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ACADEMIC POSITIONS

1/2020-current Assistant Research Professor, Arizona State University
1/2019-current Laboratory Manager, Metals, Environmental, Terrestrial Analytical
Laboratory (METAL)
7/2004-6/2020 Laboratory Manager, W.M. Keck Foundation Laboratory for
Environmental Biogeochemistry
5/2014-12/2019 Research Scientist, Arizona State University
7/2007-5/2014 Assoc. Research Scientist, Arizona State University
7/2004-7/2007 Postdoctoral Fellow, Arizona State University
4/2003-6/2004 Postdoctoral Fellow, University of Rochester
6/2002-4/2003 Postdoctoral Associate, Yale University
5/2001-6/2002 Research Associate, Yale University

EDUCATION

Certificate of Completion in Forensic Investigation
Mesa Community College, 12/2011
Ph.D., Yale University, 06/2002
Thesis: *The Transport of Osmium from the Continents to the Oceans*
Advisor: Karl K. Turekian
M.Phil., Yale University, 12/1994
Advisor: Karl K. Turekian
B.S., Stanford University, 12/1992, with Honors
Thesis: *Contact metamorphism of arkosic sandstones in Vandfaldsdalen, East Greenland*
Advisor: Dennis Bird

PUBLICATIONS (maiden name was Gwyneth A. Williams):

Peer Reviewed Publications:

1. Pacheco-Forés, S.I., Morehart, C.T., Buikstra, J.E., Gordon, G.W., Knudson, K.J. (revised and resubmitted) Migration, violence, and the “other”: a biogeochemical approach to identity-based violence in the Epiclassic Basin of Mexico. *J. Anthro. Arch.*

2. Goto, K.T., Sekine, Y., Ito, T., Suzuki, K., Anbaar, A.D., Gordon, G.W., Harigane, Y., Maruoka, T., Shimoda, G., Kashiwabara, T., Takaya, Y., Nozaki, T., Hein, J.R., Tetteh, G.M. Nyame, F.K., Kiyokawa, S. (accepted pending revision) Progressive ocean oxygenation at ~2.2 Ga inferred from geochemistry and molybdenum isotopes of the Nsuta Mn deposit, Ghana. *Chem. Geol.*
3. Alonzi, E., Pacheco-Forés, S., Gordon, G.W., Kujit, I., and Knudson, K.J. (2020) New understandings of the Sea Spray Effect and its impact on bioavailable radiogenic strontium isotope ratios in coastal environments. *J Arch Sci: Reports*, 33, 102452, doi: 10.1016/j.jasrep.2020.102462.
4. Goto, K.T., Sekine, Y., Shimoda, G., Hein, J.R., Aoki, S., Ishikawa, A., Suzuki, K., **Gordon, G.W.**, and Anbar, A.D. (2020) A framework for understanding Mo isotope records of Archean and Paleoproterozoic Fe- and Mn-rich sedimentary rocks: Insights from modern marine hydrothermal Fe-Mn oxides. *Geochim. Cosmochim. Acta* 280: 221-236, doi: 10.1016/j.gca.2020.04.017 0016-7037
5. Song, H., Song, H., Tong, J., **Gordon, G.W.**, Wignall, P.B., Tian, L., Zheng, W., Algeo, T.J., Liang, L., Bai, R., Wu, K., and Anbar, A.D. (accepted pending revision) Conodont calcium isotopic evidence for multiple shelf acidification events during the Early Triassic. *Chem. Geol.*
6. *Zipkin, A.M., Fisher, E.C., Cawthra, H.C., **Gordon, G.W.**, Hipondoka, M., Le Roux, P., Marean, C.W., Knudson, K.J., and Wiessner, P. (2020) Strontium isoscapes and hard tissue provenience in southern Africa to reconstruct hunger-gatherer social and exchange networks. Am. J. Phys. Anthro. 171, 320.*
7. Pacheco-Forés, S., **Gordon, G.W.**, and Knudson, K.J. (2020) Expanding radiogenic strontium isotope baseline data for central Mexican paleomobility studies. *PloS One*, 15(2), e0229687
8. Ostrander, C.M., Kendall, B., Olson, S.L., Lyons, T.W., **Gordon, G.W.**, Romaniello, S.J., Zheng, W., Reinhard, C.T., Roy, M., and Anbar, A.D. (2020) An expanded shale $\delta^{98}\text{Mo}$ record permits recurrent shallow marine oxygenation during the Neoproterozoic. *Chem. Geol.*, doi: 10.1016/j.chemgeo.2019.119391.
9. Lau, H., **Gordon, G.W.** and Knudson, K. (in review) Reconstructing Herding Practices at Halaf Domuztepe: Evidence from Biogeochemical Analyses. *J Field Arch.*
10. Ostrander, C.M., Sahoo, S.K., Kendall, B., Jiang, G., Planavsky, N.J., Lyons, T.W., Nielsen, S.G., Owens, J.D., Gordon, G.W., Romaniello, S.J., Anbar, A.D. (2019) Multiple negative molybdenum isotope excursions in the Doushantuo Formation (South China) fingerprint complex redox-related processes in the Ediacaran Nanhua Basin. *Geochim. Cosmochim. Acta* 261: 191-209, doi: 10.1016/j.gca.2019.07.016.
11. Alonzi, E., Day, N., **Gordon, G.W.**, Scott, R.E., and Knudson, K. (2019) Traveling Monastic Paths: Mobility and Religion at Medieval Irish Monasteries. *J Anthropological Archaeology* 101077, <https://doi.org/10.1016/j.jaa.2019.101077>
12. Ostrander, C.M., Sune, G.N., Owens, J.D., Kendall, B., **Gordon, G.W.**, Romaniello, S.J., and Anbar, A.D. (2019) Fully oxygenated water columns over continental shelves before the Great Oxidation Event. *Nature Geoscience* 12: 186-191, doi: 10.1038/s41561-019-0309-7

13. Chazin, H., **Gordon, G.W.**, and Knudson, K. (2019) Isotopic perspectives on Pastoralist Mobility in the late Bronze Age South Caucasus. *J Anthropol. Arch.* 54, 48-67, doi: 10.1016/j.jaa.2019.02.003.
14. **Gordon, G.W.** and Rhoads, A. (2019) Field-Deployable Measurements of Free-Living Individuals to Determine Energy Balance: Fuel Substrate Usage through $\delta^{13}\text{C}$ in Breath CO_2 and Diet through Hair $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values *Isotopes in Environ. Health Studies* doi: 10.1080/10256016.2018.1562448
15. **Gordon, G.W.** (2018) Isotopic Taphonomy of Human Remains. National Institute of Justice Technical Report for 2014-DN-BX-K002. 244 pps. NCJ 252506
16. **Gordon, G.W.**, Saul, T., Steadman, D., Wescott, D.J. and Knudson, K. (2018) Preservation of hair stable isotope signatures during freezing and law enforcement evidence packaging. *Forensic Chem.* 11: 108-119, doi: [10.1016/j.forc.2018.10.004](https://doi.org/10.1016/j.forc.2018.10.004).
17. Herrmann, A.D., **Gordon, G.W.** and Anbar, A.D. (2018) Uranium isotope variations in a dolomitized Jurassic carbonate platform (Tithonian, Franconian Alb, Southern Germany). *Chem. Geol.* 497: 41-53, doi: 10.1016/j.chemgeo.2018.08.17.
18. Magnall, J.M., Gleeson, S.A., Poulton, S.W., **Gordon, G.W.**, and Paradis, S. (2018) Links between seawater paleoredox and the formation of sediment-hosted massive sulphide (SHMS) deposits – Fe speciation and Mo isotope constraints from Late Devonian mudstones. *Chem. Geol.* 490: 45-60, doi: 10.1016/j.chemgeo.2018.05.005.
19. Marsteller, S., **Gordon, G.W.**, Knudson, K. and Anbar, A.D. (2017) Biogeochemical Reconstructions of Life Histories as a Method to Assess Regional Interactions: Stable Oxygen and Radiogenic Strontium Isotopes and Late Intermediate Period Mobility on the Central Peruvian Coast. *J. Archaeol. Sci.* 13: 535-546, doi: 10.1016/j.jasrep.2017.04.016.
20. Lu, X., Kendall, B., Stein, H.J., Li, C., Hannah, J.L., **Gordon, G.W.** and Obestad, J.O. (2017) Marine redox conditions during deposition of Late Ordovician and Early Silurian organic-rich mudrocks in the Siljan ring district, central Sweden. *Chem. Geol.* 457: 75-94, doi: 10.1016/j.chemgeo.2017.03.015.
21. Monferrán, M.V., Garnero, P., Bistoni, M.D., Anbar, A., **Gordon, G.W.** and Wunderlin, D.A. (2016) From water to edible fish. Transfer of metals and metalloids in the San Roque Reservoir (Cordoba, Argentina). Implications associated with fish consumption. *Ecol. Indicators* 63: 48-60, doi: 10.1016/j.ecolind.2015.11.048.
22. Wolfe, A., Stewart, B., Capo, R., Liu, R., Dzombak, D.A., **Gordon, G.W.** and Anbar, A.D. (2016) Iron isotope investigation of hydrothermal and sedimentary pyrite and their aqueous dissolution products. *Chem. Geol.* 427: 73-82, doi: 10.1016/j.chemgeo.2016.02.015.
23. Romaniello, S.J., Field, M.P., Smith, H.B., **Gordon, G.W.**, Kim, M.H. and Anbar, A.D. (2015) Fully automated chromatographic purification of Sr and Ca for isotopic analysis. *JAAS* 30(9): 1906-1912; doi: 10.1039/c5ja00205b.
24. Azmy, K., Kendall, B., Brand, U., Stouge, S. and **Gordon, G.W.** (2015) Redox conditions across the Cambrian-Ordovician boundary: Elemental and isotopic signatures retained in the GSSP carbonates. *Palaeogeog. Palaeoclimat. Palaeoecol.* 440: 440-454, doi: 10.1016/j.palaeo.2015.09.014

25. Goto, K., Shimoda, G., Anbar, A.D., **Gordon, G.W.**, Harigane, Y., Senda, R., Suzuki, K. (2015) Molybdenum isotopes in hydrothermal manganese crust from the Ryukyu arc system: Implications for the source of molybdenum. *Marine Geol.* 269: 91-99, doi: 10.1016/j.margeo.2015.08.007
26. Channon, M.B., **Gordon, G.W.**, Morgan, J.L. Skulan, J.L., Smith, S.M. and Anbar, A.D. (2015) Using natural stable calcium isotopes in human blood to detect and monitor changes in bone mineral balance. *Bone* 77: 69-74; doi: 10.1016/j.bone.2015.04.023
27. Kendall, B., Komiya, T., Lyons, T.W., Bates, S.M., **Gordon, G.W.**, Romaniello, S., Jiang, G., Creaser, R.A., Xiao, S., McFadden, K., Sawaki, Y., Tahata, M., Shu, D., Han, J., Li, Y., Chu, X. and Anbar, A.D. (2015) Uranium and molybdenum isotope evidence for an episode of widespread ocean oxygenation during the late Ediacaran Period. *Geochim. Cosmochim. Acta* 156: 173-193, doi: 10.1016/j.gca.2015.02.025.
28. Westerhoff, P., Lee, S., **Gordon, G.W.**, Hristovski, K., Halden, R.U. and Herckes, P. (2015) Characterization, Recovery Opportunities, and Valuation of Metals in Municipal Sludges from U.S. Wastewater Treatment Plants Nationwide. *Environ. Sci. Tech.* doi: 10.1021/es505329q
29. Goto, K.T., Anbar, A.D., **Gordon, G.**, Romaniello, S.R., Shimoda, G., Takaya, Y., Tokumaru, A., Nozaki, T., Suzuki, K., Machida, S., Hanyu, T. and Usui, A. (2014) Uranium isotope systematics of ferromanganese crusts in the Pacific Ocean: Implications for the marine $^{238}\text{U}/^{235}\text{U}$ isotope system. *Geochim. Cosmochim. Acta* **146**: 43-58, doi: 10.1016/j.gca.2014.10.003.
30. **Gordon, G.**, Monga, J., Channon, M.B., Wu, Q., Skulan, J.L., Anbar, A.D. and Fonseca, R. (2014) Predicting multiple myeloma disease activity by analyzing natural calcium isotopic composition. *Leukemia* doi: 10.1038/leu.2014.193.
31. Nägler, T.F., Anbar, A.D., Archer, C., Goldberg, T., **Gordon, G.W.**, Greber, N.D., Siebert, C., Sohrin, Y. and Vance, D. (2014) Proposal for an international molybdenum isotope measurement standard and data representation. *Geostand. Geoanalyt. Resrch* **38**(2): 149-151, doi: 10.1111/j.1751-908x.2013.00275.x
32. Goldberg, T., **Gordon, G.**, Izon, G., Archer, C., Pearce, C.R., McManus, J., Anbar, A.D. and Rehkamper, M. (2013) Resolution of inter-laboratory discrepancies in Mo isotope data: An intercalibration. *J. Anal. At. Spectrom.* 10.1039/C3JA30375F
33. Chappaz, A., Lyons, T.W., **Gordon, G.** and A. D. Anbar (2012). Isotopic fingerprints of anthropogenic molybdenum in lake sediments. *Env. Sci. Tech.* **46**: 10934–10940.
34. Herrmann, A.D., Kendall, B., Algeo, T.J., **Gordon, G.W.**, Wasylenki, L.E. and A. D. Anbar (2012). Anomalous molybdenum isotope trends in Upper Pennsylvanian euxinic facies: Significance for use of $\delta^{98}\text{Mo}$ as a global marine redox proxy. *Chem. Geol.* **324-325**: 87-98.
35. Morgan, J.L.L., Skulan, J.L., **Gordon, G.W.**, Romaniello, S.J., Smith S.M. and A. D. Anbar (2012). Rapidly assessing changes in bone mineral balance using natural stable calcium isotopes. *Proc. Nat. Acad. Sci.* **109**: 9989-9994.
36. Owens, J.D., Lyons, T.W., Li, X., Macleod, K.G., **Gordon, G.**, Kuypers, M.M., Anbar, A., Kuhnt W. and S. Severmann. (2012). Iron isotope and trace metal records of iron

- cycling in the proto-North Atlantic during the Cenomanian-Turonian oceanic anoxic event (OAE-2). *Paleoceanography* **27**, PA3223, 13 pp.
37. Dahl, T.W., Canfield, D.E., Rosing, M.T., Frei, R., **Gordon, G.W.**, Knoll, A.H. and A. D. Anbar (2011). Molybdenum evidence for expansive sulfidic water masses in ~750 Ma oceans. *Earth Planet. Sci. Lett.* **311**: 264-274.
 38. Morgan, J.L., **Gordon, G.W.**, Arrua, C., Skulan, J., Bullen T.D. and A. D. Anbar (2011). High precision measurement of variations in calcium isotope ratios in urine by multiple collector inductively coupled plasma mass spectrometry (MC-ICP-MS). *Anal. Chem.* **83**: 6956-6962.
 39. **Gordon, G.W.** (2011) Comments on “Application of laser ablation multicollector inductively coupled plasma mass spectrometry for the measurement of calcium and lead isotope ratios in packaging for discriminatory purposes” *Rapid Comm. In Mass Spectr.* **25**, 3196-3198, doi: 10.1002/rcm.5195
 40. Kendall, B., **Gordon, G.W.**, Poulton, S.W. and Anbar, A.D. (2011) Molybdenum Isotope Constraints on the Extent of Late Paleoproterozoic Ocean Euxinia. *Earth Planet. Sci. Lett.* **307**:450-460.
 41. Wolfe-Simon, F., Switzer Blum, J., Kulp, T. R., **Gordon, G. W.**, Hoefft, S. E., Pett-Ridge, J., Stolz, J. F., Webb, S. M., Weber, P. K., Davies, P. C. W., Anbar, A. D. and R. S. Oremland (2011). A bacterium that can grow by using arsenic instead of phosphorus. *Science* **332**: 1163 – 1166.
 42. Wolfe-Simon, F., Switzer Blum, J., Kulp, T. R., **Gordon, G. W.**, Hoefft, S. E., Pett-Ridge, J., Stolz, J. F., Webb, S. M., Weber, P. K., Davies, P. C. W., Anbar, A. D. and R. S. Oremland (2011). Response to Comments on “A bacterium that can grow by using arsenic instead of phosphorus”. *Science* DOI: 10.1126/science.1202098
 43. Duval, B.D., Dijkstra, P., Natali, S.M., Megonigal, J.P., Ketterer, M.E., Drake, B.G., Lerda, M.T., **Gordon, G.W.**, Anbar, A.D., Hungate, B.A. (2011) Plant-Soil Distribution of Potentially Toxic Elements in Response to Elevated Atmospheric CO₂ *Environ. Sci. Tech.*, doi:10.1021/es102250u
 44. Bonilla, M.D.-Z., Prevedorou, E.A., Buikstra, J., Knudson, K. J., **Gordon, G.W.** and Anbar., A.D. (2011) Movilidad y paleodieta en la comunidad agrícola de Gatas: análisis de ⁸⁷Sr/⁸⁶Sr, δ¹⁸O y δ¹³C (translated title: Mobility and paleodiet in the agricultural community of Gatas: analysis of ⁸⁷Sr/⁸⁶Sr, δ¹⁸O and δ¹³C) Memorial Luis Siret 1: Congreso de Prehistoria de Andalucía, 603-606
 45. Dahl, T.W., Hammarlund, E., Anbar, A.D., Bond, D., Gill, B.C., **Gordon, G.W.**, Knoll A., Nielsen A.T., Schovsbo N., Canfield, D.E. (2011) Reply to Butterfield: Devonian rise in atmospheric oxygen correlated to the radiations of terrestrial plants and large predatory fish. *Proc. Nat. Acad. Sci.* **108**: E29; doi: 10.1073/pnas.1018818108.
 46. Dahl, T.W., Hammarlund, E., Anbar, A.D., Bond, D., Gill, B.C., **Gordon, G.W.**, Knoll A., Nielsen A.T., Schovsbo N., Canfield, D.E. (2010) Devonian rise in atmospheric oxygen correlated to the radiations of terrestrial plants and large predatory fish *Proc. Natl. Acad. Sci.*, doi:www.pnas.org/cgi/doi/10.1073/pnas.1011287107
 47. Duan, Y., Anbar, A.D., Arnold, G.L., Lyons, T.W., **Gordon, G.W.** and Kendall, B. (2010) Molybdenum Isotope Evidence for Mild Biospheric Oxygenation before the Great

- Oxidation Event *Geochim. Cosmochim. Acta* 74: 6655-6668; doi: 10.1016/j.epsl.2009.11.052
48. Y. Duan, S. Severmann, A.D. Anbar, T.W. Lyons, **G.W. Gordon** and B. Sageman (2010) Isotopic evidence for Fe cycling and repartitioning in ancient oxygen-deficient settings: Examples from black shales of the mid-to-late Devonian Appalachian basin *Earth Planet Sci. Lett.* 290: 244-253
 49. Knudson, K.J., Williams, H.M., Buikstra, J.E., Tomczak, P.D., **Gordon, G.W.**, Anbar, A.D. (2010) Introducing $\delta^{88/86}\text{Sr}$ analysis in archaeology: a demonstration of the utility of strontium isotope fractionation in paleodietary studies *J. of Arch. Sci.*, 37, 2352-2364, doi:10.1016/j.jas.2010.04.009
 50. Dahl, T.W., A.D. Anbar, **G.W. Gordon**, M.T. Rosing, R.E. Frei and D.E. Canfield (2010) The behavior of molybdenum and its isotopes across the chemocline and in the sediments of sulfidic Lake Cadagno, Switzerland. *Geochim. Cosmochim. Acta* 74:144-163, doi: 10.1016/j.gca.2009.09.018
 51. **Gordon, G.W.**, Rockman, M., Turekian, K.K. and Over, J. (2009) Osmium isotopic evidence against an impact at the Frasnian-Famennian boundary *American J. of Science* 309, 420-430, DOI: 10.2475/05.2009.03
 52. **Gordon, G.W.**, Lyons, T.W., Arnold, G.L., Roe, J., Sageman, B.B. and Anbar, A.D. (2009) When Do Black Shales Tell Molybdenum Isotope Tales? *Geology* 37(6), 535-538, DOI: 10.1130/G25186A.1
 53. Ryb, U., Erel, Y., Matthews, A., Avni, Y., **Gordon, G.W.** and Anbar, A.D. (2009) Large molybdenum isotope variations trace subsurface fluid migration along the Dead Sea transform *Geology* 37(5), 463-466, DOI: 10.1130/G25331A.1
 54. Beraldi-Campesi, H., Hartnett, H., Anbar, A., **Gordon, G.W.** and Garcia-Pichel, F. (2009) Effect of biological soil crusts on soil elemental concentrations: implications for biogeochemistry and as traceable biosignatures of ancient life on land *Geobiology* 7, 348-359, DOI: 10.1111/j.1472-4669.2009.00204.x
 55. Kendall, B., Creaser, R., **Gordon, G.W.** and Anbar, A.D. (2009) Re-Os and Mo Isotope Systematics of black shales from the Middle Proterozoic Velkerri and Wollgorang Formations, McArthur Basin, northern Australia *Geochim. Cosmochim. Acta* 73, 2534-2558, DOI: 10.1016/j.gca.2009.02.01
 56. Severmann, S. Lyons, T.W., Anbar, A., McManus, J. and **Gordon, G.** (2008) Modern iron isotope perspective on the benthic iron shuttle and the redox evolution of ancient oceans *Geology* 36(6), 487-490, DOI: 10.1130/G24670A.1
 57. Anbar, A.D. and **Gordon, G.W.** (2008) Redox Renaissance *Geology* 36(3), 271-272, DOI: 10.1130/focus032008.1
 58. Weyer, S., Anbar, A.D., Gerdes, A., **Gordon, G.W.**, Algeo, T.J. and Boyle, E.A. (2008) Natural fractionation of $^{238}\text{U}/^{235}\text{U}$. *Earth Planet. Sci. Lett.* 72: 345-359.
 59. Jones, A.K., Lichtenstein, B.R., Dutta, A., **Gordon, G.** and Dutton, P.L. (2007) Synthetic Hydrogenases: Incorporation of an Iron Carbonyl Thiolate into a Designed Peptide *J. Am. Chem. Soc.* 129, 14844-14845, DOI: 10.1021/ja075116a
 60. Anbar, A.D....**Gordon** (2007) A Whiff of Oxygen Before the Great Oxidation Event? *Science* 317: 1903-1906 DOI: 10.1126/science.1140325

61. Wasylenki, L.E., Anbar, A.D., Liermann, L.J., Mathur, R., **Gordon, G.** and Brantley, S. (2007) Isotope fractionation during microbial metal uptake using MC-ICP-MS, *J. Anal. At. Spec.* 22(8), 905-910, DOI: 10.1039/b705476a
62. Turekian, K.K., Sharma, M. and **Gordon, G.W.** (2007) The behavior of natural and anthropogenic osmium in the Hudson River-Long Island Sound estuarine system *Geochim. Cosmochim. Acta* 71, 4135-4140, DOI: 10.1016/j.gca.2007.05.020
63. Carrigan, P.E., Hentz, J.G., **Williams, G.** Morgan, J.L., Raimondo, M., Anbar, A. and Miller, L.J. (2007) Distinctive heavy metal composition of pancreatic juice in patients with pancreatic carcinoma, *Cancer Epidemiology Biomarkers & Prevention* 16(12), 2656-2663
64. **Williams, G.A.** and Turekian, K.K. (2004) The glacial-interglacial variation in seawater Os isotopes as recorded in Santa Barbara Basin sediments, *Earth Planet. Sci. Lett.* 228, 379-389
65. Krishnaswami, S., **Williams, G.A.**, Graustein, W.C. and Turekian, K.K. (2004) The effect of weathering regime on uranium decay series and osmium in two soil profiles, *Geochem. J.* 38, 651-660
66. **Williams, G.** and Turekian, K.K. (2002) The atmospheric supply of osmium to the oceans. *Geochim. Cosmochim. Acta* 66, 3789-3791
67. **Williams, G.**, Marcantonio, F. and Turekian, K.K. (1997) The behavior of natural and anthropogenic osmium in Long Island Sound, an urban estuary in the eastern U.S. *Earth Planet. Sci. Lett.* 148, 341-347

FORENSIC SCIENCE ACTIVITIES

2019-current	Associate Member of the General Section of the American Academy of Forensic Sciences
7/2017-current	founding member of Forensic Science Initiative at ASU through Team Leadership Academy program with KED
12/2016-current	supervised a UC Davis Master's student, Julianne Sarancha, in examining the fidelity of stable isotope signatures in bone with and without accelerants; also developed a new method of distinguishing human and animal bones, suitable for use even in powdered cremains
3/2012-current	member of Arizona Identification Council (division of International Association for Identification)
7/2011-current	Fulbright Specialist, co-led graduate course on Isotopes in Forensics and Food Authentication at the University of Córdoba, Argentina in Fall 2011
5/2010-current	Volunteer Crime Scene Specialist, Mesa Police Department, Forensic Sciences Division; processed over 250 property and minor persons crime scenes, received 59 AFIS hits (Automated Fingerprint Identification System "match") and 13 CODIS hits (Combined DNA Index System, a DNA "match")

8/2011 gave oral presentation titled, “A blind comparison of multiple analytical methods for soil comparison in a home invasion robbery double shooting case in urban Phoenix, AZ” at 2011 Trace Evidence Symposium in Kansas City

PATENTS

Provisional Patent 11157.032PROV – Methods of tracing and/or sourcing plant material (with J. Skulan and Odysseas Ladopoulos)

Patent 20140273248 – Application of Ca isotope analysis to the early detection of metastatic cancer (with J. Skulan, A.D. Anbar and R. Fonseca)

Patent 20130115650 – Isotopic biomarkers for rapid assessment of bone mineral balance in biomedical applications (with J. Skulan, A.D. Anbar and J. Morgan)

FUNDING HISTORY

Source of Support: National Institutes of Justice

Principal Investigator: N. Schweitzer (School of Social and Behavioral Sciences, ASU)

Co-investigator: Z. Horne, T. Neal, J. Salerno (all SSBS), G. Gordon

Project Title: Enhancing understanding of Forensic Expert Evidence

Award Amount: \$718,786 (pending sponsor decision)

Source of Support: NIJ

Principal Investigator: G. Gordon (ASU)

Co-Principal Investigators: J. Stufkin (ASU), T. Saul (MTSU)

Project Title: Stable Isotope Analysis as a Geospatial Tool for Identification: Intra-Individual Isotopic Variability

Award Amount: \$570,624

Period of Award: 1/1/19 – 12/31/21

Source of Support: National Science Foundation (Law and Social Sciences: Interdisciplinary Postdoc Fellowship)

Principal Investigator: N. Schweitzer (ASU)

Collaborators: G. Gordon, J. Salerno, S. Barclay, M. Saks

Project Title: Postdoctoral fellowship with an Intersectional Approach to Law and Social Sciences

Award Amount: \$247,000

Period of Award: 08/01/18 – 07/31/20

Source of Support: Virginia G. Piper Charitable Trust (ASU-Mayo Clinic Obesity Solutions Seed Grant Funding)

Principal Investigator: G. Gordon (ASU)

Project Title: Combining mobile and isotopic analyses for determining metabolic change during exercise

Award Amount: \$4,990

Period of Award: 7/1/15 – 6/30/18

Source of Support: NIJ

Principal Investigator: G. Gordon (ASU)

Co-Principal Investigators: K. Knudson, A.D. Anbar (ASU)

Principal Investigator: D. Steadman (U. Tennessee)

Project Title: The isotopic taphonomy of human remains

Award Amount: \$350,343 to ASU

Period of Award: 1/1/15 – 6/30/17

Principal Investigator: A.D. Anbar (ASU)

Co-Principal Investigator: G.W. Gordon (ASU)

Principal Investigator: S. Smith (NASA)

Project Title: Stable calcium isotopes in urine as a biomarker of bone mineral balance in spaceflight

Award Amount: \$550,320 to ASU

Period of Award: 9/1/13 – 11/30/17

Source of Support: Flinn Foundation

Principal Investigator: A.D. Anbar (ASU)

Co-Principal Investigator: G.W. Gordon (ASU)

Principal Investigator: K. Cannon (Mayo), R. Fonseca (Mayo), J. Skulan (consultant)

Project Title: Improving the clinical utility of Ca isotope analysis by assessing population-level variation in the Ca isotope composition of blood

Award Amount: \$100,000

Period of Award: 7/11/13 – 6/30/16

Source of Support: NSF OCE

Principal Investigator: A. Anbar (ASU)

Co-Principal Investigators: A. Herrmann, G. Gordon (ASU)

Principal Investigator: Lisa Levin (UCSD)

Project Title: Ocean Acidification Category 2: Collaborative Research - Development of geochemical proxies to evaluate larval pH-exposure history

Award Amount: \$99,633 to ASU

Period of Award: 6/1/11 – 5/31/13

Source of Support: ASU-Mayo Pilot Funding

ASU Investigator #1: A. D. Anbar

ASU Investigator #2: G. W. Gordon

Mayo Investigator #1: R. Fonseca
Project Title: Calcium isotopes: Inorganic Signatures of Multiple Myeloma Progression
Award Amount: \$40,000
Period of Award: 7/01/12 – 6/30/13

Source of Support: ASU-Mayo Pilot Funding
ASU Investigator #1: A. D. Anbar
ASU Investigator #2: G. Gordon
Mayo Investigator #1: Larry Miller
Mayo Investigator #2: Patricia Carrigan
Project Title: Environmental Factors and Pancreatic Cancer
Award Amount: \$40,000
Period of Award: 9/01/05 – 9/31/06

SERVICE

2019 Reviewer, NIJ
2018 Reviewer, NSF-MRI
2015-current Reviewer, Limited Submissions, ASU-Mayo Seed Grant
Ad hoc reviewer for EPSL, Science of the Total Environment, PNAS, Metallomics, J. Agri. Food Chem., Intl. J. Environ Health, GCA, ES & T, Chem Geol., Archaeometry, Anal Chem, Am J Criminal Justice, Geochem Perspect. Letters

Founding member, Forensic Science Initiative (2016-current)
Team LA, Forensic Science team (2017-8)

Mentoring (selected list of students with most intensive mentoring and training)

* indicates co-author of published article or submitted manuscript

(*) manuscript actively in preparation

High School Mentees

Amrita Rhoads*

Undergraduate Mentees

Jonathon Wiggins

Teidra Williams

Michael Fancher (NASA-Space Grant mentee)

Chad Ostrander^{*,(*)} (NASA-Space Grant mentee)

Taghreed Adnan (manuscript in submission)

Sara Anderson^(*) (Barrett Honors Thesis)

Graduate student Mentees (provided significant assistance with experimental design, method development, data interpretation, and/or writing, approximately chronological)

Hugo Beraldi-Campesi*

Tais Dahl* (U. of Copenhagen, Denmark)

Yun Duan*

Brian Kendall* (U of Alberta, Canada)

Jennifer Morgan*

Susan Schultz

Katie Alexander

Ben Duval* (NAU)

Hope Williams^(*)

Ashley Evans

Ben Gill* (UC Riverside)

Stephen Romaniello*

Ayla Kiser

Sara Marsteller*

Katherine Miller

Kristin Nado

Lillian Ostrach

Zachary Poss

Eleanna Prevedorou^{*,(*)}

Emily Schach

Julia Giblin

Sandra Nunez

Swapan Sahoo^(*) (UNLV)

Alka Tripathy

Emma Harrison

Xiangyu Bi

Xinming Chen

Dominique Garello

Sandra Londono

Magdalena Monferrán* (Universidad Nacional de Córdoba, Argentina)

Aurelie Marcotte

Keith Morrison

Marc Neveu

Ben Shepard

Joseph Magnall* (U. Alberta)

Hannah Lau* (UCLA)

Hannah Chazin^(*) (Columbia)

Cyrus Hester^(*)

Ziheng Li (China University of Geosciences)

Huimin Yu (University of Science and Technology of China)

Julianne Sarancha^{*,(*)} (UC Davis, Master's committee member)

Tiffany Saul^{*,(*)} (Tennessee State University at Knoxville, doctoral committee member)
Feifei Zhang (doctoral committee member)

Laboratory management experience

- I currently manage the Metal, Environmental and Terrestrial Environmental Laboratory (formerly W.M. Keck Foundation for Environmental Biogeochemistry; see <https://cores.research.asu.edu/metals-environmental-and-terrestrial-analytical-laboratory/about> and <http://kflieb.asu.org> (2005-current))
- Currently employs 1.5 FTE technicians, 1.0 FTE student worker, 3 PhD level scientists
- Includes trace metal clean lab, iCAP-Q ICP-MS, Neptune MC-ICP-MS, microwave digester, assorted peripherals
- User list of publications from laboratory analyses includes 184 peer-reviewed publications (available upon request)
- Diverse user base including ~50% of revenue from sources external to ASU
- ASU users are split among multiple academic units including School of Earth & Space Exploration (30%), School of Human Evolution and Social Change (20%), Fulton Schools of Engineering (35%), School of Life Sciences, and New College of Interdisciplinary Arts and Sciences

REFERENCES

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