

Curriculum Vitae

Dr. John Pierce Wise, Jr.

Office Location:

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Louisville, KY

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Education

- 2019-Present Postdoctoral Fellow in Toxicology, School of Medicine, University of Louisville, Louisville, KY.
- 2018-2019 Postdoctoral Fellow in Gerontology, Leonard Davis School of Gerontology, University of Southern California, Los Angeles, CA.
- 2013-2018 Ph.D. in Toxicology, Purdue University, West Lafayette, IN
- 2007-2013 B.S. in Biology, University of Southern Maine, Portland, ME

Professional Experience

- 2019-Present Postdoctoral Fellow in Toxicology, School of Medicine, University of Louisville, Louisville, KY.
- 2018-2019 Postdoctoral Fellow in Gerontology, Leonard Davis School of Gerontology, University of Southern California, Los Angeles, CA.
- 2013-2018 Ph.D. Candidate, College of Health Sciences and Toxicology, Purdue University
- 2011-12 Student Team Leader of science crew for Gulf of Mexico studies on board *R/V Odyssey*, Wise Laboratory of Environmental and Genetic Toxicology
- 2008-2009 Team Leader of Dirigo, a team participating in NASA's Reduced Gravity Student Flight Opportunities Program
- 2007-2013 Undergraduate Student Researcher, Wise Laboratory of Environmental and Genetic Toxicology, Maine Center for Toxicology and Environmental Health, University of Southern Maine

- 2007-2008 Team Leader of Dirigo, a team participant in NASA's Reduced Gravity Student Flight Opportunities Program
- 2004-2007 High School Student Researcher, Wise Laboratory of Environmental and Genetic Toxicology, Maine Center for Toxicology and Environmental Health, University of Southern Maine

Professional Activities

- 2018 Symposium Session Chair: Mechanisms of Autophagic Function and Dysfunction in Neurotoxicity and Neurodegeneration, Annual Meeting for the Society of Toxicology, San Antonio, Texas
- 2016 Poster Session Chair: Neurotoxicology – Neurodegenerative Diseases, Annual Meeting for the Society of Toxicology, New Orleans, Louisiana.
Peer Mentor for the Undergraduate Education Program, Annual Meeting for the Society of Toxicology, New Orleans, Louisiana.
- 2012 Panelist, The Biodiversity Research Institute's Spotlight on Ecoscience: Dr. Lovejoy's Looming Questions for Conservation in the 21st Century, Hannaford Lecture Hall, University of Southern Maine, Portland, Maine.
- 2012 Student Representative, AIAA Congressional Visits Day, Capitol Hill, Washington D.C.
- 2011 Panelist, Students Bringing Space Related Research Down to Earth, ASGSB/AIAA, Capitol Hill, Washington, D.C.
- 2010 Student Representative, AIAA Congressional Visits Day, Capitol Hill, Washington D.C.
- 2009 Student Representative, AIAA Congressional Visits Day, Capitol Hill, Washington D.C.

Officer Positions

- 2015-2016 President of Purdue Health Sciences Graduate Student Organization
- 2014-2015 President Elect of Purdue Health Sciences Graduate Student Organization
- 2011-2012 President of USM Outdoor Adventure Club
Treasurer of USM Biology Club

Treasurer of USM Environmental Health and Toxicology Club
Vice President of the Student Association of the American Society for Gravitational
and Space Biology
Co-President of the New England Chapter of Marine Mammalogy

- 2010-2011 President of USM Biology Club
Co-President of the New England Chapter of Marine Mammalogy
Co-President of USM Outdoor Adventure Club
Treasurer of USM Environmental Health and Toxicology Club
Treasurer/Secretary of the Student Association of the American Society for
Gravitational and Space Biology
- 2009-2010 President of USM Outdoor Adventure Club
Secretary of USM Environmental Health and Toxicology Club
- 2008-2009 Vice President of USM Biology Club

Honors and Awards:

Awards

- 2018 1st Place Graduate Student Abstract/Travel Award at Greater Indiana Society for
Neuroscience
- 2017 Purdue Bilsland Dissertation Fellowship (valued at >\$62,000)
- 2016 Purdue Research Foundation Research Grant (valued at >\$28,000)
- 2016 Purdue Graduate Student Government Travel Grant (\$250)
- 2016 Purdue Institute of Integrative Neuroscience Travel Award (\$500)
- 2014 Compton Graduate Research Travel Award (\$500)
- 2013 Fredrick N. Andrews Fellowship (valued at >\$33,000)
- 2013 Outstanding Student Leader for the University of Southern Maine
- 2011 ASGSB Student Travel Award (\$500)
SMM Student Travel Grant (\$500)
PRIMO16 Student Travel Award (\$500)
Maine Space Grant Academic Year Internship (\$2,500)
- 2010 Maine Space Grant Academic Year Internship (\$2,600)
Outstanding Student of the Year, Maine Center for Toxicology and Environmental
Health

- 2009 Maine Space Grant Academic Year Internship (\$3,000)
 Inducted into USM's Leadership Recognition Dog Pound
 ASGSB Student Travel Award (\$500)
 Summer Undergraduate Research Fellowship, University of Southern Maine (\$2,900)
- 2008 Maine Space Grant Academic Year Internship (\$5,760)
- 2007 Graduate Cheverus High School Cum Laude
 Maine Space Grant Summer Internship
- 2005 Cum Laude – National Latin Exam

Publications

Journal Articles

1. Brooks, B., O'Brien, T.J., Ceryak, S., Wise, Sr., J.P., Wise, S.S., **Wise, Jr., J.P.**, DeFabo, E. and Patierno, S.R. Excision Repair is Required for Genotoxin-Induced Mutagenesis in Mammalian Cells. Carcinogenesis. 29(5):1064-1069, 2008.
2. Li Chen, T., Wise, S.S., Holmes, A., Shaffiey, F., **Wise, Jr., J.P.**, Thompson, W.D., Kraus, S. and Wise, Sr., J.P. Cytotoxicity and Genotoxicity of Hexavalent Chromium in Human and North Atlantic Right Whale (*Eubalaena glacialis*) Lung Cells. Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology, 150(4): 487-494, 2009.
3. **Wise Jr., J.P.**, Wise, S.S., Wise, J., McKay, J., Browne, M., Joyce, K., Braun, M., Wise, C., Duffy, R., Estell, E., Brown, J., Gianios Jr., C., Mason, M., Shehata, T., Hammond, D., Thompson, W.D., and Wise, Sr., J.P. Altered Gravity Exacerbates Chromate-Induced Genotoxicity. Gravitational and Space Biology, 23(2): 83-84, 2010.
4. Wise, Sr., J.P., Wise, S.S., LaCerte, C., **Wise, Jr., J.P.**, and Aboueissa, A.E.M. The genotoxicity of particulate and soluble chromate in sperm whale (*Physeter macrocephalus*) skin fibroblasts. Environmental and Molecular Mutagenesis. 52(1): 43-49, 2011.
5. Li Chen, T., Wise, S.S., LaCerte, C., Martino, J., **Wise, Jr., J.P.**, Thompson, W.D. and Wise, Sr., J.P. Comparative cytotoxicity and genotoxicity of particulate and soluble hexavalent chromium in human and sperm whale (*Physeter macrocephalus*) skin cells. Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology. 155(2012): 143-150, 2012.
6. Pabuwal, V., Boswell, M., Pasquali, A., Wise, S.S., Kumar, S., Shen, Y., Garcia, T., LaCerte, C.,

- Wise, Jr., J.P.**, Wise, Sr., J.P., Warren, W., and Walter, R.B. Transcriptomic Analysis of Cultured Whale Skin Cells Exposed to Hexavalent Chromium [Cr(VI)]. *Aquatic Toxicology*. 134-135: 74-81, 2013.
7. **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Gianios, Jr., C., Xie, H., Thompson, W.D., Perkins, C., Falank, C., and Wise, Sr., J.P. Concentrations of the Genotoxic Metals, Chromium and Nickel, in Whales, Tar Balls, Oil Slicks, and Released Oil from the Gulf of Mexico in the Immediate Aftermath of the Deepwater Horizon Oil Crisis: Is Genotoxic Metal Exposure Part of the Deepwater Horizon Legacy? *Environmental Science and Technology*. 48(2014): 2997-3006.
8. Wise, C.F., Wise, J.T.F., Wise, S.S., Thompson, W.D., **Wise, Jr., J.P.**, Wise, Sr., J.P. Chemical dispersants used in the Gulf of Mexico oil crisis are cytotoxic and genotoxic to sperm whale skin cells. *Aquatic Toxicology*. 152:335-340, 2014.
9. Wise, J.T.F., Xie, H., **Wise, Jr. J.P.**, Mason, M., Jeevarajan, A., Wallace, W., and Wise, Sr., J.P. Comparative Toxicity of Lunar, Martian Dust Simulants and Urban Dust in Human Skin Fibroblast Cells. *Gravitational and Space Research*. 3(1): 51-58, 2015.
10. Wise, S.S., Wise, C.F., Xie, H., Guillette, Jr., L.J., Zhu, C., **Wise, Jr., J.P.**, and Wise, Sr., J.P. Hexavalent Chromium is Cytotoxic and Genotoxic to American Alligator Cells. *Aquatic Toxicology*. 171: 30-36, 2016.
11. **Wise, Jr., J.P.** and Cannon, J.R. From the Cover: Alterations in Optineurin Expression and Localization in Pre-clinical Parkinson's Disease Models. *Toxicological Sciences*. 153(2): 372-381, 2016.
12. Warren, W.C., Kuderna, L., Alexander, A., Catchen, J., Perez-Silva, J.G., Lopez-Otin, C., Quesada, V., Minx, P., Tomlinson, C., Montague, M.J., Farias, F.G.H., Walter, R.B., Marques-Bonet, T., Glenn, T., Kieran, T.J., Wise, S.S., **Wise, Jr., J.P.**, Waterhouse, R.M., Wise, Sr., J.P. The novel evolution of the sperm whale genome. *Genome Biology and Evolution*. 9(12): 3260-3264, 2017.
13. **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Gianios, Jr., C., Xie, H., Walter, R., Boswell, M., Perkins, C., and Wise, Sr., J.P. A Three Year Study of Metal Levels in Skin Biopsies of Whales in the Gulf of Mexico after the Deepwater Horizon Oil Crisis. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*. 205: 15-25, 2018.
14. **Wise, Jr., J.P.**, Price, C.G., Amaro, J.A., Cannon, J.R. Autophagy disruptions associated with

altered optineurin expression in extranigral regions in a rotenone model of Parkinson's disease.

Frontiers in Neuroscience. 12:289, 2018.

15. **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Zhu, C., Browning, C.L., Zheng, T., Perkins, C., Gianios, Jr., C., Xie, H., and Wise, Sr., J.P. Metal Levels in Whales from the Gulf of Maine: A One Environmental Health approach. Chemosphere. 216:653-660, 2019.

16. **Wise, Jr., J.P.**, Croom-Perez, T.J., Meaza, I., Montalvo, C.L., Wise, C.F., Wise, S.S., Wise, J.T.F., Speer, R., Abouiessa, A., Bras, M.M., Lopez, C., Markley, L.C., Young, J.L., Urban-R., J., and Wise, Sr., J.P. A Whale of a Tale: A One Environmental Health Approach to Study Metal Pollution in the Sea of Cortez. Toxicology and Applied Pharmacology. 376:58-69, 2019.

17. Haghani, A., Johnson, R., Safi, N., Zhang, H., Thorwald, M., Mousavi, A., Woodward, N.C., Shirmohammadi, F., Coussa, V. **Wise, Jr., J.P.**, Forman, H.J., Sioutas, C., Allayee, H., Morgan, T., Finch, C.E. Toxicity of urban air pollution particulate matter in developing and adult mouse brain: Comparison of total and filter-eluted nanoparticles. Environment International. 136:105510, 2020.

18. **Wise, Jr., J.P.**, Young, J.L., Cai, J., Cai, L. A Concise Review on the Neurotoxicology of Hexavalent Chromium (Cr [VI]) and New Perspectives. *Submitted to Environment International, in second review.*

Book Chapters and Reports

1. **Wise, Jr., J.P.** and Wise, Sr., J.P. Education Outreach Program - Effects of Altered Gravity on Cellular Function in NASA/TM-2010-216132, C-9 and Other Microgravity Simulations Summary Report, prepared by Space Life Sciences Directorate, Human Adaptation and Countermeasures Division, NASA Johnson Space Center, Houston, 2010.

2. Wise, C.F., **Wise, Jr., J.P.**, Wise, S.S., and Wise, Sr., J.P. Skin Biopsy Applications in Free Ranging Marine Mammals: A Case Study of Whale Skin Biopsies as a Valuable and Essential Tool for Studying Marine Mammal Toxicology and Conservation. Chapter 5, pp. 109-122 in Romero, A. and Keith, E.O. (eds.) *New Approaches to the Study of Marine Mammals*. InTech, Rijeka, Croatia. 2012.

3. **Wise, Jr., J.P.**, Cannon, J.R. Recent Advances in the Exploration of Gene-Environment Interactions in Parkinson's Disease. Chapter 9, pp. 171-208 in Qi, L (ed.) *Gene-Environment Interactions and Human Diseases*. Nova Publishers. New York. 2016.

4. **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Young, J., Wise, Sr., J.P. Organizations. In: Information Resources in Toxicology. 5th ed. Wexler, P., editor. Cambridge, MA: Elsevier; 2020. Chapter 65; p. 643-671. 1054p.

Research Grants:

Pending Grants

As Principal Investigator

R21 ES033327-01	Wise, Jr., J.P. (PI), Cai, L. (Co-I), Cai, J. (Co-I)	Dates TBD
NIH/NIA		\$TBD

Cr(VI)-Induced DNA Damage Contributes to Brain Aging

The major goals of this grant are to assess the interaction of age and hexavalent chromium toxicology from two perspectives: 1) how age (young, adult, geriatric) affects neurotoxic outcomes after chromium exposure, and 2) how hexavalent chromium induces or accelerates aging processes.

Completed Grants

As Principal Investigator

2008-2009	Wise, Jr. (PI)	12/23/08 - 07/21/09	(Flight Week: June 4-13, 2009)
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NASA Reduced Gravity Student Flight Opportunities Program

"Effects of Altered Gravity on Cell Function"

The major goal of this project is to determine the effects of altered gravity on genotoxicity of chemicals in human cells.

2007-2008	Wise, Jr. (PI)	12/21/07 - 09/12/08	(Flight Week: July 10-19, 2008)
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NASA Reduced Gravity Student Flight Opportunities Program

"Effects of Hypergravity and Microgravity on DNA Damage, Repair, and Cellular Uptake in Lung Cells"

The major goal of this project is to determine the effects of altered gravity on genotoxicity of chemicals in human cells.

Seminars and Public Presentations

2021 Speaker: "Heavy Metal Roles in Brain Aging: Cr(VI) Neurotoxicity and Gerontogenicity"
Presented in Purdue University's School of Health Sciences seminar series on March 9, 2021.

2021 Speaker: "Heavy Metal Roles in Brain Aging: Cr(VI) Neurotoxicity and Gerontogenicity"

Presented in University of Louisville's Pharmacology and Toxicology seminar series on February 4, 2021.

- 2019 Invited Speaker: "A Toxicologist's Journey Through the Brain" Presented to Dr. Xianglin Shi's lab, University of Kentucky, June 21, 2019.
- 2017 Selected for Platform Presentation: "Autophagic dysfunction in brainstem nuclei in a preclinical Parkinson's Disease model" Presented at the annual meeting for the Ohio Valley chapter of the Society of Toxicology, Purdue University, December 1, 2017.
- 2017 Invited Speaker: "Why Oceans Matter: The Shared Health of the Earth, Whales, and Us" Public presentation for the Indianapolis Dive Club, May 25, 2017.
- 2017 Invited Speaker: "Why Oceans Matter: The Shared Health of the Earth, Whales, and Us" Public presentation at Carnahan Hall, March 3, 2017.
- 2015 Speaker: "Optineurin Expression in the Nigrostriatal Dopamine System in Normal and Rotenone-Treated Rats: A New Player in the Field of Parkinson's Disease" Health Sciences Seminar Series (HSCI696). Presented in December, 2015.
- 2010 Invited Speaker: "USM's Response to the Gulf of Mexico Oil Crisis" Civic Matters, USM. Presented in November, 2010.
- 2010 Invited Speaker: "Dirigo, Maine's First Team of Students Aboard the Vomit Comet" Maine Space Day, Bath Middle School. Presented in May, 2010.
- 2010 Speaker: "Altered Gravity Exacerbates Chromium-Induced DNA Damage" Northeast Undergraduate Research Symposium, University of New England. Presented in April 2010.
- 2010 Invited Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder" Corporate Partners Business Before Hours Breakfast, University of Southern Maine. Presented in April 2010.
- 2009 Invited Speaker: "Dirigo, Maine's First Team of Students Aboard the Vomit Comet: Completion of Operation Flyball" Margaret Chase Smith School. Presented in December, 2009.
- 2009 Speaker: "Altered Gravity Exacerbated Chromate-Induced DNA Damage" ASGSB Annual Meeting and 25th Anniversary. Presented in November 2009.

- 2009 Invited Speaker: "Dirigo, Maine's First Team of Students Aboard the Vomit Comet" Margaret Chase Smith School. Presented in May, 2009.
- 2009 Invited Speaker: "Dirigo, Maine's First Team of Students Aboard the Vomit Comet" Maine Space Day, Raymond Middle School and Windham Middle School. Presented in May, 2009.
- 2009 Invited Speaker: "Dirigo, Maine's First Team of Students Aboard the Vomit Comet" Cheverus High School. Presented in March, 2009.
- 2009 Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" Maine Biological and Medical Sciences Symposium, Mount Desert Island Biological Laboratories. Presented in April, 2009.
- 2009 Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" Northeast Undergraduate Research Development Symposium, University of New England. Presented in March, 2009.
- 2009 Invited Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" USM Engineering Expo, Gorham, Maine. Presented in February, 2009.
- 2009 Invited Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" Challenger Learning Center of Maine, Bangor, Maine. Presented in January, 2009.
- 008 Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" AMS Seminar Series, University of Southern Maine. Presented in November, 2008.
- 2008 Invited Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" Astronomy, University of Southern Maine. Presented in October, 2008.
- 2008 Invited Speaker: "Altered Gravity Affects Cellular Function" Department of Biology, University of Bridgeport. Presented in September, 2008.
- 2008 Invited Speaker: "Dirigo, Maine's First Student Team Aboard the Weightless Wonder: Effects of Altered Gravity on Cellular Function" Chemistry I: Principles of Chemistry, University of Southern Maine. Presented in September, 2008.

- 2008 Invited Speaker: “Dirigo, Maine’s First Student Team Aboard the Weightless Wonder” Kittery Middle School. Presented in September, 2008.
- 2008 Invited Speaker: “Dirigo, Maine’s First Student Team Aboard the Weightless Wonder” Maine Space Grant Consortium Annual Meeting, Orono, ME. Presented in April, 2008.
- 2007 Speaker: “Lunar Dust in Human Lung Cells” Lyndon B. Johnson Space Center, Houston, Texas. Presented in August, 2007.

Field Work

- 2021 Began environmental health study investigating metal pollution in Louisville, using terrestrial isopods as bioindicators of metal pollution. Position: primary investigator
- 2021 Conducted whale skin biopsy collecting in the Gulf of Maine. Biopsies were taken from fin, humpback, and minke whales. Position: co-investigator, primary biopsier
- 2019 Conducted whale skin biopsy collecting in the Gulf of Maine. Biopsies were taken from fin, humpback, and minke whales. Position: co-investigator, primary biopsier
- 2019 Captured and sampled alligators on Kennedy Space Center and the surrounding Merritt Island with Russell Lowers. Blood and scute samples were collected in the field and processed in a field lab for comet assays.
- 2019 Conducted whale skin biopsy collecting in the Santa Barbara Channel. Biopsies were taken from blue and humpback whales. Position: co-investigator, primary biopsier
- 2017 Conducted whale skin biopsy collecting in the Gulf of Maine. Biopsies were taken from fin, humpback, and minke whales. Position: co-investigator, primary biopsier
- 2017 Conduct a two-week research voyage during April, in collaboration with Universidad Autónoma de Baja California Sur and the Sea Shepherd Conservation Society, in the Sea of Cortez on the *R/V Martin Sheen*, collecting skin biopsies from Bryde’s, humpback, fin and sperm whales.
- 2016 Conducted a two-week research voyage during April, in collaboration with Universidad Autónoma de Baja California Sur and the Sea Shepherd Conservation Society, in the Sea of Cortez on the *R/V Martin Sheen*, collecting skin biopsies from fin, humpback, short-finned pilot, blue, Bryde’s, and sperm whales.
Position: co-investigator, primary biopsier, sample processor
- 2013 Captured alligators on Kennedy Space Center and the surrounding Merritt Island with Dr. Lou Guillette and Russell Lowers to help with their studies on endocrine disruptors.

- 2012 Conducted scientific ballooning experiment in Sanford/New Gloucester, Maine.
- 2012 Conducted whale skin biopsy collecting in the Gulf of Maine during the fall season. Biopsies were taken from fin, humpback, and minke whales.
Position: co-investigator, primary biopsier, student team leader
- 2012 Conducted three month voyage through the Gulf of Mexico, between Key West, Florida and offshore Louisiana studying impacts of Deepwater Horizon oil spill on wildlife and the environment. Samples were collected from marine life (including whale skin/blubber, fish, krill, shrimp, mollusks, crabs, seaweed, and squid) and the marine environment (including air, water, and sediment along the 1000m shelf). Voyage occurred from May through August.
Position: co-investigator, primary biopsier, student team leader
- 2012 Began development of marine field research laboratory in Vieques, Puerto Rico.
- 2012 Conducted scientific ballooning in Bethel/Chester, ME in winter.
- 2011 Conducted four 1-day trips in the Gulf of Maine, biopsying humpback and fin whales, and observing northern right whales. Position: co-investigator, primary biopsier, student team leader.
- 2011 Conducted three month voyage through the Gulf of Mexico, between Key West, Florida and offshore Louisiana studying impacts of Deepwater Horizon oil spill on wildlife and the environment. Samples were collected from marine life (including whale skin/blubber, fish, krill, shrimp, mollusks, crabs, seaweed, and squid) and the marine environment (including air, water, and sediment along the 1000m shelf). Voyage occurred from June through August.
Position: co-investigator, primary biopsier, student team leader
- 2011 Used a weather balloon to lift experiments of cells to 30,000+ ft, to determine effects of altitude on cellular function and DNA damage.
- 2010 Conducted four month voyage from Maine, along the eastern seaboard of the United States and through the Gulf of Mexico. Samples were collected from marine life (including whale skin/blubber, fish, krill, shrimp, mollusks, crabs, seaweed, and squid) and the marine environment (including air, water, and sediment along the 1000m shelf). Many of the collection methods were developed during the voyage. First voyage to successfully culture whale cells at sea. Voyage occurred from July through November. Position: co-investigator, primary biopsier
- 2009 Led a team of undergraduate students to participate in NASA's Reduced Gravity Student Flight Opportunities Program. Replicated research from previous year to determine the effects of altered gravity on cellular function and DNA damage on board NASA's Weightless Wonder, at

Johnson Space Center, Houston, Texas.

2008 Led a team of undergraduate students to participate in NASA's Reduced Gravity Student Flight Opportunities Program. Conducted research to determine the effects of altered gravity on cellular function and DNA damage on board NASA's Weightless Wonder, at Johnson Space Center, Houston, Texas.

Continuing Education Coursework

2017 Technologies and Applications of Stem Cells for Use in Toxicology, Society of Toxicology

2016 Basics of 3D Cell Culture Workshop, Purdue University

2012 Working with Marine Mammals: BIO 347, California State University Monterey Bay and Moss Landing Marine Laboratories

2012 Aquatic Animal Behavior and Training Workshop, International Association of Aquatic Animal Medicine

2011 Marine Mammal Biopsy Workshop, Society of Marine Mammalogy

Current Professional Memberships & Societies:

Society of Toxicology

Past Professional Memberships & Societies:

American Institute of Aeronautics and Astronautics

American Society for Gravitational and Space Research

International Association for Aquatic Animal Medicine

Society for Marine Mammalogy

Society for Neuroscience

Abstracts

1. **Wise, Jr., J.P.**, Munroe, R.C., Stackpole, M.M., Camrye, E., Wise, S.S., and Wise, Sr., J.P. Cells Deficient in DNA Double Strand Break Repair Are Hypersensitive to Particulate Hexavalent Chromium. American Association for Cancer Research, 2005.

2. Lacerte, C., Wise, S.S., **Wise, Jr., J.P.**, Kerr, I.A.R., Payne, R., Evers, D., and Wise, Sr., J.P. Chromium Exposure and Its Toxicity in the Sperm Whale. Proceedings of the North Atlantic Chapter of the Society of Environmental Toxicology and Chemistry, June, 2006.

3. Wise, S.S., Lacerte, C., **Wise, Jr., J.P.**, Kerr, I.A.R., Payne, R., Evers, D., and Wise, Sr., J.P. Chromium Exposure and Its Toxicity in the Sperm Whale. Society of Environmental Chemistry and Toxicology (SETAC) Abstracts, p. 316, 2006.
4. Wise, S.S., Lacerte, C., **Wise, Jr., J.P.**, Kerr, I.A.R., Payne, R., Evers, D., and Wise, Sr., J.P. The Effects of Chromium Exposure and Its Toxicity in the Sperm Whale. Proceedings of the Biennial Meeting of PRIMO (Pollution Research in Marine Organisms), May, 2007.
5. Wise, S.S., Mason M.D., Holmes, A.L., Savery, L., Li Chen, T., Goodale, B., Shaffiey, F., **Wise, Jr, J.P.**, Craig, G., Walter, R., Payne, R., Kerr, I., Spaulding, M., and Wise, Sr., J.P. Cytotoxicity and Genotoxicity of Silver Nanoparticles in Human and Marine Cell Lines. Environmental and Molecular Mutagenesis. 48(7): 606, 2007.
6. Wise, S.S., **Wise, Jr, J.P.**, Xie, H., Mason M.D., Craig, G., Payne, R., Kerr, I.A.R., and Wise, Sr., J.P. The Cytotoxicity and Genotoxicity of Silver Nanoparticles in Sperm Whale Cells. Society of Environmental Chemistry and Toxicology (SETAC) Abstracts, p. 295, 2007.
7. **Wise, Jr., J.P.**, Xie, H., Wallace, W. Hammond, D., Jeevarajan, A. and Wise, Sr., J.P. Colonizing the Moon: A Study of the Toxic Effects of Lunar Dust on Human Lung Cells. Presented at Making the Connection III: Toxics and Tomorrow's Children Conference, March, 2008.
8. Wise, J., **Wise, Jr. J.P.**, Xie, H., LaCerte, C., Yong, J., Mason, M., Jeevarajan, A., Wallace, W., Hammond, D. and Wise, Sr., J.P. Toxic Effects of Lunar Dust in Human Lung Fibroblast Cells. Presented at the Maine Space Grant Consortium Annual Meeting. 2008.
9. Martino, J., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Aluminum Is More Cytotoxic than Lunar Dust in Human Skin and Lung Fibroblasts. Proceedings of the Annual Meeting of the Northeast Chapter of the Society of Toxicology, p. 18, October, 2008.
10. Young, J.L., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Lunar Dust and its Components are Cytotoxic to Human Lung Cells. Proceedings of the Annual Meeting of the Northeast Chapter of the Society of Toxicology, p. 30, October, 2008.
11. **Wise, Jr. J.P.**, Wise, S.S., Wise, J., McKay, J., Courtemanche, A., Freedman, B., Browne, M., Gianios, Jr. C., Mason, M., Shehata, T., Hammond, D., and Wise, Sr. J.P. Altered Gravity

Exacerbates Chromate-Induced Genotoxicity. Proceedings of the Annual Meeting of the Northeast Chapter of the Society of Toxicology, p. 26, October, 2008.

12. **Wise, Jr. J.P.**, Wise, S.S., Wise, J., McKay, J., Courtemanche, A., Freedman, B., Browne, M., Gianios, Jr. C., Mason, M., Shehata, T., Hammond, D., and Wise, Sr. J.P. Altered Gravity Exacerbates Chromate-Induced Genotoxicity. Presented at the Annual Meeting of Society of Toxicology, March 2009.

13. Young, J.L., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Lunar Dust and its Components are Cytotoxic to Human Lung Cells. Presented at the annual meeting of the Society of Toxicology, March, 2009.

14. Martino, J., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Aluminum Is More Cytotoxic than Lunar Dust in Human Skin and Lung Fibroblasts. Presented at the annual meeting of the Society of Toxicology, March, 2009.

15. **Wise, Jr. J.P.**, Wise, S.S., Wise, J., McKay, J., Courtemanche, A., Freedman, B., Browne, M., Gianios, Jr. C., Mason, M., Shehata, T., Hammond, D., and Wise, Sr. J.P. Altered Gravity Exacerbates Chromate-Induced Genotoxicity. Presented at the 36th Maine Biological and Medical Sciences Symposium, April, 2009.

16. McKay, J., **Wise, Jr., J.P.** and Wise, Sr., J.P. Effects of Hypergravity on Chromate-Induced Toxicity in Bowhead Whale Lung Cells. Proceedings of the 36th Annual Biological and Medical Science Symposium, 2009.

17. Young, J.L., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Lunar Dust and its Components are Cytotoxic to Human Lung Cells. Presented at the 36th Maine Biological and Medical Sciences Symposium, April, 2009.

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B., Glass, I., Walker, R., LaCerte, C. and Holmes, A.L. Voyage 2 of the Odyssey: the Impact of the Oil Crisis on Health Using Whales as an Indicator Species. Presented at the annual meeting of the Environmental and Molecular Mutagenesis Society, October 2011.

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Exposure Part of the Toxic Legacy of the Deepwater Horizon Oil Crisis? Presented at the annual meeting of the Society of Toxicology (SOT), March, 2013.

45. **Wise, Jr., J.P.**, Wise, J., Thompson, W.D., Perkins, C., and Wise, Sr., J.P. Is Genotoxic Metal Exposure Part of the Toxic Legacy of the Deepwater Horizon Oil Crisis? Presented at the annual meeting of the International Association for Aquatic Animal Medicine (IAAAM), April, 2013.

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54. **Wise, Jr, J.P.** and Cannon, J.R. Optineurin expression in the nigrostriatal dopamine system in normal and rotenone-treated rats. Presented at the annual meeting of the Society of Toxicology. March, 2016.
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56. **Wise, Jr., J.P.**, Cannon, J.R. Optineurin expression in the nigrostriatal dopamine system: normal expression and response to rotenone treatment. Presented at the annual meeting of the International Union of Toxicology. October, 2016.
57. Mestres-Villanueva, M., **Wise, Jr., J.P.**, Cannon, J.R. Optineurin Distribution in Extranigral Nuclei: Altered Expression in Parkinson's Disease. Presented at the 2016 Annual Biomedical Research Conference for Minority Students. November, 2016.
58. **Wise, Jr., J.P.**, Cannon, J.R. The Role of Optineurin in Golgi Fragmentation During Parkinson's Disease. Presented at the 2017 annual meeting of the Society of Toxicology. March, 2017.
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60. Wise, Sr., J.P., Wise, C.F., **Wise, Jr., J.P.**, Browning, C.L., Martino, J., Li Chen, T., Wise, S.S., and Wise, J.T.F. Insights into the Threat of Chromium on Whale Health: As a One Environmental Health Approach. Presented at the 56th Annual Meeting of the International Association of Aquatic Animal Medicine. Cancun, Mexico, May, 2017.
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63. Wise, Sr., J.P., **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Browning, C.L., Martino, J., and Li Chen, T. A Whale of a Tale: Lessons from Moby Dick's Descendants about Global Chromium Pollution. Presented at the 14th International Symposium on Recent Advances in Environmental Health Research, Jackson, Mississippi, September, 2017
64. Nkera, B., **Wise, Jr., J.P.**, Cannon, J.R. Evaluation of alpha-synuclein and optineurin expression in extranigral regions of end-stage Parkinson's disease. Presented at the Annual Biomedical Research Conference for Minority Students. November 1-2, 2017.
65. Wise, Sr., J.P., **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Browning, C.L., Martino, J., and Li Chen, T. Of Whales and Men: Using a One Health Perspective to Understanding Chromium Pollution in Great Whales. Presented at the annual meeting of the Society of Environmental Toxicology and Chemistry (SETAC), Minneapolis, Minnesota, November, 2017.
66. **Wise, Jr., J.P.**, Montalvo, C.L., Wise, C.F., Wise, S.S., Wise, J.T.F., Speer, R.M., Li Chen, T., Abouiessa, A., Perkins, C., Bras, M.M., Savery, L.C., Urbán, J. and Wise, Sr., J.P. A Whale of a Tale: Using a One Health Approach to Study Metal Pollution in the Sea of Cortez. Presented at the annual meeting of the Southern California Marine Mammal Workshop (SCMMW), Newport Beach, California, January, 2018.
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69. Wise, Sr., J.P., **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Browning, C.L. Martino, J., and Li Chen, T. A Whale of a Tale: Metals and Genotoxicity in Great Whales Considered from a One Health

Perspective. Environmental and Molecular Mutagenesis 59(S1): S30 p 42, 2018.

70. **Wise, Jr., J.P.**, Croom-Perez, T.J., Meaza, I., Montalvo, C.L., Wise, C.F., Wise, S.S., Wise, J.T.F., Speer, R., Abouieissa, A., Bras, M.M., Lopez, C., Markley, L.C., Young, J.L., Urban-R., J., and Wise, Sr., J.P. A Whale of a Tale: A One Environmental Health Approach to Study Metal Pollution in the Sea of Cortez. Presented at the 2019 annual meeting of the Society of Toxicology (SOT), Baltimore, MD. March, 2018.

71. **Wise, Jr., J.P.**, Lu, H., Meaza, I., Wise, S.S., Croom-Perez, T., Speer, R., Toyoda, J., Ali, A., Cai, L., Liu, K.J., Wise, J.T.F., Young, J.L., Wise, Sr., J.P. Assessment of Heavy Metal Accumulation in American Alligators in Florida. Presented at the 2019 annual meeting of the Ohio Valley Chapter of the Society of Toxicology (OVSOT), Cincinnati, OH. October, 2019.

72. Wise, Sr., J.P., **Wise, Jr., J.P.**, Toyoda, J.H., Croom-Perez, T.J., Abouieissa, A., , Montalvo, C.L., Isusi, I.M., Wise, S.S., Wise, C.F., Wise, J.T.F., Li Chen, T., Perkins, C.R., Bras, M.M., Speer, R.M., and Urbán, J. Of Whales and Men: Understanding Metal Pollution in the Sea of Cortez through a One Environmental Health Approach. Presented at the World Marine Mammal Science Conference, Barcelona, Spain, December, 2019.

73. Young, J.L., **Wise, Jr., J.P.**, Wise, J.T.F., Wise, C.F., Wise, S.S., Zhu, C., Browning, C., Zheng T, Perkins C, Gianios, Jr, C., Xie H, Lu, C., and Wise, Sr., J.P. A Whale of a Tale: A 3-Year Study of Metals in Gulf of Maine Whales. Presented at the World Marine Mammal Science Conference, Barcelona, Spain, December, 2019

74. **Wise, Jr. J.P.**, Cai, L. Evaluation of Cr(VI) Neurotoxicity and Its Potential as a Brain Gerontogen. Presented at the 2021 annual meeting of the Society of Toxicology, March 2021, virtual.

75. **Wise, Jr. J.P.**, Cai, L. Two Sides of a Toxic Coin: Cr(VI) as a Gerontogen and Neurotoxic Effects with Age. To be presented at the 2021 OVSOT Student & Postdoctoral Researchers' Virtual Summer Meeting, July 28, 2021.

University of Louisville: Research Louisville! Presentations

1. Wise, S., Miller, E., Daniel, S., Meaza, I., Toyoda, J., Lu, H., Speer, R., Young, J., Isakov, R., Jagers, H., **Wise, Jr., J.** Croom-Perez, T., Cai, L., Hoyle, G. Effects of chronic exposures to

particulate chromium in rat lungs. September 2019.

Purdue University Research Day Presentations

1. Horin, A., Agim, Z. S., Lee, J.-W., **Wise, J.**, Cannon, J. R., 2014. Neurotoxicity and gene-environment interactions in Parkinson's disease. Twenty second Annual Undergraduate Research Day. Department of Biological Sciences. Purdue University. #13
2. **Wise, Jr., J.P.**, Agim, Z.S., Tambe, M.A., Rochet, J.C., and Cannon, J.R. Optineurin expression in dopaminergic neurons and response to Parkinson's disease relevant insults. Presented at the Proceedings of Health and Disease: Science, Culture and Policy Research Poster Session. March 5, 2015.
3. **Wise, Jr., J.P.**, Agim, Z.S., Tambe, M.A., Rochet, J.C., and Cannon, J.R. Altered optineurin expression in cellular and rodent models of Parkinson's disease. Presented at The Hitchhiker's Guide to the Protein Galaxy. May 13-14, 2015.
4. **Wise, Jr., J.P.** and Cannon, J.R. Optineurin expression in the nigrostriatal dopamine system in normal and rotenone-treated rats. Proceedings of College of Health and Human Sciences Fall Research Day, October, 2015.
5. **Wise, Jr., J.P.** and Cannon, J.R. Optineurin expression in the nigrostriatal dopamine system in normal and rotenone-treated rats. Proceedings of Health and Disease: Science, Culture and Policy Research Poster Session. March 28, 2016.
6. Mestres-Villanueva, M.A., **Wise Jr., J.P.**, Cannon, J. Optineurin distribution in extranigral nuclei: Altered expression in Parkinson's disease. Purdue University SROP Presentation; July 29, 2016.
7. **Wise, Jr., J.P.** and Cannon, J.R. Golgi fragmentation in Parkinson's disease. Purdue HHS Fall Research Day. October 26, 2016.

University of Southern Maine Student Research Day Presentations

1. **Wise, Jr. J.P.**, Wise, S.S., Wise, J.T.F., Link, N., Courtemanche, A., Freedman, B., Browne, M., Gianios, Jr., C., Mason, M. and Wise, Sr., J.P. DIRIGO: Maine's First Student Team in Microgravity.

Proceedings of University of Southern Maine's 5th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, 51, 2008.

2. **Wise, Jr., J.P.**, Xie, H., Wallace, W., Hammond, D., Jeevarajan, A. and Wise, Sr., J.P. The Toxicity of Lunar Dust in Human Lung Epithelial Cells. Proceedings of University of Southern Maine's 5th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, 151, 2008.

3. **Wise, Jr., J.P.**, Wise, J.T.F., Ford, J. and Wise, Sr., J.P. Protocol Development: Cells in Microgravity. Proceedings of University of Southern Maine's 5th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, 20, 2008.

4. McKay, J., **Wise, Jr., J.P.** and Wise, Sr., J.P. Effects of Hypergravity on Chromate-Induced Toxicity in Bowhead Whale Lung Cells. Proceedings of University of Southern Maine's 6th Annual Thinking Matters: USM Research, Scholarship and Creativity Symposium, 2009.

5. **Wise, Jr. J.P.**, Wise, S.S., Wise, J., McKay, J., Courtemanche, A., Freedman, B., Browne, M., Gianios, Jr. C., Mason, M., Shehata, T., Hammond, D., and Wise, Sr. J.P. Altered Gravity Exacerbates Chromate-Induced Genotoxicity. Presented at the University of Southern Maine's 6th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2009.

6. Young, J.L., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Lunar Dust and its Components are Cytotoxic to Human Lung Cells. Presented at the University of Southern Maine's 6th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2009.

7. Martino, J., **Wise, Jr. J.P.**, Wise, J., Jeevarajan, A., Wallace, W., Hammond, D., Shehata, T., and Wise, Sr. J.P. Aluminum Is More Cytotoxic than Lunar Dust in Human Skin and Lung Fibroblasts. Presented at the University of Southern Maine's 6th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2009.

8. **Wise, Jr. J.P.**, Wise, S.S., Wise, J.T., Wise, C., McKay, J., Braun, M., Courtemanche, A., Duffy, R., Freedman, B., Browne, M., Estell, E., Brown, J., Joyce, K., Gianios, Jr. C., Mason, M., Shehata, T., Hammond, D., and Wise, Sr. J.P. Altered Gravity Exacerbates Chromate-Induced Genotoxicity. Presented at the University of Southern Maine's 6th Annual Thinking Matters Conference: USM

Research, Scholarship, and Creativity Symposium, April, 2010.

9. Shively, B., **Wise, Jr., J.P.**, Richardson, B., Krieg, E., Bickford, M. and Wise, Sr., J.P. Mars Dust is Genotoxic to Human Lung Cells. Proceedings of the University of Southern Maine's 7th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2010.

10. Wheeler, C., **Wise, Jr., J.P.** and Wise, Sr., J.P. Effects of Simulated Microgravity on Chromate Toxicity in Human Cells. Proceedings of the University of Southern Maine's 7th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2010.

11. Wise, S., Kerr, I., **Wise, Jr., J.P.**, Wise, C., Wise, J., Gianios, Jr., C., Braun, M., Wallace, R., Glass, I., Walker, R., LaCerte, C., McKay, J., Li Chen, T., Martino, J., Chapman, G., Duffy, R., Leighton, R., Joyce, K. and Wise, Sr., J.P. The Gulf Oil Crisis: Impact on Whales. Proceedings of the University of Southern Maine's 8th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2011.

12. **Wise, Jr, J.P.**, Wise, S. and Wise, Sr., J.P. The Use Of Sperm Whale Karyotype To Assess The Potential Impacts Of The Gulf Of Mexico Oil Spill. Proceedings of the University of Southern Maine's 8th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2011.

13. **Wise, Jr., J.P.**, Wheeler, C. and Wise, Sr., J.P. The Impact of Altered Gravity on Chromate Genotoxicity: Using a Bioreactor to Simulate Microgravity in Cell Culture. Proceedings of the University of Southern Maine's 8th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2011.

14. Shively, E., **Wise, Jr., J.P.**, McKay, J. and Wise, Sr., J.P. The Effect of Hypergravity on Cr(VI)-induced Cytotoxicity and Genotoxicity. Proceedings of the University of Southern Maine's 8th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2011.

15. Wise, C., Braun, M., **Wise, Jr., J.P.**, Wise, J., Wise, S., Kerr, I., Xie, H. and Wise, Sr., J.P. Developing a Whale Cell Line at Sea to Evaluate the Cytotoxicity and Genotoxicity of Chemical Dispersants Used in the Gulf of Mexico Oil Crisis. Proceedings of the University of Southern Maine's 8th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2011.

16. **Wise, Jr., J.P.**, Wise, C., Keim, E., Wise, Sr., J.P. Comparison of Observed Nickel Levels and Nickel Toxicity in Whales. Proceedings of the University of Southern Maine's 9th Annual Thinking Matters Conference: USM Research, Scholarship, and Creativity Symposium, April, 2012.

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Advising and Mentoring

Teaching Assistant

2018 HSCI 562 Analytical Toxicology and Toxicologic Pathology

2017 HSCI 671 Biochemical Toxicology

2016 HSCI 562 Analytical Toxicology and Toxicologic Pathology

2013 HSCI 560 Toxicology

SRSP Medical Students

2021 Jessica Fulkerson (University of Louisville)

Undergraduate Students

2016-2018 Charles G. Price (Purdue University)

2017 Bahati Nkera (University of Massachusetts – Amherst) 2016

Mariella Mestres-Villanueva (University of Puerto Rico)

Erika Kischuk (DePauw University)

2013-2017 Joseph A. Amaro (Purdue University)

High School Students

2009-2012 Benjamin Richardson (Windham High School, Windham, ME)

Elizabeth Shively (Windham High School, Windham, ME) Emma

Krieg (Windham High School, Windham, ME)

Service to Community

2021 Volunteer Judge for Wyoming State Science Fair, March 8, 2021

2021 Volunteer Judge for Louisville Regional Science & Engineering Fair, March 6, 2021
2019 Volunteer for Louisville Youth Science Summit, Louisville, KY
2019 Volunteer at Lexington Science Summit, Lexmark, Lexington, KY
2017 SCUBA Ambassador, Indy Dive Center, Logansport, IN
2016 Volunteer, Wildcat Wildlife Rescue Center, Delphi, IN
2010 Volunteer, Work Exchange Team (WET) at Nateva Music Festival in Oxford, ME
2008 Volunteer, Maine Blues Festival in Naples, ME.