

**Ángela Brocalero Camacho**

**FENNSI group**

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My name is Ángela Brocalero and I was born in Valencia. I obtained my degree in Medicine and Surgery at the Faculty of Medicine of the University of Valencia, and the title of Specialty in Neurology after my training as MIR at the Hospital General Universitario de Valencia in July 2004, then I worked as an interim attending physician at the Consorcio Hospital General Universitario de Valencia until 2008 with special interest in demyelinating diseases and epilepsy and neuropathic pain. For this reason in relation to demyelinating diseases I was offered a grant to set up a database in the specialized consultation, with extension of consultation days, and I actively participated in the GITEM group of the Valencian Society of Neurology for the development of activities aimed at Research, Teaching and Assistance in Demyelinating Diseases; and also in the Section of Neurophysiology and Pain I did the Course of Chronic Pain Treatment corresponding to the degree of University Diploma studies at the Catholic University of Valencia San Vicente Martir.

In 2008 I moved to Nuestra Sra. del Prado Hospital in Talavera as a specialist in Neurology area and after the OPE of 2009 I started working in the Neurology Section of the Hospital de Parapléjicos (HNP) in Toledo in January 2010, this destination allowed me to meet Dr. Oliviero and the Exploration Group of Neurology. Oliviero and the Functional Exploration and Neuromodulation of the Nervous System Group (FENNSI) that he directs, to train me in non-invasive brain stimulation techniques (transcranial magnetic stimulation -TMS- and direct current -tDCS, among others) and their application in different neurological processes. Due to the high prevalence of chronic pain in the development of our healthcare activity and the creation of the non-invasive brain stimulation consultation for patients with drug-resistant chronic pain by Dr. Oliviero, I have been able to acquire more experience in the treatment of pain. Since 2015 my participation is more active in the research line of non-invasive brain stimulation techniques of the cerebral cortex, motivated by the application of new treatment protocols of TMS and also of tDCS in pain, and in February 2021 I obtained my PhD in Neurosciences from the International Doctoral School of the University of Castilla-La Mancha, being my doctoral thesis directors Dr. Oliviero and Dr. Soto León.

Given the increase in admissions of non-traumatic spinal cord pathology, very frequent of inflammatory etiology, in June 2022, I completed the Master in Neuroimmunology, 14th ed, coordinated by the Multiple Sclerosis Center of Catalonia and Viguera Editores, Barcelona (Spain), accredited by the Universitat Autònoma de Barcelona, and directed by Drs. Xabier Montalbán Gairín and Jaume Sastre-Garriga from the Unitat de Neuroimmunologia Clínica-Centre d' Esclerosi Múltiple de Catalunya.

There are already more than 10 years working at HNP and I enjoy developing my clinical activity in outpatient and hospitalization, with the teaching being part of the faculty of the postgraduate course of spinal cord injury and as author of the book spinal cord injury

(multidisciplinary approach), participating in the general hospital sessions and since 2018 member of the teaching and training committee of the HNP of Toledo; in addition to the researcher as I have already mentioned.

In the following lines I list the publications in which I have participated in recent years:

1. Brocalero-Camacho A, Pérez-Borrego YA, Soto-León V, Rodríguez-Matas MJ, Foffani G, Oliviero A. Effects of COVID-19 lockdown on chronic drug-resistant pain patients treated using brain stimulation approaches. *Brain Stimul.* 2020 Jul-Aug;13(4):1089-1090. doi: 10.1016/j.brs.2020.05.003. Epub 2020 May 8. PMID: 32389838; PMCID: PMC7206438.
2. A. Brocalero Camacho, A. Oliviero. (2020). Estimulación cerebral no invasiva. En: Esclarín de Ruz, A. Lesión medular: Enfoque multidisciplinario (2ª ed) (pp. 251-256). Madrid, España: Editorial Médica Panamericana S.A.
3. A. Brocalero Camacho, Y.A. Pérez Borrego, M.J. Rodríguez Matas, V. Soto León, Laura Mordillo Mateos, Antonio Oliviero. Protocolo terapéutico del dolor con técnicas de estimulación no invasiva. *Medicine: Programa de Formación Médica Continuada Acreditado*, ISSN 0304-5412, Serie 12, Nº. 75, 2019, págs. 4451-4454.
4. Cudeiro-Blanco J, Onate-Figuérez A, Soto-León V, Avendaño-Coy J, Mordillo-Mateos L, Brocalero-Camacho A, Esclarin-Ruz A, Rotondi M, Aguilar J, Arias P, Oliviero A. Prevalence of Fatigue and Associated Factors in a Spinal Cord Injury Population: Data from an Internet-Based and Face-to-Face Surveys. *J Neurotrauma.* 2017 Aug 1;34(15):2335-2341. doi: 10.1089/neu.2016.4950. Epub 2017 Jun 28. PubMed PMID: 28569601.
5. Mordillo-Mateos L, Dileone M, Soto-León V, Brocalero-Camacho A, Pérez-Borrego YA, Onate- Figuerez A, Aguilar J, Oliviero A. Effects of transcranial direct current stimulation on temperature and pain perception. *Sci Rep.* 2017 Jun 7;7(1):2946. doi: 10.1038/s41598-017-03173-2. PubMed PMID: 28592857; PubMed Central PMCID: PMC5462761.
6. Ayuga-Loro F, Torres-Llacsca M, Brocalero A, Florensa-Vila J, Oliviero A. Phantoms in the brain: transient mass in the posterior fossa after traumatic cervical SCI and vertebral artery obstruction. *Acta Neurol Belg.* 2011 Sep;111(3):258. PMID: 22141299.
7. Ayuga-Loro F, Brocalero-Camacho A, Quintas-López MV, Cabrera-Feria JR. Efectos adversos neuropsiquiátricos del ziconotide intratecal [Neuropsychiatric side effects of intrathecal ziconotide]. *Rev Neurol.* 2011 Jan 1;52(1):61-3. Spanish. PMID: 21246497.