Matias Leandro Andina

Personal Information

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Education

Current 2021 | **PhD in Neuroscience, Massachusetts Institute of Technology**, USA
Advisor: Dr Gloria Choi.

2016-2018 | **MSc in Neuroscience, University of Massachusetts Amherst**, USA
Thesis: Mapping a pup-resposive pathway from medial preoptic area to ventral tegmental area.
Advisor: Dr Mariana Pereira.
GPA: 3.87

2010-2015 | **Biology Degree, University of Buenos Aires**, Argentina
Thesis: Study of different long-term memories and participation of synaptic ERK/MAPK in memory consolidation.
Advisor: Dr Mariana Feld
GPA: 8.4/10.0

Research Experience

Current 2021 | **PhD Student - Brain and Cognitive Sciences Program**
Massachusetts Institute of Technology, USA

2018-2021 | **Technical Associate**
Massachusetts Institute of Technology, USA
Study of inflammatory-induced and genetic deficits on social behavior.

2016-2018 | **MSc Student - Neuroscience and Behavior Program**
University of Massachusetts Amherst, USA
Study of neural circuits involved in maternal behavior using a rat model.

2013-2015 | **Undergraduate Research Assistant**
Neurobiology of Memory Lab, IFIByNE-CONICET, Argentina
Contextual Pavlovian Conditioning, long term memory consolidation and molecular mechanisms involved in crab's escape response to a visual danger stimulus.

Skills

Laboratory	Stereotaxic surgery, Brain localized injections, Perfusion, Brain tissue collection, Cryosectioning, Immunohistochemistry, Epifluorescence and Confocal Microscopy, Microdialysis probe implant and sample collection, Tissue homogenates, ELISA, HPLC, Gel electrophoresis.
Computer	Software: Microsoft Office, Inkscape, ImageJ, Illustrator. Languages: R, Python, MATLAB, Markdown, Latex, C(Arduino). Analysis: Linear Models, Supervised and unsupervised Learning, Computer Vision, CNN.

Selected Publications

2021	Ojea Ramos S., **Andina M.**, Romano A., Feld, M. Two spaced training trials induce associative ERK-dependent long term memory in Neohelice granulata. Behavioral Brain Research. DOI: `https://doi.org/10.1016/j.bbr.2021.113132`
2020	Reed M.D., Yim Y.S., (...), **Andina M.**, (...), Huh J.R., Choi G.B. Interleukin-17a restores sociability in several mouse models for neurodevelopmental disorders. Nature 577, 249–253. DOI: `https://doi.org/10.1038/s41586-019-1843-6`.

Full list of publications can be found in Google Scholar.

Teaching Experience

University of Massachusetts Amherst

2018 **Teaching Assistant**
Methods of Inquiry in Psychology.

2017 **Instructor of Record**
Animal Behavior: stay fit, survive another day. First year 1 credit seminar, supported by College of Natural Sciences (CNS) fellowship. CIRTL Associate.

2017 **Teaching Assistant**
Interdisciplinary Methods in Psychology.

Invited Talks and Lectures

2021 **Building a user-driven database of open neuroscience projects** - OBMH.
2019 **Data Visualization** - Philanthropy Advisory Fellowship, Harvard.
2017 **Parenting Behaviors** - Behavioral Neuroendocrinology, UMass
2017 **Neural Basis of Maternal Behavior** - Neuroscience club, UMass.

Conferences and Presentations

2019 Reed M.D., Yim Y.S., (...), **Andina M.**, (...), Huh J.R., Choi G.B. Interleukin-17a restores sociability in several mouse models for neurodevelopmental disorders. Presented at the Society for Neuroscience, Chicago, USA.

2018 Ojea Ramos S., **Andina M.**, Feld M. Long-term memory induced by two training trials in the crab Neohelice granulata. Presented at the FENS forum, Berlin, Germany.

2015 **Andina M.**, Romano A., Feld M. Two-trial long-term memory in the crab Neohelice granulata. Presented at the Annual Meeting of the Argentinean Society of Neuroscience Research. Mar del Plata, Argentina.

2013 **Andina M.**, Klappenbach M., Locatelli F., Pedreira E., Romano A., Feld M. Measuring crab´s memory: improving conditioning. Presented at the Annual Meeting of the Argentinean Society of Neuroscience Research. Huerta Grande, Argentina.

Funding and Awards

2021 Arete Fellowship. Effective Altruism discussion panel. Massachusetts Institute of Technology

2021 Funding support to organize open-hardware workshop in Argentina, IBRO-LARC.

2021 Presidential Fellowship, Massachusetts Institute of Technology.

2017 College of Natural Sciences Fellowship, University of Massachusetts Amherst.

2016 Neuroscience and Behavior Program Fellowship, University of Massachusetts. Amherst.

2015 Young ISN Neurochemistry Award.

Mentoring

Massachusetts Institute of Technology

2021	Melissa Nie	Open software and data analysis in Python and R.
2021	Penelope Herrero	Open Hardware design and fabrication.
2021	John Eastman	FedWatcher. Open Hardware design and fabrication.

University of Massachusetts Amherst

2017 - 2018	Idil Tuncali	Ultrasonic vocalization analysis. Statistics. R.
2017	Nneka Southwell	Perfusion, Tissue Collection, Cryosectioning.
2016 - 2017	Thomas Riley Potter	Microdialysis probe calibration.
2016	Dar Alon	Automated cell counting.

Software Development

- FedWatcher: an open-source software package for FED3 feeding devices. https://github.com/matiasandina/FedWatcher
- FLOW: an open-source home cage monitoring system of temperature and movement. https://github.com/matiasandina/homecage_quantification
- R package author of *stepfinder*. Detection of steps in 1 dimensional data. https://github.com/matiasandina/stepfinder
- R package author of *choices*. User-friendly menu options in R. https://github.com/matiasandina/choices

- R package contributor of *SMART*. Semi-manual alignment to reference templates (SMART): An open source pipeline in R for whole brain mapping. https://github.com/matiasandina/SMART and https://github.com/mjin1812/smart

Service

Massachusetts Institute of Technology

current	Talleres Open Source co-founder and team member
2020	Organization of workshops for Open Source tools in Neuroscience. https://github/com/talleresopensource/
current	Open-Neuroscience team member
2020	Web-developer and curator of repository of open-source neuroscience tools. https://open-neuroscience.com/
2019	Organization of the first AI Latin America sumMIT. Sponsor Coordinator http://ailatinsum.mit.edu/

University of Massachusetts Amherst

2016 - 2018	NSB Seminar Committee. Organization of invited Faculty talks at UMass.
2017 - 2018	NSB Mentoring Committee. Organization of first year graduate student activities and mentoring events.

Outreach

2016 - 2018	That's Life [Science] Blog. Article writing and editing.

Languages

Spanish:	Native Proficiency
English:	Bilingual Proficiency
Portuguese:	Intermediate Proficiency