

Curriculum vitae

Luca Sacchi

Fields of Interest: neurodegenerative disorders, prognostic biomarkers, quantitative neuroimaging.

Education

- **Doctoral Program in Clinical Research** 2022-
University of Milan, Milan, Italy
 - **Completion of specialist Neurology training**
Dissertation: The glymphatic system in Alzheimer's disease and related dementias: in-depth characterization through quantitative multiparametric MRI and cerebrospinal fluid analysis. 13/11/2023
Supervisors: Prof. Alberto Priori, Prof. Giacomo Pietro Comi, Dott. Andrea Arighi. Final mark: 70/70 with honors
 - **Inscription Italian Order of Physicians** 28/02/2019
Ordine dei Medici di Milano, Milan, Italy (number 46156)
 - **Medical Doctor Degree, University of Milan, Italy**
Dissertation: Nuovi biomarcatori per la malattia di Alzheimer: ruolo dei microRNA in 31/07/2018
esosomi plasmatici di origine neuronale. Final mark: 110/110 with honors. Supervisors:
Prof. Elio Scarpini, Dr. Daniela Galimberti
 - **Classical High School Diploma** 2012
Liceo Salvatore Quasimodo, Magenta (MI), Italy. Final mark: 100/100 with honors
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Work experiences

- **Resident Doctor in Neurology, University of Milan**
IRCCS Fondazione Ca' Granda, Ospedale Maggiore Policlinico, Milan; ASST 2019-2023
Fatebenefratelli-Sacco, Ospedale Sacco, Milan; ASST Santi Paolo e Carlo, Ospedale San Paolo, Milan
Clinical activities:
 - General practice in the Neurology Unit and in the Emergency Department
 - Neurodegenerative disease Unit (Multiple Sclerosis and Alzheimer Centres)*Research activities:*
 - Quantitative brain MRI
 - Correlations between neuroimaging data (MRI, PET, and OCT) and biological biomarkers
 - Epidemiological studies: meta-analyses and systematic reviews
- **Non-emergency medical care, Doctor on call** 03/2019-
Ospedale Giuseppe Fornaroli, Magenta, ATS Città Metropolitana di Milano, Italy 10/2019

• **Undergraduate Fellow, University of Milan**

Department of Pathophysiology and Transplantation, Neurology Unit, University of Milan, IRCCS Fondazione Ca' Granda, Ospedale Maggiore Policlinico, Milan, Italy. Supervisors: Prof. Elio Scarpini, Dr. Daniela Galimberti
Clinical activity in the Neurology Unit and in the Multiple Sclerosis Center

2015-2018

Publications

1. **Sacchi L**, D'Agata F, Campisi C, Arcaro M, Carandini T, Örszik B, Dal Maschio VP, Fenoglio C, Pietroboni AM, Ghezzi L, Serpente M, Pintus M, Conte G, Triulzi F, Lopiano L, Galimberti D, Cercignani M, Bozzali M, Arighi A. A "glympse" into neurodegeneration: Diffusion MRI and cerebrospinal fluid aquaporin-4 for the assessment of glymphatic system in Alzheimer's disease and other dementias. *Hum Brain Mapp.* 2024 Aug 15;45(12):e26805. doi: 10.1002/hbm.26805. 2024
2. Fenoglio C, Serpente M, Arcaro M, Carandini T, **Sacchi L**, Pintus M, Rotondo E, Borracci V, Ghezzi L, Bouzigues A, Russell LL, Foster PH, Ferry-Bolder E, van Swieten JC, Jiskoot LC, Seelaar H, Sánchez Valle R, Laforce R, Graff C, Vandenberghe R, de Mendonça A, Tiraboschi P, Santana I, Gerhard A, Levin J, Sorbi S, Otto M, Pasquier F, Ducharme S, Butler CR, Ber IL, Finger E, Carmela Tartaglia M, Masellis M, Rowe JB, Synofzik M, Moreno F, Borroni B, Rohrer JD, Arighi A, Galimberti D; Genetic FTD Initiative GENFI. Inflammatory plasma profile in genetic symptomatic and presymptomatic Frontotemporal Dementia - A GENFI study. *Brain Behav Immun.* 2024 Nov;122:231-240. doi: 10.1016/j.bbi.2024.08.030. Epub 2024 Aug 15. 2024
3. Serpente M, Fenoglio C, Arcaro M, Carandini T, **Sacchi L**, Pintus M, Rotondo E, Borracci V, Ghezzi L, Bouzigues A, Russell LL, Foster PH, Ferry-Bolder E, van Swieten JC, Jiskoot LC, Seelaar H, Sánchez Valle R, Laforce R, Graff C, Vandenberghe R, de Mendonça A, Tiraboschi P, Santana I, Gerhard A, Levin J, Sorbi S, Otto M, Pasquier F, Ducharme S, Butler CR, Le Ber I, Finger E, Tartaglia MC, Masellis M, Rowe JB, Synofzik M, Moreno F, Borroni B, Rohrer JD, Arighi A, Galimberti D; Genetic FTD Initiative GENFI. Long Non-Coding RNA Profile in Genetic Symptomatic and Presymptomatic Frontotemporal Dementia: A GENFI Study. *J Alzheimers Dis.* 2024;100(s1):S187-S196. doi: 10.3233/JAD-240557. 2024
4. Falgàs N, **Sacchi L**, Carandini T, Montagut N, Conte G, Triulzi F, Galimberti D, Arighi A, Sanchez-Valle R, Fumagalli GG. Utility of visual rating scales in primary progressive aphasia. *Alzheimers Res Ther.* 2024 Apr 6;16(1):73. doi: 10.1186/s13195-024-01442-7. 2024
5. M. Chapleau, R. La Joie, K. Yong, F. Agosta, I.E. Allen, L. Apostolova, J. Best, B.D.C. Boon, S. Crutch, M. Filippi, G.G. Fumagalli, D. Galimberti, J. Graff-Radford, L.T. Grinberg, D.J. Irwin, K.A. Josephs, M.F. Mendez, P.C. Mendez, R. Migliaccio, Z.A. Miller, M. Montembeault, M.E. Murray, S. Nemes, V. Pelak, D. Perani, J. Phillips, Y. Pijnenburg, E. Rogalski, J.M. Schott, W. Seeley, A.C. Sullivan, S. Spina, J. Tanner, J. Walker, J.L. Whitwell, D.A. Wolk, R. Ossenkoppele, G.D. Rabinovici, Z. Abdi, S. Ahmed, D. Alcolea, K.S.J. Allinson, A. Arighi, M. Balasa, F. Barkhof, K.D. Brandt, J. Brosch, J. Burrell, C.R. Butler, I. Calandri, S.P. Caminiti, E. Canu, M.C. Carrillo, F. Caso, M. Chu, N. Cordato, A.S. Costa, Y. Cui, B. Dickerson, D.W. Dickson, R. Duara, B. Dubois, M. Eldaief, M. Farlow, C. Fenoglio, K. Fliessbach, M. Formaglio, J. Fortea, N. Fox, D. Foxe, C.F. Tilikete, M.P. Frosch, D. Galasko, O. Garat, G. Giardinieri, N.R. Graff-Radford, C. Groot, A.M. Hake, O. Hansson, A. Headley, M. Hernandez, D. Hochberg, J.R. Hodges, P.R. Hof, J. Holton, G. Hromas, I. Illán Gala, Z. Jaunmuktane, D. Jing, S.M. Kagerer, K. Kasuga, Y. Kong, E. Kövari, M. Lacombe-Thibault, A. Lleó Plarrumani, D.E. Lucente, M.M. Machulda, G. Magnani, E. Magnin, M. Malpetti, B. Matthews, S. McGinnis, M. Mesulam, C. Miklitz, N. Mundada, P.J. Nestor, D. Ocal, R. Paterson, O. Piguet, D. Putcha, M. Quimby, K. Reetz, N. Rein, T. Revesz, N. Rezaei,

- F. Rodriguez-Porcel, J.B. Rowe, N. Ryan, R. Sanchez-Valle, L. **Sacchi**, M.Á. Santos-Santos, J. Sherman, E. Stomrud, P. Tideman, T. Tokutake, G. Tondo, A. Touroutoglou, B. Tousi, R. Vandenberghe, W. van der Flier, S. Weintraub, B. Wong, L. Wu, K. Xie. Demographic, clinical, biomarker, and neuropathological correlates of posterior cortical atrophy: an international cohort study and individual participant data meta-analysis. *Lancet Neurol.* 2024 Feb;23(2):168-177. doi: 10.1016/S1474-4422(23)00414-3
6. Di Napoli J, Arighi A, Conte G, Carandini T, **Sacchi** L, Arcaro M, Fenoglio C, Sorrentino F, Mercurio M, Pietroboni AM, Giardinieri G, Triulzi F, Galimberti D, Scarpini E, Fumagalli GG. Predominant right temporal lobe atrophy: Clinical, neuropsychological and structural differences based on amyloid status. *Eur J Neurol.* 2024 Feb;31(2):e16124 2024
7. **Sacchi** L, Arcaro M, Carandini T, Pietroboni AM, Fumagalli GG, Fenoglio C, Serpente M, Sorrentino F, Visconte C, Pintus M, Conte G, Contarino VE, Scarpini E, Triulzi F, Galimberti D, Arighi A. Association between enlarged perivascular spaces and cerebrospinal fluid aquaporin-4 and tau levels: report from a memory clinic. *Front Aging Neurosci.* 2023 Jul 20;15:1191714. doi: 10.3389/fnagi.2023.1191714 2023
8. Sorrentino F, Fenoglio C, **Sacchi** L, Serpente M, Arighi A, Carandini T, Arosio B, Ferri E, Arcaro M, Visconte C, Rotondo E, Scarpini E, Galimberti D. Klotho Gene Expression Is Decreased in Peripheral Blood Mononuclear Cells in Patients with Alzheimer's Disease and Frontotemporal Dementia. *J Alzheimers Dis.* 2023;94(3):1225-1231. doi: 10.3233/JAD-230322 2023
9. **Sacchi** L, Contarino VE, Siggillino S, Carandini T, Fumagalli GG, Pietroboni AM, Arcaro M, Fenoglio C, Orunesu E, Castellani M, Casale S, Conte G, Liu C, Triulzi F, Galimberti D, Scarpini E, Arighi A. Banks of the Superior Temporal Sulcus in Alzheimer's Disease: A Pilot Quantitative Susceptibility Mapping Study. *J Alzheimers Dis.* 2023 May 5. doi: 10.3233/JAD-230095 2023
10. Pietroboni AM, Colombi A, Contarino VE, Russo FML, Conte G, Morabito A, Siggillino S, Carandini T, Fenoglio C, Arighi A, De Riz MA, Arcaro M, **Sacchi** L, Fumagalli GG, Bianchi AM, Triulzi F, Scarpini E, Galimberti D. Quantitative susceptibility mapping of the normal-appearing white matter as a potential new marker of disability progression in multiple sclerosis. *Eur Radiol.* 2022 Dec 23. doi: 10.1007/s00330-022-09338-6. 2022
11. Arcaro M, Fenoglio C, Serpente M, Arighi A, Fumagalli GG, **Sacchi** L, Floro S, D'Anca M, Sorrentino F, Visconte C, Perego A, Scarpini E, Galimberti D. A Novel Automated Chemiluminescence Method for Detecting Cerebrospinal Fluid Amyloid-Beta 1-42 and 1-40, Total Tau and Phosphorylated-Tau: Implications for Improving Diagnostic Performance in Alzheimer's Disease. *Biomedicines.* 2022 Oct 21;10(10):2667. 2022
12. Arighi A, Arcaro M, Fumagalli GG, Carandini T, Pietroboni AM, **Sacchi** L, Fenoglio C, Serpente M, Sorrentino F, Isgrò G, Turkheimer F, Scarpini E, Galimberti D. Aquaporin-4 cerebrospinal fluid levels are higher in neurodegenerative dementia: looking at glymphatic system dysregulation. *Alzheimers Res Ther.* 2022 Sep 17;14(1):135. 2022
13. Pietroboni AM, Colombi A, Carandini T, **Sacchi** L, Fenoglio C, Marotta G, Arighi A, De Riz MA, Fumagalli GG, Castellani M, Bozzali M, Scarpini E, Galimberti D. Amyloid PET imaging and dementias: potential applications in detecting and quantifying early white matter damage. *Alzheimers Res Ther.* 2022 Feb 12; 14(1):33. 2022
14. **Sacchi** L, Carandini T, Fumagalli GG, Pietroboni AM, Contarino VE, Siggillino S, Arcaro M, Fenoglio C, Zito F, Marotta G, Castellani M, Triulzi F, Galimberti D, Scarpini E, Arighi A. Unravelling the Association Between Amyloid-PET and Cerebrospinal Fluid Biomarkers in the Alzheimer's Disease Spectrum: Who Really Deserves an A+? *J Alzheimers Dis.* 2022; 85(3):1009-1020. 2022
15. Carandini T, **Sacchi** L, Bovis F, Azzimonti M, Bozzali M, Galimberti D, Scarpini E, Pietroboni AM. Distinct patterns of MRI lesions in MOG antibody disease and AQP4 NMOSD: a systematic review and meta-analysis. *Mult Scler Relat Disord.* 2021 Sep; 54:103118 2021
16. Pietroboni AM, Lanfranconi S, Novella A, Carandini T, Arighi A, Abati E, Brusa R,

- Costamagna G, Lazzeri G, Mauri E, Pozzato M, **Sacchi L**, Valcamonica G, Villa D, Bonato S, Comi GP, Bresolin N, Galimberti D, Scarpini E, Nobili A; Neurology-COVID-19 Group. Clinical features and disease course of patients with acute ischaemic stroke just before the Italian index case: Was COVID-19 already there? *Intern. Emerg. Med.* 2021 Feb 10;1-6. 2021
17. **Sacchi L**, Rotondo E, Pozzoli S, Fiorentini A, Schinco G, Mandelli C, Coppola C, Fumagalli GG, Carandini T, Pietroboni AM, Galimberti D, Triulzi F, Marotta G, Scarpini E, Cesari M, Brambilla P, Arighi A. Diogenes syndrome in dementia: a case report. *BJPsych Open.* 2021 Feb 2;7(2):e43. 2021
18. Carandini T, **Sacchi L**, Ghezzi L, Pietroboni AM, Fenoglio C, Arighi A, Fumagalli GG, De Riz MA, Serpente M, Rotondo E, Scarpini E, Galimberti D. Detection of the SQSTM1 Mutation in a Patient with Early-Onset Hippocampal Amnestic Syndrome. *J Alzheimers Dis.* 2021;79(2):477-481. 2021
19. Fumagalli GG, Basilico P, Arighi A, Mercurio M, Scarioni M, Carandini T, Colombi A, Pietroboni AM, **Sacchi L**, Conte G, Scola E, Triulzi F, Scarpini E, Galimberti D. Parieto-occipital sulcus widening differentiates posterior cortical atrophy from typical Alzheimer disease. *Neuroimage Clin.* 2020;28:102453. 2020
20. Carandini T, Pietroboni AM, **Sacchi L**, De Riz MA, Pozzato M, Arighi A, Fumagalli GG, Martinelli Boneschi F, Galimberti D, Scarpini E. Alemtuzumab in multiple sclerosis during the COVID-19 pandemic: A mild uncomplicated infection despite intense immunosuppression. *Mult. Scler.* 2020 Sep;26(10):1268-1269. 2020
21. Carandini T, Arighi A, **Sacchi L**, Fumagalli GG, Pietroboni AM, Ghezzi L, et al. Testing the 2018 NIA-AA research framework in a retrospective large cohort of patients with cognitive impairment: from biological biomarkers to clinical syndromes. *Alzheimers Res Ther.* 2019 Oct 15;11(1):84. 2019
22. Fumagalli GG, **Sacchi L**, Basilico P, Arighi A, Carandini T, Scarioni M, et al. Monozygotic Twins with Frontotemporal Dementia Due To Thr272fs GRN Mutation Discordant for Age At Onset. *J Alzheimers Dis.* 2019;67(4):1173-1179. 2019
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National and International Congresses

XIX Convegno Nazionale SINDEM, Padova, Italy (2024)
1st Glymphatic Symposium, Lund (2024)
9th European Academy of Neurology, Budapest (2023)
8th European Academy of Neurology, Wien (2022)
7th European Academy of Neurology, Virtual (2021)
6th European Academy of Neurology, Virtual (2020)
11th SINDEM for Juniors, Bressanone, Italy (2024)
10th SINDEM for Juniors, Bressanone, Italy (2023)
9th SINDEM for Juniors, Bressanone, Italy (2022)
8th SINDEM for Juniors, Bressanone, Italy (2020)
7th SINDEM for Juniors, Bressanone, Italy (2019)
XIV Convegno Nazionale SINDEM, Florence, Italy (2019)

Grants & Honours

"Diego Lops" award winner, ed. 2023-2024
"Massimo Musicco" award for best oral presentation at the 11th Sindem for Juniors
Travel Grants with bursary for the 9th EAN congress
Travel Grants with bursary for the 8th EAN congress

Skills & Interests

- **Languages:** Italian (native), English (fluent), Spanish (elementary)
- **Computer Skills:** Microsoft Office Suite (Word, Excel, Power Point), R, Jamovi, MatLab, SPM, FreeSurfer, FSL
- **Sports:** climbing, hiking, skiing, swimming.

Milan, 16/12/2024

"Il presente curriculum ha la funzione di autocertificazione ai sensi del D.P.R. 445/2000. Dichiaro di essere a conoscenza delle sanzioni penali di cui all'art.76 del D.P.R. medesimo in caso di false dichiarazioni. Autorizzo inoltre il trattamento dei miei dati personali ai sensi della normativa vigente ed in particolare dell'art. 15 del d.lgs. n. 33 del 14 marzo 2013"