

MASSIMO PIZZATO

Virus-Cell Interaction Laboratory
Department of Cellular, Computational and Integrative Biology (CIBIO)
University of Trento

Current position:

Full Professor, Department of Cellular, Computational and Integrative Biology (CIBIO) and Centre for Medical Sciences, University of Trento, Italy.

Previous positions

2009 - 2012	Dept. of Microbiology & Molecular Medicine, University of Geneva , Switzerland Lecturer
2004 – 2009	Dept. of Infectious Diseases, Imperial College London , U.K. Lecturer
2001- 2004	Dept. of Histology, Microbiology and Medical Biotechnology, University of Padova , Italy Lecturer (Ricercatore a tempo indeterminato)
2000 – 2002, 2004	Dept. of Cancer, Immunology and AIDS, Dana-Farber Cancer Institute, Harvard Medical School , USA Postdoctoral research fellow
1999 – 2000	Windeyer Institute of Medical Sciences, University College London , U.K Postdoctoral Honorary Research Scientist
1995 – 1999	The Institute of Cancer Research and GlaxoWellcome , London, UK. Ph.D. student
1994 – 1995	Dept. of Microbiology, University of Padova , Italy Graduate Research Fellow

Education

1999	The Institute of Cancer Research, University of London , UK. Ph.D. in Virology
1994	Department of Biology, University of Padova , Italy. B.Sc. in Biological Sciences

Current Funding

2023-2025	The Italian Ministry of University and Research, COC-1-2023-UNIPV, 225,000 EUR
2023-2025	CARITRO Foundation, Research and Development, 98,000 EUR
2023-2025	The Italian Ministry of University and Research, PRIN, 200,000 EUR
2022-2027	The Health Ministry, Genomed POS T3 (260,000 EUR)

Awards

2017	Pettenkofer Prize from the City of Munich, Pettenkofer Foundation , for research on "Restriction factors against pathogenic viruses"
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Patents

2020	European patent 20175072.8 "Bacterial outer membrane vesicles carrying coronavirus proteins, method of preparation, composition and use thereof". May 15, 2020
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Editorial & Journal Positions

- Editorial Board member of: Virology, Frontiers of Virology
- Guest editor for: mBio, Viruses
- Serving as reviewer for several journals including, (in the last five years):
Nature Microbiology, PNAS, Science Advances, Cell Host and Microbes, eLife, Trends in Microbiology, Plos Biology, Plos Pathogens Scientific reports, Journal of Virology, Retrovirology, Cells, Antimicrobial agents and chemotherapy, Virology, Viruses, Virology Journal, Virus Research, Journal of General Virology, Plos One, FEBS Letters.

Administrative roles

Current	University of Trento <ul style="list-style-type: none">- Teaching coordinator for the University of Trento Medical School (pre-clinical), from 2020- Departmental delegate for the internationalization, from 2012.- Member of the PhD School committee, from 2014.
2004-2009	Imperial College London <ul style="list-style-type: none">- Member of the Graduate School of Life Sciences and Medicine committee.
2001-2004	University of Padova, Faculty of Medicine <ul style="list-style-type: none">- Member of the Post-graduate School of Microbiology and Molecular Medicine committee

Languages

Italian: mother tongue.
English: fluent (written and oral).
French: intermediate.

Invited seminars (selected)

Invited keynote speeches at international conferences:

- 31st International Conference on Retroviral Pathogenesis, October 2019 Padova, Italy.
- Frontiers in Retrovirology Conference, September 2018, Leuven, Belgium.
- International Symposium "Innate sensing and restriction of human retroviruses", June 2018, Heidelberg, Germany.
- The 15th Awaji International Forum on Infection and Immunity, September 2016, Awaji Island, Japan
- ICAR Conference on AIDS and Antiviral Research, June 2016, Milano, Italy
- Conference on Retroviruses and Opportunistic Infections (CROI), February 2016, Boston, USA,
- Ninth Annual Meeting of the Cambridge Retrovirologists, January 2016, Cambridge, UK
- 1st Kyoto International Symposium on Virus Host Coevolution, September 2014, University of Kyoto, Japan

Publications (selected in the last 10 years)

Grandi A, Tomasi M, Ullah I, Bertelli C, Vanzo T, Accordini S, Gagliardi A, Zanella I, Benedet M, Corbellari R, Di Lascio G, Tamburini S, Caproni E, Croia L, Ravà M, Fumagalli V, Di Lucia P, Marotta D, Sala E, Iannacone M, Kumar P, Mothes W, Uchil PD, Cherepanov P, Bolognesi M, **Pizzato M***, Grandi G*. Immunogenicity and Pre-Clinical Efficacy of an OMV-Based SARS-CoV-2 Vaccine. *Vaccines*. 2023; 11(10):1546. <https://doi.org/10.3390/vaccines11101546>.

Firrito C, Bertelli C, Rosa A., Chande A, Ananth S, van Dijk H., Fackler O.T., Stoneham C., Singh R., Guatelli J., **Pizzato M**. A Conserved Acidic Residue in the C-Terminal Flexible Loop of HIV-1 Nef Contributes to the Activity of SERINC5 and CD4 Downregulation. *Viruses*. 15(3):652. <https://doi.org/10.3390/v15030652> (2023)

Pagani I., Demela P., Ghezzi S., Vicenzi E., **Pizzato M.**, and Poli G. Host Restriction Factors Modulating HIV Latency and Replication in Macrophages. *IJMS*; 11;23(6):3021. doi: 10.3390/ijms23063021.

Fronza, F., Groff, N., Martinelli, A., Passerini, B.Z., Rensi, N., Cortelletti, I., Vivori, N., Adami, V., Helander, A., Bridi, S., Pancher, M., Greco, V., Garritano, S.I., Piffer, E., Stefani, L., De Sanctis, V., Bertorelli, R., Pancheri, S., Collini, L., Dassi, E., Quattrone, A., Capobianchi, M.R., Icardi, G., Poli, G., Caciagli, P., Ferro, A. and **Pizzato, M**. A Community Study of SARS-CoV-2 Detection by RT-PCR in Saliva: A Reliable and Effective Method. *Viruses*, 14, 313. <https://doi.org/10.3390/v14020313>. (2022)

Pizzato M, Baraldi C, Boscato Sopetto G, Finozzi D, Gentile C, Gentile MD, Marconi R, Paladino D, Raoss A, Riedmiller I, Ur Rehman H, Santini A, Succetti V and Volpini L. SARS-CoV-2 and the host cell: a tale of interactions. *Frontiers in Virology*, <https://doi.org/10.3389/fviro.2021.815388> (2022)

Diehl, W.E.; Guney, M.H.; Vanzo, T.; Kyawe, P.P.; White, J.M.; **Pizzato, M.**; Luban, J. Influence of Different Glycoproteins and of the Virion Core on SERINC5 Antiviral Activity. *Viruses*, 13, 1279. DOI: 10.3390/v13071279 (2021)

Rosa A, Pye VE, Graham C, Muir L, Seow J, Ng KW, Cook NJ, Rees-Spear C, Parker E, Silva Dos Santos M, Rosadas C, Susana A, Rhys H, Nans A, Masino L, Roustan C, Christodoulou E, Ulferts R, Wrobel AG, Short CE, Fertleman M, Sanders RW, Heaney J, Spyer M, Kjær S, Riddell A, Malim MH, Beale R, MacRae JI, Taylor GP, Nastouli E, van Gils MJ, Rosenthal PB, **Pizzato M**, McClure MO, Tedder RS, Kassiotis G, McCoy LE, Doores KJ, Cherepanov P. SARS-

CoV-2 can recruit a haem metabolite to evade antibody immunity. *Sci Adv*: eabg7607. DOI: 10.1126/sciadv.abg7607 (2021)

Pye V.E., Rosa A., Bertelli C., Struwe W., Maslen S., Corey R., Liko I., Hassall M., Mattiuzzo G., Ballandras-Colas A., Nans A., Takeuchi Y., Stansfeld P.J., Skehel M., Robinson C., **Pizzato M.**, Cherepanov P.* "A Bipartite Structural Organization Defines the SERINC Family of HIV-1 Restriction Factors". *Nat Struct Mol Biol* 27 (1), 78-83 (2020)

Firrito C, Bertelli C, Vanzo T, Chande A, **Pizzato M.** "SERINC5 as a New Restriction Factor for Human Immunodeficiency Virus and Murine Leukemia Virus." *Annu Rev Virol*. 29;5(1):323-340 (2018).

Schulte B, Selyutina A, Opp S, Herschhorn A, Sodroski JG, **Pizzato M**, Diaz-Griffero. "Localization to detergent-resistant membranes and HIV-1 core entry inhibition correlate with HIV-1 restriction by SERINC5". *Virology*, 515:52-65 (2017)

Sood C., Marin M., Chande A., **Pizzato M.** and Melikyan G.B. "SERINC5 Inhibits HIV-1 Fusion Pore Formation by Promoting Functional Inactivation of Envelope Glycoproteins". *J. Biol. Chem.* jbc.M117.777714. (2017).

Chande A, Cuccurullo EC, Rosa A, Ziglio S, Carpenter S, **Pizzato M.** "S2 from Equine infectious anemia virus is an infectivity factor which counteracts the retroviral inhibitors SERINC5 and SERINC3". *PNAS*, 113:13197-13202 (2016).

Trautz B, Pierini V, Wombacher R, Stolp B, Chase AJ, **Pizzato M**, Fackler OT. "Antagonism of the SERINC5 Particle Infectivity Restriction by HIV-1 Nef Involves Counteraction of Virion-associated Pools of the Restriction Factor." *Journal of virology*. JVI.01246-16 (2016)

Heigle A, Kmiec D, Regensburger K, Langer S, Peiffer L, Stürzel CM, Sauter D, Peeters M, **Pizzato M**, Learn GH, Hahn B, Kirchhoff F. "The Potency of Nef-mediated SERINC5 Antagonism Correlates with the Prevalence of Primate Lentiviruses in the Wild", *Cell Host and Microbe*, 20: 381-391 (2016).

Rosa A, Chande A, Ziglio S, De Sanctis V, Bertorelli R, Goh SL, McCauley SM, Nowosielska A, Antonarakis SE, Luban J, Santoni FA, **Pizzato M.** "HIV-1 Nef promotes infection by excluding SERINC5 from virion incorporation". *Nature*, 526: 121-7. (2015).

Pizzato M, McCauley SM, Neagu MR, Pertel T, Firrito C, Ziglio S, Dauphin A, Zufferey M, Berthoux L & Luban J. "Lv4 Is a Capsid-Specific Antiviral Activity in Human Blood Cells That Restricts Viruses of the SIVMAC/SIVSM/HIV-2 Lineage Prior to Integration". *PLoS pathogens* 11, e1005050 (2015).

Cuccurullo EC, Valentini C & **Pizzato M.** "Retroviral factors promoting infectivity". *Progress in molecular biology and translational science* 129, 213-251 (2015).

Autorizzo il trattamento dei miei dati personali presenti nel cv ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali" e del GDPR (Regolamento UE 2016/679);

Trento, 04/12/2024