

PERSONAL INFORMATION

Antonio Lavecchia



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Sex Male | Date of birth 12/02/1968 | Nationality Italian

Enterprise	University	EPR
☐ Management Level	☒ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
☐ Mid-Management Level	☐ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

- 2012–Present **Full Professor of Medicinal Chemistry (CHIM08)**
University of Napoli "Federico II", Naples (Italy)
- 2005–2012 **Associate Professor of Medicinal Chemistry**
University of Napoli "Federico II", Naples (Italy)
- 2001–2005 **Assistant Professor**
University of Napoli "Federico II", Naples (Italy)

EDUCATION AND TRAINING

- 2008 **Visiting Researcher**
Rega Institute for Medical Research - Katholieke Universiteit Leuven, Leuven (Belgium)
- 2002 **Visiting Researcher**
Institut für Organische Chemie und Biochemie - Technische Universität, München (Germany), München (Germany)
- 2001 **Visiting Researcher**
IMIM (Institut de Recerca Hospital del Mar) - (Barcelona), Barcelona (Spain)
- 1998–1999 **Visiting Researcher**
College of Pharmacy - University of Minnesota (USA) (United States)
- 1996–1999 **PhD in Pharmaceutical Sciences**
University of Catania, Catania (Italy)
- 1993–1995 **Master in Business Administration (MBA)**
Libera Università Internazionale degli Studi Sociali (L.U.I.S.S) Guido Carli of Roma, Rome (Italy)
- 1987–1992 **MSc in Pharmacy 110/110 magna cum laude**
University of Pisa, Pisa (Italy)

WORK ACTIVITIES

- Awards**
- 2023: Prof. Lavecchia has been included among the Best Scientists ranking in the field of Chemistry (Research.com)
- 2022: The ranking organization ExpertScape has placed Prof. Lavecchia in the top 0.1% World Expert in PPARgamma over the past 10 years (Stanford University, USA)
- 2021: Prof. Lavecchia has been included in the list of the 168 best scientists of the University of Naples Federico II reported in the ranking of the about 160 thousand best international scientists, drawn up by the journal *Plos Biology* (Stanford University, USA)
- 2020: Prof. Lavecchia has been included in the list of the 90 best scientists of the University of Naples Federico II reported in the ranking of the 100 thousand best international scientists, drawn up by the journal *Plos Biology* (Stanford University, USA)
- 2020: ACS Medicinal Chemistry Letters Front Cover (March 3, 2020) for the paper entitled "Sulfonimide and Amide Derivatives as Novel PPARα Antagonists: Synthesis, Antiproliferative Activity and Docking Studies. *ACS Med. Chem. Lett.*, 11, 5, 624-632, ISSN: 1948-5875, doi: doi.org/10.1021/acsmedchemlett.9b00666

2018: Prof. Lavecchia's scientific profile has been included in the "Meet the Editorial Board" section of the *Current Medicinal Chemistry* journal (Volume 25, Issue 12, 2018, doi: [10.2174/092986732512180419114514](https://doi.org/10.2174/092986732512180419114514))

2010: Winner of the START CUP CAMPANIA AWARD 2010 with the project: "ISHTAR - Production and Marketing of New Phytotherapeutic and Nutraceutical Substances in the Treatment of Dyslipidaemias, Diabetes and Metabolic Syndrome."

2009: Winner of the START CUP CAMPANIA AWARD 2009 with the project: "Anticancer Agents for Treatment of Acute and Chronic Myeloid Leukemia".

2007: Spotlight in *Angew. Chem. Int. Ed.* (2007), 46, 3788-3789 for the article available at <https://doi.org/10.1002/cmdc.200600307>

2006: Winner of the FARMINDUSTRIA ITALIAN NATIONAL AWARD FOR RESEARCH EXCELLENCE IN MEDICINAL CHEMISTRY

Editorial activity

2022 to date: Topic Editor of the Research Topic "Evolving Perspectives in Nuclear Receptors' Drug Discovery" in *Frontiers in Chemistry - Medicinal and Pharmaceutical Chemistry* (ISSN 2296-2646, Impact Factor: 5.545)

2022 to date: Topic Editor of the Special Issue "Recent trends in anti-cancer drug discovery by in silico methods" in *Frontiers in Drug Discovery - In silico Methods and Artificial Intelligence for Drug Discovery* (ISSN 2674-0338)

2021: Guest Editor of the Special Issue "In Silico Drug Design and Discovery: Big Data for Small Molecule Design" in *Biomolecules* (ISSN 2218-273X, Impact Factor: 6.064)

2019 to date: Editorial Board Member of Nature's *Scientific Reports* (<https://www.nature.com/srep/>).

2018 to date: Editorial Board Member of Bentham's *Current Medicinal Chemistry* (<http://benthamscience.com/journals/current-medicinal-chemistry/>)

Referee ad hoc for the following Journals: *Journal of Medicinal Chemistry*; *Scientific Reports*; *ACS Medicinal Chemistry Letters*; *European Journal of Medicinal Chemistry*; *Bioorganic & Medicinal Chemistry*; *Bioorganic & Medicinal Chemistry Letters*; *Future Medicinal Chemistry*; *PLoS ONE*; *Journal of Computer Aided-Molecular Design*; *ChemMedChem*; *Proteins*; *ChemBioChem*; *Journal of Molecular Biology*; *Molecular Cancer Therapeutics*; *Biochimica et Biophysica Acta*; *Britannic Journal of Pharmacology*; *Oncotarget*.

2010-to date: Prof. Lavecchia is author of the following Books and Chapters of Books:

- Lavecchia, A.; Attanasio, S. "Da speciali a farmacisti. Storia, iconografia e arredi", Guida Editore, ISBN: 8868669242, Napoli 2022.

- Lavecchia, A. "Prostanoids." In "Chimica Farmaceutica", Gasco, A., Gualtieri, F., Melchiorre, C., Zanichelli, Second Edition, ISBN: 9788808420268, Milano 2020.

- Lavecchia, A. "Prostanoids." In "Chimica Farmaceutica", Gasco, A., Gualtieri, F., Melchiorre, C., Zanichelli, First Edition, ISBN: 9788808187123, Milano 2015.

- Lavecchia, A. "Vaccini e vaccinazioni." In "La Gestione Tecnico Professionale della Farmacia", Novellino, E., Iadevaia, V. Punto Effe Editore, ISBN: 97888882306892012, Milano 2012.

- Lavecchia, A. "Guida a vaccini e vaccinazioni", Tecniche Nuove, ISBN: 9788848124669, Milano 2009.

Invited presentations

His scientific production is validated by several national and international cooperation with Italian and foreign researchers, and by several participations as speaker to national and international conferences and meetings.

Grants

- SPOKE 4 - Metabolic and cardiovascular diseases of the project "National Center for Gene Therapy and Drugs based on RNA Technology" (Project number: CN00000041) financed with funds from the National Recovery and Resilience Plan (PNRR). Role: Research Unit PI.

- POR Campania FESR 2014/2020, "Fighting tumor resistance: an integrated multidisciplinary platform for an innovative technological approach to oncoterapies - CAMPANIA ONCOTERAPIE", (Project number B61G18000470007). End date: 31-06-21. Role: Participant

- RESEARCH & MOBILITY (R&M) PROJECT 2015 promoted and funded by the University of Messina, "Development of novel 20S immunoproteasome-specific inhibitors for the treatment of hematological malignancies, autoimmune and inflammatory diseases", (Project number: 19302940). End date: 05-02-17. Role: Participant.

- CARIPLO FOUNDATION PROJECT 2009 (<http://www.fondazioneccariplo.it/>), "Peroxisome Proliferator-Activated Receptors (PPARs) in the Regulation of Glucose and Lipid Metabolism: a Multidisciplinary Approach for the Identification and Characterisation of New Ligands to Improve Therapeutic Interventions in Diabetes, Obesity and Metabolic syndrome", (Project number: 2009.2727). End date: 15/02/2014. Role: Research Unit PI.

- MIUR PRIN grants as PI in 2010-2011, 2008, 2006, 2004, 2003.

Patents

- De Paulis, A.; Lavecchia, A.; Montuori, N., Rossi, F.W. Inhibitors of the interaction of the upar/fprs receptors. PCT Int. Appl. 2021, WO2021198844A1.

- Bolognese, A.; Lavecchia, A.; Montuori, N.; Selli, C. Inibitori di proteine di prenilazione come agenti antitumorali: processo di preparazione ed impieghi in campo medico. Italian Patent application number NA2009A000047, 2009.

- Silvestri, R.; Marfè, G.; Abruzzese, E.; Catalano, G.; Di Stefano, C.; Novellino, E.; Sinibaldi Salimei, P.; La Regina, G.; Lavecchia, A. Benzodiazepine Derivatives and Uses Thereof in Medical Field. PCT Int. Appl. 2007, WO2007015280 A1.

- Crestani, M.; Pinelli, A.; Godio, C.; Mitro, N.; Tortorella, V.; Loiodice, F.; Fracchiolla, G.; Laghezza, A.; Lavecchia, A.; Novellino, E.; Fruchart, J.-C.; Staels, B. Clofibrate Acid Analogues and their Use as Ligands of Nuclear Peroxisome Proliferator Activated Receptors (PPARs) α and γ in the Treatment of Metabolic Disorders. Italian Patent application number MI2004A 000405, 2004.

International Collaborations

- Peiretti F., Aix Marseille Université, INSERM 1263, Marseille, France
- Gilardi F., Faculty Unit of Toxicology, University Center of Legal Medicine, Lausanne University Hospital and University of Lausanne, Switzerland
- Prof. Dr. Jürgen Bajorath (Bonn Aachen International Center for Information Technology [B-IT] and University of Bonn's LIMES Institute, Germany);
- Prof. C S Ramaa (Department of Pharmaceutical Chemistry, Bharati Vidyapeeth's College of Pharmacy, Navi Mumbai, India);
- Prof. Vadim S. Pokrovsky (Laboratory of Combined Therapy, N.N. Blokhin Cancer Research Center, 115478 Moscow (Russia));
- Prof. Kenneth A. Jacobson (National Institute of Diabetes and Digestive and Kidney Diseases, NIH, Bethesda, Maryland, USA);
- Prof. Øystein Bruserud (Department of Clinical Science, Faculty of Medicine and Dentistry, University of Bergen, Bergen, Norway);
- Prof. Dr. Tanja Schirmeister (Johannes- Gutenberg University of Mainz, Mainz, Germany);
- Prof. Venkatesan Jayaprakash (Department of Pharmaceutical Sciences & Technology, Birla Institute of Technology, Mesra, India);
- Prof. Karl- Norbert Klotz (Institut für Pharmakologie und Toxikologie, Universität Würzburg, Würzburg, Germany);
- Prof. Dr. Horst Kessler (Institute for Advanced Study, Department Chemie TU München, Garching, Germany);
- Prof. Jan Balzarini (Rega Institute for Medical Research, Katholieke Universiteit Leuven, Leuven, Belgium);
- Prof. Ernest Hamel (National Cancer Institute at Frederick, National Institutes of Health, Frederick, Maryland, USA);
- Prof. Yves Pommier (National Cancer Institute, Bethesda, Maryland, USA);
- Prof. Andrea Brancale (Welsh School of Pharmacy, Cardiff University, UK).

ADDITIONAL INFORMATION

Publications

total number of publications in peer-review journals (SCOPUS): **158**
publications in the last 10 years: **72**
total number of citations: **6116**
H index: **44**

Some papers of last 5 years:

- 1) Laghezza, A.; Cerchia, C.; Genovese, M.; Leuci, R.; Pranzini, E.; Santi, A.; Brunetti, L.; Piemontese, L.; Tortorella, P.; Biswas, A.; Singh R.P., Tambe, S.; Sudeep, C A; Pattnaik A.K.; Jayaprakash V.; Paoli, P.; **Lavecchia, A.**; Loiodice, F. A New Antidiabetic Agent Showing Short- and Long-Term Effects Due to Peroxisome Proliferator-Activated Receptor Alpha/Gamma Dual Agonism and Mitochondrial Pyruvate Carrier Inhibition. *J. Med. Chem.* 2023, 66, 3566-3587.
- 2) Cerchia, C.; **Lavecchia, A.** New Avenues in Artificial Intelligence-Assisted Drug Discovery. *Drug Discov. Today* 2023, 28, 103516.
- 3) Sblano, S.; Cerchia, C.; Laghezza, A.; Piemontese, L.; Brunetti, L.; Leuci, R.; Gilardi, F.; Thomas, A.; Genovese, M.; Santi, A.; Tortorella, P.; Paoli, P.; **Lavecchia, A.**; Loiodice, F. A Chemoinformatics Search for Peroxisome Proliferator-Activated Receptors Ligands Revealed a New Pan-Agonist Able to Reduce Lipid Accumulation and Improve Insulin Sensitivity. *Eur. J. Med. Chem.* 2022, 23, 114240.
- 4) Tilekar, K.; Hess, J.D.; Upadhyay, N.; Lo Bianco, A.; Schweipert, M.; Laghezza, A.; Loiodice, F.; Meyer-Almes, F.-J.; Aguilera, R.J.; **Lavecchia, A.**; Ramaa, CS. Thiazolidinedione "Magic Bullets" Simultaneously Targeting PPAR γ and HDACs: Design, Synthesis, and Investigations of their In Vitro and In Vivo Antitumor Effects. *J. Med. Chem.* 2021, 64, 6949-6971.
- 5) **Lavecchia A.** Deep Learning in Drug Discovery: Opportunities, Challenges and Future Prospects. *Drug Discov. Today* 2019, 24, 2017-2032.
- 6) Giampietro, L.; Laghezza, A.; Cerchia, C.; Florio, R.; Recinella, L.; Capone, F.; Ammazalorso, A.; Bruno, I.; De Filippis, B.; Fantacuzzi, M.; Ferrante, C.; Maccallini, C.; Tortorella, P.; Verginelli, F.; Brunetti, L.; Cama, A.; Amoroso, R.; Loiodice, F.; **Lavecchia, A.** Novel Phenylidiazene Fibrate Analogues as PPAR α/δ Pan-Agonists for the Amelioration of Metabolic Syndrome. *ACS Med. Chem. Lett.* 2019, 10, 545-551.
- 7) Sabatino, L.; Ziccardi, P.; Cerchia, C.; Muccillo, L.; Piemontese, L.; Loiodice, F.; Colantuoni, V.; Lupo, A.; **Lavecchia, A.** Chiral Phenoxycetic Acid Analogues Inhibit Colon Cancer Cell Proliferation Acting As PPAR γ Partial Agonists. *Sci Rep.* 2019, 9, 5434.

Naples, 05.05.2023

