

Kathleen Kay Treseder

Ecology and Evolutionary Biology
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Professional Experience:

Howard A. Schneiderman Endowed Chair, University of California, Irvine	2020–present
Professor of Biology, University of California, Irvine	2011–present
Associate Professor of Biology, University of California, Irvine	2006–2011
Assistant Professor of Biology, University of California, Irvine	2003–2006
Assistant Professor of Biology, Department of Biology, University of Pennsylvania	2001–2003
Postdoctoral Fellow, Univ. of California Riverside	1999–2000

Education:

Ph.D. in Biological Sciences, Stanford University	1999
Honors Bachelor of Science in Biology with Chemistry minor, University of Utah	1994

Research Funding (past five years):

Sole PI: “Trade-offs among fungal traits that influence responses to the environment and effects on ecosystems”; NSF Ecosystems; \$305,614.	2019–2023
Co-PI: “Biogeochemical consequences of microbial evolution under drought”; DOE Office of Biological & Environmental Research; PI: Steven Allison (UCI); other Co-PIs: Michael Goulden, Adam Martiny, Jennifer Martiny, Eoin Brodie; UCI share: \$2,699,278.	2019–2022
Co-PI: “Acquisition of a Zeiss PALM Microscope for Molecular and Microbiological Research”; NSF Ocean Sciences; PI: Kate Mackey (UCI); Other Co-PIs: Matthew Bracken & Adam Martiny; UCI share: \$365,812	2017–2020
Co-PI: “A trait-based framework for linking microbial communities with carbon transformations under precipitation change”; DOE Office of Biological & Environmental Research; PI: Steven Allison (UCI); other Co-PIs: Michael Goulden, Adam Martiny, Jennifer Martiny, Eoin Brodie; UCI share: \$2,874,285.	2016–2020
PI: “Climate Change and the Dispersal of Fungal Pathogens”; UC-Mexico Initiative; Co-PIs: James Randerson (UCI) and Meritxell Riquelme (CICESE); \$30,000	2016
Co-PI: “Controls over decomposition by microbial communities under global change”; NSF Ecosystems; PI: Steven Allison (UCI); other Co-PIs: Adam Martiny, Jennifer Martiny, Eoin Brodie; UCI share: \$839,807.	2015–2019
Co-PI: “Bedrock nitrogen and the Earth system: From geo-biological mechanisms to climate change forecasts”, NSF Integrated Earth Systems, PI: Benjamin Houlton (UC Davis). UCI share: \$398,236.	2014–2019
PI: “Genomes and transcriptomes of decomposer fungi responding to warming in Alaskan boreal forest”, DOE Joint Genome Institute Community Science Program, Co-PIs: Steven Allison (UCI) and John Taylor (UC Berkeley).	2014–2016
PI: “Evolutionary trade-offs in the adaptation of decomposers to global warming: Implications for ecosystem C balance”, NSF Ecosystems, Co-PIs: Steven Allison (UCI) and John Taylor (UC Berkeley). UCI share: \$600,348.	2013–2016

Kathleen Kay Treseder

Publications (123 peer-reviewed):

130. Alster***, C. J., S. D. Allison, and K. K. **Treseder**. 2022. Trait relationships of fungal decomposers in response to drought using a dual field and laboratory approach. *Ecosphere*, in press.
129. Lovero**, K. G. and K. K. **Treseder**. 2021. Trade-offs between growth rate and other fungal traits. *Frontiers in Forests and Global Change* 4, DOI: 10.3389/ffgc.2021.756650
128. **Treseder**, K. K., C. J. Alster***, L. A. Cat**, M. E. Gorris, A. L. Kuhn**, K. G. Lovero**, F. Hagedorn, J. F. Kerekes, T. A. McHugh, and E. F. Solly. 2021. Nutrient and stress tolerance traits linked to fungal responses to global change: Four case studies. *Elementa: Science of the Anthropocene: Ecology and Earth Systems*, <https://doi.org/10.1525/elementa.2020.00144>
127. Alster***, C. J., S. D. Allison, N. Johnson, S. I. Glassman, K. K. **Treseder**. 2021. Phenotypic plasticity of fungal traits in response to moisture and temperature. *ISME Communications* 1: 43 (2021). <https://doi.org/10.1038/s43705-021-00045-9>
126. Färkkilä, S. M. A., E. T. Kiers, R. Jaaniso, U. Mäeorg, R. M. Leblanc, K. K. **Treseder**, Z. Kang, and L. Tedersoo. 2021. Fluorescent nanoparticles as tools in ecology and physiology. *Biological Reviews*, DOI: 10.1111/brv.12758
125. Kivlin, S. N., C. V. Hawkes, M. Papes, K. K. **Treseder**, and C. Averill. 2021. The future of microbial ecological niche theory and modeling. *New Phytologist*, doi: 10.1111/nph.17373 (not peer-reviewed)
124. Alster***, C. J., S. D. Allison, S. I. Glassman, A. C. Martiny, and K. K. **Treseder**. 2021. Exploring trait trade-offs for fungal decomposers in a Southern California grassland. *Frontiers in Microbiology*, doi: 10.3389/fmicb.2021.655987
123. Finks, S.S., C. Weihe, S. Kimball, S. D. Allison, A. C. Martiny, K. K. **Treseder**, and J.B.H. Martiny. 2021. Microbial community response to a decade of simulated global changes depends on the plant community. *Elementa: Science of the Anthropocene* 9 (1): 00124. doi: <https://doi.org/10.1525/elementa.2021.00124123>. Alster, C. J., S. D. Allison, and K. K. **Treseder**. 2020. Carbon budgets for soil and plants respond to long-term warming in an Alaskan boreal forest. *Biogeochemistry* 150, 345–353. doi.org/10.1007/s10533-020-00697-0
122. Walker, A.P., De Kauwe, M.G., Bastos, A., Belmecheri, S., Georgiou, K., Keeling, R., McMahon, S.M., Medlyn, B.E., Moore, D.J., Norby, R.J., Zaehle, S., Anderson-Teixeira, K.J., Battipaglia, G., Brienen, R.J., Cabugao, K.G., Cailleret, M., Campbell, E., Canadell, J., Ciais, P., Craig, M.E., Ellsworth, D., Farquhar, G., Fatichi, S., Fisher, J.B., Frank, D., Graven, H., Gu, L., Haverd, V., Heilman, K., Heimann, M., Hungate, B.A., Iversen, C.M., Joos, F., Jiang, M., Keenan, T.F., Knauer, J., Körner, C., Leshyk, V.O., Leuzinger, S., Liu, Y., MacBean, N., Malhi, Y., McVicar, T., Penuelas, J., Pongratz, J., Powell, A.S., Riutta, T., Sabot, M.E., Schleucher, J., Sitch, S., Smith, W.K., Sulman, B., Taylor, B., Terrer, C., Torn, M.S., **Treseder**, K., Trugman, A.T., Trumbore, S.E., van Mantgem, P.J., Voelker, S.L., Whelan, M.E. and Zuidema, P.A. 2020. Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO₂. *New Phytologist*, in press. doi:10.1111/nph.16866
121. Mackey, K. R. M, S. Stragier, L. Robledo; L. A. Cat, X. Xu, S. Capps, K. K. **Treseder**, C. I. Czimczik, and C. Faiola. 2020. Seasonal variation of aerosol composition in Orange County, Southern California. *Atmospheric Environment* 244: 117795. doi.org/10.1016/j.atmosenv.2020.117795
120. Gorris, M. E., L. A. Cat, M. Matlock, O. A. Ogunseitan, K. K. **Treseder**, J. T. Randerson. C. S. Zender. 2020. Coccidioidomycosis (Valley fever) case data for the southwestern United States. *Open Health Data*: 7(1) DOI: <http://doi.org/10.5334/ohd.31>
119. Alster, C. J., J. C. von Fischer, S. D. Allison, and K. K. **Treseder**. 2020. Embracing a new paradigm for temperature sensitivity of soil microbes. *Global Change Biology*, doi.org/10.1111/gcb.15053
118. Zanne, A. E., K. Abarenkov, M. E. Afkhami, C. A. Aguilar-Trigueros, S. Bates, J. M. Bhatnagar, P. E. Busby, N. Christian, W. K. Cornwell, T. W. Crowther, H. Flores-Moreno, D. Floudas, R. Gazis, D. Hibbett, P. Kennedy, D. L. Lindner, D. S. Maynard, A. M. Milo, R. H. Nilsson, J. Powell, M. Schildhauer,

Kathleen Kay Treseder

- J. Schilling and K. K. **Treseder**. 2019. Fungal functional ecology: bringing a trait-based approach to plant-associated fungi. *Biological Reviews*, doi:10.1111/brv.12570
117. Looby**, C. I., E. C. Hollenbeck, and K. K. **Treseder**. 2019. Fungi in the canopy: how soil fungi and extracellular enzymes differ between canopy and ground soils. *Ecosystems*, DOI: 10.1007/s10021-019-00439-w
116. Gorris, M. E., K. K. **Treseder**, C. S. Zender, and J. T. Randerson 2019. Expansion of coccidioidomycosis endemic regions in the United States in response to climate change. *GeoHealth* 3: 308-327, doi.org/10.1029/2019GH000209
115. Malik, A. A., J. B. H. Martiny, E. L. Brodie, A. C. Martiny, K. K. **Treseder**, and S. D. Allison. 2019. Defining trait-based microbial strategies with consequences for soil carbon cycling under climate change. *ISME Journal*, doi.org/10.1038/s41396-019-0510-0
114. Romero-Olivares**, A. L., G. Meléndrez-Carballo, A. Lago-Lestón and K. K. **Treseder**. 2019. Soil metatranscriptomes under long-term experimental warming and drying: fungi allocate resources to cell metabolic maintenance rather than decay. *Frontiers in Microbiology*, doi.org/10.3389/fmicb.2019.01914
113. Cat**, L. H., M. E. Gorris, J. T. Randerson, M. Riquelme, and K. K. **Treseder**. 2019. Crossing the Line: Human Diseases and Climate Change Across Borders. *Journal of Environmental Health* 81: 14-22.
112. **Treseder**, K. K., R. Berlemont, S. D. Allison, and A. C. Martiny. 2018. Drought increases the frequencies of fungal functional genes related to carbon and nitrogen acquisition. *PLoS One* 13(11): e0206441.
111. Glassman, S. I., C. Weihe, J. Li, M. B. N. Albright, C. I. Looby, A. C. Martiny, K. K. **Treseder**, S. D. Allison, and J. B. H. Martiny. 2018. Decomposition responses to climate depend on microbial community composition. *Proceedings of the National Academy of Sciences* 115 (47) 11994-11999.
110. Allison, S. D., A. L. Romero-Olivares, L. Lu, J. W. Taylor, and K. K. **Treseder**. 2018. Temperature acclimation and adaptation of enzyme physiology in *Neurospora discreta*. *Fungal Ecology* 35: 78-86.
109. **Treseder**, K. K., R. Berlemont, S. D. Allison, and A. C. Martiny. 2018. Nitrogen enrichment shifts functional genes related to nitrogen and carbon acquisition in the fungal community. *Soil Biology and Biochemistry* 123: 87-96.
108. Aburto-Oropeza, O... L. A. Cat**... K. K. **Treseder**, et al. 2018. Harnessing cross-border resources to confront climate change. *Environmental Science and Policy Journal* 87: 128-132.
107. Bhatnagar**, J. M., K. G. Peay, and K. K. **Treseder**. 2018. Litter chemistry influences decomposition through activity of specific microbial functional guilds. *Ecological Monographs* 88: 429-444.
106. Allison, S. D., A. L. Romero-Olivares**, Y. Lu, J. Taylor, and K. K. **Treseder**. 2018. Temperature sensitivities of extracellular enzyme Vmax and Km across thermal environments. *Global Change Biology* 24: 2884-2897.
105. Gorris, M. E., L. A. Cat**, C. S. Zender, K. K. **Treseder**, and J. T. Randerson. 2018. Coccidioidomycosis dynamics in relation to climate in the southwestern United States. *GeoHealth* 2: 6-24.
104. Homyak***, P. M., S. D. Allison, T. E. Huxman, M. L. Goulden, and K. K. **Treseder**. 2018. Effects of drought manipulation on soil nitrogen cycling: A meta-analysis. *JGR-Biogeosciences* 122: 3260-3272, DOI: 10.1002/2017JG004146
103. Looby**, C. I. and K. K. **Treseder**. 2018. Shifts in soil fungi and extracellular enzyme activity with simulated climate change in a tropical montane cloud forest. *Soil Biology and Biochemistry* 117: 87-96.
102. **Treseder**, K. K., E. B. Allen, L. M. Egerton-Warburton, M. M. Hart, J. N. Klironomos, H. Maherali, and L. Tedersoo. 2018. Arbuscular mycorrhizal fungal traits could mediate ecosystem responses to nitrogen deposition. *Journal of Ecology* 106:480-489.

Kathleen Kay Treseder

101. Camenzind, T., S. Hättenschwiler, K. K. **Treseder**, A. Lehmann, M. C. Rillig. 2017. Nutrient limitation of soil microbial processes in tropical forests. *Ecological Monographs* 88: 4-21
100. Maltz**, M. R., K. K. **Treseder**, and K. L. McGuire***. 2017. Links between plant and fungal diversity in habitat fragments of coastal shrubland. *PLoS One* 12(9): e0184991.
99. Romero-Olivares**, A. L., S. D. Allison, and K. K. **Treseder**. 2017. Decomposition of recalcitrant carbon under experimental warming in boreal forest. *PLoS One* 12(6): e0179674
98. Kivlin, S. N., R. Muscarella, C. V. Hawkes, and K. K. **Treseder** 2017. The predictive power of ecological niche modeling for global arbuscular mycorrhizal fungal biogeography. In: *Biogeography of Mycorrhizal Symbiosis*, L. Tedersoo (ed.). Springer International Publishing. *Ecological Studies* 230: 143-158.
97. Romero-Olivares**, A. L., S. D. Allison, and K. K. **Treseder**. 2017. Soil microbes and their response to experimental warming over time: a meta-analysis of field studies. *Soil Biology and Biochemistry* 107: 32-40.
96. Crowther, T. W., K. E. O. Todd-Brown, C. W. Rowe, W. R. Wieder, J. C. Carey, M. B. Machmuller, L. B. Snoek, S. Fang, G. Zhou, S. D. Allison, J. M. Blair, S. D. Bridgham, A. J. Burton, Y. Carrillo, P. B. Reich, J. S. Clark, A. T. Classen, F. A. Dijkstra, B. Elberling, B. Emmett, M. Estiarte, S. D. Frey, J. Guo, J. Harte, L. Jiang, B. R. Johnson, G. Kröel-Dulay, K. S. Larsen, H. Laudon, J. M. Lavelle, Y. Luo, M. Lupascu, L. N. Ma, S. Marhan, A. Michelsen, J. Mohan, S. Niu, E. Pendall, J. Peñuelas, L. Pfeifer-Meister, C. Poll, S. Reinsch, L. L. Reynolds, I. K. Schmidt, S. Sistla, N. W. Sokol, P. H. Templer, K. K. **Treseder**, J. M. Welker, and M. A. Bradford. 2016. Quantifying global soil C losses in response to warming. *Nature* 540: 104-108.
95. Martiny, J. B. H., A. C. Martiny, C. Weihe, Y. Lu, R. Berlemont, E. L. Brodie, M. L. Goulden, K. K. **Treseder**, and S. D. Allison. 2016. Microbial legacies alter decomposition in response to simulated global change. *ISME Journal* 11: 490-499, DOI: 10.1038/ismej.2016.122
94. Jansa, J and K. K. **Treseder**. 2016. Mycorrhizas and the carbon cycle. In: *Mycorrhizal Mediation of Soil: Fertility, Structure, and Carbon Storage*. N. C. Johnson, C. Gehring, and J. Jansa (eds). Elsevier, Amsterdam. (not peer-reviewed)
93. Maltz**, M. R., C. E. Bell, M. J. Mitrovich, A. R. Iyert, and K. K. **Treseder**. 2016. Invasive plant management techniques alter arbuscular mycorrhizal fungi. *Ecological Restoration* 34: 209-215.
92. Aprahamian*, A. M., M. E. Lulow, M. R. Major, K. Balazs, K. K. **Treseder**, and M. R. Maltz**. 2016. Arbuscular mycorrhizal inoculation in coastal sage scrub restoration. *Botany*, 10.1139/cjb-2015-0226
91. Looby**, C. I., M. R. Maltz**, and K. K. **Treseder**. 2016. Belowground responses to elevation in a changing cloud forest. *Ecology and Evolution*, 10.1002/ece3.2025
90. **Treseder**, K. K., Y. Marusenko***, A. L. Romero-Olivares**, and M. R. Maltz**. 2016. Experimental warming alters potential function of the fungal community in boreal forest. *Global Change Biology* 22: 3395-3404, DOI: 10.1111/gcb.13238
89. **Treseder**, K. K. 2016. Model behavior of arbuscular mycorrhizal fungi: Predicting soil carbon dynamics under climate change. *Botany*, 10.1139/cjb-2015-0245
88. Holden**, S. R., B. M. Rogers, K. K. **Treseder**, and J. T. Randerson. 2016. Fire severity influences the response of soil microbes to a boreal forest fire. *Environmental Research Letters* 11(3): 035004.
87. Amend, A., A. Martiny, S. Allison, R. Berlemont, M. Goulden, Y. Lu, K. K. **Treseder**, C. Weihe, and J. Martiny. 2016. Microbial response to simulated global change is phylogenetically conserved and linked with functional potential. *ISME Journal*, doi: 10.1038/ismej.2015.96
86. Romero-Olivares**, A. L., J. W. Taylor, and K. K. **Treseder**. 2015. *Neurospora discreta* as a model to assess adaptation of soil fungi to warming. *BMC Evolutionary Biology* 15: 198, doi:10.1186/s12862-015-0482-2

Kathleen Kay Treseder

85. Hynson***, N. A., S. D. Allison, and K. K. **Treseder**. 2015. Quantum dots reveal shifts in organic nitrogen uptake by fungi exposed to long-term nitrogen enrichment. *PLoS One*, DOI: 10.1371/journal.pone.0138158
84. Maltz**, M. R. and K. K. **Treseder**. 2015. Sources of inocula influence mycorrhizal colonization of plants in restoration projects: A meta-analysis. *Restoration Ecology* 23(5): 625-634.
83. Holden**, S. R., A. A. Berhe, and K. K. **Treseder**. 2015. Decreases in soil moisture and organic matter quality suppress microbial decomposition following a boreal forest fire. *Soil Biology and Biochemistry* 87: 1-9.
82. **Treseder**, K. K. and J. T. Lennon. 2015. Fungal traits that drive ecosystem dynamics on land. *Microbiology and Molecular Biology Reviews* 79(2): 243-262.
81. Soudzilovskaia, N. A., A. A. Akhmetzhanova, P. M. van Bodegom, W. K. Cornwell, E. J. Moens, K. K. **Treseder**, M. Tibbett, Y. Wang, and J. H. C. Cornelissen. 2015. Global patterns of plant root colonization intensity by mycorrhizal fungi explained by climate and soil chemistry. *Global Ecology and Biogeography* 24: 371-382.
80. Kivlin, S. N.** and K. K. **Treseder**. 2014. Initial phylogenetic relatedness of saprotrophic fungal communities affects subsequent litter decomposition rates. *Microbial Ecology*: DOI: 10.1007/s00248-014-0509-z
79. Rogers, B. M., S. Veraverbeke, G. Azzari, C. I. Czimczik, S. R. Holden**, G. O. Mouteva, F. Sedano, K. K. **Treseder**, and J. T. Randerson 2014. Quantifying fire-wide carbon emissions in interior Alaska using field measurements and Landsat imagery. *Journal of Geophysical Research – Biogeosciences* 8: 1608-1629.
78. **Treseder**, K. K., M. R. Maltz**, B. A. Hawkins, N. Fierer, J. E. Stajich, and K. L. McGuire***. 2014. Evolutionary histories of soil fungi are reflected in their large-scale biogeography. *Ecology Letters* 17 (9): 1086-1093.
77. Kivlin, S. N.**, G. C. Winston, M. L. Goulden, K. K. **Treseder**. 2014. Environmental filtering affects soil fungal community composition more than dispersal limitation at regional scales. *Fungal Ecology* 12: 14-25.
76. Hynson***, N. A., V. S. F. T. Merckx, B. A. Perry and K. K. **Treseder**. 2013. Identities and distributions of the co-invading ectomycorrhizal fungal symbionts of exotic pines in the Hawaiian Islands. *Biological Invasions* 15: 2373-2385.
75. McGuire***, K. L., S. D. Allison***, N. Fierer, and K. K. **Treseder**. 2013. Ectomycorrhizal-dominated boreal and tropical forests have distinct fungal communities, but analogous spatial patterns across soil horizons. *PLoS One* 8(7): e68278. doi:10.1371/journal.pone.0068278
74. Holden**, S. R and K. K. **Treseder**. 2013. A meta-analysis of soil microbial responses to forest disturbances. *Frontiers in Microbiology* 4: 163.
73. Kivlin**, S. N. and K. K. **Treseder**. 2014. Soil extracellular enzyme activities correspond with abiotic factors more than fungal community composition. *Biogeochemistry* 117: 23-37.
72. **Treseder**, K. K. and S. R. Holden**. 2013. Fungal carbon sequestration. *Science* 339: 1528-1529. (not peer-reviewed)
71. **Treseder**, K. K. 2013. Marschner Review: The extent of mycorrhizal colonization of roots and its influence on plant growth and phosphorus content. *Plant and Soil* 371: 1-13.
70. **Treseder**, K. K., E. Bent, J. Borneman, and K. L. McGuire***. 2014. Shifts in fungal communities during decomposition of boreal forest litter. *Fungal Ecology* 10: 58-69.
69. Hynson***, N. A., M. Weiß, K. Preiss, G. Gebauer, and K. K. **Treseder**. 2013. Fungal host specificity is not a bottleneck for the germination of Pyroaleae species (Ericaceae) in a Bavarian forest. *Molecular Ecology* 22: 1473-1481.

Kathleen Kay Treseder

68. Martiny A. C., K. K. **Treseder** and G. Pusch. 2013. Phylogenetic conservatism of functional traits in microorganisms. *ISME Journal* 7: 830-838.
67. Allison, S. D., Y. Lu, C. Weihe, M. L. Goulden, A. C. Martiny, K. K. **Treseder**, and J. B. H. Martiny. 2013. Microbial abundance and composition influence litter decomposition response to environmental change. *Ecology* 94: 714-725.
66. Whiteside**, M. D., M. O Garcia*, and K. K. **Treseder**. 2012. Amino acid uptake in arbuscular mycorrhizal plants. *PLoS One* 7: e47643.
65. Holden**, S. R., A. Gutierrez*, and K. K. **Treseder**. 2012. Changes in soil fungal communities, extracellular enzyme activities, and litter decomposition across a fire chronosequence in Alaskan boreal forests. *Ecosystems* 16: 34-46.
64. Whiteside**, M. D., M. A. Digman, E. Gratton, and K. K. **Treseder**. 2012. Organic nitrogen uptake by arbuscular mycorrhizal fungi in a boreal forest. *Soil Biology and Biochemistry* 55: 7-13.
63. Santos, G. M., A. Alexandre, J. R. Southon, K. K. **Treseder**, R. Corbineau, and P. E. Reyerson. 2012. Possible source of ancient carbon in phytolith concentrates from harvested grasses. *Biogeosciences* 9: 1873-1884.
62. Gartner***, T. B., R. L. Sinsabaugh, G. M. Malcolm, and K. K. **Treseder**. 2012. Extracellular enzyme activity in the mycorrhizospheres of a boreal fire chronosequence. *Pedobiologia* 55: 121-127.
61. McGuire***, K. L., N. Fierer, C. Bateman, K. K. **Treseder**, and B. L. Turner. 2011. Fungal community composition in neotropical rain forests: The influence of tree diversity and precipitation. *Microbial Ecology* 63: 804-812.
60. Talbot, J. M.** and K. K. **Treseder**. 2012. Interactions between lignin, cellulose, and nitrogen drive litter chemistry-decay relationships. *Ecology* 93: 345-354.
59. Dooley, S. R.** and K. K. **Treseder**. 2012. The effect of fire on microbial biomass: a meta-analysis of field studies. *Biogeochemistry* 109: 49-61.
58. **Treseder**, K. K., T. C. Balsler, M. A. Bradford, E. L. Brodie, E. A. Dubinsky, V. T. Eviner, K. S. Hofmockel, J. T. Lennon, U. Y. Levine, B. J. MacGregor, J. Pett-Ridge, and M. P. Waldrop. 2012. Integrating microbial ecology into ecosystem models: Challenges and priorities. *Biogeochemistry* 109: 7-18.
57. Kivlin, S. N.**, C. V. Hawkes, and K. K. **Treseder**. 2011. Global diversity and distribution of arbuscular mycorrhizal fungi. *Soil Biology and Biochemistry* 43: 2294-2303.
56. **Treseder**, K. K., S. N. Kivlin**, and C. V. Hawkes. 2011. Evolutionary trade-offs among decomposers determine responses to nitrogen enrichment. *Ecology Letters* 14: 933-938.
55. Talbot, J. M.** and K. K. **Treseder**. 2011. Dishing the dirt on carbon cycling. *Nature Climate Change* 1: 144-146. (not peer-reviewed)
54. Goldfarb, K. C., U. Karaoz, C. A. Hanson, C. A. Santee, M. A. Bradford, K. K. **Treseder**, M. D. Wallenstein, and E. L. Brodie. 2011. Differential growth responses of soil bacterial taxa to carbon substrates of varying chemical recalcitrance. *Frontiers in Terrestrial Microbiology* 2: 94. doi: 10.3389/fmicb.2011.00094.
53. Talbot, J. M.**, D. J. Yelle, J. Nowick, and K. K. **Treseder**. 2012. Litter decay rates are determined by lignin chemistry. *Biogeochemistry* 108: 279-295.
52. Allison, S. D.*** and K. K. **Treseder**. 2011. Climate change feedbacks to microbial decomposition in boreal soils. *Fungal Ecology* 4: 362-374.
51. Drake, J., A. Gallet-Budynek, K. Hofmockel, E. Bernhardt, S. Billings, R. Jackson, K. Johnsen, J. Lichter, R. Phillips, H. McCarthy, D. Moore, M. L. McCormack, S. Palmroth, R. Oren, J. Pippen, S. Pritchard, K. K. **Treseder**, W. Schlesinger, E. DeLucia, A. C. Finzi. 2011. Increases in the flux of carbon belowground stimulate nitrogen uptake and sustain the long-term enhancement of forest productivity under elevated CO₂. *Ecology Letters*: 14(4): 349-357.

Kathleen Kay Treseder

50. Allison, S. D.^{***}, K. L. McGuire^{***}, and K. K. **Treseder**. 2010. Resistance of microbial and soil properties to warming treatment seven years after boreal fire. *Soil Biology and Biochemistry* 42(10): 1872-1878.
49. **Treseder**, K. K., J. P. Schimel, M. O. Garcia*, and M. D. Whiteside^{**}. 2010. Slow turnover and production of fungal hyphae during a Californian dry season. *Soil Biology and Biochemistry* 42(9): 1657-1660.
48. Allison, S. D.^{***}, T. B. Gartner^{***}, M. C. Mack, K. L. McGuire^{***}, and K. K. **Treseder**. 2010. Nitrogen alters carbon dynamics during early succession in boreal forest. *Soil Biology and Biochemistry* 42(7): 1157-1164.
47. Talbot, J. M.^{**} and K. K. **Treseder**. 2010. Controls over mycorrhizal uptake of organic nitrogen. *Pedobiologia* 53(3): 169-179.
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Kathleen Kay Treseder

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Kathleen Kay Treseder

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3. **Treseder**, K. K. and M. F. Allen. 2000. Black boxes and missing sinks: Fungi in global change research. *Mycological Research* 104: 1281-1283. (not peer-reviewed)
2. Martinelli, L. A., M. C. Piccolo, A. R. Townsend, P. M. Vitousek, E. Cuevas, W. McDowell, G. P. Robertson, O. C. Santos, and K. **Treseder**. 1999. Nitrogen stable isotopic composition of leaves and soil: Tropical versus temperate forests. *Biogeochemistry* 46: 45-65.
1. **Treseder**, K. K., D. W. Davidson, and J. R. Ehleringer. 1995. Absorption of ant-provided carbon dioxide and nitrogen by a tropical epiphyte. *Nature* 375 (6527): 137-139. (and cover)

†Supervised high school student, *Supervised undergraduate student, **Supervised graduate student, ***Supervised postdoctoral fellow

Google Scholar Metrics

H-index: 70

Total citations: 21,566

Kathleen Kay Treseder

Popular Press Articles

- P2. Looby**, C. I. and K. K. **Treseder**. 2015. The Invisible Power Players in Climate Change. *Cultures Magazine* 2(4): 44-49.
- P1. Looby**, C. I. and K. K. **Treseder**. 2015. Working in the field: New solutions for old problems. *AWIS Magazine* 47: 48-50.

Advisees:

Postdoctoral researchers: Steven D. Allison (now Professor, UC Irvine), Charlotte Alster (now Postdoc, University of Waikato), Tracy B. Gartner (now Professor, Carthage College), Aidee Guzman (current), Peter M. Homyak (now Asst. Professor, UC Riverside), Nicole A. Hynson (now Assoc. Professor, U Hawaii Manoa), Caroline A. Masiello (now Professor, Rice University), Krista L. McGuire (now Assoc. Professor, Oregon)

Graduate students: Rebecca J. Aicher (Ph.D., 2010, co-advised), David Banuelas (Ph.D. student, current) Belle Bergner (M.S., 2003), Linh Anh Cat (Ph.D. student, 2019), Eduardo Choreño Parra (Ph.D. student, current), Melanie Hacopian (Ph.D., current), Sandra R. Holden (Ph.D., 2014), Stephanie N. Kivlin (Ph.D., 2012), Alexander Kuhn (M.S., 2019), David S. LeBauer (Ph.D., 2008), Caitlin I. Looby (Ph.D., 2017), Karissa Lovero (Ph.D., current), Mia R. Maltz (Ph.D., 2016), Adriana L. Romero-Olivares (Ph.D., 2017), Marko J. Spasojevik (Ph.D., 2010, co-advised), Jennifer M. Talbot (Ph.D., 2011), Evelyn Valdez-Ward (Ph.D., current, co-advised), Matthew D. Whiteside (Ph.D., 2011)

Patent:

Treseder, K. K. and M. D. Whiteside**. 2011. Nanotechnological delivery of microbicides and other substances. The Regents of the University of California. USA. WO/2011/031487.

Honors, Awards, and Fellowships:

2021 Highly Cited Researcher, ISI Web of Science (top 1% of field)	2021
2020 Highly Cited Researcher, ISI Web of Science (top 1% of field)	2020
Emerge California Class of 2020	2020
2019 Highly Cited Researcher, ISI Web of Science (top 1% of field)	2019
Francis E. Clark Distinguished Lectureship on Soil Biology, Soil Science Society of America	2019
Kathy Alberti Faculty and Staff Award, Associated Graduate Students of UCI	2019
UCI Dynamic Womxn Award for Academic Achievement	2019
Dean's Distinguished Lecture, UCI School of Biological Sciences	2019
Fellow, American Academy of Microbiology	2019
2018 Highly Cited Researcher, ISI Web of Science (top 1% of field)	2018
Fellow, American Association for the Advancement of Science	2017
Fellow, Ecological Society of America	2016
Chancellor's Fellow, UCI	2012–2015
Selected as the United States representative for the publication "Young Women Scientists: A Bright Future for the Americas", by the Interamerican Network of Academies of Sciences	2015
Chancellor's Award for Excellence in Fostering Undergraduate Research, UCI	2005
Charles Ludwig Distinguished Teaching Award (School of Arts and Sciences, University of Pennsylvania)	2003
NSF Postdoctoral Fellowship in Biosciences Related to the Environment	1999–2000

Kathleen Kay Treseder

Graduate Fellowship, ARCS® Foundation	1996–1998
NSF Graduate Research Fellowship	1995–1998
Featured in Harper’s Bazaar magazine as one of thirty-three young women likely to influence their respective fields in the upcoming century. (“Women of the 21 st Century,” September issue)	1995
 Editorial Boards:	
Annual Review of Ecology, Evolution, and Systematics	2019
Microbiology and Molecular Biology Reviews	2016–present
PLoS One	2012–2015
Functional Ecology	2009–2017
 Service (past 3 years):	
Delegate, California Democratic State Central Committee	2021–present
Member, San Clemente Council Member Chris Duncan’s Community Advisory Committee on Community Choice Energy	2021–present
Member, Laguna Beach Mayor Pro Tem Susan Kempf’s Community Advisory Committee on Community Choice Energy	2021–present
Chair, UCI CALPIRG Bee-Friendly Committee	2021–present
Member, Vice Mayor Tammy Kim’s Environmental Advisory Committee	2021–present
Member, Crime Survivors Council, Crime Survivors Resource Center, Orange County	2020–present
Co-chair, Irvine Vice Mayor Michael Carroll’s Community Choice Energy Stakeholder Committee	2020
Member, Assemblywoman Cottie Petrie-Norris’ Advisory Council on Climate Change	2019–present
Member, Green Ribbon Environmental Committee, City of Irvine (Chair, 2019–2021)	2019–present
Member, US Rep. Mike Levin’s San Onofre Nuclear Generation Station Task Force	2019–present
Member, Advisory Council, Climate Action Campaign	2019–present
Member-at-Large (elected), Ecological Society of America Governing Board	2018–2020
Vice President and Co-Founder, OC Clean Power	2017–present
Member, Advisory Council, Women for American Values and Ethics PAC/Super PAC	2017–2021
Chair, Environmental Working Action Group, Women for American Values and Ethics	2017–present
Member, Fungal User Advisory Committee, Dept. of Energy Joint Genome Inst.	2015–present