

| Personal information | |
|-----------------------------|---------------------------|
| Family name / First name | Marina de Bernard |
| Date of birth | 13 ottobre 1969 |
| Email | marina.debernard@unipd.it |
| Tel. | 049/8276309 |

| Education | |
|------------------|---|
| 1998 | Ph.D. (Molecular and Cellular Biology and Pathology) Dept. of Biomedical Sciences, University of Padova, Italy. Supervisor: Prof. Cesare Montecucco |
| 1993 | Master's Degree in Biology (<i>summa cum laude</i>), Dept. of Biomedical Sciences, University of Padova, Italy. Supervisor: Prof. Cesare Montecucco |

| Current position(s) | |
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| 2018-present | Full Professor of General pathology, Dept of Biology, University of Padova, Italy |

| Previous position(s) | |
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| 2010-2018 | Associate Professor of General pathology, Dept. of Biology, University of Padova, Italy |
| 2002-2010 | Assistant Professor of General pathology, Dept. of Biology, University of Padova, Italy |

| Fellowships | |
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| 2000 | Short Term Fellowship, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany |
| 1997-1999 | Long Term Fellowship, University of Padova, Italy |

| Teaching activities | |
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| 2004-2011 | Immunobiotechnology, Master's Degree in Industrial Biotechnologies, University of Padova, Italy |
| 2004-2017 | Immunology, Bachelor's Degree in Molecular Biology, University of Padova, Italy |
| 2011-present | Molecular pathology, Master's Degree in Biology of Health, University of Padova, Italy |
| 2018-present | General pathology and Istopathology, Master's Degree in Biology of Health, University of Padova, Italy |

| Institutional responsibilities | |
|---------------------------------------|---|
| 2005-2013 | Group Leader of the Research Unit of Host-pathogens interaction at the Veneto Institute of Molecular Medicine (VIMM), Padova, Italy |
| 2006-2012 | Faculty, PhD Course in Cell Biology, University of Padova, Italy |
| 2013-2014 | Faculty, PhD Course in Biosciences and Biotechnology, University of Padova, Italy |
| 2014-present | Faculty, PhD Course in Biosciences, University of Padova, Italy |
| 2012-present | Group Leader of the Research Unit of General pathology at the Department of Biology, University of Padova, Italy |
| 2015-present | Member of the Scientific and Resource Committee, Department of Biology, University of Padova, Italy |
| 2019-2023 | Deputy Director of the Department of Biology, University of Padova, Italy |
| 2020-present | Member of the Organizing Committee of a new inter-University (UNIPD-UNIBO) three-year degree course in "Human and Environmental Health" |
| 2024-present | Member of the Scientific Committee of the University of Padua as coordinator of the area Biological sciences |
| 2024-present | - Coordinator of the Department Space Committee |

2024-present- Coordinator of the Scientific Committee for Area 06 and member of the University Scientific Committee

Offices

2016-present Editorial Board, *Frontiers in Immunology*

2016-present Editorial Board, *Frontiers in Microbiology*

2021, 2022, 2023 Member of the Panel for Agence Nationale de la Recherche (France): CE15 - Immunology, Infection and Inflammation

2022 Guest Editor for the Research Topic “Modulation of the immune system by bacteria: from evasion to therapy” published by *Frontiers in Immunology*

Referee for the following Journals: *Cellular Microbiology*, *Blood*, *Helicobacter*, *Immunology Letters*, *Journal of Immunology*, *Journal of Biological Chemistry*, *International Journal of Medical Microbiology*, *PLoS One*, *PLoS Pathogen*, *Vaccine*, *Experimental Cell Research*, *Infection & Immunity*, *Microbial Pathogenesis*, *FEMS Immunology and Medical Microbiology*, *Emerging Microbes and Infection*, *FEMS Microbiology Letters*, *FASEB Journal*, *Journal of Leukocyte Biology*, *International Journal of Medical Microbiology*.

Memberships of scientific societies

2009-present Italian Society of Immunology, Clinical Immunology and Allergology (SIICA)

2021-present European Association for the Study of Diabetes (EASD)

2023-present Italian Society of General Pathology and Translational Medicine

National and International Grants

2004 MIUR, Ministero dell’Istruzione, dell’Università e della Ricerca – Bando per i Progetti di Rilevante Interesse Nazionale

2006 MIUR, Ministero dell’Istruzione, dell’Università e della Ricerca – Bando per i Progetti di Rilevante Interesse Nazionale

2007 Fondazione Berlucci – Bando per Progetti di Ricerca

2008-2015 AIRC-Associazione Italiana Ricerca sul cancro – Bando AIRC Regional Research Grant

2008 Fondazione Cassa di Risparmio di Padova e Rovigo – Bando per Progetti di Ricerca

2009 MIUR, Ministero dell’Istruzione, dell’Università e della Ricerca – Bando per i Progetti di Rilevante Interesse Nazionale

2011 Fondazione Cariplo – Bando Scientific Research in Biomedicine

2014 MIUR-UE-JNPD 2014 – European Research Projects for Cross-Disease Analysis of Pathways Related to Neurodegenerative Disorders

2018 IOV5 x 1000 – Research projects SENIOR

2020 FESR (Fondo Europeo di Sviluppo Regionale) – Bando Ricerca, Sviluppo Tecnologico e Innovazione - L'agricoltura del futuro e gli alimenti funzionali: una sfida per la ricerca e il rilancio del territorio veneto” (F.A.&A.F.)- **Scientific coordinator of 3 WPs involving 7 agrifood companies and 4 research institutions**

2022 MUR, Ministero dell’Università e della Ricerca – Bando per i Progetti di Rilevante Interesse Nazionale

2023 Ministero Imprese e Made in Italy – Fondo Crescita Sostenibile – Accordi di Innovazione

2024 FESR 2021-2027 – Bando per il finanziamento di progetti di ricerca e sviluppo realizzati dalle Reti Innovative Regionali e dai Distretti Industriali - Alimenti funzionali per la salute e benessere:

Innovazione delle materie prime, caratterizzazione delle proteine di origine vegetale e animale, nuovi approcci per la shelf life e packaging più sostenibile – Food-4-Life. **Scientific coordinator of 1 WP involving 5 companies and 4 research institutions**

Relevant publications in major international peer-reviewed journals

Selected papers from 95. All listed papers do not include the PhD supervisor. **Total citations** for M. de Bernard papers: **5561 (Scopus), 8164 (Google Scholar); h-index: 41 (Scopus), h-index: 49 (Google Scholar).** * co-correspondence.

1. Amedei A, Cappon A, Codolo G, Cabrelle A, Polenghi A, Benagiano M, Tasca E, Azzurri A, D'Elios MM, Del Prete G, **de Bernard M**. The neutrophil-activating protein of *Helicobacter pylori* promotes Th1 immune responses. *J Clin Invest*. 2006 Apr;116(4):1092-101.
2. D'Elios MM, Amedei A, Cappon A, Del Prete G, **de Bernard M**. The neutrophil-activating protein of *Helicobacter pylori* (HP-NAP) as an immune modulating agent. *FEMS Immunol Med Microbiol*. 2007 Jul;50(2):157-64.
3. Codolo G, Mazzi P, Amedei A, Del Prete G, Berton G, D'Elios MM, **de Bernard M**. The neutrophil-activating protein of *Helicobacter pylori* down-modulates Th2 inflammation in ovalbumin-induced allergic asthma. *Cell Microbiol*. 2008 Nov;10(11):2355-63. doi: 10.1111/j.1462-5822.2008.01217.x.
4. Calore F, Genisset C, Casellato A, Rossato M, Codolo G, Esposti MD, Scorrano L, **de Bernard M**. Endosome-mitochondria juxtaposition during apoptosis induced by *H. pylori* VacA. *Cell Death Differ*. 2010 Nov;17(11):1707-16. doi: 10.1038/cdd.2010.42.
5. Babolin C, Amedei A, Ozolins D, Zilevica A, D'Elios MM, **de Bernard M**. TpF1 from *Treponema pallidum* activates inflammasome and promotes the development of regulatory T cells. *J Immunol*. 2011 Aug 1;187(3):1377-84. doi: 10.4049/jimmunol.1100615.
6. Munari F, Lonardi S, Cassatella MA, Doglioni C, Cangi MG, Amedei A, Facchetti F, Eishi Y, Rugge M, Fassan M, **de Bernard M**, D'Elios MM, Vermi W. Tumor-associated macrophages as major source of APRIL in gastric MALT lymphoma. *Blood*. 2011 Jun 16;117(24):6612-6. doi: 10.1182/blood-2010-06-293266.
7. Benagiano M, Munari F, Ciervo A, Amedei A, Paccani SR, Mancini F, Ferrari M, Della Bella C, Ulivi C, D'Elios S, Baldari CT, Prisco D, **de Bernard M***, D'Elios MM*. *Chlamydomonas pneumoniae* phospholipase D (CpPLD) drives Th17 inflammation in human atherosclerosis. *Proc Natl Acad Sci U S A*. 2012 Jan 24;109(4):1222-7. doi: 10.1073/pnas.1111833109.
8. Codolo G, Fassan M, Munari F, Volpe A, Bassi P, Rugge M, Pagano F, D'Elios MM, **de Bernard M**. HP-NAP inhibits the growth of bladder cancer in mice by activating a cytotoxic Th1 response. *Cancer Immunol Immunother*. 2012 Jan;61(1):31-40. doi: 10.1007/s00262-011-1087-2.
9. Codolo G, Plotegher N, Pozzobon T, Brucale M, Tessari I, Bubacco L, **de Bernard M**. Triggering of inflammasome by aggregated α -synuclein, an inflammatory response in synucleinopathies. *PLoS One*. 2013;8(1):e55375. doi: 10.1371/journal.pone.0055375.
10. Codolo G, Bossi F, Durigutto P, Bella CD, Fischetti F, Amedei A, Tedesco F, D'Elios S, Cimmino M, Micheletti A, Cassatella MA, D'Elios MM, **de Bernard M**. Orchestration of inflammation and adaptive immunity in *Borrelia burgdorferi*-induced arthritis by neutrophil-activating protein A. *Arthritis Rheum*. 2013 May;65(5):1232-42. doi: 10.1002/art.37875.
11. Amedei A, Munari F, Bella CD, Niccolai E, Benagiano M, Bencini L, Cianchi F, Farsi M, Emmi G, Zanotti G, **de Bernard M**, Kundu M, D'Elios MM. *Helicobacter pylori* secreted peptidyl prolyl cis, trans-isomerase drives Th17 inflammation in gastric adenocarcinoma. *Intern Emerg Med*. 2014 Apr;9(3):303-9. doi: 10.1007/s11739-012-0867-9.
12. Casellato A, Rossi Paccani S, Barrile R, Bossi F, Ciucchi L, Codolo G, Pizza M, Aricò B, **de Bernard M**. The C2 fragment from *Neisseria meningitidis* antigen NHBA increases endothelial permeability by destabilizing adherens junctions. *Cell Microbiol*. 2014 Jun;16(6):925-37. doi: 10.1111/cmi.12250.
13. **de Bernard M**, Josenhans C. Pathogenesis of *Helicobacter pylori* infection. *Helicobacter*. 2014 Sep;19 Suppl 1:11-8. doi: 10.1111/hel.12160.
14. Munari F, Fassan M, Capitani N, Codolo G, Vila-Caballer M, Pizzi M, Rugge M, Della Bella C, Troilo A, D'Elios S, Baldari CT, D'Elios MM, **de Bernard M**. Cytokine BAFF released by *Helicobacter pylori*-infected macrophages triggers the Th17 response in human chronic gastritis. *J Immunol*. 2014 Dec 1;193(11):5584-94. doi: 10.4049/jimmunol.1302865.

15. Vila-Caballer M, Codolo G, Munari F, Malfanti A, Fassan M, Rugge M, Balasso A, **de Bernard M***, Salmaso S*. A pH-sensitive stearyl-PEG-poly(methacryloyl sulfadimethoxine)-decorated liposome system for protein delivery: An application for bladder cancer treatment. *J Control Release*. 2016 Jul 18;238:31-42. doi:10.1016/j.jconrel.2016.07.024.
16. Pozzobon T, Facchinello N, Bossi F, Capitani N, Benagiano M, Di Benedetto G, Zennaro C, West N, Codolo G, Bernardini M, Baldari CT, D'Elíos MM, Pellegrini L, Argenton F, **de Bernard M**. Treponema pallidum (syphilis) antigen TpF1 induces angiogenesis through the activation of the IL-8 pathway. *Sci Rep*. 2016 Jan 5;6:18785. doi: 10.1038/srep18785.
17. D'Elíos MM, Vallese F, Capitani N, Benagiano M, Bernardini ML, Rossi M, Rossi GP, Ferrari M, Baldari CT, Zanotti G, **de Bernard M***, Codolo G*. The Helicobacter cinaedi antigen CAIP participates in atherosclerotic inflammation by promoting the differentiation of macrophages in foam cells. *Sci Rep*. 2017 Jan 11;7:40515. doi: 10.1038/srep40515.
18. Pagliari M, Munari F, Toffoletto M, Lonardi S, Chemello F, Codolo G, Millino C, Della Bella C, Pacchioni B, Vermi W, Fassan M, **de Bernard M***, Cagnin S*. Helicobacter pylori Affects the Antigen Presentation Activity of Macrophages Modulating the Expression of the Immune Receptor CD300E through miR-4270. *Front Immunol*. 2017 Oct 12;8:1288. doi: 10.3389/fimmu.2017.01288.
19. Capitani N, Codolo G, Vallese F, Minervini G, Grassi A, Cianchi F, Troilo A, Fischer W, Zanotti G, Baldari CT, **de Bernard M***, D'Elíos MM*. The lipoprotein HP1454 of Helicobacter pylori regulates T-cell response by shaping T-cell receptor signalling. *Cell Microbiol*. 2019 May;21(5):e13006. doi: 10.1111/cmi.13006.
20. Codolo G, Toffoletto M, Chemello F, Coletta S, Soler Teixidor G, Battaggia G, Munari G, Fassan M, Cagnin S, **de Bernard M**. Helicobacter pylori Dampens HLA-II Expression on Macrophages via the Up-Regulation of miRNAs Targeting CIITA. *Front Immunol*. 2020 Jan 8;10:2923. doi: 10.3389/fimmu.2019.02923.
21. Coletta S, Battaggia G, Della Bella C, Furlani M, Hauke M, Faass L, D'Elíos MM, Josenhans C, **de Bernard M**. ADP-heptose enables Helicobacter pylori to exploit macrophages as a survival niche by suppressing antigen-presenting HLA-II expression. *FEBS Lett*. 2021 Aug;595(16):2160-2168. doi: 10.1002/1873-3468.14156.
22. Codolo G, Coletta S, D'Elíos MM, **de Bernard M**. HP-NAP of Helicobacter pylori: The Power of the Immunomodulation. *Front Immunol*. 2022 Jun 29;13:944139.doi:10.3389/fimmu.2022.944139.
23. Coletta S, Trevellin E, Benagiano M, Romagnoli J, Della Bella C, D'Elíos MM, Vettor R, **de Bernard M**. The antigen CD300e drives T cell inflammation in adipose tissue and elicits an antibody response predictive of the insulin sensitivity recovery in obese patients. *J Inflamm (Lond)*. 2022 Nov 22;19(1):21. doi: 10.1186/s12950-022-00318-7.
24. Tonolo F, Coletta S, Fiorese F, Grinzato A, Albanesi M, Folda A, Ferro S, De Mario A, Piazza I, Mammucari C, Arrigoni G, Marin O, Cestonaro G, Nataloni L, Costanzo E, Lodovichi C, Rigobello MP, **de Bernard M**. Sunflower seed-derived bioactive peptides show antioxidant and anti-inflammatory activity: From in silico simulation to the animal model. *Food Chem*. 2024 May 1;439:138124. doi: 10.1016/j.foodchem.2023.138124.
25. Ma J, Sarén T, Jin C, Su Kim H, Donaji P, Pineda C, **de Bernard M**, Amini R, Rondahl V, Enblad G, Yu D, Essand M. Pre-clinical safety and efficacy evaluation of Helicobacter Pylori neutrophil-activating protein (HP-NAP)-armed CAR-T cells targeting B cell lymphomas. *Cancer Immunol Immunother*. 2025. <https://doi.org/10.1007/s00262-025-04112-1>. In press.

Granted patents

co-Inventor of the patent: *Use of neutrophil activating protein of Helicobacter pylori (HP-NAP) and (or of its portions as adjuvants for the development of T helper type 1 (Th1) immune responses*. Publication number: WO/2007/039451

Marina de Bernard - curriculum vitae – June 2025

Autorizzo il trattamento dei miei dati personali presenti nel curriculum vitae ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 e del GDPR (Regolamento UE 2016/679).

Padova, 15 luglio 2024 