PERSONAL INFORMATION

Simona Balestrini

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Sex F | *Nationality* Italian and British

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University
☐ Full professor
☒ Associate Professor
☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

From 1.2.2021	Associate Professor of Child Neurology and Psychiatry, Neuroscience Department, Children's Hospital A. Meyer, University of Florence
From 6.1.2020	Senior Clinical Research Fellow in the Department of Clinical and Experimental Epilepsy at the UCL Queen Square Institute of Neurology. Main topics of research: genetics of epilepsies, next generation sequencing, genotype/phenotype correlation, transcranial magnetic stimulation
From 1.12.2017	Consultant Neurologist at UCLH NHS Foundation Trust, based at two sites: National Hospital for Neurology and Neurosurgery and Chalfont Centre for Epilepsy.
From 1.11.2018 to 5.1.2020	Honorary Clinical Associate Professor in the Department of Clinical and Experimental Epilepsy at the UCL Queen Square Institute of Neurology.
From 1.7.2016. to 31.12.2016	Locum Consultant Neurologist – Special Interest in Epilepsy, at University College London Hospital (UCLH) NHS Foundation Trust
From 1.8.2014. to 30.11.2017	Clinical Research Associate in the Department of Clinical and Experimental Epilepsy, UCL Queen Square Institute Of Neurology
From 18.10.2012	GMC (General Medical Council) full registration with a licence to practice in UK (GMC registration number: 7347547). Specialist registration (Neurology) from 17 May 2016. Last revalidation in 2019.

EDUCATION AND TRAINING

From October 2021 to June 2022	Advanced Course on Paediatric Clinical Trials and Paediatric Drug Development
From 1.11.2013 to 1.3.2017	PhD awarded from Polytechnic University of Marche (Ancona, Italy) in March 2017. Main topic of research: genetics of drug-resistant epilepsy. Final thesis on 'Biomarkers of Sudden Unexpected Death in Epilepsy (SUDEP)'
From 30.6.2009 to 4.7.2014	Completion of Medical Residency in Neurology at Polytechnic University of Marche (Ancona, Italy), with thesis on 'Electrical Stimulations of Parietal Lobe: a Stereo-EEG Study in Patients with Drug-Resistant Focal Epilepsy" (50/50 With honour)
From April 2011 to May 2012	Specialization Course in 'Statistics applied to clinical questions', Modena and Reggio Emilia University (176 hours)
On 24.7.2008	Degree in Medicine and Surgery at Polytechnic University of Marche with thesis on "Progression of Carotid Atherosclerosis and Zinc Homeostasis" (110/110 with honour).
In.2002	Scientific high school diploma (final vote 100/100)

PERSONAL SKILLS

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Mother tongue	Italian

Other language

English
Reading skills Excellent
Writing skills Excellent
Verbal skills Excellent

Job-related skills

From 2021 Associate Editor of the EAN e-Learning Editorial Board
From 2021 lead of the Solve-RD Data Interpretation Task Force
From2021 Chair of the ILAE-Young Epilepsy Section-Italian chapter
From2021 Member of the ILAE Task Force on Nosology and Definitions
From2018 F1000 Associate Faculty Member for Neurological Disorders
From2016 Muir Maxwell Trust Research Fellow at Epilepsy Society
2018 Prize for best scientific contribution LICE meeting on the impact of precision medicine in genetic epilepsies; 2017 Prize 'Giancarlo Muscas';2016 two awards by Italian Neurological Society (SIN) for best publications on stroke and epilepsy; 2015, prize for best scientific contribution LICE meeting on cortical stimulations of the parietal lobe; 2014, prize for best scientific contribution LICE meeting on retinal nerve fibre layer thickness as a possible biomarker of drug resistance in epilepsy; 2014 SIN award for best publication on cerebrovascular disease.

Other skills

From 2021 supervisor of 2-3 undergraduate medical students each year
From 2022 ongoing Subsidiary supervisor of PhD student Ms Charlotte Ravenscroft, with research project on factors influencing TMS-evoked responses in epilepsy
From 2022 ongoing Subsidiary supervisor of PhD student Dr Angeliki Vakrinou, with research project on clinical use of Whole Genome Sequencing in epilepsy
From 2019 ongoing supervisor of postdoc researchers Sasha DAmbrosio and Diego-Jimenez-Jimenez, with research project on TMS in genetic epilepsies.
From 2019 ongoing Subsidiary supervisor of PhD student Dr Katri Silvennoinen, with research project on TMS in Dravet Syndrome.
From 2018 ongoing Subsidiary supervisor of PhD student Dr Sara Zagaglia, with research project on TMS in epilepsies caused my mTOR pathway gene mutations.
From 2020 primary supervisor of 2-3 MsC students each year at UCL
2019 ILAE Leadership Programme.

ADDITIONAL INFORMATION

Projects

Use of Transcranial Magnetic Stimulation (TMS) as a surrogate of Pathophysiology in genetic epilepsies- TMSpath, March 2023-March 2026, Italian Ministry of Health, euro 450.000 (PI)
Precision medicine in Dravet syndrome: from a national registry to neuronal modelling based on individual genome data, March 2023-March 2024, euro 1.000.000 (co-PI)
Use of TMS to understand in-vivo the functional pathophysiology of Dravet Syndrome and predict treatment response. January 2022-January 2024, Dravet Syndrome Foundation (DSF), $150.000 (PI)
Prediction of treatment response in epilepsy by Transcranial Magnetic Stimulation coupled with EEG (TMS-EEG),October 2022-October 2023, Fast Track award (NIHR University College London Hospitals Biomedical Research Centre and UCLH Charity, £39,160.48 (PI)
TMS-EEG in genetic epilepsies. February 2019-February 2022.National Brain Appeal (NBA), £260,000 (co-PI)

Publication Track record

104 publications, h-index 26, 2147 citations (Scopus)

Relevant publications

Steps to Improve Precision Medicine in Epilepsy. **Balestrini S**, Mei D, Sisodiya SM, Guerrini R. Mol Diagn Ther. 2023 Nov;27(6):661-672. doi: 10.1007/s40291-023-00676-9.

Stretch-activated ion channel TMEM63B associates with developmental and epileptic encephalopathies and progressive neurodegeneration. Vetro A, Pelorosso C, **Balestrini S**, et al.

Am J Hum Genet. 2023 Jun 28:S0002-9297(23)00209-4. doi: 10.1016/j.ajhg.2023.06.008.

Risk-conferring HLA variants in an epilepsy cohort: benefits of multifaceted use of whole genome sequencing in clinical practice. Vakrinou A, …**Balestrini S**, Sisodiya SM. J Neurol Neurosurg Psychiatry. 2023 Jun 26:jnnp-2023-331419. doi: 10.1136/jnnp-2023-331419.

Morphometry and network-based atrophy patterns in SCN1A-related Dravet syndrome. Lenge M, **Balestrini S,** Mei D, et al. Cereb Cortex. 2023 Jun 21:bhad224. doi: 10.1093/cercor/bhad224.

Widespread genomic influences on phenotype in Dravet syndrome, a 'monogenic' condition. Martins Custodio H,…, **Balestrini S**, Mills JD, Sisodiya SM. Brain. 2023 Apr 3:awad111. doi:10.1093/brain/awad111.

A registry for Dravet syndrome: The Italian experience. **Balestrini S**, et al. Epilepsia Open. 2023 Mar 20. doi: 10.1002/epi4.12730

Transcranial magnetic stimulation-evoked electroencephalography responses as biomarkers for epilepsy: A review of study design and outcomes. Gefferie SR,…., **Balestrini S**, Thijs RD. Hum Brain Mapp. 2023 Jun 1;44(8):3446-3460.

Focal cortical dysplasia: a practical guide for neurologists. **Balestrini S**, et al. Pract Neurol. 2023 Feb 23:practneurol-2022-003404.

Developmental and epileptic encephalopathies: from genetic heterogeneity to phenotypic continuum. Guerrini R,….**Balestrini S**, Galanopoulou AS, Benfenati F. Physiol Rev. 2023 Jan 1;103(1):433-513.

Alternating hemiplegia of childhood: An electroclinical study of sleep and hemiplegia. Poole J,…..**Balestrini S,** Vivekananda U. PLoS One. 2022 Sep 30;17(9):e0268720.

Risk factors and outcome of hyperammonaemia in people with epilepsy. Vakrinou A,…. **Balestrini S**. J Neurol. 2022 Jul 30. doi: 10.1007/s00415-022-11304-7.

Physiological symmetry of transcranial magnetic stimulation-evoked EEG spectral features. D'Ambrosio S, …., **Balestrini S**. Hum Brain Mapp. 2022 Jul 21. doi: 10.1002/hbm.26022

The impact of Transcranial Magnetic Stimulation (TMS) on seizure course in people with and without epilepsy. Pang S,……., **Balestrini S**. Clin Neurophysiol Pract. 2022 Jun 13;7:174-182

Efficacy and Safety of Long-Term Treatment with Stiripentol in Children and Adults with Drug-Resistant Epilepsies: A Retrospective Cohort Study of 196 Patients. **Balestrini S**, Doccini V, Boncristiano A, et al. Drugs Real World Outcomes. 2022 Sep;9(3):451-461.

Expanding the genetic and phenotypic spectrum of CHD2-related disease: From early neurodevelopmental disorders to adult-onset epilepsy. De Maria B, **Balestrini S,** et al. Am J Med Genet A. 2022 Feb;188(2):522-533.

Non-Stationary Outcome of Alternating Hemiplegia of Childhood into Adulthood. Perulli M, Poole J, Di Lazzaro G, …….**Balestrini S**.Mov Disord Clin Pract. 2021 Dec 29;9(2):206-211

Postictal Psychosis in Epilepsy: A Clinicogenetic Study. Braatz V, …. **Balestrini S,** Sisodiya SM. Ann Neurol. 2021 Sep;90(3):464-476.

Monogenic Epilepsies: Disease Mechanisms, Clinical Phenotypes, and Targeted Therapies. Guerrini R, **Balestrini S,** Wirrell EC, Walker MC. Neurology. 2021 Oct 26;97(17):817-831.

Rare and Complex Epilepsies from Childhood to Adulthood: Requirements for Separate Management or Scope for a Lifespan Holistic Approach? **Balestrini S,** Guerrini R, Sisodiya SM. Curr Neurol Neurosci Rep. 2021 Nov 24;21(12):65.

Real-life survey of pitfalls and successes of precision medicine in genetic epilepsies. **Balestrini S**,

Chiarello D, Gogou M, et al. J Neurol Neurosurg Psychiatry. 2021 Apr 26:jnnp-2020-325932.

Increased facial asymmetry in focal epilepsies associated with unilateral lesions. **Balestrini S**, et al. Brain Commun. 2021 Apr 19;3(2):fcab068.

Intracerebral electrical stimulations of the temporal lobe: A stereoelectroencephalography study. Mariani V, **Balestrini S**, et al. Eur J Neurosci. 2021 Aug;54(4):5368-5383

Clinical outcomes of SARS-CoV-2 pandemic in long-term care facilities for people with epilepsy: observational study **Balestrini S**, Koepp MJ, Gandhi S, et al. Epilepsy Behav. 2020 Nov 5:107602.

Cardiac phenotype in ATP1A3-related syndromes: A multicentre cohort Study. **Balestrini S**, Mikati MA, Garcia-Roves RA, et al. Neurology. 2020 95(21):e2866- e2879.

Transcranial magnetic stimulation as a tool to understand genetic conditions associated with epilepsy. Silvennoinen K, **Balestrini S**, Rothwell JC, Sisodiya SM. Epilepsia. 2020 Aug 12.

Muscle and brain sodium channelopathies: genetic causes, clinical phenotypes, and management approaches. Matthews E, **Balestrini S,** Sisodiya SM, Hanna MG. Lancet Child Adolesc Health. 2020 Jul;4(7):536-547.

Transcranial magnetic stimulation as a biomarker of treatment response in children with Epilepsy. **Balestrini S**, Sander JW. Dev Med Child Neurol. 2020l;62(7):770

Cerebellar, limbic, and midbrain volume alterations in sudden unexpected death in epilepsy. Allen LA, Vos SB, Kumar R, Ogren JA, Harper RK, Winston GP, **Balestrini S**, et al. Epilepsia. 2019 Apr;60(4):718-729.

TBC1D24 genotype-phenotype correlation: Epilepsies and other neurologic features. **Balestrini S,** Milh M, Castiglioni C, et al Neurology. 2016 Jul 5;87(1):77-85.

Genome-wide Polygenic Burden of Rare Deleterious Variants in Sudden Unexpected Death in Epilepsy. Leu C, **Balestrini S**, Maher B, et al. EBioMedicine. 2015;2:1063-70

Multimodal responses induced by cortical stimulation of the parietal lobe: a stereo electroencephalography study. **Balestrini S**, Francione S, Mai R, et al. Brain. 2015 Sep;2596-607

9/01/2024