

# CURRICULUM VITAE

## Francesco Di Lorenzo MD

*Nationality: Italian*

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*Languages: Italian (mother tongue); English and French (oral and written with proficiency), basics of Spanish*

### **Current Positions (VERY BRIEF SUMMARY)**

**2010-present** Researcher in Non Invasive Stimulation Unit in Santa Lucia Foundation, IRCCS, Rome, Italy.

**2013-2018** Resident in Neurology at Tor Vergata University in Rome

**2014-2017** Study Coordinator in Clinical Trial in a phase III, randomized, double-blind, placebo-controlled, parallel-group, multicenter efficacy and safety study of Gantenerumab in Patients with mild Alzheimer's disease

**2017-2021** PhD in Experimental NeuroPsychology at Sussex University funded by Alzheimer's Society UK

**2021-present** PI at Non Invasive Brain Stimulation Unit at IRCCS Fondazione Santa Lucia

### **Academic & Medical Qualifications**

**2022** PhD at Sussex University

**2021** Qualification to the Role of Associate Professor in Neurology

**2019** Registration to General Medical Council

**2018** Degree of Neurologist at Università degli Studi di Roma Tor Vergata, Italy on 19th September 2018. Degree score 50/50 cum laude.

**2011** Certificate of Qualification to practice medicine and surgery: *Università degli Studi di Roma Tor Vergata, Italy*. This certification required a 6 months rota in several National Hospitals and passing the final National Exam.

**2010** Degree in Medicine and Surgery: *Università degli Studi di Roma Tor Vergata, Italy* on 27<sup>th</sup> October 2010. Degree score 110/110 *cum laude*. Thesis: The role of dopamine transmission in Alzheimer's disease

**2004:** Bachelor in Classical/Linguistic High School at "G. Carducci" in Nola with degree score 100/100

### **Clinical work**

Since 2009 attending memory clinic of Tor Vergata Hospital, directed by prof. Alessandro Martorana, first as visiting student, then as clinical fellowship.

Five years of Residency in Neurology Inpatient and outpatient clinical activity in the Department of Neurology in the Hospital of Tor Vergata University, Rome, Italy.

Responsibilities include: clinical activity in a 50-beds inpatient service including also emergency neurology Unit. Outpatient clinical work includes both general neurology and specialist dementia clinic, in which are currently running different clinical randomized, double-blind, placebo-controlled trials.

I am currently working since 2021 at Santa Lucia Foundation IRCCS as clinical researcher with focus on neurodegenerative diseases and post-stroke neurorehabilitation.

### **Research Interests & Expertise**

Researcher since 2010 in the Non Invasive Stimulation Unit directed by dr. Giacomo Koch. I actively participate to all the activities of the lab, performing on my own neurophysiological recordings by using Transcranial Magnetic Stimulation (TMS) and Theta Burst Stimulation, transcranial Direct Current Stimulation and TMS/EEG recordings, analyzing personally the data, creating study design and writing scientific papers. I focused my research on the study of cortical plasticity mechanisms in Alzheimer's disease patients and other neurodegenerative diseases such as Parkinson's disease, Progressive Supranuclear Palsy, Dystonia and stroke patients, as well in healthy subjects.

Moreover I am interested in clinical research, such as timely diagnosis of Alzheimer's disease and other neurodegenerative diseases, through a multidisciplinary approach including neuropsychological testing, CSF biomarkers investigation, brain imaging study together with a strict follow-up.

Currently submitted my thesis for PhD at Sussex University entitled "Mapping connectivity changes across AD progression using Bayesian modelling: the impact of ApoE4

**2010-2013** elective internship at the Department of Neurology of the Policlinico "Tor Vergata" 2009-**2009-2010** Erasmus program at the University of Szeged (Hungary) for a period of seven months; during this experience elective internship in the Department of Pediatric Neurology Polyclinic " Szegedi Tudományegyetem ."

**2008-2009** elective internship at the Department of Neurosurgery at the Policlinico "Tor Vergata

**2007-2008** elective internship at the Department of Oncology at the Policlinico "Tor Vergata"

**2006-2007** elective internship at the Department of Pharmacology of the University "Tor Vergata

### **Prizes**

**05/2019** Prize "Società Italiana di Neurofisiologia Clinica" for Young Researcher 2019 (1.500 Euro)

**09/2018** Prix Galien Italy for Clinical and experimental Research 2018 (2.500 Euro)

**10/2016** Prize for the best published scientific article at the 47°congress of "Società Italiana di Neurologia", Venice, Italy (3.000,00 Euro)

**10/2016** Prize for the best poster presentation at the 47°congress of "Società Italiana di Neurologia", Venice, Italy (500,00 Euro)

**03/2014** Prize for the best oral contribute at the 30th International Congress of Clinical Neurophysiology, Berlin, Germany (300,00 Euro).

**05/2013** Prize for the best poster presentation at the Scientific Congress of "Società Italiana di Neurofisiologia Clinica", Florence, Italy (350,00 Euro)

**02/2011** "Prize Raeli" for the best student in the Academic Year of Medicine Course in 2009-2010 (5.000, 00 Euro)

### **Travel awards & Bursaries**

**10/2013** Travel award for Italian Society of Neurology (SIN) 2013 National Conference (300 Euro)  
**03/2014** 30<sup>th</sup> International Congress of Clinical Neurophysiology, Berlin, Germany (800,00 \$).  
**10/2014** Travel award for Italian Society of Neurology (SIN) 2014 National Conference (300 Euro)  
**10/2015** Travel award for Italian Society of Neurology (SIN) 2015 National Conference (300 Euro)  
**10/2016** Travel award for Italian Society of Neurology (SIN) 2016 National Conference (300 Euro)  
**10/2017** Travel award for Italian Society of Neurology (SIN) 2017 National Conference (300 Euro)  
**05/2018** 31<sup>th</sup> International Congress of Clinical Neurophysiology, Washington DC, USA (1000,00 \$).  
**06/2018** Bursary for the 4<sup>th</sup> European Academy of Neurology Conference in Lisbon  
**10/2018** Travel award for Italian Society of Neurology (SIN) 2018 National Conference (300 Euro)  
**06/2019** Bursary for the 5<sup>th</sup> European Academy of Neurology Conference in Oslo  
**10/2019** Travel award for Italian Society of Neurology (SIN) 2017 National Conference (300 Euro)

### **Grants won**

**2020** – Principal Investigator of the Italian Ministry of Health Grant for Young Researcher 2019 for the project: “Palmitoylethanolamide + Luteolin (PeaLut) to treat cognitive and behavioural symptoms in sporadic FTD patients: a 24 weeks placebo controlled randomized clinical trial” - GR-2019-12370435”: 450.000 Euro  
**2022**- Principal Collaborator of Italian Ministry of Health Grant PNRR: M6/C2\_CALL 2022: “Development of advanced MRI methods and of tailored signal processing for the quantitative characterization of neurodegenerative diseases through novel biomarkers identification” 1.000.000 Euro

### **Publications in Peer-review journals**

Antonioni A, Raho EM, Lopriore P, Pace AP, Latino RR, Assogna M, Mancuso M, Gragnaniello D, Granieri E, Pugliatti M, **Di Lorenzo F\***, Koch G. Frontotemporal Dementia, Where Do We Stand? A Narrative Review. Int J Mol Sci. 2023 Jul 21;24(14):11732. doi: 10.3390/ijms241411732. **Impact factor: 6.208** \*= corresponding author

Toniolo S, **Di Lorenzo F**, Bernardini S, Mercuri NB, Sancesario GM. Blood-Brain Barrier Dysfunction and A $\beta$ 42/40 Ratio Dose-Dependent Modulation with the ApoE Genotype within the ATN Framework. Int J Mol Sci. 2023 Jul 29;24(15):12151. doi: 10.3390/ijms241512151. **Impact factor: 6.208**

Ercoli T, Barbato F, Bombaci A, Cuffaro L, **Di Lorenzo F**, Iodice F, Romoli M, Solla P, Defazio G. Neurological Consequences of COVID-19: A Systematic Review of the Pandemic's Impact on Neurology Training. *Brain Sci.* 2023 Aug 10;13(8):1188. doi: 10.3390/brainsci13081188. **Impact Factor: 3.333**

Assogna M, Premi E, Gazzina S, Benussi A, Ashton NJ, Zetterberg H, Blennow K, Gasparotti R, Padovani A, Tadayon E, Romanella S, Sprugnoli G, Pascual-Leone A, **Di Lorenzo F**, Koch G, Borroni B, Santarnecchi E. Association of Choroid Plexus Volume With Serum Biomarkers, Clinical Features, and Disease Severity in Patients With Frontotemporal Lobar Degeneration Spectrum. *Neurology.* 2023 Sep 19;101(12):e1218-e1230. doi: 10.1212/WNL.0000000000207600. **Impact Factor: 9.9**

Motta C, Assogna M, Bonomi CG, **Di Lorenzo F**, Nuccetelli M, Mercuri NB, Koch G, Martorana A. Interplay between the catecholaminergic enzymatic axis and neurodegeneration/neuroinflammation processes in the Alzheimer's disease continuum. *Eur J Neurol.* 2023 Apr;30(4):839-848. doi: 10.1111/ene.15691. **Impact Factor: 6.288**

Ercoli T, Barbato F, Cuffaro L, Iodice F, Romoli M, Tedeschi G, Berardelli A, **Di Lorenzo F\***, Bombaci A; SlgN. The future of neurology after the COVID-19 pandemic according to neurology residents. *Neurol Sci.* 2022 Oct 13:1–4. doi: 10.1007/s10072-022-06450-9. **Impact Factor = 3.495 \*= corresponding author**

D'Antonio F, Tremolizzo L, Zuffi M, Pomati S, Farina E; **Sindem BPSD Study Group**. Clinical Perception and Treatment Options for Behavioral and Psychological Symptoms of Dementia (BPSD) in Italy. *Front Psychiatry.* 2022 Apr 1;13:843088. **Impact Factor = 5.435**

Assogna M, **Di Lorenzo F**, Martorana A, Koch G. Synaptic Effects of Palmitoylethanolamide in Neurodegenerative Disorders. *Biomolecules.* 2022 Aug 22;12(8):1161. doi: 10.3390/biom12081161. **Impact Factor = 5.88**

Casula EP, Borghi I, Maiella M, Pellicciari MC, Bonni S, Mencarelli L, Assogna M, D'Acunto A, **Di Lorenzo F**, Spampinato DA, Santarnecchi E, Martorana A, Koch G. Regional Precuneus Cortical Hyperexcitability in Alzheimer's Disease Patients. *Ann Neurol.* 2022 Sep 22. doi: 10.1002/ana.26514 **Impact Factor = 10.442**

**Di Lorenzo F**, Oliviero A, Guerra A, Fried PJ. Editorial: Non-invasive Brain Stimulation for Neurodegenerative Disorders: From Investigation to Therapeutic Application. *Front Neurol.* 2022 Mar 3;13:820942. **Impact Factor = 3.552**

Spina E, Tedeschi G, Russo A, Trojsi F, Iodice R, Tozza S, Iovino A, Iodice F, Abbadessa G, **Di Lorenzo F**, Miele G, Maida E, Cerullo G, Sparaco M, Silvestro M, Leocani L, Bonavita S, Manganelli F, Lavorgna L; Digital Technologies, Web and Social Media Study Group of the Italian Society of Neurology (SIN). Telemedicine application to headache: a critical review. *Neurol Sci.* 2022 Jan 24:1–7. **Impact Factor = 3.18**

Gialopsou A, Abel C, James TM, Coussens T, Bason MG, Puddy R, **Di Lorenzo F**, Rolfs K, Voigt J, Sander T, Cercignani M, Krüger P. Improved spatio-temporal measurements of visually evoked fields using optically-pumped magnetometers. Sci Rep. 2021 Nov 17;11(1):22412. **Impact Factor = 4.379**

Toniolo S, Scarioni M, **Di Lorenzo F**, Hort J, Georges J. Tomic S, Nobili F Frederiksen KS, Bonanni L. Dementia and COVID-19, a bidirectional liaison: Risk factors, biomarkers, and optimal health care. DOI 10.3233/JAD-210335. Journal of Alzheimer's Disease. **Impact Factor = 4.472**

S Toniolo, **F Di Lorenzo**, M Scarioni, KS Frederiksen, F Nobili. Is the Frontal Lobe the Primary Target of SARS-CoV-2? Journal of Alzheimer's Disease. **Impact Factor = 4.472**

**Di Lorenzo F**, Ercoli T, Cuffaro L, Barbato F, Iodice F, Tedeschi G, Bombaci A. COVID-19 impact on neurology training program in Italy. DOI:10.1007/s10072-020-04991-5. Neurological Sciences (2020). **Impact factor: 2.484;**

Alberto Benussi, Mario Grassi, Fernando Palluzzi, Valentina Cantoni, Maria Sofia Cotelli, Enrico Premi, **Francesco Di Lorenzo**, Maria Concetta Pellicciari, Federico Ranieri, Gabriella Musumeci, Camillo Marra, Paolo Manganotti, Raffaele Nardone, Vincenzo Di Lazzaro, Giacomo Koch, Barbara Borroni. Classification accuracy of TMS for the diagnosis of mild cognitive impairment, Brain Stimulation. (2021) **Impact factor : 6.12**

**Di Lorenzo F**, Koch G. Synaptic impairment: The new battlefield of Alzheimer's disease. Alzheimers Dement. 2021 Feb;17(2):314-315. **Impact factor : 17.127**

Maria Stamelou, Walter Struhal, Olle Ten Cate, Magdalena Matczak, S Ayhan Çalışkan, Riccardo Soffietti, Anthony Marson, Panagiotis Zis, **Francesco di Lorenzo**, Anja Sander, Günther Deuschl, Marianne de Visser, Claudio LA Bassetti. Evaluation of the 2020 EAN Virtual Congress: transition from a face-to-face to a virtual meeting. European Journal of Neurology(2021) **Impact factor: 6.089**

Luca Cuffaro, **Francesco Di Lorenzo\***, Simona Bonavita, Gioacchino Tedeschi, Letizia Leocani, Luigi Lavorgna. Dementia care and COVID-19 pandemic: a necessary digital revolution. Neurological Sciences (2020). 2020;41(8):1977-1979. **Impact factor: 2.484;**  
**\*=co-first author**

Matthijs van der Meulen, Nina N Kleineberg, David R Schreier, David García-Azorin, **Francesco Di Lorenzo**. COVID-19 and neurological training in Europe: from early challenges to future perspectives. Neurological Sciences (2020). **Impact Factor = 2.484**

Sofia Toniolo, **Francesco Di Lorenzo**, Marco Bozzali, Mahinda Yogarajah. The impact of lacosamide on mood disorders in adult patients with epilepsy: A systematic review. Epilepsy & Behavior (2020) 2020;111:107179 **Impact Factor = 2.530**

David Raphael Schreier, **Francesco Di Lorenzo\***, Francesco Iodice, Samuel Shribman. Do you want to perform endovascular therapy? Perspectives from neurology trainees across Europe. *European Journal of Neurology* (2020) **Impact factor: 3.356** \*= co-first author

**Francesco Di Lorenzo**, Sonia Bonni, Silvia Picazio, Caterina Motta, Carlo Caltagirone, Alessandro Martorana, Giacomo Koch. Effects of cerebellar theta burst stimulation on contralateral motor cortex excitability in patients with Alzheimer's disease. *Brain Topography* (2020) 2020;33(5):613-617. doi:10.1007/s10548-020-00781-6 **Impact factor: 3.230**

**Francesco Di Lorenzo**, Caterina Motta, Elias Paolo Casula, Sonia Bonni, Martina Assogna, Carlo Caltagirone, Alessandro Martorana, Giacomo Koch. LTP-like cortical plasticity predicts conversion to dementia in patients with memory impairment. *Brain Stimulation* (2020). **13(5):1175-1182. doi:10.1016/j.brs.2020.05.013. Impact factor: 6.730**

Caterina Motta, Annamaria Finardi, Sofia Toniolo, **Francesco Di Lorenzo**, Eugenia Scaricamazza, Stefano Loizzo, Nicola Biagio Mercuri, Roberto Furlan, Giacomo Koch, Alessandro Martorana. Protective Role of Cerebrospinal Fluid Inflammatory Cytokines in Patients with Amnesic Mild Cognitive Impairment and Early Alzheimer's Disease Carrying Apolipoprotein E4 Genotype. *Journal of Alzheimer's Disease* (2020). 2020;76(2):681-689 **Impact Factor = 3.731**

Giacomo Koch, Caterina Motta, Sonia Bonni, Maria Concetta Pellicciari, Silvia Picazio, Elias Paolo Casula, Michele Maiella, **Francesco Di Lorenzo**, Viviana Ponzio, Clarissa Ferrari, Eugenia Scaricamazza, Carlo Caltagirone, Alessandro Martorana. Effect of rotigotine vs placebo on cognitive functions among patients with mild to moderate Alzheimer disease: a randomized clinical trial (2020). *JAMA Network*. doi:10.1001/jamanetworkopen.2020.10372. **Impact factor: 5.032**

Alberto Benussi, Mario Grassi, Fernando Palluzzi, Giacomo Koch, Vincenzo Di Lazzaro, Raffaele Nardone, Valentina Cantoni, Valentina Dell'Era, Enrico Premi, Alessandro Martorana, **Francesco di Lorenzo**, Sonia Bonni, Federico Ranieri, Fioravante Capone, Gabriella Musumeci, Maria Sofia Cotelli, Alessandro Padovani, Barbara Borroni. Classification accuracy of transcranial magnetic stimulation for the diagnosis of neurodegenerative dementias. *Annals of Neurology* (2020). *Ann Neurol.* 2020;87(3):394-404. **Impact factor: 9.550**

Giacomo Koch, Romina Esposito, Caterina Motta, Elias Paolo Casula, **Francesco Di Lorenzo**, Sonia Bonni, Alex Martino Cinnera, Viviana Ponzio, Michele Maiella, Silvia Picazio, Martina Assogna, Fabrizio Sallustio, Carlo Caltagirone, Maria Concetta Pellicciari. Improving visuo-motor learning with cerebellar theta burst stimulation: behavioral and neurophysiological evidence (2020). *Neuroimage*. 2020;208:116424. **Impact factor: 5.880**

Martina Assogna, Elias Paolo Casula, Ilaria Borghi, Sonia Bonni, Domenico Samà, Caterina Motta, **Francesco Di Lorenzo**, Alessia D'Acunto, Francesco Porraccini, Marilena Minei, Carlo Caltagirone, Alessandro Martorana, Giacomo Koch. Effects of Palmitoylethanolamide Combined with Luteoline on Frontal Lobe Functions, High Frequency Oscillations, and GABAergic Transmission in Patients with Frontotemporal Dementia. *Journal of Alzheimer's Disease* (2020). 2020;76(4):1297-1308. doi:10.3233/JAD-200426 **Impact Factor = 3.731**

**Di Lorenzo F**, Alberti P, Pavolucci L, Pietrafusa N, Iodice F. Introduction to the Italian section for young neurologists. *Neurol Sci*. 2019 Jun 14. doi: 10.1007/s10072-019-03967-4. **Impact Factor = 2.484**

Aloisi G, Marengoni A, Morandi A, Zucchelli A, Cherubini A, Mossello E, Bo M, Di Santo SG, Mazzone A, Trabucchi M, Cappa S, Fimognari FL, Incalzi RA, Gareri P, Perticone F, Campanini M, Montorsi M, Latronico N, Zambon A, Bellelli G; **Italian Study Group on Delirium (ISGoD)**. Drug Prescription and Delirium in Older Inpatients: Results From the Nationwide Multicenter Italian Delirium Day 2015-2016. *J Clin Psychiatry*. 2019 Mar 12;80(2). **Impact Factor = 4.023**

Iodice F, Brunetti V, Nicolini E, Paolucci M, **Di Lorenzo F**. Endovascular therapy for acute ischemic stroke: which role for neurologists? *Neurol Sci*. 2019 Feb 15. doi: 10.1007/s10072-019-03759-w. **Impact Factor = 2.484**

Martorana, A., Motta, C., Koch, G., Massaia, M., Mondino, S., Raniero, I., Vacca, A., **Di Lorenzo, F.**, Cavallo, G., Oddenino, E., Pavanelli, E., Maniscalco, M., Montano, V., Mastropietro, A., Bellia, N.C., Ciravegna, E., La Rocca, M., Vitale, E., Lorico, F., Zacchettin, B., Scalise, A., Codemo, A., Gabelli, C., Spano, M., Poli, S., Panuccio, D., Bruno, P., Alfieri, P., Ruggiero, R., Corsi, F., Levi della Vida, G. Effect of homotaurine in patients with cognitive impairment: Results from an Italian observational retrospective study (2018) *Journal of Gerontology and Geriatrics*, 66 (1), pp. 15-20. **Impact factor: 1.925**

Motta C, **Di Lorenzo F\***, Ponzio V, Pellicciari MC, Bonni S, Picazio S, Mercuri NB, Caltagirone C, Martorana A, Koch G. Transcranial magnetic stimulation predicts cognitive decline in patients with Alzheimer's disease. *J Neurol Neurosurg Psychiatry*. 2018 Dec;89(12):1237-1242. doi: 10.1136/jnnp-2017-317879. **Impact Factor = 7.14** \*= co-first author

**Di Lorenzo F**, Motta C, Bonni S, Mercuri NB, Caltagirone C, Martorana A, Koch G. LTP-like cortical plasticity is associated with verbal memory impairment in Alzheimer's disease patients. *Brain Stimul*. 2018 Oct 19. pii: S1935-861X(18)30355-3. doi: 10.1016/j.brs.2018.10.009. **Impact Factor = 6.12**

**Di Lorenzo F**, Ponzo V, Motta C, Bonni S, Picazio S, Caltagirone C, Bozzali M, Martorana A, Koch G. Impaired Spike Timing Dependent Cortico-Cortical Plasticity in Alzheimer's Disease Patients. *J Alzheimers Dis*. 2018 Oct 22. doi: 10.3233/JAD-180503. **Impact Factor = 3.731**

Schirinzi T, **Di Lorenzo F**, Sancesario GM, Di Lazzaro G, Ponzo V, Pisani A, Mercuri NB, Koch G, Martorana A. Amyloid-Mediated Cholinergic Dysfunction in Motor Impairment Related to Alzheimer's Disease. *J Alzheimers Dis*. 2018 Jun 8. **Impact Factor = 3.731**

**Di Lorenzo F**, Motta C, Caltagirone C, Koch G, Mercuri NB, Martorana A. Lacosamide in the Management of Behavioral Symptoms in Frontotemporal Dementia: A 2-Case Report. *Alzheimer Dis Assoc Disord*. 2018 Jan 31. doi: 10.1097/WAD.0000000000000245. [Epub ahead of print] PubMed PMID: 29389672. **Impact Factor = 2.395**

Koch G, Bonni S, Pellicciari MC, Casula EP, Mancini M, Esposito R, Ponzo V, Picazio S, **Di Lorenzo F**, Serra L, Motta C, Maiella M, Marra C, Cercignani M, Martorana A, Caltagirone C, Bozzali M. Transcranial magnetic stimulation of the precuneus enhances memory and neural activity in prodromal Alzheimer's disease. *Neuroimage*. 2017 Dec 19;169:302-311. doi: 10.1016/j.neuroimage.2017.12.048. **Impact Factor = 5.835**

Koch G, **Di Lorenzo F**, Loizzo S, Motta C, Travaglione S, Baiula M, Rimondini R, Ponzo V, Bonni S, Toniolo S, Sallustio F, Bozzali M, Caltagirone C, Campana G, Martorana A. CSF tau is associated with impaired cortical plasticity, cognitive decline and astrocyte survival only in APOE4-positive Alzheimer's disease. *Sci Rep*. 2017 Oct 23;7(1):13728. **Impact Factor = 4.259**

Benussi A, **Di Lorenzo F**, Dell'Era V, Cosseddu M, Alberici A, Caratozzolo S, Cotelli MS, Micheli A, Rozzini L, Depari A, Flammini A, Ponzo V, Martorana A, Caltagirone C, Padovani A, Koch G, Borroni B. Transcranial magnetic stimulation distinguishes Alzheimer disease from frontotemporal dementia. *Neurology*. 2017 Aug 15;89(7):665-672. **Impact Factor = 7.592**

Bonni S, Ponzo V, **Di Lorenzo F**, Caltagirone C, Koch G. Real-time activation of central cholinergic circuits during recognition memory. *Eur J Neurosci*. 2017 Jun;45(11):1485-1489. **Impact Factor = 2.941**

**Di Lorenzo F**, Ponzo V, Brusa L, Caltagirone C, Koch G. Reply Letter to "Does motor cortex plasticity depend on the type of mutation in the LRRK2 gene?" *Mov Disord*. 2017 Jun;32(6):949 **Impact Factor = 7.072**

Ponzo V, **Di Lorenzo F**, Brusa L, Schirinzi T, Battistini S, Ricci C, Sambucci M, Caltagirone C, Koch G. Impaired intracortical transmission in G2019S leucine rich-repeat kinase Parkinson patients. *Mov Disord*. 2017 May;32(5):750-756. **Impact Factor = 7.072**



**Di Lorenzo F**, Ponzo V, Bonni S, Motta C, Negrão Serra PC, Bozzali M, Caltagirone C, Martorana A, Koch G. Long-term potentiation-like cortical plasticity is disrupted in Alzheimer's disease patients independently from age of onset. *Ann Neurol*. 2016 Aug;80(2):202-10. **Impact Factor = 9.638**

Bellelli G, Morandi A, Di Santo SG, Mazzone A, Cherubini A, Mossello E, Bo M, Bianchetti A, Rozzini R, Zanetti E, Musicco M, Ferrari A, Ferrara N, Trabucchi M; **Italian Study Group on Delirium (ISGoD)**. "Delirium Day": a nationwide point prevalence study of delirium in older hospitalized patients using an easy standardized diagnostic tool. *BMC Med*. 2016 Jul 18;14:106. doi: 10.1186/s12916-016-0649-8. **Impact Factor = 9.088**

Ponzo V, Picazio S, Benussi A, **Di Lorenzo F**, Brusa L, Caltagirone C, Koch G. Altered inhibitory interaction among inferior frontal and motor cortex in l-dopa-induced dyskinesias. *Mov Disord*. 2016 May;31(5):755-9. **Impact Factor = 7.072**

Semprini R, Koch G, Belli L, **Di Lorenzo F**, Ragonese M, Manenti G, Sorice GP, Martorana A. Insulin and the Future Treatment of Alzheimer's Disease. *CNS Neurol Disord Drug Targets*. 2016;15(6):660-4. **Impact Factor = 2.188**

Bonanni L, Cagnin A, Agosta F, Babiloni C, Borroni B, Bozzali M, Bruni AC, Filippi M, Galimberti D, Monastero R, Muscio C, Parnetti L, Perani D, Serra L, Silani V, Tiraboschi P, Padovani A; **DLB-SINdem study group**. The Italian dementia with Lewy bodies study group (DLB-SINdem): toward a standardization of clinical procedures and multicenter cohort studies design. *Neurol Sci*. 2016 Sep 13. **Impact Factor = 1.783**

Schirinzi T, **Di Lorenzo F**, Ponzo V, Palmieri MG, Bentivoglio AR, Schillaci O, Pisani A, Koch G. Mild cerebello-thalamo-cortical impairment in patients with normal dopaminergic scans (SWEDD). *Parkinsonism Relat Disord*. 2016 Jul;28:23-8. **Impact Factor = 3.794**

Koch G, Di Lorenzo F, Del Olmo MF, Bonni S, Ponzo V, Caltagirone C, Bozzali M, Martorana A. Reversal of LTP-Like Cortical Plasticity in Alzheimer's Disease Patients with Tau-Related Faster Clinical Progression. *J Alzheimers Dis*. 2016;50(2):605-16. **Impact Factor = 3.731**

Martorana A, **Di Lorenzo F**, Belli L, Sancesario G, Toniolo S, Sallustio F, Sancesario GM, Koch G. Cerebrospinal Fluid A $\beta$ 42 Levels: When Physiological Become Pathological State. *CNS Neurosci Ther*. 2015 Dec;21(12):921-5. **Impact Factor = 4.019**

Chiaravalloti A, Koch G, Toniolo S, Belli L, **Di Lorenzo F**, Gaudenzi S, Schillaci O, Bozzali M, Sancesario G, Martorana A. Comparison between Early-Onset and Late-Onset Alzheimer's Disease Patients with Amnesic Presentation: CSF and (18)F-FDG PET Study. *Dement Geriatr Cogn Dis Extra*. 2016 Apr 5;6(1):108-19. **Impact Factor = 3.511**

Martorana A, **Di Lorenzo F**, Manenti G, Semprini R, Koch G. Homotaurine induces measurable changes of short latency afferent inhibition in a group of mild cognitive impairment individuals. *Front Aging Neurosci*. 2014 Sep 23;6:254. **Impact Factor = 4.000**

Koch G, **Di Lorenzo F**, Bonni S, Giacobbe V, Bozzali M, Caltagirone C, Martorana A. Dopaminergic Modulation of Cortical Plasticity in Alzheimer's Disease Patients. *Neuropsychopharmacology*. 2014 May 26. **Impact Factor = 7.048**

Koch G, Porcacchia P, Ponzio V, Carrillo F, Cáceres-Redondo MT, Brusa L, Desiato MT, Arciprete F, **Di Lorenzo F**, Pisani A, Caltagirone C, Palomar FJ, Mir P. Effects of Two Weeks of Cerebellar Theta Burst Stimulation in Cervical Dystonia Patients. *Brain Stimul*. 2014 May 9. **Impact Factor = 4.399**

Brusa L, Ponzio V, Mastropasqua C, Picazio S, Bonni S, **Di Lorenzo F**, Iani C, Stefani A, Stanzione P, Caltagirone C, Bozzali M, Koch G. Theta burst stimulation modulates cerebellar-cortical connectivity in patients with progressive supranuclear palsy. *Brain Stimul*. 2014 Jan-Feb;7(1):29-35. **Impact Factor = 4.399**

Koch G, Belli L, Giudice TL, **Di Lorenzo F**, Sancesario GM, Sorge R, Bernardini S, Martorana A. Frailty among Alzheimer's disease patients. *CNS Neurol Disord Drug Targets*. 2013 Jun;12(4):507-11. Review. **Impact Factor = 2.702**

Koch G, Ponzio V, **Di Lorenzo F**, Caltagirone C, Veniero D. Hebbian and anti-Hebbian spike-timing-dependent plasticity of human cortico-cortical connections. *J Neurosci*. 2013 Jun 5;33(23):9725-33. **Impact Factor = 6.747**

**Di Lorenzo F**, Martorana A, Ponzio V, Bonni S, D'Angelo E, Caltagirone C, Koch G. Cerebellar theta burst stimulation modulates short latency afferent inhibition in Alzheimer's disease patients. *Front Aging Neurosci*. 2013 Feb 19;5:2. **Impact Factor = 2.843**

Martorana A, **Di Lorenzo F**, Esposito Z, Lo Giudice T, Bernardi G, Caltagirone C, Koch G. Dopamine D<sub>2</sub>-agonist rotigotine effects on cortical excitability and central cholinergic transmission in Alzheimer's disease patients. *Neuropharmacology*. 2013 Jan;64:108-13. **Impact Factor = 4.819**

Koch G, **Di Lorenzo F**, Bonni S, Ponzio V, Caltagirone C, Martorana A. Impaired LTP- but not LTD-like cortical plasticity in Alzheimer's disease patients. *J Alzheimers Dis*. 2012;31(3):593-9. **Impact Factor = 4.174**

Martorana A, Esposito Z, **Di Lorenzo F**, Giacobbe V, Sancesario GM, Bucchi G, Bonni S, Bernardini S, Sorge R, Sancesario G, Bernardi G, Caltagirone C, Koch G. Cerebrospinal fluid levels of A $\beta$ 42 relationship with cholinergic cortical activity in Alzheimer's disease patients. *J Neural Transm*. 2012 Jul;119(7):771-8. **Impact Factor = 3.052**

Koch G, Esposito Z, Kusayanagi H, Monteleone F, Codecá C, **Di Lorenzo F**, Caltagirone C, Bernardi G, Martorana A. CSF tau levels influence cortical plasticity in Alzheimer's disease patients. *J Alzheimers Dis*. 2011;26(1):181-6. **Impact Factor = 3.745**

Koch G, Esposito Z, Codecà C, Mori F, Kusayanagi H, Monteleone F, **Di Lorenzo, F**, Bernardi G, Martorana A. Altered dopamine modulation of LTD-like plasticity in Alzheimer's disease patients. Clin Neurophysiol. 2011 Apr;122(4):703-7. **Impact Factor = 3.406**

**H-index: 30 (Scopus); 30 (Google Scholar)**

### **Book Chapters**

**Di Lorenzo F**, Koch G. Integrated Methods of Neuromodulation for Guiding Recovery Following Stroke. In “Neurobiological and Psychological Aspects of Brain Recovery” Edited By L. Petrosini, ISBN: 978-3-319-52065-0. Springer International Publishing AG 2017

**Di Lorenzo F**, Martorana A, Koch G. Plasticità cerebrale e circuiti colinergici nella malattia di Alzheimer. In “Malattia di alzheimer e altre demenze diagnosi e terapia integrata”. Edited by G. Sancesareo & C. Caltagirone, ISBN: 978-88-6515-140-2. SEU 2017

### **Invited Lectures**

**Di Lorenzo F**. I modelli di apprendimento della neurologia: tanti settori in pochi anni (Learning models in neurology: many sectors in a few years). 1st National Meeting for Italian residents in Neurology, 24 March 2017, Rome, Italy

**Di Lorenzo F**. Long-term potentiation-like cortical plasticity is disrupted in Alzheimer's disease patients independently from age of onset. Italian-French Neurology Workshop Under the auspices of the SFN and SIN within the JNLF 2017, 29 March 2017 Toulouse, France

**Di Lorenzo F**. Latest news from Alzheimer's Disease research. 2<sup>nd</sup> National Meeting for Italian residents in Neurology, 13 April 2018, Rome, Italy

**Di Lorenzo F**. Presentazione e introduzione alle iniziative della European Academy of Neurology

3<sup>rd</sup> National Meeting for Italian residents in Neurology, 2 March 2019, Rome, Italy

**Di Lorenzo F**. Non-Invasive Brain Stimulation Tools and Neuromodulation : Exploring the Brain from Physiology to Clinical Applications. Behavioral & Cognitive Neuroscience talks. 4 April 2019, Sussex University, Brighton, UK.

**Di Lorenzo F**. Advances in non-invasive neuromodulation. 64° National Congress of SINC (Italian Society of Clinical Neurophysiology). 1 June 2019, Rome, Italy.

**Di Lorenzo F**. Endovascular therapy for acute ischemic stroke: which role for neurologists?" 30 June 2019. 5<sup>th</sup> EAN Conference, Oslo, Norway.

**Di Lorenzo F.** Italian Young Neurologists: activities and projects looking to the future in Italy and Europe, 2 July 2019. 5<sup>th</sup> EAN Conference, Oslo, Norway.

**Di Lorenzo F.** Presentation of Resident & Research Fellow Section of the EAN. EAN Autumn School. Loutraki, Greece. 18<sup>th</sup> October 2019.

**Di Lorenzo F.** A digital journey. Presentazione della rivista online Neuromag della SIN Giovani. Anacapri 29 maggio 2021

**Di Lorenzo F.** DENTRO LA NEUROLOGIA- VII WORKSHOP DELLA NEUROLOGIA DELLE CURE PRIMARIE “LA MALATTIA DI ALZHEIMER, Napoli 10 December 2021: Use of Transcranial Magnetic Stimulation in AD: clinical perspectives

**Di Lorenzo F.** Presentation of Resident & Research Fellow Section of the EAN. Regional Teaching Course of the European Academy of Neurology. Nicosia, Cyprus. 13<sup>th</sup> March 2022.

**Di Lorenzo F.** Neuromodulazione e malattia di Alzheimer. L' APPROCCIO CLINICO INTEGRATO E LA rTMS IN AMBITO NEUROLOGICO E PSICHIATRICO. Rimini 2 april 2022.

**Di Lorenzo F.** Digital health e Giovani neurologi. Neurologia digitale 2022: nuove opportunità per la clinica e la ricerca. IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo 21 May 2022

**Di Lorenzo F.** "Beyond bench and bedside: disentangling the concept of translational research" European Academy of Neurology, Wien, 25 June 2022

**Di Lorenzo F.** “Ipoglicemizzanti orali e trattamento dei sintomi cognitivi, quali evidenze e prospettive future” CONGRESSO SINDEM/AIP LAZIO, Roma 6-7 Ottobre 2023

### **Conference Organization**

**2015** Organization of the 3rd Winter Seminar on Dementia and Neurodegenerative Disorders, promoted by the Italian Society of Neurology/Dementia Section (SINDEM).

**2016** Organization of the 4th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM).

**2017** Organization of the 5th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM).

**2017** Organization of 1st National Meeting for Italian residents in Neurology, 24-26 March 2017, Rome, Italy

**2018** Organization of the 6th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM).

**2018** Organization of 2nd National Meeting for Italian residents in Neurology, 13-14 April 2018, Rome, Italy

**2019** Organization of the 7th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM).

**2019** Organization of 3rd National Meeting for Italian residents in Neurology, 6-8 March 2019, Rome, Italy

**2020** Organization of the 8th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM)

**2020** Organization of 4th National Meeting for Italian residents in Neurology, 12-14 June 2020, Rome, Italy

**2021** Organization of 5th National Meeting for Italian residents in Neurology, 22-24 October 2021, Rome, Italy

**2021** Organization of the 4<sup>th</sup> Edition of the Brainstorming Research Assembly for Young Neuroscientist, Pisa 20-22 October 2021

**2022** Organization of the 9th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM)

**2022** Organization of 6th National Meeting for Italian residents in Neurology, 13-15 May 2022, Chianciano Terme, Italy

**2022** Organization of the 5<sup>th</sup> Edition of the Brainstorming Research Assembly for Young Neuroscientist, Rome 28-30 September 2022

**2023** Organization of the 10th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM) 24-26 February 2023, Bressanone, Italy

**2023** Organization of 7th National Meeting for Italian residents in Neurology, 12-14 May 2022, Rimini, Italy

**2023** Organization of the 6<sup>th</sup> Edition of the Brainstorming Research Assembly for Young Neuroscientist, Napoli 27-29 September 2023

**2024** Organization of the 11th Winter Seminar on Dementia and Neurodegenerative Disorder, promoted by the Italian Society of Neurology/Dementia Section (SINDEM) 14-16 February 2023, Bressanone, Italy

### **Teaching activities**

**2018-2021:** assistant professor at Sussex University for the courses of “Neurophysiology” and “Experimental Neuropsychology”

**2023:** Teacher at “Forma Mentis” Specialization school in Psychotherapy

**2023** Teacher at Master in “Neurorehabilitation and Aging Brain”

**2023** Teacher at Master in “ High Specialization Neurorehabilitation”

### **Institutional and professional memberships**

**2023** Examiner at the European Board of Neurology examination (European Academy of Neurology & European Union of Medical Specialties –section of Neurology)

**2021-present** Member of the Scientific Committee of the Brainstorming Research Assembly for Young Neuroscientist

**2021-present** Member of the Committee of the European Board of Neurology examination (European Academy of Neurology & European Union of Medical Specialties –section of Neurology)

**2021-present** Member of the eLearning sub-Committee of the European Academy of Neurology

**2020-present** Member of the Board of Italian Society for Dementias (SIndem)

**2019 – present** Registration to the General Medical Council (GMC)

**2018 –present** Coordinator of Young Italian Neurologist Society (SIgN)

**2018- present** Fellow of the European Board of Neurology

**2018 - present** RRFs representative in the European Academy of Neurology Ethics and Quality Task Force

**2017-present** Italian delegate to the Scientific Panel of Dementia of the European Academy of Neurology (EAN)

**2017-present** Italian delegate to the National representative Network of Research Fellow Section (RRFS) of European Academy of Neurology (EAN)

**2017 – present** Member of EAN Scientific Panel on Dementia

**2017- present** Member of the Resident and Research Fellow Section (RRFS) of European Academy of Neurology (EAN)

**2016-present** Member of the Executive Committee of Young Italian Neurology Society (SIgN)

**2015-present** Member of The Scientific Committee of Italian Society of Neurology/Dementia Section for juniors (SINDEM 4 juniors)

**2014-present** Member of The Society for Neuroscience (SfN).

**2013-present** Member of the Italian Society of Neurology (SIN)

**2012-present** Member of the Italian Society of Neurology/Dementia section (SINDEM)

**2013- present** Member of The Italian Society of Clinical Neurophysiology (SINC)

**2011** Registration “Ordine dei Medici Chirurghi” (Italian equivalent of GMC).

## **Editorial activity**

**Ad hoc Reviewer for:** Frontiers in Aging Neuroscience, Frontiers in Psychiatry, Frontiers in Psychology, PlosOne, Scientific Reports, Archives of Gerontology and Geriatrics, Geriatrics, Current Alzheimer Research, Neurorehabilitation & Neural Repair, Neural Plasticity, Journal of Clinical Medicine, Scientifica, BioMed Research International, American Journal of Alzheimer's Disease and Other Dementias, International Journal of Environmental Research and Public Health, Journal of Alzheimer's Disease, Neurology and Therapy, Brain Stimulation, Brain and behavior, Diagnostics, Journal of Neurological Sciences, Journal of Neurology, Neurosurgery, and Psychiatry, Human Brain Mapping, Neurology, Journal of Neuroscience Methods, Frontiers in Human Neuroscience, Neural Plasticity, Alzheimer's & Dementia, Biology, BMC Neurology, Marine Drugs, Molecules, Clinical Interventions in Aging, Acta Diabetologica, Nursing Reports, Brain Topography, Antioxidants, Molecular Neurobiology, The cerebellum, Clinical EEG and Neuroscience,