



Beatrice Orso

PHD

Born in July 1991

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Professional Register: 2890

PROFILE

Hands-on experience in neuroscience research, strong interest in brain diseases and degeneration, neuroimaging and statistical analysis. I define myself as a fast-learner, logical thinker and problem-solving person. I've always travelled and stayed abroad for long periods of time, that made me very adaptable, friendly and outgoing.

WORK SKILLS

- Neuropsychological assessment of different neurodegenerative conditions.
- Planning of tailored cognitive rehabilitation program.
- Significant knowledge of Microsoft Office, R, MatLab, SPSS, Stata softwares, for the analysis of imaging data.

LANGUAGE SKILLS

- Italian: native.
- English (C2)
- Spanish (B2).

EDUCATION HISTORY

PhD in Neuroscience

Nov 2019 - Oct 2022

Department of Neuroscience, University of Genoa (Italy)

MSc in Neuroscience

Oct 2017 - Oct 2018

University of Milan Cattolica del Sacro Cuore, Milan (Italy)

MSc in Neuropsychology

Sep 2015 - July 2017

University of Florence, Florence (Italy)

BSc in Psychology

Sep 2012 - July 2015

University of Genoa, Genoa (Italy)

WORK EXPERIENCE

RESEARCH FELLOWSHIP

Sep 2019 - currently

Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health, University of Genoa (Italy)

- Project: Multi-modal imaging approaches for the correlation of clinical variables, diffuse projection systems, sleep disorders and brain networks.
- Supervisors: Matteo Pardini & Dario Arnaldi.

VISITING PHD

Sep 2021 - May 2022

Amsterdam VuMC, Department of Radiology and Nuclear Medicine, Amsterdam (the Netherlands)

- Project: Concerted alterations of functional connectivity and WM integrity in relationship to early amyloid deposition
- Supervisor: Frederik Barkhof.

POST-LAUREAM INTERNSHIP

Mar 2018 - Sep 2019

University of Genoa and IRCCS Policlinic Hospital S. Martino, Genoa (Italy)

- Project: Correlations between cognitive functions, neurodegeneration and structural-functional alterations in diffuse projection systems.
- Supervisor: Flavio Nobili.

Sep 2017 - Mar 2018

Azienda Ospedaliero-Universitaria di Careggi, Neurology Department, Florence (Italy)

- Project: Neural correlates of naming errors across different neurodegenerative diseases: an FDG-PET study.
- Supervisor: Sandro Sorbi.

ONLINE CERTIFICATION

Fundamental Neuroscience for Neuroimaging via Coursera (with certificate)

Jan 2022

- Course by Johns Hopkins University

CONFERENCE ATTENDANCE

World Sleep Congress 2023 -Symposia Invited Speaker & Young Investigator Awardee
Brain changes in the isolated phase of REM sleep behavior disorder: A critical review of recent findings and implications.

Italian Association of Psychology (AIP) 2023 -Symposia Invited Speaker
Neuroimaging and Neurodegeneration: Clinical value and applications of neuroimaging in neurodegenerative diseases.

Alzheimer's Association International conference (AAIC) 2023 - Poster
Monoaminergic Disfunctions and Misfolded Proteins levels in the Alzheimer's DiseaseContinuum.

European Academy of Neurology (EAN) 2023 - Oral Communication
Different Temporal Dynamics of Monoaminergic Disfunctions across Neurodegenerative Conditions.

European Conference on Clinical Neuroimaging (ECCN) 2023 - Oral Communication
Validation of the REM Behaviour Disorder phenoconversion-related pattern in an independent Cohort

European Academy of Neurology (EAN) 2022 - Poster
The role of monoaminergic tones and brain metabolism in cognition in de novo Parkinson's Disease.

World Sleep Congress 2022 - Oral Communication & Young Investigator Awardee
Identification and validation of a brain glucose metabolism conversion pattern in idiopathic REM Behaviour Disorder.

European Academy of Neurology (EAN) 2021 - Oral Communication
Associations between grey matter metabolism and dopaminergic and serotonergic systems degeneration in de novo Parkinson's Disease.

FULL PAPERS

Massa F., Martinuzzo C., de San José N.G., Pelagotti V., Kreshpa W., Abu-Rumeileh S., Barba L., Mattioli P., **Orso B.**, Brugnolo A., Girtler N., Vigo T., Arnaldi D., Serrati C., uccelli A., Morbelli S., Chincarini A., Otto M., Pardini M.. (2023). Cerebrospinal fluid NPTX2 changes and relationship with regional brain metabolism metrics across mild cognitive impairment due to Alzheimer's disease. *Journal of Neurology*, 1-11.

Brugnolo A., **Orso B.**, Girtler N., Pilar M.F., Arnaldi D., Mattioli P., Massa F., Famà F., Argenti L., Biffa G. Morganti W., Buonopane S., Uccelli A., Morbelli S., Pardini M. (2023) Tracking the Progression of Alzheimer's Disease: Insights from Metabolic Patterns of SOMI Stages. *Cortex*, (in-press).

Orso B., Mattioli P., Yoon E.J., Kim Y.K., Kim H., Shin J.H., Kim R., Liguori C., Famà F., Donniaquio A., Massa F., Garcia Vallez D., Meles SK., Leenders KL., Chiaravallotti A., Pardini M., Bauckneht M., Morbelli S., Nobili F., Lee J.Y.*, Arnaldi D.*, (2023) Validation of the REM Behaviour Disorder phenoconversion-related pattern in an independent Cohort. *Neurological Sciences*, 44, 3161-3168. ***Authors equally contributed**

Biassoni E., Kreshpa W., Massa F., D'Amico F., Bauckneht M., Arnaldi D., Pardini M., **Orso B.**, Girtler N., Brugnolo A., Morbelli S., Tinazzi M., Nobili F., Mattioli P (2023) Right Posterior Hypometabolism in Pisa Syndrome of Parkinson's Disease: A Key to Explain Body Schema Perception deficit?. *Parkinsonism and Related Disorders*, 110, 105371.

Orso B.*, Mattioli P.*, Liguori C., Famà F., Giorgetti L., Donniaquio A., Massa F., Giberti A., Garcia Vallez D., Meles SK., Leenders KL., Placidi F., Spanetta M., Chiaravallotti A., Camedda R., Schillaci O., Izzi F., Mercuri N., Pardini M., Bauckneht M., Morbelli S., Nobili F., Arnaldi D., (2023) Derivation and validation of a phenoconversion-related pattern in idiopathic REM Behaviour Disorder. *Movement Disorders*, 38(1), 57-67. ***Authors equally contributed**

Mattioli P., Pardini M., Girtler N., Brugnolo A., **Orso B.**, Donniaquio A., Calizzano F., Mancini R., Massa F., Terzaghi M., Bauckneht M., Morbelli S., Sambuceti G., Nobili F., Arnaldi D. (2022) Cognitive and Brain Metabolism Profiles of Mild Cognitive Impairment in Prodromal Alpha-Synucleinopathy. *Journal of Alzheimer's Disease*, 90(1), 433-444.

Orso B., Arnaldi D., Peira E., Famà F., Giorgetti L., Girtler N., Brugnolo A., Mattioli P., Biassoni E., Donniaquio A., Massa F., Bauckneht M., Miceli A., Morbelli S., Nobili F., Pardini M (2022). The role of monoaminergic tones and brain metabolism in cognition in de novo Parkinson's Disease. *Journal of Parkinson's Disease*, (Pre-print), 1-11.

Girtler N., Chincari A., Brugnolo A., Doglione E., **Orso B.**, Morbelli S., Massa F., Peira E., Biassoni E., Donniaquio A., Grisanti S., Pardini M., Arnaldi D., Nobili F. (2022) The Free and Cued Selective Reminding Test: Discriminative Values in a Naturalistic Cohort. *Journal of Alzheimer's Disease*, 87(2), 887-899.

Orso B., Lorenzini L., Arnaldi D., Girtler N., Brugnolo A., Doglione E., Mattioli P., Biassoni E., Massa F., Peira E., Bauckneht M., Donegani I., Morbelli S., Nobili F., Pardini M. (2022) The role of hub and spoke regions in Theory of Mind in early Alzheimer's Disease and Frontotemporal Dementia. *Biomedicine*, 10(3), 544.

Morbelli S., Chiola S., Donegani M.I., Arnaldi D., Pardini M., Mancini R., Lanfranchi F., D'Amico F., Bauckneht M., Miceli A., Biassoni E., **Orso B.**, Barisione E., Benedetti L., Sambuceti G., Nobili F. (2021) Metabolic correlates of olfactory dysfunction in COVID-19 and Parkinson Disease (PD) do not overlap. *European Journal of Nuclear Medicine and Molecular Imaging*, 1-12, in press.

Orso B., Famà F., Giorgetti L., Mattioli P., Donniaquio A., Girtler N., Brugnolo A., Massa F., Peira E., Pardini M., Morbelli S., Nobili F., Arnaldi D. (2021). Polysomnographic correlates of sleep disturbances in de novo, drug naïve Parkinson's Disease. *Neurological Sciences*, 1-6

Massa F., Chincarini A., Bauckneht M., Raffa S., Peira E., Arnaldi D., Pardini M., Pagani M., **Orso B.**, Donegani I., Brugnolo A., Biassoni E., Mattioli P., Girtler N., Guerra U.P., Morbelli S., Nobili F. (2021). Added value of semi-quantitative analysis of brain FDG-PET for the differentiation between MCI-Lewy bodies and MCI due to Alzheimer's disease. *European Journal of Nuclear Medicine and Molecular Imaging*, 1-12.

Arnaldi D., Mattioli P., Famà F., Girtler N., Brugnolo A., Pardini M., Donniaquio A., Massa F., **Orso B.**, Raffa S., Bauckneht M., Morbelli S., Nobili F. (2021). Stratification Tools for Disease-Modifying Trials in Prodromal Synucleinopathy. *Movement Disorders*, 37(1), 52-61.

Orso B., Arnaldi D., Girtler N., Brugnolo A., Doglione E., Mattioli P., Biassoni E., Fancellu R., Massa F., Bauckneht M., Chiola S., Morbelli S., Nobili F., Pardini M. (2021). Dopaminergic and serotonergic degeneration and cortical [18F]FDG-PET in de novo Parkinson's Disease. *Movement Disorders*, 36(10), 2293-2302.

Roascio M., Canessa A., Tro R. D., Mattioli P., Giorgetti L., Girtler N., **Orso B.**, Morbelli S., Nobili F., Arnaldi D., Arnulfo G. (2021). Phase and amplitude correlations change with disease progression in idiopathic Rapid eye-movement sleep behavior disorder patients. *Sleep* 45(1).

Serafini G., Pardini M., Monacelli F., **Orso B.**, Girtler N., Brugnolo A., Amore M., Nobili F. (2021). Neuroprogression as an Illness Trajectory in Bipolar Disorder: A Selective Review of the Current Literature. *Brain Sciences*, 11(2), 276.

Brugnolo A., Girtler N., Doglione E., **Orso B.**, Massa F., Donegani M. I., Bauckneht M., Morbelli S., Arnaldi D., Nobili F., Pardini M. (2021). Brain Resources: How Semantic Cueing Works in Mild Cognitive Impairment due to Alzheimer's Disease (MCI-AD). *Diagnostics*, 11(1), 108.

Mattioli P., Pardini M., Famà F., Girtler N., Brugnolo A., **Orso B.**, Meli R., Fillippi L., Grisanti S., Massa F., Bauckneht M., Miceli A., Terzaghi M., Morbelli S., Nobili F., Arnaldi D. (2021). Cuneus/precuneus as a central hub for brain functional connectivity of mild cognitive impairment in idiopathic REM sleep behavior patients. *European Journal of Nuclear Medicine and Molecular Imaging*, 1-12.

Arnaldi D., Famà F., Girtler N., Brugnolo A., Pardini M., Mattioli P., Meli R., Massa F., **Orso B.**, Sormani MP., Donegani MI., Bauckneht M., Morbelli SD., Nobili F. (2020). REMeDio: a proof-of-concept neuroprotection study for prodromal synucleinopathies. *European Journal of Neurology* 28(4), 1210-1217.

Massa F., Grisanti S., Brugnolo A., Doglione E., **Orso B.**, Morbelli S., Bauckneht M., Origone P., Filippi L., Arnaldi D., De Carli F., Pardini M., Pagani M., Nobili F., Girtler N. (2020). The role of anterior prefrontal cortex in prospective memory: an exploratory FDG-PET study in early Alzheimer's disease. *Neurobiology of Aging*, 96, 117-127.

Orso B., Arnaldi D., Famà F., Girtler N., Brugnolo A., Doglione E., Filippi L., Massa F., Peira E., Bauckneht M., Morbelli S., Nobili F., Pardini M. (2020). Anatomical and neurochemical bases of theory of mind in de novo. *Cortex*, 130, 401-412.

Orso B., Mattei C., Arnaldi D., Massa F., Serafini G., Plantone D., Doglione E., Grafman J., Nobili F., Pardini M. (2020). Clinical and MRI predictors of conversion from mild behavioural impairment to dementia. *The American Journal of Geriatric Psychiatry*, 28(7), 755-763.