

DAVID A. BAUM

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Pronouns: he/him/his

EDUCATION

1982–1985	St. Catherine's College, University of Oxford, B.A. (Hons.), Botany.
1986–1991	Washington University in St. Louis, Ph.D. in Evolutionary and Population Biology: <i>The pollination and floral biology of Adansonia (Bombacaceae): A phylogenetic approach</i> (Peter Raven)

APPOINTMENTS

1991–1993	Postdoctoral research fellow (K. Sytsma), Department of Botany, UW-Madison
1993–1994	Postdoctoral research trainee (A. Bleecker), Department of Botany, UW-Madison
1994–1998	Assistant Professor, Department of Organismic and Evolutionary Biology, Harvard University
1998–2001	Associate Professor, Department of Organismic and Evolutionary Biology, Harvard University (awarded tenure, May 2000)
2001–2004	Associate Professor, Department of Botany UW-Madison
2004–	Professor, Department of Botany, UW-Madison
2014–	Fellow, Wisconsin Institute for Discovery, UW-Madison

ADMINISTRATIVE ROLES

2021–2022	Chair, Department of Botany, UW-Madison
2015–2017	Chair, Department of Botany, UW-Madison
2012–2014	Interim Associate Director for Students, Wisconsin Institute for Discovery
2010–2013	Director, J. F. Crow Institute for the Study of Evolution, UW-Madison
2008–2012	Chair, Department of Botany, UW-Madison

VISITING FELLOWSHIPS

2007-2008	St. Catherine's College, University of Oxford
2015	Queen's College, Melbourne University
2023-2024	Clare Hall, University of Cambridge

RESEARCH INTERESTS

Origins of life and chemical evolution. Evolutionary and phylogenetic theory. Origin of eukaryotes. Plant evolution and systematics.

MAJOR AWARDS AND HONORS

2019	Distinguished Fellow of the UW-Madison Teaching Academy
2016	Kellett Mid-Career Award, UW-Madison
2015	Chancellor's Distinguished Teaching Award, UW-Madison
2010	UW-Madison Teaching Academy, Fellow
2009–2014	Letters and Sciences Hamel Family Faculty Fellowship, UW-Madison
2008	Christiansen Fellowship, St. Catherine's College, Oxford
2007–2008	John Simon Guggenheim Foundation Fellowship
2006	Elected Fellow of the American Association for the Advancement of Science
1999–2004	National Science Foundation, Career Award.
1996–1999	Alfred P. Sloan Foundation Young Investigator Award in Molecular Evolution

CURRENT EXTRAMURAL GRANTS

National Science Foundation, Division of Environmental Biology (2218817). **Collaborative Research: From ecological dynamics to adaptive evolution during the origin of life.** 07/2022-07/2026: \$1,126,538 (\$1,429,792 total). PI.

Alfred P. Sloan Foundation (G-2024-22574). **Microfluidic artificial selection experiments to investigate the origins of genetic evolution.** 08/01/2024-07/31/2027: \$800,000. PI (coPI D. Beebe).

National Aeronautics and Space Administration, Future Investigators in NASA Earth and Space Science and Technology (FINESST) (80NSSC24K1810). **Can lipid vesicles evolve?** \$100,000. 08/06/2024 - 08/05/2026. PI (Fellowship Recipient, Tymofii Sokolskyi).

PRIOR FEDERAL GRANTS (since 2004)

National Aeronautics and Space Administration, Exobiology (80NSSC17K0296). **The emergence of evolvable surface-associated interacting molecular ensembles: A chemical ecosystem selection approach.** \$2,673,627. 7/26/17-7/25/22. PI (coPIs Katarzyna Adamala, Irving Epstein, Janet Iwasa, Christopher Kempes, Karyn Rogers, Daniel Segrè).

National Aeronautics and Space Administration, Future Investigators in NASA Earth and Space Science and Technology (FINESST) (80NSSC20K1390). **Searching for dynamic biosignatures among lifelike systems isolated by chemical ecosystem selection.** \$90,000. 9/1/20-8/31/23. PI (Fellowship Recipient, Lena Vincent).

National Science Foundation, Systematics Program (DEB-1354793). Collaborative Research: **Multilocus phylogenetics and species delimitation using sequence-capture and next-gen sequencing and its application in *Adansonia* (Malvaceae).** \$670,384. 6/1/2014 - 5/31/2018. PI (co-PIs = Cecile Ané, Corrinne Grover, Jonathan Wendel)

National Science Foundation, Chemistry of Life Processes Program (CHE-1624562). Collaborative Research: **EAGER: A microfluidic platform for the discovery of new, life-like chemical systems.** \$300,000. 8/1/2016 -7/31/2018. PI (co-PIs = David Eddington, Tehshik Yoon, Judith Burstyn, Kalin Vetsigian).

- National Science Foundation, Systematics Program (DEB-0949121). **Reconciling gene trees: deciphering the source and extent of genealogical discordance.** \$505,379. 7/1/10-6/30/13. Co-PI (PI=Cecile Ané).
- National Science Foundation, Developmental Mechanisms Program (IOS-1021930). **The molecular mechanisms by which genes alter development when moved between closely related species.** \$135,460. 9/1/10-12/30/11. PI
- National Science Foundation, Planetary Biotic Inventory Program. **Systematics and Evolution of *Euphorbia*.** \$152,199. 9/1/06-8/30/10. Subcontract PI (overall PI: Paul Berry, University of Michigan).
- National Science Foundation, Developmental Mechanisms Program (IOB-0641428). **The genetic basis of the evolution of rosette flowering in *Leavenworthia*.** \$375,000. 7/1/07-6/30/10. PI
- National Science Foundation, REU program (DBI-0552806). **Integrated Biological Sciences Summer Research Program for Undergraduates.** \$440,321. 05/01/06 - 04/30/11. co-PI (PI=Janet Branchaw)
- National Science Foundation, Systematic Biology program (DEB-0608428). Dissertation Research: **Systematics and Biogeography of the *Pedilanthus* clade (*Euphorbia-Euphorbiaceae*).** \$12,000. 7/1/06-6/30/08. PI (co-PI=Ivalú Cacho).
- National Science Foundation, Systematic Biology program (DEB-0608444). Dissertation Research: **Systematics and evolution of the Malagasy endemic genus *Megistostegium* (Malvaceae).** \$11,998. 7/1/06-8/30/08. PI (co-PI=Margaret Koopman).
- National Science Foundation, Systematic Biology Program (DEB-0416096). **Phylogeny of *Malvatheca* (Malvaceae) and the pace and place of its evolution.** \$300,000. 9/1/04-8/30/07. PI.
- National Science Foundation, Developmental Mechanisms Program (IOB-0234118). **Meristem identity genes and the evolution of plant architecture in Brassicaceae.** \$345,000. 2/15/03-2/14/06. PI
- National Institutes of Health, **Improving Bayesian Phylogeny** (R01: GM068950-01). \$1,449,570. 6/1/03-5/31/07. co-PI (PI=Bret Larget).
- National Science Foundation, Systematic Biology Program (DEB-0309310). Dissertation Research: **Pollinator-mediated evolution of Andean Solanaceae.** \$11,590. 7/1/03-6/30/06. PI (co-PI=Stacey Smith).

AUTHORED BOOKS

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- Baum, D. A. and Smith, S.D. 2012. *Tree-thinking: An Introduction to Phylogenetic Biology*. Roberts & Company, Greenwood Village, CO.

EDITED BOOKS

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- Losos, J. Baum, D. A., D. Futuyma, H. Hoekstra, R. Lenski, A. Moore, D. Schluter, and M. Whitlock (eds.). 2013. *The Princeton Guide to Evolution*. Princeton University Press.

RESEARCH ARTICLES AND BOOK CHAPTERS (see Google Scholar [profile](#)). Mentees marked: ^UUndergraduate; ^GGraduate student; ^PPostdoctoral

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- ^PPeng, Z., ^GSpencer, E. and Baum, D. A. 2026. The diverse effects of side reactions on the persistence of autocatalytic cycles. In revision (preprint: <https://doi.org/10.26434/chemrxiv-2025-nv8qg>)
- ^PPeng, Z., ^UPlum, A. M., ^UKartha, R., ^UJacobson, E. M., and Baum, D. A. 2026. Conditions enabling the persistence of cooperating ribozymes without cellular encapsulation. *Journal of Molecular Evolution* 94(3) <https://doi.org/10.1007/s00239-026-10323-6>
- ^GSokolskyi, T. and Baum, D. A. 2026. Vesicle populations can respond to selection for greater turbidity via emergent cooperative dynamics. *ACS Langmuir*. <https://doi.org/10.1021/acs.langmuir.6c00275>
- ^GKarimi, N., Grover, C. E., Wendel, J. F., and Baum, D. A. 2026. Phylogenomic analysis of Madagascar's baobabs reveals admixed populations and supports resurrection of a previously described species. *Taxon* (in press).
- ^{GP}Gagrani, P. and Baum, D. A. 2025. Evolution of complexity and the origins of biochemical life. *Physical Reviews E* 111: 064403. <https://doi.org/10.1103/PhysRevE.111.064403>
- ^UPlum, A. and Baum, D. A. 2025. Spatial Structure Supports Diversity in Prebiotic Autocatalytic Chemical Ecosystems. *npj Complexity*: 2, 21. <https://doi.org/10.1038/s44260-025-00045-z>
- ^GSokolskyi, T., Cuevas-Zuviria, B., ^UGargulak, S., Allen, E., & Baum, D. A. 2024. Measuring heritability in messy prebiotic chemical systems. *bioRxiv* 2024.08.03.606486; <https://www.biorxiv.org/content/10.1101/2024.08.03.606486v3>
- ^GSokolskyi, T., ^GGanju, P., ^UMontgomery-Taylor, R., Baum, D. A. 2024. Evidence of heritability in prebiotically realistic membrane-bound systems. *Life* 14:284. <https://doi.org/10.3390/life14030284>
- ^{GP}Gagrani, P., Blanco, V., Smith, E. and Baum, D. A. 2024. Polyhedral geometry and combinatorics of an autocatalytic ecosystem. *Journal of Mathematical Chemistry*, 62(5), 1012-1078. <https://link.springer.com/article/10.1007/s10910-024-01576-x>
- Baum, D. A., ^PPeng, Z., Dolson, E., Smith, D. E., ^UPlum, A. M., and ^{GP}Gagrani, P. 2023. The ecology-evolution continuum and the origin of life. *Journal of the Royal Society Interface* 20(208). <https://dx.doi.org/10.1098/rsif.2023.0346>
- Foreback, M., Leither, S., Dolson, E. and Baum, D. A. 2023. The Role of Abiotic Parameters in the Promotion of Egalitarian Major Evolutionary Transitions. *ALife* 2023. MIT Press. In *ALIFE 2023: Ghost in the Machine: Proceedings of the 2023 Artificial Life Conference*. MIT Press. <https://direct.mit.edu/isal/proceedings/isal/35/78/116809>
- Leither, S., Foreback, M., Dolson, E. and Baum, D. A. 2023. Interaction Strengths Affect Whether Ecological Networks Promote Egalitarian Major Transitions. In *ALIFE 2023: Ghost in the Machine: Proceedings of the 2023 Artificial Life Conference*. MIT Press. <https://direct.mit.edu/isal/proceedings/isal/35/73/116913>
- ^GKarimi, N., Baum, D. A., Razanamaro, O. H., Léong Pock Tsy, J. M., and Danthu, P. 2022. Malvaceae (Bombacoideae), *Adansonia*, baobab, bozy, fony, renala, ringy, za. In: Goodman, S. M. (ed.), *The new natural history of Madagascar*. Princeton, Princeton University Press.

- ^PPeng, Z., Linderorth, J., Baum, D. A. 2022. The hierarchical organization of autocatalytic reaction networks and its relevance to the origin of life. PLoS Computational Biology 18(9): e1010498. <https://doi.org/10.1371/journal.pcbi.1010498>
- Jenkins K., Mead, L., Baum, D. A., Bucklin, C. J., Daniel, K. L., Gibson, J. P., Leone, A. and Naegle, E. 2022. Developing the BETTSI: A Tree-Thinking Diagnostic Tool to Assess Individual Elements of Representational Competence. Evolution 76: 708-721 <https://doi.org/10.1111/evo.14458>.
- ^GKarimi, N., Grover, C. E., Gallagher, J. P., Conover, J. L., Miller, E. R., Wendel, J. F., and Baum, D. A. 2022. Genetic diversity of Malagasy baobabs: implications for conservation. *Adansonia* 44: 37-47. [\[link\]](#)
- ^GKarimi, N., ^USaghafi, S., Keefover-Ring, K., Venter, S. M., and Baum, D. A. (2021). Evidence for hawkmoth pollination in the chiropterophilous African baobab (*Adansonia digitata*). *Biotropica* 54:113–124. [\[link\]](#)
- ^GVincent, L., ^PColón-Santos, S., Henderson J. Cleaves II, Baum, D. A. *, Maurer, S. E. * [co-corresponding author] 2021. The Prebiotic Kitchen: A Guide to Composing Prebiotic Soup Recipes to Test Origins of Life Hypotheses. Life 11(11): 1221 [\[link\]](#).
- Dey, G, Baum, D. A., and Baum, B. 2020. Origin of Eukaryotes. Oxford Bibliographies in Evolutionary Biology (Ed. Karin Pfennig). New York: Oxford University Press [\[link\]](#)
- Baum, B. and Baum, D. A. 2020. The merger that made us. BMC Biology [\[link\]](#)
- ^PPeng, Z., ^UPlum, A., ^{GP}Gagrani, P., and Baum, D. A. 2020. An ecological framework for the analysis of prebiotic chemical reaction networks. J. Theoretical Biology 507:1-15 <https://doi.org/10.1016/j.jtbi.2020.110451>
- Zizka, A., Carvalho-Sobrinho J. G., Pennington, R. T., Queiroz, L. P., Alcantara, S., Baum, D. A., Bacon, C. D., and Antonelli. A. 2020. Transitions between biomes are common and directional in Bombacoideae (Malvaceae). Journal of Biogeography. 2020; 47(6): 1310-1321 [\[link\]](#)
- ^GKarimi, N., Grover, C. E., Ané, C., Gallagher, J. P., Wendel, J. P., and Baum, D. A. 2020. Reticulate evolution helps explain apparent homoplasy in floral biology and pollination in baobabs (*Adansonia*; Bombacoideae; Malvaceae). Systematic Biology 69(3): 462–478. [\[link\]](#)
- ^GVincent, L., ^GBerg, M., ^UKrismer, M., ^USaghafi, S., ^UCosby, J., ^USankari, T., Vetsigian, K., Cleaves, H. J. III, and Baum, D. A. 2019. Chemical Ecosystem Selection on Mineral Surfaces Reveals long-term dynamics consistent with the spontaneous emergence of mutual catalysis. Life. 9(4), doi:10.3390/life9040080 [\[link\]](#)
- Baum, D. A. 2019. Plant parts: Processes, structures, or functions? Gardens Bulletin, Singapore, 71 (Suppl. 2): 247-258. [\[link\]](#)
- Mizuuchi, R., Blokhuis, A., ^GVincent, L., Nghe, P., Lehman, N., and Baum, D. A. 2019. Mineral surfaces select for longer RNA molecules. Chemical Communications 10.1039/C8CC10319D [\[link\]](#)
- ^GVincent L., Cleaves H. J., and Baum, D. A. 2019. A candidate self-propagating system enriched by chemical ecosystem selection. ALIFE 2019: The 2019 Conference on Artificial Life, Artificial Life, 658-659. [\[link\]](#)
- ^GVincent L., Vetsigian K., and Baum, D. A. 2018. Chemical ecosystem selection approach for generating evolvable chemical systems *in vitro*. In: Artificial Life Conference Proceedings 2018 Jul (pp. 649-650). MIT Press, Cambridge, MA. [\[link\]](#)

- Conover, J.L., ^GKarimi, N., ^UStenz, N., Ané, C., Grover, C.E., Skema, C., Tate, J. A., Wolff, K., Logan, S. A., Wendel, J.F., and Baum, D. A. 2018. A Malvaceae mystery: A mallow maelstrom of genome multiplications and maybe misleading methods? *Journal of Integrative Plant Biology* 61(1):12-31 [[link](#)]
- Baum, D. A. 2018. The origin and early evolution of life in chemical complexity space. *Journal of Theoretical Biology*. 456: 295-304 [<https://doi.org/10.1016/j.jtbi.2018.08.016>]
- Wright, E. and Baum, D. A. 2018. Exclusivity offers a sound yet practical species criterion for bacteria. *BMC Genomics* 19:724 [[link](#)]
- Dey, G, and Baum, D. A. 2018. Origin of Eukaryotes. *Oxford Bibliographies in Evolutionary Biology* (Ed. Karin Pfennig). New York: Oxford University Press. DOI: 10.1093/OBO/9780199941728-0108 [[link](#)]
- Baum, D. A. 2017. Does the future of systematics really rest on the legacy of one mid-twentieth century German entomologist? *Quarterly Review of Biology* 94:450-453 [[link](#)]
- Baum, D. A. and Lehman, N. 2017. Life's late digital revolution and why it matters for the study of the origins of life. *Life* 7(3), 34: doi: 10.3390/life7030034 [[link](#)]
- Venter, S., Glennon, K. Witkowski, E. Baum, D. A., Cron, G., Tivakudze, R., and ^GKarimi N. 2017. Baobabs (*Adansonia digitata* L.) are self-incompatible and 'male' trees can produce fruit if hand-pollinated. *South African Journal of Botany*. DOI: 10.1016/j.sajb.2017.01.007 [[link](#)]
- Baum, D. A. and K. Vetsigian. 2017. An experimental framework for generating evolvable chemical systems in the laboratory. *Origins of Life and Evolution of Biospheres*, 47:481–497. <https://link.springer.com/article/10.1007/s11084-016-9526-x>
- Cron, G. V., ^GKarimi, N., Glennon K. L., Chukwudi, U., Witkowski, E. T. F., Venter, S. M., Assogbadjo, A. E. and Baum, D. A. 2016. One African baobab species or two? Synonymy of *Adansonia kilima* and *A. digitata*. *Taxon* 65: 1037–1049. [[link](#)]
- Baum, D. A., Ané, C. M., Larget, B., Solís-Lemus, C., Ho, L. S. T., Boone P., Drummond, C., Bontrager M., Hunter S., and Saucier S. 2016. Statistical evidence for common ancestry: Application to primates. *Evolution*. 70: 1354–1363. [[link](#)]
- Carvalho-Sobrinho, J. G., de Queiroz, L. P., ^PAlverson, W. S., Alcantara, S., da Mota, A. C. and Baum, D. A. 2016. Revisiting the phylogeny of Bombacoideae (Malvaceae): novel relationships, morphologically cohesive clades, and a new tribal classification based on multilocus phylogenetic analyses. *Molecular Phylogenetics and Evolution* 101: 56–74. [[link](#)]
- ^GMazie, A. R., and Baum, D. A. 2016. Changes in selection acting on *BRANCHLESS TRICHOME* in relation to the evolution of stellate trichomes in *Physaria* (Brassicaceae). *Molecular Phylogenetics and Evolution* 100:31-40 [[link](#)].
- ^GScott, A. D., ^UStenz, N., Ingvarsson, P. K., and Baum, D. A. 2016. Whole genome duplication in coast redwood (*Sequoia sempervirens*) and its implications for explaining the rarity of polyploidy in conifers. *New Phytologist* 211: 186–193. [[link](#)]
- ^GScott, A. D. and Baum, D. A. 2016. Phylogenetic Tree. *Encyclopedia of Evolutionary Biology*, vol. 3, pp. 270–276 (R. M. Kliman Ed.). Oxford: Academic Press [[link](#)]
- Baum, D. A. 2015. A comparison of autogenous theories for the origin of eukaryotic cells. *American Journal of Botany*. 102(12): 1-12 [[link](#)]
- ^GCorrea, R. and Baum, D. A. 2015. Evolutionary transgenomics: prospects and challenges. *Frontiers Plant Science* 6: 00858. [[link](#)]
- ^UStenz, N., Larget, B., Baum, D. A. and Ané, C. 2015. Exploring tree-like and non-tree-like

- patterns using genome sequences: An example using the inbreeding plant species *Arabidopsis thaliana* (L.) Heynh. *Systematic Biology* 64(5):809–823 doi: 10.1093/sysbio/syv039 [link]
- Baum, D. A. 2015. Selection and the origin of cells. *Bioscience* 65: 678-684. <https://doi.org/10.1093/biosci/biv063>
- Rangan H., Bell, K. L., Baum, D. A., Fowler, R., McConvell, P., Saunders, T., Spronck, S., Kull, C. A., and Murphy, D. J. 2015. New genetic and linguistic analyses show ancient human influence on baobab evolution and distribution in Australia. *PLoS ONE* 10(4): e0119758. doi: 10.1371/journal.pone.0119758 [link]
- Baum, D. A. and Baum, B. 2015. We've got the evolution of complex cells inside-out. *New Scientist*. 3008: 28-29.
- Baum, D. A. 2015. In Search of Cell Evolution by Franklin Harold [book review]. Reports of the National Center for Science Education. [35\(3\)](#).
- Baum, D. A. and Baum, B. 2014. An inside-out origin of the eukaryotic cell. *BMC Biology* 12:76. doi:10.1186/s12915-014-0076-2 <http://www.biomedcentral.com/1741-7007/12/76> [coverage including [The Economist](#) and [F1000](#) - statistics at [Altmetrics](#)]
- Carvalho-Sobrinho, J. G., ^PAlverson, W. S., da Mota, A. C., Machado, M. C. and Baum, D. A. 2014. A new deciduous species of *Pachira* (Malvaceae, Bombacoideae) from a Seasonally Dry Tropical Forest in northeastern Brazil. *Systematic Botany* 39(1): 260-267.
- Davis, C. C., Schaefer, H., Xi, Z., Baum, D. A., Donoghue, M. J., & Harmon, L. J. 2014. Long-term morphological stasis maintained by a plant–pollinator mutualism. *Proceedings of the National Academy of Sciences*, 111(16): 5914-5919. [link]
- Baum, D. A. 2013. Developmental causation and the problem of homology. *Philosophy and Theory in Biology*, 5, <http://dx.doi.org/10.3998/ptb.6959004.0005.003> [link]
- Baum, D. A. 2013. The origin of primary plastids: A pas de deux or a ménage à trois? *The Plant Cell* 25: 4-6.
- Baum, D. A. 2013. Phylogenetics and the History of Life. *In* Losos, J. D. A. Baum, D. Futuyma, H. Hoekstra, R. Lenski, A. Moore, D. Schluter, and M. Whitlock (eds.). 2013. *The Princeton Guide to Evolution*. Princeton University Press.
- ^GMartins, T. R., ^UBerg, J. J., ^UBlinka, S., Rausher, M. D. and Baum, D. A. 2013. Precise spatio-temporal regulation of the anthocyanin biosynthetic pathway leads to petal spot formation in *Clarkia gracilis* (Onagraceae). *New Phytologist* 197: 958–969. [Commentary: *New Phytologist* 197: 687–689]
- ^GCacho, N. I. and Baum, D. A. 2012. The Caribbean slipper spurge *Euphorbia tithymaloides*, the first example of a ring species in plants. *Proceedings of the Royal Society B-Biological Sciences*. 279: 3377-3383. [Commentary: *Nature* 486, 442]
- Cellinese, N., Baum, D. A., and Mishler, B. D. 2012. Species and phylogenetic nomenclature. *Systematic Biology*. 61(5): 885-891.
- ^GCorrea, R. Stanga, J., Larget, B., Roznowski, A., Shu, G., Dilkes, B., and Baum, D. A. 2012. An assessment of transgenomics as a tool for identifying genes involved in the evolutionary differentiation of closely related plant species. *New Phytologist* 193: 494–503.
- Duarte, M.C., Esteves, G. L., Salatino, M. L. F., ^UWalsh, K. C., and Baum, D. A. 2011. Phylogenetic analyses of *Eriotheca* and related genera (Bombacoideae, Malvaceae). *Systematic Botany*. 36: 690–701.

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- ^PLiu, N., ^PSliwinski M.K., ^GCorrea, R. and Baum, D. A. 2011. Possible contributions of *TERMINAL FLOWER 1* to the evolution of rosette flowering in *Leavenworthia* (Brassicaceae). *New Phytologist* 189:616-28.
- ^GOyama, R. K., Jones, K. N., and Baum, D. A. 2010. Sympatric sister species of Californian *Antirrhinum* and their transiently specialized pollinators. *American Midland Naturalist* 164(2):337-347.
- ^GKoopman, M. and Baum, D. A. 2010. Isolating nuclear genes and identifying lineages without monophyly: An example of closely related species from Southern Madagascar. *International Journal of Plant Sciences*. 171: 761-771.
- ^GCacho, N. I., Berry, P. E., Olson, M. E., Steinmann, V. W., and Baum, D. A. 2010. Are spurred cyathia a key innovation? Molecular systematics and trait evolution in the slipper-spurges (Pedilanthus clade - *Euphorbia*, Euphorbiaceae). *American Journal of Botany* 97: 493–510.
- Eckardt, N. A., and Baum, D. A. 2010. The Podostemad Puzzle: The Evolution of Unusual Morphology in the Podostemaceae [commentary]. *The Plant Cell Online*, 22(7): 2104–2104.
- Yue, J.-P., Sun, H., Baum, D. A., Al-Shehbaz, I. L., and Ree, R. 2009. Molecular phylogeny of *Solms-laubachia* (Brassicaceae) s.l., based on multiple nuclear and plastid DNA sequences, and its biogeographic implications. *Journal of Systematics and Evolution* 47(5): 402-415.
- ^GSmith, S. D., Ané, C., and Baum, D. A. 2009. Macroevolutionary tests of pollination syndromes: A reply to Fenster et al. *Evolution* 63: 2763–2767.
- Smith, J. J., Baum, D. A., and Moore A. 2009. The need for molecular genetic perspectives in evolutionary education (and vice versa). *Trends in Genetics* 25: 427-429. [Forum]
- Baum, D. A. 2009. Species as ranked taxa. *Systematic Biology* 58:74–86.
- Mach, J., and Baum, D. A. 2009. Functional and Phylogenetic Analysis of the Glutathione Transferase Gene Family in Poplar [commentary]. *The Plant Cell Online*, 21(12): 3716–3716
- ^GSmith S. D., Izquierado, P., ^UHall, S.J., and Baum, D. A. 2008. Comparative pollination biology of sympatric and allopatric Andean *Iochroma* (Solanaceae). *Annals of the Missouri Botanical Garden* 95: 600-617.
- Janka, H, ^Pvon Balthazar, M., ^PAlverson, W. S., Baum, D. A., Semir, J., and Bayer, C. 2008. Structure, development, and evolution of the androecium in Adansonieae (core Bombacoideae, Malvaceae s.l.). *Plant Systematics and Evolution* 275: 69-91
- ^GKoopman, M. M. and Baum, D. A. 2008. Phylogeny and biogeography of Hibisceae (Malvaceae) on Madagascar. *Systematic Botany* 33: 364-374.
- Baum, D. A. and Offner, S. 2008. Phylogenies and tree thinking. *American Biology Teacher* 70: 222-229.
- ^UBosch. J. A., Heo, K., ^PSliwinski, M. K., and Baum, D. A. 2008. An exploration of *LEAFY* expression in independent evolutionary origins of rosette flowering in Brassicaceae. *American Journal of Botany* 95:286-293.

- Davis, C. C., P. Endress, and Baum, D. A. 2008. The evolution of floral gigantism. *Current Opinions in Plant Biology* 11:49-57.
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TEACHING RESOURCES

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- Jenkins K., Mead, L., Baum, D. A. Daniel, K. L., Bucklin, C. J., Leone, A., Gibson, J. P. and Naegle, E. (2020). BETTSI - Basic Evolutionary Tree-Thinking Skills Instrument. QUBES Educational Resources. doi:10.25334/ZQY1-W289 [[link](#)]
- Karimi, N., Parks, B. M., Rouse, D., Martin K., Dong, X., Rajangam, P. C., Baum, D. A., and Heitz, J. G. 2017. Building Trees: Introducing evolutionary concepts by exploring Crassulaceae phylogeny and biogeography. *CourseSource* 04:1-9 [[link](#)]

INVITED TALKS AND PLENARIES (last five years)

- What is “chemical evolution?” Building a robust theory and experimental framework for evolutionary chemistry in origins of life.* Origins 2026 (The International Society for the Study of the Origins of Life), Paris, France, July 2026.
- Multilevel selection and the emergence of ecosystems of cooperating genetic polymers.* Matter to Life Conference. Heilbronn, Germany, June 2026
- Chemical evolution and evolutionary chemistry: Where we have been and where we are going?* Astrobiology Science Conference, Madison, WI, June 2026.
- Exploring some uncomfortable truths about species.* SSB Presidential Address. 3rd Joint Congress of Evolution, Montréal, Canada. July 2024.
- Exploring some uncomfortable truths about species.* SSB Presidential Address. 3rd Joint Congress of Evolution, Montréal, Canada. July 2024. [[link](#)]
- The origins of evolution: From autocatalytic chemistry to genetic cells and beyond.* Evolution of complex contemporary life. Lorentz Center, Leiden, Netherlands. April 2024.
- The parallelism-convergence continuum and its implications for homology assessment.* Evolution on Repeat. Society for Molecular Biology and Evolution 2023, Ferrara, Italy, July 2023.
- In the beginning was a (chemical) ecosystem: Analog evolution and the origin of life.* Raper Symposium, University of Wisconsin-Madison, Department of Bacteriology. Sept. 2021.

RESEARCH SEMINARS (last five years; excluding talks at UW-Madison)

- The origins of evolution: From autocatalytic chemistry to genetic cells.* University of Pittsburgh, Tousimis-Laufer Distinguished Lecture, Department of Biological Sciences, Apr. 2025
- On the origins of evolution and the emergence of life.* Michigan State University, Ecology, Evolution and Behavior Program, Nov. 2024.
- Origins of evolution: Mechanisms of adaptive change during the emergence of life.* University of Cambridge, Leverhulme Center for Life in the Universe, February 2024.
- Evolving views of the origin-of-life problem.* Clare Hall, University of Cambridge, History and Philosophy of Science Special Interest Group, February 2024.
- Origins of evolution: Chemical ecosystem dynamics and the emergence of life.* Washington University, St. Louis, Department of Biology. January 2024.
- Origins of evolution: Mechanisms of adaptive change during the emergence of life.* École Supérieure de Physique et de Chimie Industrielles, Paris (ESPCI). November 2023.
- Origins of evolution: Mechanisms of adaptive change during the emergence of life.* University of Cambridge, Department of Plant Science. November 2023.
- In the beginning was a (chemical) ecosystem: Analog evolution and the origin of life.* University of Maryland – Baltimore County, Department of Biological Sciences. February 2022.
- In the beginning was an ecosystem: The onset of evolution at the origin of life.* Max Planck Institute for Evolutionary Biology, Department of Microbial Population Biology, Plön, Germany, June 2020 (online).

RECENT RECORDED TALKS

Evolution Seminar Series, UW-Madison, Sept. 2023. Origins of evolution: Chemical ecosystem dynamics and the emergence of life. <https://www.youtube.com/watch?v=qQsJNPOOh5w>
Evolution 2023, June 2023, Albuquerque. *Adaptive evolution before genes: Traversing the eco-evo continuum during origins of life*: <https://www.youtube.com/watch?v=2porfj-pjHA>

OFF CAMPUS SERVICE

Editorial:

Current:

Senior Editor: *Astrobiology*, 2025-

Associate Editor, *Evolution Outreach and Education*, 2014-

Past:

Board of Reviewing Editors, *Science*, 2010-2017

Co-Editor, *The Plant Cell*, 2006-2012

Associate editor, *Australian Systematic Botany*, 2016-2019

Associate Editor, *International Journal of Plant Sciences*, 2003-2012

Associate Editor, *Systematic Biology*, 1995-2000

Associate Editor, *Evolution*, 2000-2003

Editorial board, *Life*, 2020-2024

Editorial board, *Organisms, Diversity and Evolution*, 2000-2011

Editorial board, *Molecular and Developmental Evolution*. 1999-2012

Review board: *Yearbook of Science and Technology in Society*. 2003-2005

Ad hoc reviewer for diverse journals/publishers, including: African Journal of Biotechnology, American Naturalist, American Journal of Botany, Annals of Forest Science, Astrobiology, Australian Journal of Botany, Biological Journal of the Linnean Society, Bioessays, Biology Direct, Biological Reviews, BioScience, BMC Evolutionary Biology, BMC Genetics, BMC Plant Biology, Botanical Studies, Bulletin of the Society of Systematic Biologists, Chemical Reviews, Cladistics, Cognitive Science, Columbia University Press, Comptes Rendus Palevol, Developmental Genetics, Genome Biology and Evolution, Evolution, Evolution and Development, Evolutionary Education and Outreach, Fruits, International Association of Wood Anatomists, International Journal of Astrobiology, International Journal of Plant Science, Genetics, Israel Journal of Ecology and Evolution, Journal of Heredity, Journal of Molecular Evolution, Journal of the Royal Society Interface, Journal of Tropical Ecology, Journal of Tropical Forestry Science, Journal of Undergraduate Science and Technology, Journal of Zoology, Life, Molecular Biology and Evolution, Molecular Phylogenetics and Evolution, Nature, Nature Chemistry, Nature Reviews Genetics, New Phytologist, npj Complexity, PeerJ, Philosophy and Theory in Biology, Planta, Plant Journal, Plant Cell, Plant Molecular Biology, Plant Physiology, PLoS, PLoS One, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society - B, Science, Science Advances, Smithsonian Institution Press, Systematic Biology, Systematic Botany, Theory in Biosciences, Trends in Ecology and Evolution, Trends in Plant Science.

Ad hoc grant/foundation reviewer for: AAAS symposium proposals; European Research Council; Fund for Scientific Research – Belgium; Guggenheim Foundation; Human Frontiers

Science Program; John Templeton Foundation; MacArthur Foundation; Marsden Fund (New Zealand); National Science Foundation (ADVANCE fellows program, ATOL program, Biotic Surveys and Inventories, International Programs, Systematic Biology, Population Biology, Developmental Mechanisms, HBCU Program, Midscale Research Infrastructure); National Research Fund (South Africa); Newnham College Cambridge; Newton Fund (Cambridge University); Royal Society Te Apārangi Marsden Fund; Sloan Foundation; Smithsonian Institution Scholarly Studies Program; UK Basic and Biomedical Science Research Council; USDA-CSREES; UW-Madison Research Forward.

Promotion/tenure reviews: Arizona State University, Barnard College, Brigham Young University, Cambridge University, Harvard University (4), Michigan State University, Oberlin College, Oklahoma State University, Rutgers (2) University, St. John's University (2), Tulane University, University of Alberta, University of Alaska - Fairbanks, University of Florida (2), University of Maryland, University of Minnesota (2), University of Maryland, University of Missouri, University of South Dakota, University of Texas - Austin, Washington State University, Wayne State University, Yale University (2).

Grant panelist: NASA Biosignatures Ideas Lab; NASA FINESST program; NSF ADVANCE fellows program; NSF Assembling the Tree of Life (ATOL) program; NSF Evolutionary Processes; NSF NRT program; NSF Plant Developmental Mechanisms; NSF Systematics.

Service to scholarly societies:

Elected:

Society of Systematic Biology: President (elect-active-past) (2022-2024); Council member (2001-2003; 2010-2012)

AAAS: American Association for the Advancement of Science, Council Delegate representing the Section on Biological Sciences (2019-2022); Committee on Council Affairs (2020-2022)

American Genetics Association: Council member (2013-2015)

Appointed:

Botanical Society of America: Education committee (2013-2016); *ad hoc* committee on endowment (1999-2000)

American Genetics Association: Stephen J. O'Brien Awards Committee (2013-2015); Publications Committee.

American Society of Plant Taxonomists: Awards and Nominations Committee (2010-2011)

International Society of Phylogenetic Nomenclature: Nominating Committee (2007-2009)

Multinational Arabidopsis Steering Committee: Comparative Genomics and Natural Variation Subcommittee (2006-2007).

Society of Systematic Biology: Graduate Research Awards Committee (2000); Nominating Committee (2004-2005); Mayr Award Committee (2011); AAAS representative (2010-2012); Joint Committee on Creationism (2005-2007)

Society for the Study of Evolution: Hamilton Award Committee (2011)

Plant Science Research Network, Future of Graduate Training in Plant Science working group, 2016-2017.

Ontology-Based System for Querying Life in a Post-Taxonomic Age, Advisory Board (2015-2017)

Phylotaxonomy Consortium, Advisory Board (2017-2020)

Research Coordination Network for exploration of life's origins, Steering Committee (2017-2020)

Volunteer:

Evolution conference, Undergraduate Diversity at Evolution mentor (2022, 2023, 2024)

Astrobiology Science Conference Undergraduate Mentor (2022)

SMBE Graduate student excellence and Young Investigator award review committee (2023)

SSE Rosemary Grant Graduate Student Research Awards, evaluator (2025)

Symposia organized (last ten years)

From autocatalysis to evolution. 2022 Astrobiology Science Conference, Atlanta GA (co-convener)

Evolving Chemical Systems. 3-day workshop (co-organized with Chris Kempes and Oana Carja), Santa Fe Institute, November 2019.

Evolution in prebiotic and protobiological systems. 2019 Astrobiology Science Conference, Bellevue WA (co-convener)

Multi-level selection and the origins of life Evolution Joint Congress, Montpellier, France (co-organizers: Niles Lehman, Michael Travisano). August 2018.

Advances in the analysis of reticulate population networks SSB Symposium, Evolution, June 2016, Austin Texas (co-organizer with Claudia Solís-Lemus). June 2016.

Beyond Rate My Professors: The Future of Course and Instructor Evaluation. UW-Madison Teaching Academy Winter Retreat, January 2016 (speaker and member of organizing committee).

Outreach Activities (last five years)

Studying the origin of life on Earth (and elsewhere in the Universe). Oak Creek Public Library, Feb. 2026

Evolutionary Biology: Why Study It? What Can It Teach Us About Finding Life Beyond Earth? Online outreach lecture. The Jordanian Astronomical Society, The Center for Theoretical Physics and Astrophysics, The Theoretical Physics Club, The Association of Arab Astronomical Societies & The Arab Union for Astronomy and Space Science. Aug. 2024.

The Science of Life's Origin. Wisconsin Alumni Association St. Louis Chapter, May. 2024.

Science and the origin of life. 90-minute presentation and lab tours with 48 10th graders.

AVID/TOPS program, Madison West High School. April 2023.

Baobabs: Monstrous productions of the vegetable kingdom. Madison Area Master Gardeners Association (Badger Talks), Madison WI. Apr. 2024.

Rethinking the origin of complex cells. Clare Hall, University of Cambridge, 3-slide lightning talk. Feb 2024.

Darwin and the Tree of Life. Lakeland Audubon Society. 90-minute lecture and discussion. Jan. 2023.

The Science of Life's Origin. Beth Israel Center. 90-minute lecture and discussion, Oct. 2022.

An animal clade race. 50-minute presentation to 8th-Grade students, Storybook Middle School, Milwaukee, WI (remote). May 2021.

Darwin and the Tree of Life. Driftless Dialogue. Kickapoo Valley Reserve. 90-minute lecture and discussion, Oct. 2021. [[lecture video](#)]

In the beginning was a (chemical) ecosystem: Analog evolution and the origin of life.

Astrobiology Society, University of Manchester, UK. Oct. 2021.

An inside-out origin of eukaryotes. The Biology Society, Bangalore, India. Apr. 2021.

Print Media

Interviews/commentary with media outlets, including: Australian Broadcasting Corporation, British Broadcasting Corporation, CNN, Economist, El Pais (Spain), LA Times, LiveScience, New York Times, National Public Radio, Offspring Films, Polish Radio, Quanta, Times of India, Topic Magazine, Washington Post.

Recent example: [Universe Today](#)

Teaching triggers search for origins of life on Earth: May 5, 2019, Wisconsin State Journal.

Radio/TV recordings

University of the Air, Wisconsin Public Radio, [The Science of Life's Origin](#), Nov. 21 2021 (50 minute interview)

Larry Meiller Show, Wisconsin Public Radio, [Research on the Origin of Life Research](#), Aug. 6. 2020 (45 minute call in show – also with Lena Vincent)

University Place, Wisconsin Public Television, [The Origin of Life as a Chemical Ecological Problem](#), Nov. 23, 2018. (45-minute lecture)

University Place, Wisconsin Public Television, [Darwin's Tree of Life](#), Dec. 21, 2011 (45-minute lecture)

UNIVERSITY OF WISCONSIN SERVICE

Current:

Department of Botany:

Undergraduate and Curriculum Committee, Chair (2022-)

Daijiang Li Mentoring Committee, Chair (2025-)

Jack Satterlee Mentoring Committee (2025-)

Merit & Personnel (2025-)

Finance Committee (2022-)

Teaching & Learning Liaison (2024-)

Wisconsin Center for Origins Research, Advisory Council (2024-)

Letters & Science Teaching & Learning Advisory Council (2024-)

Letters & Science Natural Science Breadth task force (2025-2026)

Biophysics Curriculum Committee (2023-)

University Curriculum Committee (2025-2028; Vice chair 2026-2027; Chair 2027-2028)

Undergraduate Advisor: Biology (Evolution Option) and Botany

Ecology and Evolutionary Biology Graduate Program Committee (2025-)

Selected prior roles:

Department of Botany:

Chair (2008-2012; 2015-2017; 2021-2022)

Committee chairships: Advancement Committee (2012-2014); Awards Committee (2018-2021); Faculty Search Committee (2004-2005); Ecology & Evolution Faculty Search Co-Chair (2024-2025)

College of Letters and Science:

Origins of Life Cluster Steering Committee (2021-2022); Exoplanet Spectroscopy Faculty Search Committee (2021-2022) ; Statistics Academic Program Review Committee (2017-2018); Physics Academic Program Review Committee (2013-2014); Office of Service Learning & Community Based Research Faculty Advisory Committee (2010); Molecular Biology Major External Review Committee (2004); Institute for Cross-College Biology Education Transitional Advisory Committee (2004-2005)

Graduate School:

Future of the Dissertation Committee (2015-16); Biological Sciences Fellowship committee (2005-2008)

University:

Distinguished Teaching Awards Committee (2020-2023); Biology Majors Program Committee (2013-2015; 2018-2022); UW Collaborative for Advancing Teaching and Learning, Executive Committee Member (2016); Meyerhoff Scholarship Selection Committee, Associated Students of Madison (2016); *Ad hoc de novo* tenure review committee (2015-2016); Introductory Biology Innovation Committee (2011-2012); Biological Sciences Strategic Planning Committee (2005-2008; **Chair**, 2006-2007)

J. F. Crow Institute for the Study of Evolution:

Director (2010-2013).

Evolution Coordinating Committee (Chair, 2002-2021; co-chair 2013-2014)

UW Teaching Academy

Faculty co-Chair (2016); Executive Committee (2011-2013, 2015-2018); Assessment Subcommittee (Chair, 2011-2013); UW-TEaCH: Member, U-CLaSS development team (2015-2016)

TEACHING INTERESTS

Undergraduate courses in introductory biology (genetics and evolution) and biological diversity; graduate courses in evolutionary theory, origin of life, and pedagogy; outreach workshops for teachers on evolutionary biology and tree thinking

TEACHING AWARDS

Distinguished Fellow of the University of Wisconsin Teaching Academy: 2020
University Housing Honored Instructor Award: S2013, S2014, S2018, F2018, F2019
Chancellor's Distinguished Teaching Award, UW-Madison: 2015
Fellow of the University of Wisconsin Teaching Academy: 2010

COURSES (last 10 years)

Evolutionary Biology (Anthro/Bot/Zoo 410, 3 cr): Su2019; S2021; F2024; F2025. I currently teach this entire class to ~70 students

Introductory Biology (Bio/Bot/Zoo 152, 5 cr): (S2015; S2016; S2017; S2018; S2019; S2020; S2021; S2022; S2023; S2024; S2026). I currently teach the evolution module to up to 1100 students per semester.

Freshman Interest Group: Major Transitions in Evolution (Inter-LS 101, 3 cr): F2016; F2017; F2018; F2019 (100%). A small, intensive class for 20 first-semester freshmen.

General Botany (Bot 130, 5 cr): F2022. I teach half the course concerned with plant evolution and diversity to ~150 students.

Foundations of Evolution (Anthro/Bot/Entom/Genet 820, 2 cr): F2015; F2016; F2017; F2018; F2019; F2020; F2021; F2022; F2024. I developed this course for 10-15 graduate students, which I have co-taught with different colleagues.

Astrobiology and Origin of Life Graduate Seminar (Botany 575, 1-2 cr): S2018; S2022; S2025). I developed this graduate seminar which has typically attracted about 12 students and teach it alone.

Plant Systematics & Evolution Seminar (Bot 940, 1 cr.): S2017. I co-taught this class focused on the history of plant systematics.

GUEST LECTURES (last five years)

Abiogenesis on Earth (90 minutes) (WiCOR STAR Bootcamp). Summer 2025.

Evolution Before Genes (90 minutes) (WiCOR STAR Bootcamp). Summer 2025.

Emergence of Biological Individuals (45 minutes) (WiCOR STAR Bootcamp). Summer 2025.

What is Life? Biological Life in French Culture and Literature (French 211). Spring 2021, Spring 2022 (Lecture on origins of life).

What is Life? Biological Life in French Culture and Literature (French 211). Spring 2020, Spring 2021 (Lecture on definitions of life).

Evolutionary Biology (Zoology 410). Fall 2019 (Lecture on plant evolution)

ONLINE TEACHING (last five years)

Life: Easy or Hard? Introductory lecture in the MOOC Origins of Life, from complexityexplorer.org Recorded Apr. 2019 [[Lecture link](#)]

What is the meaning of 'life'? Introductory lecture in the MOOC Origins of Life, from complexityexplorer.org Recorded Apr. 2019 [[Lecture link](#)]

A Recipe for Adaptation. Lecture in the MOOC Origins of Life, from complexityexplorer.org Recorded Apr. 2019 [[Lecture link](#)]

Origins of Eukaryotes? Lecture in the MOOC Origins of Life, from complexityexplorer.org Recorded Apr. 2019 [[Lecture link](#)]

MENTORING

Past Scientific Visitors: Kristina Jones (Visiting scientist 1997-2000); Claire Williams (Visiting scientist 1998); James Smith (Sabbatical 2000); Kweon Heo (Sabbatical, 2006); Maria Logacheva (Visiting Post-doc, 2009).

Past postdocs/scientists (dates; current position) [16]: **Elena Conti** (1995-1996; Professor, University of Zürich), **William Alverson** (1995-1997; Senior Scientist, University of Wisconsin Botany Department - retired), **Guoping Shu** (1996-1998; Senior Vice President, Beijing Lantron Seed Corp), **Reto Nyffeler** (1997-2000; Curator of Phanerogams, Institut für Systematische Botanik, Zürich), **Ho-Sung Yoon** (1999-2002; Professor, Department of Biology, Kyungpook National University, Daegu, South Korea), **Alan Yen** (1999-2001; Licensing and Business Development Consultant), **Maria von Balthazar** (2002-2003; Senior Scientist, University of Vienna), **Mathieu Perret** (2003; Curator, Conservatoire et Jardin Botaniques de la Ville de Genève). **Marek Sliwinski** (2003-2006; Associate Professor, Univ. of N. Iowa). **Ning Liu** (2007-2009; Professor & Principal Investigator, National Engineering Research Center for Vegetables, Beijing Academy of Agricultural and Forestry Sciences). **John Stanga** (2010-2012; Assistant Professor, Mercer University); **Stephanie Colón-Santos** (2019-2022; unknown); **Praful Gagrani** (2023-2024; Post-doc Univ. Tokyo); **Zhen Peng** (2019-2022; 2024-2025; Assistant Professor, East China University of Science & Technology); **Maria Kalambokidis** (2025-2026; Account Coordinator, Stellate Communications); **Dean Jarois** (2026; Director of Chemistry; Geneva Labs).

Current doctoral students: **Tymofii Sokolskyi** (2021-; Ph.D. Astrobiology and Evolution); **Nicole Anderson** (2023-; Ph.D. Astrobiology and Origins of Life); **Emily Spencer** (2024-; Ph.D. Astrobiology and Systems Science).

Previous doctoral students (dates; current position) [17]: **Weber Amaral** (1998; Professor, University of Sao Paulo ESALQ and CEO, Brazilian Center for Biofuels), **Barbara Whitlock** (2000; Professor, Miami University), **Ryan Oyama** (2002: Research Scientist, Corteva Agriscience), **Lena Hileman** (2002: Professor and Chair, University of Kansas), **Dianella Howarth** (2002; Professor and Chair, St. John's University); **Stacey Smith** (2001-2006 Botany; Professor, University of Colorado - Boulder); **Margaret Hanes** (née Koopman) (2003-2008 Botany; Professor and Herbarium Director, Eastern Michigan University); **Ivalú Cacho** (2003-2009 Botany; Associate Professor, UNAM, Mexico); **Raúl Correa** (2004-2010 Genetics; Research Scientist, Baylor College of Medicine); **Talline Martins** (2005-2011 Genetics; Assistant Dean and Director of the Office of Graduate Professional Development, University of Florida, Gainesville); **Pulikesi C. R.** (2008-2015 Plant Breeding/Plant Genetics; National Biodiversity Authority, India); **Abigail Mazie** (2008-2015 Botany, Scientist, University of Pittsburgh); **Alison Scott** (2010-2017; Botany; Project Leader, Max Planck Institute for Plant Breeding Research); **Nisa Karimi** (2013-2018; Botany, Teaching Faculty, University of Wisconsin); **Lena Vincent** (2017-2022; Ph.D. Astrobiology and Prebiotic Chemistry. Senior Research Technician, Monterey Bay Aquarium and Research Institute); **Melody Sain** (2015-2022; Botany. Tennessee Valley Authority); **Praful Gagrani** (2019-2023; Physics. Postdoc, University of Tokyo).

Doctoral students advised as interim advisor: **Kobinah Abdul-Salim** (2002; Primary Advisor Peter Stevens), **Charles Davis** (2002; Professor, Harvard University; Primary advisor Michael Donoghue), **Richard Ree** (2001; Curator/Professor, Field Museum of Natural History/U. Chicago; Primary advisor Michael Donoghue)

Other current doctoral committees: Libby Berryman (Botany); Corbin Bryan (Botany); Myron Child (Genetics); Nathan Kolbow (Biostatistics); Natalie Schuler (Chemistry); Cecelia Stokes (Botany).

Previous doctoral committees (year of graduation) [57]: Benjamin Adamczyk (Botany – 2009); Carlos Arbizu Berrocal (Plant Breeding/Plant Genetics – 2016); Rafael Arevalo (Botany – 2014); Brent Berger (Botany – 2012); Hayley Boigenzahn (Chemical and Biological Engineering – 2023); Kirsten Bomblies (Genetics – 2004); Jane Bradbury (Botany – 2013); Eric Caldera (Microbiology – 2017); Sara Carlson (Yale University – 2010); Jaime Cordova (Genetics – 2025); L. Alexander Damián-Parizaca (Botany – 2026); Katie Deaven (Philosophy – 2024); Samuel Donovan (Curriculum and Instruction – 2005); Alfonso Doucette (Botany – 2017); Chloe Drummond (Botany – 2018); Evan Eifler (Botany – 2024); Tabitha Faber (Botany – 2025); Lauren Frankel (Botany – 2025); Evrim Fer (Microbiology – 2025); Megan Frayer (Genetics – 2022); Andrew Gardner (Botany – 2013); Jacob Golan (Botany – 2020); Benjamin Grady (Botany – 2012); Savannah Gentry (Botany – 2023); Philip Gonsiska (Botany – 2010); Jocelyn Hall (Botany – 2003); Andrew Hipp (Botany – 2004); (Zoology – 2018); Donny Hoang (Microbiology – 2023); Rachel Jabaily (Botany – 2009); Dean Jarois (Chemistry - 2026); Eunsoo Kim (Botany – 2006); Zachary Lemmon (Genetics – 2014); Ruiyan Luo (Statistics – 2007); Christopher McAllester (Genetics – 2025); Brian McCloone (Philosophy – 2016); Stephanie McFarlane (Botany – 2023); Daniel Minahan (Zoology – 2019); Candace Moore (Botany – 2013); Matthew Pace (Botany - 2015); John Pritchard (Plant Breeding/ Plant Genetics – 2004); Ricarda Riina-Olivares (Botany – 2006); Laura Shannon (Genetics – 2013); Madelyn Schaut (Botany – 2026); Claudia Solis Lemus (Statistics – 2015); Heejung Shim (Statistics – 2010); Terra Theim (Botany – 2006); Benjamin Van Ee (Botany – 2006); Laura Vaughn (Genetics – 2010); Jay Walker (Botany – 2006); Brian Walsh (Botany – 2014); Shenyi Wang (Botany – 2020); Michael White (Genetics – 2011); Evelyn Williams (Botany – 2011); Erik Wright (Microbiology – 2016); Qiong Zhao (Genetics – 2006); Alejandro Zuluaga (Botany – 2015).

Visiting doctoral students: Mariano Avino (2005); Jipei Yue (2006); Anders Larsen (2007); Marilia Duarte (2009); Camille Evin (2023).

Previous Master's students: **Michael Berg** (2014-2017; Origin of Life [Special Committee Degree]; Associate Scientist, Pharmaceutical Product Development, LLC); **Rebecca Oldham** (Botany - 2006); **Talia Sankari** (2021-2022; Bacteriology); **Pavani Ganju** (2022-2024; Botany).

Previous Master's committees: Mathew Nelsen (Botany 2005); Gemma May (Zoology 2004); Kelsey Huisman (Botany 2021); Michael Kartje (Genetics 2021); Kathryn Schmidt (2021-; Microbiology).

Current Research Interns/Limited Term Employees: **Gabo Ochoa Samoff** (2026-)

Research Interns/Limited Term Employees: **Shawn Christensen** (2017-2018; Postdoctoral scholar, UC-Davis); **Mitchell Krismer** (2018); **Noah Stenz** (2015-2016; Amazon.com); **Alex Plum** (2021; Doctoral Student, UCSD); **Ronan Montgomery-Taylor** (2024-2025; Doctoral Student, U. Michigan); **Gabo Ochoa Samoff** (2026-)

Current undergraduate research assistants/independent study: **Nadhir “Naz” Michel** (2025-); **Nisvana Shams** (2026-).

Previous undergraduate research assistants/independent study since 2001 (years; awards; last known position) [83]: **Karen Walsh** (2001-2004; Awarded Hildale Fellowship and

Sophomore Summer Apprenticeship; Master of Public Policy). **Rachel Warrich** (2002). **Tara Mehta** (2002-2004; Undergraduate Research Scholars Program). **Steven Hall** (2002-2004; Awarded Sophomore Summer Apprenticeship and George Enfield Frazer, Jr. Scholarship; Professor at Iowa State U.). **Nicole Van Abel** (2004-2005; Awarded Sophomore Summer Apprenticeship and Honors Senior Thesis Grant; Doctor of Veterinary Medicine); **Justin Bosch** (2004-2006; Awarded Hilldale Fellowship; PhD UC-Berkeley, Assistant Professor at University of Utah); **Adam Clements** (2004-2005; Undergraduate Research Scholars Program); **Mai Xiong** (2004-2005; Undergraduate Research Scholars Program). **Christopher Lizon** (2005); **Vanessa Kolberg** (2005-2006); **Steven Blinka** (2006-2009; L&S Honors Program Research Award; MD-PhD, Primary Care, U. Washington-Seattle); **Kevin Miller** (2006-2008); **David Silverman** (2007); **Raman Kutty** (2007-2008); **Brittany Ota** (2007-2008); **Brandon Weathersby** (2007); **Rebecka Pralle** (2007-2009); **Jacob Smith** (2007-2008); **Arielle Woods** (2008); **Evan Nondorf** (2008); **Jaime Shier** (2008); **Amanda Teschke** (2008-2009); **Jeremy Berg** (2008-2010; Frits Went Research Scholarship; PhD UC-Davis; Assistant Professor of Human Genetics U. Chicago); **Tanjina Shabu** (2008-2011; Masters of Public Health); **Bohkyeong Suh** (2009-2011; Masters of Public Health; Dental School); **Colton Skenandore** (2010); **Caitlin Riegert** (2010); **Aaron Roznowski** (2010-2011; Frits Went Undergraduate Research Scholarship; Postdoc, U. Arizona); **Pa Yiar Khang** (2010-2011; NSF EDEN research internship); **John Kernien** (2010-2011); **Emily Kief** (2010-2013; Graduate Student, Biomedical and Health Information Sciences, UIC); **Morgan Sell** (2010-2011); **Jacob Kream** (2011); **Thomas Coolidge** (2010-2011); **Thiago Braga** (2011); **Ajay Shah** (2011); **Sean Kunding** (2011-2012); **Robele Kebede** (2011-2012); **“Mimi” Young Yoon** (2012-2014; Frits Went Research Scholarship; graduate program, U. Chicago); **MacKenzie Taychert** (2012); **Emma Watermolen** (2012-2014); **Noah Stenz** (2013-2014; Amazon.com); **Wonuk Lee** (2013-2014); **Alexandra Cohn** (2013; L&S Sophomore Summer Apprenticeship; UW-Medical School); **AnaElise Beckman** (2013; L&S Sophomore Summer Apprenticeship); **Richard Muggli** (2013-2014); **Bella Sobah** (2013-2104, JD); **Margaret Habib** (2014-2015); **Xing Dong** (2015-2016; UW-Pharmacy); **Daniel Dryer** (2015-2016); **Michael Hermsen** (2016-2017; L&S Welton Summer Apprenticeship; U. Chicago Medical School); **Rachel Clausen** (2015-2017); **Keith Franke** (2016-2017); **Mitchell Krismer** (2015-2018); **Jacob Cosby** (2017-2020; Undergraduate Research Scholars Program); **Ian McCormick** (2018-); **Erin Seablom** (2018-); **Abby Schweiner**, (2015-2018); **Samuel Saghafi** (2017-2018; Graduate Student UW-Madison); **Jakob Meyer** (2018-2019); **Gage Siebert** (2018-2019; Undergraduate Research Scholars Program; Goldwater Fellow; Graduate Student Arizona State U); **Talia Sankari** (2019-2020); **Jacob Yourich** (2017-2019; Undergraduate Research Scholars Program); **Libby Berryman** (2019-2020; Graduate student in Botany, UW); **Joyce Riphagen** (2020); **Alex Plum** (2017- Undergraduate Research Scholars Program; Sophomore Apprenticeship; Hilldale Fellowship; Rhodes Finalist; graduate student Physics, UCSD). **Brandon Dawning** (2018-2020; Undergraduate Research Scholars Program; Sophomore Summer Apprenticeship); **Brenna Fricke** (2022); **Steven Manos** (2021-2022); **Emily Jacobson** (2020-; Undergraduate Research Scholars Program); **Rahul Kartha** (2020-2023; Undergraduate Research Scholars Program); **Keeley Kuru** (2021-2023; Doctoral student UW-Madison); **Justin Yang** (2022-2023; Master’s U. San Francisco); **Ronan Montgomery-Taylor** (2021-2024; Doctoral student U. Michigan);

Esau Allen (2022-2024; Undergraduate Research Scholars Program); **Sydney Gargulak** (2023-2024; Doctoral Student University of Alaska-Fairbanks); **Katelyn Casey** (2025); **Walid Lakdari** (2024-2025); **Anna Khanov** (2025; Doctoral student Georgia Tech.); **Anushka Malaika** (2025-2026; Post-bac intern SUNY-Syracuse); **Lukas Lee** (2025-2026); **Gabo Ochoa Samoff** (2025-2026; Post-bac intern UW-Madison).

Summer Research Opportunity Students: **Mackenzie Taylor** (Truman State U., 2006); **John Malloy** (U. Maryland Baltimore County, 2014); **Karla Martin** (Xavier U., 2016); **Ivelisse Cappielo Cosme** (U. Puerto Rico – Ponce, 2018); **Esau Allen** (U. Wisconsin-Madison, 2022); **Nadhir “Naz” Michel** (Madison Area Technical College, 2025); **Lukas Lee** (U. Wisconsin-Madison, 2025); **Carmen Blanco Nieto** (LASER, 2026); **Maddy Her** (LASER, 2026).

High School interns: **Daniel Wear** (2011, 2012); **Norah Ntambi** (2011; PEOPLE program)