Giovanna Petrucci, PhD
ORCID: 0000-0002-9280-3673

Personal Information

Giovanna Petrucci is Associate Professor of Pharmacology (SSD BIO/14) at UniCamillus University, Rome. Her scientific activity focuses on cardiovascular pharmacology, platelet biology, thromboxane biosynthesis, and the role of platelets in cancer progression.

Education

She obtained her Scientific High School Diploma in Morlupo (Rome) in 1990 with full marks (60/60). In 1998, she graduated *cum laude* in Natural Sciences at Sapienza University of Rome, presenting a thesis entitled: *"Analysis by semi-automatic sequencer of three microsatellite polymorphisms (cd4-d18-tpox) and molecular haplotyping (cd4-alu) in selected populations from Central Africa."* In 2012, she earned her PhD in Pathophysiology and Pharmacology of Hemostasis and Thrombosis (XXIV PhD cycle) at the Faculty of Medicine and Surgery, Università Cattolica del Sacro Cuore, Rome. Her doctoral dissertation, entitled *"Determinants of inter-individual variability in the pharmacological response to low-dose aspirin in patients with Essential Thrombocythemia, Type 2 Diabetes Mellitus, and non-diabetic subjects at high cardiovascular risk: evaluation of different administration regimens"*, explored variability in aspirin responsiveness across clinical settings.

Professional Experience

From March 1998 to December 1999, Giovanna Petrucci held a research fellowship at the Institute of Anatomy and Pathological Histology, Faculty of Medicine and Surgery, Università Cattolica del Sacro Cuore, Rome. Her research focused on the *immunohistochemical localization of gonadotrophins (LH and FSH) in human thymus and thymoma*.

Between January and June 2000, she continued her fellowship at the same Institute, where she investigated the *immunohistochemical localization of cyclooxygenase-1 and -2 in the normal human thymus and thymoma*.

From July 2000 to July 2003, she worked as a Laboratory Technician at the Institute of Anatomy and Pathological Histology, Università Cattolica del Sacro Cuore, Rome.

From May 2004 to May 2005, she held another fellowship at the same Institute, continuing her research on the immunohistochemical localization of cyclooxygenase-1 and -2 in human thymus and thymoma.

Between October 2004 and April 2005, she was appointed Research Collaborator under a project contract at the Institute of Anatomy and Pathological Histology, Università Cattolica del Sacro Cuore, Rome. The project, entitled *"Neuroendocrine control of growth and immune modulation in epithelial thymic tumors"*, was supervised by Professor Libero Lauriola.

In December 2005, she obtained a short-term research contract within a Ministry-funded project (FIRB code RBNE01A882_005) on *"Characterization of genetic and molecular determinants of individual responses to cyclooxygenase inhibitors in elderly patients and identification of novel molecular targets"*. The scientific coordinator was Professor Bianca Rocca.

From April 2005 to December 2007, she collaborated on the project *"Glioblastoma Cancer Stem Cells"* at the Institute of Neurosurgery, Università Cattolica del Sacro Cuore, Rome, under the supervision of Professor Giulio Maira.

Between January and July 2006, she worked again under a short-term research contract on the FIRB project on cyclooxygenase inhibitors in elderly patients, coordinated by Professor Bianca Rocca.

In April 2007, she was awarded a fellowship at the Institute of Neurosurgery, Università Cattolica del Sacro Cuore, Rome, within a project funded by the Nando Peretti Foundation, focused on *"Repair of CNS lesions through cell replacement therapy using NSC induced towards neuronal phenotypes"* and *"Isolation of cancer stem cells from human brain tumors"*.

In June and again from July to September 2007, she was engaged as a project collaborator at the Institute of Neurosurgery, Università Cattolica del Sacro Cuore, Rome, in studies on glioblastoma cancer stem cells, under the supervision of Professors Giulio Maira and Roberto Pallini.

In December 2008, she obtained a research contract for immunohistochemical characterization of tumor stem cells at the Institute of Anatomy and Pathological Histology, Università Cattolica del Sacro Cuore, Rome, under the supervision of Professor Luigi Maria Larocca.

From February 2012 to August 2025, she served as Assistant Professor of Pharmacology (Tenured, SSD BIO/14) at Università Cattolica del Sacro Cuore, Rome.

Since 2019, she has been a member of the Scientific Board of the multicenter phase IV trial *"Why does aspirin fail in secondary cerebrovascular prevention? – ASTRO"*, funded by the FADOI Foundation.

From May 2025, she has also been serving as Adjunct Professor of Pharmacology at the Nursing Degree Program, LUM University, Casamassima (Bari).

On March 7, 2025, she was awarded the National Scientific Habilitation (ASN) for the role of Associate Professor in Pharmacology, Clinical Pharmacology and Pharmacognosy (05/G1).

As of September 1, 2025, she is Associate Professor of Pharmacology (SSD BIO/14) at UniCamillus University, Rome.

Teaching and Academic Responsibilities

Since the academic year 2012/2013, Giovanna Petrucci has continuously held teaching assignments in Pharmacology (SSD BIO/14) across undergraduate, graduate, and postgraduate degree programs in health professions, medicine, and pharmacy at Università Cattolica del Sacro Cuore (Rome and affiliated campuses).

She has taught Pharmacology and related subjects (including Pharmacotoxicology and Clinical Pharmacology) in numerous degree programs such as Dental Hygiene, Physiotherapy, Nursing,

Speech Therapy, Audioprosthetics, Prevention Techniques in the Environment and Workplace, and Pharmacy.

She has also been responsible for teaching Pharmacology in the Integrated Courses of Pharmacology I and Pharmacology II in the *Medicine and Surgery* program at Università Cattolica del Sacro Cuore, Rome campus.

In postgraduate education, she has taught Pharmacology in the School of Specialization in Internal Medicine (III year) and Cardiovascular Pharmacology in the School of Specialization in Cardiovascular Diseases (III year), both at Università Cattolica del Sacro Cuore, Rome.

Her teaching portfolio spans more than a decade and includes continuous responsibilities across different Italian regions (Rome, Turin, Bolzano, Rieti, Colleferro, Viterbo, Campobasso).

Coordinated Courses and Academic Roles

- 2024–2025 – Coordinator of the Integrated Course *Critical Care and Emergency Medicine* in the Speech Therapy Degree Program, Università Cattolica, Claudiana Provincial School, Bolzano.
- 2018–2019 – Coordinator of the Integrated Course *Critical Care and Emergency Medicine* in the Speech Therapy Degree Program, Università Cattolica, Claudiana Provincial School, Bolzano.
- 2017–2018 – Coordinator of the Integrated Course *Clinical Sciences and First Aid* in the Prevention Techniques in the Environment and Workplace Degree Program, Università Cattolica, Colleferro campus.
- 2016–2017 – Coordinator of the Integrated Course *Clinical Sciences and First Aid* in the same program and campus.

Degree Program Reference Lecturer

- 2020–present – Reference Lecturer for the Nursing Degree Program, Università Cattolica, Cottolengo Hospital, Turin.
- 2016–2017 – Reference Lecturer for the Physiotherapy Degree Program, Università Cattolica, Villa Immacolata, San Martino al Cimino (VT).
- 2015–2016 – Reference Lecturer for the Speech Therapy Degree Program, Università Cattolica, Scuola Provinciale Claudiana, Bolzano.

Tutoring and Supervision of Students and PhD Candidates

Giovanna Petrucci has extensive experience in supervising undergraduate, graduate, and doctoral students in Pharmacology, Biotechnology, and Translational Medicine. Her contributions include thesis supervision, laboratory training, and scientific mentoring.

Since January 2025, she has been co-supervising the PhD thesis of Mohammad Farhoud, a doctoral student in Experimental and Translational Medicine (40th cycle), Università Cattolica del Sacro Cuore, under the coordination of Professor Ornella Parolini.

During the 2024–2025 academic year, she served as thesis advisor for Miriam Francesca Palma and Chiara Taraddei, graduating students in Pharmacy at Università Cattolica del Sacro Cuore, Rome.

In 2024, she supervised Yousef Amiri, a Medicine and Surgery student, during his Pharmacology laboratory internship.

Since January 2023, she has been supervising Cristina Morelli, a PhD student in Experimental and Translational Medicine (38th cycle), Università Cattolica del Sacro Cuore, under the coordination of Professor Ornella Parolini.

Between January and November 2023, she tutored Dr. Zahraa Mallah, a joint PhD candidate between the Lebanese University (Beirut, Lebanon) and Università Cattolica del Sacro Cuore, Rome, in Experimental and Translational Medicine.

From 2020 to 2023, she co-supervised the PhD thesis of Dr. Duaa Hatem in Experimental and Translational Medicine (35th cycle), Università Cattolica del Sacro Cuore, under the coordination of Professor Ornella Parolini.

Between 2012 and 2015, she mentored Francesca Pagliaccia, PhD student in Pathophysiology and Pharmacology of Hemostasis and Thrombosis (27th cycle), Università Cattolica del Sacro Cuore, under the supervision of Professor Carlo Patrono.

Earlier in her career, she contributed to the supervision of undergraduate theses in Biotechnology and Biomedical Laboratory Techniques:

- 2007–2008: Laboratory tutor for students of the Biotechnology Degree Program, Università Cattolica del Sacro Cuore.
- 2006–2007: Tutor and scientific advisor for Pierpaolo Occhiolupo (Biotechnology Degree Program).
- 1999–2000: Tutor and advisor for Silvia Sarti (Biomedical Laboratory Techniques Diploma), Università Cattolica del Sacro Cuore.

Committees and Examination Boards

In May 2025, Giovanna Petrucci was appointed as a member of the Selection Committee for admission to the PhD program in Experimental and Translational Medicine (42nd cycle), Università Cattolica del Sacro Cuore, Rome.

In 2025, she became a member of the PhD Faculty Board in Experimental and Translational Medicine (41st cycle) at Università Cattolica del Sacro Cuore, Rome.

In 2024, she served as a member of the PhD Faculty Board in Experimental and Translational Medicine (40th cycle) at the same University.

On 28 November 2023, she acted as an examiner for the joint PhD program between Lebanese University (Beirut, Lebanon) and Università Cattolica del Sacro Cuore (Rome, Italy) in Experimental and Translational Medicine, for the doctoral thesis of Dr. Zahraa Mallah.

In October 2019, she was appointed external evaluator for a PhD dissertation in the *Experimental and Clinical Pharmacological Sciences* program (32nd cycle), University of Milan, coordinated by Professor Alberico Luigi Catapano (candidate: Dr. Leonardo Sandrini).

In December 2018, she served as external evaluator for a PhD dissertation in *Biomedical Sciences and Public Health* (31st cycle), Università Cattolica del Sacro Cuore, Faculty of Medicine and Surgery, Rome, coordinated by Professor Maurizio Sanguinetti (candidate: Dr. Paola Ranalli).

Her participation in national and international PhD committees highlights her recognition as an expert in Pharmacology and her active role in evaluating and mentoring young researchers.

Conferences, Seminars, and Scientific Presentations

Seminar entitled: "*Role of platelet activation in cancer*" - PhD in Experimental and Translational Medicine. Università Cattolica del Sacro Cuore, Facoltà di Medicina e Chirurgia (PhD Cycle 39). 08/05/2025.

1. Seminar entitled: "*Surrogate biomarkers of cardiovascular risk and/or response to antiplatelet drugs; significance and validation on large clinical trials*" - PhD in Experimental and Translational Medicine. Università Cattolica del Sacro Cuore, Facoltà di Medicina e Chirurgia (PhD Cycle 40). 06/03/2025.

2. Presentation entitled: *"In vivo Platelet activation in Patients with Melanoma"*, EuroCVP – Advances in Cardiovascular Pharmacotherapy, Conference, Budapest, Ungheria, 7-9 November 2024.

3. Presentation entitled: *"Stability of the thromboxane B2 biomarker of aspirin pharmacodynamics in human whole blood and in long-term stored serum samples"*, EuroCVP – Advances in Cardiovascular Pharmacotherapy, Conference, Budapest, Ungheria, 7-9 November 2024.

4. Presentation entitled: *"Stability of the thromboxane B2 biomarker of aspirin pharmacodynamics in human whole blood and in long-term stored serum samples"*, ETEV 2024 - EuroThrombosis and EuroVessels Conference, Bologna, 10-12 October 2024.

5. Seminar entitled: *"Surrogate biomarkers of cardiovascular risk and/or response to antiplatelet drugs; significance and validation on large clinical trials*". PhD in Experimental and Translational Medicine. Università Cattolica del Sacro Cuore, Facoltà di Medicina e Chirurgia (PhD Cycle 38). 12/07/2024.

6. Seminar entitled: "*Surrogate biomarkers of cardiovascular risk and/or response to antiplatelet drugs; significance and validation on large clinical trials*". PhD in Experimental and Translational Medicine. Università Cattolica del Sacro Cuore, Facoltà di Medicina e Chirurgia (PhD Cycle 39). 21/06/2024.

7. Presentation entitled: *"Increased Thromboxane Biosynthesis in Patients with Melanoma"*, EuroCVP 2023 - The annual meeting on advances in cardiovascular pharmacotherapy, Florence, 2-4 November 2023.

8. Presentation entitled: *"Serum Thromboxane B2 measurements in patients on acetylsalicylic acid: investigation of different pre-analytical conditions to improve feasibility in clinical studies"*, EuroCVP 2023 - The annual meeting on advances in cardiovascular pharmacotherapy, Florence, 2-4 November 2023.

9. Presentation entitled: *"Effect of long-term storage and freeze-thawing cycles on arachidonic acid metabolites in human urine samples"*, EuroCVP 2023 - The annual meeting on advances in cardiovascular pharmacotherapy, Florence, 2-4 November 2023.

10. Presentation entitled: *"Effect of long-term storage and freeze-thawing cycles on urinary thromboxane A2 metabolite and isoprostanes"*, 28th International Congress on Thrombosis (ICT 2023), Lisbon, Portugal, 1-3 June 2023.

11. Presentation entitled: *"In vivo lipid peroxidation and platelet activation in patients with cancer: results of a sub-study of the Add-Aspirin trial"*, Aspirin for Cancer Prevention (AsCaP) Meeting, Paris, France, 15-16 May 2023, University of London Institute in Paris.

12. Presentation entitled: *"Platelet thromboxane inhibition by low-dose aspirin in polycythemia vera: ex vivo and in vivo measurements and in silico simulation"*, 41° National Congress of Società Italiana di Farmacologia, Rome, 16-19 November 2022.

13. Presentation entitled: *"PLATELET THROMBOXANE INHIBITION BY LOW-DOSE ASPIRIN IN POLYCYTHEMIA VERA: EX VIVO AND IN VIVO MEASUREMENTS AND IN SILICO SIMULATION"*, EuroThrombosis & EuroVessels 2022, Lisbon, 20-22 October 2022.

14. Presentation entitled: *"Stability of the thromboxane metabolite 11-Dehydro-TxB2 and of creatinine in samples stored over 5 years"*, 39° National Congress of Società Italiana di Farmacologia, Florence, 20-23 November 2019.

15. Presentation entitled: *"Obesity is associated with in vivo platelet activation and impaired responsiveness to once-daily, low-dose aspirin"*, 39° National Congress of Società Italiana di Farmacologia, Florence, 20-23 November 2019.

16. Presentation entitled: *"C-reactive protein and immature platelet fraction contribute to poor responsiveness to low-dose aspirin and persistent in vivo platelet activation in polycythemia vera"*, 39° National Congress of Società Italiana di Farmacologia, Florence, 20-23 November 2019.

17. Presentazione dal titolo: *"C-reactive protein and immature platelet contribute to poor responsiveness to low-dose aspirin and in vivo platelet activation in polycythemia vera"*, Eurothrombosis 2018, Barcelona, Spain, 4-6 October 2018.

18. Presentation entitled: *"Obesity enhances in vivo platelet activation and reduces aspirin responsiveness"*, Eurothrombosis 2018, , Barcelona, Spain, 4-6 October 2018.

19. Presentation entitled: *"C-reactive protein and immature platelet fraction contribute to poor responsiveness to low-dose aspirin and persistent in vivo platelet activation in polycythemia vera"*, Convegno Monotematico SIF – Naples, 26-27 September 2018.

20. Presentation entitled: *"Obesity enhances in vivo platelet activation and reduces aspirin responsiveness"*, Convegno Monotematico SIF – Napoli, 26-27 September 2018.

21. Presentation entitled: *"Poor responsiveness to low-dose aspirin contributes to persistent in vivo platelet activation in polycythemia vera"*, III Convegno Monotematico SIF – Naples, 15-16 March 2018.

22. Presentation entitled: *"Poor Responsiveness to low-dose aspirin in polycythemia vera predicts residual in vivo platelet activation"*, 38° National Congress of Società Italiana di Farmacologia, Rimini, 25-28 Otctober 2017.

23. Presentation entitled: *"Pre-analytical biases in investigating low-dose aspirin responsiveness and comparison of two different methods"*, 37° National Congress of Società Italiana di Farmacologia, Napoli, 27-30 October 2015.

24. Presentation entitled: *"In vivo platelet activation and aspirin responsiveness in type 1 diabetes mellitus"*, 37° National Congress of Società Italiana di Farmacologia, Napoli, 27-30 October 2015.

25. Presentation entitled: *"Aspirin–insensitive thromboxane biosynthesis in essential thrombocytemia: effect of different aspirin doses, formulations and dosing regimen"*, 35° National Congress of Società Italiana di Farmacologia, Bologna, 14-17 Seètember 2011.

26. Presentation entitled: *"Prostaglandin E2 and EP3 activation potentiate human platelet responsiveness"*, XXI National Congress of Società Italiana per lo Studio dell'Emostasi e della Trombosi, Bologna, 28-31 October 2010.

27. Presentation entitled: *"Positive modulation of prostaglandin E2 and EP3 activation on platelet aggregation"*, 34° National Congress of Società Italiana di Farmacologia, Rimini, 14-17 October 2009.

Scientific Responsibility for Research Projects in National and International Research Collaborations

2025 – Participation in the study "Profasta Trial on prolonged fasting" in collaboration with Prof. Luigi Fontana, University of Sydney Johns Hopkins, Australia.

2024–present – Principal investigator for pharmacodynamic and platelet activation studies in the project: "Evaluation of intra-platelets and circulating levels of MIR-126-5p and their association with in vivo biomarkers of platelet activation in subjects with type 2 diabetes". In collaboration with Dr. Elisabetta Bigagli, Department of Neuroscience, Psychology, Drug Area and Child Health (NEUROFARBA), Florence.

2024–present – Principal investigator for pharmacodynamic and platelet activation studies in the project: "Residual platelet activation in cardiovascular patients with depression", in collaboration with Centro Cardiologico Monzino, Milan.

2020 – Participation in the international clinical trial: "Effect of Low-dose and Standard dose Aspirin on PGE2 Biosynthesis Among Individuals with Colorectal Adenomas: a Randomized Clinical Trial (ASPIRED)". In collaboration with Prof. Andy Chan, Division of Gastroenterology, Department of Medicine, Harvard Medical School, Boston, USA.

2017–2019 – Collaboration in the international clinical trial "Will lower dose aspirin be more effective in ACS?" (WILLOW-ACS), NCT02741817, University of Sheffield. PI: Prof. Robert F. Storey, University of Sheffield, UK.

2012–2013 – Clinical study "Antiplatelet effect of low doses of aspirin taken every 12 hours in patients undergoing coronary artery bypass graft and/or aortic valve replacement surgery with bioprostheses (ASABy)" EudraCT 2011-001488-40, in collaboration with Centro Cardiologico Monzino, Milan. Responsible for pharmacodynamic studies.

Scientific Responsibility for Research Projects Funded through Competitive, Peer-reviewed Calls

2025–2029 – Collaboration with LUM University Casamassima (Bari) in the study "Suppressing Platelet Activation to Reduce Cancer – A New Approach to Cancer Prevention", in collaboration with MRC Clinical Trials Unit at UCL, London. Funded by Cancer Research UK.

2025–2027 – Co-Principal Investigator, clinical study "Diet with or without Metarecod® in obese subjects with type 2 diabetes: effect on body weight, in vivo oxidative stress, endothelial function, low-grade inflammation and gut microbiota" – Mondo (ID 6264). Investigator-initiated project funded by Aboca/BiosTherapy.

2024–present – Responsible for pharmacodynamic and platelet activation biomarker studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2024, PI Prof. Bianca Rocca), Rome campus. Project title: "Correlation between in vivo platelet activation biomarkers and ex vivo platelet microRNAs in high cardiovascular risk conditions."

2019–present – Responsible for pharmacodynamic and platelet activation biomarker studies in the multicenter phase IV trial "Why does aspirin fail in secondary cerebrovascular prevention? – ASTRO" (https://www.fadoi.org/ricerca/studi-in-corso/studio-astro/), funded by Fondazione FADOI.

2022–2023 – Responsible for biomarker studies of platelet activation and oxidative stress; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2022, PI Prof. Bianca Rocca, Biennial), Rome campus. Project title: "Vascular protective effects of SGLT2 inhibitors and GLP1 receptor agonists in diabetic patients in secondary prevention."

2021–2022 – Responsible for biomarker studies of platelet activation and oxidative stress; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2021, PI Prof. Bianca Rocca), Rome campus. Project title: "Effect of partial factor Xa inhibition on residual platelet activation in vivo in type 2 diabetes mellitus."

2019–2022 – Responsible for pharmacodynamic and platelet activation biomarker studies of the Pharmacology Unit in the phase IV clinical trial "Effect of low-dose Rivaroxaban associated with low-dose aspirin versus low-dose aspirin alone on in vivo platelet activation, endothelial function and ex vivo inflammation in patients with type 2 diabetes mellitus and peripheral, carotid or coronary artery disease: a randomized, crossover trial – RivAsa" (EudraCT 2019-000610-10).

2018–2023 – Collaboration in the international phase III trial "Add-Aspirin" (ISRCTN74358648, PI Prof. Ruth Langley, MRC Clinical Trials Unit, UCL, UK); responsible for the pharmacodynamic and platelet activation substudy.

2017–2019 – Responsible for pharmacodynamic and platelet activation biomarker studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2017, PI Prof. Bianca Rocca, Biennial), Rome campus. Project title: "Pharmacodynamics of antiplatelet drugs in obesity."

2016–2017 – Responsible for pharmacodynamic and platelet activation biomarker studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2016, PI Prof. Bianca Rocca), Rome campus. Project title: "Longitudinal analysis of aspirin response and non-genetic cardiovascular biomarkers in patients with Polycythemia Vera and Essential Thrombocythemia."

2015–2019 – Collaboration with the European Union's Seventh Framework Programme (FP7/2007-2013) for the Innovative Medicine Initiative, grant agreement n° IMI/115006 (SUrrogate markers for Micro- and Macro-

vascular hard endpoints for Innovative diabetes Tools – SUMMIT consortium). Coordinators: Prof. Carlo Patrono and Prof. Bianca Rocca.

2015–2019 – Responsible for the biological substudy of the international phase III trial "A Study of Cardiovascular Events in Diabetes mellitus (ASCEND)", PI Prof. Jane Armitage, Clinical Trial Service Unit and Epidemiological Studies Unit (CTSU), University of Oxford, UK, within the European project IMI-SUMMIT.

2014–2015 – Responsible for platelet activation biomarker studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2014, PI Prof. Carlo Patrono), Rome campus. Project title: "Platelet activation and inflammation in pre-diabetic states."

2013–2016 – Member of the Catholic University of Rome research unit in the project: "A translational medicine research programme exploring early events in cancer development: the role of platelets in intestinal tumorigenesis." Funded by PRIN 2010-2011, grant n°2010FHH32M_004. PI for the Catholic University research unit: Prof. Carlo Patrono.

2012–2015 – Partner 2 in the project "Platelet Activation in Type 2 Diabetic Patients with Stable Coronary Artery Disease: Insights into their Thrombotic Propensity using a Genome-Wide Approach". Funded by Fondazione Cariplo, grant n°2011-0473. In collaboration with Centro Cardiologico Monzino, Milan, and the Department of Medicine and Aging Sciences, University "G. D'Annunzio", Chieti.

2012–2014 – Responsible for pharmacodynamic and platelet activation biomarker studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2012, PI Prof. Bianca Rocca, Biennial), Rome campus.

2011–2012 – Responsible for pharmacodynamic studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2011, PI Prof. Bianca Rocca), Rome campus. Project title: "Inter-individual variability in the pharmacological response to low-dose aspirin: effects of body mass and renal function."

2009–2011 – Responsible for pharmacodynamic and platelet activation biomarker studies; member of the research group funded by the Catholic University of the Sacred Heart (institutional call, Line D1 2009 and Line D1 2010, PI Prof. Bianca Rocca), Rome campus. Project title: "Longitudinal Study on Time-related Modifications of Platelet Activation during the Development and Progression of Type 2 Diabetes Mellitus."

Reviewer for International Peer-reviewed Journals

Ad hoc reviewer for the following international journals: *Circulation Research, Clinical and Experimental Medicine, Thrombosis Journal*.

Membership in Scientific Societies

07/2009–present – Italian Society of Pharmacology
12/2013–present – Working Group on Thrombosis, European Society of Cardiology
11/2022–present – Working Group on Cardiovascular Pharmacotherapy, European Society of Cardiology
2023–present – Cardiovascular and Metabolic Working Group, Italian Society of Pharmacology

---

Awards

2011 – Winner of the Oral Communication Award for PhD Students, 35th National Congress of the Italian Society of Pharmacology, Bologna, September 14–17, 2011.
2017 – Winner of the *High-quality Publications Award 2017*, Catholic University, Faculty of Medicine and Surgery, Rome.
2019 – Winner of the *High-quality Publications Award 2019*, Catholic University, Faculty of Medicine and Surgery, Rome.
2024 – Winner of the *High-quality Publications Award 2024*, Catholic University, Faculty of Medicine and Surgery, Rome.

Scientific Interests

Cardiovascular pharmacology, eicosanoids, hemostasis and platelets.
Platelet activation and oxidative stress in cancer.

Bibliometric Indicators (source: Scopus, updated Sept 6, 2025)

- Number of publications indexed in PubMed: 45
- H-index: 22
- Total Impact Factor: 317.64
- Average Impact Factor: 7.22
- Total number of citations: 1639
- Percentage of publications in journals within the top 25% by CiteScore: 68.2% (15 documents)
- International collaborations (percentage of documents co-authored with researchers from other countries/regions): 63.6%

Scientific Output

Publications indexed in PubMed

1. Rizzi A, Petrucci G, Sacco M, Viti L, Brioschi M, Banfi C, Zaccardi F, Lancellotti S, Simone G, Cristofaro R, Rocca B, Pitocco D. Effects of low-dose rivaroxaban combined with low-dose aspirin versus low-dose aspirin alone on in vivo platelet activation, endothelial function and inflammation in type 2 diabetes patients with stable atherosclerotic disease: the RivAsa randomized, crossover study. Diabetes Res Clin Pract. 2025 Jun;224:112244.

2. Commissati S, Cagigas ML, Masedunskas A, Petrucci G, Tosti V, De Ciutiis I, Rajakumar G, Kirmess KM, Meyer MR, Goldhamer A, Kennedy BK, Hatem D, Rocca B, Fiorito G, Fontana L. Prolonged fasting promotes systemic inflammation and platelet activation in humans: A medically supervised, water-only fasting and refeeding study. Mol Metab. 2025 Jun;96:102152.

3. Petrucci G, Rizzi A, Bellavia S, Dentali F, Frisullo G, Pitocco D, Ranalli P, Rizzo PA, Scala I, Silingardi M, Zagarrì E, Gussoni G, Rocca B. Stability of the thromboxane B2 biomarker of low-dose aspirin pharmacodynamics in human whole blood and in long-term stored serum samples. Res Pract Thromb Haemost. 2024 Nov 12;8(8):102623.

4. Rocca B, Tosetto A, Petrucci G, Rossi E, Betti S, Soldati D, Iurlo A, Cattaneo D, Bucelli C, Dragani A, Di Ianni M, Ranalli P, Palandri F, Vianelli N, Beggiato E, Lanzarone G, Ruggeri M, Carli G, Elli EM, Renso R, Randi ML, Bertozzi I, Loscocco GG, Ricco A, Specchia G, Vannucchi AM, Rodeghiero F, De Stefano V, Patrono C; Aspirin Regimens in EsSential thrombocythemia (ARES) Investigators. Longterm pharmacodynamic and clinical effects of twice- versus once-daily low-dose aspirin in essential thrombocythemia: The ARES trial. Am J Hematol. 2024 Aug;99(8):1462-14742024 .

5. Petrucci G, Hatem D, Langley R, Cleary S, Gentry-Maharaj A, Pitocco D, Rizzi A, Ranalli P, Zaccardi F, Habib A, Rocca B. Effect of very long-term storage and multiple freeze and thaw cycles on 11-dehydro-thromboxane-B2 and 8-iso-prostaglandin F2α, levels in human urine samples by validated enzyme immunoassays. Sci Rep. 2024 Mar 6;14(1):5546.

6. Petrucci G, Buck GA, Rocca B, Parish S, Baigent C, Hatem D, Mafham M, Habib A, Bowman L, Armitage J, Patrono C, on behalf of the ASCEND Study Collaborative Group. Thromboxane biosynthesis and risk of future events in diabetes mellitus: A sub-study of the ASCEND trial. European Heart Journal. 2024 Apr 14;45(15):1355-1367.

7. Joharatnam-Hogan N, Hatem D, Cafferty FH, Petrucci G, Cameron DA, Ring A, Kynaston HG, Gilbert DC, Wilson RH, Hubner RA, Swinson DEB, Cleary S, Robbins A, MacKenzie M, Scott-Brown MWG, Sothi S, Dawson LK, Capaldi LM, Churn M, Cunningham D, Khoo V, Armstrong AC, Ainsworth NL, Horan G, Wheatley DA, Mullen R, Lofts FJ, Walther A, Herbertson RA, Eaton JD, O'Callaghan A, Eichholz A, Kagzi MM, Patterson DM, Narahari K, Bradbury J, Stokes Z, Rizvi AJ, Walker GA, Kunene VL, Srihari N, Gentry-Maharaj A, Meade A, Patrono C, Rocca B, Langley RE. Thromboxane biosynthesis in cancer patients and its inhibition by aspirin: a sub-study of the Add-Aspirin trial. Br J Cancer. 2023 Sep;129(4):706-720.

8. Petrucci G, Giaretta A, Ranalli P, Cavalca V, Dragani A, Porro B, Hatem D, Habib A, Tremoli E, Patrono C, Rocca B. Platelet thromboxane inhibition by low-dose aspirin in polycythemia vera: ex vivo and in vivo measurements and in silico simulation. Clinical and Transaltional Science. 2022;15:2958- 2970

9. Petrucci G, Rizzi A, Hatem D, Tosti G, Rocca B, Pitocco D. Role of Oxidative Stress in the Pathogenesis of Atherothrombotic Diseases. Antioxidants (Basel). 2022;11(7):1408

10. Giaretta A, Petrucci G, Rocca B, Toffolo GM. Physiologically based modelling of the antiplatelet effect of aspirin: A tool to characterize drug responsiveness and inform precision dosing. PLoS One. 2022;17(8):e0268905.

11. Tosetto A, Rocca B, Petrucci G, Betti S, Soldati D, Rossi E, Timillero A, Cavalca V, Porro B, Iurlo A, Cattaneo D, Bucelli C, Dragani A, Di Ianni M, Ranalli P, Palandri F, Vianelli N, Beggiato E, Lanzarone G, Ruggeri M, Carli G, Elli EM, Priolo S, Randi ML, Bertozzi I, Loscocco GG, Ricco A, Specchia G, Vannucchi AM, Rodeghiero F, De Stefano V, Patrono C; Aspirin Regimens in EsSential thrombocythemia (ARES) Investigators. Association of Platelet Thromboxane Inhibition by Low-Dose Aspirin With Platelet Count and Cytoreductive Therapy in Essential Thrombocythemia. Clin Pharmacol Ther . 2022;111(4):939-949.

12. Drew DA, Schuck MM, Magicheva-Gupta MV, Stewart KO, Gilpin KK, Miller P, Parziale MP, Pond EN, Takacsi-Nagy O, Zerjav DC, Chin SM, Mackinnon Krems J, Meixell D, Joshi AD, Ma W, Colizzo FP, Carolan PJ, Nishioka NS, Staller K, Richter JM, Khalili H, Gala MK, Garber JJ, Chung DC, Yarze

JC, Zukerberg L, Petrucci G, Rocca B, Patrono C, Milne GL,Wang M, Chan AT. Effect of Low-dose and Standard-dose Aspirin on PGE2 Biosynthesis Among Individuals with Colorectal Adenomas: a Randomized Clinical Trial. Cancer Prev Res (Phila). 2020 Oct;13(10):877-888.

13. Rocca B, Tosetto A, Betti S, Soldati D, Petrucci G, Rossi E, Timillero A, Cavalca V, Porro B, Iurlo A, Cattaneo D, Bucelli C, Dragani A, Di Ianni M, Ranalli P, Palandri F, Vianelli N, Beggiato E, Lanzarone G, Ruggeri M, Carli G, Elli EM, Carpenedo M, Randi ML, Bertozzi I, Paoli C, Specchia G, Ricco A, Vannucchi AM, Rodeghiero F, Patrono C, De Stefano V. A randomized double-blind trial of 3 aspirin regimens to optimize antiplatelet therapy in essential thrombocythemia. Blood. 2020 Jul 9;136(2):171-182.

14. Sacco M, Ranalli P, Lancellotti S, Petrucci G, Dragani A, Rocca B, De Cristofaro R. Increased von Willebrand factor levels in polycythemia vera and phenotypic differences with essential thrombocythemia. Res Pract Thromb Haemost. 2020 Mar; 4(3): 413–421.

15. Habib A, Petrucci G, Rocca B. Pathophysiology of Thrombosis in Peripheral Artery Disease. Curr Vasc Pharmacol. 2020. doi: 10.2174/1570161117666190206234046.

16. Santilli F, Zaccardi F, Liani R, Petrucci G, Simeone P, Pitocco D, Tripaldi R, Rizzi A, Formoso G, Pontecorvi A, Angelucci E, Pagliaccia F, Golato M, De Leva F, Vitacolonna E, Rocca B, Consoli A, Patrono C. In vivo thromboxane-dependent platelet activation is persistently enhanced in subjects with impaired glucose tolerance. Diabetes Metab Res Rev. 2020 Feb;36(2):e3232.

17. Pozzoli G, Petrucci G, Navarra P, Marei HE, Cenciarelli C. Aspirin inhibits proliferation and promotes differentiation of neuroblastoma cells via p21Waf1 protein up-regulation and Rb1 pathway modulation. J Cell Mol Med. 2019 Oct;23(10):7078-7087.

18. Petrucci G, Zaccardi F, Giaretta A, Cavalca V, Capristo E, Cardillo C, Pitocco D, Porro B, Schinzari F, Toffolo G, Tremoli E, Rocca B Obesity is associated with impaired responsiveness to once-daily lowdose aspirin and in vivo platelet activation. J Thromb Haemost. 2019 Jun;17(6):885-895.

19. Parker WAE, Orme RC, Hanson J, Stokes MH, Shaw PA, Sumaya W, Petrucci G, Porro B, Judge HM, Ajjan RA, Rocca B, Storey RF. Very-Low-Dose Twice-Daily Aspirin Maintains Platelet Inhibition and Improves Hemostasis during Dual-Antiplatelet Therapy for Acute Coronary Syndrome. Platelets. 2019;30(2):148-157

20. Pozzoli G, Marei HE, Althani A, Boninsegna A, Casalbore P, Marlier LNJL, Lanzilli G, Zonfrillo M, Petrucci G, Rocca B, Navarra P, Sgambato A, Cenciarelli C. Aspirin inhibits cancer stem cells properties and growth of glioblastoma multiforme through Rb1 pathway modulation. J Cell Physiol. 2019 Jan 30. doi: 10.1002/jcp.28194.

21. De Stefano V, Rocca B, Tosetto A, Soldati D, Petrucci G, Beggiato E, Bertozzi I, Betti S, Carli G, Carpenedo M, Cattaneo D, Cavalca V, Dragani A, Elli E, Finazzi G, Iurlo A, Lanzarone G, Lissandrini L, Palandri F, Paoli C, Rambaldi A, Ranalli P, Randi ML, Ricco A, Rossi E, Ruggeri M, Specchia G, Timillero A, Turnu L, Vianelli N, Vannucchi AM, Rodeghiero F, Patrono C.The Aspirin Regimens in Essential Thrombocythemia (ARES) phase II randomized trial design: Implementation of the serum thromboxane B2 assay as an evaluation tool of different aspirin dosing regimens in the clinical setting. Blood Cancer J. 2018 ;8(6):49

22. Cavalca V, Rocca B, Veglia F, Petrucci G, Porro B, Myasoedova V, De Cristofaro R, Turnu L, Bonomi A, Songia P, Cavallotti L, Zanobini M, Camera M, Alamanni F, Parolari A, Patrono C, Tremoli E. Onpump Cardiac Surgery Enhances Platelet Renewal and Impairs Aspirin Pharmacodynamics: Effects of Improved Dosing Regimens. Clin Pharmacol Ther. 2017;102(5):849-858.

23. Petrucci G, Rizzi A, Cavalca V, Habib A, Pitocco D, Veglia F, Ranalli P, Zaccardi F, Pagliaccia F, Tremoli E, Patrono C, Rocca B. Patient-independent variables affecting the assessment of aspirin responsiveness by serum thromboxane measurement. Thromb Haemost. 2016;116(5):891-896.

24. Russo NW, Petrucci G, Rocca B. Aspirin, stroke and drug-drug interactions. Vascul Pharmacol. 2016;87:14-22

25. Zaccardi F, Rizzi A, Petrucci G, Ciaffardini F, Tanese L, Pagliaccia F, Cavalca V, Ciminello A, Habib A, Squellerio I, Rizzo P, Tremoli E, Rocca B, Pitocco D, Patrono C. In Vivo Platelet Activation and Aspirin Responsiveness in Type 1 Diabetes. Diabetes. 2016;65(2):503-9.

26. Barbieri S., Petrucci G., Amadio P, Tarantino E, Machlus K.R., Ranelletti F.O, Gianellini S, Rocca. Function in Cyclooxygenase-2-Deficient Mice. Thromb Haemost. 2015 Nov 25;114(6):1218-29.

27. Lancellotti S, Dragani A, Ranalli P, Petrucci G, Basso M, Tartaglione R, Rocca B, Cristofaro R. Qualitative and quantitative modifications of Von Willebrand factor in patients with essential thrombocythemia and controlled platelet count. J. Thromb Haemost. 2015 Jul;13(7):1226-37

28. Pagliaccia F, Habib A, Pitocco A, Petrucci G, Zaccardi F, Di Stasio E, Rocca B. Stability of Urinary Thromboxane A2 Metabolites and Adaptation of the Extraction Method to Small Urine Volume. Clin Lab. 2014;60(1):105-11.

29. Rocca B, Petrucci G. Variability in the responsiveness to low-dose aspirin: pharmacological and disease-related mechanisms. Thrombosis 2012;2012:376721

30. Rocca B, Santilli F, Pitocco D, Mucci L, Petrucci G, Vitacolonna E, Lattanzio S, Mattoscio D, Zaccardi F, Liani R, Vazzana N, Del Ponte A, Ferrante E, Martini F, Cardillo C, Morosetti R, Mirabella M, Ghirlanda G, Davì G, Patrono C. The recovery of platelet cyclooxygenase activity explains interindividual variability in responsiveness to low-dose aspirin in patients with and without diabetes. J. Thromb Haemost. 2012;10(7):1220-30.

31. Pascale S, Petrucci G, Dragani A, Habib A, Zaccardi F, Pagliaccia F, Pocaterra D, Ragazzoni E, Rolandi G, Rocca B, Patrono C. Aspirin-insensitive thromboxane biosynthesis in essential thrombocythemia is explained by accelerated renewal of the drug target. Blood 2012;119(15):3595-603

32. Petrucci G, De Cristofaro R, Rutella S, Ranelletti FO, Pocaterra D, Lancellotti S, Maggiano N, Habib A, Rocca B and Patrono C. Prostaglandin E2 differentially modulates human platelet Responsiveness through the EP2 and EP3 receptors. Journal of Pharmacology and Experimental Therapeutics 2011;336:391-402

33. Dragani A, Pascale S, Recchiuti A, Mattoscio D, Lattanzio S, Petrucci G, Mucci L, Ferrante E, Habib A, Ranelletti FO, Davì G, Patrono C and Rocca B. The contribution of cyclooxygenase-1 and

cyclooxygenase-2 to aspirin-insensitive thromboxane biosynthesis in essential thrombocythemia: implications for antiplatelet therapy. Blood 2010;115(5):1054-1061

34. Mattoscio D, Evangelista V, De Cristofaro R, Recchiuti A, Pandolfi A, Di Silvestre S, Manarini S, Martelli N, Rocca B, Petrucci G, Angelini DF, Battistini L, Robuffo I, Pensabene T, Pieroni L, Furnari ML, Pardo F, Quattrucci S, Lancellotti S, Davì G and Romano M. Cystic fibrosis transmembrane conductance regulator (CFTR) expression in Human platelets: impact on mediators and mechanisms of the inflammatory response. FASEB Journal 2010;24(10):3970-3980

35. Rocca B, Petrucci G. Personalized Medicine, Pharmacogenetics, and Clopidogrel: Unraveling Variability of Response. Molecular Interventions 2010;10(1):12-19

36. Casalbore P, Budoni M, Ricci-Vitiani L, Cenciarelli C, Petrucci G, Milazzo L, Montano N, Tabolacci E, Maira G, Larocca LM, Pallini R. Tumorigenic potential of olfactory bulb-derived human adult neural stem cells associates whit activation of TERT and NOTCH1. PLoS ONE 2009;4(2):e4434

37. Falchetti ML, Mongiardi MP, Fiorenzo P, Petrucci G, Pierconti F, D'Agnano I, D'Alessandris G, Alessandri G, Gelati M, Ricci-Vitiani L, Maira G, Larocca LM, Levi A, Pallini R. Inhibition of telomerase in the endothelial cells disrupts tumor angiogenesis in glioblastoma xenografts. International Journal of Cancer 2008;122(6):1236-1242

38. Martini M, Hohaus S, Petrucci G, Cenci T, Pierconti F, Massini G, Teofili L, Leone G, Larocca LM. Phosphorylated STAT5 represents a new possible prognostic marker in Hodgkin lymphoma. American Journal of Clinical Pathology 2008;129(3):472-477

39. Ricci-Vitiani L, Pallini R, Larocca LM, Lombardi DG, Signore M, Pierconti F, Petrucci G, Montano N, Maira G and De Maria R. Mesenchymal differentiation of glioblastoma stem cells. Cell Death and Differentiation 2008;15(9):1491-1498

40. Teofili L, Martini M, Cenci T, Petrucci G, Torti L, Storti S, Guidi F, Leone G, Larocca LM. Different STAT-3 and STAT-5 phosphorylation discriminates among Ph-negative chronic myeloproliferative diseases and is independent of the V617F JAK-2 mutation. Blood 2007;110(1):354-359

41. Testa M, Rocca B, Spath L, Ranelletti FO, Petrucci G, Ciabattoni G, Naro F, Schiaffino S, Volpe M, Reggiani C. Expression and activity of cyclooxygenase isoforms in skeletal muscles and myocardium of humans and rodents. Journal of Applied Physiology 2007;103(4):1412-1418

42. Ricci-Vitiani L, Casalbore P, Petrucci G, Lauretti L, Montano N, Larocca LM, Falchetti ML, Lombardi DG, Gerevini VD, Cenciarelli C, D'Alessandris QG, Fernandez E, De Maria R, Maira G, Peschle C, Parati E, Pallini R. Influence of local environment on the differentiation of neural stem cells engrafted onto the injured spinal cord. Neurogical Research 2006;28(5):488-492

43. Falchetti ML, Fiorenzo P, Mongiardi MP, Petrucci G, Montano N, Maira G, Pierconti F, Larocca LM, Levi A, Pallini R. Telomerase inhibition impairs tumor growth in glioblastoma xenografts. Neurogical Research 2006;28(5):532-537

44. Ricci-Vitiani L, Pierconti F, Falchetti ML, Petrucci G, Maira G, De Maria R, Larocca LM, Pallini R. Establishing tumor cell lines from aggressive telomerase-positive chordomas of the skull base. Journal of Neurosurgery 2006;105(3):482-484

45. Rocca B, Maggiano N, Habib A, Petrucci G, Gessi M, Fattorossi A, Lauriola L, Landolfi R, Ranelletti FO. Distinct expression of cyclooxygenase-1 and -2 in the human thymus. European Journal of Immunology 2002;32(5):1482-1492

Book Chapters

Trattato di Farmacologia edizione IV- Annunziato, Di Rienzo- Edizioni Idelson Gnocchi 1908 – Capitolo 45, Farmaci Antipiastrinici, Giovanna Petrucci-Bianca Rocca. 2024, in press

Platelets in Thrombotic and Non Thrombotic Disorders. Editors P. Gresele, J.A. Lopez, D. J. Angiolillo, C. P. Page.- Capitolo 18, Platelet Thromboxane A_2 and Prostaglandin receptors, Petrucci G, Farhoud M, Habib A. 2025, in press.

Full Papers in National Journals

Rocca B, Petrucci G. Resistenza agli antiaggreganti: fantasia o realtà? Trends in Circulation. 2010;1:22-23