Alissa J. Arp

EDUCATION

PhD, MA, 1983, Biology, University of California, Santa Barbara
BA with honors, Biology, 1977, Sonoma State University, Rohnert Park, California

AWARDS AND HONORS

President, American Association for the Advancement of Science, Pacific Division, 2011

Fellow of the Pacific Award, Hawaii Pacific University, 2007

Distinguished Alumni Award, Sonoma State University, 2003

Bautzer Faculty University Advancement Award, San Francisco State University, 1998

Science Fellow, California Academy of Sciences, 1991

PROFESSIONAL EXPERIENCE AND ACCOMPLISHMENTS

Southern Oregon University

Faculty member, Environmental Studies, 2013 - present
Dean of the College of Arts and Sciences, Professor of Biology with tenure – 2009 to 2013

Hawaii Pacific University

Vice President for Research and Dean of the College of Natural Sciences -- 2006 to 2009

Romberg Tiburon Center for Environmental Studies, San Francisco State University

Director -- 1995 to 2006

San Francisco State University, Department of Biology

Professor of Biology with tenure -- 1994 to 2006
Associate Professor of Biology --1989 to 1994
Researcher and Lecturer -- 1986 to 1988

OTHER PROFESSIONAL EXPERIENCE

Postdoctoral Associate, 1983 to 1986, Scripps Institution of Oceanography, UC San Diego

Moss Landing Marine Laboratories, Monterey, California - Visiting Scientist, 1988 to 1989

PROFESSIONAL PUBLICATIONS (asterisk indicates a student author)

Wohlgemuth, SE, **Arp AJ**, *Bergquist D and Julian D. 2007. Rapid induction and disappearance of electron-dense organelles following sulfide exposure in the marine annelid *Branchioasychis americana*. Invertebrate Biology 126(2):163–172.

Julian D, Statile J, *Roepke T and **Arp A.J**. 2005. Sodium nitroprusside potentiates H2S-induced contractions in body wall muscle from a marine worm. Biological Bulletin, 209: 6-10.

Menon J.G, *Tauscher, *Willsie and **Arp A.J.** 2003. Ultrastructure and functional implications in five vestimentiferans and a polychaete from sulfidic environments. Invertebrate Biology 122(4):332-344.

Julian D., *Statile, J.L., Wohlgemuth, S.E. and **Arp A.J.** 2002. Enzymatic hydrogen sulfide production in marine invertebrate tissues. Comparative Biochemistry and Physiology 133:105-115.

Arp. A.J. 2001. Hydrothermal vent environments are dynamic, hot, and toxic. Encyclopedia of Ocean Sciences, Academic press, 1242-1246.

Julian D, *Chang, M.L., *Judd, J.R., and **Arp A.J.** 2001. Influence of environmental factors on burrow irrigation and oxygen consumption in the mudflat invertebrate *Urechis caupo*. Marine Biology 139:163-173.

Zierenberg, R.A., Adams, M.W. and **Arp A.J.** 2000. Life in Extreme Environments: Hydrothermal Vents. Proceedings of the National Academy of Sciences, Vol. 97:24, 12961-12962.

Julian D, Gaill F, *Wood E, **Arp A.J** and Fisher CR. 1999. Roots as a site of hydrogen sulfide uptake in the hydrocarbon seep vestimentiferan *Lamellibrachia* sp. Journal of Experimental Biology 202, 2245-2257.

Julian D, *Wieting SL, *Seto SL, *Bogan MR and **Arp A.J.** 1999. Thiosulfate permeability and elimination in a sulfide-adapted marine invertebrate. Physiological and Biochemical Zoology 72(4):416-425.

Menon, J.G. and **Arp A.J.** 1998. Ultrastructural evidence of detoxification in the alimentary canal of *Urechis caupo*. Invertebrate Biology 117(4): 307-317.

Julian, D., *Dalia, W. E. and **Arp, AJ.** 1998. Neuromuscular sensitivity to hydrogen sulfide in the marine invertebrate Urechis caupo. The Journal of Experimental Biology 201:1393-1403.

Julian D., *Passman W.E., and **Arp A.J.** 1996. Water lung and body wall contributions to respiration in an echiuran worm. Respiration Physiology 106:187-198.

Arp, AJ. 1995. Multiple mechanisms for sulfide tolerance in *Urechis caupo*. American Zoologist 35: 132-144.

Menon, J.G. and **Arp A.J.** 1994. The integument of the marine echiuran worm *Urechis caupo*. Biological Bulletin 185:440-454.

Childress, J.J., C.R. Fisher, J.A. Favuzzi, and **Arp A.J.** 1993. The role of serum sulfide binding in the uptake and transport of dissolved sulfide by the chemoautotrophic symbiont-containing clam *Calyptogena elongata*. Journal of Experimental Biology 179:131-158.

*Eaton, R. and **Arp A.J.** 1992. Aerobic respiration during sulfide exposure in the marine echiuran worm, *Urechis caupo.* Physiological Zoology 66(1):1-19.

Menon, J.G. and **Arp A.J.** 1992. Morphological adaptations of the respiratory hindgut of a marine echiuran worm. Journal of Morphology 214:1-8.

*Julian, D. and **Arp A.J.** 1992. Sulfide permeability in the marine invertebrate *Urechis caupo*. Journal of Comparative Physiology B. 162:59-67.

Arp, AJ., *B.M. Hansen, and *D. Julian. 1992. The burrow environment and coelomic fluid characteristics of the echiuran worm *Urechis caupo* from three northern California population sites. Marine Biology 113:613-623.

*Levitt, J. M. and **Arp A.J.** 1991. The effects of sulfide on the anaerobic metabolism of two congeneric species of mudflat clams. Journal of Comparative Biochemistry and Physiology 98B:339-347.

Arp, AJ. 1991. The role of heme compounds in sulfide tolerance in the echiuran worm *Urechis caupo*. In: Vinogradov and Kapp (eds.) Structure and function of invertebrate oxygen proteins. Springer-Verlag, NY. Symposium contribution.

Arp, AJ., M. Doyle, E. Cera, and S.J. Gill. 1990. Oxygen binding characteristics of two co-occurring hemoglobins of *Riftia pachyptila*. Respiration Physiology 80:323-334.

Powell, M.A. and **Arp A.J.** 1989. Hydrogen sulfide oxidation by abundant heme compounds in marine invertebrates from sulfide rich habitats. Journal of Experimental Zoology 249:121-132.

Sanders, N.K., **Arp A.J**, and J.J. Childress. 1988. Oxygen binding characteristics of the hemocyanins of two deep-sea hydrothermal vent crustaceans. Respiration Physiology 71:57-68.

Fisher, C.R. Jr., J.J. Childress, **Arp A.J**, J.M. Brooks, D. Distil, J.A. Favuzzi, H. Felbeck, R. Hessler, K.S. Johnson, M.C. Kennicutt, A. Newton, M.A. Powell, G.N. Somero, and T. Soto. 1988. Microhabitat variation in the hydrothermal-vent mussel *Bathymodiolus thermophilus*, at Rose Garden. Deep-Sea Research 35: 1769-1779.

Fisher, C.R. Jr., J.J. Childress, **Arp A.J**, J.M. Brooks, D. Distil, J.A. Favuzzi, H. Felbeck, R. Hessler, K.S. Johnson, M.C. Kennicutt, A. Newton, M.A. Powell, G.N. Somero, and T. Soto. 1988. Variations in the hydrothermal-vent clam *Calyptogena magnifica* at the Rose Garden vent on the Galapagos Spreading Center. Deep-Sea Research 35:1811-1831.

Fisher, C.R. Jr., J.J. Childress, **Arp A.J**, J.M. Brooks, D. Distil, J.A. Favuzzi, S.A. Macko, A. Newton, M.A. Powell, G.N. Somero, and T. Soto. 1988. Physiology, morphology, and composition of *Riftia pachyptila* at Rose Garden in 1985. Deep-Sea Research.35:1745-1758.

Arp, A.J., J.J. Childress, and R.D. Vetter. 1987. Sulfide binding protein in the blood of *Riftia pachyptila is* the extracellular hemoglobin. Journal of Experimental Biology 128:139.

Arp, A.J. 1986. Sulfide binding by an extracellular hemoglobin. In. B. Linzen (ed.), Invertebrate Oxygen Carriers. Springer-Verlag, NY. Symposium contribution.

Arp, A.J., J.J. Childress, and C.R. Fisher Jr. 1985. Blood gas transport in *Riftia pachyptila.* In. M.L. Jones (ed.), The Hydrothermal Vents of the Eastern Pacific: An Overview. Bulletin of the Biological Society of Washington, No. 6:289-300.

Arp, A.J. and J.J. Childress. 1985. Oxygen binding properties of the blood of the deep-sea shrimp, *Glyphocrangon vicaria.* Physiological Zoology 58(1):38-45.

Arp, A.J., J.J. Childress, and C.R. Fisher Jr. 1984. Metabolic and blood gas transport characteristics of the hydrothermal vent bivalve, *Calyptogena magnifica*. Physiological Zoology 57(6):648-662.

Childress, J.J., **Arp A.J**, and C.R. Fisher Jr. 1984. Metabolic and respiratory characteristics of the hydrothermal vent tube worm *Riftia pachyptila*. Marine Biology 83:109-124.

Arp, A.J., and J.J. Childress. 1983. Sulfide binding by the blood of the hydrothermal vent tube worm *Riftia pachyptila*. Science 219:295-297.

Terwilliger, N.B., R.C. Terwilliger, and **Arp A.J.** 1983. Thermal vent clam (*Calyptogena magnifica*) hemoglobin. Science 219:981-983.

Arp, A.J., and J.J. Childress. 1981. Blood function in the hydrothermal vent vestimentiferan tube worm. Science 213:342-344.

Arp, A.J., and J.J. Childress. 1981. Functional characteristics of the blood of the deep-sea hydrothermal vent brachyuran crab. Science 214:559-561.