Diana Pendin
Place and Date of birth: Malo (VI), September 30th, 1981
Country of Citizenship: Italy
E-mail: diana.pendin@cnr.it
Researcher unique identifiers: **Scopus Author ID**: 28267914100; **ORCID:** 0000-0002-2023-0749.

Education and key qualifications

- **Education**

2010: PhD in Pharmacology, University of Padova, Italy - laboratory of Dr. Andrea Daga
2006: MSC Degree (Laurea Magistrale) in Pharmaceutical Biotechnologies, University of Padova, Italy.

- **Current position**

2018 – present: Researcher at Neuroscience Institute – National Research Council (CNR) - Padova.

- **Previous positions**

2016-2018: Term-contract Researcher (RTDA), Department of Biomedical Sciences, University of Padova.
2012-2016: Term-contract Researcher, Neuroscience Institute – National Research Council (CNR) - Padova.
2010-2012: Post-doctoral fellow, IRCCS E. Medea, Scientific Institute - Padova.
2010: Visiting researcher - EMBO Short Term Fellowship, Rice University, Texas (USA).

- **National Scientific Habilitation (ASN; Abilitazione Scientifica Nazionale)**

Valid until 18/09/2029: ASN, 05/F1 BIOLOGIA APPLICATA II fascia (associate professor).

Summary of Scientific Production:

- **30 papers** published in indexed journals (**22 in Q1**), 11 of which as **first author** and 11 as last or **corresponding author** (Scopus; 14 years of academic age); **2 book chapters** as corresponding author; Total **IF 296,5**.
- Scopus: h-index 19, 1492 citations; Google Scholar: h-index 20, 2004 citations.

Granted calls as PI/co-PI:

- PRIN 2022 from Italian MUR. “Innovative chemical tools for real-time calcium imaging in organelles” (202282LYW5). Amount: **100.136,00** euro/unit from October 2023 to October 2025. Role: **PI**.
- HORIZON MSCA Postdoctoral Fellowships 2022 (HORIZON-MSCA-2022-PF-01 #101109589). “SHAPE. Deciphering sarcoplasmic reticulum shaping in heart function”. Amount: **188.590,08** euro starting from November 2023. Role: **Supervisor**.
- PNRR “Rafforzamento e creazione di Infrastrutture di Ricerca”. Missione 4, “Istruzione e Ricerca” - Componente 2, “Dalla ricerca all’impresa” - Linea di investimento 3.1, “Fondo per la realizzazione di un sistema integrato di infrastrutture di ricerca e innovazione”, finanziato dall’Unione europea – NextGenerationEU. “SEE LIFE - StrEngthEning the ItaLIan InFrastructure of Eurobioimaging”. Amount: **2.842.350,00** euro/unit from 01/11/2022-present. Role: **Lead of operating unit** (Padova).
- Telethon-Cariplo Grant 2022 (GJC21054). “Deorphanizing and functionalizing the mitochondrial protein TMEM65”. Amount: **125.000,00** euro/unit from 10/05/2022 - present. Role: **co-PI**.
- Scholarship for a PhD Position (2022-2024) financed by PON Research and Innovation 2014-2020. “Untangling the role of ER stress and membrane lipid imbalance in fine particulate matter exposure”. Role: **Proponent**, PhD supervisor.
- Telethon Grant 2019, from Fondazione Telethon (GGP19304). “Plasmalogen-based therapeutic strategy for the treatment of Hereditary Spastic Paraplegia”. Amount: **290.180,00** euro, from 01/11/2019 - present. Role: **PI**.
- BIRD, from University of Padova. “Development of new chemical probes for organelle-specific real-time calcium imaging”. Amount: **37.314,00** euro, years 2018-2019. Role: **PI**.
- Starting Grant 2015 from Fondazione Cariparo. “Impact of Endoplasmic Reticulum morphological alterations on cellular Ca^{2+} homeostasis: a common pathway in hereditary axonopathies?”. Amount: **265.338,41** euro, years 2016-2020. Role: **PI**.

Awards

- **Best presentation award**, French-Italian Joint Meeting on Subcellular Trafficking, 28 May 2011, Padova.

- Recipient of **EMBO Short-Term Fellowship** (ASFT No: 84-2010). “In vitro analysis of human atlastins activity” (2010) project carried out in the lab of Dr. McNew at Rice University, Texas, USA.
- Recipient of “**Premio di Studio**” from Telethon Foundation in 2008 and in 2009.

Oral communications (selected)

- Junior European Calcium Society meeting, 4th online meeting: Calcium research across kingdoms (October 5th, 2023). **Invited talk**, “Neurodegeneration in *Drosophila melanogaster*: the role of ER morphology and Ca^{2+} handling”.
- Kick off meeting PNRR: StrEngthEning the ItaLIan InFrastructure of EuroBioimaging - See Life (May 3rd, 2023, Naples, Italy). **Invited talk**, “Imaging subcellular calcium dynamics, in ricordo di Tullio Pozzan”.
- Telethon meeting: Frontiere della ricerca sulle malattie genetiche rare (October 21-23, 2021 online). “Plasmalogen-based therapeutic strategy for the treatment of Hereditary Spastic Paraplegia”
- DSB-CNR Virtual Conference: Mechanistic Insights into Neurological Disorders and New Therapeutic Strategies (July 7-8, 2021 online). “ER-shaping proteins and their role in neuronal Ca^{2+} homeostasis”
- XIX IDRC - Italian Drosophila Research Conference (June 20-22, 2018, Padova, Italy). “Shaping the endoplasmic reticulum: fusion and fission dynamics revealed in flies”
- French-Italian Joint Meeting on Subcellular Trafficking (May 25-28, 2011, Padova, Italy). "Atlastin, Reticulon and ER dynamics”

Publications in indexed journals

- Lia A, Sansevero G, Chiavegato A, Sbrissa M, **Pendin D**, et al. “Rescue of astrocyte activity by the calcium sensor STIM1 restores long-term synaptic plasticity in female mice modelling Alzheimer's disease”. Nat Commun. 2023 Mar 22;14(1):1590.
- Galla L, Vajente N, **Pendin D**, Pizzo P, Pozzan T, Greotti E. “Generation and Characterization of a New FRET-Based Ca^{2+} Sensor Targeted to the Nucleus”. Int J Mol Sci. 2021 Sep 14;22(18):9945.
- Sonda S, **Pendin D***, Daga A*. “ER Morphology in the Pathogenesis of Hereditary Spastic Paraplegia”. Cells. 2021 Oct 25;10(11):2870. (*corresponding authors)
- Redolfi N, García-Casas P, Fornetto C, Sonda S, Pizzo P, **Pendin D**. “Lighting Up Ca^{2+} Dynamics in Animal Models”. Cells. 2021 Aug 19;10(8):2133.
- Redolfi N, Greotti E, Zanetti G, Hochepied T, Fasolato C, **Pendin D***, Pozzan T. “A new transgenic mouse line for imaging mitochondrial calcium signals”. Function. 2021, Vol 2, Issue 3. (*corresponding author)
- Montagna A, Vajente N, **Pendin D***, Daga A* (*corresponding authors). “In vivo analysis of CRISPR/Cas9 induced atlastin pathological mutations in Drosophila”. Front Neurosci. 2020 Oct 15;14:547746.
- Pizzo P, Basso E, Filadi R, Greotti E, Leparulo A, **Pendin D**, et al. “Presenilin-2 and Calcium Handling: Molecules, Organelles, Cells and Brain Networks”. Cells. 2020 Sep 25;9(10):2166.
- De Nadai A, Vajente N, **Pendin D**, Mattarei A. “Mt-fura-2, a Ratiometric Mitochondria-Targeted Ca^{2+} Sensor. Determination of Spectroscopic Properties and Ca^{2+} Imaging Assays”. Methods Mol Biol. 2021;2275:187-215.
- Vajente N, Norante R, Pizzo P, **Pendin D**. “Calcium Imaging in Drosophila melanogaster”. Adv Exp Med Biol. 2020;1131:881-900.
- Vajente N, Norante R, Redolfi N, Daga A, Pizzo P, **Pendin D**. “Microtubules Stabilization by Mutant Spastin Affects ER Morphology and Ca^{2+} Handling”. Front Physiol. 2019 Dec 20;10:1544.
- Espadas J*, **Pendin D***, Bocanegra R, Escalada A, Misticoni G, et al. (*equal contribution) “Dynamic constriction and fission of endoplasmic reticulum membranes by reticulon”. Nat Commun. 2019 Nov 22;10(1):5327.
- **Pendin D**, Fasolato C, Basso E, Filadi R, Greotti E, et al. “Familial Alzheimer's disease presenilin-2 mutants affect Ca^{2+} homeostasis and brain network excitability”. Aging Clin Exp Res. 2019 Oct 12.
- **Pendin D**, Norante R, De Nadai A, Gherardi G, Vajente N, et al. “A Synthetic Fluorescent Mitochondria-Targeted Sensor for Ratiometric Imaging of Calcium in Live Cells”. Angew Chem Int Ed Engl. 2019 Jul 15;58(29):9917-9922.

- Greotti E, Fortunati I, **Pendin D**, Ferrante C, Galla L, et al. “mCerulean3-Based Cameleon Sensor to Explore Mitochondrial Ca^{2+} Dynamics In Vivo”. iScience. 2019 Jun 28;16:340-355.
- Greotti E, Capitanio P, Wong A, Pozzan T, Pizzo P, **Pendin D**. “Familial Alzheimer's disease-linked presenilin mutants and intracellular Ca^{2+} handling: A single-organelle, FRET-based analysis”. Cell Calcium. 2019 May;79:44-56.
- Tsakiri E, Gumeni S, Vougas K, **Pendin D**, Papassideri I, et al. “Proteasome dysfunction induces excessive proteome instability and loss of mitostasis that can be mitigated by enhancing mitochondrial fusion or autophagy”. Autophagy. 2019 Oct;15(10):1757-1773.
- Trevisan T*, **Pendin D***, Montagna A, Bova S, Ghelli AM, Daga A. (*equal contribution). “Manipulation of Mitochondria Dynamics Reveals Separate Roles for Form and Function in Mitochondria Distribution”. Cell Rep. 2018 May 8;23(6):1742-1753.
- Filadi R, **Pendin D**, Pizzo P. “Mitofusin 2: from functions to disease”. Cell Death Dis. 2018 Feb 28;9(3):330.
- Tkatch T, Greotti E, Baranauskas G, **Pendin D**, Roy S, et al. “Optogenetic control of mitochondrial metabolism and Ca^{2+} signaling by mitochondria-targeted opsins”. Proc Natl Acad Sci U S A. 2017 Jun 27;114(26):E5167-E5176.
- **Pendin D**, Filadi R, Pizzo P. “The Concerted Action of Mitochondrial Dynamics and Positioning: New Characters in Cancer Onset and Progression”. Front Oncol. 2017 May 22;7:102.
- **Pendin D**, Greotti E, Lefkimmiatis K, Pozzan T. “Exploring cells with targeted biosensors”. J Gen Physiol. 2017 Jan;149(1):1-36.
- Greotti E, Wong A, Pozzan T, **Pendin D***, Pizzo P (*Corresponding author). “Characterization of the ER-Targeted Low Affinity Ca^{2+} Probe D4ER”. Sensors. 2016 Sep 2;16(9):1419.
- Summerville J, Faust J, Fan E, **Pendin D**, Daga A, Formella J, Stern M, McNew JA. “The effects of ER morphology on synaptic structure and function in Drosophila melanogaster”. J Cell Sci. 2016 Apr 15;129(8):1635-48.
- **Pendin D***, Greotti E, Filadi R, Pozzan T. (*Corresponding author). “Spying on organelle Ca^{2+} in living cells: the mitochondrial point of view”. J Endocrinol Invest. 2015 Jan;38(1):39-45.
- **Pendin D**, Greotti E, Pozzan T. “The elusive importance of being a mitochondrial Ca2+ uniporter”. Cell Calcium. 2014 Mar;55(3):139-45.
- Debattisti V, **Pendin D**, Ziviani E, Daga A, Scorrano L. “Reduction of endoplasmic reticulum stress attenuates the defects caused by Drosophila mitofusin depletion”. J Cell Biol. 2014 Feb 3;204(3):303-12
- Di Benedetto G, **Pendin D**, Greotti E, Pizzo P, Pozzan T. “Ca^{2+} and cAMP crosstalk in mitochondria”. J Physiol. 2014 Jan 15;592(2):305-12.
- **Pendin D***, Tosetto J*, Moss TJ, Andreazza C, Moro S, McNew JA, Daga A. “GTP-dependent packing of a three-helix bundle is required for atlastin-mediated fusion”. Proc Natl Acad Sci U S A. 2011 Sep 27;108(39):16283-8.
- **Pendin D**, McNew JA, Daga A. “Balancing ER dynamics: shaping, bending, severing, and mending membranes”. Curr Opin Cell Biol. 2011 Aug;23(4):435-42.
- Orso G*, **Pendin D***, Liu S, Tosetto J, Moss TJ, Faust JE, et al. (*equal contribution). “Homotypic fusion of ER membranes requires the dynamin-like GTPase atlastin”. Nature. 2009 Aug 20;460(7258):978-83.