

CURRICULUM VITAE WILLIAM K. HART

PERMANENT ADDRESS

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EDUCATION

- Ph.D. (1982)** Geological Sciences, Case Western Reserve University, Cleveland, OH
Dissertation: "Chemical, geochronologic, and isotopic significance of low K, high-alumina olivine tholeiite in the northwestern Great Basin, U.S.A.". Advisor: Dr. James L. Aronson (now at Dartmouth College)
- M.S. (1981)** Geological Sciences, Case Western Reserve University, Cleveland, OH
- B.A. (1977)** Geology, Franklin and Marshall College, Lancaster, PA
Thesis: "The geology and petrology of the northern one-half of the Bray Quadrangle, northeastern California". Advisor: Dr. Stanley A. Mertzman, Jr.

PROFESSIONAL EXPERIENCE

Miami University, Department of Geology

Department Chair	January 2001 – Present
Director, Geology Field Station	July 1998 – Present
Professor	July 1996 – Present
Director of Graduate Studies	July 1993 – December 1997
Assistant Chair	August 1991 – December 1997
Associate Professor, with tenure	July 1989 – June 1996
Assistant Professor	January 1984 – June 1989

National Science Foundation, Division of Earth Sciences, Petrology and Geochemistry Program

Program Director (AD-1350-4) January 1998 – January 1999

Carnegie Institution of Washington, Department of Terrestrial Magnetism, Geochemistry

Visiting Research Scientist	January 1984 – Present
Post-doctoral research fellow	January 1982 – December 1984
Pre-doctoral research fellow	October 1980 – January 1981

AWARDS

- Elected Distinguished Scholar of the Graduate Faculty, 2005
- Nominee: 2001, University Distinguished Scholar; 2004/05 Benjamin Harrison Medallion
- President-elect, 1997, Miami University Chapter of Sigma Xi, The Scientific Research Society (appointment at National Science Foundation required me to relinquish this honor).
- Researcher of the Year 1994, Miami University Chapter of Sigma Xi, The Scientific Research Society.

MEMBERSHIP

American Geophysical Union	Geological Society of America
Geochemical Society	Sigma Xi

PROFESSIONAL ACTIVITIES

Research/Disciplinary Service

- 2003-Present **Co-leader**; Tephra Working Group, Revealing Human Origins Initiative (RHOI); NSF funded initiative involving 50 scientists from 37 institutions and 15 countries.
- 2000-01 **Invited scientist**; Japanese Ocean Research Institute cruise (KH00-05, Leg 3); Aden, Yemen to Madras, India (December 2000 – January 2001).
- 1999 **Ad-hoc Panel Member**; Petrology & Geochemistry Program, National Science Foundation.
- 1999 **Advisory Panel**; Human Origins Initiative, National Science Foundation.
- 1993-Present **Volunteer**; National Park Service, education and outreach activities and scientific reviews (Wrangell-St. Elias NP/P, Hagerman Fossil Beds NM, Dayton Aviation Heritage NHS).
- 1993-96 **Leader**; Western Wrangell Volcanic Field Research Expedition, Alaska.
- 1990-Present **Invited Scientific Member**; Middle Awash Research Project.
- 1990 **Leader**; Southern Afar Margin Research Expedition, Ethiopia.
- 1985 **Field trip leader**; Geological Society of America Rocky Mtn. Meeting.
- 1983-96 **Visiting Scientist**; Case Western Reserve University (K-Ar Laboratory).
- 1983-84 **Co-leader**; Central Ethiopian Rift Valley Expedition, Ethiopia.
- 1982-Present **Manuscript Reviewer**; Nature, Science, Geology, Bulletin of the Geological Society of America, Bulletin of Volcanology, Contributions to Mineralogy and Petrology, Earth and Planetary Science Letters, Geochimica et Cosmochimica Acta, Journal of African Earth Sciences, Journal of Geology, Journal of Geophysical Research, Journal of Petrology, Journal of Volcanology and Geothermal Research, Lithos.
- 1982-Present **Proposal Reviewer**; National Science Foundation (*Petrology & Geochemistry Program, Geology & Paleontology Program, Structure & Tectonics Program, Instrumentation & Facilities Program, Continental Dynamics Program, Earth Science Education Program, International Programs, Marine Geology & Geophysics Program*), American Chemical Society, National Geographic Society, Department of Energy.

Symposia/Workshop Convener

- 2005 *RHOI Tephra Working Group Meeting, Santa Fe, NM.*
- 1996 *Geologic Evolution of the Oregon Plateau, GSA Cordilleran Mtg.*
- 1992 *Magmatism Along the Northern Margin of the Basin and Range Province, GSA Cordilleran Mtg.*
- 1989 *Neogene Volcanism in the Western United States, Part II: Magmatism and Tectonism in the Cordilleran Continental Interior, GSA Rocky Mtn./Cordilleran Mtg.*
- 1985 *Volcanic Geology of the Western Snake River Plain and Adjacent Areas GSA Rocky Mtn. Mtg.*

Invited Symposia/Workshop Participant

- 2009 *Assessing Geoscience Programs: Theory and Practice, SERC, Carlton College.*
- 2008 *Scientific Drilling for Human Origins: Exploring the Application of Drill Core Records to Understanding Hominin Evolution, International Continental Drilling Program (ICDP) Workshop, Addis Ababa, Ethiopia*
- 2008 *Bimodal Magmatism: Integrating Volcanological, Geochemical and Geophysical Constraints on Petrogenetic Processes, IAVCEI 2008, Reykjavik, Iceland.*
- 2008 *Tephra Studies - Tephrochronology, IAVCEI 2008, Reykjavik, Iceland.*
- 2007 *The Future of Geoscience Field Courses, GSA Annual Mtg.*
- 2006 *GeoFrame: A Geologic Framework for EarthScope's USArray, AGU Fall Mtg.*
- 2005 *The Yellowstone Hotspot: Its Influence on the Magmatic and Tectonic Evolution of the Western U.S., GSA Annual Mtg.*
- 2005 *Mesozoic and Cenozoic Crustal Evolution of Alaska and Western Canada, GSA Annual Mtg.*
- 2004 *Geological Context of Early Humans from Ethiopian Rift Basins, GSA Annual Mtg.*
- 2004 *Large-volume Rhyolites of the Western USA, GSA Cordilleran/Rocky Mtn. Mtg.*
- 2003 *The Columbia River Flood Basalts: New Insights into the Volcanism, Petrology, and Tectonism of a Large Igneous Province, GSA Annual Mtg.*
- 1999 *Tectonic and Magmatic History of the Snake River Plain, GSA Rocky Mtn. Mtg.*
- 1998 *Regional Investigations of the North American Cordillera, AGU Fall Mtg.*
- 1997 *Plume Tails and Continental Lithosphere: A Multi-Disciplinary Approach to the Snake River Plain and Other Continental Plume Tracks, GSA Annual Mtg.*

- 1996 *Magma Generation and Evolution at Convergent Margins* GSA Annual Mtg.
 1994 *Volcanic Hazards and Disasters in Human History*, GSA Annual Mtg.
 1993 *Workshop on Magmatism and Mass Fluxes at Margins*, National Research Council -MARGINS Research Initiative (keynote speaker and contributing scientist).
 1993 *Applications of the Re-Os Isotopic System to Solid Earth Geochemistry*, AGU Spring Mtg.
 1992 *Continental Intraplate Volcanism*, Amer. Geophys. Union Spring Mtg.
 1991 *MASHING and SMASHING: Geochemical Evidence fo Long-Term Crust-Mantle Interaction Along a Cratonic Margin, Northwest U.S* GSA Annual Mtg.
 1990 *INQUA/ICCT Field Conference and Workshop on Tephrochronology*, Yellowstone Nat. Park.
 1987 *Magmatism Associated with Lithospheric Extension*, AGU Fall Mtg.
 1987 *Fourth Columbia River Basalt Symposium*, GSA Cordilleran Mtg.
 1986 *Evolution of the Rio Grande Rift and Related Magmatism*, GSA Annual Mtg.
 1986 *International Volcanological Congress*, New Zealand

ACADEMIC ADMINISTRATIVE AND COMMITTEE SERVICE (not previously listed)

- 2007-2008 Member; Graduate Student Achievement Fund Committee, Graduate Council.
 2007-08 Chair; Tenure-track Geobiology Search Committee, Department of Geology.
 2007-08 Co-Chair; Tenure-track Geoscience Search Committee, Department of Geology (MUH).
 2006-07 Member; Academic Program Review Committee, Department of Chemistry & Biochemistry.
 2006-07 Chair; Tenure-track Geobiology Search Committee, Department of Geology.
 2005-Present Member; CAS Environmental Co-Major Oversight Committee (and Executive Committee).
 2005-06 Chair; Limper Museum Director Search Committee, Department of Geology.
 2004-2007 Member; Outcomes of the Majors, Natural Sciences Assessment Working Group.
 2004-2006 Member; President's Academic Enrichment Award Committee.
 2003-Present Member; University Chemical Safety Committee.
 2003-04 Member; Environmental Awareness LLC Advisory Committee.
 2003-04 Chair; Tenure-track Solid Earth Geophysicist Search Committee, Department of Geology.
 2003 Member; Visiting Assistant Professor Search Committee, MU Hamilton Campus.
 2002-Present Coordinator; Baldwin Frontiers in Geology Distinguissehd Lecture Series.
 2002 Chair; Department of Chemistry and Biochemistry Chair Search Committee.
 2001-Present Alternate; Divisional Appeals Committee, College of Arts and Science.
 2001-02 Chair; Interim Museum Manager Search Committee, Department of Geology.
 2001-02 Chair; Visiting Assistant Professor Search Committee, Department of Geology.
 2001-02 Chair; Tenure-track Geomorphologist Search Committee, Department of Geology.
 2001 Member; Visiting Assistant Professor Search Committee, MU Hamilton Campus.
 2000 Chair; Tenure-track Geomorphologist Search Committee, Department of Geology.
 1998-99 Chair; Curriculum Committee, Department of Geology
 1998-99 Chair; Promotion & Tenure Committee, Department of Geology.
 1995-97 Member and Chair (1997); Sigma Xi Researcher of the Year Award Selection Committee.
 1995-96 Member; Tenure-track Isotope Geochemist Search Committee, Department of Geology.
 1992-99 Assistant/Associate Chair; Department of Geology.
 1992-94 Chair; Assistant Professor Promotion & Tenure Committee.
 1990-Present Campus Representative; Geological Society of America.
 1990-2000 Member; Promotion & Tenure Committee, Department of Geology.
 1989 Coordinator; University Committee on Faculty Research, Research Forum.
 1988-90 Member; Liberal Education Requirement Committee, College of Arts and Science.
 1988-89 Chair; Natural and Applied Sciences Subcommittee, Committee on Faculty Research.
 1987-8 Member; Graduate Student Achievement Fund Committee, Graduate Council
 1987-8 Member; Tenure-track Strutural Geologist Search Committee, Department of Geology.
 1986-92 Chair; Space Utilization Committee, Department of Geology.
 1986-88 Member; Applied and Natural Sciences Subcommittee, Graduate Council.
 1986-87 Chair; Guidelines Revision Subcommittee, University Committee on Faculty Research.
 1985-89 Member; University Committee on Faculty Research.
 1984-93 Member; Curriculum Committee, Department of Geology.

RESEARCH INTERESTS AND EXPERTISE

Areas of ongoing research: Volcano-tectonic evolution of continental igneous provinces; geochemical evolution of the crust and mantle with emphasis in extensional and arc-back-arc settings; volcanology, tephrochronology and faunal evolution; and understanding terrestrial geochemical processes and fluxes.

Field experience: Over 30 years of field experience in North America, Hawaii, New Zealand and Ethiopia with extended field campaigns (minimum one-month) in the following general areas; Basin & Range, Snake River Plain, Columbia Plateau Provinces (1978, 79, 83, 84, 85, 87, 89, 90, 91, 92, 96, 97, 99, 2000-04, 2006, 2007, 2008); Cascade Range (1975, 77, 79, 86, 87); Ethiopian Rift and Afar (1983, 84, 90, 94, 96, 99, 2008); and Wrangell Volcanic Field, Alaska (1993, 94, 95, 96).

Physical and chemical characterization of earth materials: Rock preparation and thin sectioning; mineral and tephra glass separation and purification; transmitted and reflected light microscopy, scanning electron microscopy; cathodoluminescence microscopy, electron microprobe microanalysis, x-ray fluorescence and diffraction spectrometry; and argon plasma spectrometry (DCP, ICP, ICP-MS).

Geochronologic and isotopic characterization of earth materials: Ar extraction and spectrometry for K-Ar and Ar-Ar geochronology in igneous, hydrothermal, and diagenetic clay mineral systems; oxygen extraction and spectrometry for oxygen isotopic measurements of igneous rocks and minerals; and positive and negative thermal ionization mass spectrometry (TIMS) and geochemical procedures for REE and Rb-Sr, Sm-Nd, U-Th-Pb, and Re-Os isotopic analyses of an array of earth materials.

INVITED RESEARCH LECTURES

Carnegie Institution of Washington-DTM (2008); College of Wooster (2008); Boise State University (2007); Miami University (2007); Shawnee State University (2007); China University of Geosciences, Beijing (2006); University of Science and Technology-AGH, Krakow (2006); Bowling Green State University (2002); Miami University (2002); Indiana University (2001); Saint Joseph's College (2001); University of Kentucky (2000); Geological Society of Washington (1998); University of Cincinnati (1997); Ohio University (1996); Miami University (1994 Sigma Xi Researcher of the Year Lecture); Miami University (1992); Ethiopian Institute of Geological Surveys (1990); Northern Illinois University (1989); Franklin & Marshall College (1988); Duke University (1988); University of Cincinnati (1986); Wright State University (1985); Ethiopian Institute of Geological Surveys (1984, 1983); Dartmouth College (1983); University of Pennsylvania (1983); Carnegie Institution-DTM (1982), Franklin & Marshall College (1981).

MIAMI UNIVERSITY TEACHING EXPERIENCE

Undergraduate (current courses indicated by italics)

Honors Geology Laboratory (GLG 115.H)

First Year Seminar in Environmental Science (GLG 175)

Geology of the U.S. National Parks (GLG 141)

Chemistry of Earth Systems (GLG 211)

Igneous and Metamorphic Petrology/Petrography (GLG 422 now GLG 357)

Field Geology (GLG 411)

Independent Research (various designations at 200-, 300- and 400-levels)

Physical Volcanology (various designations at 400-level)

Optical Mineralogy & X-ray Methods (various designations as part of 200-level courses)

Graduate (current courses indicated by italics)

Advanced Igneous Petrology (GLG 646)

Seminars in volcanology, igneous geochemistry, petrologic modeling, crust/mantle evolution, geochemical modeling, geochemical analysis methods/techniques (GLG 730 and 750)

Field Geology (GLG 511)
Teaching Field Geology; Advanced Field Training (GLG 699)
Independent Research (various designations at 600-, 700- and 800-levels)
Volcanology Summer Workshop (GLG 699)
Physical Volcanology (various designations at 500-level)
Isotope Geochemistry (various designations at 600-level)

STUDENT MENTORING

Graduate students (10 Ph.D. , 21 M.S./M.A.) and Undergraduate senior thesis students (7) listed individually; over 25 total Undergraduate student research advisees.

Brown, Kenneth: *Petrologic and tectonic significance of Cretaceous granitoid suites from the Wrangell-Nutzotin Mountains area, Alaska*; **Ph.D.**, in progress.

Walkup, Laura: *Tephrochemical investigations of heterogeneous silicic eruptive products in the Middle Awash region, Afar, Ethiopia*; **M.S.**, in progress.

Wypych, Alicja: *Petrogenesis and tectonic significance of mid-Miocene silicic volcanism in the Owyhee Plateau – SE High Lava Plains region, northwestern USA*; **Ph.D.**, in progress.

Hinterberger, Thomas: *A Re-Os investigation of monogenetic basalt volcanism in SE Oregon*; **M.S.**, in progress.

Short, Emily: *Petrologic and tectonic significance of Quaternary basaltic volcanism at the western edge of the Owyhee Plateau, Oregon*; **M.S.**, in progress.

Pasquale, Stephen: *Petrologic and tectonic significance of mid-Miocene silicic volcanism west of the Pueblo Mountains, SE Oregon*; **M.A. (with research project)**, 2008.

Minturn, C.B.: *Volcanic history of the Glens Ferry Formation in the Hagerman-Glens Ferry area, Idaho*; **M.A. (with research project)**, 2007.

Bondre, Ninad: *Field and geochemical investigation of basaltic magmatism in the western United States and India*; **Ph.D.**, 2006.

Brueseke, Matt: *The evolution of Miocene volcanic systems in the southeastern Oregon Plateau of Oregon and Nevada*; **Ph.D.**, 2005.

Morisen, Krista: **M.A.**, 2005.

Knight, Jake: *Physical, petrographic and geochemical characterization of ash flow volcanism: the mid-Miocene Cold Springs Tuff of the Santa Rosa-Calico volcanic field, Nevada*; **B.S.**, 2005.

Snyder, Darin: *Chemical and isotopic studies of the timescales of magmatic differentiation and complex magmatic system evolution*; **Ph.D.**, 2005 (with Elisabeth Widom).

Shoemaker, Kurt: *Quantification of the lithospheric and sublithospheric contributions to northwestern United States basaltic volcanism*; **Ph.D.**, 2004.

Ferrarelli, Amber: **M.A.**, 2004

Mutiti, Christine: **M.A.**, 2004.

Gilbert, Lauren: *A record of mid-Miocene explosive volcanism and rift basin development in the Santa Rosa-Calico volcanic field, Nevada*; **A.B. (Dept. Honors)**, 2003.

Maloy, Amy: *The generation of intermediate composition magmas in a bimodal setting: evidence from the Santa Rosa-Calico volcanic field, Nevada*; **A.B. (Dept. Honors)**, 2003.

Irvin, Shawn: *Volcanology and stratigraphy of the Esa Dibo region, Middle Awash Valley, Ethiopia*; **M.S.**, 2002.

Larson, Tonja: *Geochemistry and petrogenesis of tephra from the Middle Awash region, Ethiopia*; **M.S.**, 1998.

McKee, Claire: *Chemical characterization of basaltic eruptive centers in southeastern Oregon*; **A.B.**, 1998.

Snyder, Darin: *Petrogenesis of the White Mountain main granitoid suite, Nabesna district, Alaska*; **M.S.**, 1998.

- Lunt, Amy: *Reconnaissance petrology and geochemistry of mafic intra-arc volcanism in the western Wrangell Volcanic Field, Alaska*; **M.S.**, 1997.
- Preece, Shari: *Geochemical variation in the <5 Ma Wrangell volcanic field, Alaska with an emphasis on the Skookum Creek volcanic complex*; **Ph.D.**, 1997.
- Chernet, Tadiwos: *Petrologic and geochemical investigation of volcanism in the northern Main Ethiopian Rift - Afar transition zone*; **Ph.D.**, 1995.
- Herlihy, Fran: *Rare-earth element analysis and petrogenetic history of Jordan Craters volcanic field, southeastern Oregon*; **A.B.**, 1993.
- Rowe, Harry: *A geochemical and petrographic study of a basaltic dike and the surrounding country rock, Owyhee Reservoir, SE Oregon*; **A.B.**, 1993.
- Stuck, Rich: *Petrology and geochemistry of a late Cretaceous granitoid suite, Santa Rosa mountain range, Humboldt County, Nevada*; **M.S.**, 1993.
- Cooper, Jeanne: *Geochemical evolution of the Springerville volcanic field, east-central Arizona*; **Ph.D.**, 1991.
- Anderson, James: *Petrology of late Cenozoic basalts from the Colorado Plateau – Basin and Range transition, SW Utah*; **A.B. (Dept. Honors)**, 1989.
- Cupp, Barry: *Mineralization and volcanism at the DeLamar Silver Mine, Owyhee County, Idaho*; **M.S.**, 1989.
- Mallin, Kevin: *Magmatism associated with Cascade segmentation and Basin and Range extension, northeastern California - south-central Oregon*; **M.S.**, 1989.
- Mitchell, Jeremy: *Geochemical evolution of an ophiolite complex from New Caledonia*; **M.S.**, 1989.
- Mosher, Stephanie: *Petrogenesis of the Pueblo Mountains basalts, southeastern Oregon - northern Nevada*; **M.S.**, 1989.
- Legge, Paul: *The bimodal basalt-rhyolite association west of and adjacent to the Pueblo Mountains, southeastern Oregon*; **M.S.**, 1988.
- Mellott, Mark: *Geochemical, petrologic, and isotopic investigation of andesites and related volcanic rocks in the Santa Rosa Range and Bloody Run Hills, Nevada*; **M.S.**, 1987.
- WoldeGabriel, Giday: *Volcanotectonic history of the central sector of the Main Ethiopian Rift*; **Ph.D.**, 1987 (Case Western Reserve University with J.L. Aronson and R.C. Walter).
- Cooper, Jeanne: *Chemical and isotopic variations within late Cenozoic tholeiitic and alkaline basalts in relation to the Colorado Plateau and Basin and Range Provinces, east-central Arizona*; **M.S.**, 1986.

Note: In addition to the mentoring listed above, I have served as a reader and/or committee member for more than a dozen PhD students in Geology and Chemistry/Biochemistry and more than two dozen MS/MA students in Geology. I also have served as mentor for three research associate / postdoctoral fellow appointees in Geology.

For all Publication categories, work based on thesis/dissertation/advisee research at Miami University is indicated; MU graduate student or postdoc (*) and MU undergraduate student ()**

PUBLICATIONS (in review, in press)

- *Brueseke, M.E. and Hart, W.K. (in press). Intermediate composition magma production in an intracontinental setting: “accidental” andesites and dacites of the mid-Miocene Santa Rosa – Calico Volcanic Field, northern Nevada. *Journal of Volcanology and Geothermal Research* [DOI:10.1016/j.volgeores.2008.12.015] **(Invited)**.
- Hart, W.K., WoldeGabriel, G., Haile-Selassie, Y., and Renne, P.R. (in press). Chapter 3: Volcanic Record of the Adu Assa Formation, in Haile-Selassie, Y. and WoldeGabriel, G., eds., *Ardipithecus kadabba*: Context and Environment: *The Middle Awash Series* (T.D. White, ed.), University of California Press **(Invited)**.

WoldeGabriel, G., Hart, W.K., Renne, P.R., Haile-Selassie, Y., and White, T.D. (in press). Chapter 2: Stratigraphy of the Adu-Asa Formation, in Haile-Selassie, Y. and WoldeGabriel, G., eds., *Ardipithecus kadabba: Context and Environment: The Middle Awash Series* (T.D. White, ed.), University of California Press **(Invited)**

Renne, P.R., Morgan, L.E., WoldeGabriel, G., Hart, W.K., and Haile-Selassie, Y., (in press). Chapter 4: Geochronology, in Haile-Selassie, Y. and WoldeGabriel, G., eds., *Ardipithecus kadabba: Context and Environment: The Middle Awash Series* (T.D. White, ed.), University of California Press **(Invited)**

PUBLICATIONS – EDITED VOLUME / BOOK CHAPTERS (INVITED)

WoldeGabriel, G., Gilbert, W.H., Hart, W.K., Renne, P.R., and Ambrose, S.H. (2008). Chapter 2: Geology and Geochronology, in Gilbert, W.H. and Asfaw, B., eds., *Homo Erectus: Pleistocene Evidence from the Middle Awash, Ethiopia*, p. 13-43, *The Middle Awash Series* (T.D. White, ed.), University of California Press.

*Brueseke, M.E. and Hart, W.K. (2008). Geology and petrology of the mid-Miocene Santa Rosa – Calico Volcanic Field, northern Nevada. *Nevada Bureau of Mines and Geology Bulletin 113* (online publication <http://www.nbmng.unr.edu/dox/dox.htm>) (46 pages plus 36 pages of figures and 4 tables; CD version available).

*Snyder, D.C. and Hart, W.K. (2007). The White Mountain granitoid suite: isotopic constraints on source reservoirs for Cretaceous magmatism within the Wrangellia Terrane, in Ridgway, K.D., Trop, J.M., O'Neill, J.M., and Glen, J., eds., Tectonic growth of a collisional continental margin: crustal evolution of southern Alaska, *Geological Society of America Special Paper* 431, 379-400.

*Shoemaker, K.A. and Hart, W.K. (2002). Temporal controls on basalt genesis and evolution on the Owyhee Plateau, Idaho and Oregon: in Bill Bonnicksen, C.M. White, and Michael McCurry, eds., Tectonic and Magmatic Evolution of the Snake River Plain Province: *Idaho Geological Survey Bulletin* 30, 313-328.

White, C.M., Hart, W.K., Bonnicksen, B. and Matthews, D. (2002). Geochemistry and strontium isotopic systematics of basalts in the Melba area, western Snake River Plain: in Bill Bonnicksen, C.M. White, and Michael McCurry, eds., Tectonic and Magmatic Evolution of the Snake River Plain Province: *Idaho Geological Survey Bulletin* 30, 329-342.

WoldeGabriel, G., Heiken, G., White, T.D., Asfaw, B., Hart, W.K., and Renne, P.R. (2000). Volcanism, tectonism, sedimentation, and the paleoanthropological record in the Ethiopian Rift System: in McCoy, F.W. and Heiken, G., eds., Volcanic Hazards and Disasters in Human Antiquity, *Geological Society of America Special Paper* 345, 83-99.

Hart, W.K., Carlson, R.W., and *Mosher, S.A. (1989). Petrogenesis of the Pueblo Mountains basalt, southeastern Oregon and northern Nevada: in Reidel, S.P. and Hooper, P.R., eds., Volcanism and tectonism in the Columbia River flood-basalt province: Boulder, Colorado, *Geological Society of America Special Paper* 239, 367-378.

Carlson, R.W. and Hart, W.K. (1988). Flood basalt volcanism in the northwestern United States, in, Macdougall J.D., ed., *Continental Flood Basalts*: Kluwer Ac. Pub., 35-61.

PUBLICATIONS – NATIONAL/INTERNATIONAL JOURNALS

Note: 8 published in *Nature*, 2 published in *Science*, 2 published in *Geology*, and 12 invited.

*Bondre, N.R. and Hart, W.K. (2008). Morphological and textural diversity of the Steens Basalt lava flows, southeastern Oregon, USA: implications for emplacement style and nature of eruptive episodes. *Bulletin of Volcanology*, 70, 999-1019 [DOI: 10.1007/s00445-007-0182-x].

- Westgate, J.A., Preece, S.J., Froese, D.G., Pearce, N.J.G., Roberts, R.G., Demuro, M., Hart, W.K., and Perkins, W. (2008). Changing ideas on the identity and stratigraphic significance of the Sheep Creek tephra beds in Alaska and the Yukon Territory, northwestern North America. *Quaternary International*, 178, 183-209 [DOI:10.1016/j.quaint.2007.03.009] **(Invited)**.
- *Brueseke, M.E., Hart, W.K., and Heizler, M.T. (2008). Diverse mid-Miocene silicic volcanism associated with the Yellowstone-Newberry thermal anomaly. *Bulletin of Volcanology*, 70, 343-360 [DOI: 10.1007/s00445-007-0142-5]. **(Invited)**
- Suwa, G., Asfaw, B., Haile-Selassie, Y., White, T., Katoh, S., WoldeGabriel, G., Hart, W.K., Nakaya, H., and Beyene, Y. (2007). Early Pleistocene Homo erectus fossils from Konso, southern Ethiopia: Anthropological Science (The Anthropological Society of Nippon), 1-19.
- *Brueseke, M.E., Heizler, M.T., Hart, W.K., and Mertzman, S.A. (2007). Distribution and geochronology of Oregon Plateau (U.S.A.) flood basalt volcanism: the Steens Basalt revisited: *Journal of Volcanology and Geothermal Research*, 161, 187-214.
- *Bondre, N.R., Hart, W.K., and Sheth, H.C. (2006). Geology and geochemistry of the Sangamner mafic dikes, Deccan Volcanic Province, India: implications for chemostratigraphic interpretations: *Journal of Geology*, 114, 155-170.
- White, T.D., WoldeGabriel, G., Asfaw, B., Ambrose, S., Beyene, Y., Bernor, R.L., Boisserie, J.-R., Currie, B., Gilbert, H., Haile-Selassie, Y., Hart, W.K., Hlusko, L., Howell, F.C., Kono, R.T., Louchart, A., Lovejoy, C.O., Renne, P.R., Saegusa, H., Vrba, E.S., Wesselman, H., and Suwa, G. (2006). Asa Issie, Aramis, and the origin of Australopithecus: *Nature*, 440, 883-889.
- WoldeGabriel, G., Hart, W.K., Katoh, S., Beyene, Y., and Suwa, G. (2005). Correlation of Plio-Pleistocene tephra in Ethiopian and Kenyan rift basins: temporal calibration of geological features and hominid fossil records: *Journal of Volcanology and Geothermal Research*, 147, 81-108.
- *Preece, S.J. and Hart, W.K. (2004). Geochemical variations in the < 5 Ma Wrangell Volcanic Field, Alaska: implications for the magmatic and tectonic development of a complex continental arc system: *Tectonophysics*, 392, 165-191. **(Invited)**
- WoldeGabriel, G., Renne, P.R., Hart, W.K., Ambrose, S.H., Asfaw, and White, T.D. (2004). Geoscience methods lead to paleo-anthropological discoveries in Afar Rift, Ethiopia: *EOS, Transactions of the American Geophysical Union*, 85, 273, 276-277. **(Invited)**
- Haile-Selassie, Y., WoldeGabriel, G., White, T.D., Bernor, R.L., Dugusta, D., Renne, P.R., Hart, W.K., Vrba, E., Ambrose, S., and Howell, F.C. (2004). Mio-Pliocene mammals from the Middle Awash, Ethiopia: *Geobios*, 37, 536-552.
- Hart, W.K., WoldeGabriel, G., Katoh, S., Renne, P.R., Suwa, G., Asfaw, B., and White, T.D. (2003). Reply to comment on "Dating of the Herto hominin fossils": *Nature*, 426, 622.
- Clark, J.D., Beyene, Y., WoldeGabriel, G., Hart, W.K., Renne, P., Gilbert, H., Defleur, A., Suwa, G., Katoh, S., Ludwig, K., Boisserie, J.-R., Asfaw, B., and White, T.D. (2003). Stratigraphic, chronological, and behavioral contexts of Pleistocene Homo sapiens from Herto, Ethiopia: *Nature*, 423, 747-752.
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OTHER PROFESSIONAL PRESENTATIONS

**Knight, J.E., *Brueseke, M.E., and Hart, W.K. (2005). Physical, petrographic and geochemical characterization of ash flow volcanism: the mid-Miocene Cold Springs Tuff of the Santa Rosa-Calico volcanic field, Nevada: *Miami University Undergraduate Research Forum 2005 Conference Program*.

**Knight, J.E., *Brueseke, M.E., and Hart, W.K. (2004). Geochemical and petrographic characterization of ash flow volcanism: the Cold Springs Tuff and its significance to the evolution of the Santa Rosa-Calico volcanic field, Nevada: *Miami University Undergraduate Research Forum 2004 Conference Program*.

**Olland, A.G., *Bondre, N.R., and Hart, W.K. (2004). Flow lobe morphology of the Deccan Volcanic Province, India. *Miami University Undergraduate Research Forum 2004 Conference Program*.

**Gilbert, L.Y., *Brueseke, M.E., *Snyder, D.C., and Hart, W.K. (2003). A record of mid-Miocene explosive volcanism and rift basin development in the Santa Rosa-Calico volcanic field, Nevada: *Miami University Undergraduate Research Forum 2003 Conference Program*.

**Maloy, A.K., *Brueseke, M.E., *Minturn, C.B., and Hart, W.K. (2003). The generation of intermediate composition magmas in a bimodal setting: evidence from the Santa Rosa-Calico volcanic field, Nevada: *Miami University Undergraduate Research Forum 2003 Conference Program*.

**McKee, C.M. and Hart, W.K. (1997). Distribution of basalt vents in extreme southeastern Oregon: *Miami University Undergraduate Summer Scholars 1997 Research Forum*.

Asfaw, B., Beyene, Y., Haile-Selassie, Y., Hart, W., Renne, P., Suwa, G., White, T., and WoldeGabriel, G. (1995). Three years of hominid paleontology at Aramis, Ethiopia: *4th Annual Meeting of the Paleoanthropology Society*.

Hart, W.K. and Carlson, R.W. (1993). Continental extension and rifting - a view from the volcanic record: *Workshop on Magmatism and Mass Fluxes at Margins, National Research Council - MARGINS Research Initiative*.

Hart, W.K. (1989). Petrogenesis of basalts - examples from the western U.S. and Ethiopia: *Miami University Committee on Faculty Research 1989 Research Forum*.

Hart, W.K. (1989). Isotope variations in continental basalts and global mantle heterogeneity: *International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) Field Conference*.

Hart, W.K. (1989). Andesite petrogenesis in the northwestern Basin & Range: *International Geological Congress Meeting (presented as part of a National Science Foundation display)*.

RESEARCH FUNDING HISTORY (not including internal small grants or matching funds)

U.S. Geological Survey, National Cooperative Geological Mapping Program,

EDMAP 2009, 6/09 – 5/10, \$15,972

W. Hart; *Miocene arrival of the Yellowstone hotspot and inception of Basin and Range extension in southern Oregon.*

National Science Foundation, 1/07 – 12/09, \$239,991

E. Widom and W.K. Hart; *Technician support: Management of thermal ionization mass spectrometry and isotope geochemistry labs.*

National Science Foundation, 9/05 - 8/10, \$197,690 (MU portion of large collaborative)

W.K. Hart; *Collaborative research: understanding the causes of continental intraplate tectonomagmatism: a case study in the Pacific Northwest.*

National Science Foundation, 5/01 - 12/05, \$4,950

W.K. Hart; *The Santa Rosa – Calico volcanic field: a case study of magmatic processes associated with the Yellowstone hotspot and lithospheric extension – REU Supplement.*

National Science Foundation, 7/01 - 12/05, \$126,696

W.K. Hart; *The Santa Rosa – Calico volcanic field: a case study of magmatic processes associated with the Yellowstone hotspot and lithospheric extension.*

National Science Foundation, 8/01 – 7/03, \$309,962

E. Widom, H. Dong, and W.K. Hart; *Acquisition of a thermal ionization mass spectrometer for geochemical and geochronological applications.*

Ohio Board of Regents Action Fund, 8/01 – 7/03, \$147,481

E. Widom, H. Dong, and W.K. Hart; *Acquisition of a thermal ionization mass spectrometer for geochemical and geochronological applications.*

Miami University Hampton Fund, 4/99 - 6/00, \$3,000

W.K. Hart; *Continued Geological and Paleoanthropological Research in the Middle Awash Region, Ethiopia.*

National Science Foundation, 1/98 - 1/99, \$94,652

W.K. Hart; *IPA Mobility Assignment – NSF Program Director for Petrology and Geochemistry Program.*

National Park Service, 10/97 - 6/99, \$2,000

W.K. Hart; *Analysis and Dating of Volcanic Ash from the Hagerman Horse Quarry, Hagerman Fossil Beds National Monument.*

Miami University Committee on Faculty Research, 12/1/96 - 5/31/99; \$13,840

W.K. Hart; *Basaltic volcanism and continental rifting in the northwestern United States.*

National Science Foundation, 6/1/93 - 5/31/98; \$109,298

W.K. Hart; *Petrologic and geochemical investigation of the Wrangell volcanic field, Alaska.*

Institute of Human Origins, 10/1/90 - 12/31/95; \$47,040

W.K. Hart (five annual awards); *Proposal to African Student Training Program.*

Ohio Board of Regents Research Challenge Program, 4/1/94 - 8/31/95; \$10,480

W.K. Hart; *Geochemical and geochronologic characterization of volcanic tephra: applications to geologic and paleoanthropologic investigations in the East African Rift system.*

National Science Foundation, 9/1/92 - 2/28/94; \$6,950

W.K. Hart; *U.S.-Ethiopia Dissertation Improvement Research on petrologic and geochemical investigation of volcanism in the Main Ethiopian Rift-Afar transition region.*

National Science Foundation, 6/1/92 - 5/31/95; \$34,700

W.K. Hart; *Rhenium-Osmium investigation of Western U.S. magmatism.*

Ohio Board of Regents Research Challenge Program, 12/1/89 - 11/30/91; \$10,266

W.K. Hart; *Application of a new geochemical system to problems of Earth evolution.*

Miami University Committee on Faculty Research, 12/1/89 - 6/1/91; \$6,135

W.K. Hart; *Application of Rhenium - Osmium isotope systematics to magma and mantle evolution.*

National Science Foundation, 6/1/89 - 11/30/91; \$44,400

W.K. Hart; *The Springerville volcanic field, east-central Arizona: a case study of crust/mantle evolution and petrogenetic processes in a tectonophysical transition zone.*

National Science Foundation, 2/1/87 - 1/31/90; \$89,600 (\$55,400 to Miami University)

W.K. Hart and R.W. Carlson; *Collaborative Research - Geochemical investigation of late Cenozoic volcanism in the N.W. United States: implications for crust/mantle evolution and tectonic development.*

Ohio Board of Regents Research Challenge Program, 5/1/86 - 8/31/87; \$23,050

W.K. Hart, L. Mayer, and J.M. Hughes; *Dynamics of arc segmentation: implications for geologic hazards in the Cascade volcanic range.*

National Science Foundation, 8/1/85 - 8/31/87; \$55,875

N.K. Grant, M. Boardman, W.K. Hart, W. Green, and G. Pacey; *Acquisition of a Direct Current Argon Plasma spectrometer.*

Miami University Faculty Research Committee, 2/1/85 - 6/30/86; \$6,395

W.K. Hart; *Basaltic volcanism in the northwestern Basin and Range: implications for regional tectonic development and crust/mantle structure.*

American Chemical Society (PRF), 6/1/84 - 8/31/86; \$15,000

W.K. Hart; *Rb-Sr, Sm-Nd, and U-Pb isotope systematics and their significance in studies of volcanic petrogenesis in the Afar region, Ethiopia.*

MAJOR STUDENT DERIVED RESEARCH FUNDING

(not including small internal or conference travel grants)

Geological Society of America and Sigma Xi

Ninad Bondre, Ph.D.	\$1,830 (2003)
Matt Brueseke, Ph.D.	\$3,400 (1998, 2001)
Tadiwos Chernet, Ph.D.	\$1,340 (1991,93)
Jeanne Cooper, Ph.D, M.S.	\$3,150 (1985,87,89)
Mark Mellott, M.S.	\$ 800 (1985)
Shari Preece, Ph.D.	\$4,000 (1992,94,95)
Kurt Shoemaker, Ph.D.	\$3,400 (1996,98)
Emily Short, M.S.	\$2,300 (2007)
Darin Snyder, M.S.	\$1,500 (1997)
Rich Stuck, M.S.	\$1,000 (1991)
Laura Walkup, M.S.	\$ 500 (2008)
Alicja Wypych Ph.D.	\$2,980 (2008)

NERCO-DeLamar Silver Mine

Barry Cupp, M.S.	\$1,200 (1986)
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Miami University Undergraduate Summer Scholar Program

Jake Knight, B.S.	\$3,400 (2004)
Lauren Gilbert, A.B.	\$3,400 (2002)
Claire McKee, A.B.	\$2,800 (1997)

Miami University, College of Arts and Science Dean's Scholar Program

Jake Knight, B.S.	\$1,500 (2004/05)
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Tadiwos Chernet, Ph.D. – in-kind field support, approximately \$5,000 (1990-91)

U.S. Geological Survey – Alaskan Branch

Shari Preece, Ph.D. – in-kind field support, approximately \$1,000 (1993-95)

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