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FULL NAME: Simona Saponara

POSITION: Associate Professor of Pharmacology

AFFILIATION: Dep of Life Sciences, University of Siena, Italy

EDUCATION

1997 Master Degree in Pharmacy, University of Siena, Italy, 110/110 cum laude

1997 State exam for professional certification as a pharmacist

2001 Ph.D. Molecular Pharmacology and Toxicology, University of Siena

PROFESSIONAL POSITIONS

1998 Research Consultant, University of Siena

1999 Technical assistant, University of Siena

2002-2008 Research Associate of Pharmacology, University of Siena

Dec 2008-Dec 2021 Assistant Professor of Pharmacology, University of Siena

Apr 2017 qualified as Associate Prof of Pharmacology by the Italian National Examination Board

Jan 2022 Associate Professor of Pharmacology

Jun 2026 qualified as Full Prof of Pharmacology by the Italian National Examination Board

RESEARCH EXPERIENCE

1996-2008 Inst of Pharmacological Sciences, Dep of Biomedical Sciences, Dep of Neurosciences, University of Siena, Italy. Prof. G. Sgaragli's laboratory.

1999 March: Bulgarian Academy of Sciences, Sofia, Bulgaria. Dr Petko Alov's Lab. Study on free-radical-scavenging activity of novel antioxidants

2001 Feb: Dep of Neuroscience, Physiology Section, University of Turin, Italy. Prof. E. Carbone's Lab. Recording single channel Ca^{2+} currents in smooth muscle and neuroendocrine cells.

RESEARCH TOPICS

-Cardiovascular effects of polyphenols, food matrices, agrofood waste

-Novel natural and synthetic modulators of vascular and cardiac Ca^{2+} and K^{+} currents

-Cardiovascular liabilities of novel anticancer drugs

-Analyses of adverse drug reactions/adverse event following immunization to drugs/vaccines, collected by the Italian National Network of Pharmacovigilance

TEACHING ACTIVITY

1999 Lecturer at the "Recent advances in Neurobiology", University of Siena, Italy (SOCRATES Programme, EU).

1999/2008 Tutor-teaching: Toxicology, Pharmacology and Pharmacotherapy (Degree in Chemistry and Pharmaceutical Technologies, Degree in Pharmacy)

2004 Lecturer at the Training course "Conventional therapy and novel drugs for the treatment of hypertension", Matera, Italy

As assistant professor

2009-2010: Pharmacokinetic and drug metabolism, Pharmacogenetic and Pharmacogenomic (Specialty School in Hospital Pharmacy); Pharmacology and Pharmacotherapy (Degree in Pharmacy)

2011-2012: Toxicology (Degree in Chemistry and Pharmaceutical Technologies)

2013-2014: OTC drugs and Pharmacovigilance (Degree in Pharmacy)

2014-2017: OTC and Pharmacovigilance (Degree in Pharmacy); Pharmacology (Degree in Cardio-Circulatory Physiopathology and Cardiovascular Perfusion Methods)

2017-2021: Pharmacology (Degree in Cardio-Circulatory Physiopathology and Cardiovascular Perfusion Methods); Pharmacology (Speciality School in Anaesthesia, Reanimation, Intensive Care and Pain Management); Pharmacotherapy (Degree in Pharmacy)

As associate professor

2021-2026: Pharmacology (Degree in Cardio-Circulatory Physiopathology and Cardiovascular Perfusion Methods); Pharmacology (Speciality School in Anaesthesia, Reanimation, Intensive Care and Pain Management); Pharmacotherapy (Degree in Pharmacy); OTC drugs (Degree in Pharmacy); Food and drug interactions: effects and mechanisms for health and sport performance (Degree in Biology, Specializations: Biology of Nutrition for Health and Sport Activity)

“Experimental models to study the cardiovascular properties of natural and synthetic compounds” (PhD in Life Sciences); “Pediatric drug regulation” (Master in Regulatory Medical Writer)

2009-present: Supervisor of

-102 Theses (Master Degree in Pharmacy and Chemistry and Pharmaceutical Technologies)

-1 post- Master Degree project

-5 post-doc projects

-2 Visiting Phd Student (Rony Abdi Syahputra, University of Sumatera Utara, Indonesia; 1-10-2021/31-01-2022) (Ghada Trabelsi, University of Monastir, Tunisia, 20/10/2024 - 20/01/2025)

1 Visiting MSc Student (Dessislava Avramova, Faculty of Pharmacy, Medical University of Sofia, Bulgaria, 02/03/2026-30/06/2026)

-2 PhD Students in Life Sciences

Alice Panti, XXXVII cycle

Project: Agri-food by-products as sources of nutraceutical compounds: evaluation of their potential pharmacological activity (GREENER)

PhD thesis: Sagrantino vine cv. leaves extracts, micro and nanovesicles: chemical characterization and ex vivo evaluation of vasoactive properties (26/08/2025)

Alessia Bichicchi, XXXIX cycle

Project: Cardiovascular targets for novel naturally-occurring and synthetic compounds (OCT

Co-supervisor of 1 PhD Students in Life Sciences

Aurora Bacci, XLI cycle

Project: Novel Natural and Synthetic Compounds Targeting Cardiovascular System (VICTORY)

INSTITUTIONAL RESPONSABILITIES

2009-2010: Member of “Doctoral School of Molecular Physiology-Pharmacology-Toxicology ” (DOT0330214)

2014: Member of the examining boards for the qualification to practice as a pharmacist

2018-present: Member of the Board of the Speciality School in Anaesthesia, Reanimation, Intensive Care and Pain Management (University of Siena)

2018-present: Library delegate for Dep of Life Sciences and Member of the Council of the Medical-Biological-Pharmaceutical Library (University of Siena)

2022-present: Placement delegate for Dep of Life Sciences (University of Siena)

2022-present: Member of PhD in Life Sciences - DOT1330719

2023: Member of the selection committee for admission to the PhD in Life Sciences "Life Sciences" – 39° cycle (Rector's Decree no. 1489/2023)

13/06/2023-present: Member of the Commission for the Establishment of the Curriculum "Biology of Nutrition for Health and Sports", Master Degree in Biology

2025-present ERASMUS coordinator for biomedical student mobility at the Medical University Sofia (BG)

2025-present: Chair of the Council of the Medical-Biological-Pharmaceutical Library and Member of the University Library Committee, University of Siena

PUBLIC ENGAGEMENT

27 September 2024 – Participation in Bright-Night: The European Researchers' Night in Tuscany. Research stand "Food Without Borders: A Journey into Wellbeing and Health", Santa Maria della Scala, Siena, Italy

26 September 2025- Participation in Bright-Night: The European Researchers' Night in Tuscany. Research stand "Taking Care: Nourishing Your Health Through Small Daily Choices", Santa Maria della Scala, Siena, Italy

20 February 2026- When the plate meets the pill: the surprising interactions between drugs and food", Conference on "Conscious Nutrition", Rotary Club Massa Marittima, Sala dell'Abbondanza, Massa Marittima, Italy.

AFFILIATION

Member of the Italian Pharmacological Society

EDITORIAL ACTIVITY

-Reviewer for:

ACS Medicinal Chemistry Letters, Biochemical Pharmacology, Biomedicine & Pharmacotherapy, BioMed Research International, Biomolecules, Bioorganic Chemistry, British Journal of Pharmacology, Canadian Journal Physiology and Pharmacology, Cancers, Cardiovascular Therapeutics, Cellular Oncology, Current Drug Safety, Current Medicinal Chemistry, European Journal of Medicinal Chemistry, European Journal of Pharmacology, Evidence-Based Complementary and Alternative Medicine, Frontiers in Cardiovascular Medicine, Frontiers Pharmacology, Future Pharmacology, Heliyon, Infectious Disorders - Drug Targets, International Journal of Molecular Sciences, Journal of Hazardous Materials, Journal of Cardiovascular Pharmacology, Journal of Integrative Medicine, Journal of Pharmacological and Toxicological Methods, Journal of Pharmacy and Pharmacology, Life Sciences, Medical Principles and Practice, Medicinal Chemistry Research, Metabolites, Mitochondrion, Molecules, Molecular Nutrition and Food Research, Natural Product Communications, Naunyn-Schmiedeberg's Archives of Pharmacology, Planta Medica, Pharmaceuticals, Pharmaceutics, Pharmacoepidemiology and Drug Safety, Pharmacological Reports, Recent Patents On Cardiovascular Drug Discovery, The Journal of Cardiovascular Pharmacology, Vascular Pharmacology

-Editorial Board Member of

-EDITORIAL BOARD MEMBER

2019-2025: Cardiovascular Therapeutics (Hindawi, Wiley)

2022-2025: Biomed Research International (Hindawi, Wiley)

2021-present: Future Pharmacology (MDPI)

2026-present: Current Molecular Pharmacology (Bentham Science, KeAi)

2026-present: Cardiovascular Medicine (MDPI)

-Evaluator of:

SIR Programme 2014 (Scientific Independence of Young Researchers) (Italian Ministry of University and Research);

Joint Projects 2016 University of Verona. Bando di Ateneo per la realizzazione di progetti congiunti con Imprese ed Enti

-External examiner

MSc and PhD Thesis, University of KwaZulu-Natal, Durban, South Africa

PhD Thesis, University of Florence, Italy

RESEARCH PROJECT FOUNDED

2001: Young researcher PROJECT

Title: Synthetic phenol derivatives as new Ca²⁺ channel antagonists in smooth muscle cells. Potential drugs for the treatment of ischemia/reperfusion injury.

Role: PI

Agency: University of Siena, Italy. Duration: 6/3/2002-6/3/2003.

2004-2006: Projects of major importance in the Scientific and Technological Collaboration Executive Programmes (Italy –Hungary)

Title: Novel compounds reverting multidrug resistance

Role: member of the RU

Agency: Italian Minister of Foreign Affairs. Duration: 02/01/2004-31/12/2006

2005-2007: Projects of major importance in the Scientific and Technological Collaboration Executive Programmes (Italy –South Africa)

Title: Investigations of isolates from the Hyacinthaceae family for cardiovascular activity

Role: member of the RU

Agency: Italian Minister of Foreign Affairs. Duration: 01/01/2005-31/12/2007

2008-2009

Title: Targeted release of MDR1/P-gp inhibitors to multidrug resistant human cancer cell using nanocarriers—NANODART

Role: member of the RU

Agency: Monte dei Paschi Foundation. Duration: 01/01/2008-01/01/2009

2009-2011: Projects of major importance in the Scientific and Technological Collaboration Executive Programmes (Italy –Vietnam)

Title: Discovery of novel cardiovascular active agents from selected Vietnamese medicinal plants

Role: member of the RU

Agency: Italian Minister of Foreign Affairs. Duration: 01/01/2009-31/12/2011

2010-2013

Title: Targeting multidrug-resistant tumour cells with nanocarriers loaded with Multi Drug Resistance (MDR) reverters

Role: member of the RU

Agency: Tuscan Tumour Institute, Duration: 11/01/2010-15/06/2013

2012: FUTURO IN RICERCA 2012 (RBFR12SOQ1)

Title: Optimization of oncology therapy: novel drugs affecting multi drug resistance

Role: National Coordinator and Principal Investigator (Co-Investigator: Lorenzo Cinci, University of Florence; Maria G Perrone, University of Bari; Chiara Riganti, University of Turin)

Agency: Italian Ministry of Education, University and Research. Funding: 989.437,00 euro.

Duration: 21/03/2013-21/11/2016

2015: INVESTIGATOR GRANT

Title: Dissecting the endoplasmic reticulum-mitochondria network to reverse chemo-immunoresistance of cancer cells (IG2014.15232)

Agency: Associazione Italiana per la Ricerca sul Cancro (AIRC), Duration: 01/01/2015-31/12/2018

Role: External collaborator (PI: Chiara Riganti, University of Turin)

2018-2022: COST ACTION CA17104

Title: New diagnostic and therapeutic tools against multidrug resistant tumors

Role: Leader of the Working Group 4 “Pharmacokinetic and ADME/toxicology of new therapeutic tools; safety of therapeutic targets” and Management Committee member from Italy

2020-2024: COST ACTION CA19144

Title “European Venom Network”, EUVEN

Role: Management Committee substitute from Italy and member of Working Group 1 “Novel targets in venom research”

2022-2023: COST INNOVATOR GRANT (CIG)

Title: “IG17104 - Pan-European Educational Platform on Multidrug Resistant Tumours and Personalised Cancer Treatment”, PANDORA

Role: member of the CIG Team

2022-2025: PROJECT National Recovery and Resilience Plan (PNRR) THE

Tuscany Health Ecosystem” (cod ECS00000017)- Spoke2 – CUP B63C22000680007

Title “Chronic faecal microbial transplant to prevent aging-related pathologies and cognitive Decline”

Agency: Ministry of University and Research– European Union NextGenerationEU, Duration: 01/12/2022 - 30/11/2025

Role: Key Investigator - Task Leader for In Vivo/Ex Vivo Cardiovascular Assessment (PI Prof. Eugenio Bertelli, University of Siena)

2023-2027: COST ACTION CA22134

Title “Sustainable Network for agrofood loss and waste prevention, management, quantification and valorisation”, FoodWaStop

Role: Member of Working Group 4 “Valorisation of agrofood waste and a circular bio-economy”

2025: BLENDED INTENSIVE PROGRAMME

Title “Translational research in MDR: how to move from preclinical research to clinical benefits”.

ID 2023-1-PT01-KA131-HED-000114182-3

Role: Partner from Italy

Duration: 31/01/2025-17/06/2025

2026: BLENDED INTENSIVE PROGRAMME

Title: DesignDrugs2MDR (Drug development, repurposing and formulation against MDR, and relative toxicological aspects)

ID: 2023-1-PT01-KA131-HED-000116521-1

Role: Partner from Italy

Duration: 06/07/2026-17/06/2026

INTERNATIONAL RESEARCH CONSULTANCY

Title: Precision Pest Eradication – pest-selective control tools. This consultancy focuses on the discovery and refinement of species-specific toxins to improve animal welfare and ensure humane standards

Agency: Manaaki Whenua – Landcare Research (New Zealand Bioeconomy Research Institute)

Duration: 01/12/2022-31/03/2028

Role: Scientific Responsible and Principal Investigator (International Research Service & Consultancy)

ORGANISATION OF SCIENTIFIC MEETINGS:

- Four Annual Symposia “Pharmacological strategies to overcome multidrug resistance in cancer chemotherapy”, Certosa di Pontignano, Siena, IT (2004, 2005, 2006, 2007).
- Conclusive meeting of the project Futuro in Ricerca “Optimization of oncology therapy: novel drugs affecting multidrug resistance”. University of Siena, Siena, 3-4 November 2016
- Cost Action CA17104, First WG1-WG4 meeting, Turin, Italy, January 29-31, 2019
- COST Action CA17104, Annual Conference – 3rd MC meeting and 4th WGs meetings, Belgrade, Serbia, 27-28 February, 2020.
- COST Action 17104 WG3 Meeting – International Online Symposium on “New Therapeutic Tools Against Preclinical Models of Multidrug Resistant Tumors”, 4 November, 2020.
- COST Action 17104, WG2 Meeting and International Online Symposium on “Synthesis and nanodelivery strategies for new therapeutic tools against Multidrug Resistant Tumours”, 15 December, 2020.
- COST Action 17104 Annual Conference –MC and WGs meetings, Prague, Czechia, 6-8 September, 2021
- COST Action 17104 WG3-WG4 Training School “Applications of genomic, cytometry and in silico studies to the study of drug sensitivity and resistance mechanisms – Clinical implications, Coimbra, Portugal, 27-29 June 2022
- COST Action 17104 5th Annual meeting, Coimbra, Portugal, 29 June-1 July 2022
- CIG 17104 PANDORA Online Course “Bench to Bedside: Translating Science From the Lab to the Patient”, 19 and 22 June 2023

HONORS

- 2001: Young Researcher Award, University of Siena
- 2008 EPHAR (Federation of the European Pharmacological Societies) bursary to attend the EPHAR meeting 2008, 13-17 July Manchester, UK and the International Workshop On Methods In Cardiovascular Pharmacology, The University of Manchester, Core Technology facility, Manchester, United Kingdom. July 18-19, 2008
- Top Cited Article Award (2022-2023). The Journal of Clinical Pharmacology (Wiley). Recognized for the paper: "Off-Label Use of Hydroxychloroquine in COVID-19: Analysis of Reports of Suspected Adverse Reactions From the Italian National Network of Pharmacovigilance".

BIBLIOMETRY

- 94 full papers on indexed international journals subjected to peer-review; 8 book chapters; 17 proceedings of international meetings; 95 national and international meetings (6 invited talks)

Simone Sopaiva