

# Matias Leandro Andina

## Personal Information

---

email: mandina[at]mit.edu ; matiasandina[at]gmail.com  
URL: matiasandina.netlify.com  
ORCID: 0000-0002-1996-2539

## Education

---

- |           |  |
|-----------|--|
| 2016-2018 | <b>MSc Student, University of Massachusetts Amherst, USA</b><br>Thesis: Mapping a pup-responsive pathway from medial preoptic area to ventral tegmental area.<br>Advisor: Dr Mariana Pereira.<br>GPA: 3.87                 |
| 2010-2015 | <b>Biology Degree, University of Buenos Aires, Argentina</b><br>Thesis: Study of different long-term memories and participation of synaptic ERK/MAPK in memory consolidation.<br>Advisor: Dr Mariana Feld<br>GPA: 8.4/10.0 |

## Research Experience

---

- |           |  |
|-----------|--|
| 2018-2020 | <b>Technical Associate</b><br><i>Massachusetts Institute of Technology, USA</i><br>Study of inflammatory-induced and genetic deficits on social behavior.  |
| 2016-2018 | <b>MSc Student - Neuroscience and Behavior Program</b><br><i>University of Massachusetts Amherst, USA</i><br>Study of neural circuits involved in maternal behavior using a rat model.   |
| 2013-2015 | <b>Undergraduate Research Assistant</b><br><i>Neurobiology of Memory Lab, IFIByNE-CONICET, Argentina</i><br>Contextual Pavlovian Conditioning, long term memory consolidation and molecular mechanisms involved in crab's escape response to a visual danger stimulus. |

## Selected Publications

---

- Yim Y.S., **Andina M.**, (...), Choi G.B. IL-17a regulates the social interaction by acting on somatosensory cortex in the mouse model of ASD. *In preparation.*
- Ojea Ramos S., **Andina M.**, Romano A., Feld, M. Two spaced training trials induce associative ERK-dependent long term memory in *Neohelice granulata*. *Under revision.*
- 2020 | Ojea Ramos S., **Andina M.**, Romano A., Feld, M. Two spaced training trials induce associative ERK-dependent long term memory in *Neohelice granulata*. BiorXiv. DOI: <https://doi.org/10.1101/2020.04.16.045427>
- 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.

## 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, SPSS, Inkscape, ImageJ, Illustrator.  
Languages: R, Python, MATLAB, Markdown, Latex, C(Arduino).  
Analysis: Linear Models, Supervised and unsupervised Learning, Computer Vision, CNN.

## 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. CIRTLL Associate.
- 2017 **Teaching Assistant**  
Interdisciplinary Methods in Psychology.

## Invited Talks and Lectures

---

- 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.

## Scholarships and Awards

---

- 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

---

*University of Massachusetts Amherst*

- |             |                     |   |
|-------------|---------------------|---|
| 2017 - 2018 | Idil Tuncali        | Projects(s): Ultrasonic vocalization analysis. Statistics. R. |
| 2017        | Nneka Southwell     | Technique(s): Perfusion, Tissue Collection, Cryosectioning.   |
| 2016 - 2017 | Thomas Riley Potter | Project(s): Microdialysis probe calibration.                  |
| 2016        | Dar Alon            | Project(s): Automated cell counting.                          |

## Software Development

---

- FLOW: an open-source home cage monitoring system of temperature and movement. [https://github.com/matiasandina/homecage\\_quantification](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>
- Python GUI for scoring of behavior and TTL synchronization. [https://github.com/matiasandina/annotate\\_behavior\\_video](https://github.com/matiasandina/annotate_behavior_video)
- Python Camera [https://github.com/matiasandina/python\\_camera](https://github.com/matiasandina/python_camera).

## Service

---

*Massachusetts Institute of Technology*

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

#### *University of Massachusetts Amherst*

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

## Outreach

---

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

## Languages

---

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