

Nicole S. Torosin

Rutgers University
Department of Genetics
Nelson Biology Laboratories
604 Allison Rd. B433

June 17, 2020
E-mail: nicole.torosin@rutgers.edu
Homepage: www.nicoletorosin.com
Piscataway, NJ 08854

Current Position

2019 - Present **Postdoctoral Associate**, Department of Genetics, Rutgers University, Piscataway, NJ
Current Research Interests: Population and evolutionary genetics, Drosophila genetics, topologically associating domains, primate immune genetics, phylogenetic methods, RNA viruses

Education

2016 - 2019 **Doctor of Philosophy**, Biological Anthropology, University of Utah, UT
Dissertation: Genetic variation in toll-like receptor 7 and toll-like receptor 8 in humans and howler monkeys and potential implications for susceptibility to yellow fever virus

2014 - 2016 **Master of Science**, Biological Anthropology, University of Utah, UT
Thesis: Genetic diversity and facial cues of kin recognition

2010 - 2014 **Bachelor of Arts**, with honors, Biological Sciences and Anthropology, Northwestern University, Evanston, IL
Thesis: A genetic test for the effect of the Toba volcanic eruption on worldwide population sizes in mammal species

Preprints and Peer-Reviewed Publications

Torosin NS, Anand A, Rao Golla T, Cao W, Ellison CE. Reorganization of 3D genome structure in the *Drosophila melanogaster* species group. PLOS Genetics. 2020, Submitted.

Preprint available from: <https://doi.org/10.1101/2020.04.09.033753>.

Torosin NS, Webster TH, Argibay H, Ferreyra H, Uhart M, Agostini I, Knapp LA. Positively selected variants in functionally important regions of TLR7 in *Alouatta guariba clamitans* with yellow fever virus exposure in Northern Argentina. *American Journal of Physical Anthropology*. In press.

Torosin NS, Argibay H, Webster TH, Corneli PS, Knapp LA. Comparing the selective landscape of TLR7 and TLR8 across primates reveals unique sites under positive selection in *Alouatta*. *Molecular Phylogenetics and Evolution*. Accepted, in review.

Torosin NS, Azkarate JC, Perrett DI, Knapp LA. Genetic diversity and facial cues of kin recognition. BioRxiv 028134. [Preprint]. April 6, 2020.

Available from: <https://doi.org/10.1101/2020.04.06.028134>.

Torosin NS, Raff JA, Hayes MG. A genetic test for the effect of the Toba volcanic eruption on worldwide population sizes in mammal species. BioRxiv 028050. [Preprint]. April 6, 2020.

Available from: <https://doi.org/10.1101/2020.04.06.028050>.

Other Publications

Knapp LA and **Torosin NS**. 2019. "The Primate Immune System: A survey of innate and acquired immune genes" in *A Companion to Anthropological Genetics*. Edited by Dennis O'Rourke.

Presentations

Torosin NS, Anand A, Cao W, Ellison CE. Evolutionary conservation and divergence of 3D genome organization in *Drosophila*.

- The Allied Genetics Conference, 2020. Podium Presentation, online to COVID-19.
- Society for Molecular Biology and Evolution, 2020. Selected for Podium Presentation, cancelled due to COVID-19.

Torosin NS, Webster TH, Corneli PS, Argibay H, Ferreyra H, Uhart M, Agostini I, Knapp LA. Genetic variation in howler monkey TLR7 and TLR8: Potential implications for susceptibility to yellow fever virus. Center for Human Evolutionary Studies Lecture Series, 2020, **Invited talk**.

Nicole Torosin, Leslie A. Knapp. The evolution of TLR7 and TLR8 in yellow fever virus endemic areas. International Society for Evolution, Medicine, and Public Health, Park City, UT, 2018. Podium.

Nicole Torosin, Leslie A. Knapp. The evolution of TLR7 and TLR8 in yellow fever virus endemic areas. American Association of Physical Anthropology, Cleveland, OH, 2019. Podium.

Nicole Torosin, Patrice Corneli, Leslie A. Knapp. A comparative study of human and howler monkey toll-like receptor 7 under the selective pressure of yellow fever virus. Poster.

- American Association of Physical Anthropology, Austin, TX, 2018
- International Society for Evolution, Medicine, and Public Health, Durham, NC, 2016
- American Association of Physical Anthropology, Atlanta, GA, 2016

Nicole Torosin, Jurgi Cristóbal Azkarate, Dave I. Perrett, Leslie A. Knapp. Genetic diversity and facial cues of kin recognition. Poster.

- Human Behavior and Evolution Society, Columbia, MO, 2015
- Northwest Evolution, Ecology, and Human Behavior Symposium, Boise, ID, 2015
- College of Social and Behavioral Sciences Research Day, Salt Lake City, UT, 2015

Nicole Torosin, Jennifer A. Raff, M. Geoffrey Hayes. A genetic test for the effect of the Toba volcanic eruption on worldwide population sizes in mammal species. Society for Molecular Biology and Evolution annual conference, Chicago, IL, 2013. Poster.

Research Funding

2017 - 2018	University of Utah, Global Change and Sustainability Center, Graduate Student Research Funding, <i>Next Generation Sequencing of DNA from howler monkey (Alouatta caraya and A. guariba clamitans) fecal samples.</i>
2015 - 2016	University of Utah Pilot Grant, <i>Testing howler monkey fecal sample collection, preservation, and DNA extraction protocols in Veracruz, Mexico.</i>
2015 - 2016	University of Utah, Global Change and Sustainability Center, Graduate Student Research Funding, <i>Collecting endangered howler monkey fecal samples in Northern Argentina.</i>

Other Research Experience and Training

2018	Computational Genomics Summer Institute, University of California, Los Angeles, CA
2018	Evolutionary Medicine Summer Institute, Duke University, Durham, NC
2012 - 2014	Hayes Laboratory, Northwestern University, Chicago, IL
2013	Gardening and Health Study, Northwestern University, Chicago, IL
2012	Bates Laboratory, King's College London, London, England
2011 - 2012	Morimoto Laboratory, Northwestern University, Evanston, IL

Field Experience

- 2017 Misiones, Argentina *Project: Collecting fecal samples from howler monkeys in El Piñalito provincial forest*
- 2015 Veracruz, Mexico *Project: Collecting fecal samples from howler monkeys in Balzapote and Montepio*

Other Awards and Funding

- 2020 Young Investigator Award, Society for Molecular Biology and Evolution
- 2018 Pollitzer Travel Award, American Association of Physical Anthropology
- 2017 - 2018 Graduate Research Fellowship, University of Utah
- 2017 Travel Award, International Society for Evolution, Medicine, and Public Health
- 2016 Travel Award, Global Change and Sustainability Center, University of Utah
- 2016 Graduate Research Fellowship Honorable Mention, National Science Foundation
- 2016 Earl and Elies Skidmore Endowed Scholarship, University of Utah
- 2015 - 2016 Honor Roll, College of Social and Behavioral Science, University of Utah
- 2015 Travel Award, Global Change and Sustainability Center, University of Utah

Teaching, Mentoring, Outreach Experience

- 2020 Project SUPER mentor, Rutgers University, Piscataway, NJ
- 2017 - 2019 Teaching Assistant, University of Utah, Salt Lake City, UT
Courses: Population Genetics, Human Origins
- 2016 - 2017 Adjunct Lecturer, Salt Lake Community College, Salt Lake City, UT
Course: Human Origins
- 2015 - 2019 Internship Supervisor, Knapp Laboratory, University of Utah, Salt Lake City, UT
- 2015 - 2019 Science Communication Fellow, Natural History Museum of Utah, Salt Lake City, UT
- 2013 - 2014 Undergraduate Teaching Assistant, Northwestern University, Evanston, IL
Course: Biology

Professional Activities

- 2020 - Present Center for Human Evolutionary Studies, Associate Member
- 2020 - Present Genetics Society of America Early Career Leadership Committee, Career Development Subcommittee
- 2016 - 2019 Knapp Laboratory Manager, University of Utah, Salt Lake City, UT
- 2017 - 2018 Communications Manager, uBiota, Salt Lake City, UT