

Maria Toro Moreno
Postdoctoral Fellow
Fred Hutchinson Cancer Center
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Education

Ph.D. in Chemistry, Duke University, Durham, NC 2015 – 21
Advisor: Emily R. Derbyshire
Bachelor of Science in Biochemistry, Saint Louis University, St. Louis, MO 2011 – 15

Employment

Postdoctoral Fellow 2021 –
Fred Hutchinson Cancer Center, Seattle, WA
Advisors: Harmit S. Malik & Arvind R. Subramaniam

Awards and Honors

Grants & Fellowships

Hanna H. Gray Fellow 2022 –
HHMI Jane Coffin Childs Fellow (declined) 2022
Burroughs Wellcome Fellowship 2019 – 20
C.R Hauser Memorial Fellowship 2019

Other awards

MIT Catalyst Fellow 2026
Leading Edge Fellow 2025
MERIT Emerging Leaders Symposium, Memorial Sloan Kettering Cancer Center 2024
Mitchell Meritorious Research Travel Award 2019
EMBO | EMBL Symposia Fellowship 2019
BioCoRE Scholar 2015
Hypercube Scholar 2015
Intercollegiate Tennis Association Scholar-Athlete 2013 – 15

Publications

<https://www.ncbi.nlm.nih.gov/myncbi/maria.toro-moreno.1/bibliography/public/>

See end of document for full citations

Presentations

Friday Night Talks, Fred Hutchinson Cancer Center, Seattle, WA April 2025
MERIT Emerging Leaders Symposium, MSK Cancer Center, New York, NY July 2024
Molecular Approaches in Malaria, Lorne, Australia May 2019
Center for Host and Microbe Interactions, Duke University, Durham, NC May 2019
Eukaryotic Pathogenesis Investigators Colloquia, Duke University, Durham, NC February 2019
FASEB Molecular Pathogenesis: Mechanisms of Infectious Diseases, Snowmass, CO July 2017

Mentorship

Research Technician Mentor, Fred Hutchinson Cancer Center 2023 –
Undergraduate Independent Study Mentor, Duke University 2016 – 21
Duke B-SURF Mentor 2016
BioCoRE Summer Research Mentor 2016 – 17

Mentees

Rebecca Alves Ferreira, Fred Hutchinson Cancer Center	2024 –
Charlotte Booke, Fred Hutchinson Cancer Center	2023 –
Rechel Geiger, Duke University	2016 – 18
Xiaoyu Cai, Duke University	2016 – 18
Alyssa Carter, Duke University	2018 – 20
Tamanna Srivastava, Duke University	2018 – 21
Olivia Liu, Duke University	2018 – 21

Service

Weintraub Award Reviewer, Fred Hutchinson Cancer Center	2025
SACNAS Recruiter, Fred Hutchinson Cancer Center	2022
SACNAS Recruiter, Duke Graduate School	2016
Hill Lecture Co-Chair, Duke University	2016 – 18
FEMMES Volunteer	2016 – 18
Science Under the Stars Volunteer	2016 – 18

Teaching

Teaching Assistant, CHEM110L: Core Concepts in Chemistry (Honors), Duke University	Fall 2015
Teaching Assistant, CHEM210L: Modern Applications of Chemistry, Duke University	Spring 2016
Invited Lecture, "Malaria Biology and Drug Discovery", HIS235: Drugs, Chemicals and Health, Duke University	Fall 2020

Publications (full citations)

* Equal contribution \ † Corresponding author

1. **Toro-Moreno M**†, Booke C, Park H, Chan M, Rao J, Pimentel H, Subramaniam AR, Malik HS†. Deep mutational scans uncover CENPB-dependent constraints of CENPA at the centromere. *In prep.*
2. Chen KY, **Toro-Moreno M**†, Subramaniam AR†. GitHub enables collaborative and reproducible laboratory research. *PLoS Biol.* 2025 Feb 14;23(2):e3003029. doi: 10.1371/journal.pbio.3003029. PMID: 39951468; PMCID: PMC11828340. Preprint: <https://doi.org/10.48550/ARXIV.2408.09344>
3. Schroeder EA, **Toro-Moreno M**, Raphemot R, Sylvester K, Colón IC, Derbyshire ER. Toxoplasma and Plasmodium associate with host Arfs during infection. *mSphere.* 2024 Mar 26;9(3):e0077023. doi: 10.1128/msphere.00770-23. Epub 2024 Feb 13. PubMed PMID: 38349168; PubMed Central PMCID: PMC10964417.
4. Bang S*, Donnelly CR*, Luo X*, **Toro-Moreno M***, Tao X, Wang Z, Chandra S, Bortsov AV, Derbyshire ER, Ji RR. Activation of GPR37 in macrophages confers protection against infection-induced sepsis and pain-like behaviour in mice. *Nat Commun.* 2021 Mar 17;12(1):1704. doi: 10.1038/s41467-021-21940-8. PubMed PMID: 33731716; PubMed Central PMCID: PMC7969930.
5. Ganley JG, Pandey A, Sylvester K, Lu KY, **Toro-Moreno M**, Rütchlin S, Bradford JM, Champion CJ, Böttcher T, Xu J, Derbyshire ER. A Systematic Analysis of Mosquito-Microbiome Biosynthetic Gene Clusters Reveals Antimalarial Siderophores that Reduce Mosquito Reproduction Capacity. *Cell Chem Biol.* 2020 Jul 16;27(7):817-826.e5. doi: 10.1016/j.chembiol.2020.06.004. Epub 2020 Jul 2. PubMed PMID: 32619453.
6. **Toro-Moreno M**, Derbyshire ER. It's about Time: Insights into the Modes of Action of Antimalarials. *Cell Chem Biol.* 2020 Feb 20;27(2):139-141. doi: 10.1016/j.chembiol.2020.01.013. PubMed PMID: 32084336.
7. **Toro-Moreno M***, Sylvester K*, Srivastava T, Posfai D, Derbyshire ER. RNA-Seq Analysis Illuminates the Early Stages of Plasmodium Liver Infection. *mBio.* 2020 Feb 4;11(1). doi: 10.1128/mBio.03234-19. PubMed PMID: 32019802; PubMed Central PMCID: PMC7002348.

8. Raphemot R*, **Toro-Moreno M***, Lu KY, Posfai D, Derbyshire ER. Discovery of Druggable Host Factors Critical to Plasmodium Liver-Stage Infection. *Cell Chem Biol.* 2019 Sep 19;26(9):1253-1262.e5. doi: 10.1016/j.chembiol.2019.05.011. Epub 2019 Jun 27. PubMed PMID: 31257182; PubMed Central PMCID: PMC6754275.
9. Raphemot R, Eubanks AL, **Toro-Moreno M**, Geiger RA, Hughes PF, Lu KY, Haystead TAJ, Derbyshire ER. Plasmodium PK9 Inhibitors Promote Growth of Liver-Stage Parasites. *Cell Chem Biol.* 2019 Mar 21;26(3):411-419.e7. doi: 10.1016/j.chembiol.2018.11.003. Epub 2018 Dec 27. PubMed PMID: 30595530; PubMed Central PMCID: PMC6430656.
10. Huang T, **Toro M**, Lee R, Hui DS, Edwards JL. Multi-functional derivatization of amine, hydroxyl, and carboxylate groups for metabolomic investigations of human tissue by electrospray ionization mass spectrometry. *Analyst.* 2018 Jul 21;143(14):3408-3414. doi: 10.1039/c8an00490k. Epub 2018 Jun 19. PubMed PMID: 29915825; PubMed Central PMCID: PMC6047751.
11. Ganley JG*, **Toro-Moreno M***, Derbyshire ER. Exploring the Untapped Biosynthetic Potential of Apicomplexan Parasites. *Biochemistry.* 2018 Jan 30;57(4):365-375. doi: 10.1021/acs.biochem.7b00877. Epub 2017 Oct 18. Review. PubMed PMID: 28976181.