

Curriculum Vitae
Rosemary L. Hickey-Vargas

Education:

- 1983 Ph.D in Geochemistry, Massachusetts Institute of Technology, Cambridge, MA.
- 1977 B.S. summa cum laude with high honors in Geology, Hofstra University, Hempstead, NY.

Employment/Professional Appointments:

- 2009 - 2013 Chairperson, Department of Earth & Environment, FIU
- 2007 - 2009 Undergraduate Program Director, Dept. of Earth Sciences, FIU
- 2001 - 2004 Chairperson, Department of Earth Sciences, FIU
- 1997 - present Professor of Geology, Department of Earth & Environment, FIU
- 1994 - 1999 Visiting Investigator, Department of Terrestrial Magnetism, Carnegie Institution of Washington (summers)
- 1991 - 1996 Graduate Program Director, Geology Department, FIU
- 1990 - 1997 Associate Professor of Geology, FIU
- 1985 - 1990 Assistant Professor of Geology, Florida International University
- 1983 - 1985 Post-doctoral Research Associate, Massachusetts Institute of Technology

Professional Affiliations/Memberships:

- American Geophysical Union
- Geological Society of America
- The Geochemical Society
- International Association for Volcanology and Chemistry of the Earth's Interior
- Professional Geologist, State of Florida

Research Interests:

Geochemistry and igneous petrology: use of isotopic, major and trace element abundances to interpret the origin and evolution of magmas and their source regions in the earth's mantle and crust. The magmatic and tectonic history of the southern Andes and Western Pacific island arcs and marginal basins. Geochemistry of earth materials in relation to the geochemical cycles of trace elements.

Scientific Expeditions/Field Work:

- Igneous Petrologist, Expedition 351 "Arc Origins", Amami-Sankaku Basin, May 30-July 30, 2014, International Ocean Discovery Program (IODP)
- Invited shipboard scientist, JAMSTEC (Japanese Marine Science and Technology Center) Cruise R/V Yokosuka YK08-08, July 8-July 22, 2008. Scientist for Shinkai 6500 submersible Dive #1091 in the Mariana Trench.

- Invited Shipboard Scientist, R/V Kairei cruise KR99-10, West Philippine Basin, October 20-November 3, 1999, Japanese Marine Science & Technology Center (JAMSTEC, Yokosuka, Japan)
- Chilean Southern Volcanic Zone: March 2012; July-August 2010; Nov-Dec 2004; Feb-March 1993; Dec 1988-Jan 1989; Dec 1987-Jan 1988; Jan-March 1982.

Leadership Positions in National/International Scientific Organizations

- NSF MARGINS/GeoPRISMS Initiative, National Steering Committee Member (December 2008-2011) (<http://geoprisms.org/>)

Conferences and Workshops Convened and Organized:

- Co-Convener and Session Chair, Geological Society of America Special Sessions: Magmas and Their Sources: A Tribute to the Distinguished Career of Fred Frey, Vancouver, BC, Canada, October 19-22, 2014
- Co-Convener, NSF/JAMSTEC Workshop on Ultra Deep Drilling into Arc Crust, Kona, Hawaii, USA, 17-21 September, 2012
- Convener and organizer: State of the Arc Conference, (SOTA 2007) – triennial international conference on subduction zone magmatism and volcanism, sponsored by the International Association for Volcanology and Chemistry of the Earth's Interior (IAVCEI), the Geological Society of America (GSA), SERNAGEOMIN (Servicio Nacional de Geología y Minería de Chile) Termas de Puyehue, Chile, January 28-Feb 2, 2007, <http://sota2007.fiu.edu>
- Convener and Session Chair: "Interpreting Volcaniclastic Sediments", American Geophysical Union Spring Meeting, New Orleans, LA, May 2005.
- Convener and Session Chair: "Island Arc and Back-Arc Basalts", American Geophysical Union Spring Meeting, Montreal, Canada, May 1992.

Invited Presentations/Participation at National/International Conferences:

- Invited participant, NSF MARGINS Successor Program Planning Meeting, San Antonio, Texas, February 15 - 17, 2010
- Invited presenter, NSF MARGINS Theoretical and Experimental Institute, "Volatiles in the Subduction Factory", Timberline Lodge, Mt. Hood, OR, September 28 – Oct. 1, 2009.
- Invited presenter, NSF MARGINS/IFREE (Japanese Institute for Research on Earth & Environment) Workshop on the Izu-Bonin-Mariana Arc System, Honolulu, Hawaii (November 10-14, 2007)
- Invited presenter, State of the Arc Conference (SOTA 2003) - IAVCEI and NSF sponsored conference on subduction magmatism and volcanism, Timberline Lodge, Portland, OR, August 16-20, 2003.
- Invited Keynote Speaker, NSF MARGINS/IFREE Workshop on the Izu-Bonin-Mariana Arc System, Honolulu, Hawaii (September 8-13, 2002)
- Invited participant, MARGINS Theoretical and Experimental Institute, "Inside the Subduction Factory", Eugene, Oregon, August 20-25, 2000

- Invited participant, COMPLEX: JOI sponsored workshop on objectives for multi-platform ocean floor drilling for the 21st Century, May 25-29, 1999, Vancouver, Canada
- Invited speaker, NSF/JSPS Workshop on Geochemical and Geophysical Studies of the Izu-Bonin-Mariana Arc System: Cooperative Studies between Japan and the US, Hayama Japan (July 27-August 1, 1996)
- Invited presenter, JOI/USSAC (Joint Oceanographic Institutions/US Science Advisory Committee) Workshop on the Results of Drilling in Western Pacific Active Margins and Marginal Basins, Monterey, CA (January 18-21, 1993)
- Invited presenter (Young Scientist Travel Award), Conference of the International Association for Volcanology and Chemistry of the Earth's Interior (IAVCEI), Rotorua, New Zealand, 1986

National Science Education Conferences, Workshops and Steering Committees

- NSF MARGINS/GeoPRISMS National Education Advisory Committee (Oct 2005-2012; <http://www.nsf-margins.org/EPO/index.html>)
- Invited participant: A Community Meeting to Envision the Next Decade: Centers for Ocean Sciences Education Excellence (COSEE), November 3-4, 2010 Ronald Reagan Building, Washington, DC

University Professional & Service Activities:

- Director, Florida Center for Analytical Electron Microscopy, 9/2013- present.
- Coordinator and instructor, Workshop for Middle School Teachers, June 17-21, 2013, part of "Growing Community Roots for the Geosciences in Miami" funded by NSF OEDG program
- FIU STRIDE Committee (2011-2014) "Strategies and Tactics for Recruitment to Increase Diversity and Excellence", funded by NSF ADVANCE program
- FIU ACE Team (2011-2014) "Awareness of, Commitment to and Empowerment of Women Scientists at FIU", funded by NSF ADVANCE program
- College of Arts & Science Representative, College of Education Accreditation Process, November 2009, and designer of the new BA in Earth Science Education major.
- Member of selection committee for Global Learning Foundation Courses, 2009
- Member, University Undergraduate Advisory Committee (2007-2009)
- Member of Advisory Board, Trace Evidence Analysis Facility, Department of Chemistry, 2006-present
- President, *Phi Beta Kappa*, Epsilon Chapter of Florida (FIU), 2006-2008
- College of Arts & Sciences, Tenure & Promotion Committee, 2005-2007
- Project Director for GeoSCOPE: Exploring Geoscience Career Opportunities - Supervised 6 FIU faculty, 6 graduate assistants and 45 undergraduate interns from FIU STEM majors participating in summer geoscience workshops and paid research internships (2004-2008, NSF funding)
- Member, University Cross-Functional Action Planning Committee on the Environmental Theme (2002)

- College of Arts & Sciences Library Committee (1997-1999)
- Organizer, Geology Department Distinguished Speaker Series (1995-1996) to celebrate the 20 year anniversary of the founding of the Geology program at FIU
- State University System of Florida Teaching Award – 1994
- College of Arts & Sciences Curriculum Committee (1986-1989)

Community Professional & Service Activities:

- Advisory Board (2007-2011), "Tools for Success", NSF funded program to encourage STEM education, Miami Dade College, Miami, FL
- Designer and administrator of "Know Your Planet!" an online contest for Miami Dade Public High School students to celebrate Earth Science Week (2nd week in October, sponsored by the American Geological Institute) (1998-2008)

Publications:

- Potra, Adriana, **Hickey-Vargas, Rosemary**, Macfarlane, Andrew and Salters, J.M. (2014) Pb, Sr, and Nd isotopic characteristics from a variety of lithologies from the Guerrero Composite Terrane, West-Central Mexico: constraints on their origin, *Revista Mexicana de Ciencias Geológicas*, V. 31, 202-200.
- Johnson, J.A., **Hickey-Vargas, R.**, Fryer, P., Reagan, M.K. and Salters, V.J.M. (2014) Geochemical and isotopic study of a plutonic suite and related early volcanic sequences in the southern Mariana forearc, *Geochemistry, Geophysics, Geosystems*, DOI: 10.1002/2013GC005053
- Hickey-Vargas, R.**, Ishizuka, O., and Bizmis, M. (2013) Age and geochemistry of volcanic clasts from DSDP Site 445, Daito Ridge and relationship to Minami-Daito Basin and Early Izu-Bonin arc magmatism, *Journal of Asian Earth Science*, DOI 10.1016/j.jseaes.2013.03.013
- Reagan, M. K., Ishizuka, O., Stern, R.J., Kelley, K. A., Ohara, Y., Blichert-Toft, J., Bloomer, S. H., Cash, J., Fryer, P., Hanan, B., **Hickey-Vargas, R.**, Ishii, T., Kimura, J-I., Peate, D.W., Rowe, M.C., and Woods, M., (2010) Fore-arc basalts and subduction initiation in the Izu-Bonin- Mariana system, *Geochemistry, Geophysics, Geosystems* G3 Vol. 11. 3: Citation Q03X12.
- Duque-Botero, F., Maurrasse, F. J. M-R., **Hickey-Vargas, R.**, Melinte, M. C., Jaffe, R. and Lopez-Oliva, J. G. (2008) Microspheroid accumulations and geochemical characteristics of a Cenomanian-Turonian Anoxic Basin: The record of the Indidura Formation, NE Mexico, in: *Geologic Problem Solving with Microfossils: A Volume in Honor of Garry D. Jones*, SEPM Special Publication No. 93, SEPM (Society for Sedimentary Geology).
- Ohara, Y., Reagan, M., Bloomer, S., Fryer, P., **Hickey-Vargas, R.**, Ishii, T., Ishizuka, O., Michibayashi, K., Stern, R. (2008) Report of Cruise R/V Yokosuka YK08-08, Leg 2, July 8, 2008-July 22, 2008: *Structure and origin of the Mariana forearc and implications for the origin of the continental crust: A Shinkai 6500 study of the Mariana forearc*, Japanese Agency for Marine-Earth Science & Technology (JAMSTEC), 171 pp.

- Hickey-Vargas, R.**, Bizimis, M., Deschamps, A. (2008) Onset of the Indian Ocean isotopic signature in the Philippine Sea Plate: Hf and Pb isotope evidence from Early Cretaceous terranes, *Earth and Planetary Science Letters*, 268, 255-267.
- Dale, C.W., Lugué, A. Macpherson, C.G., Pearson, D.G., **Hickey-Vargas, R.** (2008) Extreme platinum-group element fractionation and variable Os isotope compositions in Philippine Sea Plate basalts: tracing mantle source heterogeneity, *Chemical Geology*, 248, 213-238.
- Reagan, M.K., Hanan, B.B., Hartman, B.S., Heizler, M.T., **Hickey-Vargas, R.** (2008) Petrogenesis of volcanic rocks from Saipan and Rota, Mariana Islands and implications for the evolution of nascent island arcs, *Journal of Petrology*, 49, 441-464.
- Wacaster, S., Sun, M. and **Hickey-Vargas, R.** (2007) Olivine hosted melt inclusions from mafic small eruptive centers in the Central Southern Volcanic Zone, Chile, Extended abstracts, State of the Arc Conference 2007, Termas Puyehue, Chile, pp. 261-264.
- Hickey-Vargas, R.**, Savov, I., Bizimis, M., Ishii, T. and Fujioka, K. (2006) Origin of diverse geochemical signatures in igneous rocks from the West Philippine Basin: Implications for tectonic models, In: "*Back-Arc Spreading Systems: Geological, Biological, Chemical and Physical Interactions*", D. Christie, editor, AGU Geophysical Monograph Series 166, 287-303.
- D'Antonio, M., Savov, I., Spadea, P., **Hickey-Vargas, R.**, Lockwood, J. (2006) Petrogenesis of Eocene oceanic basalts from the West Philippine Basin and Oligocene arc volcanics from the Palau-Kyushu Ridge drilled at 20°N, 135°E (Western Pacific Ocean), *Ophioliti*, 31, 173-187.
- Savov, I., **Hickey-Vargas, R.**, D'Antonio, M., Ryan, J. and Spadea, P. (2006) Petrology and geochemistry of West Philippine Basin back-arc basin basalts and early Palau-Kyushu arc volcanoclasts from ODP Leg 195, Site 1201: Implications for the evolution of the Izu-Bonin- Mariana arc, *Journal of Petrology*, 47, 277-299.
- Hickey-Vargas, R.** (2005) Basalt and tonalite from the Amami Plateau, Northern West Philippine Basin: New age and geochemical results and their petrologic and tectonic implications, *The Island Arc* 14, 653-665.
- Vergara, M., L. López-Escobar, J.L. Palma, R. Hickey-Vargas and C. Roeschmann (2004) Late tertiary volcanic episodes in the area of the city of Santiago de Chile: new geochronological and geochemical data, *Journal of South American Earth Sciences*, Volume 17, 227-238.
- Hickey-Vargas, R.**, Lopez-Escobar, L., Moreno, R., Clavero, J., Lara, P and Sun, M. (2004) Magmatic evolution of Villarrica Volcano, in Lara, L.E. and Clavero, J. (Eds) Villarrica Volcano (39.5°S), Southern Andes, Chile, *Servicio Nacional de Geología y Minería, Boletín* No. 61, pp. 39-45.
- Hickey-Vargas, R.**, Sun, M., Lopez-Escobar, L., Moreno-Roa, H., Reagan, M.K., Morris, J.D. and Ryan, J.G. (2002) Multiple subduction components in the mantle wedge: Evidence from eruptive centers in the Central Southern volcanic zone, *Geology*, 30, 199-202.

- Merkel, R.S. and **Hickey-Vargas, R.** (2000) Element and sediment accumulation rates in the Florida Everglades, *Water, Air, & Soil Pollution*, 122, 327-349.
- Shipboard Scientific Party (1999) Onboard Report: Investigation of the Ryukyu Trench and Central Basin Fault (CBF), Philippine Sea (October 20-November 3, 1999) Japanese Marine Science and Technology Center, 388 pp.
- Vergara, M., Morata, D., **Hickey-Vargas, R.**, Lopez-Escobar, L. and Beccar, I. (1999) Geochemistry of the Tertiary volcanic rocks from the Colbún area Linares Precordillera, Central Chile (35° 35' - 35° 60'S), *Revista Geologica de Chile*, 26, 23-41.
- Hickey-Vargas, R.** (1998) Origin of the Indian Ocean-type isotopic signature in basalts from Philippine Sea plate spreading centers: an assessment of local versus large-scale processes, *J. Geophys. Res.* 103, 20963-20979.
- Hickey-Vargas, R.** (1998) Geochemical characteristics of ocean island basalts from the West Philippine basin: Implications for the sources of Southeast Asian plate margin and intraplate basalts. In: "Mantle Dynamics and Plate Interactions in East Asia", *AGU Geodynamics Series Monograph 27*, M. F.J. Flower, S-L. Chung, C. H. Lo and T-Y. Lee, eds., 365-384.
- Hickey-Vargas, R.**, Lopez-Escobar, L., and Moreno, H. (1997) Isotopic characteristics of volcanic rocks from minor eruptive centers (MEC) in the area of Villarrica Volcano (39°-39°30'S), in: *Actas, 8th Congreso Geológico Chileno*, Antofagasta, Chile, Oct., 1997, C78-82.
- Hickey-Vargas, R.**, Hergt, J.M., Spadea, P. (1995) The Indian Ocean isotopic signature in Western Pacific marginal basins: Origin and significance. In: "Active Margins and Marginal Basins of the Western Pacific", *AGU Monograph Vol. 88*, B. Taylor and J. Natland, eds., 175-197.
- Hickey-Vargas, R.**, Abdollahi, M., Parada, M.A., Lopez-Escobar, L. (1995) Crustal xenoliths from Calbuco Volcano, Andean Southern Volcanic Zone: implications for crustal composition and magma-crust interaction. *Contrib. Mineral. Petrol* 119, 331-344.
- Lopez-Escobar, L., Parada, M.A., **Hickey-Vargas, R.**, Frey, F.A., Kempton, P.D. and Moreno, H. (1995) Calbuco volcano and minor eruptive centers distributed along the Liquine-Ofqui Fault Zone, Chile (41°-42°S): contrasting origin of andesitic and basaltic magma in the Southern Volcanic Zone of the Andes, *Contrib. Mineral. Petrol* 119, 345-361.
- Hickey-Vargas, R.** (1992) A refractory HIMU component in the sources of island arc magma, *Nature* 360, 57-59.
- Lopez-Escobar, L., Parada, M.A., Moreno, H., Frey, F.A. and **Hickey-Vargas, R.L.** (1992) A contribution to the petrogenesis of Osorno and Calbuco volcanoes, Southern Andes (41°-41°30'S): comparative study, *Revista Geologica de Chile* 19, 211-226.
- Hickey-Vargas, R.** (1991) Isotope characteristics of submarine lavas from the Philippine Sea: implications for the origin of arc and basin magmas of the Philippine plate, *Earth Planet. Sci. Lett.* 107, 290-304.

- Tormey, D.R., **Hickey-Vargas, R.**, Frey, F.A. and Lopez Escobar, L. (1991) Recent lavas of the Andean volcanic front (33°S to 42°S): Interpretations of along-arc compositional variations, *GSA Special Paper 265: Andean Magmatism and its Tectonic Setting*, pp. 57-78.
- Hickey-Vargas, R.** (1989), Boninites and tholeiites from DSDP Hole 458, Mariana forearc, Chapter 13 in: *Boninites* (A.J. Crawford, ed.), Unwin-Hyman, London Boston Sydney, pp. 339-356.
- Hickey-Vargas, R.**, Moreno-Roa, H., Lopez-Escobar, L. and Frey, F.A., (1989) Geochemical variations in Andean basaltic and silicic lavas from the Villarrica region (39.5°S): an evaluation of source heterogeneity, fractional crystallization and crustal assimilation, *Contrib. Mineral. Petrol.* 103, 361-386.
- Sen, G., **Hickey-Vargas, R.**, Waggoner, G. and Maurrasse, F., (1988) Geochemistry of basalts from the Dumisseau Formation, Southern Haiti: Implications for the origin of the Caribbean Sea crust, *Earth Planet. Sci. Lett.* 87, 423-437.
- Hickey-Vargas, R.L.** and Reagan M.K. (1987) Temporal variation of isotope and rare earth element abundances in volcanic rocks from Guam: implications for the evolution of the Mariana arc, *Contrib. Mineral. Petrol.* 97, 497-508
- Hickey, R.L.**, Frey, F.A., Gerlach, D.C. and Lopez-Escobar L. (1986) Multiple sources for basaltic arc rocks from the southern volcanic zone of the Andes: trace element and isotopic evidence for contributions from subducted oceanic crust, mantle and continental crust, *J. Geophys. Res.* 91, 5963-5983.
- Johnson, R.W., Jacques A.L., **Hickey R.L.**, McKee C.O. and Chappel B.W. (1985) Manam Island, Papua New Guinea: petrology and geochemistry of a low TiO₂ basaltic island arc volcano, *J. Petrol.* 26, 283-323.
- Frey, F.A., Gerlach, D.C., **Hickey, R. L.**, Lopez-Escobar, L. and Munizaga-Villavicencio, F. (1984) Petrogenesis of the Laguna del Maule volcanic complex, Chile (36°S), *Contrib. Mineral. Petrol.* 88, 133-149
- Hickey, R.L.** Gerlach D.C. and Frey F.A. (1984) Geochemical variations in volcanic rocks from central south Chile (33°-42°S): implications for their petrogenesis, In: *Andean Magmatism: Chemical and Isotopic Constraints*, (eds. R. Harmon and B. Barriero), Shiva Publ. Ltd., Cheshire, England, pp. 72-95.
- Hickey, R.L.** and Frey F.A. (1984) Sources for arc volcanics: evidence from Central South Chilean basalts, In: *Proceedings of the ISEM Field conference on Open Magmatic Systems* (eds. M.A. Dungan, T.L. Grove and W. Hildreth), pp.76-78, Institute for the Study of Earth and Man, Southern Methodist University, Dallas, TX.
- Hickey, R.L.** and Frey, F.A. (1982) Geochemical characteristics of boninite series volcanics: implications for their source, *Geochim. Cosmochim. Acta* 46, 2099-2115.
- Coish, R.A., **Hickey, R.L.** and Frey F.A. (1982) Rare earth element geochemistry of the Betts Cove Ophiolite, Newfoundland: complexities in ophiolite formation, *Geochim. Cosmochim. Acta* 46, 2117-2134.
- Hickey, R.L.** and Frey, F.A. (1981) Rare-earth element geochemistry of Mariana fore-arc volcanics: Deep Sea Drilling Project Site 458 and Hole 459B, Chapter 40 in: *Initial*

Reports of the Deep Sea Drilling Project 60 (Hussong, D.M., Uyeda, S. et al., eds.), 735-742.

Popular Publications/Reviews:

Hickey-Vargas, R. (1999) N.L. Bowen and Crystallization-Differentiation, Book Review, *EOS, Transactions of the American Geophysical Union*, June 29, 1999, p. 356.

Hickey-Vargas, R. (1991) Andean magma: peeled or MASHed? News and Views Article, *Nature* 350, 381.

Publications in the pipeline:

Submitted to *Science*, September 2014: "Rapid subduction re-initiation on a young plate: intra-oceanic Izu-Bonin-Mariana Arc inception", Richard J. Arculus, Osamu Ishizuka, Kara A. Bogus, Michael Gurnis, **Rosemary Hickey-Vargas**, Mohammed H. Aljahdali, Alexandre N. Bandini, Andrew P. Barth, Philipp A. Brandl, Lauren Drab, Rodrigo do Monte Guerra, Morihisa Hamada, Fuqing Jiang, Kyoko Kanayama, Sev Kender, Yuki Kusano, He Li, Lorne C. Loudin, Marco Maffione, Kathleen M. Marsaglia, Anders McCarthy, Sebastián Meffre, Antony Morris, Ivan P. Savov, Clara A. Sena Da Silva, Frank J. Tepley III, Cees van der Land, Gene M. Yogodzinski, Zhaohui Zhang

Invited review article for *Lithos* (in progress): Basaltic rocks from the Andean Southern Volcanic Zone: Comparison of systematic along-strike and small scale geochemical variations and their origins /Sources of along-strike geochemical variations in basalts from continental arcs, **Hickey-Vargas, Rosemary**, Holbik, Sven P., Tormey, Daniel, et al.

Co-editor (with Michael Rhodes and Michael Garcia) (in progress) Special Volume: Magmas and Their Sources: A Tribute to the Distinguished Career of Fred Frey, to be published by *Geochimica Cosmochimica Acta*.

70+ abstracts and presentations at meetings of the American Geophysical Union, Geological Society of America, other Geoscience organizations

Reviewing Activities

Review panels:

- NSF – GEO - GeoEd (2011)
- NSF – GEO - OEDG (2005)
- NSF – GEO - MARGINS (2002)

Research Proposals:

- NSF – GEO - Ocean Sciences
- NSF – GEO --Earth Sciences
- NSF – EHR - Undergraduate Education
- NASA
- National Geographic Society

NERC (National Environmental Research Council, UK)
FONDECYT, Chile
FWF Germany

Journal Reviews:

Chemical Geology
Contributions to Mineralogy & Petrology
Earth and Planetary Science Letters
Earth, Planets, Space
Elements
Geochimica et Cosmochimica Acta
Geochemistry, Geophysics, Geosystems
Geology
Journal of Asian Earth Sciences
Journal of Geophysical Research
Journal of Petrology
Journal of South American Earth Sciences
Journal of Volcanology and Geothermal Research
Lithos
Marine Geology
Nature
Revista Geologica de Chile
Science
The Island Arc

Teaching and Graduate Student Advisement:

Courses Offered:

Undergraduate Courses: Physical Geology (GLY 1010), Earth Resources (GEO 3510, in class and on-line), Mineralogy, Earth Materials (GLY 3202; Mineralogy/Optical Mineralogy), Environmental Geology (GLY 3039)

Graduate Courses: Principles of Geochemistry (GLY 5246), Trace Element and Isotope Geochemistry (GLY 6247), Application of ICPES in Geochemistry (GLY 5283C), Geochemical Processes in Subduction Zones, Topics in Geochemistry

M.S. Theses Supervised

Raul Brens – Fractionation of U, Th, Ba by Partial Melting of Crustal Rocks and Implications for U-series Isotopic Disequilibria (5/2011, M.S., FIU; presently a doctoral candidate at Macquarie University, Melbourne, Australia)

Tiffany McKelvey – Magma Chamber Processes at Calbuco Volcano from Phenocryst Mineral Chemistry and Texture (5/2007, M.S., FIU; presently employed by Shell Oil, Houston, TX)

Robert Merkel - Sedimentation in Canals and Rockpits of South Florida (8/1997, M.S., FIU; retired)

Donna Booth - Depth-related Variation of Trace Metal Abundances in South Florida Sediments (8/1993, M.S., FIU)

Goutam Mandal - Geochemistry of Volcanic Rocks from the West Mariana Ridge, DSDP Site 451, Philippine Sea (8/1992, M.S., FIU; Education Management Professional, Houston, TX)

Mohammad Abdollahi - Petrological and Geochemical Study of Crustal Xenoliths from Calbuco Volcano, Chile (8/1990, M.S., FIU; presently employed by Chamran University, Ahvaz, Iran)

Ph.D. Dissertations Supervised

Sven Holbik – Mineralogical and Geochemical Studies of Volcanic Rocks from the Transitional Southern Volcanic Zone, Chile (Ph.D., 8/2014, FIU; presently employed as a postdoctoral fellow, FIU)

Julie Johnson - Geochronological and Geochemical Studies of Intrusive Igneous Rocks from the Southern Mariana Trench and Implications for Subduction-related Island Arc Development (Ph.D., 5/2014, FIU; presently employed as a full-time instructor in Earth Sciences at the University of Memphis)

Murong Sun – Geochemical Variations Among Small Eruptive Centers in the Central SVZ of the Andes: An Evaluation of Subduction, Mantle and Crustal Influences (Ph.D., 8/2001, FIU; presently employed by Vertacore, Redmond, WA)

Ph.D. Committees:

Internal: Philip Lamela (Geosciences), Kevin Chau (Geosciences), Crystal Pletka (Geosciences), Yosmel Sanchez (Geosciences, Ph.D. 2014), Trisha Ashley (Physics, Ph.D. 2014), Tatiana Gaona (Geosciences, Ph.D. 2013), Emily Schenk (Chemistry Ph.D. 2013), Adriana Potra, (Geosciences Ph.D., 2011) Indra Sen, (Geosciences Ph.D. 2011), Waleska Castro (Chemistry Ph.D., 2008), Peter Horst (Ph.D., 2007), Sedelia Durand (Ph.D., 2006), Fabian Duque-Botero (Ph.D., 2006), Kuppusamy Panneerselvam (Ph.D., 2001), Hillol Guha (Ph.D., 2000)

External: Ivan Savov (Ph.D., University of South Florida, 2004)

Postdoctoral Fellows:

Dr. Adriana Potra (January 2011-August 2013), currently Assistant Professor, Department of Geosciences, University of Arkansas, Fayetteville, AR

Dr. Sven Holbik (September 2014-August 2015) Working on NSF/TUES grant "Expanding the Use of Online Remote Electron Microscopy in the Classroom to Transform Undergraduate Geoscience Education"

Research Funding History – External, as Principal Investigator

IODP/USSSP – Post Expedition Activity Award, IODP Expedition 351, "Arc Origins" (September 2014-December 2015)	\$15,000.
IODP/USSSP – Participation costs, IODP expedition 351, "Arc Origins" (May 30, 2014-August 30, 2014)	\$58,170.
NSF - Collaborative: Expanding the Use of Online Remote Electron Microscopy in the Classroom to Transform Undergraduate Geoscience Education (9/1/2013-8/31/2017)	\$332,451.
NSF – Acquisition of an Inductively Coupled Plasma Emission Spectrometer for the Department of Earth and Environment, FIU (9/2011-12/2013)	\$104,000.
NSF - OCE: Evolution of the Philippine Sea Plate: Geochemical and Geochronological Studies of Pre-Oligocene Igneous Rocks (10/2009-10/2011)	\$74,595.
NSF - EAR: SOTA 2007 and GSA Field Forum in Chile: Support for Graduate Student and Latin American Participation (7/2006 - 7/2008).	\$50,000
NSF - EAR: Generation of Basaltic and Andesitic Magma in the Central Southern Volcanic Zone (1/1/04-12/31/09)	\$183,154.
NSF - GEO/OEDG: GeoSCOPE: Exploring Geoscience Career Opportunities (9/03-8/07)	\$581,109.
NSF – OCE: Collaborative Research: Magma Generation in the early Mariana Arc system revisited (1/01- 12/05)	\$43,733.
NSF – OCE: Ridge Meets Margin: Geochemical Effects of Subduction on the Central West Philippine Basin Spreading Center, (8/00-12/02).	\$68,000.
NSF - EAR: Production and ascent of magma at convergent margins: Information from small eruptive centers in the central Southern Volcanic Zone (CSVZ), Chile (1/98 to 1/01):	\$91,000.
NSF - OCE: Tectonic evolution of the West Philippine basin: Evidence from Geochemical Studies (4/94-3/97)	\$90,483.
NSF - EAR: Upgrading of the ICPES at FIU (4/94-3/96)	\$16,907.
NSF - EAR: Geochemical and Petrologic Investigations of Crustal and Volcanic Rocks from the Calbuco region, Chile. (7/92 to 7/96)	\$55,000.
NSF - OCE: Temporal and Geographic Geochemical Variations in Volcanic Rocks from the Philippine Plate. (3/90 to 11/92)	\$61,113.
NSF - OCE: Temporal and Geographic Geochemical Variations in Volcanic Rocks from the Philippine Sea. (8/87-12/89)	\$37,234.
ACS/Petroleum Research Fund: Petrologic/Geochemical/Study of Oceanic Xenoliths in Lavas from a Southern Andean Volcano (9/87-2/90)	\$18,000.
NSF - EAR: Acquisition of an Inductively Coupled Plasma Emission Spectroanalyzer for Florida International University. (8/87-8/88)	\$50,100.

Total external funding as PI: \$1,930,049.

Research Funding History – External, as co-Principal Investigator

NSF - GEO/OEDG Growing Community Roots for the Geosciences in
Miami, Florida (Dean Whitman PI, co-PI, 09/15/12 - 08/31/14) \$254,871.

NSF - EHR ADVANCE: The ACE Partnership for Adaptation,
Implementation, and Dissemination: Awareness of, Commitment to,
and Empowerment of women scientists at FIU (Suzanna Rose PI,
co-PI, 06/01/11 - 05/31/14) \$716,774.

NSF - CHE: Acquisition of a High Resolution Inductively Coupled Plasma
Mass Spectrometer for Research in Chemistry, Environmental
Science, Earth Sciences and Forensic Sciences (Jose Almirall PI, co-
PI, 8/2004-8/2006) \$582,806.

Total external funding as co-PI: \$1,554,451.