



INFORMAZIONI PERSONALI

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ESPERIENZA LAVORATIVA

- Date (2019 – presente)
Professore Associato di Fisiologia, SSD Bio/09
Università del Piemonte Orientale “Amedeo Avogadro”, Dipartimento di Scienze del Farmaco, Largo Donegani 2, Novara, 28100, Italy
- Nome e indirizzo del datore di lavoro
• Date (2016 – 2019)
Ricercatore RTDb, SSD Bio/09, Fisiologia
Università del Piemonte Orientale “Amedeo Avogadro”, Dipartimento di Scienze del Farmaco, Largo Donegani 2, Novara, 28100, Italy
- Nome e indirizzo del datore di lavoro
• Date (2009 – 2016)
Assegnista di ricerca
Università del Piemonte Orientale “Amedeo Avogadro”, Dipartimento di Scienze del Farmaco, Largo Donegani 2, Novara, 28100, Italy
- Nome e indirizzo del datore di lavoro
• Date (2007 – 2008)
Postdoctoral Fellow
Venetian Institute of Molecular Medicine, Padova, Italy
- Nome e indirizzo del datore di lavoro
• Date (2004 – 2006)
Lavoratore dipendente Co.Co.Pro.
Università di Padova, Dipartimento di Biochimica, Padova, Italy

ISTRUZIONE E FORMAZIONE

- Date (1999 – 2003)
PhD in Physiology and Cell Biology. The Open University of London, UK e Stazione Zoologica di Napoli “Anton Dohrn”, Italy
- Date (1994 – 1999)
Master degree in Physiology Cum Laude, The Moscow State University “Michail Lomonosov”
- Date (1984 – 1988)
Degree in Nursing Cum Laude. Novokuybishevsk school of nursing, Novokuybishevsk, Russia.

CORSI SPECIALIZZATI

- Date (2017)
D.lgs. 26/2014 sulla tutela degli animali utilizzati ai fini scientifici: ruolo e competenze del Responsabile del Progetto di Ricerca e Valutazione Tecnico Scientifica dei progetti. Istituto Superiore della Sanità, Centro Nazionale Sperimentazione e Benessere Animale (CSBA). 13 ore di formazione.

ATTIVITÀ PROFESSIONALI

• Date (2017 – 2020)	Member of Academic Board of the PhD in Chemistry and Biology, Università del Piemonte Orientale.
• Date (2019 – 2024)	Member of council of the Department of Pharmaceutical Sciences, Università Del Piemonte Orientale
• Date (2020 – presente)	Member of Academic Board of the PhD in Pharmaceutical innovation, Università del Piemonte Orientale.
• Date (2021 – presente)	member of Technical-Scientific Committee, Interdepartmental Center for Allergic and Autoimmune Diseases (CAAD), Università del Piemonte Orientale.
• Date (2021 – presente)	Vice president of Master Degree in Pharmaceutical Biotechnologies, Department of Pharmaceutical Sciences, Università del Piemonte Orientale.
• Date (2021 – presente)	Delegate for International Relations, Department of Pharmaceutical Sciences, Università del Piemonte Orientale.

Interesse scientifico:

Gli interessi di ricerca del Prof. Dmitry Lim si articolano in tre principali ambiti:

- Fisiopatologia dell'omeostasi e della trasduzione dei segnali mediante il calcio (Ca^{2+});
- Fisiopatologia degli astrociti e il loro ruolo nella patogenesi della malattia di Alzheimer;
- Organizzazione dei siti di contatto tra reticolo endoplasmatico (ER) e mitocondri e il loro ruolo nella fisiopatologia cellulare.

PUBBLICAZIONI

- Lim D**, Tapella L, Dematteis G, Talmon M, Genazzani AA. Calcineurin Signalling in Astrocytes: From Pathology to Physiology and Control of Neuronal Functions. *Neurochem Res.* **2022** doi: 10.1007/s11064-022-03744-4.
- Favero F, Barberis E, Gagliardi M, Espinoza S, Contu L, Gustincich S, Boccafroschi F, Borsotti C, **Lim D**, Rubino V, Mignone F, Pasolli E, Manfredi M, Zucchelli S, Corà D, Corazzari M. A Metabologenomic approach reveals alterations in the gut microbiota of a mouse model of Alzheimer's disease. *PLoS One.* **2022** 17:e0273036. doi: 10.1371/journal.pone.0273036.
- Faris P, Rumolo A, Tapella L, Tanzi M, Metallo A, Conca F, Negri S, Lefkimmatis K, Pedrazzoli P, **Lim D**, Montagna D, Moccia F. Store-Operated Ca^{2+} Entry Is Up-Regulated in Tumour-Infiltrating Lymphocytes from Metastatic Colorectal Cancer Patients. *Cancers (Basel).* **2022** 14:3312. doi: 10.3390/cancers14143312.
- Dematteis G, Restelli E, Vanella VV, Manfredi M, Marengo E, Corazzari M, Genazzani AA, Chiesa R, **Lim D**, Tapella L. Calcineurin Controls Cellular Prion Protein Expression in Mouse Astrocytes. *Cells.* **2022**. 11:609. doi: 10.3390/cells11040609.
- Merlo S, Spampinato SF, **Lim D**. Molecular Aspects of Cellular Dysfunction in Alzheimer's Disease: The Need for a Holistic View of the Early Pathogenesis. *Biomolecules.* **2021**. 11:1807. doi: 10.3390/biom11121807.
- Tapella L, Dematteis G, Ruffinatti FA, Ponzoni L, Fiordaliso F, Corbelli A, Albanese E, Pistolato B, Pagano J, Barberis E, Marengo E, Balducci C, Forloni G, VerPELLI C, Sala C, Distasi C, Sala M, Manfredi M, Genazzani AA, **Lim D**. Deletion of calcineurin from astrocytes reproduces proteome signature of Alzheimer's disease and epilepsy and predisposes to seizures. *Cell Calcium.* **2021**. 100:102480. doi: 10.1016/j.ceca.2021.102480.
- Lim D**, Dematteis G, Tapella L, Genazzani AA, Cali T, Brini M, Verkhratsky A. Ca^{2+} handling at the mitochondria-ER contact sites in neurodegeneration. *Cell Calcium.* **2021**. 98:102453. doi: 10.1016/j.ceca.2021.102453.
- Lim D**, Semyanov A, Genazzani A, Verkhratsky A. Calcium signaling in neuroglia. *Int Rev Cell Mol Biol.* **2021**. 362:1-53. doi: 10.1016/bs.ircmb.2021.01.003.
- Forcaia G, Formicola B, Terribile G, Negri S, **Lim D**, Biella G, Re F, Moccia F, Sancini G. Multifunctional Liposomes Modulate Purinergic Receptor-Induced Calcium Wave in Cerebral Microvascular Endothelial Cells and Astrocytes: New Insights for Alzheimer's disease. *Mol Neurobiol.* **2021** 58:2824-2835. doi: 10.1007/s12035-021-02299-9.
- Lomazzi, S., Caccia, M., Distasi, C., Dionisi, M., **Lim, D.**, Martemyanov, A., Nardo, L., Ruffinatti, F.A., Santoro, R. Assessment of the potential of SiPM-based systems for bioluminescence detection. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment.* **2020**. 979:164493. DOI: 10.1016/j.nima.2020.164493.

11. Dionisi M, Ruffinatti FA, Riva B, **Lim D**, Canta A, Meregalli C, Fumagalli G, Monza L, Ferrer-Montiel A, Fernandez-Carvajal A, Cavaletti G, Genazzani AA, Distasi C. Early Stimulation of TREK Channel Transcription and Activity Induced by Oxaliplatin-Dependent Cytosolic Acidification. *Int J Mol Sci.* **2020.** 21:7164. doi: 10.3390/ijms21197164.
12. Ruffinatti FA, Lomazzi S, Nardo L, Santoro R, Martemianov A, Dionisi M, Tapella L, Genazzani AA, **Lim D**, Distasi C, Caccia M. Assessment of a Silicon-Photomultiplier-Based Platform for the Measurement of Intracellular Calcium Dynamics with Targeted Aequorin. *ACS Sens.* **2020.** 5:2388-2397. doi: 10.1021/acssensors.0c00277. Epub 2020 Aug 5. PMID: 32701269.
13. Dematteis G, Vydmantaitė G, Ruffinatti FA, Chahin M, Farruggio S, Barberis E, Ferrari E, Marengo E, Distasi C, Morkūnienė R, Genazzani AA, Grilli M, Grossini E, Corazzari M, Manfredi M, **Lim D**, Jekabsone A, Tapella L. Proteomic analysis links alterations of bioenergetics, mitochondria-ER interactions and proteostasis in hippocampal astrocytes from 3xTg-AD mice. *Cell Death Dis.* **2020.** 11:645. doi:10.1038/s41419-020-02911-1
14. Kriauciūnaitė K, Kaušylė A, Pajarskienė J, Tunaitis V, **Lim D**, Verkhatsky A, & Pivoriūnas A. Immortalised Hippocampal Astrocytes from 3xTG-AD Mice Fail to Support BBB Integrity In Vitro: Role of Extracellular Vesicles in Glial-Endothelial Communication. *Cellular and molecular neurobiology*, **2020** <https://doi.org/10.1007/s10571-020-00871-w>
15. Astesana V, Faris P, Ferrari B, Siciliani S, **Lim D**, Biggiogera M, De Pascali SA, Fanizzi FP, Roda E, Moccia F, & Bottone MG. (2020). [Pt(O,O'-acac)(γ-acac)(DMS)]: Alternative Strategies to Overcome Cisplatin-Induced Side Effects and Resistance in T98G Glioma Cells. *Cellular and molecular neurobiology*, **2020** <https://doi.org/10.1007/s10571-020-00873-8>
16. Dematteis G, Restelli E, Chiesa R, Aronica E, Genazzani AA, **Lim D**, & Tapella L. Calcineurin Controls Expression of EAAT1/GLAST in Mouse and Human Cultured Astrocytes through Dynamic Regulation of Protein Synthesis and Degradation. *International journal of molecular sciences*, **2020.** 21:2213. <https://doi.org/10.3390/ijms21062213>
17. Torretta S, Colombo G, Travelli C, Boumya S, **Lim D**, Genazzani AA, & Grolla AA. The Cytokine Nicotinamide Phosphoribosyltransferase (eNAMPT; PBEF; Visfatin) Acts as a Natural Antagonist of C-C Chemokine Receptor Type 5 (CCR5). *Cells*, **2020** 9:496. <https://doi.org/10.3390/cells9020496>
18. Di Buduo CA, Abbonante V, Marty C, Moccia F, Rumi E, Pietra D, Soprano PM, **Lim D**, Cattaneo D, Iurlo A, Gianelli U, Barosi G, Rosti V, Plo I, Cazzola M, Balduini A. Defective interaction of mutant calreticulin and SOCE in megakaryocytes from patients with myeloproliferative neoplasms. *Blood.* **2020** 135:133-144. doi: 10.1182/blood.2019001103.
19. Tapella L, Soda T, Mapelli L, Bortolotto V, Bondi H, Ruffinatti FA, Dematteis G, Stevano A, Dionisi M, Ummarino S, Di Ruscio A, Distasi C, Grilli M, Genazzani AA, D'Angelo E, Moccia F, **Lim D**. Deletion of calcineurin from GFAP-expressing astrocytes impairs excitability of cerebellar and hippocampal neurons through astroglial Na⁽⁺⁾/K⁽⁺⁾ ATPase. *Glia.* **2020** 68:543-560 doi: 10.1002/glia.23737.
20. Lodola F, Rosti V, Tullii G, Desii A, Tapella L, Catarsi P, **Lim D**, Moccia F, Antognazza MR. Conjugated polymers optically regulate the fate of endothelial colony-forming cells. *Sci Adv.* **2019** Sep 27;5(9):eaav4620. doi: 10.1126/sciadv.aav4620.
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23. Faris P, Pellavio G, Ferulli F, Di Nezza F, Shekha M, **Lim D**, Maestri M, Guerra G, Ambrosone L, Pedrazzoli P, Laforenza U, Montagna D, Moccia F. Nicotinic Acid Adenine Dinucleotide Phosphate (NAADP) Induces Intracellular Ca⁽²⁺⁾ Release through the Two-Pore Channel TPC1 in Metastatic Colorectal Cancer Cells. *Cancers (Basel).* **2019.** Apr 15;11(4). pii: E542. doi: 10.3390/cancers11040542. PubMed PMID:30991693.
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26. **Lim D**, Mapelli L, Canonico PL, Moccia F, Genazzani AA. Neuronal Activity-Dependent Activation of Astroglial Calcineurin in Mouse Primary Hippocampal Cultures. *Int J Mol Sci.* **2018.** Sep 30;19(10). pii: E2997. doi: 10.3390/ijms19102997

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28. Riva B, Griglio A, Serafini M, Cordero-Sanchez C, Aprile S, Di Paola R, Gugliandolo E, Alansary D, Biocotino I, **Lim D**, Grosa G, Galli U, Niemeyer B, Sorba G, Canonico PL, Cuzzocrea S, Genazzani AA, Pirali T. Pyrtriazoles, a Novel Class of Store-Operated Calcium Entry Modulators: Discovery, Biological Profiling, and in Vivo Proof-of-Concept Efficacy in Acute Pancreatitis. *J Med Chem*. **2018**. Oct 30. doi: 10.1021/acs.jmedchem.8b01512.
29. Ruffinatti F, Tapella L, Gregnanin I, Stevano A, Chiorino G, Canonico PL, Distasi C, Genazzani AA, **Lim D**. Transcriptional remodeling in primary hippocampal astrocytes from an Alzheimer's disease mouse model. *Curr Alzheimer Res*. **2018**. Jun 12. doi: 10.2174/1567205015666180613113924.
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34. Vicidomini C, Ponzone L, **Lim D**, Schmeisser MJ, Reim D, Morello N, Orellana D, Tozzi A, Durante V, Scalmani P, Mantegazza M, Genazzani AA, Giustetto M, Sala M, Calabresi P, Boeckers TM, Sala C, Verpelli C. **2017**. Homer1b/c clustering is impaired in Phelan-McDermid Syndrome iPSCs derived neurons. *Mol Psychiatry*. 22:637.
35. Vicidomini C, Ponzone L, **Lim D**, Schmeisser MJ, Reim D, Morello N, Orellana D, Tozzi A, Durante V, Scalmani P, Mantegazza M, Genazzani AA, Giustetto M, Sala M, Calabresi P, Boeckers TM, Sala C, Verpelli C. **2017**. Pharmacological enhancement of mGlu5 receptors rescues behavioral deficits in SHANK3 knock-out mice. *Mol Psychiatry*. 22:784.
36. Zuccolo E, Dragoni S, Poletto V, Catarsi P, Guido D, Rappa A, Reforgiato M, Lodola F, **Lim D**, Rosti V, Guerra G, Moccia F. **2016**. Arachidonic acid-evoked Ca(2+) signals promote nitric oxide release and proliferation in human endothelial colony forming cells. *Vascul Pharmacol*. 87:159-171.
37. Poletto V, Dragoni S, **Lim D**, Biggiogera M, Aronica A, Cinelli M, De Luca A, Rosti V, Porta C, Guerra G, Moccia F. **2016**. Endoplasmic Reticulum Ca(2+) Handling and Apoptotic Resistance in Tumor-Derived Endothelial Colony Forming Cells. *J Cell Biochem*. 117:2260-7.
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40. Dinamarca MC, Guzzetti F, Karpova A, **Lim D**, Mitro N, Musardo S, Mellone M, Marcello E, Stanic J, Samaddar T, Burguière A, Caldarelli A, Genazzani AA, Perroy J, Fagni L, Canonico PL, Kreutz MR, Gardoni F, Di Luca M. **2016**. Ring finger protein 10 is a novel synaptonuclear messenger encoding activation of NMDA receptors in hippocampus. *Elife*. 5:e12430.
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