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## EDUCATION AND FELLOWSHIPS

- Postdoctoral Fellow**, Pacific Northwest National Laboratory, Environmental Microbiology Group, 2001–2004  
Responsibility: *Witwatersrand Deep Microbiology Project (Cont.)*, etc.  
Mentor: Jim Fredrickson
- Postdoctoral Fellow**, Princeton University, Geosciences, 1998–2001  
Responsibility: *Witwatersrand Deep Microbiology Project*  
Mentor: Tullis C. Onstott
- 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

## PROFESSIONAL APPOINTMENTS

- Associate Professor**, Desert Research Institute, Division of Hydrologic Sciences, Las Vegas, Nevada, 2017–present
- Associate Professor**, Desert Research Institute, Division of Earth and Ecosystems Sciences, Las Vegas, Nevada, 2008–2017
- Adjunct Professor**, School of Life Sciences (SOLS), Univ. of Nevada, Las Vegas, Nevada, 2005–present
- Assistant Professor**, Desert Research Institute, Division of Earth and Ecosystems Sciences, Las Vegas, Nevada, 2004–2008  
, University of Wisconsin Oshkosh, 1989
- Graduate Teaching Assistantship**, University of Wisconsin Oshkosh, Biotechnology Course, 1991
- Undergraduate Teaching Assistantship**, University of Wisconsin Oshkosh, Virology, 1990

**Undergraduate Teaching Assistantship**, University of Wisconsin Oshkosh, Medical Microbiology, 1989

**Undergraduate Teaching Assistantships**, University of Wisconsin Oshkosh, Bacteriology, 1986 - 1988

## **COURSES, INTERNSHIPS, RESEARCH EXPEDITIONS**

**R/V Atlantis + ROV Jason Expedition AT42-11**, NSF, Slow life in the fast lane:

Microbial activity in the crustal deep biosphere, Juan de Fuca Ridge, Beth Orcutt, PI.  
05/2019

**ARB Workshop**, DRI, Reno, Nevada, 7/2007

**Flow Cytometry Training**, Advanced Analytical Inc. Ames, Iowa, 02/2006

**Microbial Diversity Course**, Marine Biology Laboratory, Woods Hole, Massachusetts,

6/12.61 11.04 TfcoB12.998 (o84 Tf-360.56G93 (O)-4.S7.328 (D)565/vp0n.013-[B]4.004 (act5 (on)5

- Venkateswaran, K. and Moser, D.P.**, 2022. Complete genome sequence of *Klebsiella quasipneumoniae* subsp. *similipneumoniae* Strain IF3SW-P1 isolated from the International Space Station. *Microbiology Resource Announcements*, **11(7)**:e00476-22.
6. **Becraft, E.D., Lau Vetter, M.C.Y., Bezuidt, O.K.I., Brown, J.M., Labonté, J.M., Kauneckaite-Griguole, K., Salkauskaite, R., Alzbutas, G., Sackett, J.D., Kruger, B.R., Kadnikov, V., van Heerden, E., Moser, D., Ravin, N., Onstott, T. and Stepanauskas, R.**, 2021. Evolutionary stasis of a deep subsurface microbial lineage. *The ISME Journal*. **2021 Apr 6**:1-3. **\*ISME J - Best Paper Award for 2021\***
7. **Hathaway vp.6eMtt4e 792 reW\* nBT0.133 g/TT2 11.04 Tf121.7 584.26 Td( )TjETQpPaVn,TR.11**

**Girguis, P.R., Hentschel, U., Hollibaugh, J.T., Hug, L.A., Inskeep, W.P., Ivanova, E.P., Klenk, H., Li, W., Lloyd, K.G., Löffler, F.E., Makhalanyane, T., Moser, D.P., Nunoura, T., Palmer, M., Parro, V., Pedrós-Alió, C., Probst, A.J., Smits, T.H., Steen, A.D., Steenkamp, E.T., Spang, A., Stewart, F.J., Tiedje, J. M., Vandamme, P., Wagner, M., Wang, F., Hedlund, B.P., and Reysenbach, A.** 2020. A roadmap for naming uncultivated Archaea and Bacteria, *Nature Microbiology*, 5:987-994, 10.1038/s41564-020-0733





47.

implications for the deep biosphere. *Geochimica et Cosmochimica Acta*, **68(15)**:3239-3250.

60. **Baker, B.J., Moser, D.P., MacGregor, B.J., Fishbain, S., Wagner, M., Fry, N.K., Jackson, B., Speolstra, N., Loos, S., Takai, K., and Lollar, B.S.** 2003. Related assemblages of sulphate reducing bacteria associated with ultradeep gold mines of



- nidamental gland of the squid *Loligo pealei*. *International Journal of Systematic and Evolutionary Microbiology*, **49(4)**:1341-1351.
72. **Onstott, T.C., Moser, D.P., Dong, H., Fredrickson, J.K., Brockman, F.J., Phelps, T.J., Pfiffner, S.M., Peacock, A., White, D.C., MacNaughton, S., and Colwell, F.S.** 1999. The Witwatersrand Deep Microbiology Project: a window into the extreme environment of deep subsurface microbial communities. *EOS*, **80**:79.
  73. **Venkateswaran, K., Moser, D.P., Dollhopf, M.E., Lies, D.P., Saffarini, D.A., MacGregor, B.J., Ringelberg, D.B., White, D.C., Nishijima, M., Sano, H., and Burghardt, J.** 1999. Polyphasic taxonomy of the genus *Shewanella* and description of *Shewanella oneidensis* sp. nov. *International Journal of Systematic and Evolutionary Microbiology*, **49(2)**:705-724.
  74. **MacGregor, B.J., Moser, D.P., Alm, E.W., Nealson, K.H., and Stahl, D.A.** 1997. Crenarchaeota in Lake Michigan sediment. *Applied and Environmental Microbiology* **63(3)**:1178-1181.
  75. **Barbieri, E., Gulledege, J., Moser, D., and Chien, C.C.** 1996. New evidence for bacterial diversity in the accessory nidamental gland of the squid (*Loligo pealei*). *The Biological Bulletin*, **191(2)**:316-317.
  76. **Moser, D.P., and Nealson, K.H.** 1996. Growth of the facultative anaerobe *Shewanella putrefaciens* by elemental sulfur reduction. *Applied and Environmental Microbiology*, **62(6)**:2100-2105.
  77. **Moser, D.P.** 1997. Elemental sulfur reduction in *Shewanella putrefaciens*. Ph.D. Dissertation. University of Wisconsin, Milwaukee.
  78. **Moser, D.P., Brozowski, J.R., and Nealson, K.H.** 1996. Elemental analysis for biomass determination in the presence of insoluble substrates. *Journal of Microbiological Methods*, **26(3)**:271-278.
  79. **Moser, D.P., and Nealson, K.H.** 1996. Growth of the facultative anaerobe *Shewanella putrefaciens* by elemental sulfur reduction. *Applied and Environmental Microbiology* **62(6)**:2100-2105.
  80. **Moser, D., Zarka, D., Hedman, C., and Kallas, T.** 1995. Plasmid and chromosomal DNA recovery by electroextraction of cyanobacteria. *FEMS Microbiology Letters*, **128(3)**:307-313.
  81. **Nealson, K.H., Moser, D.P., and Saffarini, D.A.** 1995. Anaerobic electron acceptor chemotaxis in *Shewanella putrefaciens*. *Applied and Environmental Microbiology* **61(4)**:1551-1554.
  82. **Nishiguchi, M.K., Duval, B., and Moser, D.P.** 1994. Analysis of dimethylsulfoniopropionate from *Phaeocystis pouchetii*







14. \***Kruger, B.R., Sackett, J., Moser, D.P., Blank, J.** 2019. Constraining the age of microbial organic carbon within lava tube caves to inform life detection targets. *Astrobiology Science Conference - Absscicon 2019*, Seattle WA, 06/25/19. Poster.
15. \***Milshcheyn, D., D.P. Moser, D.E. Northup, J.G. Blank.** 2019. ATP bioluminescence assay as a proxy for life detection methods in subsurface analog sites. *Astrobiology Science Conference - Absscicon 2019*, Seattle WA, 06/25/19. Talk.
16. \***Munson-McGee, J.H., Lindsay, M., Brown, J., Brown, J., Dykens, K., Lubelczyk,**

determined by bioluminescence assay. B53E-2120. American Geophysical Union. Washington D.C. 12/14/18. Poster.

27. **\*Moser, D.P.** 2018. Microbial degradation of pharmaceuticals, endocrine-disrupting compounds and acrylamide in treated wastewater and agricultural irrigation systems.

- suggest cultivation strategies and reveal environmental adaptations. *Devils Hole Workshop*, Beatty, NV 05/2017. Poster
42. \***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.
  43. \***Moser, D.P., Sackett, J., and Kruger, B.** 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.
  44. \***Moser, D., S. Hamilton-Brehm, D. Huerta, B. Kruger, and J. Sackett.** 2017. Deep biosphere Windows of the Death Valley Regional Flow System. *Devils Hole Workshop*, Beatty, NV 05/2017. Talk.
  45. \***Sackett, J.D., Huerta, D.C., Kruger, B.R., Hamilton-Brehm, S.D., and 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.
  46. \***Sackett, J.D., Hamilton-Brehm, S.D., Kruger, B.R., Mullin, S.W., Wanger, G.P., Orphan, V.J., and 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.

Aquifer of the Death Valley Regional Flow System. *Devils Hole Workshop*, Ash









**Adrian Escobar**, UNLV, REU, 2012  
**Chelsey VanDrise**, University of Minnesota, REU, 2011  
**Eric Hughes**, Arizona State University, REU, 2010  
**Alex Michaud**, Coe College, Cedar Rapids, IA, REU, 2009  
**Christina Jacovides**, Yale University, REU, 2008

*\*REU = NSF Research Experience for Undergraduates*

**Post-docs, Professionals, and Visting Scholars Hosted**

**Dr. Alireza Saidi-Mehrabad**, Ph.D. U of Alberta, 2021  
**Dr. Leena Cycil**, Ph.D. U of Maryland, 2020  
**Dr. Joshua Sackett**, *Ph.D.* UNLV, 2019  
**Dr. Katerina Papp**, *Ph.D.* Northern Arizona University; co-advised with Daniel Gerrity,  
UNLV. 2017 – 2019

**Dr. Brian K. Degen**, *Ph.D.* UNLV, 2019

**Daniel Walsh**, UNLV SOLS, Ph.D. Program. *Perchlorate metabolism for Mars analog study*. 2017–2018

**Joshua Sackett**, UNLV SOLS, Ph.D. Program. *Exploration of microbial dark matter using single cell genomics*. 2012–2019

**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

**Sabrina Han**, Northwest Technical Academy, Las Vegas, Nevada, 2015-2016.

**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 2010)**

1. **Moser, D.P., and Wuest, V.** 2022. Environmental DNA (eDNA) for tracking endangered and invasive species in desert aquatic systems. DHS Colloquium. Desert Research Institute, Las Vegas, NV. 07/11/22.
2. **Moser, D.P.** *Life at and Las07La,*

11. **Moser, D.P.** 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., 10/08/18
12. **Moser, D. P.** *Environmental Microbiology Laboratory: New Tools for Tracking Biological Contamination and Degradation*. Southern Nevada Water Authority. Las Vegas, NV, 02/08/18
13. **Moser, D.P.** *Ecology and Astrobiology Labs: Microbiological Biogeochemistry at the Intersection of Biology and Hydrology*. US Geological Survey, Henderson, NV, 09/20/17
14. **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/Task Educational Session, 08/16/17
15. **Moser, D.P.** *Insights from the fringes of microbial biology*

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26. **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
27. **Moser, D.P.** *Underground Observatories.* Deep Carbon Observatory Deep Life Mini workshop. Hilton Hotel, San Francisco, CA, 12/2012
28. **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
29. **Moser, D.P.** *Some new windows into terrestrial deep subsurface microbial Ecosystems.* American Geophysical Union. San Francisco, CA, December 20/2011
30. **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
31. **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
32. **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
33. **IGERT Seminar Series - Moser, D.P.** *The dark planet: explorations of Earth's intraterrestrial biosphere.* Montana State University, Bozeman, MT, 04/2011
34. **Keynote Lecture - Moser, D.P.** *The dark planet: explorations of Earth's intraterrestrial biosphere.* Fancourt Country Club, George, South Africa, 02/2011
35. **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
36. **Keynote Lecture - Moser, D.P.** *deep biosphere and the Nevada Test Site connection.* Lake Mead Chapter, Health Physics Society, 02/2010

## **AWARDS and HONORS**

11. **Graduate Research Fellowships**, NASA/Wisconsin Space Grant Consortium,  
three-time winner, Milwaukee, Wisconsin, \$5,000, \$4,500, \$4000, 08/1993–05/1996
12. **First Place Presentation**



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.** *Biosphere. Co 320103*

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) 6<sup>th</sup> Annual Contractor-Grantee Workshop,** Washington, DC, 04/2011
- 22.



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 Faculty Senate Education Committee, 2019.
2. DRI Lab Tours Committee, 06/2016.
3. DRI VPAA Position Description Review Ad Hoc Committee, 06/2013.
4. DRI Faculty Senate Education Committee, 2013–2014.
5. DRI Faculty Senate 2011 and 2013–2014.
6. DUSEL Research Association (DuRA) Executive committee, Secretary, 07/2010–2012.
7. DRI DEES Advisory Group (DAG), 06/2008–2014.
8. Center for Watersheds and Environmental Sustainability (CWES), Scientific Advisory Group (SAG), 06/2005–2012.
9. DRI Southern Nevada Science Center Phase III Planning Committee, (various dates, 2008).

### DRI Search Committees

1. DRI Bioinformatics Postdoc, Chair, 2019.
2. DRI Groundwater Transport Modeling Postdoc, Rishi Parashar, Chair, 2019.
3. DRI VP for Academic and Faculty Affairs. Mark Pitchford Chair, 2013.
4. DRI Maki Post-doc. Jim Thomas Chair, 2013. Result, 4 post-docs hired.
5. DRI DEES/NASA NAI Field Tech. Henry Sun Chair. 2013.
6. DRI Las Vegas Facilities Director. Dr. Jenny Chapman Chair. 2012.
7. DRI Las Vegas Public Information officer (PIO) search #2. D.P. Moser Chair. 2012.
8. DRI Reno Public Information officer (PIO) search. Stephan Ross Chair. 2012.
9. DEES Actinide Microbiology Post-doc search. D.P. Moser Chair. 2012.
10. DRI DEES Division Director search. Ted Hartwell Chair. 2011.
11. DRI Public Information officer (PIO) search. D. Shafer Chair. 2008.
12. DEES Actinide Microbiology Post-doc search. D.P. Moser Chair. 2007.
13. DAS Storm Peak Lab Director search. Douglas Lowenthal Chair. 2005.
14. UNLV School of Life Sciences Microbiologist search (outside evaluator). 2006.
15. DHS Aquatic Ecologist search. Jim Thomas Chair. 2004.
16. 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 or Brian Hedlund, instructor). *Deep Subsurface Microbial Ecology.* Las Vegas, NV, 02/2010, 08/2011, 04/2012, 04/2013, 04/2014, 04/2015, 11/2017, 09/2018, 09/2019
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.

Surveillance Dashboard. 2021 – Present. I organized covid sampling for 10 rural wastewater plants for this project. <https://empower.unlv.edu/>

2.

18. **Desert Research Institute – Featured Research.** valuation of Antibiotic Resistance Genes (ARGs) in the Urban Wetland Ecosystem: Las Vegas Wash. August 14, 2019. <https://www.dri.edu/evaluation-of-antibiotic-resistance-genes-args-in-the-urban-wetland-ecosystem-las-vegas-wash/>
19. **SIUC Blog.** Tim Crosby. *SIU researcher discovers new bacterium living deep beneath former atomic test site.* <https://blog.news.siu.edu/siu-researcher-discovers-new-bacterium-living-deep-beneath-former-atomic-test-site/> 11/12/2019
20. **DRI Press Release.** *DRI and collaborators awarded 6-million grant for innovative genetic research. Link no longer active.* 11/01/2018
21. **NASA EPSCoR News and Events.** *NV NASA EPSCoR Highlight: Duane Moser, DRI.* <https://nasa.epscorspo.nevada.edu/nv-nasa-epscor-highlight-duane-moser-dri/> 05/08/2018
22. **Archaeology Wiki.** *News Paleogenomics: Ancient quids reveal clues about genetic ancestry of early Great Basin inhabitants.* <https://www.archaeology.wiki/blog/2018/05/02/ancient-quids-reveal-clues-about-genetic-ancestry-of-early-great-basin-inhabitants/>. 05/02/2018
23. **Technology Networks.** *Quids answer ancient native american DNA questions.* <https://www.technologynetworks.com/immunology/news/quids-answer-ancient-native-american-dna-questions-300320> 05/01/2018
24. **Science Daily.** *Ancient quids reveal clues about genetic ancestry of early Great Basin inhabitants.* <https://www.sciencedaily.com/releases/2018/04/180430102511.htm> 04/30/2018
25. **Phys.Org.** *Research improves prospects for imperiled Devils Hole Pupfish in captivity.* <https://phys.org/news/2018-04-prospects-imperiled-devils-hole-pupfish.html> 04/30/2018
26. **AAAS - EurekAlert.** *Ancient quids reveal clues about genetic ancestry of early Great Basin inhabitants.* <https://www.eurekalert.org/news-releases/887902> 04/27/2018
27. **Deep Life: The Hunt for the Hidden Biology of Earth, Mars, and Beyond.** T.C. Onstott. Princeton University Press. 512 P. ISBN 0691096449. Trade book which







74. **Time Magazine, Michael Lemonick and Andrea Dorfman**, *How life began*, 07/29/2002
75. **BioScience, Elia Ben-Ari**, 2001. *Intimate connections: geomicrobiologists explore the interactions between biosphere and geosphere*. April, 52:326-331
76. **NPR (the Larry Mantle Show)**. *AirTalk* program live interview, KPCC, Southern CA affiliate, National Public Radio. 2000.
77. **Kim McDonald**, *Life in Outer Space: The Search for Extraterrestrials (Space Explorer)*. Raintree/Steck-Vaughn Publ, Centennial, CO, ISBN: 0739822233 2000
78. **Science Spectra Magazine, Douglas Page**, 2000. , 19:84-88
79. **Discover Magazine**, Kevin Krajick, 1999. *Journey to the Center of the Earth*. Discover Magazine, July issue, p 76-82.

### DRI Moser Lab Awards and Contracts October – Funding History

Role	Project/task	Sponsor	Start Date	End Date	Total Award	Moser Lab Portion
	Increasing Diversity in Science in Nevada, Ring-True II Task 11 Moser Equipment Start-up	NSF-EPSCOR	10/1/04	9/30/05	NA	\$100,000
Co-I	Urban Flood Demonstration Program (UFDP)	USCE	9/20/05	9/31/07	\$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	\$825,000	\$40,000
Co-I	FY06 Nevada Water Resources Research Institute Base Program	USGS	3/1/06	12/31/09	\$460,000	\$39,455
Co-I	FY06 Nevada Water Resources Research Institute Base Program	USGS	3/1/07	1/1/10	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	\$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	\$51,023	\$51,023
PI	Devils Hole Monitoring	DRI	4/1/06	12/31/06	\$9,461	\$9,461
Co-I	Fundamental Surface Reactions Involved in the Sorption and Desorption of Radionuclides	DOE EPSCoR	8/1/06	7/31/10	\$1,257,760	\$531,220
Co-I	Cost Share – Fundamental Surface Reactions Involved in the Sorption and Desorption of Radionuclides	DOE EPSCoR	8/1/06	7/31/09	NA	\$46,516
Co-I	State Match – Fundamental Surface Reactions in the Sorption and Desorption of Radionuclides	DOE EPSCOR	8/1/06	7/31/09	\$605,547	\$78,612
Co-I	Walker Lake Task 2-6 In Stream Health/Aquatic Ecology	USBR UNR	1/2/07	6/30/08	\$1,118,828	\$57,916
PI	Characterizations of Microbial Communities in Subsurface Nuclear Blast Cavities of the Nevada Test Site	DOE ERSP Office of Science	4/15/07	4/14/09	\$199,939	\$199,939
Co-I	State match – Fundamental Surface Reactions Involved in the Sorption and Desorption of Radionuclides	DOE EPSCOR	8/1/07	7/31/09	\$38,885	\$38,885

PI	Mosher, NA Science	9/1/07	\$8,745
Co-I	Conduct Physical and Biological Development of New Products	9/24/07	\$16,681
PI	Metabolic Degradation of Estradiol (E2) in	10/1/07	\$27,96

PI	Characterization of Aquatic Chemistry, Physical Parameters, and Indigenous Microorganisms from Wells at Nevares Spring Mound Area, Death Valley, CA	Hydrodynamics Group LLC	8/26/10	8/25/11	\$20,000	\$20,000
Co-I	ARRA – Upgrades Storm Peak Laboratory, a High Elevation Atmospheric Research and Education Station	NSF	9/15/10	8/31/13	\$570,365	-
Co-I	ARRA - Upgrades Storm Peak Laboratory, a High Elevation Atmospheric Research and Education Station	NSF	9/15/10	8/31/13	\$17,401	-
Co-I	LLNL/DOE Subcontract to DRI – PU sorption / desorption	DOE SBR	12/7/10	9/30/11	\$144,539	\$144,539
PI	Ash Meadows Springs	USFWS	2/11/11	5/31/12	\$18,340	\$18,340
PI	Lahontan - Walker Lake	USFWS	8/1/11	4/30/15	\$139,753	\$139,753
PI	U Toronto Analytical Services					

Co-I	Microbial Controls on Dissolved Organic Carbon Carbon-14 Groundwater Ages in Southern Nevada Aquifers	Maki Fdn.	1/1/15	12/31/16	\$85,968	<sup>2</sup> \$85,968
PI	NASA EPSCOR Proposal workshop	NASA-EPSCOR	4/28/15	6/30/15	\$12,526	\$12,526
PI	NASA EPSCOR workshop SURF	NASA-EPSCoR	5/1/15	6/1/15	\$9,275	\$9,275
PI	A Systematic Attempt to Cultivate Candidatus Desulforudis audaxviator	A.P. Sloan Fdn.	6/1/15	11/30/15	\$24,928	\$24,928
PI	Deep Life Drilling Workshop, Death Valley Extensional Zone: Workshop	ICDP	4/1/16	4/31/16	\$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	\$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	6/31/16	12/31/16	NA	\$50,000
Co-I	Plant Uptake of Contaminants of Emerging Concern in Agroecosystems Irrigated with Reclaimed Water	USEPA	1/01/17	12/31/19	\$781,526	\$63,687
<b>Co-I</b>	Probing Microbial Community Structure and Function in the Context of Trace Organic Compound Mitigation	UNLV DRI	1/01/17	12/31/19	\$217,323	\$108,661
PI	Desert Brine Microorganisms and Abiotic Oxidants: New Analog Research Capacity for Nevada	NASA EPSCOR SEED	7/31/17	6/30/18	\$50,000	\$50,000
Co-I	Biologic and Resource Analog Investigations in Low Light Environments (BRAILLE)	NASA PSTAR	6/01/17	8/14/22	\$4,043,207	\$279,826
<b>Co-I</b>	Rogers Lake Health and Feasibility Study, Edwards Air force Base	USAF	9/01/17	8/31/19	\$220,808	\$76,699
Co-I	Evaluation of Antibiotic Resistance Genes (ARGs) in the Urban Wetland Ecosystem: Las Vegas Wash	USGS NWIR	3/01/18	2/29/19	\$154,797	\$30,000
<b>Co-I</b>	<b>RII Track-2 FEC: Single Cell Genome-to-Phenome: Integrating Genome and Phenome Analyses of Individual Microbial Cells in Complex Microbiomes</b>	<b>NSF EPSCOR OIA 1826734</b>	<b>1/01/19</b>	<b>7/31/23</b>	<b>\$5,989,591</b>	<b>\$920,000</b>

PI 8/0-10 (Ma1/tio)9932519-CB02 (MC /A-MCID 2 BDC q0160 gs/T5TJ74jETE( 7/3-10 ( Ma1/tio)993252)0 Td3 (24.00  
Next-Generation DNA F  
Sequencing to Obtain  
complete Mitogenomes from  
Archaeological Materials

<b>PI</b>	<b>Ph.D. Fellowship -Sponsor-driven research and training: eDNA tools for surveillance of endangered and invasive aquatic species in Southern Nevada</b>	<b>Maki Fdn.  DRI DHS</b>	<b>9/01/23</b>	<b>8/31/26</b>	<b>\$94,612</b>	<b>\$94,612</b>
<b>PI</b>	<b>Cooperative Agreement for eDNA Aquatic Invasive Species Monitoring</b>	<b>USFWS AIS</b>	<b>1/30/23</b>	<b>12/30/24</b>	<b>\$139,890</b>	<b>\$139,890</b>
<b>Totals</b>					<b>\$40,160,387</b>	<b>\$7,259,186</b>

<sup>1</sup>Active accounts in **colored bold type**

<sup>2</sup>Proposal led by lab personnel to support work in our lab

**Pending**



	Targeting Taxonomic “Blind Spots”	Science Program			genomes + 30 metagenomes for team
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