

# CV PAOLA PATRIGNANI

**Researcher unique identifier (ORCID):** 0000-0003-1419-2691

## Personal Information

*Name and Surname:* Paola Patrignani

*Email:* [ppatrignani@unich.it](mailto:ppatrignani@unich.it)

*Work address:* Department of Neuroscience, Imaging and Clinical Sciences, Section of Cardiovascular and Pharmacological Sciences and CAST (Center for Advanced Studies and Technology), University "G. d'Annunzio" Chieti, Via dei Vestini, 31, 66100, Chieti, Italy. Phone: 0039 0871541473

## Education and Qualifications

**1990-1997:** Post-Doc, Department of Medicine and Aging, Section of Pharmacology, School of Medicine, "G. d'Annunzio" University of Chieti.

**1989-1990:** Postdoctoral Research Fellow at the Department of Pharmacology, Catholic University, School of Medicine, Rome, Italy.

**1987-1988:** Postdoctoral Research Fellow, Le Centre Hospitalier de l'Université Laval, Quebec, Canada and Merck Frosst Research, Laboratories, Kirkland, Quebec, Canada.

**1980-1986.** Training in Pharmacology at Catholic University in the Lab directed by Carlo Patrono.

**July 1979:** Graduation with full marks and honour in Biological Science, University of Rome "La Sapienza", Rome, Italy.

## Employment and Academic Ranks

**2020-present:** Member of the Board of the "Center of Advanced Studies and Technology" (CAST), "G. d'Annunzio" University, Chieti, Italy.

**2017-present:** Member of the Board of the Department of Neuroscience, Imaging and Clinical Sciences, "G. d'Annunzio" University, Chieti, Italy.

**2015-2019:** Member of the Board of Directors of the Center for Aging Science and Translational Medicine (CESI-MeT), University "G. d'Annunzio " of Chieti, Italy.

**2015-present:** Component of the Technical Unit of CeSI-MeT, University "G. d'Annunzio " of Chieti, Italy.

**2013-present:** Member of the Research Committee of the Department of Neuroscience, Imaging and Clinical Sciences, "G. d'Annunzio" University, Chieti, Italy.

**2013-present:** Member of Faculty Board of PhD Course in "Medical Biotechnologies", "G. d'Annunzio" University, Chieti, Italy.

**2012-present:** Full Professor of Pharmacology, Department of Neuroscience, Imaging and Clinical Sciences, "G. d'Annunzio" University, Chieti, Italy.

**2012-2013:** Member of Faculty Board of PhD Course in “Neuroimaging funzionale: strumenti, metodi e modelli per lo studio delle relazioni mente-cervello-comportamento” "G. d'Annunzio" University, Chieti, Italy.

**2002-2011:** Full Professor of Pharmacology, Department of Medicine and Center of Excellence on Aging, "G. d'Annunzio" University, School of Medicine, Chieti, Italy.

**2008-2011:** Member of Faculty Board of the PhD Course in “Scienze Medico-Chirurgiche, Cliniche e Sperimentali”, “G. d'Annunzio” University, Chieti, Italy.

**2004-2009:** Member of the Ethics Committee of “G. d'Annunzio” University, Chieti, Italy.

**2000-2007:** Member of Faculty Board of the PhD Course in “Science of Aging” at the University "G. d'Annunzio" of Chieti, Italy.

**1998-2002:** Associate Professor of Pharmacology, Department of Medicine and Aging, "G. d'Annunzio" University, School of Medicine, Chieti, Italy.

## **Honors and Awards**

- 1981, Upjohn Award
- 1991, "Henry Christian" Award
- 2005, EICOSAMED - a proposal of Prof Patrignani and Prof Scilimati for a start-up - was selected for “Discovery” project, of the “Bioindustry Park del Canavese” (Colleretto Giacosa, Turin, Italy);  
[http://discovery.bipcaweb.it/documenti/Press%20release\\_itajune05.pdf](http://discovery.bipcaweb.it/documenti/Press%20release_itajune05.pdf)
- 2013, at present. Considered eligible by the Ministry of Education to be part of the list of researchers with a high scientific profile at the international level that can be drawn to the national scientific qualification on the field 05/G1 FARMACOLOGIA, FARMACOLOGIA CLINICA E FARMACOGNOSIA
- 2016, Selected as expert of the European Commission for assignments of EU research programs.
- 2013, and 2017. Results of VQR of her publications were evaluated as “eccellent”.
- 2018, at present. Top Italian Women Scientists.
- 2018, Senior Science Award 2018 by International Aspirin Foundation.
- 2019, present in the list of International Top Scientists [PLoS Biol. 2019 Aug 12;17(8):e3000384]

## **Memberships in Scientific Societies**

Italian Society of Pharmacology

## Advisory Boards

- Member of Italian Consensus on Eular 2003 recommendations for the treatment of knee osteoarthritis (Reumatismo. 2004 Jul-Sep;56:190-201).
- Member of FDA Arthritis Advisory Committee Meeting, April 12, 2007
- Co-Organizer of the Symposium “PHARMACOEPIDEMOLOGY FOR MONITORING OF DRUG SAFETY AND RATIONAL DRUG USE: A GOOD CASE FOR TRANSLATIONAL MEDICINE” as part of the XXXIV National Congress of the Italian Society of Pharmacology (SIF). October 17, 2009, Rimini, Italy.
- Organizer of the First International Summer School for PhD students on "Lipid Signaling", Chieti, Italy, September 27-28, 2010.
- Organizer of the Second International Summer School for PhD students on "Lipid Signaling", Chieti, Italy, September 30, 2012 - October 2, 2012.
- She contributed to the drafting of the document made by the "Coxibs and traditional NSAIDs Trialists' (CNT) Collaboration" on the cardiovascular and upper gastrointestinal effects of non-steroidal anti-inflammatory drugs gastrointestinal (Lancet 2013; 382: 769-79).
- Organizer of the First European School on “Bioactive Lipids”, Pescara, Italy, November 23-27, 2014.
- Organizer of the Biotech EU Biotech Week Meeting, September 26, 2016, Chieti, Italy.
- Co-Organizer of the Symposium “Acetylsalicylic acid, 120 years later” as part of the XXXVIII National Congress of the Italian Society of Pharmacology (SIF). October 25, 2017; Rimini, Italy.
- Member of the Scientific advisory board for the session “NOVEL INSIGHTS IN CANCER AND EICOSANOIDS” at the International Meeting “Winter Eicosanoid Conference”, Baltimore, USA, August 16-19, 2020.
- Member of the Scientific Program Theme Committee for the session “Role of Hemostatic System in Cancer, Inflammation and Immunity” at the International Meeting “ISTH2020 Congress”, July 11-15, 2020, Milan, Italy

## Scopus Parameters with date (H-index, citations)

**H-index:** 54 (25/03/2020)

**Citations:** 9665 (25/03/2020)

## Google Scholar

**H-index:** 59

**Citations:** 13025

## Scientific Achievements

The primary focus of my work is on eicosanoids role in cardiovascular and cancer biology. The distinguishing feature of my research group [System Pharmacology and Translation Therapeutics (SPaTT) Laboratory] is to pursue interdisciplinary translational science with a focus on therapeutics. Thus, we work in different model systems, including mammalian cells and mice, but also humans. My laboratory aims to develop quantitative approaches that can be projected from in vitro

experiments in the model systems to guide elucidation of drug action in humans. Also, my laboratory has long utilized mass spectrometry, initially to target the arachidonate derived lipidome, but more latterly also the proteome.

I contributed to the field of cancer prevention and treatment by my discoveries of novel mechanisms involved in the early phases of colorectal cancer (CRC) development that can be modulated by a pharmacological approach. In particular, I'm pursuing new avenues for cancer prevention by using drugs that affect platelet responses and those interfering with the synthesis and action of the mediators of inflammation. I have hypothesized that unconstrained platelet activation in the context of the wound healing process translates into the development of a chronic inflammatory response that fosters cancer development.

I have a long expertise in the development of specific biomarkers to predict the efficacy and toxicity of nonsteroidal anti-inflammatory drugs (NSAIDs) which allow to develop a personalized therapy with these agents in inflammation-associated clinical conditions, including CRC.

Importantly, I developed a proteomic assay as a direct biomarker of aspirin action, which has allowed to elucidate the mechanism by which low-dose aspirin interferes with early events of CRC. This assay is of fundamental help to develop a personalized strategy for aspirin treatment in cardiovascular disease and cancer.

I discovered that platelets induce phenotypic changes of cancer cells leading to mesenchymal features associated with enhanced migratory capacity and prometastatic actions. Thus, low-dose aspirin exerts an antimetastatic action by averting the stem cell mimicry of cancer cells associated with enhanced proaggregatory effects induced by platelet-tumor cell interactions.

Recently my Laboratory generated a mouse with specific deletion of cyclooxygenase-1 in megakaryocytes/platelets, which recapitulates the human pharmacodynamics of low-dose aspirin, thus demonstrating the central role of platelet-derived thromboxane A<sub>2</sub> in the development of intestinal inflammation in response to tissue damage and the possibility to mitigate it by the inhibition of platelet function. These results clearly show that platelets are inflammatory cells contributing to the development of chronic inflammation which is an hallmark of cancer, and that the inhibition of platelet function is sufficient to promote intestinal wound healing.

I, recently, developed a proteomic assay for platelet-derived microparticles(MP)s to discriminate obese individuals with prothrombotic and protumorigenic phenotypes.

## **Funded Projects**

(list only peer-reviewed competitive funding, not other types of funding)

### *Peer-reviewed competitive funding (last 15 years)*

- Center of Excellence on Aging (Coordinator C. Patrino) (MIUR)
- AIRC (2005-2007): Determinants of colorectal adenoma recurrence in patients with FAP in response to celecoxib (Investigator Grant).
- MIUR (PRIN 2006-2009): The emerging role of platelet transcriptome and signalosome into the variability of the response to aspirin in cardiovascular disease (Coordinator).
- Responsible of a workpackage in the European EICOSANOX (FP6) (2004-2009)

- NIH grant 2008-2010 (USA): Oxidative damage, disability and mortality in elders; Grant Number: 1 R01 AG026556-0.
- MIUR (PRIN 2010-2011): A translational medicine research programme exploring early events in cancer development: the role of platelets in intestinal tumorigenesis (Coordinator).
- AIRC (2011-2014): “Platelets in colorectal cancer development” (PI: Paola Patrignani) Investigator Grant.
- AIRC 2017 Id.20365: Extracellular vesicles in colorectal cancer: diagnostic and therapeutic implications (PI: Paola Patrignani) Investigator Grant.
- Cancer Research UK Grant Award: Understanding the mechanisms and benefit risk of aspirin chemoprevention of cancer through population research - Aspirin for Cancer Prevention Collaboration (ASCAP) (PI of Research Unit: Paola Patrignani).

## **Other Sources of Funding**

### *Other funding (last 15 years)*

- Daiichi Sankyo, 2007-2008: Assessment of the effects of a novel drug (DZ-697b) on the antiplatelet activity of aspirin in healthy subjects.
- ACRAF SpA, 2009: Role of cyclooxygenases and PGE2 synthase in experimental inflammatory bowel disease (IBD).
- ACRAF SpA, 2010: Pharmacological characterization of AF3485 towards COX-isozyme and 5-lipoxygenase activities in vitro.
- NicOx, 2009: Evaluation of antiplatelet and anti-inflammatory effects of Nitrooxy-acyl Derivatives of Salicylic Acid.
- NicOx, 2010: Role of COX inhibition and NO donation on in vitro platelet aggregation by NCX429 (CINOD)
- Rottapharm SpA, 2010-2011: Effects of novel diarylpyrrole derivative on cyclooxygenase - 1 and cyclooxygenase-2 activities in human whole blood assays in vitro.
- Aragon Institute Health Sciences (IACS), Zaragoza, Spain (2013): “Development of biomarkers of prostanoid inhibition using metabolomics and proteomics strategies” (Research Agreement).
- Aragon Institute Health Sciences (IACS), Zaragoza, Spain (2014): “Aspirin and colorectal cancer prevention: exploring the platelet hypothesis of its mechanism of action” (Research Agreement).
- IROKO PHARMACEUTICALS, LLC (Philadelphia, USA), 2015: A randomized, repeat-dose, crossover study to characterize COX-1 and COX-2 inhibition in healthy subjects administered meloxicam solumatrix® capsules 5 mg and 10 mg and meloxicam 15 mg tablets.
- Aragon Institute Health Sciences (IACS), Zaragoza, Spain (2017-ongoing): “Acetylsalicylic acid and platelets in colon cancer” (Research Agreement).

## **Patents**

1. Italian patent (n. MI2004A000019) entitled: “DERIVATI ISOSSAZOLICI E LORO IMPIEGO COME INIBITORI DELLA CICLOOSSIGENASI” deposited on 12/01/2004. Inventors: Scilimati A, Vitale P, Di Nunno L, Patrignani P, Tacconelli S.

2. Italian patent (n.MI2005A001320) entitled: “DIARILISOSSAZOLI FUNZIONALIZZATI INIBITORI DELLA CICLOOSSIGENASI” deposited on 12/07/2005. Inventors: Scilimati A, Vitale P, Di Nunno L, Patrignani P, Capone ML, Tacconelli S.
3. European patent n. 05702217.0 entitled: “ISOXAZOLE DERIVATIVES AND THEIR USE AS CYCLOOXYGENASE INHIBITORS” deposited on 24/3/2007. Inventors: Scilimati A, Vitale P, Di Nunno L, Patrignani P, Tacconelli S, Stuppia L, Porreca E.
4. Divisional European patent entitled: “ISOXAZOLE DERIVATIVES AND THEIR USE AS CYCLOOXYGENASE INHIBITORS”, n. 10005150.7 deposited on 12/01/2005. Inventors: Scilimati A, Vitale P, Di Nunno L, Patrignani P, Tacconelli S, Stuppia L, Porreca E.
5. Patent application in USA n. 12/007,571 “Functionalized diarylisoxazoles inhibitors of cyclooxygenase” (published on 02/08/2011). Inventors: Scilimati A, Di Nunno L, Vitale P, Patrignani P, Tacconelli S, Capone ML.

### Original Peer-Reviewed Publications

1. Patrono C, **Patrignani P**. Pharmacologic modulation of arachidonic acid metabolism in man. A minireview with emphasis on radioimmunological methods used to quantitate drug effects. *Int J Immunopharmacol*. 1982; 4(2): 127-33.
2. Patrono C, Pugliese F, Ciabattoni G, **Patrignani P**, Maseri A, Chierchia S, Peskar BA, Cinotti GA, Simonetti BM, Pierucci A. Evidence for a direct stimulatory effect of prostacyclin on renin release in man. *J Clin Invest*. 1982; 69(1): 231-9.
3. **Patrignani P**, Filabozzi P, Patrono C. Selective cumulative inhibition of platelet thromboxane production by low-dose aspirin in healthy subjects. *J Clin Invest*. 1982; 69(6): 1366-72.
4. **Patrignani P**, Filabozzi P, Patrono C. Low-dose aspirin is a selective inhibitor of platelet cyclooxygenase activity in healthy subjects. *Adv Prostaglandin Thromboxane Leukot Res*. 1983; 11: 259-64.
5. Patrono C, Ciabattoni G, **Patrignani P**, Filabozzi P, Pinca E, Satta MA, van Dorne D, Cinotti GA, Pugliese F, Pierucci A, Simonetti BM. Evidence for a renal origin of urinary thromboxane B2 in health and disease. *Adv Prostaglandin Thromboxane Leukot Res*. 1983; 11: 493-8.
6. Remuzzi G, Benigni A, Dodesini P, Schieppati A, Livio M, De Gaetano G, Day SS, Smith WL, Pinca E, **Patrignani P**, Patrono C. Reduced platelet thromboxane formation in uremia. Evidence for a functional cyclooxygenase defect. *J Clin Invest*. 1983; 1(3): 762-8.
7. Edlund A, Fredholm BB, **Patrignani P**, Patrono C, Wennmalm A, Wennmalm M. Release of two vasodilators, adenosine and prostacyclin, from isolated rabbit hearts during controlled hypoxia. *J Physiol*. 1983; 340: 487-501.
8. **Patrignani P**, Filabozzi P, Catella F, Pugliese F, Patrono C. Differential effects of dazoxiben, a selective thromboxane-synthase inhibitor, on platelet and renal prostaglandin-endoperoxide metabolism. *J Pharmacol Exp Ther*. 1984; 228(2): 472-7.
9. Patrono C, Ciabattoni G, Filabozzi P, Catella F, Forni L, Segni M, **Patrignani P**, Pugliese F, Simonetti BM, Pierucci A. Drugs, prostaglandins, and renal function. *Adv Prostaglandin Thromboxane Leukot Res*. 1985; 13: 131-9.
10. De Caterina R, Giannessi D, Bernini W, Boem A, **Patrignani P**, Filabozzi P, Patrono C. Aspirin after acute myocardial infarction: a systematic approach to compare the hemostatic effects of three different doses. *Adv Prostaglandin Thromboxane Leukot Res*. 1985; 13: 267-70.
11. Lichtenthal PR, Rossi EC, Louis G, Rehnberg KA, Wade LD, Michaelis LL, Fung HL, **Patrignani P**. Dose-related prolongation of the bleeding time by intravenous nitroglycerin. *Anesth Analg*. 1985; 64(1): 30-3.
12. Trimarco B, De Simone A, Cuocolo A, Ricciardelli B, Volpe M, **Patrignani P**, Saccà L, Condorelli M. Role of prostaglandins in the renal handling of a salt load in essential hypertension. *Am J Cardiol*. 1985; 55(1): 116-21.
13. Alessandrini P, Avogaro P, Bittolo Bon G, **Patrignani P**, Patrono C. Physiologic variables affecting thromboxane B2 production in human whole blood. *Thromb Res*. 1985; 37(1): 1-8.
14. De Caterina R, Giannessi D, Bernini W, Gazzetti P, Michelassi C, L'Abbate A, Donato L, **Patrignani P**, Filabozzi P, Patrono C. Selective inhibition of thromboxane-related platelet function by low-dose aspirin in patients after myocardial infarction. *Am J Cardiol*. 1985; 55(5): 589-90.

15. De Caterina R, Giannessi D, Bernini W, Gazzetti P, Michelassi C, L'Abbate A, Donato L, **Patrignani P**, Filabozzi P, Patrono C. Low-dose aspirin in patients recovering from myocardial infarction. Evidence for a selective inhibition of thromboxane-related platelet function. *Eur Heart J*. 1985; 6(5): 409-17.
16. De Caterina R, Giannessi D, Boem A, Bernini W, Battaglia D, Michelassi C, Dell'Amico F, L'Abbate A, **Patrignani P**, Patrono C. Equal antiplatelet effects of aspirin 50 or 324 mg/day in patients after acute myocardial infarction. *Thromb Haemost*. 1985; 54(2): 528-32.
17. Patrono C, Ciabattoni G, **Patrignani P**, Pugliese F, Filabozzi P, Catella F, Davì G, Forni L. Clinical pharmacology of platelet cyclooxygenase inhibition. *Circulation*. 1985; 72(6): 1177-84.
18. Laffi G, La Villa G, Pinzani M, Ciabattoni G, **Patrignani P**, Mannelli M, Cominelli F, Gentilini P. Altered renal and platelet arachidonic acid metabolism in cirrhosis. *Gastroenterology*. 1986; 90(2): 274-82.
19. Trimarco B, Cuocolo A, Ricciardelli B, **Patrignani P**, Volpe M, de Luca N, Condorelli M. Effects of prostaglandin synthesis inhibition on sympathetic and parasympathetic-mediated coronary hemodynamic responses. *J Pharmacol Exp Ther*. 1986; 237(2): 589-99.
20. **Patrignani P**, Canete-Soler R. Biosynthesis, characterization and inhibition of leukotriene B<sub>4</sub> in human whole blood. *Prostaglandins*. 1987; 33(4): 539-51.
21. Ciabattoni G, Boss AH, **Patrignani P**, Catella F, Simonetti BM, Pierucci A, Pugliese F, Filabozzi P, Patrono C. Effects of sulindac on renal and extrarenal eicosanoid synthesis. *Clin Pharmacol Ther*. 1987; 41(4): 380-3.
22. **Patrignani P**, Valitutti S, Aiello F, Musiani P. Platelet-activating factor (PAF) receptor antagonists inhibit mitogen-induced human peripheral blood T-cell proliferation. *Biochem Biophys Res Commun*. 1987; 148(2): 802-10.
23. Pierucci A, Simonetti BM, Pecci G, Mavrikakis G, Feriozzi S, Cinotti GA, **Patrignani P**, Ciabattoni G, Patrono C. Improvement of renal function with selective thromboxane antagonism in lupus nephritis. *N Engl J Med*. 1989; 320(7): 421-5.
24. **Patrignani P**, Morton H, Cirino M, Lord A, Charette L, Gillard J, Rokach J, Patrono C. Fractional conversion of thromboxane A<sub>2</sub> and B<sub>2</sub> to urinary 2,3-dinor-thromboxane B<sub>2</sub> and 11-dehydrothromboxane B<sub>2</sub> in the cynomolgus monkey. *Biochim Biophys Acta*. 1989; 992(1): 71-7.
25. Valitutti S, Castellino F, Aiello FB, Ricci R, **Patrignani P**, Musiani P. The role of arachidonic acid metabolite PGE<sub>2</sub> on T cell proliferative response. *J Clin Lab Immunol*. 1989; 29(4): 167-73.
26. Ciabattoni G, **Patrignani P**, Patrono C. Radioimmunoassay of 11-dehydrothromboxane B<sub>2</sub>. *Methods Enzymol*. 1990; 187: 34-42.
27. **Patrignani P**, Volpi D, Ferrario R, Romanzini L, Di Somma M, Patrono C. Effects of racemic, S- and R-indobufen on cyclooxygenase and lipoxygenase activities in human whole blood. *Eur J Pharmacol*. 1990; 191(1): 83-8.
28. **Patrignani P**, Del Maschio A, Bazzoni G, Daffonchio L, Hernandez A, Modica R, Montesanti L, Volpi D, Patrono C, Dejana E. Inactivation of endothelin by polymorphonuclear leukocyte-derived lytic enzymes. *Blood*. 1991; 78(10): 2715-20.
29. Naccache PH, Leblanc Y, Rokach J, **Patrignani P**, Fruteau de Laclos B, Borgeat P. Calcium mobilization and right-angle light scatter responses to 12-oxo-derivatives of arachidonic acid in neutrophils: evidence for the involvement of the leukotriene B<sub>4</sub> receptor. *Biochim Biophys Acta*. 1991; 1133(1): 102-6.
30. **Patrignani P**, Daffonchio L, Hernandez A, De Caterina R, Pelosi G, Patrono C. Release of contracting autacoids by aortae of normal and atherosclerotic rabbits. *J Cardiovasc Pharmacol*. 1992; 20 Suppl 12: S208-10.
31. Cagossi M, Salgarello M, **Patrignani P**, Salgarello G. Effects of various prostaglandin synthesis inhibitors on the tone of the lower oesophageal sphincter in man. *Eur J Clin Pharmacol*. 1992; 43(3): 303-5.
32. Patrono C, Ciabattoni G, **Patrignani P**. Human eicosanoid biosynthesis and metabolism. *Mt Sinai J Med*. 1992; 59(2): 157-62.
33. Macclouf J, Antoine C, De Caterina R, Sicari R, Murphy RC, **Patrignani P**, Loizzo S, Patrono C. Entry rate and metabolism of leukotriene C<sub>4</sub> into vascular compartment in healthy subjects. *Am J Physiol*. 1992; 263(1 Pt 2): H244-9.
34. Landolfi R, Ciabattoni G, **Patrignani P**, Castellana MA, Pogliani E, Bizzi B, Patrono C. Increased thromboxane biosynthesis in patients with polycythemia vera: evidence for aspirin-suppressible platelet activation in vivo. *Blood*. 1992; 80(8): 1965-71.
35. Patrono C, **Patrignani P**, Davì G. Thromboxane biosynthesis and metabolism in cardiovascular and renal disease. *J Lipid Mediat*. 1993; 6(1-3): 411-5.
36. **Patrignani P**, Modica R, Bertolero F, Patrono C. Differential effects of leukotriene C<sub>4</sub> on endothelin-1 and prostacyclin release by cultured vascular cells. *Pharmacol Res*. 1993; 27(3): 281-5.
37. Patrono C, Ciabattoni G, **Patrignani P**, Rocca B, Landolfi R. Eicosanoid biosynthesis and metabolism in myeloproliferative disorders. *Ann N Y Acad Sci*. 1994; 744: 229-36.

38. **Patrignani P**, Panara MR, Greco A, Fusco O, Natoli C, Iacobelli S, Cipollone F, Ganci A, Créminon C, Maclouf J, et al. Biochemical and pharmacological characterization of the cyclooxygenase activity of human blood prostaglandin endoperoxide synthases. *J Pharmacol Exp Ther*. 1994 Dec;271(3):1705-12.
39. **Patrignani P**, Panara MR, Greco A, Fusco O, Natoli C, Iacobelli S, Cipollone F, Ganci A, Créminon C, Maclouf J, et al. Characterization of the cyclooxygenase activity of human blood prostaglandin endoperoxide synthases. *Adv Prostaglandin Thromboxane Leukot Res*. 1995; 23: 129-31.
40. Davì G, Iapichino L, Balsamo V, Ganci A, Giammarresi C, **Patrignani P**, Patrono C. Thromboxane biosynthesis and pulmonary function in cystic fibrosis. *Adv Prostaglandin Thromboxane Leukot Res*. 1995; 23: 369-71.
41. Patrono C, **Patrignani P**, Rocca B, Landolfi R. Characterization of biochemical and functional effects of antiplatelet drugs as a key to their clinical development. *Thromb Haemost*. 1995; 74(1): 396-400.
42. Cipollone F, Ganci A, Panara MR, Greco A, Cuccurullo F, Patrono C, **Patrignani P**. Effects of nabumetone on prostanoid biosynthesis in humans. *Clin Pharmacol Ther*. 1995; 58(3): 335-41.
43. Panara MR, Greco A, Santini G, Sciulli MG, Rotondo MT, Padovano R, di Giamberardino M, Cipollone F, Cuccurullo F, Patrono C, **Patrignani P**. Effects of the novel anti-inflammatory compounds, N-[2-(cyclohexyloxy)-4-nitrophenyl] methanesulphonamide (NS-398) and 5-methanesulphonamido-6-(2,4-difluorothio-phenyl)-1-inda none (L-745,337), on the cyclo-oxygenase activity of human blood prostaglandin endoperoxide synthases. *Br J Pharmacol*. 1995; 116(5): 2429-34.
44. **Patrignani P**, Santini G, Panara MR, Sciulli MG, Greco A, Rotondo MT, di Giamberardino M, Maclouf J, Ciabattoni G, Patrono C. Induction of prostaglandin endoperoxide synthase-2 in human monocytes associated with cyclo-oxygenase-dependent F2-isoprostane formation. *Br J Pharmacol*. 1996; 118(5): 1285-93.
45. Santini G, Sciulli MG, Panara MR, Padovano R, di Giamberardino M, Rotondo MT, Del Soldato P, **Patrignani P**. Effects of flurbiprofen and flurbinitroxybutylester on prostaglandin endoperoxide synthases. *Eur J Pharmacol*. 1996; 316(1): 65-72.
46. Cipollone F, **Patrignani P**, Greco A, Panara MR, Padovano R, Cuccurullo F, Patrono C, Rebuszi AG, Liuzzo G, Quaranta G, Maseri A. Differential suppression of thromboxane biosynthesis by indobufen and aspirin in patients with unstable angina. *Circulation*. 1997; 96(4): 1109-16.
47. **Patrignani P**, Panara MR, Sciulli MG, Santini G, Renda G, Patrono C. Differential inhibition of human prostaglandin endoperoxide synthase-1 and -2 by nonsteroidal anti-inflammatory drugs. *J Physiol Pharmacol*. 1997; 48(4): 623-31.
48. Panara MR, Padovano R, Sciulli MG, Santini G, Renda G, Rotondo MT, Pace A, Patrono C, **Patrignani P**. Effects of nimesulide on constitutive and inducible prostanoid biosynthesis in human beings. *Clin Pharmacol Ther*. 1998; 63(6): 672-81.
49. Panara MR, Renda G, Sciulli MG, Santini G, Di Giamberardino M, Rotondo MT, Tacconelli S, Seta F, Patrono C, **Patrignani P**. Dose-dependent inhibition of platelet cyclooxygenase-1 and monocyte cyclooxygenase-2 by meloxicam in healthy subjects. *J Pharmacol Exp Ther*. 1999; 290(1): 276-80.
50. **Patrignani P**, Sciulli MG, Manarini S, Santini G, Cerletti C, Evangelista V. COX-2 is not involved in thromboxane biosynthesis by activated human platelets. *J Physiol Pharmacol*. 1999; 50(4): 661-7.
51. **Patrignani P**, Santini G, Sciulli MG, Marinacci R, Fusco O, Spoletini L, Natoli C, Procopio A, Maclouf J. Cyclooxygenase-independent induction of p21WAF-1/CIP1, apoptosis and differentiation by L-745,337 and salicylate in HT-29 colon cancer cells. *Adv Exp Med Biol*. 1999; 469: 555-61.
52. Santini G, Sciulli MG, Marinacci R, Fusco O, Spoletini L, Pace A, Ricciardulli A, Natoli C, Procopio A, Maclouf J, **Patrignani P**. Cyclooxygenase-independent induction of p21WAF-1/cip1, apoptosis and differentiation by L-745,337, a selective PGH synthase-2 inhibitor, and salicylate in HT-29 cells. *Apoptosis*. 1999; 4(3): 151-62.
53. **Patrignani P**, Panara MR, Tacconelli S, Seta F, Bucciarelli T, Ciabattoni G, Alessandrini P, Mezzetti A, Santini G, Sciulli MG, Cipollone F, Davì G, Gallina P, Bon GB, Patrono C. Effects of vitamin E supplementation on F(2)-isoprostane and thromboxane biosynthesis in healthy cigarette smokers. *Circulation*. 2000;102(5): 539-45.
54. **Patrignani P**. Nonsteroidal anti-inflammatory drugs, COX-2 and colorectal cancer. *Toxicol Lett*. 2000; 112-113: 493-8.
55. Cipollone F, Ciabattoni G, **Patrignani P**, Pasquale M, Di Gregorio D, Bucciarelli T, Davì G, Cuccurullo F, Patrono C. Oxidant stress and aspirin-insensitive thromboxane biosynthesis in severe unstable angina. *Circulation*. 2000; 102(9): 1007-13.
56. Patrono C, **Patrignani P**, García Rodríguez LA. Cyclooxygenase-selective inhibition of prostanoid formation: transducing biochemical selectivity into clinical read-outs. *J Clin Invest*. 2001; 108(1): 7-13.
57. Santini G\*, **Patrignani P\***, Sciulli MG, Seta F, Tacconelli S, Panara MR, Ricciotti E, Capone ML, Patrono C. The human pharmacology of monocyte cyclooxygenase 2 inhibition by cortisol and synthetic glucocorticoids. *Clin Pharmacol Ther*. 2001; 70(5): 475-83. (\*equal contribution).
58. **Patrignani P**. Oxidized lipids. *Ital Heart J*. 2001; 2(12): 873-7.
59. Minuz P, **Patrignani P**, Gaino S, Degan M, Menapace L, Tommasoli R, Seta F, Capone ML, Tacconelli S, Palatresi S, Bencini C, Del Vecchio C, Mansueto G, Arosio E, Santonastaso CL, Lechi A, Morganti A, Patrono



- C. Increased oxidative stress and platelet activation in patients with hypertension and renovascular disease. *Circulation*. 2002; 106(22): 2800-5.
60. Cipollone F, Ganci A, Greco A, Panara MR, Pasquale M, Di Gregorio D, Porreca E, Mezzetti A, Cuccurullo F, **Patrignani P**. Modulation of aspirin-insensitive eicosanoid biosynthesis by 6-methylprednisolone in unstable angina. *Circulation*. 2003; 107(1): 55-61
61. **Patrignani P**, Capone ML, Tacconelli S. Clinical pharmacology of etoricoxib: a novel selective COX2 inhibitor. *Expert Opin Pharmacother*. 2003; 4(2): 265-84.
62. Tacconelli S, Capone ML, Sciulli MG, Ricciotti E, **Patrignani P**. The biochemical selectivity of novel COX-2 inhibitors in whole blood assays of COX-isozyme activity. *Curr Med Res Opin*. 2002; 18(8): 503-11.
63. Sciulli MG, Seta F, Tacconelli S, Capone ML, Ricciotti E, Pistrutto G, **Patrignani P**. Effects of acetaminophen on constitutive and inducible prostanoid biosynthesis in human blood cells. *Br J Pharmacol*. 2003; 138(4): 634-41.
64. Capone ML, Tacconelli S, Sciulli MG, **Patrignani P**. Clinical pharmacology of selective COX-2 inhibitors. *Int J Immunopathol Pharmacol*. 2003; 16(2 Suppl): 49-58.
65. **Patrignani P**. Aspirin insensitive eicosanoid biosynthesis in cardiovascular disease. *Thromb Res*. 2003; 110(5-6): 281-6.
66. Minuz P, **Patrignani P**, Gaino S, Seta F, Capone ML, Tacconelli S, Degan M, Faccini G, Fornasiero A, Talamini G, Tommasoli R, Arosio E, Santonastaso CL, Lechi A, Patrono C. Determinants of platelet activation in human essential hypertension. *Hypertension*. 2004; 43(1):64-70.
67. Tacconelli S, Capone ML, **Patrignani P**. Clinical pharmacology of novel selective COX-2 inhibitors. *Curr Pharm Des*. 2004; 10(6): 589-601.
68. Nardone G, Rocco A, Vaira D, Staibano S, Budillon A, Tatangelo F, Sciulli MG, Perna F, Salvatore G, Di Benedetto M, De Rosa G, **Patrignani P**. Expression of COX-2, mPGE-synthase1, MDR-1 (P-gp), and Bcl-xL: a molecular pathway of H pylori-related gastric carcinogenesis. *J Pathol*. 2004; 202(3): 305-12.
69. Capone ML, Tacconelli S, Sciulli MG, Grana M, Ricciotti E, Minuz P, Di Gregorio P, Merciaro G, Patrono C, **Patrignani P**. Clinical pharmacology of platelet, monocyte, and vascular cyclooxygenase inhibition by naproxen and low-dose aspirin in healthy subjects. *Circulation*. 2004; 109(12): 1468-71.
70. **Patrignani P**. [Clinical pharmacology of selective inhibitors of cyclooxygenase-2]. *Acta Otorhinolaryngol Ital*. 2003; 23(4 Suppl 74): 13-8, 37-40.
71. Di Nunno L, Vitale P, Scilimati A, Tacconelli S, **Patrignani P**. Novel synthesis of 3,4-diarylisoaxazole analogues of valdecoxib: reversal cyclooxygenase-2 selectivity by sulfonamide group removal. *J Med Chem*. 2004; 47(20): 4881-90.
72. Punzi L, Canesi B, Carrabba M, Cimmino MA, Frizziero L, Lapadula G, Arioli G, Chevillard M, Cozzi F, Cricelli C, Fioravanti A, Giannini S, Iannone F, Leardini G, Mannoni A, Meliconi R, Modena V, Molfetta L, Monteleone V, Nava T, Parente L, Paresce E, **Patrignani P**, Ramonda R, Salaffi F, Spadaro A, Marcolongo R. [Italian consensus on Euler 2003 recommendations for the treatment of knee osteoarthritis]. *Reumatismo*. 2004; 56(3): 190-201.
73. Sciulli MG, Filabozzi P, Tacconelli S, Padovano R, Ricciotti E, Capone ML, Grana M, Carnevale V, **Patrignani P**. Platelet activation in patients with colorectal cancer. *Prostaglandins Leukot Essent Fatty Acids*. 2005; 72(2): 79-83.
74. Passali D, De Benedetto M, Giordano C, Ottini L, **Patrignani P**, Piemonte M, Damiani V, Passali GC, Passali FM, Bellussi L. [Rationale of the use of COX-2 inhibitors in ENT pathologies]. *Clin Ter*. 2004; 155(10): 439-42.
75. Capone ML, Sciulli MG, Tacconelli S, Grana M, Ricciotti E, Renda G, Di Gregorio P, Merciaro G, **Patrignani P**. Pharmacodynamic interaction of naproxen with low-dose aspirin in healthy subjects. *J Am Coll Cardiol*. 2005; 45(8): 1295-301.
76. **Patrignani P**, Tacconelli S, Sciulli MG, Capone ML. New insights into COX-2 biology and inhibition. *Brain Res Brain Res Rev*. 2005; 48(2): 352-9.
77. **Patrignani P**, Tacconelli S. Isoprostanes and other markers of peroxidation in atherosclerosis. *Biomarkers*. 2005; 10 Suppl 1: S24-9.
78. Sciulli MG, Capone ML, Tacconelli S, **Patrignani P**. The future of traditional nonsteroidal antiinflammatory drugs and cyclooxygenase-2 inhibitors in the treatment of inflammation and pain. *Pharmacol Rep*. 2005; 57 Suppl: 66-85.
79. Capone ML, Tacconelli S, **Patrignani P**. Clinical pharmacology of etoricoxib. *Expert Opin Drug Metab Toxicol*. 2005; 1(2): 269-82.
80. **Patrignani P**, Di Febbo C, Tacconelli S, Moretta V, Baccante G, Sciulli MG, Ricciotti E, Capone ML, Antonucci I, Guglielmi MD, Stuppia L, Porreca E. Reduced thromboxane biosynthesis in carriers of toll-like receptor 4 polymorphisms in vivo. *Blood*. 2006; 107(9): 3572-4.

81. D'Orazi G, Sciulli MG, Di Stefano V, Riccioni S, Frattini M, Falcioni R, Bertario L, Sacchi A, **Patrignani P**. Homeodomain-interacting protein kinase-2 restrains cytosolic phospholipase A2-dependent prostaglandin E2 generation in human colorectal cancer cells. *Clin Cancer Res*. 2006; 12(3 Pt 1): 735-41.
82. Evangelista V, Manarini S, Di Santo A, Capone ML, Ricciotti E, Di Francesco L, Tacconelli S, Sacchetti A, D'Angelo S, Scilimati A, Sciulli MG, **Patrignani P**. De novo synthesis of cyclooxygenase-1 counteracts the suppression of platelet thromboxane biosynthesis by aspirin. *Circ Res*. 2006; 98(5): 593-5.
83. Gatti D, Adami S, Canesi B, Cimmino MA, Della Casa O, Del Tacca M, Klersy C, Leardini G, **Patrignani P**, Punzi L, Bombardieri S. [Antiinflammatory therapy and cardiovascular risk: a consensus view]. *Reumatismo*. 2006; 58(2): 85-93.
84. Sciulli MG, Renda G, Capone ML, Tacconelli S, Ricciotti E, Manarini S, Evangelista V, Rebuzzi A, **Patrignani P**. Heterogeneity in the suppression of platelet cyclooxygenase-1 activity by aspirin in coronary heart disease. *Clin Pharmacol Ther*. 2006; 80(2): 115-25.
85. Fava C, Minuz P, **Patrignani P**, Morganti A. Renal artery stenosis and accelerated atherosclerosis: which comes first? *J Hypertens*. 2006; 24(9):1687-96.
86. Renda G, Tacconelli S, Capone ML, Sacchetta D, Santarelli F, Sciulli MG, Zimarino M, Grana M, D'Amelio E, Zurro M, Price TS, Patrono C, De Caterina R, **Patrignani P**. Celecoxib, ibuprofen, and the antiplatelet effect of aspirin in patients with osteoarthritis and ischemic heart disease. *Clin Pharmacol Ther*. 2006; 80(3): 264-74.
87. Rodríguez LA, **Patrignani P**. The ever growing story of cyclo-oxygenase inhibition. *Lancet*. 2006; 368(9549): 1745-7.
88. Capone ML, Tacconelli S, Di Francesco L, Sacchetti A, Sciulli MG, **Patrignani P**. Pharmacodynamic of cyclooxygenase inhibitors in humans. *Prostaglandins Other Lipid Mediat*. 2007; 82(1-4): 85-94.
89. Punzi L, Doherty M, Zhang W, Cimmino MA, Carrabba M, Frizziero L, Grassi W, Lapadula G, Modena V, Arioli G, Brignoli O, Canesi B, Cazzola M, Cricelli C, Faldini A, Fioravanti A, Gimigliano R, Giustini A, Iannone F, Leardini G, Meliconi R, Molfetta L, **Patrignani P**, Parente L, Ramonda R, Randelli G, Salaffi F, Spadaro A, Bombardieri S. [Italian consensus on EULAR recommendations 2005 for the management of hip osteoarthritis]. *Reumatismo*. 2006; 58(4): 301-9.
90. Donnini S, Finetti F, Solito R, Terzuoli E, Sacchetti A, Morbidelli L, **Patrignani P**, Ziche M. EP2 prostanoid receptor promotes squamous cell carcinoma growth through epidermal growth factor receptor transactivation and iNOS and ERK1/2 pathways. *FASEB J*. 2007; 21(10): 2418-30.
91. Capone ML, Tacconelli S, Sciulli MG, Anzellotti P, Di Francesco L, Merciaro G, Di Gregorio P, **Patrignani P**. Human pharmacology of naproxen sodium. *J Pharmacol Exp Ther*. 2007; 322(2): 453-60.
92. Biava M, Porretta GC, Poce G, Supino S, Forli S, Rovini M, Cappelli A, Manetti F, Botta M, Sautebin L, Rossi A, Pergola C, Ghelardini C, Vivoli E, Makovec F, Anzellotti P, **Patrignani P**, Anzini M. Cyclooxygenase-2 inhibitors. 1,5-diarylpyrrol-3-acetic esters with enhanced inhibitory activity toward cyclooxygenase-2 and improved cyclooxygenase-2/cyclooxygenase-1 selectivity. *J Med Chem*. 2007; 50(22): 5403-11.
93. Capone ML, Tacconelli S, Di Francesco L, Petrelli M, **Patrignani P**. Cardiovascular effects of valdecoxib: transducing human pharmacology results into clinical read-outs. *Expert Opin Drug Saf*. 2008; 7(1): 29-42.
94. **Patrignani P**, Capone ML, Tacconelli S. NSAIDs and cardiovascular disease. *Heart*. 2008; 94(4): 395-7.
95. Minuz P, Jiang H, Fava C, Turolo L, Tacconelli S, Ricci M, **Patrignani P**, Morganti A, Lechi A, McGiff JC. Altered release of cytochrome p450 metabolites of arachidonic acid in renovascular disease. *Hypertension*. 2008; 51(5): 1379-85.
96. **Patrignani P**, Di Febbo C, Tacconelli S, Douville K, Guglielmi MD, Horvath RJ, Ding M, Sierra K, Stitham J, Gleim S, Baccante G, Moretta V, Di Francesco L, Capone ML, Porreca E, Hwa J. Differential association between human prostacyclin receptor polymorphisms and the development of venous thrombosis and intimal hyperplasia: a clinical biomarker study. *Pharmacogenet Genomics*. 2008; 18(7): 611-20.
97. Anzini M, Rovini M, Cappelli A, Vomero S, Manetti F, Botta M, Sautebin L, Rossi A, Pergola C, Ghelardini C, Norcini M, Giordani A, Makovec F, Anzellotti P, **Patrignani P**, Biava M. Synthesis, biological evaluation, and enzyme docking simulations of 1,5-diarylpyrrole-3-alkoxyethyl ethers as selective cyclooxygenase-2 inhibitors endowed with anti-inflammatory and antinociceptive activity. *J Med Chem*. 2008; 51(15): 4476-81.
98. Biava M, Porretta GC, Poce G, Supino S, Manetti F, Forli S, Botta M, Sautebin L, Rossi A, Pergola C, Ghelardini C, Norcini M, Makovec F, Giordani A, Anzellotti P, Cirilli R, Ferretti R, Gallinella B, La Torre F, Anzini M, **Patrignani P**. Synthesis, in vitro, and in vivo biological evaluation and molecular docking simulations of chiral alcohol and ether derivatives of the 1,5-diarylpyrrole scaffold as novel anti-inflammatory and analgesic agents. *Bioorg Med Chem*. 2008; 16(17): 8072-81.
99. García Rodríguez LA, Tacconelli S, **Patrignani P**. Role of dose potency in the prediction of risk of myocardial infarction associated with nonsteroidal anti-inflammatory drugs in the general population. *J Am Coll Cardiol*. 2008; 52(20): 1628-36.
100. Rimoli MG, Russo E, Cataldi M, Citraro R, Ambrosino P, Melisi D, Curcio A, De Lucia S, **Patrignani P**, De Sarro G, Abignente E. T-type channel blocking properties and antiabsence activity of two imidazo[1,2-b]pyridazine derivatives structurally related to indomethacin. *Neuropharmacology*. 2009; 56(3): 637-46.

101. Di Francesco L, Totani L, Dovizio M, Piccoli A, Di Francesco A, Salvatore T, Pandolfi A, Evangelista V, Dercho RA, Seta F, **Patrignani P**. Induction of prostacyclin by steady laminar shear stress suppresses tumor necrosis factor- $\alpha$  biosynthesis via heme oxygenase-1 in human endothelial cells. *Circ Res*. 2009; 104(4): 506-13.
102. **Patrignani P**, Tacconelli S, Capone ML. Risk management profile of etoricoxib: an example of personalized medicine. *Ther Clin Risk Manag*. 2008; 4(5): 983-97.
103. García Rodríguez LA, **Patrignani P**, González-Pérez A. Risk of myocardial infarction persisting after discontinuation of non-steroidal anti-inflammatory drugs in the general population. *J Thromb Haemost*. 2009; 7(5): 892-4.
104. Bruno A, Di Francesco L, Coletta I, Mangano G, Alisi MA, Polenzani L, Milanese C, Anzellotti P, Ricciotti E, Dovizio M, Di Francesco A, Tacconelli S, Capone ML, **Patrignani P**. Effects of AF3442 [N-(9-ethyl-9H-carbazol-3-yl)-2-(trifluoromethyl)benzamide], a novel inhibitor of human microsomal prostaglandin E synthase-1, on prostanoid biosynthesis in human monocytes in vitro. *Biochem Pharmacol*. 2010; 79(7): 974-81.
105. Biava M, Porretta GC, Poce G, Battilocchio C, Manetti F, Botta M, Forli S, Sautebin L, Rossi A, Pergola C, Ghelardini C, Galeotti N, Makovec F, Giordani A, Anzellotti P, **Patrignani P**, Anzini M. Novel ester and acid derivatives of the 1,5-diarylpyrrole scaffold as anti-inflammatory and analgesic agents. Synthesis and in vitro and in vivo biological evaluation. *J Med Chem*. 2010; 53(2): 723-33.
106. **Patrignani P**, Tacconelli S, Bruno A. Grand challenges in pharmacotherapy of inflammation for the first decades of the 21st century. *Front Pharmacol*. 2010; 1: 2.
107. Ricciotti E, Dovizio M, Di Francesco L, Anzellotti P, Salvatore T, Di Francesco A, Sciulli MG, Pistritto G, Monopoli A, **Patrignani P**. NCX 4040, a nitric oxide-donating aspirin, exerts anti-inflammatory effects through inhibition of I kappa B- $\alpha$  degradation in human monocytes. *J Immunol*. 2010; 184(4): 2140-7.
108. Massó González EL\*, **Patrignani P\***, Tacconelli S, García Rodríguez LA. Variability among nonsteroidal antiinflammatory drugs in risk of upper gastrointestinal bleeding. *Arthritis Rheum*. 2010; 62(6): 1592-601. (\*equal contribution)
109. Bueno H, Bardají A, **Patrignani P**, Martín-Merino E, García-Rodríguez LA; Spanish Case-Control Study to Assess NSAID-Associated ACS Risk Investigators. Use of non-steroidal antiinflammatory drugs and type-specific risk of acute coronary syndrome. *Am J Cardiol*. 2010; 105(8): 1102-6.
110. Capone ML, Tacconelli S, Rodriguez LG, **Patrignani P**. NSAIDs and cardiovascular disease: transducing human pharmacology results into clinical read-outs in the general population. *Pharmacol Rep*. 2010; 62(3): 530-5.
111. **Patrignani P**. Extraction and measurement of prostanoids and isoprostanes: Introduction to Part II. *Methods Mol Biol*. 2010; 644: 147-52.
112. Tacconelli S, Capone ML, **Patrignani P**. Measurement of 8-iso-prostaglandin F2 $\alpha$  in biological fluids as a measure of lipid peroxidation. *Methods Mol Biol*. 2010; 644: 165-78.
113. Anzellotti P, Capone ML, Jeyam A, Tacconelli S, Bruno A, Tontodonati P, Di Francesco L, Grossi L, Renda G, Merciaro G, Di Gregorio P, Price TS, Garcia Rodriguez LA, **Patrignani P**. Low-dose naproxen interferes with the antiplatelet effects of aspirin in healthy subjects: recommendations to minimize the functional consequences. *Arthritis Rheum*. 2011; 63(3): 850-9.
114. Biava M, Porretta GC, Poce G, Battilocchio C, Botta M, Manetti F, Rovini M, Cappelli A, Sautebin L, Rossi A, Pergola C, Ghelardini C, Galeotti N, Makovec F, Giordani A, Anzellotti P, Tacconelli S, **Patrignani P**, Anzini M. Enlarging the NSAIDs family: ether, ester and acid derivatives of the 1,5-diarylpyrrole scaffold as novel anti-inflammatory and analgesic agents. *Curr Med Chem*. 2011; 18(10): 1540-54.
115. Biava M, Porretta GC, Poce G, Battilocchio C, Alfonso S, Rovini M, Valenti S, Giorgi G, Calderone V, Martelli A, Testai L, Sautebin L, Rossi A, Papa G, Ghelardini C, Di Cesare Mannelli L, Giordani A, Anzellotti P, Bruno A, **Patrignani P**, Anzini M. Novel analgesic/anti-inflammatory agents: diarylpyrrole acetic esters endowed with nitric oxide releasing properties. *J Med Chem*. 2011; 54(22): 7759-71.
116. Tang WH, Stitham J, Gleim S, Di Febbo C, Porreca E, Fava C, Tacconelli S, Capone M, Evangelista V, Levantesi G, Wen L, Martin K, Minuz P, Rade J, **Patrignani P**, Hwa J. Glucose and collagen regulate human platelet activity through aldose reductase induction of thromboxane. *J Clin Invest*. 2011; 121(11): 4462-76.
117. **Patrignani P**, Tacconelli S, Bruno A, Sostres C, Lanás A. Managing the adverse effects of nonsteroidal anti-inflammatory drugs. *Expert Rev Clin Pharmacol*. 2011; 4(5): 605-21.
118. Dovizio M, Tacconelli S, Sostres C, Ricciotti E, **Patrignani P**. Mechanistic and pharmacological issues of aspirin as an anticancer agent. *Pharmaceuticals (Basel)*. 2012; 5(12): 1346-71.
119. Cesari M, Kritchevsky SB, Nicklas B, Kanaya AM, **Patrignani P**, Tacconelli S, Tranah GJ, Rognoni G, Harris TB, Antonelli Incalzi R, Newman AB, Pahor M, for the Health ABC study. *J Gerontol A Biol Sci Med Sci*. 2012; 67A(6): 671-676.
120. Dovizio M, Tacconelli S, Ricciotti E, Bruno A, Maier TJ, Anzellotti P, Di Francesco L, Sala P, Signoroni S, Bertario L, Dixon DA, Lawson JA, Steinhilber D, FitzGerald GA, **Patrignani P**. Effects of celecoxib on

- prostanoid biosynthesis and circulating angiogenesis proteins in familial adenomatous polyposis. *J Pharmacol Exp Ther.* 2012;341(1):242-50.
121. Marcantoni E, Di Francesco L, Totani L, Piccoli A, Evangelista V, Tacconelli S, **Patrignani P**. Effects of estrogen on endothelial prostanoid production and cyclooxygenase-2 and heme oxygenase-1 expression. *Prostaglandins Other Lipid Mediat.* 2012 Feb 6. [Epub ahead of print].
  122. **Patrignani P**, Dovizio M. Inside platelet-leukocyte cross-talk. *Blood.* 2012;119(16):3649-50.
  123. Marcantoni E, Di Francesco L, Dovizio M, Bruno A, **Patrignani P**. Novel insights into the vasoprotective role of heme oxygenase-1. *Int J Hypertens.* 2012; 2012: Article ID 127910.
  124. Bruno A, Dovizio M, Tacconelli S, **Patrignani P**. Mechanisms of the antitumoural effects of aspirin in the gastrointestinal tract. *Best Pract Res Clin Gastroenterol.* 2012;26(4):e1-e13.
  125. Biava M, Battilocchio C, Poce G, Alfonso S, Consalvi S, Porretta GC, Schenone S, Calderone V, Martelli A, Testai L, Ghelardini C, Di Cesare Mannelli L, Sautebin L, Rossi A, Giordani A, **Patrignani P**, Anzini M. Improving the solubilità of a new class of antiinflammatory pharmacodynamic hybrids, that release nitric oxide and inhibit cyclooxygenase-2 isoenzyme. *Eur J Med Chem.* 2012;58:287-98.
  126. Antonilli L, De Carolis L, Brusadin V, Togna AR, Dovizio M, Togna GI, **Patrignani P**, Nencini P. Repeated exposure to codeine alters morphine glucuronidation by affecting UGT gene expression in the rat. *Eur J Pharmacol.* 2012;693(1-3):7-14.
  127. Garcia Rodriguez LA, Cea-Soriano L, Tacconelli S, **Patrignani P**. Coxibs: pharmacology, toxicity and efficacy in cancer clinical trials. *Recent Results Cancer Res.* 2013;191:67-93.
  128. Dovizio M, Bruno A, Tacconelli S, **Patrignani P**. Mode of action of aspirin as a chemopreventive agent. *Recent Results Cancer Res.* 2013;191:39-65.
  129. Dixon DA, Blanco FF, Bruno A, **Patrignani P**. Mechanistic aspects of COX-2 expression in colorectal neoplasia. *Recent Results Cancer Res.* 2013;191:7-37.
  130. Milaneschi Y, Cesari M, Simonsick EM, Vogelzangs N, Kanaya AM, Yaffe K, **Patrignani P**, Metti A, Kritchevsky SB, Pahor M, Ferrucci L, Penninx BW; Health ABC study. Lipid peroxidation and depressed mood in community-dwelling older men and women. *PLoS One.* 2013;8(6):e65406.
  131. Maenthaisong R, Tacconelli S, Sritara P, Del Boccio P, Di Francesco L, Sacchetta P, Archararit N, Aryurachai K, **Patrignani P**, Suthisisang C. Clinical pharmacology of cyclooxygenase inhibition and pharmacodynamic interaction with aspirin by floctafenine in Thai healthy subjects. *Int J Immunopathol Pharmacol.* 2013;26(2):403-17.
  132. Battilocchio C, Poce G, Alfonso S, Porretta GC, Consalvi S, Sautebin L, Pace S, Rossi A, Ghelardini C, Di Cesare Mannelli L, Schenone S, Giordani A, Di Francesco L, **Patrignani P**, Biava M. A class of pyrrole derivatives endowed with analgesic/anti-inflammatory activity. *Bioorg Med Chem.* 2013;21(13):3695-701.
  133. Vitale P, Tacconelli S, Perrone MG, Malerba P, Simone L, Scilimati A, Lavecchia A, Dovizio M, Marcantoni E, Bruno A, **Patrignani P**. Synthesis, pharmacological characterization, and docking analysis of a novel family of diarylisoxazoles as highly selective cyclooxygenase-1 (COX-1) inhibitors. *J Med Chem.* 2013;56(11):4277-99.
  134. Dovizio M, Maier TJ, Alberti S, Di Francesco L, Marcantoni E, Münch G, John CM, Suess B, Sgambato A, Steinhilber D, **Patrignani P**. Pharmacological inhibition of platelet-tumor cell cross-talk prevents platelet-induced overexpression of cyclooxygenase-2 in HT29 human colon carcinoma cells. *Mol Pharmacol.* 2013;84(1):25-40.
  135. Anzini M, Di Capua A, Valenti S, Brogi S, Rovini M, Giuliani G, Cappelli A, Vomero S, Chiasserini L, Segal A, Poce G, Giorgi G, Calderone V, Martelli A, Testai L, Sautebin L, Rossi A, Pace S, Ghelardini C, Di Cesare Mannelli L, Benetti V, Giordani A, Anzellotti P, Dovizio M, **Patrignani P**, Biava M. Novel analgesic/anti-inflammatory agents: 1,5-diarylpyrrole nitrooxyalkyl ethers and related compounds as cyclooxygenase-2 inhibiting nitric oxide donors. *J Med Chem.* 2013;56(8):3191-206.
  136. Martelli A, Testai L, Anzini M, Cappelli A, Di Capua A, Biava M, Poce G, Consalvi S, Giordani A, Caselli G, Rovati L, Ghelardini C, **Patrignani P**, Sautebin L, Breschi MC, Calderone V. The novel anti-inflammatory agent VA694, endowed with both NO-releasing and COX(2)-selective inhibiting properties, exhibits NO-mediated positive effects on blood pressure, coronary flow and endothelium in an experimental model of hypertension and endothelial dysfunction. *Pharmacol Res.* 2013;78C:1-9.
  137. Togna AR, Antonilli L, Dovizio M, Salemme A, De Carolis L, Togna GI, **Patrignani P**, Nencini P. In vitro morphine metabolism by rat microglia. *Neuropharmacology.* 2013;75C:391-398.
  138. Bruno A, Tacconelli S, **Patrignani P**. Variability in the Response to Non-Steroidal Anti-Inflammatory Drugs: Mechanisms and Perspectives. *Basic Clin Pharmacol Toxicol.* 2014;114(1):56-63
  139. Dovizio M, Alberti S, Guillem-Llobat P, **Patrignani P**. Role of Platelets in Inflammation and Cancer: Novel Therapeutic Strategies. *Basic Clin Pharmacol Toxicol.* 2014;114(1):118-27.
  140. Coxib and traditional NSAID Trialists' (CNT) Collaboration, Bhalra N, Emberson J, Merhi A, Abramson S, Arber N, Baron JA, Bombardier C, Cannon C, Farkouh ME, FitzGerald GA, Goss P, Halls H, Hawk E, Hawkey C, Hennekens C, Hochberg M, Holland LE, Kearney PM, Laine L, Lanis A, Lance P, Laupacis A, Oates J, Patrono

- C, Schnitzer TJ, Solomon S, Tugwell P, Wilson K, Wittes J, Baigent C. Collaborators: Adelowo O, Aisen P, Al-Quorain A, Altman R, Bakris G, Baumgartner H, Bresee C, Carducci M, Chang DM, Chou CT, Clegg D, Cudkowicz M, Doody L, El Miedany Y, Falandry C, Farley J, Ford L, García-Losa M, González-Ortiz M, Haghighi M, Hála M, Iwama T, Jajić Z, Kerr D, Kim HS, Köhne C, Koo BK, Martin B, Meinert C, Müller N, Myklebust G, Neustadt D, Omdal R, Ozgocmen S, Papas A, **Patrignani P**, Pelliccia F, Roy V, Schlegelmilch I, Umar A, Wahlström O, Wollheim F, Yocum S, Zhang XY, Hall E, McGettigan P, Midgley R, Moore RA, Philipson R, Curtis S, Reicin A, Bond J, Moore A, Essex M, Fabule J, Morrison B, Tive L, Baigent C, Bhala N, Davies K, Emberson J, Halls H, Holland LE, Kearney PM, Merhi A, Patrono C, Wilson K, Yau F. Vascular and upper gastrointestinal effects of non-steroidal anti-inflammatory drugs: meta-analyses of individual participant data from randomised trials. *Lancet*. 2013;382:769-79.
141. Biava M, Battilocchio C, Poce G, Alfonso S, Consalvi S, Di Capua A, Calderone V, Martelli A, Testai L, Sautebin L, Rossi A, Ghelardini C, Di Cesare Mannelli L, Giordani A, Persiani S, Colovic M, Dovizio M, **Patrignani P**, Anzini M. Enhancing the pharmacodynamic profile of a class of selective COX-2 inhibiting nitric oxide donors. *Bioorg Med Chem*. 2014;22(2):772-86.
  142. Guillem-Llobat P, Dovizio M, Alberti S, Bruno A, **Patrignani P**. Platelets, cyclooxygenases, and colon cancer. *Semin Oncol*. 2014;41(3):385-96.
  143. **Patrignani P**, Tacconelli S, Piazzuelo E, Di Francesco L, Dovizio M, Sostres C, Marcantoni E, Guillem-Llobat P, Del Boccio P, Zucchelli M, Patrono C, Lanas A. Reappraisal of the clinical pharmacology of low-dose aspirin by comparing novel direct and traditional indirect biomarkers of drug action. *J Thromb Haemost*. 2014;12(8):1320-3.
  144. **Patrignani P**, Tacconelli S, Bruno A. Gut microbiota, host gene expression, and aging. *J Clin Gastroenterol*. 2014;48 Suppl 1:S28-31.
  145. Tacconelli S, **Patrignani P**. Inside epoxyeicosatrienoic acids and cardiovascular disease. *Front Pharmacol*. 2014;5:239.
  146. **Patrignani P**, Patrono C. Cyclooxygenase inhibitors: From pharmacology to clinical read-outs. *Biochim Biophys Acta*. 2015;1851(4):422-432.
  147. Brune K, **Patrignani P**. New insights into the use of currently available non-steroidal anti-inflammatory drugs. *J Pain Res*. 2015;8:105-18.
  148. Marcantoni E, Dovizio M, O Gaora P, Di Francesco L, Bendaya I, Schiavone S, Trenti A, Guillem-Llobat P, Zambon A, Nardelli GB, Trevisi L, **Patrignani P**, Belton O. Dysregulation of gene expression in human fetal endothelial cells from gestational diabetes in response to TGF- $\beta$ 1. *Prostaglandins Other Lipid Mediat*. 2015 Mar 26. pii: S1098-8823(15)00030-1. doi: 10.1016/j.prostaglandins.2015.03.004. [Epub ahead of print]
  149. Di Francesco L, López Contreras LA, Sacco A, **Patrignani P**. New insights into the mechanism of action of aspirin in the prevention of colorectal neoplasia. *Curr Pharm Des*. 2015;21(35):5116-26.
  150. Di Francesco L, Dovizio M, Trenti A, Marcantoni E, Moore A, O'Gaora P, McCarthy C, Tacconelli S, Bruno A, Alberti S, Gizzo S, Nardelli GB, Orso G, Belton O, Trevisi L, Dixon DA, **Patrignani P**. Dysregulated post-transcriptional control of COX-2 gene expression in gestational diabetic endothelial cells. *Br J Pharmacol*. 2015;172(18): 4575–4587.
  151. **Patrignani P**, Dovizio M. COX-2 and EGFR: Partners in Crime Split by Aspirin. *EBioMedicine*. 2015;2:372-3..
  152. Xiao B, Gu SM, Li MJ, Li J, Tao B, Wang Y, Wang Y, Zuo S, Shen Y, Yu Y, Chen D, Chen G, Kong D, Tang J, Liu Q, Chen DR, Liu Y, Alberti S, Dovizio M, Landolfi R, Mucci L, Miao PZ, Gao P, Zhu DL, Wang J, Li B, **Patrignani P**, Yu Y. Rare SNP rs12731181 in the miR-590-3p Target Site of the Prostaglandin F2 $\alpha$  Receptor Gene Confers Risk for Essential Hypertension in the Han Chinese Population. *Arterioscler Thromb Vasc Biol*. 2015;35:1687-95.
  153. Altman R, Bosch B, Brune K, **Patrignani P**, Young C. Advances in NSAID development: evolution of diclofenac products using pharmaceutical technology. *Drugs*. 2015;75:859-77.
  154. Dovizio M, Alberti S, Sacco A, Guillem-Llobat P, Schiavone S, Maier TJ, Steinhilber D, **Patrignani P**. Novel insights into the regulation of cyclooxygenase-2 expression by platelet-cancer cell cross-talk. *Biochem Soc Trans*. 2015;43(4):707-14.
  155. Olesch C, Sha W, Angioni C, Sha LK, Açaf E, **Patrignani P**, Jakobsson PJ, Radeke HH, Grösch S, Geisslinger G, von Knethen A, Weigert A, Brüne B. MPGES-1-derived PGE2 suppresses CD80 expression on tumor-associated phagocytes to inhibit anti-tumor immune responses in breast cancer. *Oncotarget*. 2015;6(12):10284-96.
  156. Guillem-Llobat P, Dovizio M, Bruno A, Ricciotti E, Cufino V, Sacco A, Grande R, Alberti S, Arena V, Cirillo M, Patrono C, FitzGerald GA, Steinhilber D, Sgambato A, **Patrignani P**. Aspirin prevents colorectal cancer metastasis in mice by splitting the crosstalk between platelets and tumor cells. *Oncotarget*. 2016;7(22):32462-77.
  157. **Patrignani P**, Dovizio M. Time for Integrating Clinical, Lifestyle and Molecular Data to Predict Drug Responses. *EBioMedicine*. 2016;7:9-10.

158. **Patrignani P**, Patrono C. Aspirin and Cancer. *J Am Coll Cardiol*. 2016;68(9):967-76.
159. Dovizio M, Sacco A, **Patrignani P**. Curbing tumorigenesis and malignant progression through the pharmacological control of the wound healing process. *Vascul Pharmacol*. 2017;89:1-11.
160. **Patrignani P**, Sacco A, Sostres C, Bruno A, Dovizio M, Piazzuelo E, Di Francesco L, Contursi A, Zucchelli M, Schiavone S, Tacconelli S, Patrono C, Lanas A. Low-dose aspirin acetylates cyclooxygenase-1 in human colorectal mucosa: implications for the chemoprevention of colorectal cancer. *Clin Pharmacol Ther*. 2017 Jan 31. doi: 10.1002/cpt.639. [Epub ahead of print]
161. Contursi A, Sacco A, Grande R, Dovizio M, **Patrignani P**. Platelets as crucial partners for tumor metastasis: from mechanistic aspects to pharmacological targeting. *Cell Mol Life Sci*. 2017 May 9. doi: 10.1007/s00018-017-2536-7. [Epub ahead of print]
162. Schiavone S, Contursi A, Grande R, **Patrignani P**. Therapeutic targeting of dysregulated cellular communication. *Ann.Transl. Med* 2017;5(10):222.
163. Tacconelli S, Bruno A, Grande R, Ballerini P, **Patrignani P**. Nonsteroidal anti-inflammatory drugs and cardiovascular safety - translating pharmacological data into clinical readouts. *Expert Opin Drug Saf*. 2017;16(7):791-807.
164. Ballerini P, Dovizio M, Bruno A, Tacconelli S, **Patrignani P**. P2Y<sub>12</sub> Receptors in Tumorigenesis and Metastasis. *Front Pharmacol*. 2018; 9:66.
165. Tacconelli S, Dovizio M, Di Francesco L, Meneguzzi A, D'Agostino I, Evangelista V, Manarini S, Capone ML, Grossi L, Porreca E, Di Febbo C, Bruno A, Ballerini P, Levantesi G, Fava C, Minuz P, **Patrignani P**. Reduced variability to aspirin antiplatelet effect by the coadministration of statins in high-risk patients for cardiovascular disease. *Clin Pharmacol Ther*. 2018; 104(1): 111-119.
166. **Patrignani P**, Patrono C. Aspirin, platelet inhibition and cancer prevention. *Platelets*. 2018; 9:1-7.
167. Dovizio M, Bruno A, Contursi A, Grande R, **Patrignani P**. Platelets and extracellular vesicles in cancer: diagnostic and therapeutic implications. *Cancer Metastasis Rev*. 2018 May 31. doi: 10.1007/s10555-018-9730-4.
168. Bruno A, Dovizio M, Tacconelli S, Contursi A, Ballerini P, **Patrignani P**. Antithrombotic Agents and Cancer. *Cancers (Basel)*. 2018;10(8). doi: 10.3390/cancers10080253.
169. Contursi A, Grande R, Dovizio M, Bruno A, Fullone R, **Patrignani P**. Platelets in cancer development and diagnosis. *Biochem Soc Trans*. 2018;46(6):1517-1527.
170. Grande R, Dovizio M, Marcone S, Szklanna PB, Bruno A, Ebhardt HA, Cassidy H, Ní Áinle F, Caprodossi A, Lanuti P, Marchisio M, Mingrone G, Maguire PB, **Patrignani P**. Platelet-Derived Microparticles From Obese Individuals: Characterization of Number, Size, Proteomics, and Crosstalk With Cancer and Endothelial Cells. *Front Pharmacol*. 2019; 10:7. doi:10.3389/fphar.2019.00007.
171. Saul MJ, Baumann I, Bruno A, Emmerich AC, Wellstein J, Ottinger SM, Contursi A, Dovizio M, Donnini S, Tacconelli S, Raouf J, Idborg H, Stein S, Korotkova M, Savai R, Terzuoli E, Sala G, Seeger W, Jakobsson PJ, **Patrignani P**, Suess B, Steinhilber D. miR-574-5p as RNA decoy for CUGBP1 stimulates human lung tumor growth by mPGES-1 induction. *FASEB J*. 2019;33(6):6933-6947.
172. Sacco A, Bruno A, Contursi A, Dovizio M, Tacconelli S, Ricciotti E, Guillem-Llobat P, Salvatore T, Di Francesco L, Fullone R, Ballerini P, Arena V, Alberti S, Liu G, Gong Y, Sgambato A, Patrono C, FitzGerald GA, Yu Y, **Patrignani P**. Platelet-Specific Deletion of Cyclooxygenase-1 Ameliorates Dextran Sulfate Sodium-Induced Colitis in Mice. *J Pharmacol Exp Ther*. 2019;370(3):416-426.
173. Walker J, Cattaneo M, Badimon L, Agnelli G, Chan AT, Lanas A, Rocca B, Rothwell P, **Patrignani P**, Langley R, Vilahur G, Cosentino F1. Highlights from the 2019 International Aspirin Foundation Scientific Conference, Rome, 28 June 2019: benefits and risks of antithrombotic therapy for cardiovascular disease prevention *Ecanermedicalscience*. 2020;14:998.
174. Di Francesco L\*, Bruno A\*, Ricciotti E\*, Tacconelli S, Dovizio M, Guillem-Llobat P, Alisi MA, Garrone B, Coletta I, Mangano G, Milanese C, FitzGerald GA, **Patrignani P**. Pharmacological characterization of the microsomal prostaglandin E2 synthase-1 inhibitor AF3485 in vitro and in vivo. *Frontiers in Pharmacology* 2020 in press. \*equal contribution

## 10 Most Significant Publications (all career)

1. **Patrignani P**, Panara MR, Greco A, Fusco O, Natoli C, Iacobelli S, Cipollone F, Ganci A, Créminon C, Maclouf J, et al. Biochemical and pharmacological characterization of the cyclooxygenase activity of human blood prostaglandin endoperoxide synthases. *J Pharmacol Exp Ther*. 1994;271(3):1705-12.

2. Capone ML, Tacconelli S, Sciulli MG, Grana M, Ricciotti E, Minuz P, Di Gregorio P, Merciaro G, Patrono C, **Patrignani P**. Clinical pharmacology of platelet, monocyte, and vascular cyclooxygenase inhibition by naproxen and low-dose aspirin in healthy subjects. *Circulation*. 2004; 109(12): 1468-71.
3. Capone ML, Sciulli MG, Tacconelli S, Grana M, Ricciotti E, Renda G, Di Gregorio P, Merciaro G, **Patrignani P**. Pharmacodynamic interaction of naproxen with low-dose aspirin in healthy subjects. *J Am Coll Cardiol*. 2005; 45(8): 1295-301.
4. García Rodríguez LA, Tacconelli S, **Patrignani P**. Role of dose potency in the prediction of risk of myocardial infarction associated with nonsteroidal anti-inflammatory drugs in the general population. *J Am Coll Cardiol*. 2008; 52(20): 1628-36.
5. Massó González EL\*, **Patrignani P\***, Tacconelli S, García Rodríguez LA. Variability among nonsteroidal antiinflammatory drugs in risk of upper gastrointestinal bleeding. *Arthritis Rheum*. 2010; 62(6): 1592-601. (\*equal contribution)
6. Anzellotti P, Capone ML, Jeyam A, Tacconelli S, Bruno A, Tontodonati P, Di Francesco L, Grossi L, Renda G, Merciaro G, Di Gregorio P, Price TS, Garcia Rodriguez LA, **Patrignani P**. Low-dose naproxen interferes with the antiplatelet effects of aspirin in healthy subjects: recommendations to minimize the functional consequences. *Arthritis Rheum*. 2011; 63(3): 850-9.
7. Guillem-Llobat P, Dovizio M, Bruno A, Ricciotti E, Cufino V, Sacco A, Grande R, Alberti S, Arena V, Cirillo M, Patrono C, FitzGerald GA, Steinhilber D, Sgambato A, **Patrignani P**. Aspirin prevents colorectal cancer metastasis in mice by splitting the crosstalk between platelets and tumor cells. *Oncotarget*. 2016;7(22):32462-77.
8. **Patrignani P**, Patrono C. Aspirin and Cancer. *J Am Coll Cardiol*. 2016;68(9):967-76.
9. **Patrignani P**, Sacco A, Sostres C, Bruno A, Dovizio M, Piazzuelo E, Di Francesco L, Contursi A, Zucchelli M, Schiavone S, Tacconelli S, Patrono C, Lanas A. Low-dose aspirin acetylates cyclooxygenase-1 in human colorectal mucosa: implications for the chemoprevention of colorectal cancer. *Clin Pharmacol Ther*. 2017;102(1):52-61.
10. Sacco A, Bruno A, Contursi A, Dovizio M, Tacconelli S, Ricciotti E, Guillem-Llobat P, Salvatore T, Di Francesco L, Fullone R, Ballerini P, Arena V, Alberti S, Liu G, Gong Y, Sgambato A, Patrono C, FitzGerald GA, Yu Y, **Patrignani P**. Platelet-Specific Deletion of Cyclooxygenase-1 Ameliorates Dextran Sulfate Sodium-Induced Colitis in Mice. *J Pharmacol Exp Ther*. 2019;370(3):416-426.

## Peer-Reviewed Publications (last 10 years)

1. Bruno A, Di Francesco L, Coletta I, Mangano G, Alisi MA, Polenzani L, Milanese C, Anzellotti P, Ricciotti E, Dovizio M, Di Francesco A, Tacconelli S, Capone ML, **Patrignani P**. Effects of AF3442 [N-(9-ethyl-9H-carbazol-3-yl)-2-(trifluoromethyl)benzamide], a novel inhibitor of human microsomal prostaglandin E synthase-1, on prostanoid biosynthesis in human monocytes in vitro. *Biochem Pharmacol*. 2010; 79(7): 974-81.
2. Biava M, Porretta GC, Poce G, Battilocchio C, Manetti F, Botta M, Forli S, Sautebin L, Rossi A, Pergola C, Ghelardini C, Galeotti N, Makovec F, Giordani A, Anzellotti P, **Patrignani P**, Anzini M. Novel ester and acid derivatives of the 1,5-diarylpyrrole scaffold as anti-inflammatory and analgesic agents. Synthesis and in vitro and in vivo biological evaluation. *J Med Chem*. 2010; 53(2): 723-33.
3. **Patrignani P**, Tacconelli S, Bruno A. Grand challenges in pharmacotherapy of inflammation for the first decades of the 21st century. *Front Pharmacol*. 2010; 1: 2.
4. Ricciotti E, Dovizio M, Di Francesco L, Anzellotti P, Salvatore T, Di Francesco A, Sciulli MG, Pistritto G, Monopoli A, **Patrignani P**. NCX 4040, a nitric oxide-donating aspirin, exerts anti-inflammatory effects through inhibition of I kappa B-alpha degradation in human monocytes. *J Immunol*. 2010; 184(4): 2140-7.
5. Massó González EL\*, **Patrignani P\***, Tacconelli S, García Rodríguez LA. Variability among nonsteroidal antiinflammatory drugs in risk of upper gastrointestinal bleeding. *Arthritis Rheum*. 2010; 62(6): 1592-601. (\*equal contribution)
6. Bueno H, Bardají A, **Patrignani P**, Martín-Merino E, García-Rodríguez LA; Spanish Case-Control Study to Assess NSAID-Associated ACS Risk Investigators. Use of non-steroidal antiinflammatory drugs and type-specific risk of acute coronary syndrome. *Am J Cardiol*. 2010; 105(8): 1102-6.
7. Capone ML, Tacconelli S, Rodriguez LG, **Patrignani P**. NSAIDs and cardiovascular disease: transducing human pharmacology results into clinical read-outs in the general population. *Pharmacol Rep*. 2010; 62(3): 530-5.
8. **Patrignani P**. Extraction and measurement of prostanoids and isoprostanes: Introduction to Part II. *Methods Mol Biol*. 2010; 644: 147-52.

9. Tacconelli S, Capone ML, **Patrignani P**. Measurement of 8-iso-prostaglandin F2alpha in biological fluids as a measure of lipid peroxidation. *Methods Mol Biol*. 2010; 644: 165-78.
10. Anzellotti P, Capone ML, Jeyam A, Tacconelli S, Bruno A, Tontodonati P, Di Francesco L, Grossi L, Renda G, Merciaro G, Di Gregorio P, Price TS, Garcia Rodriguez LA, **Patrignani P**. Low-dose naproxen interferes with the antiplatelet effects of aspirin in healthy subjects: recommendations to minimize the functional consequences. *Arthritis Rheum*. 2011; 63(3): 850-9.
11. Biava M, Porretta GC, Poce G, Battilocchio C, Botta M, Manetti F, Rovini M, Cappelli A, Sautebin L, Rossi A, Pergola C, Ghelardini C, Galeotti N, Makovec F, Giordani A, Anzellotti P, Tacconelli S, **Patrignani P**, Anzini M. Enlarging the NSAIDs family: ether, ester and acid derivatives of the 1,5-diarylpyrrole scaffold as novel anti-inflammatory and analgesic agents. *Curr Med Chem*. 2011; 18(10): 1540-54.
12. Biava M, Porretta GC, Poce G, Battilocchio C, Alfonso S, Rovini M, Valenti S, Giorgi G, Calderone V, Martelli A, Testai L, Sautebin L, Rossi A, Papa G, Ghelardini C, Di Cesare Mannelli L, Giordani A, Anzellotti P, Bruno A, **Patrignani P**, Anzini M. Novel analgesic/anti-inflammatory agents: diarylpyrrole acetic esters endowed with nitric oxide releasing properties. *J Med Chem*. 2011; 54(22): 7759-71.
13. Tang WH, Stitham J, Gleim S, Di Febbo C, Porreca E, Fava C, Tacconelli S, Capone M, Evangelista V, Levantesi G, Wen L, Martin K, Minuz P, Rade J, **Patrignani P**, Hwa J. Glucose and collagen regulate human platelet activity through aldose reductase induction of thromboxane. *J Clin Invest*. 2011; 121(11): 4462-76.
14. **Patrignani P**, Tacconelli S, Bruno A, Sostres C, Lanas A. Managing the adverse effects of nonsteroidal anti-inflammatory drugs. *Expert Rev Clin Pharmacol*. 2011; 4(5): 605-21.
15. Dovizio M, Tacconelli S, Sostres C, Ricciotti E, **Patrignani P**. Mechanistic and pharmacological issues of aspirin as an anticancer agent. *Pharmaceuticals (Basel)*. 2012;5(12):1346-71.
16. Cesari M, Kritchevsky SB, Nicklas B, Kanaya AM, **Patrignani P**, Tacconelli S, Tranah GJ, Rognoni G, Harris TB, Antonelli Incalzi R, Newman AB, Pahor M, for the Health ABC study. *J Gerontol A Biol Sci Med Sci*. 2012;67A(6):671-676.
17. Dovizio M, Tacconelli S, Ricciotti E, Bruno A, Maier TJ, Anzellotti P, Di Francesco L, Sala P, Signoroni S, Bertario L, Dixon DA, Lawson JA, Steinhilber D, FitzGerald GA, **Patrignani P**. Effects of celecoxib on prostanoid biosynthesis and circulating angiogenesis proteins in familial adenomatous polyposis. *J Pharmacol Exp Ther*. 2012;341(1):242-50.
18. Marcantoni E, Di Francesco L, Totani L, Piccoli A, Evangelista V, Tacconelli S, **Patrignani P**. Effects of estrogen on endothelial prostanoid production and cyclooxygenase-2 and heme oxygenase-1 expression. *Prostaglandins Other Lipid Mediat*. 2012 Feb 6. [Epub ahead of print].
19. **Patrignani P**, Dovizio M. Inside platelet-leukocyte cross-talk. *Blood*. 2012;119(16):3649-50.
20. Marcantoni E, Di Francesco L, Dovizio M, Bruno A, **Patrignani P**. Novel insights into the vasoprotective role of heme oxygenase-1. *Int J Hypertens*. 2012; 2012: Article ID 127910.
21. Bruno A, Dovizio M, Tacconelli S, **Patrignani P**. Mechanisms of the antitumoural effects of aspirin in the gastrointestinal tract. *Best Pract Res Clin Gastroenterol*. 2012;26(4):e1-e13.
22. Biava M, Battilocchio C, Poce G, Alfonso S, Consalvi S, Porretta GC, Schenone S, Calderone V, Martelli A, Testai L, Ghelardini C, Di Cesare Mannelli L, Sautebin L, Rossi A, Giordani A, **Patrignani P**, Anzini M. Improving the solubilità of a new class of antiinflammatory pharmacodynamic hybrids, that release nitric oxide and inhibit cyclooxygenase-2 isoenzyme. *Eur J Med Chem*. 2012;58:287-98.
23. Antonilli L, De Carolis L, Brusadin V, Togna AR, Dovizio M, Togna GI, **Patrignani P**, Nencini P. Repeated exposure to codeine alters morphine glucuronidation by affecting UGT gene expression in the rat. *Eur J Pharmacol*. 2012;693(1-3):7-14.
24. Garcia Rodriguez LA, Cea-Soriano L, Tacconelli S, **Patrignani P**. Coxibs: pharmacology, toxicity and efficacy in cancer clinical trials. *Recent Results Cancer Res*. 2013;191:67-93.
25. Dovizio M, Bruno A, Tacconelli S, **Patrignani P**. Mode of action of aspirin as a chemopreventive agent. *Recent Results Cancer Res*. 2013;191:39-65.
26. Dixon DA, Blanco FF, Bruno A, **Patrignani P**. Mechanistic aspects of COX-2 expression in colorectal neoplasia. *Recent Results Cancer Res*. 2013;191:7-37.
27. Milaneschi Y, Cesari M, Simonsick EM, Vogelzangs N, Kanaya AM, Yaffe K, **Patrignani P**, Metti A, Kritchevsky SB, Pahor M, Ferrucci L, Penninx BW; Health ABC study. Lipid peroxidation and depressed mood in community-dwelling older men and women. *PLoS One*. 2013;8(6):e65406.
28. Maenthaisong R, Tacconelli S, Sritara P, Del Boccio P, Di Francesco L, Sacchetta P, Archararit N, Aryurachai K, **Patrignani P**, Suthisisang C. Clinical pharmacology of cyclooxygenase inhibition and pharmacodynamic interaction with aspirin by floctafenine in Thai healthy subjects. *Int J Immunopathol Pharmacol*. 2013;26(2):403-17.
29. Battilocchio C, Poce G, Alfonso S, Porretta GC, Consalvi S, Sautebin L, Pace S, Rossi A, Ghelardini C, Di Cesare Mannelli L, Schenone S, Giordani A, Di Francesco L, **Patrignani P**, Biava M. A class of pyrrole derivatives endowed with analgesic/anti-inflammatory activity. *Bioorg Med Chem*. 2013;21(13):3695-701.



30. Vitale P, Tacconelli S, Perrone MG, Malerba P, Simone L, Scilimati A, Lavecchia A, Dovizio M, Marcantoni E, Bruno A, **Patrignani P**. Synthesis, pharmacological characterization, and docking analysis of a novel family of diarylisoaxazoles as highly selective cyclooxygenase-1 (COX-1) inhibitors. *J Med Chem*. 2013;56(11):4277-99.
31. Dovizio M, Maier TJ, Alberti S, Di Francesco L, Marcantoni E, Münch G, John CM, Suess B, Sgambato A, Steinhilber D, **Patrignani P**. Pharmacological inhibition of platelet-tumor cell cross-talk prevents platelet-induced overexpression of cyclooxygenase-2 in HT29 human colon carcinoma cells. *Mol Pharmacol*. 2013;84(1):25-40.
32. Anzini M, Di Capua A, Valenti S, Brogi S, Rovini M, Giuliani G, Cappelli A, Vomero S, Chiasserini L, Sega A, Poce G, Giorgi G, Calderone V, Martelli A, Testai L, Sautebin L, Rossi A, Pace S, Ghelardini C, Di Cesare Mannelli L, Benetti V, Giordani A, Anzellotti P, Dovizio M, **Patrignani P**, Biava M. Novel analgesic/anti-inflammatory agents: 1,5-diarylpyrrole nitrooxyalkyl ethers and related compounds as cyclooxygenase-2 inhibiting nitric oxide donors. *J Med Chem*. 2013;56(8):3191-206.
33. Martelli A, Testai L, Anzini M, Cappelli A, Di Capua A, Biava M, Poce G, Consalvi S, Giordani A, Caselli G, Rovati L, Ghelardini C, **Patrignani P**, Sautebin L, Breschi MC, Calderone V. The novel anti-inflammatory agent VA694, endowed with both NO-releasing and COX(2)-selective inhibiting properties, exhibits NO-mediated positive effects on blood pressure, coronary flow and endothelium in an experimental model of hypertension and endothelial dysfunction. *Pharmacol Res*. 2013;78C:1-9.
34. Togna AR, Antonilli L, Dovizio M, Salemme A, De Carolis L, Togna GI, **Patrignani P**, Nencini P. In vitro morphine metabolism by rat microglia. *Neuropharmacology*. 2013;75C:391-398.
35. Bruno A, Tacconelli S, **Patrignani P**. Variability in the Response to Non-Steroidal Anti-Inflammatory Drugs: Mechanisms and Perspectives. *Basic Clin Pharmacol Toxicol*. 2014;114(1):56-63.
36. Dovizio M, Alberti S, Guillem-Llobat P, **Patrignani P**. Role of Platelets in Inflammation and Cancer: Novel Therapeutic Strategies. *Basic Clin Pharmacol Toxicol*. 2014;114(1):118-27.
37. Coxib and traditional NSAID Trialists' (CNT) Collaboration, Bhala N, Emberson J, Merhi A, Abramson S, Arber N, Baron JA, Bombardier C, Cannon C, Farkouh ME, FitzGerald GA, Goss P, Halls H, Hawk E, Hawkey C, Hennekens C, Hochberg M, Holland LE, Kearney PM, Laine L, Lanus A, Lance P, Laupacis A, Oates J, Patrono C, Schnitzer TJ, Solomon S, Tugwell P, Wilson K, Wittes J, Baigent C. Collaborators: Adelowo O, Aisen P, Al-Quorain A, Altman R, Bakris G, Baumgartner H, Bresee C, Carducci M, Chang DM, Chou CT, Clegg D, Cudkowicz M, Doody L, El Miedany Y, Falandry C, Farley J, Ford L, García-Losa M, González-Ortiz M, Haghighi M, Hála M, Iwama T, Jajić Z, Kerr D, Kim HS, Köhne C, Koo BK, Martin B, Meinert C, Müller N, Myklebust G, Neustadt D, Omdal R, Ozgocmen S, Papas A, **Patrignani P**, Pelliccia F, Roy V, Schlegelmilch I, Umar A, Wahlström O, Wollheim F, Yocum S, Zhang XY, Hall E, McGettigan P, Midgley R, Moore RA, Philipson R, Curtis S, Reicin A, Bond J, Moore A, Essex M, Fabule J, Morrison B, Tive L, Baigent C, Bhala N, Davies K, Emberson J, Halls H, Holland LE, Kearney PM, Merhi A, Patrono C, Wilson K, Yau F. Vascular and upper gastrointestinal effects of non-steroidal anti-inflammatory drugs: meta-analyses of individual participant data from randomised trials. *Lancet*. 2013;382:769-79.
38. Biava M, Battilocchio C, Poce G, Alfonso S, Consalvi S, Di Capua A, Calderone V, Martelli A, Testai L, Sautebin L, Rossi A, Ghelardini C, Di Cesare Mannelli L, Giordani A, Persiani S, Colovic M, Dovizio M, **Patrignani P**, Anzini M. Enhancing the pharmacodynamic profile of a class of selective COX-2 inhibiting nitric oxide donors. *Bioorg Med Chem*. 2014;22(2):772-86.
39. Guillem-Llobat P, Dovizio M, Alberti S, Bruno A, **Patrignani P**. Platelets, cyclooxygenases, and colon cancer. *Semin Oncol*. 2014;41(3):385-96.
40. **Patrignani P**, Tacconelli S, Piazzuelo E, Di Francesco L, Dovizio M, Sostres C, Marcantoni E, Guillem-Llobat P, Del Boccio P, Zucchelli M, Patrono C, Lanus A. Reappraisal of the clinical pharmacology of low-dose aspirin by comparing novel direct and traditional indirect biomarkers of drug action. *J Thromb Haemost*. 2014;12(8):1320-3.
41. **Patrignani P**, Tacconelli S, Bruno A. Gut microbiota, host gene expression, and aging. *J Clin Gastroenterol*. 2014;48 Suppl 1:S28-31.
42. Tacconelli S, **Patrignani P**. Inside epoxyeicosatrienoic acids and cardiovascular disease. *Front Pharmacol*. 2014;5:239.
43. **Patrignani P**, Patrono C. Cyclooxygenase inhibitors: From pharmacology to clinical read-outs. *Biochim Biophys Acta*. 2015;1851(4):422-432.
44. Brune K, **Patrignani P**. New insights into the use of currently available non-steroidal anti-inflammatory drugs. *J Pain Res*. 2015;8:105-18.
45. Marcantoni E, Dovizio M, O Gaora P, Di Francesco L, Bendaya I, Schiavone S, Trenti A, Guillem-Llobat P, Zambon A, Nardelli GB, Trevisi L, **Patrignani P**, Belton O. Dysregulation of gene expression in human fetal endothelial cells from gestational diabetes in response to TGF- $\beta$ 1. *Prostaglandins Other Lipid Mediat*. 2015 Mar 26. pii: S1098-8823(15)00030-1. doi: 10.1016/j.prostaglandins.2015.03.004. [Epub ahead of print]

46. Di Francesco L, López Contreras LA, Sacco A, **Patrignani P**. New insights into the mechanism of action of aspirin in the prevention of colorectal neoplasia. *Curr Pharm Des*. 2015;21(35):5116-26.
47. Di Francesco L, Dovizio M, Trenti A, Marcantoni E, Moore A, O'Gaora P, McCarthy C, Tacconelli S, Bruno A, Alberti S, Gizzo S, Nardelli GB, Orso G, Belton O, Trevisi L, Dixon DA, **Patrignani P**. Dysregulated post-transcriptional control of COX-2 gene expression in gestational diabetic endothelial cells. *Br J Pharmacol*. 2015; 172(18): 4575–4587.
48. **Patrignani P**, Dovizio M. COX-2 and EGFR: Partners in Crime Split by Aspirin. *EBioMedicine*. 2015;2:372-3..
49. Xiao B, Gu SM, Li MJ, Li J, Tao B, Wang Y, Wang Y, Zuo S, Shen Y, Yu Y, Chen D, Chen G, Kong D, Tang J, Liu Q, Chen DR, Liu Y, Alberti S, Dovizio M, Landolfi R, Mucci L, Miao PZ, Gao P, Zhu DL, Wang J, Li B, **Patrignani P**, Yu Y. Rare SNP rs12731181 in the miR-590-3p Target Site of the Prostaglandin F2 $\alpha$  Receptor Gene Confers Risk for Essential Hypertension in the Han Chinese Population. *Arterioscler Thromb Vasc Biol*. 2015;35:1687-95.
50. Altman R, Bosch B, Brune K, **Patrignani P**, Young C. Advances in NSAID development: evolution of diclofenac products using pharmaceutical technology. *Drugs*. 2015;75:859-77.
51. Dovizio M, Alberti S, Sacco A, Guillem-Llobat P, Schiavone S, Maier TJ, Steinhilber D, **Patrignani P**. Novel insights into the regulation of cyclooxygenase-2 expression by platelet-cancer cell cross-talk. *Biochem Soc Trans*. 2015;43(4):707-14.
52. Olesch C, Sha W, Angioni C, Sha LK, Açaf E, **Patrignani P**, Jakobsson PJ, Radeke HH, Grösch S, Geisslinger G, von Knethen A, Weigert A, Brüne B. MPGES-1-derived PGE2 suppresses CD80 expression on tumor-associated phagocytes to inhibit anti-tumor immune responses in breast cancer. *Oncotarget*. 2015;6(12):10284-96.
53. Guillem-Llobat P, Dovizio M, Bruno A, Ricciotti E, Cufino V, Sacco A, Grande R, Alberti S, Arena V, Cirillo M, Patrono C, FitzGerald GA, Steinhilber D, Sgambato A, **Patrignani P**. Aspirin prevents colorectal cancer metastasis in mice by splitting the crosstalk between platelets and tumor cells. *Oncotarget*. 2016;7(22):32462-77.
54. **Patrignani P**, Dovizio M. Time for Integrating Clinical, Lifestyle and Molecular Data to Predict Drug Responses. *EBioMedicine*. 2016;7:9-10.
55. **Patrignani P**, Patrono C. Aspirin and Cancer. *J Am Coll Cardiol*. 2016;68(9):967-76.
56. Dovizio M, Sacco A, **Patrignani P**. Curbing tumorigenesis and malignant progression through the pharmacological control of the wound healing process. *Vascul Pharmacol*. 2017;89:1-11.
57. **Patrignani P**, Sacco A, Sostres C, Bruno A, Dovizio M, Piazzuelo E, Di Francesco L, Contursi A, Zucchelli M, Schiavone S, Tacconelli S, Patrono C, Lanas A. Low-dose aspirin acetylates cyclooxygenase-1 in human colorectal mucosa: implications for the chemoprevention of colorectal cancer. *Clin Pharmacol Ther*. 2017 Jan 31. doi: 10.1002/cpt.639. [Epub ahead of print]
58. Contursi A, Sacco A, Grande R, Dovizio M, **Patrignani P**. Platelets as crucial partners for tumor metastasis: from mechanistic aspects to pharmacological targeting. *Cell Mol Life Sci*. 2017 May 9. doi: 10.1007/s00018-017-2536-7. [Epub ahead of print]
59. Schiavone S, Contursi A, Grande R, **Patrignani P**. Therapeutic targeting of dysregulated cellular communication. *Ann.Transl. Med* 2017;5(10):222.
60. Tacconelli S, Bruno A, Grande R, Ballerini P, **Patrignani P**. Nonsteroidal anti-inflammatory drugs and cardiovascular safety - translating pharmacological data into clinical readouts. *Expert Opin Drug Saf*. 2017;16(7):791-807.
61. Ballerini P, Dovizio M, Bruno A, Tacconelli S, **Patrignani P**. P2Y<sub>12</sub> Receptors in Tumorigenesis and Metastasis. *Front Pharmacol*. 2018; 9:66.
62. Tacconelli S, Dovizio M, Di Francesco L, Meneguzzi A, D'Agostino I, Evangelista V, Manarini S, Capone ML, Grossi L, Porreca E, Di Febbo C, Bruno A, Ballerini P, Levantesi G, Fava C, Minuz P, **Patrignani P**. Reduced variability to aspirin antiplatelet effect by the coadministration of statins in high-risk patients for cardiovascular disease. *Clin Pharmacol Ther*. 2018; 104(1): 111-119.
63. **Patrignani P**, Patrono C. Aspirin, platelet inhibition and cancer prevention. *Platelets*. 2018; 9:1-7.
64. Dovizio M, Bruno A, Contursi A, Grande R, **Patrignani P**. Platelets and extracellular vesicles in cancer: diagnostic and therapeutic implications. *Cancer Metastasis Rev*. 2018 May 31. doi: 10.1007/s10555-018-9730-4.
65. Bruno A, Dovizio M, Tacconelli S, Contursi A, Ballerini P, **Patrignani P**. Antithrombotic Agents and Cancer. *Cancers (Basel)*. 2018;10(8). doi: 10.3390/cancers10080253.
66. Contursi A, Grande R, Dovizio M, Bruno A, Fullone R, **Patrignani P**. Platelets in cancer development and diagnosis. *Biochem Soc Trans*. 2018;46(6):1517-1527.
67. Grande R, Dovizio M, Marcone S, Szklanna PB, Bruno A, Ebhardt HA, Cassidy H, Ní Áinle F, Caprodossi A, Lanuti P, Marchisio M, Mingrone G, Maguire PB, **Patrignani P**. Platelet-Derived Microparticles From Obese

- Individuals: Characterization of Number, Size, Proteomics, and Crosstalk With Cancer and Endothelial Cells. *Front Pharmacol*. 2019; 10:7. doi:10.3389/fphar.2019.00007.
68. Saul MJ, Baumann I, Bruno A, Emmerich AC, Wellstein J, Ottinger SM, Contursi A, Dovizio M, Donnini S, Tacconelli S, Raouf J, Idborg H, Stein S, Korotkova M, Savai R, Terzuoli E, Sala G, Seeger W, Jakobsson PJ, **Patrignani P**, Suess B, Steinhilber D. miR-574-5p as RNA decoy for CUGBP1 stimulates human lung tumor growth by mPGES-1 induction. *FASEB J*. 2019;33(6):6933-6947.
  69. Sacco A, Bruno A, Contursi A, Dovizio M, Tacconelli S, Ricciotti E, Guillem-Llobat P, Salvatore T, Di Francesco L, Fullone R, Ballerini P, Arena V, Alberti S, Liu G, Gong Y, Sgambato A, Patrono C, FitzGerald GA, Yu Y, **Patrignani P**. Platelet-Specific Deletion of Cyclooxygenase-1 Ameliorates Dextran Sulfate Sodium-Induced Colitis in Mice. *J Pharmacol Exp Ther*. 2019;370(3):416-426.
  70. Walker J, Cattaneo M, Badimon L, Agnelli G, Chan AT, Lanas A, Rocca B, Rothwell P, **Patrignani P**, Langley R, Vilahur G, Cosentino F1. Highlights from the 2019 International Aspirin Foundation Scientific Conference, Rome, 28 June 2019: benefits and risks of antithrombotic therapy for cardiovascular disease prevention *Ecanermedicalscience*. 2020;14:998.
  71. Di Francesco L\*, Bruno A\*, Ricciotti E\*, Tacconelli S, Dovizio M, Guillem-Llobat P, Alisi MA, Garrone B, Coletta I, Mangano G, Milanese C, FitzGerald GA, **Patrignani P**. Pharmacological characterization of the microsomal prostaglandin E2 synthase-1 inhibitor AF3485 in vitro and in vivo. *Frontiers in Pharmacology* 2020 in press. \*equal contribution