

Francesco Ferraro



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Current Position: Researcher

Current Affiliation:

Department of Biology and Development of Marine Organisms (BEOM)

Stazione Zoologica Anton Dohrn, Villa Comunale, 80121 Naples, Italy

Research areas: protein biochemistry; cell biology; membrane traffic; organelle biology.

Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
Agricultural Chemistry Institute, University of Pisa (Italy)	Laurea 110/110 cum laude	1986-1994	Biology. Major in Biochemistry
Biophysics Institute, National Research Council (CNR), Pisa (Italy)	Post-graduate Research fellow	1995-1996	Biochemistry of Microalgae
Department of Agricultural Chemistry and Biotechnology University of Pisa (Italy)	PhD	1997-2001	Plant Physiology and Biochemistry
Neuroscience Department, University of Connecticut Health Center, UCHC (USA)	Post-doctoral fellow	2001-2007	Biochemistry and Cell Biology of Neurosecretion
MRC Laboratory for Molecular Cellular Biology (LMCB), University College London (UK)	Post-doctoral fellow	2007-2012	Cell Biology of the Endothelial Secretory Pathway

MRC Laboratory for Molecular Cellular Biology (LMCB), University College London (UK)	Investigator Scientist	2012-2017	Cell Biology of the Endothelial Secretory Pathway
Stazione Zoologica Anton Dohrn (Italy)	Researcher	2019 - present	Biochemistry and Cell Biology of Marine Organisms

Invited talks

2022 - Euro Evo Devo Meeting, Naples
2017 - University of Manchester, UK; Host: Martin Lowe
2016 - EMBO workshop “Glycosylation in the Golgi complex”, Italy
2015 - TIGEM (Telethon Institute for Genetics and Medicine), Italy; Host: Antonella De Matteis
2014 - Gordon Research Conference on Protein Processing, Trafficking & Secretion, USA
2014 - Lysosome Related Organelles, Zing Conference, Spain
2013 - Membrane Trafficking UK Meeting, UK
2007 - University of Illinois at Chicago, USA; Host: Scott Brady
2006 - Cancer UK London Research Institute, UK; Hosts: Sharon Tooze and Giampietro Schiavo
2006 - Neuroscience Department, San Raffaele Institute, Italy; Host: Iacopo Meldolesi

Other talks

2021 – BEOM Retreat
2020 – SNZ, Internal Seminar series
2019 – EDEN Retreat
2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 - MRC LMCB, Internal seminar series
2013 - London Membrane Trafficking Club
2007 - UCHC, Neuroscience Department Retreat

Supervision and Tutoring

Supervised four PhD students (3 at LMCB, University College London and 1 at UCHC)
SZN – Director of Studies for Emanuele Astoricchio (SZN-Open University program 2020-2023)

Other

Outreach

2013 - Science Fair for the Medical Research Council Centennial

Memberships

2020-present – ABCD (Italian Association of Cell Biology and Differentiation)
2020-present – SIBE (Italian Society of Evolutionary Biology)
2007-2017 - British Society for Cell Biology

Posters

2015 - Shenc symposium on von Willebrand Factor; Germany
2014 - UCL Faculty of Life Sciences Research day; UK,
2014 - Gordon Research Conference on Protein Processing, Trafficking & Secretion; USA
2013 - UCL Faculty of Life Sciences Research day; UK
2007 - UCHC, Neuroscience Department Retreat; USA
2005 - FEBS Advanced Course on Lipid-protein interaction in signalling and membrane trafficking; Italy

2004 - Gordon Research Conference on Protein Processing, Trafficking & Secretion; USA
(poster award)

2003 - Annual Meeting of the Society for Endocrinology; USA

2002 - Gordon Research Conference on Protein Processing, Trafficking & Secretion; USA

Publications

Journal articles

Page KM*, McCormack JJ, Lopes-da-Silva M, Patella F, Harrison-Lavoie K, Burden JJ, Quah YB, Scaglioni D, **Ferraro F***, Cutler DF*. *Structure modelling hints at a granular organization of the Golgi ribbon*. BMC Biology (2022) 20, 111.

<https://doi.org/10.1186/s12915-022-01305-3>

*co-corresponding author

Ferraro F*¹, Patella F¹, Costa JR, Ketteler R, Kriston-Vizi J, Cutler DF*. *Modulation of endothelial organelle size as an antithrombotic strategy*. J. Thromb Haemost. (2020) 18:3296–3308. <https://doi.org/10.1111/jth.15084>

¹co-first, *co-corresponding author

Lopes-da-Silva M, McCormack JJ, Burden JJ, Harrison-Lavoie KJ, **Ferraro F**, Cutler DF. *A GBF1-Dependent Mechanism for Environmentally Responsive Regulation of ER-Golgi Transport*. Dev Cell. 2019 Jun 3;49(5):786-801.e6. doi: 10.1016/j.devcel.2019.04.006

Mencarelli C, Nitarska J, Kroecher T, **Ferraro F**, Massey K, Riccio A, Pichaud F. *RanBP1 Couples Nuclear Export and Golgi Regulation through LKB1 to Promote Cortical Neuron Polarity*. Cell Rep. 2018 Sep 4;24(10):2529-2539.e4. doi: 10.1016/j.celrep.2018.07.107.

McCormack JJ*, Lopes da Silva M*, **Ferraro F***, Patella F*, Cutler DF. *Weibel-Palade bodies at a glance*. McCormack JJ¹, Lopes da Silva M¹, Ferraro F¹, Patella F¹, Cutler DF². J Cell Sci. 2017 Nov 1;130(21):3611-3617. doi: 10.1242/jcs.208033

*equal contribution

Ketteler R, Freeman J, **Ferraro F**, Bata N, Cutler DF, Kriston-Vizi J, Stevenson N. *Image-based siRNA screen to identify kinases regulating Weibel-Palade body size control using electroporation*. Sci Data. 2017 Mar 1;4:170022. doi: 10.1038/sdata.2017.22.

Ferraro F*, Mafalda Lopes da S, Grimes W, Lee HK, Ketteler R, Kriston-Vizi J, Cutler DF. *Weibel-Palade body size modulates the adhesive activity of its von Willebrand Factor cargo in cultured endothelial cells*. Sci Rep. 2016 Aug 31;6:32473. doi: 10.1038/srep32473.

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Banushi B, Forneris F, Straatman-Iwanowska A, Strange A, Lyne AM, Rogerson C, Burden JJ, Heywood WE, Hanley J, Doykov I, Straatman KR, Smith H, Bem D, Kriston-Vizi J, Ariceta G, Risteli M, Wang C, Ardill RE, Zaniew M, Latka-Grot J, Waddington SN, Howe SJ, **Ferraro F**, Gjinovci A, Lawrence S, Marsh M, Girolami M, Bozec L, Mills K, Gissen P. *Regulation of post-Golgi LH3 trafficking is essential for collagen homeostasis*. Nat Commun. 2016 Jul 20;7:12111. doi: 10.1038/ncomms12111.

Ferraro F, Kriston-Vizi J, Metcalf DJ, Martin-Martin B, Freeman J, Burden JJ, Westmoreland D, Dyer CE, Knight AE, Ketteler R, Cutler DF. *A two-tier Golgi-based control of organelle size underpins the functional plasticity of endothelial cells*. Dev Cell. 2014 May 12;29(3):292-304. doi: 10.1016/j.devcel.2014.03.021.

Starke RD, **Ferraro F**, Paschalaki KE, Dryden NH, McKinnon TA, Sutton RE, Payne EM, Haskard DO, Hughes AD, Cutler DF, Laffan MA, Randi AM. Endothelial von Willebrand factor regulates angiogenesis. Blood. 2011 Jan 20;117(3):1071-80. doi: 10.1182/blood-2010-01-264507.

Doyle EL, Ridger V, **Ferraro F**, Turmaine M, Saftig P, Cutler DF. *CD63 is an essential cofactor to leukocyte recruitment by endothelial P-selectin*. Blood. 2011 Oct 13;118(15):4265-73. doi: 10.1182/blood-2010-11-321489

Lui-Roberts WW, **Ferraro F**, Nightingale TD, Cutler DF. *Aftiphilin and gamma-synergin are required for secretagogue sensitivity of Weibel-Palade bodies in endothelial cells*. Mol Biol Cell. 2008 Dec;19(12):5072-81. doi: 10.1091/mbc.E08-03-0301.

Gauthier DJ, Sobota JA, Ferraro F, Mains RE, Lazure C. *Flow cytometry-assisted purification and proteomic analysis of the corticotropes dense-core secretory granules*. Proteomics. 2008 Sep;8(18):3848-61. doi: 10.1002/pmic.200700969.

Schiller MR, **Ferraro F**, Wang Y, Ma XM, McPherson CE, Sobota JA, Schiller NI, Mains RE, Eipper BA. *Autonomous functions for the Sec14p/spectrin-repeat region of Kalirin*. Exp Cell Res. 2008 Aug 15;314(14):2674-91. doi: 10.1016/j.yexcr.2008.05.011.

Ma XM, Wang Y, **Ferraro F**, Mains RE, Eipper BA. *Kalirin-7 is an essential component of both shaft and spine excitatory synapses in hippocampal interneurons*. J Neurosci. 2008 Jan 16;28(3):711-24. doi: 10.1523/JNEUROSCI.5283-07.2008.

Ferraro F, Ma XM, Sobota JA, Eipper BA, Mains RE. *Kalirin/Trio Rho guanine nucleotide exchange factors regulate a novel step in secretory granule maturation*. Mol Biol Cell. 2007 Dec;18(12):4813-25. doi: 10.1091/mbc.e07-05-0503

Sobota JA, **Ferraro F**, Bäck N, Eipper BA, Mains RE. *Not all secretory granules are created equal: Partitioning of soluble content proteins*. Mol Biol Cell. 2006 Dec;17(12):5038-52. doi: 10.1091/mbc.e06-07-0626

Ferraro F, Eipper BA, Mains RE. Retrieval and reuse of pituitary secretory granule proteins. J Biol Chem. 2005 Jul 8;280(27):25424-35. doi: 10.1074/jbc.M414156200

Xin X, **Ferraro F**, Bäck N, Eipper BA, Mains RE. Cdk5 and Trio modulate endocrine cell exocytosis. J Cell Sci. 2004 Sep 15;117(Pt 20):4739-48. doi: 10.1242/jcs.01333

Ferraro F, Castagna, A, Soldatini, GF and Ranieri, A. *Tomato (Lycopersicon esculentum M.) T3238FER and T3238fer genotypes. Influence of different iron concentrations on thylakoid pigment and protein composition*. Plant Sci. 2003 164 (5), 783-792

Ranieri, A., Giuntini, D., **Ferraro F**., Nali, C., Baldan B., Lorenzini. G. and Soldatini, G.F. *Chronic ozone fumigation induces alterations in thylakoid functionality and composition in two poplar clones*. Plant Phys. Biochem. 2001 39 (11), 999-1008