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Federico Tucci

ABOUT ME

Driven and ambitious neuroscientist with a strong passion for interdisciplinary research in neurodegenerative disorders and neurophysiology. Experienced in electroencephalography (EEG) and eye-tracking techniques, with a commitment to advancing scientific knowledge through dedication, curiosity, and a rigorous research approach.

PUBLICATIONS

[2024]

Resting state electroencephalographic alpha rhythms are sensitive to Alzheimer's disease mild cognitive impairment progression at a 6-month follow-up

Babiloni C, Jakhar D, **Tucci F**, Del Percio C, Lopez S, Soricelli A, Salvatore M, Ferri R, Catania V, Massa F, Arnaldi D, Famà F, Güntekin B, Yener G, Stocchi F, Vacca L, Marizzoni M, Giubilei F, Yıldırım E, Hanoğlu L, Hünerli D, Frisoni GB, Noce G.

Neurobiol Aging. 2024 May;137:19-37. doi: 10.1016/j.neurobiolaging.2024.01.013.

[2024]

Poor reactivity of posterior electroencephalographic alpha rhythms during the eyes open condition in patients with dementia due to Parkinson's disease

Babiloni C, Noce G, **Tucci F**, Jakhar D, Ferri R, Panerai S, Catania V, Soricelli A, Salvatore M, Nobili F, Arnaldi D, Famà F, Buttinelli C, Giubilei F, Onofrj M, Stocchi F, Vacca L, Radicati F, Fuhr P, Gschwandtner U, Ransmayr G, Parnetti L, Marizzoni M, D'Antonio F, Bruno G, De Lena C, Güntekin B, Yıldırım E, Hanoğlu L, Yener G, Hünerli D, Taylor JP, Schumacher J, McKeith I, Frisoni GB, Antonini A, Ferreri F, Bonanni L, De Pandis MF, Del Percio C.

Neurobiol Aging. 2024 Mar;135:1-14. doi: 10.1016/j.neurobiolaging.2023.11.010.

[2023]

Poor reactivity of posterior electroencephalographic alpha rhythms during the eyes open condition in patients with dementia due to Parkinson's disease.

Babiloni C, Noce G, **Tucci F**, Jakhar D, Ferri R, Panerai S, Catania V, Soricelli A, Salvatore M, Nobili F, Arnaldi D, Famà F, Buttinelli C, Giubilei F, Onofrj M, Stocchi F, Vacca L, Radicati F, Fuhr P, Gschwandtner U, Ransmayr G, Parnetti L, Marizzoni M, D'Antonio F, Bruno G, De Lena C, Güntekin B, Yıldırım E, Hanoğlu L, Yener G, Hünerli D, Taylor JP, Schumacher J, McKeith I, Frisoni GB, Antonini A, Ferreri F, Bonanni L, De Pandis MF, Del Percio C.

Neurobiol Aging. 2023 Nov 28;135:1-14. doi: 10.1016/j.neurobiolaging.2023.11.010.

[2023]

Early and Stable Difficulties of Everyday Executive Functions Predict Autism Symptoms and Emotional/behavioral Problems in Preschool Age Children with Autism: a 2-Year Longitudinal

Lupi E, **Tucci F**, Casula L, Lucia Novello R, Guerrera S, Vicari S and Valeri G.

Front. Psychol. Sec. Developmental Psychology 2023

[2023]
What a Single Electroencephalographic (EEG) Channel Can Tell us About Alzheimer's Disease Patients With Mild Cognitive Impairment.
Del Percio C, Lopez S, Noce G, Lizio R, **Tucci F**, Soricelli A, Ferri R, Nobili F, Arnaldi D, Famà F, Buttinelli C, Giubilei F, Marizzoni M, Güntekin B, Yener G, Stocchi F, Vacca L, Frisoni GB, Babiloni C.

Clin EEG Neurosci. 2023

[2022]
What a single electroencephalographic (EEG) channel can tell us about patients with dementia due to Alzheimer's disease
Del Percio C, Noce G, Lopez S, **Tucci F**, Carlin G, Lizio R, Musat AM, Soricelli A, Salvatore M, Ferri R, Nobili F, Arnaldi D, Famà F, Buttinelli C, Giubilei F, Marizzoni M, Güntekin B, Yener G, Stocchi F, Vacca L, Frisoni GB, Babiloni C.

Int J Psychophysiol. 2022

[2022]
Alzheimer's disease with epileptiform-like signatures: abnormal cortical sources of resting state delta rhythms in patients with amnesic mild cognitive impairment.
Babiloni B, Noce G, Di Bonaventura C, Lizio R, Pascarelli MT, Eldellaa A, **Tucci F,** Soricelli A, Ferri R, Nobili F, Famà F, Arnaldi D, Palma E, Cifelli P, Marizzoni M, Stocchi F, Bruno G, Frisoni GB, Del Percio C.

Journal of Alzheimer's disease (JAD). 2022

[2022]
Reactivity of posterior cortical electroencephalographic alpha rhythms during eyes opening in healthy older adults and patients with dementia due to alzheimer’s and lewy body diseases.
Babiloni C, Lorenzo I, Lizio R, Lopez S, **Tucci F**, Ferri R, Soricelli A, Nobili F, Arnaldi D, Famà F, Buttinelli C, Giubilei F, Cipollini V, Onofrj M, Stocchi F, Vacca L, Fuhr P, Gschwandtner U, Ransmayr G, Aarsland D, Parnetti L, Marizzoni M, D'Antonio F, De Lena C, Güüntekin B, Yıldırım E, Hanoğğlu L, Yener G, Güündüüz DH, Taylor JP, Schumacher J, McKeith I, Frisoni GB, Maria De Pandis F, Bonanni L, Del Percio C and Noce G.

Neurobiology of Aging. 2022

[2022]
Resting State Alpha Electroencephalographic Rhythms Are Affected by Sex in Cognitively Unimpaired Seniors and Patients with Alzheimer's Disease and Amnesic Mild Cognitive Impairment: A Retrospective and Exploratory Study.
Babiloni C, Noce G, Ferri R, Lizio R, Lopez S, Lorenzo I, **Tucci F**, Soricelli A, Zurrón M, Díaz F, Nobili F, Arnaldi D, Famà F, Buttinelli C, Giubilei F, Cipollini V, Marizzoni M, Güntekin B, Yıldırım E, Hanoğlu L, Yener G, Gündüz DH, Onorati P, Stocchi F, Vacca L, Maestú F, Frisoni GB, Del Percio C.

Cereb Cortex. 2022

[2022]
Microglia modulate hippocampal synaptic transmission and sleep duration along the light/dark cycle.
Corsi G, Picard K, di Castro MA, Garofalo S, **Tucci F**, Chece G, Del Percio C, Golia MT, Raspa M, Scavizzi F, Decoeur F, Lauro C, Rigamonti M, Iannello F, Ragozzino DA, Russo E, Bernardini G, Nadjar A, Tremblay ME, Babiloni C, Maggi L, Limatola C

Glia. 2022

[2021]
Measures of resting state EEG rhythms for clinical trials in Alzheimer's disease: Recommendations of an expert panel
Babiloni C, Arakaki X, Azami H, Bennys K, Blinowska K, Bonanni L, Bujan A, Carrillo MC, Cichocki A, de Frutos-Lucas J, Del Percio C, Dubois B, Edelmayer R, Egan G, Epelbaum S, Escudero J, Evans A, Farina F, Fargo K, Fernández A, Ferri R, Frisoni G, Hampel H, Harrington MG, Jelic V, Jeong J, Jiang Y, Kaminski M, Kavcic V, Kilborn K, Kumar S, Lam A, Lim L, Lizio R, Lopez D, Lopez S, Lucey B, Maestú F, McGeown WJ, McKeith I, Moretti DV, Nobili F, Noce G, Olichney J, Onofrj M, Osorio R, Parra-Rodriguez M, Rajji T, Ritter P, Soricelli A, Stocchi F, Tarnanas I, Taylor JP, Teipel S, **Tucci F**, Valdes-Sosa M, Valdes-Sosa P, Weiergräber M, Yener G, Guntekin B

Alzheimer's & Dementia. 2021

[2021]
Resting State Alpha Electroencephalographic Rhythms Are Differently Related to Aging in Cognitively Unimpaired Seniors and Patients with Alzheimer's Disease and Amnesic Mild Cognitive Impairment.
Babiloni C, Ferri R, Noce G, Lizio R, Lopez S, Lorenzo I, **Tucci F**, Soricelli A, Nobili F, Arnaldi D, Famà F, Orzi F, Buttinelli C, Giubilei F, Cipollini V, Marizzoni M, Güntekin B, Aktürk T, Hanoğlu L, Yener G, Özbek Y, Stocchi F, Vacca L, Frisoni GB, Del Percio C.

J Alzheimers Dis. 2021.

[2021]
EEG measures for clinical research in major vascular cognitive impairment: recommendations by an expert panel.
Babiloni C, Arakaki X, Bonanni L, Bujan A, Carrillo MC, Del Percio C, Edelmayer RM, Egan G, Elahh FM, Evans A, Ferri R, Frisoni GB, Güntekin B, Hainsworth A, Hampel H, Jelic V, Jeong J, Kim DK, Kramberger M, Kumar S, Lizio R, Nobili F, Noce G, Puce A, Ritter P, Smit DJA, Soricelli A, Teipel S, **Tucci F**, Sachdev P, Valdes-Sosa M, Valdes-Sosa P, Vergallo A, Yener G.

Neurobiol Aging. 2021.

[2020]
Abnormalities of Cortical Sources of Resting State Delta Electroencephalographic Rhythms Are Related to Epileptiform Activity in Patients with Amnesic Mild Cognitive Impairment Not Due to Alzheimer's Disease.
Babiloni C, Noce G, Di Bonaventura C, Lizio R, Pascarelli MT, **Tucci F**, Soricelli A, Ferri R, Nobili F, Famà F, Palma E, Cifelli P, Marizzoni M, Stocchi F, Frisoni GB, Del Percio C.

Front Neurol. 2020

WORK EXPERIENCE

Post-doc researcher
Sapienza University of Rome [01/04/2024 – Current]

City: Rome | **Country:** Italy

Working with Professor Moreno Coco and Doctor Fabrizia D'Antonio in a PRIN project entitled "Identifying biomarkers of Lewy body dementia in the prodromal stage: a combined eye-tracking and EEG approach".

Post-doc researcher
AOU San Giovanni di Dio e Ruggi d'Aragona [12/2022 – 12/2023]

City: Salerno | **Country:** Italy

Involvement in a National project aimed to investigate the hypothesis that statistically modeling (1) the endogenous and exogenous risk factors, (2) the presence of the amyloid and alpha-synuclein pathological aggregates in CSF, (3) the brain connectivity, and (4) the clinical and biological indices such as vigilance, general
motility, the sleep-wake cycle, and genomic instability and DNA damage MAY correlate with (predict) the clinical condition of mild cognitive impairment (MCI) and dementia in patients with Alzheimer's disease (AD) and Parkinson's disease (PD). Cognitively intact healthy (Nold) participants serve to define abnormalities in the markers derived from hospital setting.

Erasmus+ PhD

Sapienza University of Rome [08/2022 – 10/2022]

City: Rome | **Country:** Italy

In the PhD framework, I have been involved in a project aimed to study the clinical heterogeneity in a group of Subjective Cognitive Complain patients enrolled by the Huddinge hospital and negative to the Alzheimer's disease biomarkers. The main tutors of this project were Vesna Jelic and Daniel Ferreira.

Tutoring

Sapienza University of Rome [02/2022 – 05/2022]

City: Rome | **Country:** Italy

Didactic activity in a seminar series entitled "the two faces of the brain".

Traineeship

Policlinic Umberto I [09/2017 – 09/2018]

City: Rome | **Country:** Italy

Post lauream traineeship in the Memory clinic under the supervision of Dr Giuliana Ricotta. The activities regarded a neurological and neuropsychological examination of patients hospitalized in the Neurology department.

EDUCATION AND TRAINING

PhD in Clinical-experimental neuroscience and psychiatry (curriculum in neurophysiology)

Sapienza University of Rome [11/2019 – 10/2022]

City: Rome | **Country:** Italy | **Field(s) of study:** Doctoral program in Neurophysiology | **Final grade:** Awarded cum laude | **Thesis:** Abnormal reactivity of resting-state eeg alpha rhythms during eyes open in patients with Alzheimer's and Lewy body diseases. Supervisor Professor Claudio Babiloni

Doctoral program in Neurophysiology with the Physiology and Pharmacology "V. Erspamer" department under the supervision of Professor Claudio Babiloni. The doctoral research consists in measurement of abnormalities of vigilance by electroencephalographic technique in major neurodegenerative diseases due to pathophysiological alterations of activating ascendant systems.

MSc in Cognitive Neuroscience

Sapienza University of Rome [09/2015 – 07/2017]

City: Rome | **Country:** Italy | **Field(s) of study:** Neuroscience and Psychological Rehabilitation | **Final grade:** 110 cum laude | **Thesis:** Effect of postnatal social isolation on glutamatergic synapses and on adrenocorticoid receptors in the mice Hippocampus. Supervisor Professor Sergio Scaccianoce

BSc in Psychology

Sapienza University of Rome [09/2012 – 09/2015]

City: Rome | **Country:** Italy | **Field(s) of study:** General Psychology | **Thesis:** Phylogenetic evolution of the mirror neurons. Three months project coordinated by Professor Maria Leggio

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access / Matlab/Simulik / Analyzing EEG Data with EEGLAB (Matlab) / eLORETA / IBM Statistical package for Sciences (SPSS) / GraphPad (Intermediate) / R , RStudio / Eye Tracking Methodology

CONFERENCES AND SEMINARS

[04/09/2024 – 06/09/2024] Cesena
Congresso SIPF Cesena 2024

[18/09/2023 – 20/09/2023] Scuola IMT Alti Studi di Lucca
Abnormal alpha reactivity in patients with Alzheimer's and Lewy body disease (presenter)
XXIX Congresso AIP Sezione Sperimentale

[03/2023] ADPD2023 Goteborg, Sweden
Resting state electroencephalographic rhythms deteriorate in patients with mild cognitive impairment due to Alzheimer's disease at 6 months follow-up (presenter)
Oral Presentation

[10/2020] LIVEMEEG
Cortical sources of resting state delta EEG rhythms are abnormal in patients with amnesic mild cognitive impairment due to Alzheimer's disease with epileptiform-like signatures (presenter)
Virtual Poster

[07/2022] AAIC2022
What a single electroencephalographic (EEG) channel can tell us about Alzheimer's disease patients with mild cognitive impairment (presenter)
Virtual Poster

[07/2020] AAIC2020
Ongoing electroencephalographic rhythms related to exploratory movements in transgenic TASTPM mice (presenter)
Virtual Poster

HONOURS AND AWARDS

[05/2023] National Ministry of Health
Effects of endogenous and exogenous risk factors in patients with Alzheimer's and Parkinson's diseases using clinical indexes and endophenotypes (biomarkers) as inputs to artificial intelligence (PREDICT-NEURODEGEN).
This project explores whether statistical modeling of risk factors, pathological aggregates, brain connectivity, and clinical/biological indices can predict cognitive decline in Alzheimer's and Parkinson's patients. Data from CSF, blood,

SPECT, MRI, EEG, and wearable monitoring will help identify disease-specific biomarkers for prevention and progression tracking. Budget : 1.103.728,54 euro

[09/2022] Sapienza University of Rome

Cortical source activities of resting state electroencephalographic (rseeg) rhythms in the patients with mild cognitive impairment and epileptiform activity: biomarkers of disease progression

Type 2 research initiation project. Budget: 4000 euro