploma in General Pathology.

1988 PhD in Experimental and Molecular Pathology

Professional experiences and current position

1981-1984 fellowships from Piedmont Regional Government

1984-1987 PhD student;

1988-1996 University graduate technical assistant;

1996-2005 Researcher at the National Research Council of Italy, Rome;

2005 – to present Associate Professor in General Pathology at the School of Medicine, University of Turin (Italy).

2014 to present Professor at Experimental Medicine and Therapy PhD program (Doctoral School-University of Turin)

Participation to Directive Boards of Scientific Societies and/or Institutions:

Component of the Department Board at the Dept. of Clinical and Biological Sciences, University of Turin
Vice-coordinator of the Experimental Medicine and Therapy PhD program

Teaching activity:

General Pathology and Pathophysiology at the School of Medicine, University of Turin in:

International course in Medicine and Surgery degree;

Italian courses in Medicine and Surgery, Post graduate degree in Health professions of rehabilitation sciences,

Nursing degree, Psychiatric Techniques degree, and Physiotherapy degree;

Specialization Schools of “Oncology”, “Geriatrics”, “Diseases of the Respiratory System”;

University of Turin Doctoral School, PhD program in Experimental Medicine and Therapy (Life and Health Sciences area)

Research main topics

Translational and molecular medicine related to oxidative stress in the pathogenesis of human inflammatory diseases and tumor development.

Main fields of research - lipid peroxidation products, cholesterol metabolism and its oxidized compounds oxysterols in intestinal inflammatory diseases, and colorectal cancer.

Pharmaceutical and nutritional interventions with natural antioxidant and anti-inflammatory compounds.

Professional affiliations:

European Network for Oxysterol Research (ENOR),

Society for Free Radical Research,

Italian Society of Pathology and Translational Medicine

International HNE-Club

Peer reviewing activity for more than thirty international journals.

In CINECA 171 publications 137 in peer reviewed journals, 6 in books, 28 in meeting reports

Bibliometry (2019-present) (www.scopus.com)

SCOPUS: 131 documents; 5782 citations by 4686 documents; H index: 46

Publications in the last 10 years

- 1: Alloatti G, Penna C, Comità S, Tullio F, Aragno M, Biasi F, Pagliaro P. Aging, sex and NLRP3 inflammasome in cardiac ischaemic disease. *Vascul Pharmacol.* 2022 Aug;145:107001. doi: 10.1016/j.vph.2022.107001.
- 2: Poli G, Leoni V, Biasi F, Canzoneri F, Risso D, Menta R. Oxysterols: From redox bench to industry. *Redox Biol.* 2022 Feb;49:102220. doi:10.1016/j.redox.2021.102220.
- 3: Gamba P, Giannelli S, Staurengi E, Testa G, Sottero B, Biasi F, Poli G, Leonarduzzi G. The Controversial Role of 24-S-Hydroxycholesterol in Alzheimer's Disease. *Antioxidants (Basel).* 2021 May 7;10(5):740. doi: 10.3390/antiox10050740.
- 4: Biasi F, Leoni V, Gamba P, Sassi K, Lizard G, Poli G. Role of 27-hydroxycholesterol and its metabolism in cancer progression: Human studies. *Biochem Pharmacol.* 2022 Feb;196:114618. doi: 10.1016/j.bcp.2021.114618.
- 5: Rossin D, Barbosa-Pereira L, Iaia N, Sottero B, Danzero AC, Poli G, Zeppa G, Biasi F. Protective Effect of Cocoa Bean Shell against Intestinal Damage: An Example of Byproduct Valorization. *Antioxidants (Basel).* 2021 Feb 12;10(2):280. doi: 10.3390/antiox10020280.
- 6: Boggione L, Caccia C, Civra A, Cusato J, D'Avolio A, Biasi F, Lembo D, Di Perri G, Poli G, Leoni V. Trend of 25-hydroxycholesterol and 27-hydroxycholesterol plasma levels in patients affected by active chronic hepatitis B virus infection and inactive carriers. *J Steroid Biochem Mol Biol.* 2021 Jun;210:105854. doi: 10.1016/j.jsbmb.2021.105854.
- 7: Oliva F, di Girolamo G, Malandrone F, Iaia N, Biasi F, Maina G. Early childhood infections, antistreptococcal and basal ganglia antibodies in adult ADHD: a preliminary study. *BMC Psychiatry.* 2020 Nov 18;20(1):542. doi:10.1186/s12888-020-02946-w.
- 8: Iaia N, Rossin D, Sottero B, Venezia I, Poli G, Biasi F. Efficacy of theobromine in preventing intestinal CaCo-2 cell damage induced by oxysterols. *Arch Biochem Biophys.* 2020 Nov 15;694:108591. doi: 10.1016/j.abb.2020.108591.
- 9: Germano A, Rossin D, Leoni V, Iaia N, Saba L, Basile V, Puglisi S, Caccia C, Poli G, Biasi F, Terzolo M. Involvement of 27-Hydroxycholesterol in Mitotane Action on Adrenocortical Carcinoma. *Cells.* 2020 Apr 4;9(4):885. doi: 10.3390/cells9040885.
- 10: Rossin D, Barbosa-Pereira L, Iaia N, Testa G, Sottero B, Poli G, Zeppa G, Biasi F. A Dietary Mixture of Oxysterols Induces In Vitro Intestinal Inflammation through TLR2/4 Activation: The Protective Effect of Cocoa Bean Shells. *Antioxidants (Basel).* 2019 May 31;8(6):151. doi: 10.3390/antiox8060151.
- 11: Rossin D, Dias IHK, Solej M, Milic I, Pitt AR, Iaia N, Scoppapietra L, Devitt A, Nano M, Degiuli M, Volante M, Caccia C, Leoni V, Griffiths HR, Spickett CM, Poli G, Biasi F. Increased production of 27-hydroxycholesterol in human colorectal cancer advanced stage: Possible contribution to cancer cell survival and infiltration. *Free Radic Biol Med.* 2019 May 20;136:35-44. doi: 10.1016/j.freeradbiomed.2019.03.020.
- 12: Gargiulo S, Rossin D, Testa G, Gamba P, Staurengi E, Biasi F, Poli G, Leonarduzzi G. Up-regulation of COX-2 and mPGES-1 by 27-hydroxycholesterol and 4-hydroxynonenal: A crucial role in atherosclerotic plaque instability. *Free Radic Biol Med.* 2018 Dec;129:354-363. doi: 10.1016/j.freeradbiomed.2018.09.046.
- 13: Testa G, Rossin D, Poli G, Biasi F, Leonarduzzi G. Implication of oxysterols in chronic inflammatory human diseases. *Biochimie.* 2018 Oct;153:220-231. doi: 10.1016/j.biochi.2018.06.006.
- 14: Serra G, Incani A, Serreli G, Porru L, Melis MP, Tuberoso CIG, Rossin D, Biasi F, Deiana M. Olive oil polyphenols reduce oxysterols -induced redox imbalance and pro-inflammatory response in intestinal cells. *Redox Biol.* 2018 Jul;17:348-354. doi: 10.1016/j.redox.2018.05.006.
- 15: Deiana M, Calfapietra S, Incani A, Atzeri A, Rossin D, Loi R, Sottero B, Iaia N, Poli G, Biasi F.

Derangement of intestinal epithelial cell monolayer by dietary cholesterol oxidation products. *Free Radic Biol Med.* 2017 Dec;113:539-550. doi: 10.1016/j.freeradbiomed.2017.10.390.

16: Sottero B, Rossin D, Poli G, Biasi F. Lipid Oxidation Products in the Pathogenesis of Inflammation-related Gut Diseases. *Curr Med Chem.* 2018;25(11):1311-1326. doi: 10.2174/0929867324666170619104105.

17: Cagno V, Civra A, Rossin D, Calfapietra S, Caccia C, Leoni V, Dorma N, Biasi F, Poli G, Lembo D. Inhibition of herpes simplex-1 virus replication by 25-hydroxycholesterol and 27-hydroxycholesterol. *Redox Biol.* 2017 Aug;12:522-527. doi: 10.1016/j.redox.2017.03.016.

18: Rossin D, Calfapietra S, Sottero B, Poli G, Biasi F. HNE and cholesterol oxidation products in colorectal inflammation and carcinogenesis. *Free Radic Biol Med.* 2017 Oct;111:186-195. doi: 10.1016/j.freeradbiomed.2017.01.017.

19: Poli G, Biasi F. Potential modulation of cancer progression by oxysterols. *Mol Aspects Med.* 2016 Jun;49:47-8. doi: 10.1016/j.mam.2016.04.002.

20: Gargiulo S, Gamba P, Testa G, Rossin D, Biasi F, Poli G, Leonarduzzi G. Relation between TLR4/NF- κ B signaling pathway activation by 27-hydroxycholesterol and 4-hydroxynonenal, and atherosclerotic plaque instability. *Aging Cell.* 2015 Aug;14(4):569-81. doi: 10.1111/ace1.12322.

21: Guina T, Deiana M, Calfapietra S, Cabboi B, Maina M, Tuberoso CI, Leonarduzzi G, Gamba P, Gargiulo S, Testa G, Poli G, Biasi F. The role of p38 MAPK in the induction of intestinal inflammation by dietary oxysterols: modulation by wine phenolics. *Food Funct.* 2015 Apr;6(4):1218-28. doi: 10.1039/c4fo01116c.

22: Guina T, Biasi F, Calfapietra S, Nano M, Poli G. Inflammatory and redox reactions in colorectal carcinogenesis. *Ann N Y Acad Sci.* 2015 Mar;1340:95-103. doi: 10.1111/nyas.12734.

23: Civra A, Cagno V, Donalisio M, Biasi F, Leonarduzzi G, Poli G, Lembo D. Inhibition of pathogenic non-enveloped viruses by 25-hydroxycholesterol and 27-hydroxycholesterol. *Sci Rep.* 2014 Dec 15;4:7487. doi: 10.1038/srep07487.

24: Vurusaner B, Gamba P, Testa G, Gargiulo S, Biasi F, Zerbinati C, Iuliano L, Leonarduzzi G, Basaga H, Poli G. Survival signaling elicited by 27-hydroxycholesterol through the combined modulation of cellular redox state and ERK/Akt phosphorylation. *Free Radic Biol Med.* 2014 Dec;77:376-85. doi: 10.1016/j.freeradbiomed.2014.07.026.

25: Biasi F, Deiana M, Guina T, Gamba P, Leonarduzzi G, Poli G. Wine consumption and intestinal redox homeostasis. *Redox Biol.* 2014 Jun 18;2:795-802. doi: 10.1016/j.redox.2014.06.008.

26: Testa G, Gamba P, Badilli U, Gargiulo S, Maina M, Guina T, Calfapietra S, Biasi F, Cavalli R, Poli G, Leonarduzzi G. Loading into nanoparticles improves quercetin's efficacy in preventing neuroinflammation induced by oxysterols. *PLoS One.* 2014 May 6;9(5):e96795. doi: 10.1371/journal.pone.0096795

27: Gamba P, Guglielmotto M, Testa G, Monteleone D, Zerbinati C, Gargiulo S, Biasi F, Iuliano L, Giaccone G, Mauro A, Poli G, Tamagno E, Leonarduzzi G. Up-regulation of β -amyloidogenesis in neuron-like human cells by both 24- and 27-hydroxycholesterol: protective effect of N-acetyl-cysteine. *Aging Cell.* 2014 Jun;13(3):561-72. doi: 10.1111/ace1.12206.

28: Vizio B, Biasi F, Scirelli T, Novarino A, Prati A, Ciuffreda L, Montrucchio G, Poli G, Bellone G. Pancreatic-carcinoma-cell-derived pro-angiogenic factors can induce endothelial-cell differentiation of a subset of circulating CD34+ progenitors. *J Transl Med.* 2013 Dec 17;11:314. doi: 10.1186/1479-5876-11-314.

29: Goitre L, De Luca E, Braggion S, Trapani E, Guglielmotto M, Biasi F, Forni M, Moglia A, Trabalzini L, Retta SF. KRIT1 loss of function causes a ROS-dependent upregulation of c-Jun. *Free Radic Biol Med.* 2014 Mar;68(100):134-47. doi: 10.1016/j.freeradbiomed.2013.11.020.

30: Testa G, Biasi F, Poli G, Chiarpotto E. Calorie restriction and dietary restriction mimetics: a strategy for

improving healthy aging and longevity. *Curr Pharm Des.* 2014;20(18):2950-77. doi: 10.2174/13816128113196660699.

31: Poli G, Biasi F, Leonarduzzi G. Oxysterols in the pathogenesis of major chronic diseases. *Redox Biol.* 2013 Jan 31;1(1):125-30. doi: 10.1016/j.redox.2012.12.001.

32: Pizzimenti S, Ciamporcero E, Pettazoni P, Osella-Abate S, Novelli M, Toaldo C, Husse M, Daga M, Minelli R, Bisazza A, Ferruti P, Ranucci E, Grazia Bernengo M, Dianzani C, Biasi F, Cavalli R, Barrera G. The inclusion complex of 4-hydroxynonenal with a polymeric derivative of β -cyclodextrin enhances the antitumoral efficacy of the aldehyde in several tumor cell lines and in a three-dimensional human melanoma model. *Free Radic Biol Med.* 2013 Dec;65:765-777. doi: 10.1016/j.freeradbiomed.2013.06.035.

33: Biasi F, Guina T, Maina M, Cabboi B, Deiana M, Tuberoso CI, Calfapietra S, Chiarpotto E, Sottero B, Gamba P, Gargiulo S, Brunetto V, Testa G, Dessi MA, Poli G, Leonarduzzi G. Phenolic compounds present in Sardinian wine extracts protect against the production of inflammatory cytokines induced by oxysterols in CaCo-2 human enterocyte-like cells. *Biochem Pharmacol.* 2013 Jul 1;86(1):138-45. doi: 10.1016/j.bcp.2013.03.024.

34: Biasi F, Leonarduzzi G, Oteiza PI, Poli G. Inflammatory bowel disease: mechanisms, redox considerations, and therapeutic targets. *Antioxid Redox Signal.* 2013 Nov 10;19(14):1711-47. doi: 10.1089/ars.2012.4530.

35: Gargiulo S, Gamba P, Testa G, Sottero B, Maina M, Guina T, Biasi F, Poli G, Leonarduzzi G. Molecular signaling involved in oxysterol-induced β_1 -integrin over-expression in human macrophages. *Int J Mol Sci.* 2012 Nov 5;13(11):14278-93. doi: 10.3390/ijms131114278.

36: Biasi F, Chiarpotto E, Sottero B, Maina M, Mascia C, Guina T, Gamba P, Gargiulo S, Testa G, Leonarduzzi G, Poli G. Evidence of cell damage induced by major components of a diet-compatible mixture of oxysterols in human colon cancer CaCo-2 cell line. *Biochimie.* 2013 Mar;95(3):632-40. doi: 10.1016/j.biochi.2012.10.011.

37: Testa G, Gamba P, Di Scipio F, Sprio AE, Salamone P, Gargiulo S, Sottero B, Biasi F, Berta GN, Poli G, Leonarduzzi G. Potentiation of amyloid- β peptide neurotoxicity in human dental-pulp neuron-like cells by the membrane lipid peroxidation product 4-hydroxynonenal. *Free Radic Biol Med.* 2012 Nov 1;53(9):1708-17. doi: 10.1016/j.freeradbiomed.2012.08.581.

38: Biasi F, Guina T, Maina M, Nano M, Falcone A, Aroasio E, Saracco GM, Papotti M, Leonarduzzi G, Poli G. Progressive increase of matrix metalloprotease-9 and interleukin-8 serum levels during carcinogenic process in human colorectal tract. *PLoS One.* 2012;7(7):e41839. doi: 10.1371/journal.pone.0041839.

39: Lezo A, Biasi F, Massarenti P, Calabrese R, Poli G, Santini B, Bignamini E. Oxidative stress in stable cystic fibrosis patients: do we need higher antioxidant plasma levels? *J Cyst Fibros.* 2013 Jan;12(1):35-41. doi:10.1016/j.jcf.2012.06.002.