

Curriculum Vitae – Davide Martelli

Associate Professor. National Scientific Qualification as Full Professor, Area 05/D1 (2022–2031)

PERSONAL INFORMATION

<https://www.unibo.it/sitoweb/d.martelli/Website>: <https://www.unibo.it/sitoweb/d.martelli/>

E-mail: d.martelli@unibo.it

BIOGRAPHY

Davide Martelli discovered the splanchnic anti-inflammatory pathway, the efferent arm of the inflammatory reflex, an endogenous neural reflex that controls immune function during infection. He obtained his PhD in 2009 at the University of Bologna and moved to the Florey Institute of Neuroscience and Mental Health, Melbourne, in 2010 to study sympathetic control of immunity with Professors Robin McAllen and Michael McKinley. He returned to Bologna in 2016 and became Associate Professor of Physiology at the University of Bologna in 2022. In 2025 he was appointed Honorary Associate Professor at the Florey Institute. His awards include the American Physiological Society Early Career/Postdoctoral Award (2014) and the IBRO Return Home Fellowship (2015). He is a member of the University of Bologna working group on emerging infectious diseases. He is International Secretary of the International Society for Autonomic Neuroscience (ISAN).

EDUCATION

25/05/2009 PhD in Neurophysiology

Department of Human and General Physiology, University of Bologna, Italy.

14/03/2003 Degree in Biological Sciences – Biomolecular curriculum, University of Bologna, Italy
(110/110)

CURRENT POSITIONS

18/02/2022 – Present Associate Professor of Physiology (BIO/09)

Department of Biomedical and Neuromotor Sciences (DIBINEM), University of Bologna, Italy

03/03/2025 – Present Honorary Associate Professor

The Florey Institute of Neuroscience and Mental Health, Victoria, Australia

LEADERSHIP IN SCIENTIFIC SOCIETIES

04/09/2026 – Present International Secretary, International Society for Autonomic Neuroscience (ISAN)

PREVIOUS POSITIONS

18/02/2019 – 17/02/2022 Fixed-term Assistant Professor (RTD-B), DIBINEM, University of Bologna, Italy

18/02/2016 – 17/02/2019 Fixed-term Assistant Professor (RTD-A), DIBINEM, University of Bologna, Italy

01/02/2013 – 17/02/2016 Senior Research Officer, The Florey Institute of Neuroscience and Mental Health, University of Melbourne, Victoria, Australia

05/09/2012 – 31/01/2013 Postdoctoral Researcher, Department of Human and General Physiology (now DIBINEM), University of Bologna, Italy.

01/12/2010 – 04/09/2012 Visiting Fellow, The Florey Institute of Neuroscience and Mental Health, University of Melbourne, Victoria, Australia

25/05/2009 – 30/11/2010 Postdoctoral Researcher, Department of Human and General Physiology (now DIBINEM), University of Bologna, Italy.

RESEARCH FUNDING

2024: PI – Italian Ministerial grant PRIN (PRIN2022) – 2022E8T4FM (185.734€)

2024: PI – Grant offered by CARISBO Foundation (10.000€)

2022: Associate Investigator - Italian National Recovery and Resilience Plan (PNRR), Mission 4 Component 2 Investment 1.3 - NextGenerationEU – NextGenerationEU (Project INF-ACT; 114.5M€ in total; 150.000€ for my team)

2022: PI – ALMArie CURIE grant offered by UNIBO (10.000€)

2021: Grant UNIBO-DIBINEM to co-finance a post-doc salary (11.894€).

2021: PI – Grant offered by CARISBO Foundation (10.000€)

2019: Grant UNIBO-DIBINEM to co-finance a post-doc salary (11.894€).

2019: Associate Investigator – NHMRC Australian Research Project Grant – GNT11863684 (600.000 AU\$).

2019: Associate Investigator – NHMRC Australian Research Project Grant – GNT11863682 (620.000 AU\$).

2015: Chief Investigator A (PI) – NHMRC Australian Research Project Grant – GNT1098887 (613.466 AU\$).

2015: Awarded (PI) with a IBRO Fellowship (10.000€)

2011: PI – “Medical research & Technology equipment grant” offered by The William Buckland Foundation (24.150 AU\$).

2010: PI – European Research Grant offered by Sanofi-Aventis for the European Sleep Research Society (ESRS, 15.000€).

2009: Co-Investigator - Italian Ministerial grant PRIN 2009 - prot. 2009SPTHRK_001 (62.262€).

AWARDS, FELLOWSHIPS AND QUALIFICATIONS

2026: Appointed Bologna Ambassador by the city institutions

2023: Faculty member, European School of Pain. <https://eps2023.azuleon.org/>

2022: Best oral communication (EUR 500), 72nd National Congress of the Italian Physiological Society (SIF), Bari, Italy.

2022: Participant to EU Marie Curie Staff Exchange Project "Platypus"

2022: National Scientific Qualification as Full Professor, scientific area 05/D1 (BIO-09, Physiology), 2022–2031

2021: Ranked among the top 0.15% of experts in Autonomic Pathways by Expertscape. <https://expertscape.com/au/autonomic+pathways/Martelli%2C+D>

2018: Selected for the “Featured Topic - NCAR Hot Topics in Autonomic Regulation” symposium and sponsored by the American Physiological Society (USD 250 plus waived conference fee). EB2018, San Diego, California, USA, 21–25 April 2018.

2017: Participant to EU Marie Curie Staff Exchange Project "Platypus"

2015: Awarded an IBRO Return Home Fellowship (EUR 10,000).

2014: “Best original review” (AUD 500), published in 2013 at the Florey Institute (Florey Postdoctoral Association), Melbourne, Victoria, Australia.

2014: Merck-Millipore travel award (AUD 5,000), Melbourne, Victoria, Australia, to attend EB2014 in San Diego, USA.

2014: F1000 (Faculty of 1000) Recommendation: Jänig W: F1000Prime Recommendation of [Martelli D et al., J Physiol (Lond) 2014]. In F1000Prime, 06 Feb 2014; DOI: 10.3410/f.718236549.793490418. F1000Prime.com/718236549#eval793490418.

2014: “Post-doctoral/Early Career Investigator Award” dalla American Physiological Society (Neural Control/Autonomic Regulation section, 500US\$ + conference fee waived). San Diego, California, USA.

2013: “Best oral presentation” (AUD 500), Florey Postdoctoral Association Annual Conference, Melbourne, Victoria, Australia.

2012: “Best communication at a conference” (500 AU\$) dalla Florey Postdoctoral Association, Melbourne, Victoria, Australia.

2011: IBRO travel grant (EUR 1,250) to attend the 8th IBRO World Congress, Florence, Italy, 14–18 July 2011.

2010: Travel grant (EUR 500) to attend the 20th Meeting of the ESRS, Lisbon, Portugal, 14–18 September 2010.

2010–2013: Three research fellowships, Department of Human and General Physiology, University of Bologna, Italy.

2009: European scholarship to attend the European Marie Curie Action “Training in Sleep Research and Sleep Medicine”, organised by the European Sleep Research Society (ESRS) as part of PENS (Programme of European Neuroscience Schools; joint FENS–IBRO collaboration).

2008: Research scholarship, Department of Human and General Physiology, University of Bologna, Italy.

2004: National ministerial scholarship for the PhD programme in Neurophysiology, University of Bologna, Italy.

2003: Research scholarship, Department of Human and General Physiology, University of Bologna, Italy.

2000: European Socrates/Erasmus scholarship (six months at the University of Natural Resources and Life Sciences, Vienna, Austria).

SCIENTIFIC MEETING ORGANISATION

2026: Chair, Local Organising Committee, 14th Congress of the International Society for Autonomic Neuroscience (ISAN 2026), Bologna, Italy, 2–5 September 2026.

2023: Organiser, Chair and Speaker, IBRO Conference (International Brain Research Organization), 9–13 September 2023. Symposium: “Nervous about your immune system? How the autonomic nervous system controls immunity”. Speakers: Davide Martelli, Fernanda Brognara, Wouter de Jonge, Connie Wong.

2019: Organiser, Chair and Speaker, ISAN Conference (International Society for Autonomic Neuroscience), Los Angeles, USA, 25–27 July 2019. Symposium: “Autonomic control of inflammation; new insights into pathways and mechanisms”. Sponsored by LivaNova PLC. Speakers: Davide Martelli, Paul O’Connor, Colin Reardon, Rainer Straub.

2015: Organiser, Chair and Speaker, ISAN 2015, Stresa, Italy, 26–29 September 2015. Symposium: “Nervous about inflammation? How the autonomic nervous system influences immune function”. Sponsored by Experimental Physiology. Speakers: Davide Martelli, Ruud Buijs, Reiner Straub, Georg Pongratz.

2011, 2013: Chair, Florey Postdoctoral Annual Meetings, Melbourne, Victoria, Australia.

2010: Chair, oral blitz session on basic sleep research at the final symposium of the Marie Curie Action “Training in Sleep Research and Sleep Medicine”, Kloster Seeon, Germany, 2–6 July 2010.

2010: Chair, symposium held at the Department of Human and General Physiology, University of Bologna, within the European Marie Curie Action “Sleep Research and Sleep Medicine Education Program”, organised by the European Sleep Research Society (ESRS).

INSTITUTIONAL RESPONSIBILITIES

2026–Present: DIBINEM representative on the Board of the Centre for Applied Biomedical Research (CRBA), University of Bologna.

2026–Present: Member of the Committee for Animal Welfare (CoBA), University of Bologna.

2022–Present: Member of the University of Bologna working group for the “Emerging Infectious Diseases” partnership, PNRR Mission 4 Education and Research.

2021–Present: Member of the Quality Assurance Committee, Physiotherapy Degree Programme, University of Bologna.

2019–Present: Faculty member, Master in Pediatric Urology, University of Bologna.

2014: Member of the “School Outreach” team, Florey Institute of Neuroscience and Mental Health.

2014: Appointed by the Florey Institute as Postdoctoral representative at the First Commonwealth Science Conference, Bangalore, India, 25–28 November 2014.

POSITIONS OF TRUST

2023: Faculty member, European School of Pain. <https://eps2023.azuleon.org/>

2022–Present: Member of REPRISE, the Italian Ministry of University and Research register of independent scientific experts, Basic Research section.

2022–Oggi: Editorial Board - Neuroimmunomodulation

2021–Present: Reviewer register of ANVUR for the VQR national research assessment exercise.

2021-Oggi: Editorial Board – topic editor - Cells

2019-Oggi: Editorial Board – review editor – Frontiers in Neuroscience

2019-Oggi: Editorial Board – review editor – Frontiers in Neuroanatomy

2019-Oggi: Editorial Board – review editor – Frontiers in Physiology

2018: Invited member, Scientific Advisory Board, LivaNova PLC (more than 4,000 employees; presence in over 100 countries; market capitalisation above USD 4 billion).

2018-Oggi: Associate member Faculty Opinions / Pharmacology & Drug Discovery / Cardiovascular Pharmacology. <https://facultyopinions.com/prime/thefaculty/member/1052599>

2018: External examiner for the MPhil in Medical Science of candidate Flavia Peci, Department of Hematology, University of Cambridge, UK.

2014-Oggi: Editorial Board of the Journal of Immune Research

2013–2016: Member of the supervisory committee for PhD candidate Giancarlo Allocca, University of Melbourne.

Invited peer reviewer for: Journal of Physiology, Brain Research, Neurogastroenterology and Motility, Brain Behavior and Immunity, Clinical and Experimental Pharmacology and Physiology, Journal of Neurophysiology, Autonomic Neuroscience: Basic and Clinical, American Journal of Physiology (Regulatory, Integrative and Comparative Physiology), Frontiers in Neuroscience, Alimentary Pharmacology & Therapeutics, and others.

MEMBERSHIP IN SCIENTIFIC SOCIETIES

Italian Physiological Society (SIF; 2024–Present); International Society for Autonomic Neuroscience (ISAN; 2014–Present).

INTERNATIONAL COLLABORATIONS

Robin McAllen, Michael McKinley, Song Yao, Neural control of immunity, Florey Institute of Neuroscience and Mental Health, Australia. Erica Sloan, Cancer and autonomic nervous system, Monash University, Australia. Clive May, Lindsea Booth, Yugeesh Lankadeva Heart failure and sepsis, Florey Institute of Neuroscience and Mental Health, Australia. Alexandre Steiner, Neural control of immunity, University of Sao Paulo, Brazil.

SCIENTIFIC OUTREACH ACTIVITIES

Invited seminars:

1. Neuroscience and neurotechnology center of excellence (NÖROM); Gazi University. Keynote speaker at NÖROM workshop – Sympathetic control of immune function: focus on infections – Ankara, Turkey. 28/11/2024.
2. Institute of Inflammation and Ageing; College of Medical and Dental Sciences; University of Birmingham - The sympathetic control of immunity: focus on the INFLAMMATORY REFLEX – Birmingham, UK. 26/07/2024.
3. Institute of Biomedical Sciences at the University of Sao Paulo and Institute of Biophysics Carlos Chagas Filho from the Federal University of Rio de Janeiro – The sympathetic control of immunity: focus on the Inflammatory Reflex – Immunoweinars series. 27/05/2024.

4. Monash University – The splanchnic anti-inflammatory pathway, a sympathetic pathway controlling immune function – Melbourne, VIC Australia. 21/11/2022.
5. University of Helsinki – The inflammatory reflex – Helsinki, Finland. 11/03/2016.
6. University of Bologna - Neural control of immune function: The inflammatory reflex – Bologna, Italy. 23/04/2015.
7. Flinders University - Neural Control of Immune Function - Adelaide, SA Australia. 08 May 2013.
8. University of Sydney - Thermoregulatory but not Osmoregulatory impairment characterizes REM Sleep - Sydney, NSW Australia. 04/11/2011
9. Florey Institutes Neuroscience Seminar Series - Physiological regulations during the wake sleep cycle - Howard Florey Institute, Melbourne, VIC Australia, 28 June 2011.

Invited oral presentations:

1. Central Cardiovascular Control: Future Directions. Melbourne, VIC Australia, December 02-03 2022.
2. ISAN 2019. Invited speaker in the symposium “Autonomic control of inflammation; new insights into pathways and mechanisms”. Los Angeles, California USA, July 25-27, 2019.
3. EB 2018. Invited speaker in the symposium “Featured Topic - NCAR Hot Topics in Autonomic Regulation”. San Diego, California USA, April 21-25, 2018.
4. ISAN 2017. Invited speaker in the symposium “Targeting the autonomic nervous system to alleviate inflammatory disorders”. Nagoya, Japan, Aug 30 – Sep 2, 2017.
5. EB 2017. Invited speaker in the symposium “Sympathetic Nerves and Inflammation: The Pro and the Anti”. Chicago, IL, USA, April 22-26, 2017
6. International Society for Autonomic Neuroscience (ISAN) 2015. Stresa, Italy, 26-29 September 2015.
7. Central Cardiovascular Respiratory Control: Future Directions. Melbourne, VIC Australia, 15-16 September 2014.
8. Experimental Biology (EB) 2014. San Diego, California USA, 26-30 April 2014.
9. Florey Postdoctoral Annual Meetings 2011, 2013.
10. 20th international congress of the European Sleep Research Society. Lisbon, Portugal, 14-18 September 2010.
11. Central Cardiovascular Control: Future Directions. Melbourne, VIC Australia, 20-21 October 2011.
12. Marie Curie Action “Training in sleep research and sleep medicine”. Kloster Seeon, Germany, 02-06 July 2010.
13. PENS – Marie Curie Summer school. Bertinoro (FC), Italy, 08-13 May 2009.
14. First annual meeting of Italian PhD students in physiology. Pontignano (Si), Italy, 18-21 July 2007.

Poster presentations:

Presented posters at several national and international conferences, including:

Federation of European Physiological Societies (FEPS). Bologna, Italy 10-13/09/2019

Experimental Biology (EB) 2014, 2017, 2018. USA.

33rd Meeting of the Australian Neuroscience Society (ANS). Melbourne, VIC Australia, 3-6/02/2013

8th IBRO world congress. Florence, Italy, 14-18/07/2011

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2025: Supervisor/tutor for 2 postdoctoral fellows, DIBINEM, University of Bologna, Italy.

2024: Co-supervisor for 1 PhD student; tutor for 2 postdoctoral fellows, DIBINEM, University of Bologna, Italy.

2023: Supervisor for 1 PhD student; co-supervisor for 1 PhD student; tutor for 1 postdoctoral fellow, DIBINEM, University of Bologna, Italy.

2021–2022: Tutor for 1 postdoctoral fellow; co-supervisor for 1 PhD student, DIBINEM, University of Bologna, Italy.

2020–2021: Supervisor for 1 PhD student; co-supervisor for 1 PhD student, DIBINEM, University of Bologna, Italy.

2018–2020: Co-supervisor for 2 PhD students; supervisor for 1 Physiotherapy undergraduate student; co-supervisor for 1 Medical Biotechnology undergraduate student; tutor for 1 research fellow, DIBINEM, University of Bologna, Italy.

2015-2019: 2 PostDoc e 1 tecnico senior (lab head), The Florey Institute of Neuroscience and Mental Health, University of Melbourne.

2017: Co-supervisor for 1 Medicine and Surgery student; co-supervisor for 1 Medicine and Surgery student, University of Bologna, Italy.

2016: Supervisor for 1 Medical Biotechnology student, University of Bologna, Italy.

2012–2016: PhD committee member and co-supervisor for 1 PhD student; co-supervisor for 1 PhD student; supervisor for 1 medical resident, Florey Institute of Neuroscience and Mental Health, University of Melbourne, Victoria, Australia.

2009: Co-supervisor for 1 PhD student, Department of Human and General Physiology, University of Bologna, Italy.

2008: Co-supervisor for 1 Master's student, Department of Human and General Physiology, University of Bologna, Italy.

PUBLICATIONS

2026

1. Bardhi A., Ventrella D., Elmi A., Martelli D., Troisio I., Bacci M.L., Barbarossa A. First validated liquid chromatography–tandem mass spectrometry method for simultaneous quantification of propranolol and 4-hydroxypropranolol in pig plasma and dried blood spots and its application to a pharmacokinetic study. *Veterinary World*, 19 (1), 2026: 15-28.

2025

2. Occhinegro A., Ventrella D., Rosa S., Alberti L., Amici R., Cerri M., Hitrec T., Tupone D., Cappellini A., Ratti S., Elmi A., Zannoni A., Felici S., Golinelli D., Luppi M., Lankadeva Y.R.,

May C.N., McAllen R.M., McKinley M.J., Passaglia P., Piscitiello E., Taddei L., Giannella M., Viale P., Bacci M.L., Rucci P., Lazzarotto T., Martelli D. Non-selective beta-blockers enhance resolution of induced infections in animals and healthcare-associated infections in humans. *Scientific Reports*, 2025: 15:38766.

3. McKinley M.J., Yao S.T., Martelli D., McAllen R.M. Comparing two anti-inflammatory reflexes: Splanchnic and hypothalamic–pituitary–adrenal. *Brain Behavior and Immunity*, 2025: 106099.

2024

4. Hitrec T., Squarcio F., Piscitiello E., Cerri M., Martelli D., Occhinegro A., Taddei L., Tupone D., Amici R., Luppi M. Sleep deprivation soon after recovery from synthetic torpor enhances tau protein dephosphorylation in the rat brain. *J Comp Physiol B*, 194 (3), 2024: 347-368.
5. Squarcio F., Hitrec T., Luppi M., Martelli D., Occhinegro A., Piscitiello E., Taddei L., Tupone D., Amici R., Cerri M. Ultrasonic vocalisations during rapid eye movement sleep in the rat. *J Sleep Res*, 33 (3), 2024: e13993.

2023

6. Peiris R.M., May C.N., Booth L.C., McAllen R.M., McKinley M.J., Hood S., Martelli D., Bellomo R., Lankadeva Y.R. Splanchnic sympathetic nerve denervation improves bacterial clearance and clinical recovery in established ovine Gram-negative bacteremia. *Int Care Med Exp*, 11 (1), 2023: 53.
7. Squarcio F., Hitrec T., Luppi M., Martelli D., Occhinegro A., Piscitiello E., Taddei L., Tupone D., Amici R., Cerri M. Ultrasonic vocalisations during rapid eye movement sleep in the rat. *J Sleep Res*, 2023: e13993.
8. Occhinegro A., McAllen R.M., McKinley M.J., Martelli D. Acute inhibition of inflammation mediated by sympathetic nerves: the inflammatory reflex. *Neuroimmunomodulation*, 30, 2023: 135-142.
9. Squarcio F., Hitrec T., Piscitiello E., Cerri M., Giovannini C., Martelli D., Occhinegro A., Taddei L., Tupone D., Amici R., Luppi M. Synthetic torpor triggers a regulated mechanism in the rat brain, favoring the reversibility of Tau protein hyperphosphorylation. *Front Physiol*, 2022: 1129278.
10. Martelli D., Brooks V.L. Leptin Increases: Physiological Roles in the Control of Sympathetic Nerve Activity, Energy Balance, and the Hypothalamic–Pituitary–Thyroid Axis. *Int J Mol Sci*, 24 (3), 2023: 2684.

2022

11. McKinley M.J., Martelli D., Trevizan-Bau P., McAllen R.M. Divergent splanchnic sympathetic efferent nerve pathways regulate IL-10 and TNF responses to endotoxaemia. *J Physiol*, 600 (20), 2022: 4521-4536.
12. Martelli D. The inflammatory reflex reloaded. *Brain Behavior and Immunity*, 104, 2022: 137-138.
13. McAllen R.M., McKinley M.J., Martelli D. Reflex regulation of Systemic Inflammation by the Autonomic Nervous System. *Auton Neurosci*, 237, 2022:102926.

2021

14. Occhinegro A., Wong C.Y., Chua B. Y., Jackson D.C., McKinley M.J., McAllen R.M. Martelli D. The endogenous inflammatory reflex inhibits the inflammatory response to different immune challenges in mice. *Brain Behavior and Immunity*, 97, 2021: 371-375.
15. Hitrec T., Squarcio F., Cerri M., Martelli D., Occhinegro A., Piscitiello E., Tupone D., Amici R., Luppi M. Reversible Tau phosphorylation induced by synthetic torpor in the spinal cord of the rat. *Front Neuroanat*, 15(3), 2021: 592288.

2020

16. Lankadeva Y.R., May C.N., McKinley M.J.; Neeland M.R., Ma S., Hocking D.M., Robins-Browne R., Bedoui S., Farmer D.G.S., Bailey S.R., Martelli D., McAllen R.M. Sympathetic nerves control bacterial clearance. *Sci Rep*, 10 (1), 2020: 15009.

2019

17. Hitrec T., Luppi M., Bastianini S., Squarcio F., Berteotti C., Lo Martire V., Martelli D., Occhinegro A., Tupone D., Zoccoli G., Amici R., Cerri M. Neural control of fasting-induced torpor in mice. *Sci Rep*, 9 (1), 2019: 15462.
18. Decataldo F., Cramer T., Martelli D., Gualandi I., Korim W. S., Yao S. T., Tessarolo M., Murgia M., Scavetta E., Amici R., Fraboni B. Stretchable Low Impedance Electrodes for Bioelectronic Recording from Small Peripheral Nerves. *Sci Rep*, 9, 2019: 10598.
19. Luppi M., Cerri M., Di Cristoforo A., Hitrec T., Dentico D., Del Vecchio F., Martelli D., Perez E., Tupone D., Zamboni G., Amici R. c-Fos expression in the Limbic Thalamus following thermoregulatory and wake-sleep changes in the rat. *Exp Brain Res*, 237 (6), 2019: 1397-1407.
20. Allocca G., Ma S., Martelli D., Cerri M., Del Vecchio F., Bastianini S., Zoccoli G., Amici R., Morairty S.R., Aulsebrook A.E., Blackburn S. Lesku J.A., Rattenborg N.C., Vyssotski A.L., Wams E., Porcheret K., Wulff K., Foster R., Chan J.K.M., Nicholas C.L., Freestone D.R., Johnston L.A., Gundlach A.L. Validation of ‘Somnivore’, a Machine Learning Algorithm for Automated Scoring and Analysis of Polysomnography Data. *Frontiers in Neuroscience*, 2019. Epub. doi: 10.3389/fnins.2019.00207
21. Martelli D., Farmer D.G.S., McKinley M.J., Yao S.T., McAllen R.M. The anti-inflammatory reflex action of the splanchnic sympathetic nerves is distributed across abdominal organs. *Am J Physiol Regul Int Comp Physiol*, 316 (3), 2019: R235-R242.
22. *Walker A.K., *Martelli D., Ziegler A. I., Lambert G.W., Phillips S.E., Hill S.J., McAllen R.M., Sloan E.K. Circulating epinephrine is not required for chronic stress to enhance metastasis. *Psychoneuroendocrinology*, 99, 2019: 191-195. *Joint first authors.

2018

23. Komegae E.N., Farmer D.G.S., Brooks V.L., McKinley M.J., McAllen R.M., Martelli D. Vagal afferent activation suppresses systemic inflammation via the splanchnic anti-inflammatory pathway. *Brain Behavior and Immunity*, 73, 2018: 441-449.
24. McKinley M.J., Martelli D., Pennington G.L., Trevaks D., McAllen R.M. Integrating the competing demands of osmoregulatory and thermoregulatory homeostasis. *Physiology*, 33 (3), 2018: 170-181.

2017

25. Luppi M., Al-Jahmany A.A., Del Vecchio F., Cerri M., Di Cristoforo A., Hitrec T., Martelli D., Perez E., Zamboni G., Amici R. Wake-sleep and cardiovascular regulatory changes in rats made obese by a high-fat diet. *Behav Brain Res*, 320, 2017: 347-355.

2016

26. Martelli D., Farmer D.G.S., Yao S.T. The splanchnic anti-inflammatory pathway: Could it be the efferent arm of the inflammatory reflex? *Exp. Physiol.* 101(10), 2016: 1245-1252. Note: This paper was highlighted in the cover of the October issue.

2015

27. Anderson C.R., McKinley M.J., Martelli D., McAllen R.M. Letter to the editor: Parasympathetic innervation of the rodent spleen? *Am. J Physiol Heart Circ Physiol*, 309(12), 2015: H2158.
28. McKinley M.J., Yao S.T., Uschakov A., McAllen R.M., Rundgren M., Martelli D. The median preoptic nucleus: front and centre for regulation of body fluid, sodium, temperature, sleep and cardiovascular homeostasis. *Acta Physiologica*, 214(1), 2015: 8-32.
29. McAllen R.M., Cook A.D., Khiew H.W., Martelli D., Hamilton J.A. The interface between cholinergic pathways and the immune system and its relevance to arthritis. *Arthritis Res Ther*, 17(1) 2015: 87.
30. Martelli D., Silvani A., McAllen R.M., May C.N., Ramchandra R. Reply to “Letter to the editor: Does low-frequency power of heart rate variability correlate with cardiac sympathetic tone in normal sheep?”. *Am J Physiol Heart Circ Physiol*, 308(2), 2015:H148-9.

2014

31. Cerri M., Del Vecchio F., Mastrotto M., Luppi M., Martelli D., Perez E., Tupone D., Zamboni G., Amici R. Enhanced Slow-Wave EEG Activity and Thermoregulatory Impairment following the Inhibition of the Lateral Hypothalamus in the Rat. *Plos One*, 9(11), 2014: e112849.
32. Martelli D., Yao S.T., Mancera J., McKinley M.J., McAllen R.M. Reflex control of inflammation by the splanchnic anti-inflammatory pathway is sustained and independent of anaesthesia. *Am J Physiol Regul Int Comp Physiol*, 307(9), 2014: R1085-91.
33. Martelli D., Silvani A., McAllen R.M., May C.N., Ramchandra R. The low frequency power of heart rate variability is neither a measure of cardiac sympathetic tone nor of baroreflex sensitivity. *Am J Physiol Heart Circ Physiol*, 307(7), 2014:H1005-12.
34. Martelli D., Yao S.T., McKinley M.J., McAllen R.M. Neural control of inflammation by the greater splanchnic nerves. *Temperature*, 2014 Epub: <http://www.tandfonline.com/doi/full/10.4161/temp.29135>
35. Martelli D., Yao S.T., McKinley M.J., McAllen R.M. Reflex control of inflammation by sympathetic nerves, not the vagus. *J Physiol*, 592, 2014:1677-1686.
Note: This article has been recommended in F1000Prime (Faculty of 1000); Jänig W: F1000Prime Recommendation of [Martelli D et al., *J Physiol (Lond)* 2014]. In F1000Prime, 06 Feb 2014;
DOI: 10.3410/f.718236549.793490418. F1000Prime.com/718236549#eval793490418.
Note: This article was the editor’s choice of the published issue.
36. Martelli D., Luppi M., Cerri M., Tupone D., Perez E., Zamboni G., Amici R. The Direct Cooling of the Preoptic-Hypothalamic Area Elicits the Release of Thyroid Stimulating Hormone during Wakefulness but Not during REM Sleep. *Plos One*, 9(2), 2014: e87793.

37. Martelli D., McKinley M.J., McAllen R.M. The cholinergic anti-inflammatory pathway: a critical review. *Auton Neurosci*, 182, 2014:65-69.
38. Luppi M., Cerri M., Martelli D., Tupone D., Del Vecchio F., Di Cristoforo A., Perez E., Zamboni G., Amici R. Waking and sleeping in the rat made obese through a high-fat hypercaloric diet. *Behav Brain Res*, 258C, 2014:145-152.

2013

39. Martelli D., Stanic D., Dutschman M. The emerging role of the parabrachial complex in the generation of wakefulness drive and its implication for respiratory control. *Respir Physiol Neurobiol*, 188(3) 2013: 318-23.
40. Cerri M., Mastrotto M., Tupone D., Martelli D., Luppi M., Perez E., Zamboni G., Amici R. The inhibition of neurons in the central nervous pathways for thermoregulatory cold defense induces a suspended animation state in the rat. *J Neuroscience*, 33(7), 2013: 2984-93.

2012

41. Martelli D., Luppi M., Cerri M., Tupone D., Perez E., Zamboni G., Amici R. Waking and sleeping following water deprivation in the rat. *Plos One*, 7(9), 2012:e46116.
42. *Bratton B.O., *Martelli D., McKinley M.J., Trevaks D., Anderson C.R. and McAllen R.M.. Neural regulation of inflammation: no neural connection from the vagus to splenic sympathetic neurons. *Exp Physiol*, 97(11), 2012: 1180-5.
Note: This article was the topic of an editorial; *Exp Physiol*. 2012 Nov;97(11):1178-9. doi: 10.1113/expphysiol.2011.064071. The inflammatory reflex: the current model should be revised. Romanovsky AA.

2010

43. Luppi M., Martelli D., Amici R., Baracchi F., Cerri M., Dentico D., Perez E., Zamboni G. Hypothalamic osmoregulation is maintained across the wake-sleep cycle in the rat. *J Sleep Res*, 19(3), 2010: 394-399.
44. Cerri M., Zamboni G., Tupone D., Dentico D., Luppi M., Martelli D., Perez E., Amici R. Cutaneous vasodilation elicited by disinhibition of the caudal portion of the rostral ventromedial medulla of the free-behaving rat. *Neuroscience*, 165 (3), 2010: 984 995.

2009

45. Dentico D., Amici R., Baracchi F., Cerri M., Luppi M., Martelli D., Perez E., Zamboni G. c-Fos expression in preoptic nuclei as a marker of sleep rebound in the rat. *Eur J Neuroscience*, 3 (4), 2009: 651-661.

BOOK CHAPTERS AND TEXTBOOKS

2023

1. McAllen R.M., McKinley M.J., Martelli D. The autonomic inflammatory reflex. In “Primer on the Autonomic Nervous System, 4th Edition” by I. Biaggioni, K. Browning, G. Fink, J. Jordan, P.A. Low, J. Paton. 2023: 341-344.

2022

2. Martelli D. Autonomic control of the immune response. In *Fisiologia Umana [Human Physiology]*, 2nd edition, edited by Francesca Grassi, Daniela Negrini, Carlo Adolfo Porro,

Michele Zoli, Paola Borroni and Gabriella Cerri. Poletto Editore, 2022: 471–474 (in Italian).

2021

3. Martelli D. Translator for the Italian edition of the Netter's Essential Physiology, 2nd Edition of Susan E. Mulroney and Adam K. Myers. Piccin Editore. 2021 (in Italian).

TEACHING RESPONSIBILITIES

Academic years 2022/23 – Present:

- Lecturer in Neurofisiologia (Neuroanatomia e Neurofisiologia C.I.) – School of Medicine and Surgery, Degree Programme in Physiotherapy, University of Bologna. Teaching hours: 36
- Lecturer in Physiology (Signaling Pathways in Health and Disease C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 32
- Lecturer in Physiology Applicata (Fisiologia C.I.) – Single-cycle Degree Programme in Medicine and Surgery, University of Bologna. Teaching hours: 34.
- Lecturer in Physiology – Specialisation Schools in Cardiac Surgery, University of Bologna. Teaching hours: 8 (anno accademico 2021-22).
- Lecturer in Physiology – Specialisation Schools in Chirurgia Vascolare, University of Bologna. Teaching hours: 8 (anno accademico 2021-22).
- Lecturer in Physiology – Specialisation Schools in Chirurgia Toracica, University of Bologna. Teaching hours: 8 (anno accademico 2021-22).
- Lecturer in Physiology of the Upper and Lower Urinary Tract - Master in Pediatric Urology, University of Bologna. Ore frontali. 2

Academic year 2021/22:

- Lecturer in Neurofisiologia (Neuroanatomia e Neurofisiologia C.I.) – School of Medicine and Surgery, Degree Programme in Physiotherapy, University of Bologna. Teaching hours: 36
- Lecturer in Physiology (Signaling Pathways in Health and Disease C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 32
- Lecturer in Physiology of the Upper and Lower Urinary Tract - Master in Pediatric Urology, University of Bologna. Ore frontali. 2

Academic year 2020/21:

- Lecturer in Neurofisiologia (Neuroanatomia e Neurofisiologia C.I.) – School of Medicine and Surgery, Degree Programme in Physiotherapy, University of Bologna. Teaching hours: 36
- Lecturer in Physiology (Signaling Pathways in Health and Disease C.I.) – School of Medicine

and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 32

- Lecturer in Physiology of the Upper and Lower Urinary Tract - Master in Pediatric Urology, University of Bologna. Ore frontali. 2

Academic year 2019/20:

- Lecturer in Neurofisiologia (Neuroanatomia e Neurofisiologia C.I.) – School of Medicine and Surgery, Degree Programme in Physiotherapy, University of Bologna. Teaching hours: 36
- Lecturer in Physiology (Signaling Pathways in Health and Disease C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 32
- Lecturer in Physiology of the Upper and Lower Urinary Tract - Master in Pediatric Urology, University of Bologna. Ore frontali. 2

Academic year 2018/19:

- Lecturer in Physiology of Nervous System and Sensory Organs (Nervous System and Sensory Organs C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 24
- Lecturer in Physiology of Genito-Urinary and Reproductive Systems (Genito-Urinary and Reproductive Systems C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 24
- Lecturer in Physiology (Signaling Pathways in Health and Disease C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicine and surgery, University of Bologna. Taught in English. Teaching hours: 16

Academic year 2017/18:

- Lecturer in Nutrition Physiology (Fisiologia C.I.) – School of Medicine and Surgery, Degree Programme in Dietetics, University of Bologna. Teaching hours: 24
- Lecturer in Applied Physiology (Fisiologia C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicina e Chirurgia, University of Bologna. Teaching hours: 34
- Lecturer in Physiology (Specialisation Schools in Cardiac Surgery, Vascular Surgery e Thoracic Surgery), University of Bologna. Teaching hours: 8 (taught in September 2019)

Academic year 2016/17:

- Lecturer in Nutrition Physiology (Fisiologia C.I.) – School of Medicine and Surgery, Degree Programme in Dietetics, University of Bologna. Teaching hours: 24
- Lecturer in Applied Physiology (Fisiologia C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicina e Chirurgia, University of Bologna. Teaching hours: 34

- Lecturer in Physiology (Specialisation Schools in Cardiac Surgery, Vascular Surgery e Thoracic Surgery), University of Bologna. Teaching hours: 8 (taught in January 2018)

Academic year 2015/16:

- Lecturer in Physiology degli apparati (Fisiologia C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicina e Chirurgia, University of Bologna. Teaching hours: 48
- Lecturer in Applied Physiology (Fisiologia C.I.) – School of Medicine and Surgery, Laurea Magistrale a Ciclo Unico in Medicina e Chirurgia, University of Bologna. Teaching hours: 18