

CURRICULUM VITA
DUANE P. MOSER
Associate Professor

Microbiology, Biogeochemistry, Astrobiology

PERSONAL INFORMATION

Desert Research Institute
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EDUCATION

- Ph.D.**, (With Distinction), Biological Sciences, University of Wisconsin Milwaukee, 1997
Dissertation title: *Elemental sulfur reduction in Shewanella putrefaciens*
Major advisor: Kenneth H. Nealson
- M.S.**, Microbiology, University of Wisconsin Oshkosh, 1992
Thesis title: *Characterization of a restriction barrier and electrotransformation of the cyanobacterium, Nostoc PCC 7121*
Major advisor: Toivo Kallas
- B.S.**, Microbiology, University of Wisconsin Oshkosh, 1989

POSITIONS HELD / RESEARCH EXPERIENCE

- Associate Professor**, Desert Research Institute, Las Vegas, Nevada, 2008–present
- Adjunct Professor**, School of Life Sciences (SOLS), Univ. of Nevada, Las Vegas, Nevada, 2005–present
- Assistant Professor**, Desert Research Institute, Las Vegas, Nevada, 2004–2008
- Post-doctoral Fellow**, Pacific Northwest National Laboratory, Environmental Microbiology Group, 2001–2004
- Post-doctoral Fellow**, Princeton University, Geosciences, 1998–2001
- Guest Instructor**, Woods Hole Microbial Diversity Course, Marine Biology Lab, Woods Hole, Massachusetts, 1995
- Radiation Safety Officer**, University of Wisconsin Oshkosh, Department of Microbiology, 1989–1989
- Curator**, University of Wisconsin Oshkosh, Department of Microbiology Axenic Cyanobacteria Culture Collection, 1987–1989
- Undergraduate Intern (paid)**, Wisconsin Dept. of Natural Resources, Madison, Wisconsin, 1988

Undergraduate Intern (paid), DIFC/BD Diagnostics, Inc., Detroit, Michigan (plant located in Mauston, Wisconsin), 1987

SUPPLEMENTAL TRAINING

ARB Workshop: Computer Resource Center, DRI, Reno, Nevada, 7/07

Flow Cytometry Training: Advanced Analytical Inc. Ames, Iowa, 02/06

Microbial Diversity: Marine Biology Laboratory, Woods Hole, Massachusetts, 6/96

Biology Training Course in Antarctica: NSF, McMurdo, Antarctica, 1/94

PUBLICATIONS (Citations 4,137 as of 011/3/18)

Peer-reviewed

1. **Blunt, S.M., J. Sackett, M.J. Benotti, M.R. Rosen, R. Trenholm, B. Vanderford, B.P. Hedlund, and D.P. Moser.** 2018. Association between degradation of pharmaceuticals and endocrine-disrupting compounds and microbial ecology along a treated wastewater gradient in Lake Mead, Nevada. *Sci. Total. Environ.* **622**:1640-1648.
2. **Gerrity, D., M. Arnold, E. Dickenson, D. Moser, J.D. Sackett, E.C. Wert.** 2018. Microbial community characterization of ozone-biofiltration systems in drinking water and potable reuse applications. *Water Res.* **15**:207-219.
3. **Hamilton-Brehm, S.D., L.T. Hristova, S.R. Edwards, J.R. Wedding, B.R. Kruger, D.P. Moser.** 2018. Ancient human mitochondrial DNA and radiocarbon analysis of archived quids from the Mule Spring Rockshelter, Nevada. *PLOS-One.* **13**(3):e0194223.
4. **Moser, D.P., B. Kruger, N. Thomas, J. Sackett.** 2018. Analog study to constrain potential microbial degradation of diesel range organics from Amchitka site drilling mud pits. U.S. Department of Energy, Office of Legacy Management. Under Cooperative Agreement DE-LM0000432. 41p. Desert Research Institute, Division of Hydrologic Sciences Publication, Report #41237
5. **Sackett, J.D., D.C. Huerta, B.R. Kruger, S.D. Hamilton-Brehm, D.P. Moser.** 2018. Comparative microbiological and biogeochemical characterization of Devils Hole and the Ash Meadows Fish Conservation Facility, a constructed analog. *PLOS-One.* **13**(3):e0194404.
6. **Becraft, E.D., T. Woyke, J. Jarett, N. Ivanova, F. GodoyVitorino, N. Poulton, J.M. Brown, J. Brown, M. Lau, T. Onstott, J. Eisen, D.P. Moser, R. Stepanauskas,** 2017. Rokubacteria: genomic giants among the uncultured bacterial phyla. *Frontiers Microbiol.* **8**:226.
7. **Blunt, S.M., M.J. Benotti, M.R. Rosen, B.P. Hedlund, D.P. Moser.** 2017. Reversible reduction of estrone to 17 β -estradiol by *Rhizobium*, *Sphingopyxis*, and *Pseudomonas* Isolates from the Las Vegas Wash. *J. Environ. Qual.* **46**:281-287.
8. **Momper L., B. Kiel Reese, L. Zinke, G. Wanger, M.R. Osburn, D. Moser, J.P. Amend.** 2017. Major phylum-level differences between porefluid and host rock bacterial communities in the terrestrial deep subsurface. *Environ. Microbiol. Rep.* **9**:501-511.

9. **Jangir Y., S. French, L.M. Momper, D.P. Moser, J.P. Amend, M.Y. El-Naggar.** 2016. Isolation and characterization of electrochemically active subsurface *Delftia* and *Azonexus* species. *Frontiers Microbiol.* **2016**;7:756.
10. **Kieft, T., T. Onstott, L. Ahonen, V. Aloisi, F. Colwell, B. Engelen, S. Fendrihan, E. Gaidos, U. Harms, I. Head, J. Kallmeyer, B. Kiel Reese, L.-H. Lin, P. Long, D. Moser, H. Mills, P. Sar, D. Schulze-Makuch, H. Stan-Lotter, D. Wagner, P.-L. Wang, F. Westall, M. Wilkins.** 2015. Workshop to develop deep-life continental scientific drilling projects. *Sci. Drill.* **19**:43-53.
11. **Sun, H.J., J. Nienow, G. Zhang, D.P. Moser, C.P. McKay.** 2015. Endolithic cyanobacteria in the Mojave Desert: a cold habitat in a hot desert? *National Park Service Science Newsletter.* **April-2015**:18-20.
12. **Kminek, G., C. Conley, C. C. Allen, D. H. Bartlett, D. W. Beaty, L. G. Benning, R. Bhartia, P. J. Boston, C. Duchaine, J. D. Farmer, G. J. Flynn, D. P. Glavin, Y. Gorby, Hallsworthm, J.E., R. Mogul, D. Moser, B. P. Pricep, R. Pukall, R. Fernandez-Remolarr, C. L. Smith, K. Stedman, A. Steele, R. Stepanauskas, H. Sun, J. L. Vagox & M. A. Voytek.** 2014. Report of the workshop for life detection in samples from Mars. *Life Sci. Space Res.* **2**:1-5.
13. **Thomas, J.M., D.P. Moser, J.C. Fisher, J. Reihle, A. Wheatley, R.L. Hershey, C. Baldino, D. Weissenfluh.** 2013. Using water chemistry, isotopes and microbiology to evaluate groundwater sources, flow paths and geochemical reactions in the Death Valley Flow System, USA. *Proc. Earth. Planet. Sci.* **7**:842-845.
14. **Peacock JP, Cole JK, Murugapiran SK, Dodsworth JA, Fisher JC, Moser DP, Hedlund BP.** 2013. Pyrosequencing reveals high-temperature cellulolytic microbial consortia in Great Boiling Spring after in situ lignocellulose enrichment. *PLoS One.* **8**(3):e59927.
15. **Wanger, G., G. Southam, T.C. Onstott, D.P. Moser.** 2012. Mobile hydrocarbon microspheres from 2 billion year old carbon-bearing seams in the South African deep subsurface. *Geobiology.* **10**:496-505.
16. **Davidson, M.D., B.J. Silver, T.C. Onstott, D.P. Moser, T.M. Gihring, L.M. Pratt, E.A. Boice, B. Sherwood Lollar, J. Lippmann-Pipke, S.M. Pfiffner, T.L. Kieft, W. Seymore, C. Ralston.** 2011. Capture of planktonic microbial diversity in fractures by long-term monitoring of flowing boreholes, Evander Basin, South Africa *Geomicrobiol. J.* **28**:275-300.
17. **Labahn, S.K., J.C. Fisher, E.A. Robleto, M.H. Young, D.P. Moser.** 2010. Microbially-mediated aerobic and anaerobic degradation of acrylamide in a western U.S. irrigation canal. *J. Environ. Qual.* **39**:1563–1569.
18. **Kersting, A.B., M. Zavarin, Z. Dai, A. Felmy, R.A Kips, D. Moser, B.A Powell, R. Tinnacher, P. Zhao.** 2010. Subsurface transport of Pu on nanominerals: Teasing out biogeochemical controls in field environments. *Geochim. Cosmochim. Acta.* **74**(12):A508.
19. **Lippmann, M Stute, T Torgersen, DP Moser, J Hall, L Lihung, M Borcsik, RES Bellamy, TC Onstott.** 2010. Dating ultra-deep mine waters with noble gases and Cl-36, Witwatersrand Basin, South Africa. *Geochim Cosmochim. Acta.* **66**:A458.
20. **Chivian, D., EL Brodie, EJ Alm, DE Culley, PS Dehal, TZ DeSantis, TM Gihring, A Lapidus, LH Lin, SR Lowry, DP Moser, PM Richardson, G Southam, G Wanger, LM Pratt, GL Anderson, TC Hazen, FJ Brockman, AP Arkin, CE Dandie, DL Burton, BJ Zebarth, SL Henderson, JR Trevors, C Goyer, F De Maria Guillén-Jiménez, L Morales-Barrera, J Morales-Jiménez.** 2009. Further readings in Geomicrobiology. *Geomicrobiol. J.* **26**:161-162.

21. Navarro, J.B., D.P. Moser, A. Flores, C. Ross, M.R. Rosen, H. Dong, G. Zhang, and B.P. Hedlund. 2009. Bacterial succession within an ephemeral hypereutrophic Mojave Desert playa lake. *Microb. Ecol.* **57**:307-20.
22. Chivian, D., E.J. Alm, E.L. Brodie, D.E. Culley, P.S. Dehal, T.Z. DeSantis, T.M. Gihring, A. Lapidus, L.-H. Lin, S.R. Lowry, D.P. Moser, P. Richardson, G. Southam, G. Wanger, L.M. Pratt, G.L. Andersen, T.C. Hazen, F.J. Brockman, A.P. Arkin, T.C. Onstott. 2008. Environmental genomics reveals a single species ecosystem deep within the Earth. *Science*. **322**:275-278.
23. Costa, K.C., J. Hallmark, D.P. Moser, D. Soukup, S. Labahn, J.B. Navarro, and B.P. Hedlund. 2008. Geomicrobiological changes in two ephemeral desert playa lakes. *Geomicrobiol. J.* **25**:250-259.
24. Young, M.H., J. Woodrow, D.P. Moser, J. Zhu, L. Chen, R.B. Susfalk, G.C. Miller, S.K. Labahn, E.A. Moran, T. Arrowood. 2007. Technical report: Results of laboratory experiments in support of PAM-related research. Desert Research Institute, Division of Hydrologic Sciences Publication, Report #41237.
25. Gihring, T.M., D.P. Moser, L.-H. Lin, M. Davidson, T.C. Onstott, L. Morgan, M. Milleson, T.L. Kieft, E. Trimarco, D.L. Balkwill, M.E. Dollhopf. 2006. The distribution of microbial taxa in the subsurface water of the Kalahari Shield, South Africa. *Geomicrobiol. J.* **23**:415-430.
26. Lin, L.H., P.L. Wang, D. Rumble, J. Lippmann-Pipke, E. Boice, L.M. Pratt, B.S. Lollar, E.L. Brodie, T.C. Hazen, G.L. Andersen, T.Z. DeSantis, D.P. Moser, D. Kershaw, and T.C. Onstott. 2006. Long-term sustainability of a high-energy, low-diversity crustal biome. *Science* **314**:479-482.
27. Onstott, T.C., L.-H. Lin, M. Davidson, B. Mislowack, M. Borcsik, J. Hall, G. Slater, J. Ward, B. Sherwood Lollar, J. Lippmann-Pipke, E. Boice, L. M. Pratt, S. Pfiffner, D. Moser, T. Gihring, Thomas L. Kieft, Tommy J. Phelps, E. Vanheerden, D. Litthaur, M. DeFlaun, R. Rothmel, G. Wanger, G. Southam. 2006. The origin and age of biogeochemical trends in deep fracture water of the Witwatersrand Basin, South Africa. *Geomicrobiol. J.* **23**:369-414.
28. Pfiffner, S.M., J.M. Cantu, A. Smithgall, A.D. Peacock, D.C. White, D.P. Moser, T.C. Onstott, E. van Heerden. 2006. Deep subsurface microbial biomass and community structure in Witwatersrand Basin mines. *Geomicrobiol. J.* **23**:431-442.
29. Slater, G.F., J. Lippmann-Pipke, D.P. Moser, C.M. Reddy, T.C. Onstott, G. Lacrampe-Couloume, B. Sherwood Lollar. 2006. ¹⁴C in methane and DIC in the deep terrestrial subsurface: implications for microbial methanogenesis. *Geomicrobiol. J.* **23**:453-462.
30. Sherwood Lollar, B., G. Lacrampe-Couloume, G.F. Slater, J. Ward, D.P. Moser, T.M. Gihring, L.-H. Lin, and T. C. Onstott. 2006. Unravelling abiogenic and biogenic sources of methane in the Earth's deep subsurface. *Chemical Geology*. **226**:328-339.
31. Lin, L.-H., J.A. Hall, J. Lippmann, J.A. Ward, B. Sherwood Lollar, M. DeFlaun, R. Rothmel, D. Moser, T.M. Gihring, B. Mislowack, and T.C. Onstott. 2005. Radiolytic H₂ in the continental crust: nuclear power for deep subsurface microbial communities. *Geochem. Geophys. Geosys.* **6**:Q07003. [Online.] doi:10.1029/2004GC000907.
32. Kieft, T.L., S.M. McCuddy, T.C. Onstott, M. Davidson, Li-H. Lin, B. Mislowack, L. Pratt, E. Boice, B. Sherwood Lollar, J. Lippmann-Pipke, S.M. Pfiffner, T.J. Phelps, T. Gihring, D. Moser, A. van Heerden. 2005. Geochemically generated,

- energy-rich substrates and indigenous microorganisms in deep, ancient groundwater. *Geomicrobiol. J.* **22**:6 325-335.
33. **Moser, D.P., T.M. Gihring, F.J. Brockman, J.K. Fredrickson, D.L. Balkwill, M.E. Dollhopf, B. Sherwood Lollar, L.M. Pratt, E. Boice, G. Southam, G. Wanger, B.J. Baker, S.M. Pfiffner, L.-H. Lin, and T.C. Onstott.** 2005 *Desulfotomaculum* spp. and *Methanobacterium* spp. Dominate 4-5 km Deep Fault. *Appl. Environ. Microbiol.* **12**:8773-8783.
 34. **Sherwood Lollar, B.S., G. Slater, D.P. Moser, T.M. Gihring, J. Telling, G. Lacrampe-Couloume, L. H. Lin, and T.C. Onstott.** 2005. Abiogenic gases, H₂ autotrophy and methanogenesis in the deep subsurface. *Abstracts of Papers of the American Chemical Society* **229**:U888-U888.
 35. **Ward, J.A., G.F. Slater, D.P. Moser, L.-H. Lin, G. Lacrampe-Couloume, A.S. Bonin, M. Davidson, J.A. Hall, B. Mislowack, R.E.S. Bellamy, T.C. Onstott and B. Sherwood Lollar.** 2004. Microbial hydrocarbon gases in the Witwatersrand Basin, South Africa: Implications for the deep biosphere. *Geochim. Cosmochim. Acta.* **68**:3239-3250.
 36. **Baker, B.J., D.P. Moser, B.J. MacGregor, S. Fishbain, M. Wagner, N. K. Fry, B. Jackson, N. Spoelstra, S. Loos, K. Takai, B. Sherwood-Lollar, J. Fredrickson, D. Balkwill, T.C. Onstott, C.F. Wimpee and D.A. Stahl.** 2003. Related assemblages of sulphate-reducing bacteria associated with ultra-deep gold mines of South Africa and deep basalt aquifers of Washington State. *Environ. Microbiol.* **5**:267-277.
 37. **Lippmann, J., M. Stute, T. Torgerson, D.P. Moser, J. Hall, L. Lin, M. Borcsik, R.E.S. Bellamy and T.C. Onstott.** 2003. Dating ultra-deep mine waters with noble gases and ³⁶Cl, Witwatersrand Basin, South Africa. *Geochim. et. Cosmochim. Acta* **67**:4597-4619.
 38. **Moser, D.P., J.K. Fredrickson, D. Geist, E. Arntzen, A. Peacock, F.J. Brockman, S.-M. Li, T. Spadoni, and J.P. McKinley.** 2003. Biogeochemical processes and microbial characteristics across groundwater-surface water boundaries of the Hanford Reach of the Columbia River. *Environ. Sci. Technol.* **37**:5127-5234.
 39. **Moser, D.P., T.C. Onstott, J.K. Fredrickson, F.J. Brockman, D.L. Balkwill, G.R. Drake, S. Pfiffner, D.C. White, K. Takai, L.M. Pratt, J. Fong, B. Sherwood Lollar, G. Slater, T.J. Phelps, N. Spoelstra, M. DeFlaun, G. Southam, A.T. Welty, B.J. Baker, J. Hoek.** 2003. Temporal shifts in the geochemistry and microbial community structure of an ultra-deep mine borehole following isolation. *Geomicrobiol. J.* **20**:517-548.
 40. **Onstott, T.C., D.P. Moser, S.M. Pfiffner, J.K. Fredrickson, F.J. Brockman, T.J. Phelps, D.C. White, A. Peacock, D. Balkwill, R. Hoover, L.R. Krumholz, M. Borcsik, T. Kieft and R. Wilson.** 2003. Indigenous and contaminant microbes in ultra-deep mines. *Environ. Microbiol.* **5**:1168-1191.
 41. **Lollar, B.S., J. Ward, G. Slater, G. Lacrampe-Couloume, J. Hall, L.H. Lin, D. Moser, T.C. Onstott.** 2002. Hydrogen and hydrocarbon gases in crystalline rock: Implications for the deep biosphere. *Geochim Cosmochim Acta* **66**:A706
 42. **Moser, D.P., H.W. Martin, and P.J. Boston.** 2002. Microbiological sampling in caves and mines. In *Encyclopedia of Environmental Microbiology* (Bitton, G. Ed) John Wiley and Sons, Inc. p. 821-835.
 43. **Barbieri, E., B.J. Paster, D. Hughes, L. Zurek, D.P. Moser, A. Teske, and M.L. Sogin.** 2001. Phylogenetic characterization of epibiotic bacteria in the accessory nidamental gland and in the egg capsules of the Squid *Loligo Pealei* (Cephalopoda: Loliginidae). *Environ. Microbiol.* **3**:151-167.

44. **MacGregor, B.J., D.P. Moser, B.J. Baker, E.W. Alm, M. Maurer, K.H. Nealson, and D.A. Stahl.** 2001. Seasonal and spatial variability in Lake Michigan sediment small-subunit rRNA concentrations. *Appl. Environ. Microbiol.* **67**:3908-3922.
45. **Takai, K., D.P. Moser, M. DeFlaun, T.C. Onstott, and J.K. Fredrickson.** 2001. Archaeal diversity in waters from deep South African gold mines. *Appl. Environ. Microbiol.* **67**:5750-5760.
46. **Takai, K., D.P. Moser, T.C. Onstott, N. Spoelstra, S.M. Pfiffner, A. Dohnalkova, and J.K. Fredrickson.** 2001. *Alkaliphilus transvaalensis* gen. nov., sp. nov., an extremely alkaliphilic bacterium isolated from a deep South African gold mine. *Intern. J. Syst. Bact.* **51**:1245-1256.
47. **Teske, A., T. Brinkhoff, G. Muyzer, D.P. Moser, J. Rethmeier, and H.W. Jannasch.** 2000. Diversity of thiosulfate-oxidizing bacteria from marine sediments and hydrothermal vents. *Appl. Environ. Microbiol.* 2000. **66**:3125-3133.
48. **Leonardo, M.R., D.P. Moser, E. Barbieri, C.A. Brantner, B.J. MacGregor, B.J. Paster, E. Stackebrandt, and K.H. Nealson.** 1999 *Shewanella pealeana*, sp. nov., A member of the microbial community associated with the accessory nidamental gland of the squid *Loligo pealei*. *Intern. J. Syst. Bact.* **4**:1341-51.
49. **Venkateswaran, K., D.P. Moser, M.E. Dollhopf, D.P. Lies, D.A. Saffarini, B.J. MacGregor, D.B. Ringelberg, D.C. White, M. Nishijima, H. Sano, J. Burghardt, E. Stackebrandt, and K.H. Nealson.** 1999. Polyphasic taxonomy of the genus *Shewanella* and description of *Shewanella oneidensis* sp. *Intern. J. Syst. Bact.* **49**:705-724.
50. **MacGregor, B.J., D.P. Moser, E.W. Alm, K.H. Nealson, and D.A. Stahl.** 1997. Crenarchaeota in Lake Michigan sediments. *Appl. Environ. Microbiol.* **63**:1178-1181.
51. **Barbieri, E., J. Gullledge, D. Moser, and C-C Chien.** 1996. New evidence of bacterial diversity in the accessory nidamental gland of the squid (*Loligo pealei*). *Biol. Bull.* **191**:316-317.
52. **Moser, D.P.** Elemental sulfur reduction in *Shewanella putrefaciens*. 1996. Ph.D. Dissertation. University of Wisconsin Milwaukee.
53. **Moser, D.P., J.R. Brozowski, and K.H. Nealson.** 1996. Elemental analysis for biomass determination in the presence of interfering substrates. *J. Microbiol. Methods.* **26**:271-278.
54. **Moser, D.P., and K.H. Nealson.** 1996. Elemental sulfur reduction in facultative anaerobes as an educational tool. *A Focus on Microbiology Education.* Winter:5- American Society for Microbiology, Washington, D.C.
55. **Moser, D.P., and K.H. Nealson.** 1996. Growth of the facultative anaerobe *Shewanella putrefaciens* by elemental sulfur reduction. *Appl. Environ. Microbiol.* **62**:2100-2105.
56. **Moser, D., D. Zarka, C. Hedman, and T. Kallas.** 1995. Plasmid and chromosomal DNA recovery by electroextraction of cyanobacteria. *FEMS Microbiol Lett.* **128**:307-313.
57. **Nealson, K.H., D.P. Moser, and D.A. Saffarini.** 1995. Anaerobic electron acceptor chemotaxis in *Shewanella putrefaciens*. *Appl. Environ. Microbiol.* **61**:1551-1554.
58. **Nishiguchi, M.K., B. Duval, and D.P. Moser.** 1994. Analysis of Dimethylsulfoniopropionate (DMSP) from *Phaeocystis pouchetii* in the waters of McMurdo Sound, Antarctica. *Antarctic J. Rev.* 1994:102-105.
59. **Nealson, K.H., D. Saffarini., D. Moser, and M.J. Smith.** 1994. A spectrophotometric method for monitoring tactic responses of bacteria under anaerobic conditions. *J. Microbiol. Methods.* **20**:211-218.

60. **Moser, D.P., D. Zarka, and T. Kallas.** 1993. Characterization of a restriction barrier and electrotransformation of the cyanobacterium *Nostoc* PCC 7121. Arch. Microbiol. **160**:229-237.
61. **Moser, D.P.** 1992. Characterization of a restriction barrier and electrotransformation of the cyanobacterium *Nostoc* PCC 7121. Masters Thesis. University of Wisconsin Oshkosh.

Book Chapters and Reviewed Technical Reports

1. **Moser, D.P., Willever, K.** 2015. Biogeochemistry of Walker Lake. Close-out report for the United States Fish and Wildlife Service. USFWS Contract Number: 84240-B-J112 / F11AC01287. 38p.
2. **Moser, D.P., S.D. Hamilton-Brehm, J.C. Fisher, J.C. Bruckner, B. Kruger, J. Sackett, C.E. Russell, T.C. Onstott, K. Czerwinski, M. Zavarin, J.H. Campbell.** 2014. Radiochemically-supported microbial communities: a potential mechanism for biocolloid production of importance to actinide transport. Final Report. Desert Research Institute, Nevada University, Reno, NV (United States). 81 p.
<http://www.osti.gov/scitech/biblio/1176791>.
3. **Moser, D.P., J.C. Fisher, J.C. Bruckner, J. Reihle, P. Edmiston, A. Wheatley, C. Jacovides, S. Hamilton-Brehm, J. Dodsworth, B. Hedlund,** 2014. Microbial Biogeochemistry of Ash Meadows Springs. Close-out report for the United States Fish and Wildlife Service. Great Basin Cooperative Ecosystem Studies Unit, Cooperative Agreement CESU 84320-5-J306, DRI Project ID: 10031 and 10937. 101 p.
4. **Hedlund, B.P., D.P. Moser.** Novel thermophilic microorganisms and cellulases for improving second-generation biofuel technologies. 2013. Nevada Renewable Energy Consortium. Closeout report. Submitted 01/04/13.
http://digitalscholarship.unlv.edu/hrc_lectures_events/5/.
5. **Slater, G.F., D.P. Moser, and B. Sherwood Lollar.** 2013. Development of Microbial Characterization Techniques for Low-Permeability Sedimentary Rock. Canadian Nuclear Waste Management Organization special report. NWMO TR-2013-17. 50 p.
6. **Kersting, A.B., M. Zavarin, B.A. Powell, D. Moser, S.A. Carroll, R. Maxwell, Z. Dai, R. Williams, S. Tumey, P. Zhao, R. Tinnacher, P. Huang, R. Kips, H. Mason, J. Begg, J. Fisher, L. Simpkins, T. Zimmerman, J. Jablonski, M. Snow.** 2011.f LLNL SFA FY11 program management and performance report: environmental transport of plutonium. Lawrence Livermore National Laboratory (LLNL), Livermore, CA. LLNL-TR-490259.
7. **Moser, D.P., J.C. Bruckner, M.C. Ehrsam, J. Fisher, J. Newburn.** 2009. Limnological analyses of Devils Hole and Point of Rocks Refugium, Ash Meadows Wildlife Refuge, Nye County, Nevada - Part II: Microbiology. Closeout Report. Great Basin Cooperative Ecosystem Studies Unit Contract No. H8R07060001.
8. **Young, M.H., D. Moser, D. Sada, J. Zhu, J.E. Woodrow, M. Stone, M. Shanafield, C. Schulman, B. Fitzgerald.** 2009 PAM IV FINAL REPORT: Evaluation of the effectiveness of linear anionic polyacrylamide (LA-PAM) when used to reduce seepage in unlined irrigation canals within the 17 Western States. 2009. R.B. Susfalk, Ed., Report to USBR. December. 2009.
9. **Stone, M. C., A.C. Heyvaert, C. Chandler, C.H. Fritsen, R.L. Hershey, D.P. Moser, J. Bruckner, A.D. Lutz, J.C. Memmott, K. Acharya.** 2009 Ecological model for Walker Lake, Nevada., *In* Restoration of a Desert Lake in an Agriculturally Dominated Watershed: The Walker Lake Basin.

10. **Susfalk, R.B., D. Sada, D. Moser, J. Zhu, L. Chen, B.J. Epstein, M. Schmidt, S. Labhan, C. Rosamond, J. Woodrow, B. Fitzgerald, J. Goreham, D. Smith.** PAM III FINAL REPORT: Evaluation of the effectiveness of linear anionic polyacrylamide (LA-PAM) when used to reduce seepage in unlined irrigation canals within the 17 Western States. R.B. Susfalk, Ed., Report to USBR. 08/2009.
11. **Heyvaert, A., S. Chandra, C. Fritzen, R. Hershey, D. Moser, M. Stone, J. Bruckner, A. Lutz, J. Memmot, J. Umek and J. Thomas.** 2009. Contemporary Limnology of Walker Lake, Nevada. Final Report submitted to the Walker Basin Project. In: Restoration of a Desert Lake in an Agriculturally Dominated Watershed: The Walker Lake Basin. (Eds) M.W. Collopy and J.M. Thomas. 04/2009.
12. **Kieft, T.L. and D.P. Moser.** 2006. Preface for Special Issue (Deep Biosphere). Geomicrobiol. J. **23**:343.
13. **Verusub, K. and others.** 2006. Workshops: Scientific Coring in the Lake Tahoe Basin. Eos. Trans. **87**:3 Jan 2006.
14. **Moser, D.P., Boston, P.J. and Martin, H.W.** 2003. Caves and Mines Microbiological Sampling. Encyclopedia of Environmental Microbiology. Wiley. New York.

White Papers and other Works

1. **Stamenković, V., Barross, J., Beaty, D., Beegle, L., Bell, M.S., Breuer, D., Cooper I., Davila, A., Fischer, W.W., Glavin, D., Graham, H., Kirschvink, J., Mischna, M., Moser, D., Mustard, J., Onstott, T.C., Osburn, M., Orphan, V., Russell, M., Sapers H., Spohn T., Templeton, A., Ward, L., and Zacny, K.** 2017. Mars Subsurface Access: From Sounding to Drilling. White Paper Submitted to The National Academies of Sciences, Engineering and Medicine's Astrobiology Science Strategy for the Search for Life in the Universe Meeting January 2018.
2. **Moser, D.P.** 2016. Invited endorsement for *Deep Life: The Hunt for the Hidden Biology of Earth, Mars, and Beyond*. 2016. T.C. Onstott, Princeton University Press. 512 P. ISBN 0691096449.
3. **Onstott, T.C., T. Kieft.** 2015. Meeting report: Developing deep-life continental drilling project. Eos 26-Feb, 2015.
4. **Schultz, A., and D.P. Moser.** 2006. Flight to nowhere. Quiet Birdmen Beam. **63**:3-4.

SELECT RECENT CONFERENCE ABSTRACTS (since 2008) (*Presenter)

1. ***Moser, D.P.** 2018. Microbial degradation of pharmaceuticals, endocrine-disrupting compounds and acrylamide in treated wastewater and agricultural irrigation systems. Global Water Reuse, Food, and Health Workshop, University of MD. 10/8/2018.
2. ***Oswal, H., X. Bai, D. Gerrity, K. Acharya, D. Devitt, D. Moser, J. Edmonds.** 2018. Role of ozone in agricultural water reuse applications. International Ozone Association. Las Vegas, NV, 08/22/18. Talk.
3. ***Gerrity, D, K. Acharya, D. Moser, X. Bai, J. Edmonds.** 2018. Plant uptake of contaminants of emerging concern in agroecosystems irrigated with reclaimed water. USDA PI Meeting, Washington, D.C.
4. ***Moser, D.P. J. Sackett, B. Kruger, S. Hamilton-Brehm, D. Huerta.** 2018. Thinking big by looking small: The Death Valley Regional Flow System as a regional-scale deep biosphere observatory. Devils Hole Workshop. Beatty, NV. 05/2018. Talk.
5. ***Sackett, J., D. Huerta, B. Kruger, S. Hamilton- Brehm, D. Moser.** 2018. A comparative study of prokaryotic diversity and physicochemical characteristics of

- Devils Hole and the Ash Meadows Fish Conservation Facility, a constructed analog. Devils Hole Workshop. Beatty, NV. 05/2018. Poster.
6. ***Moser, D.P., J. Sackett, B. Kruger, S. Hamilton-Brehm.** 2018. Deep biosphere windows into the Death Valley Regional Flow System. 57th Meeting of the Arizona/Nevada American Society for Microbiology. Las Vegas, NV 04/2018. Talk.
 7. ***Papp, K., F. Bacaro, D. Gerrity, D. Moser.** 2018. Using quantitative stable isotope probing to identify carcinogen-degrading bacteria in wastewater. 57th Meeting of the Arizona/Nevada American Society for Microbiology. Las Vegas, NV 04/2018. Poster.
 8. ***Sackett, J.D., D.P. Moser.** 2018. Prokaryotic biogeochemistry of the Truckee River hyporheic zone. 57th Meeting of the Arizona/Nevada American Society for Microbiology. Las Vegas, NV 04/2018. Poster.
 9. ***Summers, R., M. Snow, J. Sackett, D. Moser.** 2018. Microbial communities from soil and coprolites. 83rd Annual Meeting, Society for American Archaeology. Washington D.C. 04/2018. Talk.
 10. ***Horton, A.C. B.M. Jones, J.H. Campbell, A. Campbell, D.P. Moser, S.D. Hamilton-Brehm.** 2017. Sequenced genomes of subsurface microorganisms suggest cultivation strategies and reveal environmental adaptations. Devils Hole Workshop, Beatty, NV 05/2017. Poster
 11. ***Kruger, B.R., Moser, D.P., Hershey, R.L.** 2017. Constraining the age of water in Southern Nevada aquifers: Investigating microbial controls on radiocarbon signatures of dissolved organic carbon. Devils Hole Workshop, Beatty, NV 05/2017. Poster.
 12. ***Moser, D., S. Hamilton-Brehm, D. Huerta, B. Kruger, J. Sackett.** 2017. Deep biosphere Windows of the Death Valley Regional Flow System. Devils Hole Workshop, Beatty, NV 05/2017. Talk.
 13. ***Sackett, J.D., D.C. Huerta, B.R. Kruger, S.D. Hamilton-Brehm, D.P. Moser.** 2017. Comparative analysis of the microbiology and aqueous geochemistry of Devils Hole and the Ash Meadows Fish Conservation Facility. Devils Hole Workshop, Beatty, NV 05/2017. Talk.
 14. ***Sackett, J.D., S.D. Hamilton-Brehm, B.R. Kruger, S.W. Mullin, G.P. Wanger, V.J. Orphan, D.P. Moser.** 2017. Planktonic vs. attached deep subsurface microbial communities of the Death Valley Regional Flow System, with special reference to microbial dark matter lineages. Devils Hole Workshop, Beatty, NV 05/2017. Poster.
 15. ***Hicks, M.L., Ruggiero, M.J., Willever, K., Hamilton-Brehm, S.D., Moser, D.P., Campbell, J.H.** 2017. Characterization of potentially novel Rhodobacteraceae from Walker Lake, Nevada. Missouri Academy of Science Annual Conference, Lindenwood University, 22 April 2017. Poster
 16. ***Moser, D.P., J. Sackett, B. Kruger.** 2017. The Death Valley Regional Flow System: a fault-controlled oasis for deep life beneath the Mojave Desert. NeLLi 2017: New Lineages of Life to New Functions. DOE Joint Genome Institute, Walnut Creek, CA. 04/2017.
 17. ***Datta, S., J. Blank, R.J. Leveille, D.P. Moser.** 2016. Basaltic caves and potential for biosignature development and preservation. GSA Annual Meeting in Denver, Colorado, USA, 01/2016. Talk.
 18. ***Moser, D.P., K.L. Willever, J.C. Fisher, J.D. Sackett, B. Kruger, J.C. Bruckner, R.L. Hershey, C.H. Fritsen, J. Memmot, Derek Bloomquist,** 2016. Linkages between limnology, biogeochemistry, and microbial communities of a threatened terminal lake ecosystem: Walker Lake, Nevada, USA. Terminus Lakes Workshop. University of NV Reno, Reno, NV. 08/2016. Poster.
 19. ***Kruger, B.K., J.P. Werne, D.K. Branstrator, T.R. Hrabik, Y. Chikaraishi, N.**

- Ohkouchi, R. Hershey, D. Moser, E.C. Minor.** 2016. Applying natural abundance radiocarbon analysis to understand ecosystem dynamics in surface and groundwater: Insights and precautions. American Society for Limnology and Oceanography (ASLO) Annual Meeting. Salt Lake City, UT. 04/2016. Talk.
20. ***Hamilton-Brehm, S.D., L. Hristova, S. Edwards, J. Wedding, and D. Moser.** 2016. Ancient human mtDNA sequence and radiocarbon analysis of quids from the Mule Springs Rockshelter, Southwestern Nevada. June 2016. Society of American Archeology (SAA) Meeting, Orlando, FL. 05/2016. Talk.
21. ***Sackett J.D., D. Huerta D., S.D. Hamilton-Brehm, Kruger B.R., Moser D.P.** 2016. Microbiological diversity of Devils Hole and the Ash Meadows Fish Conservation Facility, a manmade analog. Nevada-NASA 2016 Statewide Meeting for NASA EPSCoR/NASA Space Grant, Reno, NV. 04/2016. Poster.
22. ***Huerta D., J.D. Sackett, S.D. Hamilton-Brehm, B.R. Kruger, Moser D.P.** 2016. Comparative microbial analysis of an endangered fish habitat, Devils Hole, and a manmade replica. ASM Microbe 2016, Boston MA. 06/2016. Poster.
23. ***Sackett, J., D. Moser,** 2015. Single cell genomics-enabled analysis of microbial dark matter from subsurface environments. School of Life Sciences. University of Nevada, Las Vegas, 09/16/2015. Departmental Colloquium. Talk.
24. ***Moser, D.P., J. Amend, S.D. Hamilton-Brehm, B. Kruger, L. Momper, S. Mullin, V. Orphan, J. Sackett, G. Wanger.** 2015. Fault-controlled deep ecosystems of the Death Valley Extensional Zone. AbSciCon. Chicago, IL 06/18/2015. Talk.
25. **Wanger, G., *S. Mullin, B. Kruger, S. Hamilton-Brehm, J. Sackett, L. Momper, D. Moser, V. Orphan, R. Bhartia, J. Amend.** 2015. Microscopic and spectroscopic analysis of microbes colonizing mineral coupons incubated at ~750 m depth within a fractured rock aquifer near Death Valley, CA, USA. AbSciCon. Chicago, IL 06/18/2015. Talk.
26. ***Osburn, J.P., Amend, D.E., LaRowe, G Wanger, L.M. Momper, B. Kiel-Reese, M. El-Naggar, R. Bhartia, V. Orphan, Y. Jangir, and D. Moser.** 2015. Habitability of the terrestrial deep subsurface: Homestake Mine, SD, USA. AbSciCon. Chicago, IL 06/18/2015. Talk.
27. ***Sackett, J.D., J. Eisen, S.D. Hamilton-Brehm, B.P. Hedlund, B. Kruger, T.C. Onstott, R. Stepanauskas, T. Woyke, D.P. Moser.** 2015. Microbial dark matter hotspots and their role in deciphering the deep genealogy of life. SURF Science Meeting, South Dakota School of Mines and Technology. Rapid City, SD. 05/15/2015. Poster.
28. ***Moser, D., J. Amend, R. Bhartia, J. Eisen, M. El-Naggar, S. Hamilton-Brehm, D. Huerta, Y. Jangir, B. Kruger, L. Momper; T.C. Onstott, J. Sackett, R. Stepanauskas, A. Waddle, G. Wanger, T. Woyke.** 2015. The Natural and Manmade Windows into the Deep Biosphere from around the Death Valley Regional Flow System. Devils Hole Workshop, Ash Meadows National Wildlife Refuge, NV, 05/07/2015. Talk.
29. ***Sackett, J.D., B. Kruger, S. Hamilton-Brehm, J.C. Fisher, J.C. Bruckner, J. Reihle, P. Edmiston, A. Wheatley, C. Jacovides, J. Eisen, T.C. Onstott, B.P. Hedlund, T. Woyke, R. Stepanauskas, D.P. Moser.** 2015. Searching for microbial dark matter in the Death Valley Regional Flow System. Devils Hole Workshop, Ash Meadows National Wildlife Refuge, NV, 05/07/2015. Talk.
30. ***Hamilton-Brehm, S.D., L.E. Stewart, J. Sackett, B. Kruger, G. Wanger, J. Fisher, D.P. Moser.** 2015. Thermophilic microbial populations of the Lower

- Carbonate Aquifer of the Death Valley Regional Flow System. Devils Hole Workshop, Ash Meadows National Wildlife Refuge, NV, 05/07/2015. Talk.
31. ***Kruger, B.R., D.P. Moser, R.L. Hershey.** 2015. Constraining the age of water in Southern Nevada aquifers: Investigating microbial controls on radiocarbon signatures of dissolved organic carbon. Devils Hole Workshop, Ash Meadows National Wildlife Refuge, NV, 05/07/2015. Poster.
 32. ***Hristova, L., S.D. Hamilton-Brehm, D.P. Moser.** 2015. Molecular archaeology: human mitochondrial DNA from 'ancient' samples. Nevada Archaeological Association. Wendover, NV, 03/28/2015.
 33. ***Willever, K., M. Khan, S.D. Hamilton-Brehm, and D.P. Moser.** 2014. Microbial biogeochemistry of a transitioning terminal lake ecosystem; Walker Lake, NV. Ecological Society of America, Sacramento, CA. Invited Talk.
 34. ***Moser, D.P., S.D. Hamilton-Brehm, G. Zhang, J. Fisher, B. Kruger, J. Thomas, A. Wheatley, L. Stewart, T.C. Onstott.** 2014. Natural and manmade windows into deep microbial communities of the Death Valley Regional Flow System, USA. International Society for Subsurface Microbiology (ISSM). Asilomar, CA. 10/07/2014. Talk.
 35. ***Sherwood Lollar, B., C.J. Ballentine, G. Holland, G.F. Slater, and D.P. Moser.** 2013. The Deep Cool Terrestrial Biosphere: Habitability of ancient fracture waters of the Canadian Shield. American Geophysical Union. San Francisco, CA. 12/08/2013. Invited Talk.
 36. * **Kieft, T.L., T.C. Onstott, M. Lau, B. Sherwood Lollar, D.P. Moser, R. Stepanauskas, M. Pullin, E. van Heerden.** 2013. Probing the deep biosphere via mines: lessons for deep drilling projects. DOSECC/International Continental Drilling Program Annual Meeting. Arrowhead, CA. Talk.
 37. ***Thomas, J.M., D.P. Moser, J.C. Fisher, J. Reihle, A. Wheatley, R.L. Hershey, C. Baldino, D. Weissenfluh.** 2013. Using Water Chemistry, Isotopes and Microbiology to Evaluate Groundwater Sources, Flow Paths and Geochemical Reactions in the Death Valley Flow System, USA. WRI Conference. Grenoble, France. 2013. Invited Talk.
 38. **Sherwood Lollar, B., *G. F. Slater, D. Moser.** 2013. Development of microbial characterization techniques for low-permeability sedimentary rocks. Nuclear Waste Management Organization (of Canada) Annual Science Meeting. 05/24/2013. Talk.
 39. ***Onstott, T.C., E. Boyd, T. Kieft, L. Murdoch, D.P. Moser.** 2013. Project Summary for Water-Enthalpy-Life (WEL). Deep Carbon Observatory. High-pressure Sand Pit Workshop, Veyrier-du-Lac, France. Contributor. Talk.
 40. ***Grim, S., A. Boetius, B. Briggs, W. Brazelton, S. D'Hondt, K. Edwards, M. Fisk, E. Gaidos, J. Gralnick, K.-U. Hinrichs, C. Lazar, H. Lavalleur, V. Marteinson, D. Moser, B. Orcutt, K. Pedersen, R. Popa, A. Ramette, M. Schrenk, J. Sylvan, A. Smith, E. Walsh, M. Sogin, F. Colwell.** 2013. The deep cool terrestrial biosphere: habitability of ancient fracture waters of the Canadian Shield. American Geophysical Union. San Francisco, CA. 12/08/2013. Invited Talk.
 41. ***Hamilton-Brehm, S.D., J. Fisher, G. Zhang, D.P. Moser.** Cultivation of cosmopolitan deep subsurface microbial lineages from the southern Great Basin and ultra-deep African gold mines. Devils Hole Workshop. Furnace Creek, CA, 05/02/2013. Poster.
 42. ***Zhang, G., P. Edmiston, J. Fisher, S.D. Hamilton-Brehm, L. Kryder, J. Walker, D. Lacy, D.P. Moser.** Microbial community dynamics during a long-term deep well

- pump test in Amargosa Valley, NV. Devils Hole Workshop. Furnace Creek, CA, 05/02/2013. Poster.
43. ***Blunt, S.M., M.R. Rosen, J.C. Fisher, D.P. Moser.** 2012. Microbial transformation of 17 β -estradiol by bacterial isolates from the Las Vegas Wash. Lake Mead Workshop, Las Vegas, NV, 06/2012. Talk.
 44. ***Knue, J., J. Fisher, D.P. Moser.** 2012. Responses of Devils Hole cyanobacterial populations to historic shifts in nutrient chemistry: A potential explanation for the catastrophic declines in the endangered Devils Hole Pupfish. Southern Nevada Regional Science and Engineering Fair, UNLV, 03/2012. Poster.
 45. ***Moser, D., J. Fisher, J. Bruckner, M. Zavarin, C. Russell, K. Czerwinski, R. E. Lindvall, S. Roberts, T. Onstott, B. Sherwood-Lollar.** 2012 Radiochemically-supported microbial communities: a potential mechanism for biocolloid production of importance to actinide transport. DOE Subsurface Biogeochemical Research (SBR) Annual PI Meeting. Washington, DC. Poster.
 46. ***Escobar, A., S. Hamilton-Brehm, K. Chu, B. Sherwood Lollar, D. Moser.** 2012. Microbiological Characterization of 720m Hypersaline Silurian/Devonian Sedimentary Chronosequence. REU Program Poster Session, UNLV, Las Vegas, NV. 08/06/2012. Poster.
 47. ***Lawson, M., S. Hamilton-Brehm, D. Rhode, D. Moser.** 2012. Isolation and Characterization of Microorganisms from 3,000 to 8,000 year-old Human Coprolites. REU Program Poster Session, UNLV, Las Vegas, NV. 08/06/2012. Poster.
 48. ***Moser, D.P., B. Sherwood Lollar, G. Slater, T.C. Onstott, J.C. Bruckner, J.C. Fisher, J. Reihle.** 2012. Finding the biotic fringe in the continental deep subsurface. American Society for Microbiology. San Francisco, CA. 969B. 06/2012. Poster.
 49. ***Blunt, S.M., M.R. Rosen, J.C., Fisher, D.P. Moser.** 2012. Microbial transformation of 17 β -estradiol by bacterial isolates from the Las Vegas Wash. Lake Mead Workshop, Las Vegas, NV, 04/2012. Talk.
 50. ***Blunt, S.M., M. Benotti, J.C. Bruckner, J.C. Fisher, S. Snyder, M. Rosen, and D.P. Moser.** 2010. The potential for biodegradation of endocrine disrupting compounds by microorganisms in Las Vegas Wash and Lake Mead, Nevada. AZ-NV Branch, American Society for Microbiology, UNLV, Las Vegas, NV, 04/2010. Poster.
 51. ***Blunt, S.M., M. Benotti, J.C. Bruckner, J.C. Fisher, S. Snyder, M. Rosen, and D.P. Moser.** 2010. The potential for biodegradation of endocrine disrupting compounds by microorganisms in Las Vegas Wash and Lake Mead, Nevada. AZ-NV Branch, American Society for Microbiology, UNLV, Las Vegas, NV, 04/2010. Poster.
 52. ***Leonardo, M.R., A.B. Michaud, J.C. Bruckner, J.C. Fisher, J.A. Dodsworth, and D. P. Moser.** 2010. *Shewanella* spp. diversity and abundance in Keane Spring, Death Valley National Park. Nevada. AZ-NV Branch, American Society for Microbiology, UNLV, Las Vegas, NV, 04/2010. Talk.
 53. ***Leonardo, M.R., A.B. Michaud, and D.P. Moser.** 2010. *Shewanella* spp. abundance and diversity in Keane Wonder Spring, Death Valley National Park, Inyo County, California. Devils Hole Workshop, Furnace Creek, CA, 05/2010. Talk.
 54. ***Bruckner J.C., J.C. Fisher, M. Zavarin, K. Czerwinski, M.J. Daly, R.E. Lindvall, M. Marshall, C. Russell, and D.P. Moser.** 2010. Characterization of microbial communities in subsurface nuclear blast cavities of the Nevada Test Site. DOE-

- Environmental Remediation Sciences Program (ERSP) 4th Annual PI meeting, Lansdowne, VA, 04/2010. Poster.
55. ***Newburn, J., J. Bruckner, J. Fisher, J. Dodsworth, and D.P. Moser.** 2010. Ash Meadows National Wildlife Refuge, A Biodiversity Hotspot? Nevada. AZ-NV Branch, American Society for Microbiology, UNLV, Las Vegas, NV, 04/2010. Poster.
 56. ***Tran, J., M. Leonardo, P. Edmiston, and D. Moser.** 2010. Accessing the potential of human microbial community signatures in the study of ancient fecal materials. Nevada. AZ-NV Branch, American Society for Microbiology, UNLV, Las Vegas, NV. 04/2010. Poster.
 57. ***Blunt, S., M. Benotti, J. Fisher, J. Bruckner, S. Snyder, M. Rosen, and D. Moser.** 2009. The potential for biodegradation of endocrine disrupting compounds by microorganisms in Las Vegas Wash and Lake Mead, Nevada. SETAC North America 30th annual meeting, New Orleans, Louisiana, 11/2009. Poster.
 58. ***Blunt S.M., J.C. Bruckner, J.C. Fisher, S.K. Labahn, and D.P. Moser.** 2009. Biotransformation of steroid estrogens by microorganisms in Las Vegas Wash and Lake Mead, Nevada. Q-435. 109th General Meeting of the American Society for Microbiology, Philadelphia, PA, 05/2009. Poster.
 59. ***Blunt, S., J. Fisher, J. Bruckner, and D. Moser.** 2009. Diversity of estrogen degrading microorganisms in Las Vegas Wash and Lake Mead, Nevada. Lake Mead Science Symposium Program, Las Vegas, NV, 01/2009. Poster.
 60. ***Bruckner J.C., J.C. Fisher, R. Lindvall, M. Zavarin, K. Czerwinski, C. Russell, and D.P. Moser.** 2009. Microbial communities of underground nuclear blast cavities. N-124. 109th General Meeting of the American Society for Microbiology, Philadelphia, PA., 05/2009. Poster.
 61. ***Bruckner, J.C. J.C. Fisher, and D.P. Moser.** 2009. Microbial ecology of an alkaline, saline, terminus lake (Walker Lake, NV). Terminus Lakes Workshop, Reno, NV, 10/2009. Poster.
 62. ***Bruckner J.C., J.C. Fisher, M. Zavarin, K. Czerwinski, M.J. Daly, R.E. Lindvall, M. Marshall, C. Russell, and D.P. Moser.** 2009. Characterization of microbial communities in subsurface nuclear blast cavities of the Nevada Test Site. DOE-Environmental Remediation Sciences Program (ERSP) 4th Annual PI meeting, Lansdowne, VA, 04/2009. Poster.
 63. ***Ehram M.C., S.K. Labahn, Fisher J.C., Bruckner J.C., Bower M., Wilson K., Fisk T., and D.P. Moser.** 2009. Devil's Hole: Observing ecosystem dynamics and relationships with a neighboring spring. N-026. 109th General Meeting of the American Society for Microbiology, Philadelphia, PA, 05/2009. Poster.
 64. ***Fisher, J.C., J.C. Bruckner, B. Planer-Friedrich, R.L. Hershey, D.P. Moser.** 2009. Arsenic biogeochemistry of Walker Lake, NV. Terminus Lakes Workshop, Reno, NV. Poster.
 65. ***Fisher, J.C., S.A. Faye, K.R. Czerwinski, D.P. Moser.** 2009. Microbial effects on the sorption of uranium: kinetics and distribution ratios for tuff samples from the Nevada Test Site. Migration 2009, Richland, WA, 08/2009. Poster.
 66. ***Michaud A.B., M.R. Leonardo, J.C. Bruckner, J.C. Fisher, J. Dodsworth, and D.P. Moser.** 2009. *Shewanella* diversity and abundance in Keane Wonder spring, Death Valley National Park. N-136. 109th General Meeting of the American Society for Microbiology, Philadelphia, PA, 05/2009. Poster.
 67. ***Bruckner, J.C., C. H. Fritsen, J. C. Memmot, R. L. Hershey, A. Heyvaert, D.P. Moser.** 2008. Microbial communities of a saline, alkaline terminal lake (Walker Lake,

- NV). June 2008, Boston, MA. American Society for Microbiology Annual Meeting. N-116, 06/2008. Poster.
68. **Chivian, D., E.J. Alm, *E.L. Brodie, D.E. Culley, T. Gihring, A. Lapidus, L.H. Lin, S. Lowry, D.P. Moser, P. Richardson, G. Southam, G. Wanger, L.M. Pratt, A.P. Arkin, T.C. Hazen, F.J. Brockman, T.C. Onstott.** 2008. Environmental genomics reveals a single species ecosystem deep within the Earth. AbSciCon, Santa Clara, CA, 04/2008. Poster.
 69. ***Ehrsam, M.E., K. Acharya, M. Bower, T. Fisk, M. Stone, D.P. Moser.** 2008. Determining microbial relationships throughout Devils Hole and Related Springs. Devils Hole Workshop. Furnace Creek, CA, 05/2008. Poster.
 70. ***Ehrsam, M.C., S.K. Labahn, T. Fisk, M. Bower, K. Acharya, M. Stone, D.P. Moser.** 2008. Exploration of the Microbial Communities at Devils Hole. June 2008, Boston, MA. American Society for Microbiology Annual Meeting. N-116, 06/2008, Poster.
 71. ***Labahn, S.K., M.C. Ehrsam, S.M. Blunt, J. Wallace , J.C. Bruckner, D.P. Moser.** 2008. Microbial Degradation of Acrylamide in Canal Systems. Boston, MA. American Society for Microbiology Annual Meeting, 06/2008. Poster.
 72. ***Moser, D.P., J.C. Plata, S. Qian, J. Bruckner, C.P McKay, and H. Sun.** 2008. Substantial bacterial diversity in surface soil from the Atacama Desert. AbSciCon, Santa Clara, CA, 04/2008. Poster.

TEACHING AND STUDENTS

Teaching

- BIOL 702 - Success in Graduate School and Beyond.** UNLV, Fall 2018.
- BIOL 444/644 - Astrobiology,** new course (with C. Fritsen, B. Hedlund, H. Sun,) UNLV/UNR, Fall 2005
- BIOL 418/618 - Microbial Ecology,** new course (with B. Hedlund) UNLV, Spring 2005, 2006, Guest lectures in most years since.
- BIO SCI 512 - Limnology Laboratory,** University of Wisconsin Milwaukee, Teaching Assistantship, 1996
- BIO 390 - Biotechnology Laboratory,** University of Wisconsin Oshkosh, Teaching Assistantship, 1991
- BIO 309 - Bacteriology Laboratory,** University of Wisconsin Oshkosh, Teaching Assistantship, 1989

Post-undergraduate hourly employees

- Daniel Walsh,** from Nevada State College, 2016-2017
- Mary Devita,** from University of Hawaii, 2013–2014
- Kaitlyn Hughes,** from University of New Mexico, 2013
- Monica Lawson,** from UNLV, 2012–2013
- Patty Edmiston,** from University of Arizona, 2009–2012

Undergraduate students supported

- Penelope Borg,** UNLV, SOLS, hourly employee, 2018–Present
- Rudolph Dagher,** UNLV, SOLS, volunteer, 2015–2016

Sabrina Han, UNLV, SOLS, volunteer, 2015–2016
Nicole Thomas, UNLV, SOLS, hourly employee, 2015–Present
Desiree Huerta, UNLV, SOLS, ASM Fellowship, 2014–2016
Anthony Waddle, UNLV, SOLS, hourly employee, 2014–2015
Lidia Hristova, UNLV, Anthropology, hourly employee, 2014–2016
Memona Kahn, UNLV, SOLS, volunteer/Scholarships/Honors thesis, 2012–2015
Austin McKenna, UNLV, SOLS, volunteer, 2012–2013
Joseph Peacock, UNLV, SOLS, hourly employee, summer 2012
Adrian Escobar, College of Southern NV, 2011–2013
Monica Lawson, UNLV, SOLS, NSF EPSCoR Fellow, 2011–2013
Alexandra Wheatley, UNLV, SOLS, hourly employee, 2009–2013
Jon Tran, UNLV SOLS, NSF EPSCoR Fellow, 2009–2011
Bradley Davey, UNLV, SOLS, NSF EPSCoR Fellow, 2008
Jessica Newburn, UNLV, SOLS, NSF EPSCoR Fellow, 2008–2012
Mary Ehrsam, UNLV, SOLS, multiple fellowships (American Society for Microbiology, NSF EPSCoR), 2007–2009
Karen Levy, UNLV, SOLS, NSF EPSCoR Undergrad Fellow, 2006
Juan Plata, UNLV, Engineering, multiple fellowships, NSF EPSCoR, McNair, 2007–2009
Stephanie Georges, UNLV, SOLS, Independent Study Credits, 2008
Brett Walters, UNLV, SOLS, hourly employee, 2007
Leah Sherman, UNLV, SOLS, volunteer and hourly employee, 2006–2007
Julius DeLeon, UNLV, SOLS, hourly employee, 2006–2007
Adelbert Viloso, UNLV, SOLS, hourly employee, 2006–2007
Journet Wallace, UNLV, SOLS, Lab manager, 2005–2008
Stephanie Kay, UNLV, SOLS, hourly lab worker, 2005

NSF research experience for undergraduates program: summer students

Laura Stewart, Madison Area Technical College, 2013
Monica Lawson, UNLV, 2012
Adrian Escobar, UNLV, 2012
Chelsey VanDrisse, University of Minnesota, 2011
Eric Hughes, Arizona State University, 2010
Alex Michaud, Coe College, Cedar Rapids, IA, 2009
Christina Jacovides, Yale University, 2008

Post-docs, professionals, and visiting scholars supported

Dr. Katerina Papp, *Ph.D.* Northern Arizona University; co-advised with Daniel Gerrity, UNLV. 2017 - Present
Dr. Brittany Kruger, *Ph.D.* University of Minnesota; *Staff Scientist, Lab/NASA Astrobiology Institute Project Manager*, 2013 – Present
Dr. Scott Hamilton-Brehm, *postdoc* from ORNL, 2012–2015; *Rank I Assistant Professor*, 2015; *Rank II Assistant Professor*, 2015
Dr. Michael Leonardo, *Paid as project consultant* – Coe College, IA, 2010
Dr. Gaosen Zhang, *postdoc* from CAREERI, China, 2009–2013; *Rank I Assistant Professor*, 2014; *Rank II Assistant Professor*, 2014
Dr. Jenny C. Fisher, *postdoc*, from University of Georgia, 2008–2012

Dr. James C. Bruckner, *postdoc*, from JPL, 2007–2011; *Rank I Assistant Professor*, 2012; *Rank II Assistant Professor*, 2013

Graduate student committee service

Dengxun Lai, UNLV, SOLS, 2018–present
Nancy Nou, UNLV, SOLS, 2018–present
Rachel Garth, University of Kansas, Department of Geology, 2015
Ariel Friel, UNLV, SOLS, 2015–present
Amanda Prisbry, UNLV, SOLS, 2014–2016
Scott Thomas, UNLV, SOLS, 2012–present
Tim Alba, UNLV, SOLS, 2012–2013
John Perry, UNLV, SOLS, 2011
Trista Vick, UNLV, SOLS, 2007–2008
Linh Nguyen, UNLV, SOLS, 2006–2007
Ryan McDonald, UNLV, SOLS, 2005

Graduate students (research/major advisor)

Daniel Walsh, UNLV SOLS, Ph.D. Program. *Perchlorate metabolism for Mars analog study*. 2017–present
Joshua Sackett, UNLV SOLS, Ph.D. Program. *Exploration of microbial dark matter using single cell genomics*. 2012–present
Katherine Willever, UNLV SOLS, M.S. Program. *Microbial ecology of a desert terminal Lake: Walker Lake, Nevada*. 2012–2016
Susanna Blunt, UNLV, SOLS, M.S. Program. *Microbial impacts on endocrine disrupting contaminants: Las Vegas Wash and Lake Mead, Nevada*. 2007–2012
Stephanie Labahn, UNLV, SOLS, M.S. Program. *Microbially-mediated removal of acrylamide from canal systems*. 2005–2008

High school students

Simran Shah, The Meadows High School, Las Vegas, Nevada, Summer 2015
Shalini Shah, The Meadows High School, Las Vegas, Nevada, Summer 2015
David Lynn, Adelson High School, Las Vegas, Nevada, 2013
Chance Creigh, Bishop Gorman High School, Las Vegas, Nevada, 2013
Joseph Knue, Northwest Technical Academy, Las Vegas, Nevada, 2011–2012
Alexandra Wheatley, Northwest Technical Academy, Las Vegas, Nevada, 2010
Stephen Gibson, Meadows Upper School, Las Vegas, Nevada, summer 2010

SELECT INVITED LECTURES (Since 2008)

1. **Moser, D.P.** *Deep Life and Lessons from the fringes of microbial biology*. Department of Geological Sciences and Engineering Colloquium Speaker Series, University of Nevada Reno, Reno, NV 10/29/18.
2. **Moser, D.P.** *The last biome: unseen ecosystems of the continental deep subsurface*. Nevada State College, Henderson, NV, 10/18/18.
3. **Moser, D. P.** *DRI's Environmental Microbiology Laboratory: New Tools for Tracking Biological Contamination and Degradation*. Southern Nevada Water Authority. Las

Vegas, NV 02/08/18

4. **Moser, D.P.** *DRI's Microbial Ecology and Astrobiology Labs: Microbiological Biogeochemistry at the Intersection of Biology and Hydrology*. US Geological Survey, Henderson, NV. 09/20/17.
5. **Moser, D.P.** *Subsurface microbial worlds of the Nevada National Security Site and the death Valley Regional Flow System*. Nevada Site Specific Advisory Board, Plenary Talk, Educational Session. 08/16/17.
6. **Moser, D.P.** *Lessons from the fringes of microbial biology*. South Dakota School of Mines and Technology. Departmental Lecture. Applied Biological Sciences. Rapid City, SD., 03/17.
7. **Plenary Talk - Moser, D.P., J. Amend, R. Bhartia, M. El-Naggar, Y. Gorby, M. Osburn, K. Nealson, V. Orphan, S. Hamilton-Brehm, Y. Jangir, B. Kiel Reese, B. Kruger, L. Momper; J. Sackett, G. Wanger.** *The NASA Astrobiology Institute's Life Underground Node: Spatially-distributed deep life studies at SURF*. Plenary Talk: SURF Science Meeting. South Dakota School of Mines and Technology, Rapid City South Dakota, 05/19/15.
8. **Moser, D.P.** *The Death Valley Regional Flow System: a fault controlled deep life oasis of geological, seismic and societal significance*. Deep Carbon Observatory Deep Life Workshop to Develop and ICDP Project. GeoForschungZentrum, Potsdam, Germany, 11/03/2014.
9. **Moser, D.P., K. Willever, M. Khan, J.C. Bruckner, J.C. Fisher, S. Hamilton-Brehm.** *Baseline microbial biogeochemistry of a terminal lake in transition, Walker Lake, Nevada*. Ecological Society of America, Sacramento, CA.
10. **Keynote Lecture - Moser, D.P., S. Hamilton-Brehm, G. Zhang, A. Wheatley, K. Willever, A. McKenna, M. Khan, M. Devita.** *Discussions with the unseen witness: DRI's Environmental Microbiology and Astrobiology Labs*. Desert Research Institute, Annual Executive Staff Meeting, 11/2013.
11. **Keynote Address - Moser, D.** *Underground microbial oases of the Southern Great Basin, USA*, 2013 Devils Hole Workshop. Furnace Creek, CA, 05/03/13.
12. **Keynote Address - Moser, D.P.** *Enigmatic deep and atmospheric life*. Air Monitoring Users' Group. Annual Conference. Palace Station Casino, 04/30/13.
13. **Plenary Address - Moser, D.P., B. Sherwood Lollar, T. Kieft, J.C. Fisher, J. Bruckner, S. Hamilton-Brehm, A. Wheatley.** *Enigmatic deep life: insights from microbial "sightings" in continental fractured rock habitats*. Alfred P. Sloan Foundation's Deep Carbon Observatory Annual Science Conference. National Academy of Sciences, Washington DC, 03/04/13.
14. **Moser, D.P.** *Life Underground*. Microbial Activity in the Deep Biosphere, C-DEBI Activity Theme Workshop, Bigelow Lab, Booth Bay, ME, 09/2013. Invited Talk.
15. **Keynote Address - Moser, D.P., S. Hamilton-Brehm, J.C. Fisher, J.C. Bruckner, J. Reihle, A. Wheatley, G. Zhang.** *Underground Microbial Oases of the Southern Great Basin, USA*, Devils Hole Workshop. Furnace Creek, CA, 05/2013.
16. **Moser, D.P., B. Sherwood Lollar, G.F. Slater, T.C. Onstott, J. Bruckner, J. Fisher, J. Reihle.** *Finding the biotic fringe in the continental deep subsurface*. (Mary Voytek, NASA). Session: The Limits of Microbial Life. American Society for Microbiology, Annual Meeting, San Francisco, CA, 06/2012. Invited Talk – converted to poster.
17. **Keynote Lecture - Moser, D.P.** *Looking for life in all the wrong places: radiation-fueled deep life at NNSS and beyond*. Air Monitoring Users Group Annual Meeting, Palace Station, Las Vegas, NV, 04/27/12.

18. **Moser, D.P.** *Underground Observatories*. Deep Carbon Observatory Deep Life Mini workshop. Hilton Hotel, San Francisco, CA, 12/2012.
19. **Moser, D.P.** *Deep microbial ecosystems of the U.S. Great Basin: a second home for Desulforudis audaxviator?* Session: A Census of Deep Life: Putting a Face on the Subsurface Biosphere. American Geophysical Union, San Francisco, CA, 12/2012.
20. **Moser, D.P.** *Some new windows into terrestrial deep subsurface microbial Ecosystems*. American Geophysical Union. San Francisco, CA, December 20/2011.
21. **Moser, D.P.** *Microbial ecosystems from the deepest regions of the terrestrial deep biosphere*. American Geophysical Union. B54B Life Under Stress III. Special session in memory of Dr. James H. Scott. San Francisco, CA, 12/2011.
22. **Moser, D.P.** *An update on deep Earth life at the NNSS and implications for transport and cleanup scenarios*. Community Environmental Monitoring (CEMP) Workshop, Brian Head, UT, 07/2011.
23. **Moser, D.P., J. Bruckner, P. Edmiston, J. Newburn, and J. Fisher.** *Status Report. Desert windows into deep microbial ecosystems of Death Valley, Amargosa Valley, and the Nevada National Security Site*. Devils Hole Workshop, Furnace Creek, CA, 05/2011.
24. **IGERT Seminar Series - Moser, D.P.** *The Dark Planet: Explorations of Earth's Intraterrestrial Biosphere*. Montana State University, Bozeman, MT, 04/2011.
25. **Keynote Lecture - Moser, D.P.** *The Dark Planet: Explorations of Earth's Intraterrestrial Biosphere*. Fancourt Country Club, George, South Africa, 02/2011.
26. **Origins Institute Lecture Series - Moser, D.P.** *Earth's deep continental biosphere: a previously unrecognized rock-hosted biome?* McMaster University, Hamilton, ON, Canada, 04/2010.
27. **Keynote Lecture - Moser, D.P.** *Earth's deep biosphere and the Nevada Test Site connection*. Lake Mead Chapter, Health Physics Society, 02/2010.
28. **Moser, D.P.** *Deep Earth life and the Nevada Test Site connection*. Community Environmental Monitoring (CEMP) Workshop, Ely, NV, 07/2009.
29. **Keynote Lecture - Moser, D.P.** *Desert windows into a deep wet biosphere*. Devils Hole Workshop, Furnace Creek, CA, 05/2009.
30. **Moser, D.P.** *Microbial Populations of Devils Hole*. Interagency meeting at USFWS. Las Vegas, NV. Dr. Paul Barrett, host, 10/2008.
31. **Moser, D.P.** *Ash Meadows Unseen*, Ash Meadows Workshop, Pahrump, NV, 05/2008.
32. **Moser, D.P.** *A Geologically-defined biome at the deepest limits of Earth's biosphere*. UNLV Geosciences departmental lecture, Las Vegas, NV, 2/2008.
33. **Plenary Close-out Lecture - Moser, D.P.** *New insights into the deep dark biosphere: late developments from the South African mine environment*. Applied and Environmental Microbiology Gordon Conference, Mt. Holyoke College, MA, 07/2007.
34. **Moser, D.P., B.P. Hedlund, and J.B. Navarro.** 2007. *Playa lakes: insights into Mars' last aquatic ecosystems?* Session SS01, Water on Earth: Analogues for Other Worlds. American Society for Limnology and Oceanography (ASLO), Aquatic Sciences Meeting. Santa Fe, NM, 4/2007.
35. **Moser, D., S. Labahn, A. Villosio, J. de Leon.** *PAM and AMD fate: microbial breakdown*. PAM Advisory Panel, DRI Reno, NV, 02/2007.
36. **Keynote Lecture - Moser, D.P.** *Explorations for life in the deepest regions of Earth's biosphere*. Western Nevada Community College, Jack C. Davis Observatory, Carson City, NV, 06/2006.

37. **McDonald, E., J. Engelbrecht, J. Gillies, A. Gertler, D. Moser, (co-presented with J. Englebrecht).** *Enhanced particulate matter surveillance in the Middle East: program strategy.* USACHPPM. Gunpowder Club, APG, Maryland, 02/2006. Invited Pitch.
38. **Moser, D.P.** *Microbial communities of deep continental fracture systems may reveal energetic possibilities for life on rocky planets.* International Society for Subsurface Microbiology, Jackson Hole, WY, 08/2005.
39. **Moser, D.P.** *Explorations of intraterrestrial microbial communities.* Jet Propulsion Lab (JPL), Pasadena, CA, K. Venkateswaran host, 03/2005.
40. **Moser, D.P., T.M. Gihring, J.K. Fredrickson, F.J. Brockman, T.C. Onstott, M. Davidson, L.M. Pratt, D.L. Balkwill, B. Sherwood-Lollar, G. Southam, J. Lippmann.** *How deep is the bottom of the biosphere?* Miami University, Geology Department, Oxford, OH, H. Dong host, 11/2004.

AWARDS AND HONORS

Awards and Honors to Moser

1. **DRI Safety Ambassador Award.** DRI Environmental Health and Safety, 2018.
2. **Nominee - Regents Researcher of the Year.** DRI, 2016.
3. **Featured new project presentation (NSF GoLife),** DRI DEES Faculty and Staff Meeting, 04/2015.
4. **DRI 10-year Service Award.** 2014.
5. **Ansari Medal for Excellence in Science,** DRI, \$2,500. 06/2013.
6. **Pupfish Award.** Devils Hole Workshop. Furnace Creek, California, 05/2013.
7. **Featured faculty member presentation to the DRI Foundation.** *DRI'S Environmental Microbiology Laboratory.* Merv Griffin Ranch, Carmel Valley, California, 07/2011.
8. **Featured faculty member presentation to Nevada System of Higher Education (NSHE) Board of Regents,** *DRI'S Environmental Microbiology Lab.* DRI, Las Vegas, Nevada, 06/2009.
9. **Outstanding Performance Award,** Fundamental Science Directorate, Pacific Northwest National Laboratory, Richland, Washington, 05/2003.
10. **Graduate Research Fellowships,** NASA/Wisconsin Space Grant Consortium, three-time winner, Milwaukee, Wisconsin, \$5,000, \$4,500, \$4000, 08/1993–05/1996.
11. **First Place Presentation,** North Central Branch, American Society for Microbiology, LaCrosse, Wisconsin, \$200, 10/1994.
12. **Outstanding Graduate Student,** University of Wisconsin-Oshkosh, Oshkosh, Wisconsin, 04/1992.
13. **Student Presentation Award,** American Society for Microbiology, Minneapolis, Minnesota 10/1991.
14. **First Place Student Presentation,** Wisconsin Laboratory Association, Oshkosh, Wisconsin, 10/1989.
15. **Senior Research Award,** University of Wisconsin-Oshkosh, Oshkosh, Wisconsin, 04/1988.
16. **Arthur Overgaard Foundation Scholarship,** Mauston, Wisconsin, \$1,000, 06/1983.

Awards and Honors to Moser Lab Personnel

1. **Featured post-doc presentation to Nevada System of Higher Education (NSHE) Board of Regents, *Scott Hamilton-Brehm*.** DRI, Las Vegas, Nevada, 06/2015.
2. **Nevada Public Radio, KNPR, State of Nevada Program,** interview with post-doc, *Scott Hamilton-Brehm*. Chris Sieroty. <https://knpr.org/knpr/2014-07/desert-research-institute-hosts-scientific-journey>, 07/09/2014.
3. **Featured post-doc presentation to Nevada System of Higher Education (NSHE) Board of Regents, *Jenny Fisher*.** DRI, Las Vegas, Nevada, 06/2012.
4. **Intel International Science and Engineering Fair presentation by *Alexandra Wheatley*.** 3rd place in the Life Sciences Division. Los Angeles, California, 05/2011.
5. **Intel International Science and Engineering Fair presentation by *Alexandra Wheatley*.** 1st place American Society for Microbiology Award. Los Angeles, California, 05/2011.
6. **Featured K-12 Student presentation by *Alexandra Wheatley* to Superintendent *Dwight Jones* and Nevada Board of Regents,** Black History Month Event, DRI, Las Vegas, Nevada, 02/2011.
7. **Featured undergraduate researcher presentation by *Mary Ehrsam* to NSHE Board of Regents, *Devils Hole Microbiology*.** DRI, Las Vegas, Nevada, 06/2009.
8. **Featured woman in science presentation by *Dr. Jen Fisher* (post-doc) to NSHE Board of Regents, *Microbial Ecology*.** DRI, Las Vegas, Nevada, 06/2008.
9. **Featured graduate student presentation by *Stephanie Labahn* to NSHE Board of Regents, *Microbial degradation of polyacrylamide*.** DRI, Las Vegas, Nevada, 06/07.

PROFESSIONAL SERVICE

Symposia convened

1. **International Symposium on Subsurface Microbiology (ISSM).** *Co-chaired two sessions with Rainer Meckenstock, University Duisburg-Essen, Germany, Subsurface Ecosystems Sessions 4 and 9, October 2014.*
2. **Town Hall Meeting. *Intraterrestrial Life*.** Co-hosted with K. Edwards and R. Colwell. American Geophysical Union, San Francisco, CA, 12/2010.
3. **Division N Symposium. *Microbial Life in the Deepest Regions of the Earth's Biosphere*.** Co-hosted with T. Kieft. 104th American Society for Microbiology, New Orleans, LA, 05/2004.
4. **Nevada EPSCoR Undergraduate Research Symposium,** Moderator, Session VIII, DRI, Las Vegas, NV, 04/2007.
5. **Anchor Watch Seminar Series.** One year of service. Center for Great Lakes Studies, Milwaukee, WI, 1996.

Select Workshops and PI Meetings (Presentations)

1. **National Science Foundation. EPSCoR Track I.** Kickoff meeting. Washington, DC, 11/06/18.
2. **Global Water Reuse, Food and Health Workshop. *Microbial degradation of pharmaceuticals, endocrine-disrupting compounds and acrylamide in treated wastewater and agricultural irrigation systems*.** University of MD. 10/08/18.
3. **Continental Scientific Drilling and Coring Science Planning Workshop II. *Deep life drilling in the Death Valley Extensional Zone*.** NSF Continental Scientific Drilling Coordination Office. Washington DC. 06/04/18.

4. **Continental Scientific Drilling and Coring Science Planning Workshop.** *Death valley.* Continental Scientific Drilling Coordination Office. University of Minnesota, 05/18/17.
5. **NeLLi 2017: From New Lineages of Life To New Functions.** *Subsurface microbial dark matter repositories of the US Great Basin and the Sanford Underground Research Facility.* DOE Joint Genome Institute. Walnut Creek, CA. 04/17/17.
6. **Desert Terminus Lakes Workshop.** *Linkages between limnology, biogeochemistry, and microbial communities of Walker Lake, NV, USA.* University of Nevada Reno 11/10/16.
7. **Continental Scientific Drilling Community Meeting,** University of Minnesota, 04/06/15.
8. **Deep Carbon Observatory Deep Life Workshop to Develop an ICDP Project.** GeoForschungZentrum, Potsdam, Germany, 03/11/2014.
9. **Co-I meeting of the NSF GoLife project “Untangling the Deep Genealogy of Microbial Dark Matter“.** *Field sample and metadata collection.* Desert Research Institute, Las Vegas, NV, 12/13/2014.
10. **NASA Astrobiology Institute.** Moser lab overview. All Hands Meeting. Catalina Island, CA, 09/15/14.
11. **NASA Astrobiology Institute, Life Underground Node.** Annual PI Meeting, Lead, SD, 11/2013.
12. **C-DEBI: Using state-of-the-art molecular biology tools to enable discoveries about microbial activity in the deep biosphere.** Bigelow Lab, Boothbay, ME, 09/2013.
13. **DOE Subsurface Biogeochemical Research (SBR) and Terrestrial Ecosystems Sciences (TES) Joint PI Meeting,** Potomac, MD, 05/2013.
14. **Deep Carbon Observatory, Annual Science Meeting.** National Academy of Sciences, Washington, DC, 03/2013.
15. **NASA Astrobiology Institute, Life Underground Node.** Kickoff meeting, Catalina Island, CA, 11/2012.
16. **Walker Basin Ecosystem Research Team Meeting,** Reno NV, USFWS, 09/28/2012.
17. **Bioaerosol Effects on Clouds.** Storm Peak Laboratory, Steamboat, CO, 08/2012.
18. **DOE Subsurface Biogeochemical Research (SBR) and Terrestrial Ecosystems Sciences (TES) Joint PI Meeting,** Washington, DC, 05/2012.
19. **Microbiology of Subsurface and Hydrocarbon Ecosystems.** ExxonMobil Upstream Research Company Workshop Houston, TX, 02/2012.
20. **NASA Life Detection Workshop,** San Diego, CA, 02/2012.
21. **DOE Subsurface Biogeochemical Research (SBR) 6th Annual Contractor-Grantee Workshop,** Washington, DC, 04/2011.
22. **New Horizons for International investigations into Carbon Cycling in the Deep Crustal Biosphere,** Moser, D.P., *Globally-distributed lineages of deep subsurface microorganisms: what are Desulforudis and SAGMA trying to tell us?* University of the Free State, Bloemfontein South Africa, 01/2011.
23. **Deep Carbon Observatory: Deep Life Directorate Workshop,** Group Leader for white paper with Mitchell Sogin and Katrina Edwards, Catalina Island, CA, 03/2010.
24. **DOE Subsurface Biogeochemical Research (SBR) 5th Annual PI Meeting,** Washington, DC, 03/2010.
25. **DUSEL Ecohydrology Group,** planning session, San Francisco, CA, 12/2009.
26. **DUSEL Science Overview,** Berkeley, CA, 12/2009.
27. **Deep Energy Biosphere Workshop, Moser, D.P.** *Finding common ground,* Hilo, HI,

- 10/2009.
28. **C-DEBI (Deep Energy Biosphere Institute) CORK Observatory Workshop**, Mauna Lani Resort, Big Island, HI, 10/2009.
 29. **Fall Workshop on DUSEL Science and MREFC Development**, Lead, SD, 10/2009.
 30. **Terminus Lakes Workshop**, Moser D.P. *Microbial biogeochemistry of Walker Lake*, NV, UNR, Reno, NV, 08/2009.
 31. **DOE Environmental Remediation Sciences Program (ERSP) 4th Annual PI Meeting**, Washington, DC, 04/2009.
 32. **DUSEL Town Hall Meeting**, National Academy of Sciences, Washington DC, 09/2007. *Deep Life* white paper produced.
 33. **DUSEL Homestake Meeting**. Moser, D.P. *Deep biosphere drilling opportunities: logistical considerations*. Lead, SD, 04/2008.
 34. **DUSEL Homestake Meeting**. Moser, D., T. Kieft, T.C. Onstott. *Early deliverables from existing boreholes and long-term sentinel borehole transect*. Deep Underground Science and Engineering Lab (DUSEL) Homestake Meeting, Lead, SD, 04/2008.
 35. **USCE Urban Flood Workshop**, Moser, D.P. *Microbial processing of nutrients and contaminants in desert aquatic systems*. DRI, Las Vegas, NV, 02/21/2008.
 36. **HUSEP DUSEL Meeting**, Moser, D.P. *Surface to lower biosphere limit: long-term geobiology reference transect*, SUNY Stony Brook, 05/2006.
 37. **DOSECC (Drilling, Observations, and Sampling of the Earth's Continental Crust)** Scientific Coring in the Lake Tahoe Basin, Granlibakken Conf. Ctr., Lake Tahoe, NV, 08/2005.
 38. **HUSEP (Henderson Underground Science and Engineering Program)**, Capstone Workshop, SUNY Stony Brook, NY, 05/2005.
 39. **University of Colorado DUSEL Workshop**, University of Colorado, Boulder, Boulder, CO, 01/2005.
 40. **Life in the Extreme Workshop**, Idaho Accelerator Center, University of ID, Pocatello, ID, 6/2003.
 41. **NUSEL (National Science and Engineering Lab) Workshop**, Lead, SD, 10/2001.
 42. **Extreme Environments Workshop**, University of the Free State, Bloemfontein, South Africa, 12/2000.

Recent journal editorial review (Select)

1. Astrobiology Journal
2. Extremophiles
3. Geomicrobiology Journal
4. Chemical Geology
5. Environmental Science and Technology
6. Applied and Environmental Microbiology

Proposal adhoc review (Select)

1. NASA Post-doc Program, 2014
2. C-DEBI Post-doc Program, 2013
3. NASA Planetary Protection Research Panel 2013
4. NSF Ocean Drilling Program, 2008
5. NSF Microbial Observatories/Microbially Influenced Processes, 2005–2008
6. NSF Marine Geology and Geophysics, 2004

7. NSF Microbial Observatories Program, 2003/2004
8. NSF Division of Ocean Sciences, 2003
9. NSF Biocomplexity, 2002
10. NSF Life in Extreme Environments, 2000–2001

Proposal review panel service (Select)

1. Nevada Space Grant Consortium, Research Infrastructure, 2015, 2018
2. Nevada NASA EPSCoR, Research Infrastructure Development, 2014, 2018
3. Deep Carbon Observatory, Census of Deep Life, 2011–2018
4. Nevada NASA Space Grant Scholarship Program, 2015
5. Nevada Space Grant Consortium. HOT and Pre-college Programs, 2014
6. Genomic Applications Partnership Program (GAPP). Genome Canada. 2014, 2015, 2016
7. International Symposium on Subsurface Microbiology (ISSM), student applications for travel grants, 2014
8. NASA Exobiology Review Panel, Washington D.C., 2009, 2012
9. DOE Subsurface Biogeochemical Research, Washington D.C., 08/2010
10. NASA Exobiology Review Panel, Washington D.C., 02/2010
11. NASA Exobiology Review Panel, Washington D.C., 01/2008
12. UNLV, SOLS, Las Vegas, NV, 03/2007. NSF EPSCoR Summer Research Opportunity Panel. Paul Buck chair, 05/2005
13. Mobile geomicrobiology laboratory construction, Inter-Continental Drilling Program (ICDP) and Carnegie Institute, San Francisco, CA, 12/2003

Editorial work

1. DUSEL Newsletter. DuRA Corner. Monthly installment. 2011–2012
2. Geomicrobiology Journal: Co-editor T.L. Kieft. Special issue. Microbial ecosystems in the Deepest Regions of Earth's Biosphere 12/2006

DRI Committees

1. DRI Lab Tours Committee, 06/2016 – Present
2. DRI VPAA Position Description Review Ad Hoc Committee, 06/2013
3. DRI Faculty Senate Education Committee, 2013–2014
4. DRI Faculty Senate 2011 and 2013–2014
5. DUSEL Research Association (DuRA) Executive committee, Secretary, 07/2010–2012
6. DRI DEES Advisory Group (DAG), 06/2008–2014
7. Center for Watersheds and Environmental Sustainability (CWES), Scientific Advisory Group (SAG), 06/2005–2012
8. DRI Southern Nevada Science Center Phase III Planning Committee, (various dates, 2008)

DRI search committees

1. DRI VP for Academic and Faculty Affairs. Mark Pitchford Chair, 2013.
2. DRI Maki Post-doc. Jim Thomas Chair, 2013. Result, 4 post-docs hired.
3. DRI DEES/NASA NAI Field Tech. Henry Sun Chair. 2013.
4. DRI Las Vegas Facilities Director. Dr. Jenny Chapman Chair. 2012.
5. DRI Las Vegas Public Information officer (PIO) search #2. D.P. Moser Chair. 2012.
6. DRI Reno Public Information officer (PIO) search. Stephan Ross Chair. 2012.
7. DEES Actinide Microbiology Post-doc search. D.P. Moser Chair. 2012.
8. DRI DEES Division Director search. Ted Hartwell Chair. 2011.
9. DRI Public Information officer (PIO) search. D. Shafer Chair. 2008.
10. DEES Actinide Microbiology Post-doc search. D.P. Moser Chair. 2007.
11. DAS Storm Peak Lab Director search. Douglas Lowenthal Chair. 2005.
12. UNLV School of Life Sciences Microbiologist search (outside evaluator). 2006.
13. DHS Aquatic Ecologist search. Jim Thomas Chair. 2004.
14. DHS Ecological Engineer search. Lambis Papelis Chair. 2004.

OUTREACH (Select Activities)

1. **Guest lecture.** *Steroid biochemistry: environmental and health contexts*. South Dakota School of Mines and Technology. Biochemistry 465. Applied Biological Sciences. Rapid City, SD., 03/17.
2. **Judge**, 3 Minute Thesis Competition. UNLV. 11/2016.
3. **DRI Foundation**, Co-host and presentations for DRI Boulder City Campus tour for Foundation membership. 10/2016.
4. **Guest lectures**, UNLV SOLS Microbial Ecology class (P. Amy instructor). *Deep Subsurface Microbial Ecology*. Las Vegas, NV, 02/2010, 08/2011, 04/2012, 04/2013, 04/2014, 04/2015.
5. **UNLV School of Life Sciences White Lecture and Open House for Prospective Graduate Students**. DRI Representative and evaluator of applicant pool. Annually, 2010–2017.
6. **Invited lunch with NV Medal Winner, Dr. Steven Squires, NASA Mars Exploration Rover Principal Investigator**, Las Vegas, NV, 04/2012.
7. **Invited lunch with NV Medal Winner, Dr. Robert Ballard and site visit to Sandy Miller Middle School**, Las Vegas, NV, 04/2010.
8. **Judge**, Regional High School Science Fair. UNLV Life Sciences. Las Vegas, NV, 03/2010.
9. **A private look inside Nevada's Very Own Environmental Microbiology Laboratory**. Invited speaker for DRI Foundation event at Chairman, Mike Benjamin's home. 02/2010.
10. **DRI Day/Open House**, open lab, educational activities, 10/2009.
11. **Judge**. Intel Gathering Genius High School Science Fair, Reno, NV 05/2009.
12. **Guest lecture**, UNLV SOLS Microbial Ecology class (B. Hedlund instructor). *Deep subsurface microbiology*. Las Vegas, NV, 03/2009.
13. **Extremophiles – A lecture for students of Las Vegas Art Institute**, DRI. Las Vegas NV, 11/2008.
14. **Guest lecture**, UNLV SOLS Microbial Ecology class (B. Hedlund instructor). *Deep subsurface microbiology*. Las Vegas, NV, 04/2008, 04/2008.
15. **NSF Research Experience for Undergraduates (REU) selection committee**, UNLV, SOLS, Las Vegas, NV, 03/2008.
16. **NSF IGERT exploratory committee meeting**, UNLV/SOLS, Las Vegas, NV,

- 12/2007.
17. **Outreach seminar**, *The DRI Environmental Microbiology Laboratory*. Mentoring Summer Research Internship Program (MSRIP) Workshop, John Gardner host, DRI, Las Vegas, NV, 12/2007.
 18. **Family Science Night**. Bailey Middle School, Shana Baker, host, Las Vegas, NV, 04/2006, 05/2007.
 19. **Incoming graduate student event at UNLV SOLS**. Talk about DRI, tour of lab, and Saturday hike at Red Rock Canyon. Las Vegas, NV, 03/2007.
 20. **DRI Day/Open House**, open lab, educational activities, public lecture. *The DRI Environmental Microbiology Lab*, 10/2006, 10/2009.
 21. **UNLV WRM Student Open House**. *Life in extreme places*, DRI, Las Vegas, NV, 08/2006.
 22. **DRI Research Foundation, Field Trip**. Megaphone talks at two stops Las Vegas Bay Marina and overlook, 05/2006.
 23. **UNLV graduate student workshop and DRI tour**. "DRI" with contributions by H. Sun, M. Stone, L. Papelis, M. Young, L. Fenstermaker, 03/2006.
 24. **2nd Astrobiology Institute**, Guest lecture and field trip, Western Nevada Community College, Carson City, NV, 2005.
 25. **Host, Careers in Science Workshop for high school students**, Mauston Area High School, Mauston, WI, 1997.
 26. **Host, Meet a Scientist**, Lake Bluff Elementary School, Shorewood, WI, 1996.

PROFESSIONAL SOCIETY MEMBERSHIPS

1. American Geophysical Union
2. American Society for Microbiology
3. American Society for Limnology and Oceanography
4. American Association for the Advancement of Science
5. National Speleological Society (USA)

PRESS

1. **Deep Life: The Hunt for the Hidden Biology of Earth, Mars, and Beyond**. 2016. T.C. Onstott. Princeton University Press. 512 P. ISBN 0691096449. Trade book which prominently features our work in the deep mines of South Africa – named 129 times.
2. **Outdoor Nevada, Las Vegas PBS**. 2016. Episode 8, Standing up for Nature. <http://www.vegaspbs.org/outdoor-nevada/>
3. **DRI Press Release**. <http://www.dri.edu/earth-ecosystem-sciences/earth-eco-news/4397-microbiologist-at-the-desert-research-institute-makes-his-mark-in-death-valley>.
4. **Nevada Public Radio, KNPR**, State of Nevada Interview with Dave Becker. 2014. <http://knpr.org/knpr/2014-01/identifying-extraterrestrial-life-underground>
5. **Ramsey, Angela**, NNSS Plays Part in NASA's Search for Extraterrestrial Life: Discussion with Dr. Duane Moser. NNSS Newsletter.
6. **Barklay, M. and Moser, D.P.**, NASA Astrobiology Institute Project Launches at SURF. Cover story, SURF Newsletter. October 2013 Issue.

7. **Roggenthen, W.** Science and the Homestake Mine. Feature that noted prior work by our group and future work from NAI Life Underground Project. SURF Newsletter. November 2013 Issue.
8. **Las Vegas News 3 TV (by Merissa Mike)**, *Biologists monitor rare pupfish indigenous to Devils Hole*. On camera interview at Devils Hole. Aired 07/2013. <http://www.mynews3.com/content/news/story/Biologists-monitor-rare-pupfish-indigenous-to/zknkZY0KM0-2g39y2PT7fw.csp.x>.
9. **Desert Research Institute, Dr. Duane Moser**. Youtube video, 07/12/2013. http://www.youtube.com/watch?v=aGT3Ledp_sc.
10. **Nature World News (by Sarah Miller)**, *Isolated microbe in South Africa appears in California's Death Valley*, 12/16/2012. <http://www.natureworldnews.com/articles/400/20121216/isolated-microbe-south-africa-appears-californias-death.htm>.
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DRI Moser Lab Awards and Contracts October, 2004 – Present

Role	Project/task	Grantor	Start Date	End Date	Nature of Competition	Total Award	Moser Lab Portion
Recipient	Increasing Diversity in Science in Nevada, Ring-True II Task 11 Moser Equipment Start-up	NSF-EPSCOR	10/1/04	9/30/05	Internal, non-competitive	NA	\$100,000
Co-I	Urban Flood Demonstration Program (UFDP)	USCE	9/20/05	9/31/07	External, non-competitive	\$1,100,000	\$30,657
Co-I	Evaluating the Effectiveness of Polyacrylamide (PAM) (Experimental Design Models and Predictive Tools) (PAM III)	USBR	9/30/05	9/30/08	External, non-competitive	\$825,000	\$40,000
Co-I	FY06 Nevada Water Resources Research Institute Base Program	DOE-USGS	3/1/06	12/31/09	External, non-competitive	\$460,000	\$39,455
Co-I	FY06 Nevada Water Resources Research Institute Base Program	USGS	3/1/07	1/1/10	External, non-competitive	NA	\$10,121
Co-I	Field Evaluation of Polyacrylamide (PAM) Effectiveness and Laboratory Studies to Assess Microbial Degradation (PAM IV)	USBR	4/1/06	9/30/08	External, non-competitive	\$1,269,376	\$157,162
PI	Field Evaluation of Polyacrylamide (PAM) Effectiveness and Laboratory Studies to Assess Microbial Degradation (PAM IV Supplement)	USBR	4/1/06	9/30/08	External, non-competitive	\$51,023	\$51,023
Lead	Devils Hole Monitoring	DRI-Internal	4/1/06	12/31/06	Internal, competitive	\$9,461	\$9,461
Co-I	Investigations on the Fundamental Surface Reactions Involved in the Sorption and Desorption of Radionuclides	DOE EPSCoR	8/1/06	7/31/10	External, competitive	\$1,257,760	\$531,220
Co-I	Investigations on the Fundamental Surface Reactions Involved in the Sorption and Desorption of Radionuclides COST SHARE	DOE EPSCoR	8/1/06	7/31/09	External, competitive	NA	\$46,516

Co-I	State Match Investigations on the Fundamental Surface Reactions in the Sorption and Desorption of Radionuclides	EPSCoR NSHE	8/1/06	7/31/09	External, competitive	\$605,547	\$78,612
Co-I	Walker Lake Task 2-6 In Stream Health/Aquatic Ecology	USBR UNR	1/2/07	6/30/08	External, competitive	\$1,118,828	\$57,916
PI	Characterizations of Microbial Communities in Subsurface Nuclear Blast Cavities of the Nevada Test Site	DOE ERSP	4/15/07	4/14/09	External, competitive	\$199,939	\$199,939
Co-I	State Match Investigations on the Fundamental Surface Reactions Involved in the Sorption and Desorption of Radionuclides	DOE EPSCOR NSHE	8/1/07	7/31/09	External, competitive	\$38,885	\$38,885
Lead	Moser DNA Sequencing	UCCSN EPSCoR	9/1/07	7/31/08	External, non-competitive	\$8,745	\$8,745
Co-I	Conduct Physical, Biological, and Limnological Research at Devils Hole, Death Valley National Park	NPS	9/24/07	12/31/08	External, non-competitive	\$16,681	\$16,681
PI	Microbial Degradation of Ethinylestradiol (EE2) and Estradiol (E2) in Lake Mead and Las Vegas Wash	USGS	10/1/07	9/30/08	External, competitive	\$27,961	\$27,961
Co-I	Biological Accumulation of D-amino acids in Endolithic Microbial Communities	NASA Exobiology	5/5/08	12/31/12	External, non-competitive	\$437,858	~\$30,000
PI	Characterization of Indigenous Microorganisms from Deep Wells and Assessment of their Utility as Hydrologic Tracers	Hydrodynamics Group LLC	6/25/08	12/1/12	External, non-competitive	\$24,055	\$24,055
Co-I	Microbial Degradation of Ethinylestradiol (EE2) and Estradiol (E2) in Lake Mead and Las Vegas Wash	USGS	10/1/08	9/30/09	External, competitive	\$1,940,800	\$57,000
PI	DOI-F&W/ASH MEADOWS SPRINGS	USFWS	10/1/08	9/30/11	External, non-competitive	\$19,974	\$19,974
PI	Microbial Diversity Assessment Pilot Project: DUSEL	DRI-Internal	1/1/09	6/30/15	Internal, non-competitive	\$16,198	\$16,198
PI	Microbial Communities of Human Coprolites	Lander Foundation	1/31/09	06/31/10	Internal, competitive	\$14,498	\$14,498

Co-I	Microbial Estrogen Degradation	USGS	12/16/09	9/30/10	External, non-competitive	\$31,703	\$31,703
Co-I	Novel thermophilic microorganisms and cellulases for improving second-generation biofuel technologies	NV Renewable Energy Consortium	1/1/10	12/31/12	External, competitive	\$312,449	\$115,550
Co-I	Environmental Transportation of Plutonium: Geochemical Processes at the Femtomolar Concentration and Nanometer Scale	DOE/SBR	2/23/10	9/30/10	External, competitive	\$1,800,000	\$139,874
PI	Radiochemically-Supported Microbial Communities: A Potential Mechanism for Biocolloid Production of Importance to Actinide Transport	DOE-SBR	6/15/10	6/14/14	External, competitive	\$1,119,698	\$1,119,698
PI	Characterization of Indigenous Microorganisms from Nye County Wells and Assessment of their Utility as Hydrologic Tracers	NWRPO	8/17/10	6/30/14	External, non-competitive	\$121,000	\$121,000
PI	Characterization of Aquatic Chemistry, Physical Parameters, and Indigenous Microorganisms from Wells at Nevaes Spring Mound Area, Death Valley, CA	Hydrodynamics Group LLC	8/26/10	8/25/11	External, non-competitive	\$20,000	\$20,000
Co-I	ARRA - Upgrades to Storm Peak Laboratory, a High Elevation Atmospheric Research and Education Station	NSF EAR-0963558	9/15/10	8/31/13	External, competitive	\$570,365	-
Co-I	ARRA - Upgrades to Storm Peak Laboratory, a High Elevation Atmospheric Research and Education Station	NSF EAR-0963558	9/15/10	8/31/13	External, competitive	\$17,401	-
Co-I	LLNL/DOE Subcontract	DOE SBR	12/7/10	9/30/11	External, competitive	\$144,539	\$144,539
PI	Ash Meadows Springs	USFWS	2/11/11	5/31/12	External, non-competitive	\$18,340	\$18,340
PI	Lahontan - Walker Lake	USFWS	8/1/11	4/30/15	External, non-competitive	\$139,753	\$139,753
PI	U of Toronto Analytical Services	U of Toronto	1/1/13	6/30/13	External, non-competitive	\$18,666	\$18,666

PI	Life Underground (Supplement - 0.5 FTE for field tech)	NASA Astrobiology Institute	1/16/13	12/31/18	External, competitive	\$270,410	\$270,410
Co-I	Life Underground (Year-1 Performance Supplement-Moser)	NASA Astrobiology Institute	1/17/13	12/31/14	External, non-competitive	\$21,813	\$21,813
Co-I	Life Underground	NASA Astrobiology Institute	1/17/13	12/31/18	External, competitive	\$6,700,000	\$492,273
PI	Microbial Communities of Human Coprolites	Lander Foundation	1/1/14	4/17/15	Internal, competitive	\$30,004	\$30,004
Co-I	Mule Springs Quids	Lander Foundation	1/1/14	12/31/17	Internal, competitive	\$12,864	² \$4,288
Co-I	Mule Springs Quids Supplement (Phase II)	Lander Foundation	1/1/14	12/31/17	Internal, competitive	\$16,489	² \$16,489
PI	DEES Post-doc Support Program - Scott Hamilton-Brehm	DRI-Internal	3/1/14	12/31/14	Internal, non-competitive	\$36,402	\$36,402
Co-I	Characterization of a Novel, Thermophilic, Subsurface Bacterial Genus Related to " <i>Candidatus Desulforudis audaxviator</i> "	Sloan Foundation DCO	4/1/14	6/30/15	External, competitive	\$19,075	\$19,075
¹ Awardee	Moser Sabbatical Support	DRI-Internal	7/1/14	06/31/16	Internal, competitive	\$105,043	\$105,043
Co-I	Collaborative research: Untangling the Deep Genealogy of Microbial Dark Matter	NSF GoLife DEB 1441646	10/1/14	9/30/18	External, competitive	\$2,495,202	\$204,955
Co-I	DOE NNSA TREDS-Environmental Management Program - Soils Year-1	DOE Albuquerque	10/1/13	9/30/14	External, non-competitive	\$1,227,299	\$50,149
Co-I	DOE NNSA TREDS-Environmental Management Program - Soils Year-2	DOE Albuquerque	10/1/14	9/30/15	External, non-competitive	\$1,584,979	\$46,527
Co-I	DOE NNSA TREDS-Environmental Management Program - Soils Year-3	DOE Albuquerque	10/1/15	9/30/16	External, non-competitive	\$1,290,839	\$46,527
Co-I	Microbial Controls on Dissolved Organic Carbon Carbon-14 Groundwater Ages in Southern Nevada Aquifers	Maki Foundation	1/1/15	12/31/16	External, competitive	\$85,968	² \$85,968
PI	NASA EPSCoR Proposal workshop	NASA-EPSCoR	4/28/15	6/30/15	External, competitive	\$12,526	\$12,526

PI	NASA EPSCoR workshop SURF	NASA-EPSCoR	5/1/15	6/1/15	External, competitive	\$9,275	\$9,275
PI	A Systematic Attempt to Cultivate Candidatus Desulforudis audaxviator	A.P.Sloan Fdn.	6/1/15	11/30/15	External, competitive	\$24,928	\$24,928
PI	Deep Life Drilling Workshop, Death Valley Extensional Zone: Workshop	ICDP	4/1/16	4/31/16	External, competitive	\$64,780	\$64,780
Co-I	Hydroponic Food Production: a collaborative experiential learning curriculum from NSC, DRI, UNLV and NASA Ames	NASA-EPSCoR	9/1/15	10/31/16	External, competitive	\$100,000	\$40,452
PI	Analog Study to Constrain Potential Microbial Degradation of Diesel Range Organics from Amchitka Site Drilling Mud Pits	DOE, Office of Legacy Management	06/31/16	12/31/16	External Sole Source	NA	\$50,000
Co-I	Plant Uptake of Contaminants of Emerging Concern in Agroecosystems Irrigated with Reclaimed Water	USEPA	01/01/17	12/31/19	External, competitive	\$781,526	\$63,687
Co-PI	Probing Microbial Community Structure and Function in the Context of Trace Organic Compound Mitigation	UNLV/DRI Joint Postdoc Program	01/01/17	12/31/19	Internal and External Competitive	\$217,323	\$108,661
PI	Desert Brine Microorganisms and Abiotic Oxidants: New Analog Research Capacity for Nevada	NASA EPSCoR SEED	07/31/17	06/30/18	External, competitive	\$50,000	\$40,000
Co-PI	Biologic and Resource Analog Investigations in Low Light Environments (BRAILLE)	NASA PSTAR	6/01/17	5/31/20	External, competitive	\$4,043,207	\$263,404
² Co-I	Rogers Lake Health and Feasibility Study, Edwards Air force Base	USAF	09/01/17	08/31/19	External, competitive	\$220,808	\$76,699
^{2,3} Co-I	Evaluation of Antibiotic Resistance Genes (ARGs) in the Urban Wetland Ecosystem: Las Vegas Wash	USGS/NWIR	03/01/18	02/29/19	Internal Competitive	\$154,797	\$154,797

³ Funded Collab.	Rock Supported Life: Using Southern Nevada's Unique Hydrology to Understand Energy Flow from The Lithosphere to The Biosphere	NASA EPSCoR	08/01/18	07/31/19	External, competitive	\$44,979	\$44,979
Co-I	RII Track-2 FEC: Single Cell Genome-to-Phenome: Integrating Genome and Phenome Analyses of Individual Microbial Cells in Complex Microbiomes	NSF EPSCOR OIA 1826734	01/01/19	12/31/22	External, competitive	\$5,989,591	\$920,000

\$39,366,630 \$6,670,652

¹Active accounts in bold type

²Another DRI faculty member administers account

³Proposal led by lab personnel to support work in our lab

Pending

Role	Project/task	Grantor	Start Date	End Date	Nature of Competition	Total Award	Moser Lab Portion

\$0 \$0

Other Awards

Role	Project/task	Grantor	Start	End	Nature of Competition	Total Award	Moser Lab Portion
Co-I	A Broad View of Environmental Microbiology at UNLV	NSF REU DBI 0649267	10/1/06	9/30/09	External, competitive	\$299,318	\$35,000
PI	Fellowship Support-Joshua Sackett (Ph.D. Student in our lab)	NASA EPSCoR	9/1/15	8/31/16	External, competitive	\$21,000	\$21,000
Co-I	Expanding the Dark Matter Reference Catalog by Targeting Taxonomic "Blind Spots"	DOE Community	07/01/16	12/31/17	External, competitive	Non-financial award – 1,000 single cell	

		Science Program				genomes + 30 metagenomes for team
						\$320,318 \$56,000