

Curriculum vitae

Thomas E. Smith

EDUCATION / TRAINING

- 2017-2021 Postdoc in insect-microbe symbiosis, University of Texas at Austin, with Dr. Nancy Moran
- 2011-2016 Ph. D. in Medicinal Chemistry, University of Utah, with Dr. Eric Schmidt
- 2007-2011 B. S. in Biochemistry and Plant Biology, University of Minnesota (Twin Cities), directed by Dr. Florence Gleason

PROFESSIONAL EXPERIENCE

- Sep 2021-Oct 2022 Scientist II, Zymergen, Emeryville CA
- 2017-Sep 2021 Postdoctoral Fellow, University of Texas at Austin, with Dr. Nancy Moran
- 2011-2017 Graduate Research Fellow, University of Utah, with Dr. Eric Schmidt
- 2014-2015 American Chemical Society (ACS) Division of Medicinal Chemistry (MEDI) Pre-Doctoral Fellow
- 2013-2015 American Foundation for Pharmaceutical Education Pre-Doctoral Fellow
- 2013 TA for Pharmaceutical Sciences 5113 – Basics in Pharmaceutical Sciences, directed by Dr. Darrell R. Davis
- 2010-2011 Organic Chemistry Tutor, University of Minnesota (Twin Cities)
- 2009-2011 Undergraduate Researcher, University of Minnesota (Twin Cities), with Dr. Florence Gleason
- 2009 Experimental design for Biology 3007W – Plant Diversity course, directed by Dr. Imke Schmitt

PUBLICATIONS

*Equal contributors

Motta, E. V. S., Gage A., **Smith, T. E.**, Blake, K. J., Kwong, W. K., Riddington, I. M, Moran, N. A. Host-microbiome metabolism of a plant toxin in bees. *eLife*, *In press*.

Smith, T. E., Li, Y., Moran, N. A. (2022) Comparative genomics of eight aphid subfamilies reveals variable relationships between host horizontally-transferred genes and symbiont peptidoglycan metabolism. *PLoS Genet.* 18(5): e1010195.

Smith, T. E., Lee, M., Person, M. D., Heseck, D., Mobashery, S., Moran, N. A. (2021) Horizontal-acquisition of a promiscuous peptidoglycan-recycling enzyme enables host control of symbiont cell wall remodeling in aphids. *mBio*, 12(6): e02636-21.

El-Chaar, N. N.*, **Smith, T. E.***, Shrestha, G., Piccolo, S. R., Harper, M. K., Van Wagoner, R.M., Lu, Z., Venancio, A. R., Ireland, C. M., Bild, A. H., Moos, P. J. (2021) Topsentinol L trisulfate, a marine natural product that targets basal-like and Claudin-low breast cancers. *Mar. Drugs* 19, 41.

Smith, T. E., Moran, N. A. (2020) Coordination of host and symbiont gene expression reveals metabolic tug-of-war between aphids and *Buchnera*. *Proc. Nat. Acad. Sci. U.S.A.* 117(4): 2113–2121.

Li, Y. Park. H., **Smith, T. E.**, Moran, N. A. (2019) Gene family evolution in the pea aphid based on chromosome-level genome assembly. *Mol. Biol. Evol.* msz138.

Smith, T. E., Pond, C. D., Pierce, E., Harmer, Z., Kwan, J., Zachariah, M., Harper, M. K., Wyche, T.,

Matainaho, T. K., Bugni, T. S., Barrows, L. R., Ireland, C. M., Schmidt, E. W. (2018) Direct access to chemical diversity from the uncultivated symbionts of small marine animals. *Nat. Chem. Biol.* 14(2): 179–185.

Smith, T. E. (2017) Biogenetic relationships of bioactive sponge merotriterpenoids. *Mar. Drugs* 15(9): 285.

Smith, T. E.*, Hong, W. *, Zachariah, M. M., Harper, M. K., Matainaho, T. K., Van Wagoner, R. M., Ireland, C. M., Vershinin, M. (2013) Single molecule inhibition of kinesin by adociasulfate-13 and -14 from the sponge *Cladocroce aculeata*. *Proc. Nat. Acad. Sci. U.S.A.* 110(47): 18880–18885.

Smith, N. J., Hone, A. J., Memon, T., Bossi, S., **Smith, T. E.**, McIntosh, J. M., Olivera, B. M., Teichert, R. W. (2013) Comparative functional expression of nAChR subtypes in rodent DRG neurons. *Front. Cell. Neurosci.* 7:255.

AWARDS / FUNDING

2017-2020	National Institute of Health (NIH) F32 – Ruth L. Kirschstein Postdoctoral Individual National Research Service Award (NRSA)
2017	Biocomputational Evolution In Action (BEACON) Travel Award for Gordon Research Conference in Animal-Microbe Symbioses
2014-2015	American Chemical Society (ACS) Division of Medicinal Chemistry (MEDI) Pre-Doctoral Fellowship
2013-2015	American Foundation for Pharmaceutical Education Pre-Doctoral Fellowship (AFPE)

TEACHING / MENTORING EXPERIENCE

2022	Completed “Leading Effective Meetings” at Zymergen, Inc.
2022	Completed “Developing Your Directs” at Zymergen, Inc.
2022	Completed “Hosting Inclusive & Engaging 1:1s” at Zymergen, Inc.
2022	Completed “Coaching Skills Booster” at Zymergen, Inc.
2021-2022	Mentor to Parisa Mokhtati at Zymergen, Inc., Research Assistant
2020	Postdoctoral mentor for EBUG – a bioinformatics-based undergraduate research group jointly led by members of the Nancy Moran and Howard Ochman research groups
2019-2020	Postdoctoral mentor to Richelle Reyes, undergraduate student
2019	Completed “Intro to Evidence-Based Teaching” at UT Austin (NSC 088L)
2019	Guest lecture for “Chemical and Synthetic Biology” at UT Austin (BCH 339J/CH 391), instructed by Dr. Adrian Keatinge-Clay
2017-2019	Postdoctoral mentor to Andrew Ly, undergraduate student
2017-2019	Postdoctoral mentor to Edwin Umanzor, undergraduate student
2016-2017	Graduate mentor to Zachary Harmer, undergraduate student
2015	Graduate mentor to Trevor Gardner, PharmD student
2014	Graduate mentor to Morgan Wambaugh, graduate rotation student
2014	Graduate mentor to Malcolm Zachariah, graduate student

- 2013 Teaching Assistant for Pharmaceutical Sciences 5113 – Basics in Pharmaceutical Sciences, directed by Dr. Darrell Davis
- 2013 Graduate mentor to Malcolm Zachariah, graduate rotation student
- 2013-2017 Mass spectrometer training instructor for Eric Schmidt lab and Medicinal Chemistry Department
- 2010-2011 Organic Chemistry Tutor, University of Minnesota (Twin Cities)

CONFERENCES / INVITED TALKS

- 2019 Gordon Research Conference in Animal-Microbe Symbioses, poster presentation, Mount Snow VT
- 2018 University of Texas at Austin Annual Institute for Cellular and Molecular Biology (ICMB) Student Retreat poster presentation, Kerrville TX
- 2017 Gordon Research Conference in Animal-Microbe Symbioses, invited speaker and poster presentation, Mount Snow VT
- 2016 University of Utah Molecular Evolution Symposium, hosted by the Departments of Biology and Human Genetics, lightning talk and poster presented, best poster awarded, Salt Lake City UT
- 2016 Gordon Research Conference in Marine Natural Products, poster presentation, Ventura CA
- 2015 ACS National Meeting, Boston MA
- 2015 ACS MEDI Award Symposia at 2015 ACS National Meeting, invited speaker, Boston MA
- 2014 University of Utah Molecular Biology/Biological Chemistry Student Retreat invited speaker, Park City UT
- 2014 Gordon Research Conference in Marine Natural Products, poster presentation, Ventura CA

SERVICE / OUTREACH

- 2020- Presenter and participant in monthly discussions on promoting Diversity, Equity, and Inclusion within the Nancy Moran research group
- 2019- Participant in monthly Integrative Biology discussions on promoting Diversity, Equity, and Inclusion within the department and in science
- 2018 Volunteer for Explore UT at the University of Texas at Austin, showcasing Moran lab research to grade-school students, parents, and teachers
- 2012-2013 Graduate student recruitment host, University of Utah, 4 out of 4 students hosted chose to attend the University of Utah
- 2012-2014 First year graduate student Q&A panel, representing of the Department of Medicinal Chemistry, University of Utah
- 2010 Science Fair judge at Murray Junior Highschool in Saint Paul, MN

ADDITIONAL ACHIEVEMENTS

- 2011 SCUBA certified, SCUBA Schools International, June 2011
- 2006 Eagle Scout, December 2006