

DENNIS J. GEIST
Department of Geological Sciences
University of Idaho
Moscow, ID 83844-3022 USA
208-885-6491 (dgeist@uidaho.edu)

EDUCATION

1985 Ph.D. - University of Oregon, Geology.
1980 A.B. - Dartmouth College, Earth Sciences.

PROFESSIONAL

2000-present Professor of Geology, University of Idaho.
2001-2007 Chair of the Department of Geological Sciences, University of Idaho
1994-2000 Associate Professor of Geology, University of Idaho.
1990-1994 Assistant Professor of Geology, University of Idaho.
1988-1990 Assistant Professor of Geology, Hamilton College.
1986-1988 Postdoctoral Research Associate, University of Wyoming.
1985 Visiting Assistant Professor, University of Oregon.

AWARDS AND PROFESSIONAL ACTIVITIES

Distinguished Faculty Award, College of Science, 2011.
Convener, Chapman Conference on Ocean Island Volcanism, 2011.
Charles Darwin Foundation, Board of Directors, 2008-present. Chair, Program Committee, 2008-present.
Pardee Keynote Speaker, Geological Society of America annual meeting, 2009.
Ridge2000 Steering Committee, 2008-present.
Science Reorganization Consultant, Charles Darwin Foundation, 2008.
Consultant, White Pine County, Volcanic hazards at Yucca Mountain, 2008-2009.
NSF Panel, Geochemistry and Petrology, 2006-2007.
NSF Panel, Ridge2000, 2007-2008.
Executive Committee, HOTSPOT: Snake River Scientific Drilling Project, 2004-present.
Editorial Board, *Journal of Petrology*, 2000-2005.
Board of Advisors, *Journal of Petrology*, 2005-present.
University Research Excellence Award, University of Idaho, 2000.
Co-Chief Scientist, Drift4 cruise, R/V Revelle, 2001.
American Federation of Mineralogical Societies Distinguished Achievement Award 2003.
Geological Society of America, Penrose Conference Committee, 2004-2007.
American Geophysical Union, VGP Publications Committee, 2000-present.
NSF Chautauqua Program Leader, Geology and Biodiversity of the Galápagos. 2007.
Field Trip Leader, Cities on Volcanoes IV, Geology of the Galápagos Islands, 2006.
Convener, Penrose Conference, Evolution of Ocean Island Volcanoes, 1998.
Editorial Board, *Geology*, 1994-1997.
Fellow of the Geological Society of America.
Charles Darwin Foundation, General Assembly, 1998-present.
Plenary Lecture, American Association of Physics Teachers annual meeting, "The Physics of Volcanoes", 2002.
External program reviewer, Utah State University Geology Dept., 2009.
External program reviewer, UNLV Ph.D. program, 1997.
External program reviewer, UNLV Ph.D. program, 2005.

External program reviewer, University of Alaska, Anchorage, 2004.
Scientific participant: FLAMINGO Cruise, *R/V Melville*; Northwest Hawaiian Archipelago Cruise, *R/V Kilo Moana*, 2007; Puna Ridge Cruise, *R/V Thompson*, 1998.
Member, American Geophysical Union, International Association for Volcanology and Chemistry of the Earth's Interior.
Panel Review Committee, *DOE*, Natural and Accelerated Bioremediation Research Program, 1997; 2000.
Guest Editor, *Journal of Volcanology and Geothermal Research*, 1992.
Symposium convener, AGU annual meeting, 175 years of earth science research in the Galapagos, 2010.
Symposium convener, Goldschmidt Conference, Basalts and mantle dynamics, 2005.
Symposium convener, AGU joint session, Timescales of magmatism, 2004.
Symposium convener, AGU annual meeting, The 2002 edition of the Evolution of the Igneous Rocks: the 75th Anniversary of Bowen's Lectures, 2002.
Symposium convener, GSA annual meeting, Ocean islands: Where do we go from here? 2000.
Symposium convener, AGU annual meeting: The Yellowstone Hotspot, 1993.
JOI/USSAC Workshop participant: Drilling the oceanic lower crust and mantle, 1989.
JOI/USSAC Workshop participant: Large igneous provinces, 1990.

GRADUATE STUDENTS (Principal Advisor)

Erika Rader, Ph.D., in progress
Madison Myers, M.S., in progress
Peter Oswald, Ph.D., in progress
Mark Piersol, Ph.D., in progress
Susan Wilson, M.S., in progress
Jason Felsman, M.S., 2009, Geology, Hydrothermal Alteration, and Gold Mineralization in the Bear Lodge Dome, Wyoming.
Andres Ruiz, M.S., 2008, Inflation and deflation modeling at Sierra Negra and Fernandina Volcanoes based on GPS measurements. Galapagos Islands, Ecuador.
Melissa Sabga, M.S., 2008, Implications of temporal-compositional variations in the Cerro Pajas Flow, Floreana Volcano, Galapagos Islands.
Lisa Mayhew, M.S., 2006, Microbial community comparisons as a function of the physical and geochemical conditions of Galapagos Island fumaroles.
Peter Oswald, M.S., 2006, Eocene volcanic rocks of the southern Talkeetna Mountains, Alaska: Anomalous forearc volcanism in an extensional setting.
Bridget Diefenbach, M.S., 2005, Volcanic construction of the Galapagos Platform: Evidence from morphology and geochemistry of large submarine terraces.
Matthew Hoffer, M.S. 2004, Petrology and geochemistry of Cretaceous plutons in the Careywood Quadrangle, Northern Idaho.
John Lyons, M.S. 2004, Petrogenesis of ultramafic and mafic xenoliths, Floreana island, Galapagos archipelago: implications for lithospheric evolution.
Charlotte Goddard, M.S. 2003, Relationship of geology to species richness within the islands and islets of the Galapagos archipelago, Ecuador.
Ellen Hedfield, M.S., 2003, Insight into the magmatic evolution of Fernandina volcano, Galapagos, from olivine- and plagioclase-hosted melt inclusions.
Jennifer Gustafson, M.S., 2002, Mobility of selenium from the Red Dog zinc deposit, Alaska.
Rachel Teasdale, Ph.D., 2001, Lavas of the 1998 eruption at Volcan Cerro Azul, Galapagos: Flow emplacement and magma petrogenesis.

Elisa Sims, M.S., 2000, Origin and evolution of Snake River Plain basalts: a geochemically constrained model.

Michelle Bishop, M.S., 1999, Volcanism on the northern margin of the Thunder Mountain caldera complex, Idaho.

Terry Naumann, Ph.D., 1998, Geology and petrology of Cerro Azul volcano, Isabela island, Galapagos archipelago.

Pedro Najjar, M.S., 1998, Geology and geochemistry of the Papoose Peak quadrangle in the Salmon and Payette National Forest, Idaho and Valley Counties, Idaho.

Lisa Morrow, M.S., 1996, Volcanic evolution of Guffey Butte volcano, Snake River Plain, Idaho.

Jeff Standish, M.S., 1996, The emergence of a Galapagos shield volcano: Roca Redonda.

Mark Jellinek, M.S., 1994, A window into a caldera-filling ignimbrite: Twin Peaks caldera, Idaho.

Robert Reynolds, Ph.D., 1994, The geology and petrology of Sierra Negra volcano, Galápagos archipelago.

Roberto Barragan, M.S., 1994, A petrologic transect of the Ecuadorian Andes.

+ 11 undergraduate theses.

UNIVERSITY AND COMMUNITY SERVICE

Faculty Senate, 2009-2010.

University Promotion Committee, 2008-2009.

College of Science Promotion Committee 2011.

Provost Search Committee, 2004-2005.

Library Assessment Committee, 2002-2003.

Faculty Evaluation Task Force, 2003-2004.

Co-Chair, Science and Engineering Restructuring Committee, 2001.

Faculty Appeal Hearing Board, 1996-2000); 2003-2006; present (chair, 1999-2000; 2005-2006; 2011).

Committee on Committees, 1997-1999.

Faculty Affairs Committee, 1994-1997; 2008-2009 (chair 1996-1997).

Scientific Misconduct Committee, 1993-1997; 1999-2006.

Faculty Advisor, University of Idaho Rugby Club, 1999-2006; 2009-present.

Departmental Administrators' Review Task Force, 1999-2000.

College of Agriculture Reduction/Restructuring Committee, 1996-1997.

College of Mines, Dean Search Committee, 1997.

Chair, Graduate Admissions and Awards, Geology Dept., 1995-2000.

Latah Country Planning and Zoning Commission, 1992-1997 (vice chair, 1996-1997).

University Curriculum Committee (1993-1994).

Faculty Council (1995-1997).

PUBLICATIONS

Poulakakis, N, Russello, M, Geist, D, and Caccone, A. Unraveling the Peculiarities of Island Life: Vicariance, Dispersal and the Diversification of the Extinct and Extant Giant Galápagos Tortoises, *Molecular Ecology*, in press, 2011.

Gibson, SA, Geist, D, Day, JA, and Dale, CW, The transition from plume-driven upwelling to lateral mantle flow: Geochemical evidence from Isla Santiago, Galápagos, *Geology*, submitted, 2011.

Chadwick, WW, Jónsson, S, Geist, DJ, Poland, M, Johnson, DJ, Batt, S, Harpp, KS, and Ruiz, A, The May 2005 eruption of Fernandina volcano, Galápagos: The first

- circumferential dike intrusion observed by GPS and InSAR, *Bulletin of Volcanology* 73, 679-697, 2011.
- Gibson, SA and Geist, D, Geochemical and geophysical estimates of lithospheric thickness variation beneath Galápagos, *Earth and Planetary Science Letters* 300, 275-286, 2010.
- Kurz, MD; Curtice, J; Fornari, D; Geist, D; Moreira, M.. Primitive neon from the center of the Galapagos hotspot. *Earth and Planetary Science Letters*. 286 23-34, 2009.
- Geist, D. and Harpp, K, Galapagos Islands, Geology, *Encyclopedia of Islands*, Gillespie and Clague, eds. University of California Press, 367-372, 2009.
- Herbert, S, Gibson, S, Norman, D, Geist, D, Estes, G, Grant, T, and Miles, A, Into the field again: Re-examining Charles Darwin's 1835 geological work on Isla Santiago (James Island) in the Galapagos Archipelago, *Earth Sciences History* 28, 1-31, 2009.
- Garcia, MO, Ito, G, Weis, D, Geist, D, et al., Widespread secondary volcanism near northern Hawaiian Islands, *Eos* 89, 542-543, 2008.
- Vigouroux, N., Williams-Jones, G., Chadwick, W., Geist, D., Ruiz, A., and Johnson, D., 4D gravity changes associated with the 2005 eruption of Sierra Negra volcano, Galápagos, *Geophysics* 73,29-35 , 2008.
- Geist, D., Dieffenbach, B., Fornari, D, Kurz, M, Harpp, K., and Blusztajn, J., Construction of the Galapagos platform by large submarine volcanic terraces, *Geochemistry Geophysics Geosystems*, 9, doi:10.1029/2007GC001795, 2008.
- Geist, D, Harpp, K, Naumann, T, Poland, M, Chadwick, W, Hall, M, and Rader, E, The 2005 eruption of Sierra Negra volcano, Galápagos, *Bulletin of Volcanology*, 70, 655-673, 2008.
- Mayhew, L., Geist, D., Childers, and Pierson, J., Microbial community comparisons as a function of the physical and geochemical conditions of the Galapagos Island fumaroles, *Geomicrobiology Journal*, 24, 615-625, 2007.
- A.E. Saal, M.D. Kurz, S.R. Hart, J.S. Blusza, J. Blichert-Toft, Y. Liang and D.J. Geist, 2007, The role of lithospheric gabbros on the composition of Galapagos lavas, *Earth and Planetary Science Letters* v. 257, 391-406.
- Lyons, J, Geist, D, Harpp, K, Diefenbach, B, Olin, P, and Vervoort, J, Crustal growth by magmatic overplating in the Galápagos, *Geology* v. 35, 511-514, 2007.
- Geist, D, Fornari, D, Kurz, M, Harpp, K, Soule, SA, Perfit, M, and Koleszar, A, Submarine Fernandina: A magmatic plumbing system at the leading edge of the Galapagos Hotspot *Geochemistry Geophysics Geosystems*, v. 7, DOI 10.1029/2006GC001290, 2006.
- Chadwick, WW, Geist, D., Jonsson, S, Poland, M, Johnson, D and Meertens, C, Volcano bursting at the seams: Inflation, faulting, and eruption at Sierra Negra volcano, Galapagos, *Geology* 34, 1025-1028, 2006.
- Geist, D., Chadwick, WW, and Johnson, D, Results from new GPS And Gravity Monitoring Networks at Fernandina and Sierra Negra Volcanoes, Galápagos, 2000-2002, *Journal of Volcanology and Geothermal Research* 150, 79-97, 2006.
- Geist, D., Naumann, TR, Standish, JJ, Kurz, MD, White, WM, and Fornari, D, Wolf Volcano, Galapagos Archipelago: Melting and magmatic evolution at the margins of a mantle plume. *Journal of Petrology* 46, 2197-2224, 2005.
- Harpp, KS, Koleszar, A.M., and Geist, D.J. Volcanoes in the classroom: A simulation of an eruption column, *Journal of Geoscience Education* 53, 173-175, 2005.
- Teasdale. R, Geist, D, Kurz, M, and Harpp, K, 1998 Eruption at Volcán Cerro Azul, Galápagos Islands: I. Syn-Eruptive Petrogenesis. *Bulletin of Volcanology* 67, 170-185, 2005.
- Beheregaray, L, Ciofi, C, Geist, D, Gibbs, J, Caccone, A, Powell, J, Genes record a prehistoric volcano eruption in the Galápagos, *Science* 302, 75, 2003.

- Harpp, K.S., Fornari, D.J., Geist, D.J., and Kurz, M.D., 2003, Genovesa Submarine Ridge: A Manifestation of Plume-Ridge Interaction in the Northern Galápagos Islands, *Geochemistry Geophysics Geosystems*, 4, 8511, doi: 10.1029/2003GC000531.
- Harpp, K.S. and Geist, D., The Wolf-Darwin Lineament and Plume-Ridge Interaction in the Northern Galapagos, *Geochemistry Geophysics Geosystems*, V. 3, No. 11, 8504, doi: 10.1029/2002GC000370, 2002.
- Geist, D, White, WM, Albarede, F, Harpp, KS, Blichert-Toft, J, Reynolds, R, and Kurz, M, Volcanic Evolution in the Galápagos: the Dissected Shield of Volcan Ecuador, *Geochemistry Geophysics Geosystems* 3, (10), 10611, 1029/2002GC000355, 2002.
- Naumann, TR, Geist, D, and Kurz, MD, Petrology and geochemistry of Volcan Cerro Azul: petrologic diversity among the western Galapagos volcanoes, *Journal of Petrology*, 43: 859-883, 2002.
- Geist, D, Teasdale, R, Sims, E, and Hughes, S, Subsurface volcanology at TAN and controls on groundwater flow, *GSA Special Paper 353*, 45-59, 2002.
- Geist, D, Sims, E, and Hughes, S, Open-system evolution of a single cycle of Snake River Plain magmatism, *GSA Special Paper 353*, 193-204, 2002.
- Hughes, SS, McCurry, M, and Geist, DJ, Geochemical correlations and implications for the magmatic evolution of basalt flow groups at the Idaho National Engineering and Environmental Laboratory. *GSA Special Paper 353*, 151-173, 2002.
- Geist, D and Garcia, MO, The role of science and independent research during volcanic eruptions, *Bulletin of Volcanology* 62, 59-61, 2000.
- Naumann, T and Geist, D, Physical volcanology and structural development of Cerro Azul volcano, Isabela island, Galapagos: Implications for the development of Galapagos-type shield volcanoes, *Bulletin of Volcanology* 61, 497-514, 2000.
- Geist, D and Ellisor, R, Volcanoes, *McGraw-Hill 2001 Yearbook of Science and Technology*, 414-416, 2000.
- Kurz, MD and Geist, D, Dynamics and evolution of the Galapagos hotspot from helium isotope geochemistry. *Geochimica Cosmochimica Acta* 63, 4139-4156, 1999.
- Geist, D, White, W, Naumann, T, and Reynolds, R, Illegitimate magmas from the Galápagos archipelago: Insights into mantle mixing and magma transport, *Geology* 27, 1103-1106, 1999.
- Naumann, T and Geist, D, Generation of alkali-olivine basalts by fractionation of tholeiitic magma, *Geology* 27, 423-426, 1999.
- Barragan, R, Geist, D, Hall, ML, Larson, PB, and Kurz, M, Subduction controls on the compositions of lavas from the Ecuadorian Andes, *Earth and Planetary Science Letters* 154, 153-166, 1998.
- Geist, D, Naumann, T, and Larson, PB, Evolution of Galapagos magmas: mantle and crustal level fractionation without assimilation, *Journal of Petrology* 39, 953-971, 1998.
- Harpp, K and Geist, D, Galapagos Plumology, *Noticias de Galapagos* 59, 23-28, 1998.
- Righter, K, Chesley, JT, Geist, D, and Ruiz, J, Behavior of Re during magma fractionation: an example from Volcan Alcedo, Galapagos, *Journal of Petrology* 39, 785-795, 1998.
- Standish, J, Geist, D, Harpp, K, and Kurz, M, The emergence of a Galapagos shield volcano: Roca Redonda, *Contributions to Mineralogy and Petrology* 133, 136-148, 1998.
- Hughes, SS, Casper, JL, and Geist, DJ, Potential influence of volcanic constructs on hydrogeology beneath Test Area North, Idaho National Engineering and Environmental Laboratory, *Idaho. Proc. 32nd Symp. Engin. Geol. and Geotech. Engin.*, 23-36, 1997.
- Geist, D, On the emergence and submergence of the Galapagos Islands, *Noticias de Galapagos*, 56, 5-8, 1996.
- Geist, D, Howard, KA, and Larson, PB, The generation of oceanic rhyolites by crystal

- fractionation: The basalt-rhyolite association at Volcan Alcedo, Galápagos Archipelago, *Journal of Petrology*, 36, 965-982, 1995.
- Larson, P and Geist, D, On the origin of low ¹⁸O magmas: evidence from the Casto Pluton, Idaho, *Geology* 23, 909-912, 1995.
- Reynolds, R, Geist, D, and Kurz, M, Physical volcanology and structural development of Sierra Negra volcano, Galápagos Archipelago, *Geological Society of America Bulletin* 107, 1398-1410, 1995.
- Reynolds, R and Geist, D, Petrology of basalts from Sierra Negra volcano, Galápagos Archipelago, *Journal of Geophysical Research* 100, 24,537-24,553, 1995.
- Geist, D and White, CM, Assimilation and fractionation in adjacent parts of the same magma chamber: the Vandfaldsdalen Macrodiike, East Greenland, *Contributions to Mineralogy and Petrology* 116, 92-107, 1994.
- Geist, D, Howard, KA, Jellinek, AM, and Rayder, S, The volcanic history of Volcan Alcedo, Galápagos Archipelago: A case study of rhyolitic oceanic volcanism, *Bulletin of Volcanology* 86, 243-260, 1994.
- Geist, D and Richards, M, The origin of the Columbia Plateau and Snake River Plain: Deflection of the Yellowstone Plume, *Geology* 21, 789-792, 1993.
- Geist, D, An appraisal of melting processes and the Galápagos hotspot: major and trace element evidence, *Journal of Volcanology and Geothermal Research* 52, 65-82, 1992.
- Bow, CS and Geist, D, Geology and petrology of Floreana Island, Galápagos Archipelago, *Journal of Volcanology and Geothermal Research* 52, 83-105, 1992.
- Geist, DJ, Hyperphase: Computer-aided instruction for the interpretation of igneous phase diagrams, *Journal of Geological Education* 40, 125-129, 1992.
- Geist, DJ, Volcanoes, in *Encyclopedia of Earth System Science*, Nierenberg, ed., Academic Press (San Diego), 427-438, 1991.
- Kolker, A, Frost, CD, Hanson, G, and Geist, DJ, Neodymium, strontium, and lead isotopes in the Maloin Ranch Pluton, Wyoming: implications for the origin of evolved rocks at anorthosite margins, *Geochimica et Cosmochimica Acta* 55, 2285-2297, 1991.
- Geist, DJ, Frost, CD, and Kolker, A, Sr and Nd isotopic constraints on the origin of the Laramie Anorthosite Complex, Wyoming, *American Mineralogist* 75, 13-20, 1990.
- Geist, DJ, Frost, CD, Kolker, A, and Frost, BR, A geochemical study of magmatism across a major terrane boundary: Sr and Nd isotopes in Proterozoic granitoids of the Southern Laramie Range, Wyoming, *Journal of Geology* 97, 331-342, 1989.
- White, CM, Geist, DJ, Frost, CD, and Verwoerd, WJ, Petrology of the Vandfaldsdalen Macrodiike, Skaergaard Region, East Greenland, *Journal of Petrology* 30, 271-298, 1989.
- Geist, DJ, Myers, JD, and Frost, CD, Megacryst-bulk rock isotopic disequilibrium as an indicator of contamination processes: The Edgecumbe Volcanic Field, SE Alaska, *Contributions to Mineralogy and Petrology* 99, 105-112, 1988.
- Geist, DJ, White, WM, and McBirney, AR, Plume-asthenosphere mixing beneath the Galápagos Archipelago, *Nature* 333, 657-660, 1988.
- Geist, DJ, McBirney, AR, and Duncan, RA, Geology and petrogenesis of lavas from San Cristobal Island, Galápagos Archipelago, *Geological Society of America Bulletin* 97, 555-566, 1986.
- Geist, DJ, McBirney, AR, and Duncan, RA, Geology of Santa Fe Island: the oldest Galápagos volcano, *Journal of Volcanology and Geothermal Research* 26, 203-212, 1985.
- McBirney, AR, Cullen, AB, Geist, DJ, Vicenzi, EP, Hall, ML, Estrella, M, and Duncan, RA, The Galápagos volcano Alcedo: a unique oceanic caldera, *Journal of Volcanology and*

Geothermal Research 26, 1985.

NON-REFEREED AND BOOKS:

- Geist, Dennis, Islands on the Move: Significance of Hotspot Volcanoes, in Du Roy, T, ed. *Galapagos: Preserving Darwin's Legacy*, Firefly Books, Ontario, Canada, 2009.
- John W. Shervais, Michael J. Branney, Dennis J. Geist, Barry B. Hanan, Scott Hughes, Alexander A. Prokopenko, and Douglas F. Williams, HOTSPOT: The Snake River Scientific Drilling Project Tracking the Yellowstone Hotspot Through Space and Time, *Scientific Drilling* v. 3, 56-57, 2006.
- Dennis Geist, Karen Harpp, and Robert Reynolds, A field trip guide to the geology of the Galapagos Islands, *Cities on Volcanoes* 4, Quito, Ecuador, 37 pp., 2006.
- Geist, D, Bohrson, W, and Harpp, K, Evolution of ocean island volcanoes, *GSA Today* 8 (December), 18-21, 1998.
- Geist, D, Bohrson, W, and Harpp, K, Evolution of ocean island volcanoes, *Episodes* 21, 261-263, 1998.
- Geist, D, Volcanology in the Galápagos Islands: Clues to the nature of the earth, *Idaho Research*, Winter, 26-27, 1992.
- Geist, DJ and White, CM, Forward, Special Issue in Honour of Alexander R. McBirney, *Journal of Volcanology and Geothermal Research* 52, vii-viii, 1992.
- Geist, DJ, McBirney, AR, and Baker, BH, MacGPP: Petrologic and Geochemical software for the MacIntosh, Eugene, OR, 1989 (2nd ed. 1993), 49 pp.
- Larson, PB and Geist, DJ, Oxygen isotope ratios in the Casto Pluton, Idaho: An isotopically zoned, low 18O magma, Leon T. Silver 70th Birthday Symposium and Celebration, California Institute of Technology, 219-223, 1995.
- McBirney, AR, Geist, DJ, and Baker, BH, GPP: Petrologic and Geochemical software for the IBM PC, Eugene, OR, 1985 (2nd ed. 1992), 33 pp.

CONFERENCE ABSTRACTS:

More than 200 since 1984.

COURSES TAUGHT (times taught)

Mineralogy (2); Igneous Petrology (1); Andesites (1); Field Volcanology (1); Basalt Petrogenesis (2); Magmatic and Metamorphic Fluids (1); Field Geology (11); Physical Geology (20); Igneous and Metamorphic Petrology (22); Volcanology (11); K/T Boundary (1); Humans, Earth, and the Cosmos (1); Optical Mineralogy (3); Physical Petrology (9); Granites (2); Trace Element Methods (2); Survey of Minerals (1); Structural Geology (1); Oceanography (1); Snake River Plain Geology and Hydrology (1); Volcano Deformation (1); Natural History of Islands (1), Active Volcanism (1), Geosystems (1).

INVITED LECTURES

Portland State University (1985; 2007), Colorado College (1986), University of Wyoming (1986), Boise State University (1987; 2001), Colgate University (1989, 2004; 2010), RPI (1989), Franklin and Marshall College (1989), University of Hawaii (1990; 2004), Washington State University (1990), Idaho State University (1991), University of Oregon (1991; 2003; 2005), Oregon State University (1991), University of Washington (1997; 2010), Caltech (2000), Spokane CC (2000), UCLA (2001), Woods Hole Oceanographic Institution (2001; 2007), Columbia University (2001), Ecole Normale Supérieure de Lyon (2001), Cascade Volcano Observatory (2003), University of British Columbia (2003), Stanford University (2003), Michigan Tech (2005), Nordic

Volcanological Institute (2005), Escuela Politecnica Nacional de Quito (2006), University of Massachusetts (2006), Harvard University (2007), University of Cambridge (2008), Durham University (2008), Leicester University (2008), Williams College (2009), University of Rochester (2009), University of North Carolina (2011)

GRANTS

- 2011 *NSF*, MRI: Acquisition of a Thermal Ionization Mass Spectrometer for environmental and geologic applications (co-PI; \$850,000).
- 2008 *NSF*, Collaborative Research: An integrated seismic-geodetic study of active magmatic processes at Sierra Negra volcano, Galapagos Islands (\$75,038).
- 2008 *NSF*, Collaborative Research: Boiling-over Pyroclastic Flows (\$85,638).
- 2007 *NSF*. Collaborative Research, RUI: The Transition from Subduction to Extensional Magmatism in the Dry Valleys of Antarctica (\$15,616).
- 2006 *NSF*. Intrusion and Eruption Dynamics on Active Galapagos Volcanoes (\$224,000).
- 2006 *NSF*. Acquisition of an inductively coupled plasma spectrometer and high precision ion chromatograph (co-PI; \$121,711).
- 2005 *National Geographic*. Extremophilic microbes in Galapagos hydrothermal systems (with Dr. Susan Childers; \$20,000).
- 2004 *NSF*. Collaborative Research: The timescales of magmatic differentiation and their relationship to eruptive style at Hekla volcano, Iceland (\$172,587).
- 2003 *USGS Edmap*. Geologic map of the Careywood quadrangle, Idaho (\$11,000).
- 2002 *NSF*. Collaborative Research: the Origin and Evolution of the Galapagos Lithosphere, Floreana Volcano (\$54,474).
- 2000 *NSF*. Development of an inexpensive continuous GPS system for remote monitoring of volcano deformation (\$46,484).
- 2000 *NSF*. Compositional buffering of magmas as an indicator of differentiation processes (\$83,919).
- 2000 *USGS Edmap*. Geologic map of the Thompson Point quadrangle, Idaho (\$9000).
- 2000 *NSF*. Collaborative Research: The leading edge of the Galapagos hotspot (\$82,203).
- 1999 *NSF*. Volcano deformation and magma transport in Galapagos shield volcanoes (\$275,821).
- 1998 *NSF*. Supplement to "Volcanic evolution in the Galapagos"; monitoring of the active eruption at Cerro Azul.
- 1998 *National Geographic*. Geologic controls on biodiversity in the Galapagos (\$18,000).
- 1997 *NSF*. Support for young scientists to attend Penrose conference on Evolution of Ocean Island Volcanoes (with Drs. Wendy Bohrsen and Karen Harpp; \$12,000).
- 1997 *NSF*. REU supplement to "Volcanic evolution in the Galapagos".
- 1997 *NSF*. ROA supplement to "Volcanic evolution in the Galapagos".
- 1996 *DOE*. Bioremediation and geologic characterization of Test Area North at the Idaho Water Resources Institute (IWRI) (co-PI; \$30,000).
- 1996 *NSF*. Volcanic evolution in the Galapagos: a geological, petrological, and geochemical investigation of Volcan Ecuador (\$100,691).
- 1994 *NSF*: The volcanic and petrologic evolution of Isabela Island, Galápagos archipelago.
- 1994 *National Geographic*. The emergence of a Galápagos shield volcano, Roca Redona (\$15,000).
- 1993 *NSF*: Acquisition of a graphite-furnace atomic absorption spectrometer and gradient ion chromatograph (with Dr. Scott Wood; \$85,000).
- 1993 *NSF*: Acquisition of a powder x-ray diffractometer (co-PI \$65,000).
- 1993 *University of Idaho Research Council seed grant*: A petrologic transect of the Ecuadorian Andes (\$6000).

- 1992 *University of Idaho Research Council seed grant*: Genesis of hot and dry magmas in Central Idaho (\$6000).
- 1992 *State Board of Education Research Grant*: Infra- to supra-structure of a magmatic plumbing system (\$32,000).
- 1992 *NSF*. REU supplement to “Contrasting differentiation processes in oceanic magma chambers.
- 1992 *NSF*: Contrasting differentiation processes in oceanic magma chambers: Cerro Azul and Sierra Negra volcanoes, Galápagos (\$121,800).
- 1991 *University of Idaho Research Council seed grant*: Petrogenesis of magmas from the Challis Volcanic Field, Central Idaho (\$6000).
- 1989 *NSF*: Contrasting differentiation processes in oceanic magma chambers: Sierra Negra and Alcedo Volcanoes, Galápagos Islands (\$52,200).
- 1989 *Pew Foundation*: Development of Introductory Level Courses in Geology (with Drs. Barbara Tewksbury, Kurt Hollocher, and Michael Owen; \$8000).
- 1989 *NSF*: A modern x-ray laboratory for undergraduate instruction (\$89,000).
- 1988 *NSF*: Petrogenesis of the Felsic Series of the Vandfaldsdalen Macrodike, East Greenland (with Dr. Craig White; \$38,000).
- 1982 *GSA Penrose Fund*: Support of PhD thesis research (\$1200).
- 1982 *Sigma Xi Research*: Support of PhD thesis research (\$500).