

Talia L. Karasov

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Positions & Education

Sept. 2020 - Present	Assistant Professor School of Biological Sciences University of Utah, Salt Lake City USA
Oct. 2015 - Aug. 2020 Supervisor Institution	Postdoctoral Researcher Detlef Weigel Max Planck Institute for Developmental Biology, Tübingen Germany
Sept. 2009 - June 2015 Supervisor Institution	Ph.D. Genetics, Genomics & Systems Biology Joy Bergelson University of Chicago, Chicago USA
Sept. 2004 - June 2008 Supervisor Institution	B.Sc. (Honors) Biological Sciences Dmitri Petrov Stanford University, Stanford USA

Awards and Honours

2017-2020	Human Frontier Science Program (HFSP) Postdoctoral Fellowship
2018	Best Talk Award, Pathobiome INRA conference, Ajaccio, Corsica
2015-2016	EMBO Long-term Research Fellowship
2015	Best Thesis Award for Program in Genetics, Genomics & Systems Biology, Univ. of Chicago
2013-2015	NSF Doctoral Dissertation Improvement Grant
2013	Hind's Research Award, Univ. of Chicago
2009-2011	Fellow of the Genetics and Regulation Training Grant, Univ. of Chicago

Publications

1. Karasov, T. L., Shirsekar, G., Schwab, R. & Weigel, D. What natural variation can teach us about resistance durability. *Curr. Opin. Plant Biol.* **56**, 89–98 (2020).
2. Regalado, J., Lundberg, D. S., Deusch, O., Kersten, S., Karasov, T., Poersch, K., Shirsekar, G. & Weigel, D. Combining whole-genome shotgun sequencing and rRNA gene amplicon analyses to improve detection of microbe–microbe interaction networks in plant leaves. *ISME J.* 1–15 (2020).
3. Karasov, T. L., Neumann, M., Duque-Jaramillo, A., Kersten, S., Bezrukov, I., Schröppel, B., Symeonidi, E., Lundberg, D. S., Regalado, J., Shirsekar, G., Bergelson, J. & Weigel, D. The relationship between microbial biomass and disease

in the *Arabidopsis thaliana* phyllosphere. *BioRxiv* 828814 (2019)
doi:10.1101/828814.

4. Karasov, T. L., Almario, J., Friedemann, C., Ding, W., Giolai, M., Heavens, D., Kersten, S., Lundberg, D. S., Neumann, M., Regalado, J., Neher, R. A., Kemen, E. & Weigel, D. *Arabidopsis thaliana* and *Pseudomonas* Pathogens Exhibit Stable Associations over Evolutionary Timescales. *Cell Host Microbe* **24**, 168–179.e4 (2018).
5. Machado, H. E., Bergland, A. O., Taylor, R., Tilk, S., Behrman, E., Dyer, K., Fabian, D. K., Flatt, T., González, J., Karasov, T. L., Kozeretska, I., Lazzaro, B. P., Merritt, T. J. S., Pool, J. E., O'Brien, K., Rajpurohit, S., Roy, P. R., Schaeffer, S. W., Serga, S., Schmidt, P. & Petrov, D. Broad geographic sampling reveals predictable and pervasive seasonal adaptation in *Drosophila*. *BioRxiv* 337543 (2018)
doi:10.1101/337543.
6. Karasov, T. L., Chae, E., Herman, J. J. & Bergelson, J. Mechanisms to Mitigate the Trade-Off between Growth and Defense. *Plant Cell* **29**, 666–680 (2017).
7. Exposito-Alonso, M. ... Weigel, D. A rainfall-manipulation experiment with 517 *Arabidopsis thaliana* accessions. *BioRxiv* 186767 (2017) doi:10.1101/186767.
8. Karasov, T. L., Barrett, L., Hershberg, R. & Bergelson, J. Similar levels of gene content variation observed for *Pseudomonas syringae* populations extracted from single and multiple host species. *PLoS One* **12**, e0184195 (2017).
9. Vetter, M., Karasov, T. L. & Bergelson, J. Differentiation between MAMP Triggered Defenses in *Arabidopsis thaliana*. *PLoS Genet.* **12**, e1006068 (2016).
10. Karasov, T. L., Horton, M. W. & Bergelson, J. Genomic variability as a driver of plant–pathogen coevolution? *Curr. Opin. Plant Biol.* **18**, 24–30 (2014).
11. Karasov, T. L.*, Kniskern, J. M.*, Gao, L., DeYoung, B. J., Ding, J., Dubiella, U., Lastra, R. O., Nallu, S., Roux, F., Innes, R. W., Barrett, L. G., Hudson, R. R. & Bergelson, J. The long-term maintenance of a resistance polymorphism through diffuse interactions. *Nature* **512**, 436–440 (2014).
12. Karasov, T.*, Messer, P. W.* & Petrov, D. A. Evidence that adaptation in *Drosophila* is not limited by mutation at single sites. *PLoS Genet.* **6**, e1000924 (2010).
13. González, J., Karasov, T. L., Messer, P. W. & Petrov, D. A. Genome-wide patterns of adaptation to temperate environments associated with transposable elements in *Drosophila*. *PLoS Genet.* **6**, e1000905 (2010).

*These researchers contributed equally

Selected Conference Talks

1. “From the Microbiome to the gene.” October 2019. Wellcome Trust meeting for Plant Genomes in a Changing Environment. Hinxton England (**Invited talk**)
2. “From the Microbiome to the gene.” July 2019. MPMI meeting (**Invited talk**)
3. “The Genetics of Host-Pathogen Evolution.” March 2019. Seminar series at Stanford University. (**Invited talk**)
4. “Host-Pathogen Evolution and the Maintenance of Genetic Diversity.” August 2018. Gordon Lark Keynote Speaker at the University of Utah. Salt Lake City, UT. (**Invited talk**)

5. “Long-term maintenance and expansions of dozens of pathogenic *Pseudomonas* strains within *A. thaliana* populations.” March 2018. Pathobiome conference. Ajaccio, Corsica. **(Talk)**
6. “Evidence of pathogen success through microbe-microbe interactions.” May 2016. EMBL conference “New Model Systems for Linking Evolution and Ecology.” Heidelberg, Germany. **(Talk)**
7. “The long-term maintenance of a resistance polymorphism through diffuse interactions.” October 2014. The Sainsbury Laboratory. Norwich, England. **(Invited talk)**
8. “Balancing selection for resistance and virulence in plants and pathogens.” July 2012. Society for the Study of Evolution (SSE) meeting, Ottawa, Canada. **(Talk)**

Reviewer

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Proceedings of the National Academy of Sciences (PNAS)

International Society for Microbial Ecology (ISME)

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