

Section A: PERSONAL INFORMATION

Family name, First name: **Gargaro Marco**

Researcher unique identifier(s): ORCID: **0000-0003-0645-9800**; Research ID: **K-7077-2016**;
Scopus ID: **56081897100**;

Date of birth: 31 January 1985 Nationality: Italian

URL for web site: <https://www.scopus.com/authid/detail.uri?authorId=56081897100>

A1. EDUCATION

- 2012-2015 **Ph.D.** Doctorate school in Biology and Experimental Medicine.
Thesis Defense: "*Aryl hydrocarbon receptor and tryptophan catabolism drive endotoxin tolerance*".
PhD Supervisor: Prof. Paolo Puccetti.
Department of Experimental Medicine, University of Perugia, Italy
- 2015 **License to practice as a Biologist;**
- 2010-2012 **Master's Degree** Pharmaceutical Biotechnology (University of Perugia, Italy).
Thesis Defense: "*Impaired IDO1 induction in severe hemophilia A patients with inhibitors*" under the supervision of Professor Francesca Fallarino; Graduated with honor.
- 2006-2010 **Bachelor's Degree** *Biotechnology* (University of Perugia, Italy).
Thesis Defense: "*An in vivo study on suppressor effect single chain IL-35Ig gene construct*" under the supervision of Professor Maria Laura Belladonna;
- 1999-2004 Agricultural Science-Oriented Preparatory School (Alvito, Fr).

A2. CURRENT POSITION(S)

- 2024 –present Associate Professor of Pharmacology, Department of Pharmaceutical Science, University of Perugia, Italy;

A3. NATIONAL SCIENTIFIC HABILITATION (ASN)

- 2019-2030 Associate Professor national eligibility in Pharmacology.
2021-2032 Associate Professor national eligibility in Pathology.
2021-2032 Associate Professor national eligibility in Molecular Biology.

A4. PREVIOUS POSITIONS

- 2023 Assistant Professor of Pharmacology (**RTD-B**), Department of Medicine and Surgery, University of Perugia, Italy;
- 2022 Assistant Professor of Pharmacology (**RTD-A**), Department of Medicine and Surgery, University of Perugia, Italy;
- 2022 Coordinated and continuing collaboration (Co.co.co) for the project "Evaluation of novel compounds in a mouse model of LPS-Induced inflammation", Department of Medicine and Surgery, University of Perugia, Italy;
- 2016 – 2021 Assistant Professor of Pharmacology (**RTD-A**), Department of Medicine and Surgery, University of Perugia, Italy;
- 2018 Visiting Associate Researcher. Washington University in St. Louis, St. Louis (USA) (Prof. Kenneth Murphy);
- 2015 – 2017 Postdoctoral Research Fellow, on cDCs development and tumor immunotherapy,

- 2012 Washington University in St. Louis, St. Louis (USA) (Prof. Kenneth Murphy);
Research Trainee. I.R.C.C.S Mediterranean Neurological Institute – Neuromed.
Pozzilli, (Italy) (Prof. Ferdinando Nicoletti).

A5. FELLOWSHIPS AND AWARDS

- 2017 **SIF Award to the best poster presentation** - honored at the SIF meeting for
“Protective role of conventional dendritic cells in experimental model of sepsis”;
- 2016 **Space Prize to the best scientific publication on immune response**-honored at the
annual SIICA meeting for “Aryl hydrocarbon receptor control of a disease tolerance
defence pathway”, Gargaro M. et al., Nature, 10;511(7508):184-90, 2014;
- 2015 **Post-Doctoral Fellowship issued from Italian Society of Pharmacology** thanks to the
contribution of Merck Italy, in the name and for Merck Sharp & Dohme Corporation,
honored at the SIF meeting;
- 2015 **Farindustria National Research Award to the best scientific paper by an Italian
scientist in 2014**- honored at the SIF meeting (October 2015) for “Aryl hydrocarbon
receptor control of a disease tolerance defence pathway Italian”, Gargaro M. et al.,
Nature, 10;511(7508):184-90, 2014.

A6. SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Supervision of 24 Bachelor's and 11 Master's students from 2016 to present

Ph.D supervision:

- 2020 –present Giulia Mencarelli, University of Perugia, Department of Medicine and Surgery, Italy.
2021 –present Doriana Ricciuti, University of Perugia, Department of Medicine and Surgery, Italy.
2023 –present Alessandro Pinzi, University of Perugia, Department of Medicine and Surgery, Italy.

Post Doc supervision:

- 2023 –present Estevão Carlos Silva Barcelos, University of Perugia, Department of Medicine and
Surgery, Italy.

A7. TEACHING ACTIVITIES

- 2023 – present Lecturer–Corso formazione in materia di protezione degli animali utilizzati a fini
scientifici (Aut. 988/2023-PR):
Modulo 3.2 - Biologia appropriata di base e adeguata - specifico per specie;
Modulo 6.2 - Metodi umanitari di soppressione;
Modulo 8 - Procedure minimamente invasive senza anestesia - specifico per specie.
- 2023 – present Lecturer–General Pharmacology. Science in Nursing BSc course, University of
Perugia, Italy;
- 2023 – present Lecturer–Innovative Therapies in Pharmacology. Chemistry and Pharmaceutical
Technologies Master course, University of Perugia, Italy;
- 2022 – present Lecturer–Toxicology. Pharmacy Master course, University of Perugia, Italy;
- 2021 – present Lecturer–Basic and Molecular Genetics of Biodrugs. Pharmaceutical Biotechnology
Master course, University of Perugia, Italy;
- 2020 – present Lecturer– Applied Molecular Pharmacology. Biotechnology BSc course, University
of Perugia, Italy;
- 2020 – present Lecturer– Advanced Immunology. Ph.D. program in “Systems Biology in Immunity
and Infectious Pathologies”;

A8. INSTITUTIONAL RESPONSIBILITIES

- 2024 – present Animal Welfare Officer of the Pre-Clinical Research Services Center (CESERP), University of Perugia, Italy;
- 2024 – present Faculty member, Department of Pharmaceutical Sciences, University of Perugia, Italy;
- 2020 – present Member of the Faculty Board of the PhD Program in Inflammatory and Infectious Diseases, Therapeutic Strategies, and Bioethics;
- 2018 – 2022 Faculty member, Department of Medicine and Surgery, University of Perugia, Italy;
- 2018 – present Graduate Student Advisor in Immunopharmacology University of Perugia, Italy;

A9. REVIEWING ACTIVITIES**Reviewer of manuscripts:**

- 2021 – present Frontiers in Immunology;
- 2019 – present PLOSE ONE;
- 2018 – present Cancers (MDPI, Molecular Diversity Preservation International and Multidisciplinary Digital Publishing Institute);
- 2018 – present Scientific Report (Nature Group).

Editorial board position:

- 2024 – present Associate Editor role in Molecular Diagnostics and Therapeutics (specialty section of Frontiers in Molecular Biosciences)
- 2022 – 2023 Topic Editor in Springer Nature;
- 2022 – present Topic Editor in Cancers;
- 2021 – present Topic Editor in Frontiers in Pharmacology;
- 2021 – present Review Editor in Frontiers in Immunological Tolerance and Regulation;
- 2021 – present Review Editor in Frontiers in Brain Disease Mechanisms;
- 2019 – present Review Editor in Frontiers in Molecular Neuroscience;

A10. MEETINGS CONTRIBUTION AS SPEAKER:

- 2024 Italian Society of Pharmacology (SIF), Evolution of Cancer, Salerno, 15-16 March 2024, “*Enhancing cDC1-Mediated Antitumor Response through Disruption of Aryl Hydrocarbon Receptor's Tumor Microenvironment Sensing*”;
- 2023 IX national Conference of the Italian Society of Immunology, Clinical Immunology and Allergology (SIICA) Verona, 22-25 May 2023, “*Indoleamine 2,3-dioxygenase 1 activation in mature cDC1 promotes tolerogenic education of inflammatory cDC2 via metabolic communication*”;
- 2022 15th Congress in Inflammation (WCI), Rome June 5-8 2022, “*Tolerogenic education of inflammatory cDC2 via activation of tryptophan metabolism in mature cDC1*”;
- 2022 IX national Conference of the Italian Society of Immunology, Clinical Immunology and Allergology (SIICA) Naples, 23-26 May 2022, “*Targeting of aryl hydrocarbon receptor in type 1 conventional dendritic cells fosters anti-tumor immunity*”;
- 2021 I^o National Conference of Immunopharmacology Perugia, November 24-26, 2021, “*AhR deletion in type 1 dendritic cells restrains antitumor responses*”;
- 2019 39^o National Conference of the Italian Society of Pharmacology Florence, November 20-23, 2019, “*AhR gene editing in type 1 dendritic cells improves tumor regression*”;
- 2018 AAI Annual Immunology Meeting May 04-08, Austin, TX, “*A novel kynurenine-dependent circuit in DC1 promote IDO1 expression in DC2 leading to experimental*”

- 2017 *autoimmune encephalomyelitis suppression*”;
38° National Conference of the Italian Society of Pharmacology Rimini, October 25-28, “*L-Kynurenine modulates dendritic cell subsets activity and central nervous system inflammation via relb and aryl hydrocarbon receptor*”;
- 2014 IX national Conference of the Italian Society of Immunology, Clinical Immunology and Allergology (SIICA) Florence 28-31 May 2014, “*The Aryl Hydrocarbon Receptor and RelB controls long term expression of Indoleamine 2,3-dioxygenase-1 in splenic dendritic cells*”;
- 2014 World Immune Regulation Meeting VIII (WIRM) 14-22 MARCH DAVOS, “*The combined action of Aryl Hydrocarbon Receptor and RelB controls long term expression of Indoleamine 2,3-dioxygenase-1 in splenic dendritic cells*”.

A11. INVITED SPEAKER:

- 2023 Perugia, 03-04 Novembre 2023, Perugia V.A.S.I., Vasculopatie aterosclerotiche a sfondo internistico, III^a Edizione – “*Iperimmunità e tolleranza: un equilibrio omeostatico delicato*”;
- 2023 Gubbio, 20 Gennaio 2023, “È la sera dei miracoli - Itinerari notturni tra scienza e tecnologia”- *Editing genetico: un nuovo strumento per costruire biofarmaci genetici contro le patologie tumorali*;
- 2023 Foligno, 20-23 Aprile 2023, XII Festa di Scienza e Filosofia-Virtute e Canoscenza - *Le cellule dendritiche: sentinelle nella lotta contro i tumori*.

A12. GRANTS

As principal investigator:

- 2023: ERC Starting Grant 2022: “Breaking oncometabolites dynamics for next-generation dendritic cells tumor immunotherapy (REACT-DC)”;
- 2020-present: Ricerca di Base dell’Ateneo 2019: “Identification of the role of HOPS in antitumor immunity mediated by dendritic cells”.

Section C. RELEVANT PUBLICATIONS

Marco Gargaro has published **67 articles**, appearing in the Scopus database (search performed on May 2023) of which: **13 as main author** (e.g. first, co-first or last), **7 as second** and **47 as co-author**. His total **citations** are **2067** and his **H index** amounts to **26**.

1. *Immunity*. 2022 Jun 14;55(6):1032-1050.e14. doi: 10.1016/j.immuni.2022.05.013. Indoleamine 2,3-dioxygenase 1 activation in mature cDC1 promotes tolerogenic education of inflammatory cDC2 via metabolic communication. **Gargaro M**, Scalisi G, Manni G, Briseño CG, Bagadia P, Durai V, Theisen DJ, Kim S, Castelli M, Xu CA, Zu Hörste GM, Servillo G, Della Fazia MA, Mencarelli G, Ricciuti D, Padiglioni E, Giacchè N, Colliva C, Pellicciari R, Calvitti M, Zelante T, Fuchs D, Orabona C, Boon L, Bessede A, Colonna M, Puccetti P, Murphy TL, Murphy KM, Fallarino F.
2. *Front Immunol*. 2020 Mar 11;11:292. doi: 10.3389/fimmu.2020.00292. Pharmacologic Induction of Endotoxin Tolerance in Dendritic Cells by L-Kynurenine. Manni G, Mondanelli G, Scalisi G, Pallotta MT, Nardi D, Padiglioni E, Romani R, Talesa VN, Puccetti P, Fallarino F, **Gargaro M**.

3. *Nat Immunol.* 2019 Sep;20(9):1174-1185. doi: 10.1038/s41590-019-0449-3. An Nfil3-Zeb2-Id2 pathway imposes Irf8 enhancer switching during cDC1 development. Bagadia P, Huang X, Liu TT, Durai V, Grajales-Reyes GE, Nitschké M, Modrusan Z, Granja JM, Satpathy AT, Briseño CG, **Gargaro M**, Iwata A, Kim S, Chang HY, Shaw AS, Murphy TL, Murphy KM.
4. *Science.* 2018 Nov 9;362(6415):694-699. doi: 10.1126/science.aat5030. WDFY4 is required for cross-presentation in response to viral and tumor antigens. Theisen DJ, Davidson JT 4th, Briseño CG, **Gargaro M**, Lauron EJ, Wang Q, Desai P, Durai V, Bagadia P, Brickner JR, Beatty WL, Virgin HW, Gillanders WE, Mosammamparast N, Diamond MS, Sibley LD, Yokoyama W, Schreiber RD, Murphy TL, Murphy KM.
5. *J Exp Med.* 2018 May 7;215(5):1417-1435. doi: 10.1084/jem.20171784. Altered compensatory cytokine signaling underlies the discrepancy between Flt3^{-/-} and Flt3l^{-/-} mice. Durai V., Bagadia P., Briseño CG, Theisen DJ., Iwata A., Davidson JT. 4th, **Gargaro M.**, Fremont DH., Murphy TL., Murphy KM.
6. *Proc Natl Acad Sci U S A.* 2017 Apr 11;114(15):3957-3962. doi: 10.1073/pnas.1619863114. Deficiency of transcription factor RelB perturbs myeloid and DC development by hematopoietic-extrinsic mechanisms. Briseño CG., **Gargaro M.**, Durai V., Davidson JT., Theisen DJ., Anderson DA 3rd., Novack DV., Murphy TL., Murphy KM.
7. *Nature.* 2014 Jul 10;511(7508):184-90. doi: 10.1038/nature13323. Aryl hydrocarbon receptor control of a disease tolerance defence pathway. Bessede A.*, **Gargaro M.***, Pallotta MT., Matino D., Servillo G., Brunacci C., Bicciato S., Mazza EM., Macchiarulo A., Vacca C., Iannitti R., Tissi L., Volpi C., Belladonna ML., Orabona C., Bianchi R., Lanz TV., Platten M., Della Fazio MA., Piobbico D., Zelante T., Funakoshi H., Nakamura T., Gilot D., Denison MS., Guillemin GJ., DuHadaway JB., Prendergast GC., Metz R., Geffard M., Boon L., Pirro M., Iorio A., Veyret B., Romani L., Grohmann U., Fallarino F., Puccetti P. *These authors contributed equally to this work.

Il sottoscritto **Marco Gargaro** dichiara che tutti i fatti riportati nel presente curriculum corrispondono a verità ai sensi e per gli effetti degli artt. 46 e 47 del D.P.R. 445/2000.

Il sottoscritto dichiara di essere a conoscenza delle sanzioni penali cui incorre in caso di dichiarazione mendace o contenente dati non più rispondenti a verità, come previsto dall'art. 76 del D.P.R. 28.12.2000, n. 445.

Il sottoscritto dichiara di essere a conoscenza dell'art. 75 del D.P.R. 28.12.2000, n. 445, relativo alla decadenza dai benefici eventualmente conseguenti al provvedimento emanato, qualora l'Amministrazione, a seguito di controllo, riscontri la non veridicità del contenuto della suddetta dichiarazione.

Si allega a tale scopo copia del documento di identità in corso di validità

Perugia, 05/05/2024

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(luogo e data)

Firma

