Daniel Manrique-Castano

NEUROSCIENTIST

#Glia #BrainInjury #DataAnalysis

PERSONAL PROFILE

II am a dedicated neuroscientist with a diverse skill set, deeply passionate about exploring the interplay between neuroglia and the extracellular matrix in the context of neurological diseases. With a firm belief in the principles of open science, I ensure that my research protocols are transparent and of the highest standard, consistently yielding robust results. An innate drive for learning and self-improvement propels me, and I eagerly embrace novel challenges and research trajectories.

WORK EXPERIENCE

2020-2023 — **POSTDOCTORAL FELLOW**
University Laval (Canada)
- Research on pericyte reactivity and brain remodeling following cerebral ischemia.

2014-2020 — **DOCTORAL RESEARCHER**
NeuroscienceLab, Essen Univeristy Hospital (Germany)
- Research on extracellular matrix, neuroglial and immune response in mouse model of cerebral ischemia
- Research on the effect of pharmacological blocking of ABC transporters after cerebral ischemia

2012-2014 — **RESEARCH ASSISTANT**
Pontificia Universidad Javeriana, Cali, (Colombia)
- Research on cortical and transcallosal neuronal plasticity in rat model of cerebral ischemia.

2012-2013 — **NEUROPSYCHOLOGIST**
Valle Departmental Hospital, Cali, (Colombia)
- Neuropsychological assessment to hospitalized and outpatients in the neurosurgery unit

2010-2013 — **PROFFESOR ASSISTANT**
Pontificia Universidad Javeriana, Cali, (Colombia)
- Provide academic support for undergraduate students taking the Neuroscience II course

EDUCATION

2014-2020 — **PhD NEUROSCIENCE**
Ruhr University Bochum (Bochum, Germany)
- Effects of Tenascin-C on immune response, glial scar formation and extracellular matrix reorganization following cerebral ischemia

2009-2013 — **BACHELOR HONORS - PSYCHOLOGY**
Pontificia Universidad Javeriana, Cali, (Colombia)
- Assessment of transcallosal Diaschisis in a model of focal cerebral ischemia in rats

TECHNICAL SKILLS

- MCAo
- Behavioral testing
- Immunohistochemistry
- Protein and RNA extraction
- Flow cytometry
- Super-resolution microscopy
- Image analysis
- R-data analysis
- Python coding
- Scientific writing

AWARDS

- Fond de recherche du Québec - Postdoctoral fellowship (2022-2024)
- IGSN scholarship – for PhD program in Neuroscience (2014 — 2015)
- Order of Javeriano Academic Merit – Honor/meritorious degree (18-05-2013)
- First place in Biology essay- XIII National & V Iberoamerican contest "Reading the Science to all" 2013-2014
- First place in Physics essay- XII National & IV Iberoamerican contest "Reading the Science to all" 2011-2012

LENGUAGES

- **Spanish**
- **English**
- **French**
- **German**

CONTACT INFORMATION

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danielmanriquecastano

WRITING AND PUBLICATIONS

SCIENTIFIC ARTICLES

- **Manrique-Castano, D. et al. (2023).** Dissecting glial scar formation by spatial point pattern and topological data analysis. Submitted (Nature Communications).
- **Menet, R. ... Manrique-Castano, D. (2023).** Myeloid dickkopf-1 fuels neurovascular and neuroimmune alterations in ischemic stroke. Under Review (Nature Neuroscience).
- **Manrique-Castano, D. & Dzyubenko, E. et al (2021).** Tenascin-C restricts reactive astrogliosis in the ischemic brain. Matrix biology. DOI: 10.1016/j.matbio.2022.04.003
- Lecordier, S., **Manrique-Castano, D. et al. (2021).** Neurovascular Alterations in Vascular Dementia: Emphasis on Risk Factors. Frontiers in Aging Neuroscience. DOI: 10.3389/fnagi.2021.727590
- Dzyubenko, E. Fleischer, M, **Manrique-Castano, D., et al (2021).** Inhibitory control in neuronal networks relies on extracellular matrix integrity. Cellular and Molecular Life Sciences. DOI: 10.1007/s00018-021-03861-3
- **Manrique-Castano, D., et al (2020).** Tenascin-C preserves microglia surveillance and restricts leukocyte and, more specifically, T cell infiltration of the ischemic brain. Behavior, and Immunity. DOI: 10.1016/j.bbi.2020.10.016
- **Manrique-Castano, D.**, et al **(2019)**. Deactivation of ATP-Binding Cassette Transporters ABCB1 and ABCC1 Does Not Influence Post-ischemic Neurological Deficits, Secondary Neurodegeneration and Neurogenesis, but Induces Subtle Microglial Morphological Changes. Frontiers in cellular neuroscience, DOI: 10.3389/fncel.2019.00412
- Dzyubenko, E., **Manrique-Castano, D.,** et al. **(2018).** Role of immune responses for extracellular matrix remodeling in the ischemic brain. Therapeutic Advances in Neurological Disorders, DOI: 10.1177/1756286418818092
- **Manrique-Castano, D.**, et al **(2019).** ENCODS: A novel initiative to inspire young neuroscientists. The European Journal of Neuroscience, DOI: ENCODS: A novel initiative to inspire young neuroscientists
- Dzyubenko, E., **Manrique-Castano, D.**, et al. (**2018).** Topological remodeling of cortical perineuronal nets in focal cerebral ischemia and mild hypoperfusion. Matrix biology, DOI:10.1016/j.matbio.2018.08.001
- Arango-Dávila, C. A., Muñoz Ospina, B. E., **Manrique-Castaño,** et al. **(2016)**. Assessment transcallosal Diaschisis in a model of focal cerebral ischemia in rats. Colombia medica (Cali, Colombia), 47(2), 87–93.

BOOKS

- **Manrique-Castano, D** and ElAli, A. Neurovascular Reactivity in Tissue Scarring Following Cerebral Ischemia (Book chapter). ISBN: 978-0-6450017-9-2
- Velásquez, M.L (Author) and **Manrique-Castano, D.** (Contributor and Editor). Psychopathology: An introduction to clinics and metal health (Spanish). ISBN 978-958-8856-88-9
- **Manrique-Castano, D. (2016).** Fundamentals of Cosmology: the science of the universe (Spanish). ISBN 8494471759

SCIENCE AND HISTORY JOURNALISM

Texts available in: danielmanriquecastano