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### **Education**

Post-Doctoral, Arizona Cancer Center, U. Arizona	1994-1998
Ph.D., University of Arizona, Tucson, Arizona	1988-1994
D.V.M., The Ohio State University, Columbus Ohio	1980-1984
B.Sc. in Animal Science The Ohio State University, Columbus Ohio	1976-1980

### **Current Position**

*University of Arizona College of Veterinary Medicine*  
Associate Professor

*University of Arizona, Faculty Joint Appointments*  
College of Medicine  
College of Pharmacy  
College of Public Health  
College of Nursing  
Genetics GDP  
BIO5 Institute

### **Academic Appointments**

Associate Dean, Academic Programs and Faculty Affairs College of Veterinary Medicine University of Arizona Tucson, Arizona	2019-2020
Associate Professor College of Veterinary Medicine University of Arizona Tucson, Arizona	2019 - Present
Department Head (Interim) Department of Pharmacology and Toxicology University of Arizona Tucson, Arizona	2015-2017
Associate Department Head Department of Pharmacology and Toxicology University of Arizona Tucson, Arizona	2013- 2015
Associate Professor Department of Pharmacology and Toxicology University of Arizona Tucson, Arizona	2012- Present
Assistant Professor Department of Pharmacology and Toxicology	2006-2012

University of Arizona  
Tucson, Arizona

### **Other Positions and Experience**

Associate Research Scientist Arizona Respiratory Center, University of Arizona	2000-2006
Group Leader, Genetic Assay Development Motorola Life Sciences, Tempe, Arizona	1998-2000
Private Veterinary Medicine and Surgery Practice Pleasant Valley Animal Hospital, Pleasant Valley, PA Machias Veterinary Clinic, Machias, NY	1984-1988

### **Professional Memberships and Activities**

American Academy of Veterinary Pharmacology and Therapeutics	2021-Present
Society of Toxicology	1994-2020
Society of Toxicology, Metals Specialty Section	2010-2020
Mountain West Society of Toxicology	2010-2020

### **Committee Assignments and Administrative Services**

<u>Society of Toxicology</u> Education and Career Development Committee	2019-2020
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<u>Society of Toxicology, Metals Specialty Section</u> Elected to 4-year leadership cycle (VP-elect, VP, President, Past-President)	2013-2017
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#### U.S. National Institutes of Health Grant Review

NIH/NHLBI StARR Program (ZHL1)	2018
NIH/NCCIH Chelation Therapy Research Study Section (ZAT1 HS-26)	2016
NIH/NIEHS P50 Environmental Health Disparities Funding Opportunity	2015
NIH/NCI Special Emphasis Panel (XCA1-SRB-L (J1)	2015
NCCAM Omics Applied to CAM Therapy (Expertise in Genetics/Genomics)	2009
NCCAM Omics Applied to CAM Therapy (Expertise in Genetics/Genomics)	2008
NHLBI Lung Tissue Research (Expertise in Genetics/Genomics)	2008
NCCAM Omics Applied to CAM Therapy (Expertise in Genetics/Genomics)	2007
NHLBI Obstructive Lung Disease (Expertise in Genetics/Genomics)	2006

#### U.S. Environmental Protection Agency

Human Studies Review Board (Appointed by USEPA Director McCarthy)	2016-Present
Vice Chair, Human Studies Review Board	2019-2020

#### University of Arizona Graduate Council

Chair/Co-Chair	2016-2017
College of Pharmacy Representative	2014-2015
Professional Subcommittee	2015
Grievance Hearing Committee	2015

#### University of Arizona General Committee Participation

Activity Informed Budget: Faculty Committee	2021-Present
Steering Committee, Development of College of Veterinary Medicine	2018-2019
Search Committee, Dean, College of Veterinary Medicine	2018-2019
BIO5 Committee to Revise Space Allocation Policy	2018

TCE Vision Committee (Reviewed drafts)	2018
Search Committee, Dean, College of Pharmacy	2016
Committee on Academic Freedom and Tenure (Filled vacated position)	2016
Committee on Educational Quality Metrics	2016
University Learning Management System RFP Evaluation	2015

#### University of Arizona College of Veterinary Medicine Committee Participation

Activity Informed Budgeting Faculty Committee	2021-Present
Steering Committee Drafting Formation of Coll. Veterinary Medicine	2018-2019
Curriculum Committee	2020-Present
Admissions Committee	2020-2021

#### University of Arizona College of Pharmacy Committee Participation

Curriculum Committee	2018-Present
Assessment Committee	2018-Present
Search Committee, Asst. Dean for Finance and Administration	2017
College Executive Committee	2013-2017
Teaching & Technology Committee	2010-2015

### **Editorial Activities**

Editorial Board: Frontiers in Genetics	2011-Present
Invited Reviewer: CITI Human Subjects Training Course: Genetics	2015
Editorial Board: "The Taiwan Crisis: A Showcase of the Global Arsenic Problem". Taylor and Francis, London. ISBN 978-0-415-58510-1	2010
Editorial Board: "Arsenic in the Groundwaters of Latin America". Taylor and Francis, London. ISBN 978-0-415-40771-7	2009

#### **Journal Reviewer:**

Toxicological Sciences	Tox. Appl. Pharmacology	J. Allergy Clin. Immunol.
Genome Biology	Environmental Health Perspectives	Genes and Immunity
Am. J. Resp. Crit. Care Med.	Annals of Human Genetics	Neurobiology of Aging
Water Research	Toxicology	Chem. Research in Toxicol.
PlosOne	Frontiers in Genetics	Am. J. Human Genetics

### **Educational Activities**

#### Graduate Dissertation/Thesis Direction

Eva Amouzougan, Ph.D.	2015-2020
Anoop Hunjan, M.Sc., Molecular and Cellular Biology	2015-2017
Scott Malm, Ph.D., Pharmacology and Toxicology Currently employed at CTEH, an emergency toxicology spill first-response service.	2014-2018
Fei Zhao, Ph.D., Pharmacology and Toxicology Currently Post-Doctoral Research, NIH/NIEHS	2007-2012
Alicia Bolt, Ph.D. Pharmacology and Toxicology (Currently Assistant Professor, U. New Mexico)	2007-2012

Paulina Gomez-Rubio, Ph.D., Pharmacology and Toxicology (Currently Post-Doctoral Researcher, Genetic and Molecular Epidemiology, CNIO, Spain)	2007-2012
David Thompson, M.Sc. Applied Biosciences/Bioinformatics	2004-2006

Graduate Dissertation/Thesis Committee Mentorship (UA, unless specified)

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Jason Drees, Ph.D. Committee, Pharmacology and Toxicology  
Evisabel Craig, Ph.D. Committee, Pharmacology and Toxicology  
Shawn Wnek, Ph.D. Committee, Pharmacology and Toxicology  
Pablo Soria, Ph.D. Committee, Pharmacology and Toxicology  
April Lake, Ph.D. Committee, Pharmacology and Toxicology  
Parvathi Sinha, Ph.D. Committee, Pharmacology and Toxicology  
James Sollome, Ph.D. Committee, Pharmacology and Toxicology  
Paul Severson, Ph.D. Committee, Pharmacology and Toxicology  
Shuxi Qiao, Ph.D. Committee, Pharmacology and Toxicology  
Mark Canet, Ph.D. Committee, Pharmacology and Toxicology  
Marlene Dermody, Ph.D. Committee, Environmental Sciences (College of Public Health)  
Jason Rickert, M.Sc., College of Nursing  
Sherly Wang, Ph.D. Committee, Pharmacology and Toxicology  
Jessica Sapiro, Ph.D. Committee, Pharmacology and Toxicology  
Anikka Dzierlenga, Ph.D. Committee, Pharmacology and Toxicology  
Justyna Gozdz, Ph.D. Committee, Cell and Molecular Medicine  
Peyman Aryanpur Ph.D. Committee, Cell and Molecular Medicine  
Eric Ditzel, Ph.D. Committee, Pharmacology and Toxicology  
Jose Munoz-Rodriguez, Ph.D. Committee, Pharmacology and Toxicology  
James Hinton, M.Sc, PSM  
Anthony Luz, Ph.D Committee, Pharmacology/Toxicology, Duke University  
Elgin Avila, Ph.D. Committee, Environmental Sciences (College of Public Health)  
Erica Toth, Ph.D. Committee, Pharmacology and Toxicology  
Xiaoyu Fan, Ph.D. Committee, Pharmacology and Toxicology  
Elisa Montserrat, , Ph.D. Committee, Cancer Biology GIDP  
Yoshira Ornelas, Ph.D. Committee, Environmental Sciences (College of Public Health)  
Hui Li, Ph.D. Committee, Pharmacology and Toxicology

Additional Mentorship (UA, unless specified)

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Ricky Lira (UA Undergraduate Student Worker)	2018-2020
Ernesto Uriel Cantu Soto (Graduate Student from ITSON, Sonora, Mexico)	Summer-2006
Kari Debink (Tucson Middle School Teacher)	Summer-2007
Daniel Sotelo (KEYS High School Summer Intern)	2008
Crystal Espinoza (Minority Health Disparities Summer Research Internship)	2008
Heather Bisbee (KEYS High School Summer Intern)	2009
Angela Wu (UA Undergraduate Lab Internship)	2009-2010
Selene Huerta International grad. student from Guadalajara, Mexico; summer internship	2010
Lochan Shah (KEYS High School Summer Intern)	2010
Lisa Heisterberg (UA Undergraduate Lab Volunteer)	2011-2011
Nimish Sheth (UA UBRP Student)	2011
Ana Jimena Pacheco-Gutierrez (Undergraduate Student from Guanajuato)	Summer 2011
Connor Beeks (UA Undergraduate Student Worker)	2012-2013
Farzana Abdulla (KEYS High School Summer Intern)	2012
Ajay Raikhelkar (UA Undergraduate Student Worker)	2014
Nisha Puri (UA Undergraduate Student Volunteer)	2014
Alyssa Hinchman (Pharm.D. student, Lab Student Worker)	2013-2015
Jared Tate (Pharm.D. student, Lab Volunteer)	2014-2015
Monique Mendez (UA Undergraduate Student Worker)	2016-2017

### Training Grant Memberships

T32 program in Toxicology and Toxicogenomics (NIH/NIEHS)  
IGERT Program in Comparative Genomics (NSF)  
T32 Program in Human Genes and the Environment (NIH/NIEHS)

### Academic Program Administrative Experience

Co-Director, Undergraduate Degree in Pharmaceutical Sciences	2018-2019
Director, Undergraduate Degree in Pharmaceutical Sciences	2017-2018
Leader, Curriculum Standard, College of Pharmacy Re-accreditation process	2015-2016
Pharmacology and Toxicology Graduate Program Track Director	2015-2016
Pharmacology and Toxicology Graduate Program Executive Committee	2008-2014

### Undergraduate/Graduate/Professional Teaching

VETM 804A,B,C,D Clinical Logic in Doctoring (Course Director)	2020-Present
VETM 808: Vital Circuitry, Developing Pharmacology sessions	2020-Present
VETM 807: Musculoskeletal System, Developing Pharmacology sessions	2020-Present
VETM 804: Clinical Logic in Doctoring (Designed, Coordinated)	2020-Present
VETM 801: Foundations, Designed and led sessions in Pharmacology, Genetics.	2020-Present
VETM 806: Self Defense (Consulted on content design in Pharmacology)	2020-Present
VETM 803A: Clinical Skills, Facilitated sessions, Performed OSCE assmt.	2020-Present
PCOL 395: The Chemical Environment (Designed, Solo taught)	2016-2019
PCOL 440: Rigor and Reproducibility in Research (Designed/Coordinated)	2018-2019
ACBS 467/567: Computation in Biomedicine (Instructor)	2017-2019
PCOL 550: Drug Disposition and Metabolism (Instructor)	2014-2019
PCOL 602a: Systems Toxicology (Instructor)	2013-2019
PCOL 887: Individualized Medicine (Designed, Coordinated, Instructor)	2014-2019
NURS 472a/572a: Nursing Pharmacology (Designed, Solo Instructor)	2016-2018
CBA 595: Problems in the Biology of Complex Diseases (Instructor)	2012-2015
PCOL 601: Genomics and Proteomics (Instructor)	2006-2014
PCOL 631/831: Pharmacogenetics/Pharmacogenomics (Designed, Coordinated)	2008-2010
PCOL 835: Introductory Immunology (Instructor)	2006-2010
EPI 677: Advanced Epidemiology (Instructor)	2006-2009

### Course Development Highlights

I have successfully developed courses at the undergraduate, graduate, and professional level, spanning the spectrum of 100% in-person, to hybrid, to fully online with remotely internet-proctored exams (using combined D2L, Zoom, ExamSoft, and Examity technologies). For the last 5 years my courses have included substantial components of intentionally structured active learning. My philosophy in course development has been greatly influenced by publications based in the science of learning (Small Teaching and Make it Stick, James Lang; Teach Students How to Learn, Saundra McGuire; How We Learn and Why It Happens, Benedict Carey; Collaborative Learning Techniques, Elizabeth Barkley).

At the UA College of Veterinary Medicine (CVM) I developed a new course in veterinary medical decision making, VETM804A-D (four semesters). This course is unique among human and veterinary medical education in its presentation of the cognitive elements of clinical reasoning to novice undergraduate medical students. The course is entirely active learning, within a Team-Based Learning Framework.

This year at CVM I have led the development of a multi-component Selectives Course, consisting of 3-week blocks designed to expose students to more diverse areas and depths of focus in veterinary medicine. In addition to leading that course I am developing my own selective in Advanced Pharmacology.

### Educational Program Development: Research Education/Training

*NIEHS Grant R25ES025494-05 EHS-TRUE*

*2015-Present*

I am the Program Director of a 5 year grant funded by NIH/NIEHS, EHS-TRUE (Environmental Health Science-Transformative Research Undergraduate Experience). EHS-TRUE is a program designed to offer research education and experience to undergraduates from STEM-underrepresented backgrounds with a focus on research in the impact of environmental chemical exposures on human health. I designed this program together with Professor Carol Bender. The program's elements are intended to increase self-efficacy in the trainees by providing research training in environmental health science laboratories at UA, along with coursework and experiences that provide safe environments for students to "try on" the idea of themselves as scientists. The program also provides free tutoring, GRE prep coursework, and training in the use of individual development plans.

**Educational Program Development: The B. Sc. in Pharmaceutical Sciences**

I led a team of UA faculty and staff from multiple colleges in the design of a new undergraduate major in pharmaceutical sciences. In addition to the design of coursework necessary to meet the academic demands of this degree, this involved soliciting input from potential employers and enlisting the support from faculty in other departments who could improve the program by teaching in its courses. Equally challenging were the successful negotiations with other academic units to pave the way for the program's approval through the gauntlet of university committees. In its second year the program now has a Co-Director, Dr. Rich Vaillancourt and an Academic Coordinator, Rebecca Field. Enrollment is about 125 current undergrad students, with over 400 accepted freshmen selecting its pre-major.

**Educational Program Development: The UA College of Veterinary Medicine**

In 2018 I was appointed to the search committee for the Dean of the College of Veterinary Medicine, and I was asked to join the steering committee for the initial design and development of the college. In that capacity I am participating in both the initial configuration of the college (org-chart, faculty composition, committee structure, physical facilities) as well as the curricular structure. More importantly, the steering committee and Dean Julie Funk are composing the application materials for college accreditation.

In 2019 I directed the detailed assembly of the curriculum drafted by the steering committee into a presentation to the AVMA COE accreditation site visit team. Similarly, I covered the Research, Assessment, and Faculty Standards within the accreditation process.

**Teaching Improvement**

Teaching and Assessing Critical Thinking Course, Dalhousie University COMed.	2020
Organized Team Based Learning workshop at UA	2019
Team Based Learning Workshop: Phoenix	2019
Faculty Study Group: National Academy of Science: "How People Learn-II"	2019
Led Introduction of OIA Personnel Instructional Coaching in Coll. Pharmacy	2018-Present
UA Faculty Learning Community	2017-Present

**Honors and Awards**

**University of Arizona College of Pharmacy**

Graduate Programs Educator of the Year	2019
Rho Chi Academic Honor Society (Faculty Elected by Pharm. D. Students)	2017-Present

**Grants and Contract Awards**

**Source:** NIH/NIEHS R01 ES028668      **Dates:** 2019-2024      **Total Direct:** \$1,640,525  
**Title:** Renal Disposition in NASH  
**Role:** Technical Expert in Human Genetics (10% Effort)

**Description:** This project will explore the impact of non-alcoholic steato-hepatitis (NASH) on renal drug disposition and excretion of probe drugs in human volunteers with, and without, biopsy-verified NASH.

**Source:** NIH/NIEHS R25 ES025494      **Dates:** 2015-2020      **Total Direct:** \$540,000

**Title:** EHS-TRUE: Environmental Health Sciences-Transformative Undergraduate Research Experience

**Role:** Program Director

**Description:** This is a training grant designed to provide two years of financial support to undergraduates who are from backgrounds under-represented in the environmental health sciences. Students will be matched to laboratories researching environmental health-relevant questions, and will be provided funding for paid laboratory work, travel to scientific meetings. Students will also participate in an exciting program of peer-oriented science colloquia and workshops.

**Source:** NIH/NIEHS P42 ES004940      **Dates:** 2015-2017      **Total Direct:** \$102,333

**Title:** Arsenic-Induced Pseudohypoxia Drives Malignant Transformation in Lung Cancer

**Role:** Principal Investigator

The goal of this project is to understand the role of the arsenic-induced hypoxic response, paradoxically in the presence of abundant oxygen, in the acquisition of malignancy in lung epithelial cells.

**Source:** NIH/NIEHS R03 ES023921      **Dates:** 2014-2016      **Total Direct:** \$100,000

**Title:** Arsenic carcinogenicity: Metabolic disruption leads to loss of PTEN function.

**Role:** Principal Investigator

**Description:** Based on the fact that elevated NADH concentration is inhibitory to the function of the tumor suppressor protein, PTEN, the goal of this project is to understand the relationship between altered mitochondrial function, disrupted NAD<sup>+</sup>/NADH ratio, and the loss of PTEN function during arsenic-induced malignant transformation.

**Source:** NIEHS-Southwest      **Dates:** 2013-2014      **Total Direct:** \$80,000

Environmental Health Sciences Center

**Title:** Induced pluripotent stem cells (iPSC) as a model of human genetic determinants of variable xenobiotic metabolism

**Role:** Principal Investigator

**Description:** This project will utilize induced pluripotent stem cells (iPSC) from genetically defined donors to establish their utility as in vitro models of pharmacogenomic variability in human populations. iPSC will be differentiated to hepatocytes, exposed to probe drugs, and monitored by UPLC-mass spec for genetically-associated variable drug metabolism.

**Source:** NIH/NIA AG027979      **Dates:** 2007-2012      **Total Direct:** \$3,613,327

**Title:** Biomarkers and Genetic Factors Related to Sarcopenia in Women

**Role:** Co-Investigator (8% effort)

**Description:** This study utilized blood and DNA samples, together with body composition measurements from subjects enrolled in the Women's Health Initiative to identify genetic and environmental factors associated with a chronic catabolic state that may contribute to muscle wasting (sarcopenia).

**Source:** Southwest Environmental      **Dates:** 2007-2008      **Total Direct:** \$40,000

Health Sciences Center Pilot Project

**Title:** In Vitro Modeling of Human Populations to Develop Robust Arsenic Exposure Biomarkers

**Role:** Principal Investigator

**Description:** This project utilized lymphoblastoid cell lines derived from a population of healthy donors of known ancestry, exposed in vitro to inorganic arsenic, to characterize arsenic-modulated gene expression patterns at varying levels of arsenite resistance. This simultaneously allows identification of variation-insensitive biomarkers of arsenic exposure, as well as providing robust information regarding biological pathways perturbed by environmentally relevant arsenic exposures.

**Source:** NIH/NCI CA127989                      **Dates:** 2006-2010                      **Total Direct:** \$645,964  
**Title:** Epigenetic remodeling by environmental arsenicals  
**Role:** Co-Investigator (10% effort)  
**Description:** This project characterized the epigenetic landscape of exfoliated bladder epithelial cells in two human populations environmentally exposed to arsenic at low and at comparatively high levels. My participation in this grant involved the use of a system I developed to automate the analysis of bisulfite sequencing data, as well as the human study design, and the identification of Mexican collaborators with access to arsenic-exposed human populations.

**Source:** US EPA X96948701                      **Dates:** 2005-2009                      **Total Direct:** \$320,733  
**Title:** Component Project: Environmental Factors and Genetic Susceptibility Associated with Breast Cancer in Mexico  
**Role:** Principal Investigator of U.S. component (U.S. - Mexico Binational Project) (10% effort)  
**Description:** This epidemiological project, conducted with Dr. Lizbeth Lopez-Carillo at the National Public Health Institute in Mexico, tested the hypothesis that there will be an interaction between arsenic exposure, determinants of variable arsenic metabolism, and folate intake, upon the risk of breast cancer in Mexican women.

**Source:** NIH/NIEHS ES004940                      **Dates:** 2005-2010                      **Total Direct:** \$1,292,945  
**Title:** Superfund Project 5: Individual variation in human arsenic biotransformation  
**Role:** Project 5 Co-Principal Investigator (20% effort)  
**Description:** This epidemiological project was aimed at identifying the determinants of variability in the metabolism of arsenic in environmentally-exposed populations, with particular focus on DNA variants as drivers of metabolism differences between people.

**Source:** NIH/NHLBI HL071123                      **Dates:** 2004-2007                      **Total Direct:** \$140,000  
**Title:** Genetic variants in circadian rhythm sleep disorders  
**Role:** Principal Investigator [Sub-Contract to UCSD (20% effort)]  
**Description:** This project involved my lab performing high throughput resequencing of candidate genes for delayed phase sleep syndrome, cataloging the genetic variants, and then testing those variants in a phenotyped case/control clinical population.

**Source:** NIH/NHLBI HL67672                      **Dates:** 2001-2006                      **Total Direct:** \$600,000  
**Title:** SCOR in Cellular and Molecular Mechanisms of Asthma  
**Role:** Co-Investigator, Director of Molecular Genetics Core Facility (PI: F. Martinez, MD)  
**Description:** This project involved my lab performing resequencing and genotyping in human samples to identify and test candidate genes for asthma causation and protection.

**Source:** NIH/NHLBI HL66806                      **Dates:** 2000-2004                      **Total Direct:** \$2,160,000  
**Title:** Analytical Genomics Center: Innate Immunity PGA  
**Role:** Principal Investigator  
**Description:** In this project my laboratory completely resequenced and cataloged genetic variation in 100 candidate innate-immunity genes in a population of 50 human subjects.

**Source:** NIH/NHLBI HL66801                      **Dates:** 2000-2004                      **Total Direct:** \$120,000  
**Title:** Bioinformatics Center: Innate Immunity PGA  
**Role:** Principal Investigator  
**Description:** The Bioinformatic Center provided computational and software support for the large-scale resequencing effort in the Analytical Genomics Center of this project.

**Source:** NIH/NHLBI 66447                      **Dates:** 2000-2005                      **Total Direct:** \$1,375,000  
**Title:** Chromosome 5q gene variants and asthma-related traits  
**Role:** Co-I (PI, F. Martinez)  
**Description:** My lab provided genotyping/resequencing support for this fine mapping project.



## Publications

Grace C, Larriva MM, Steiner HE, Marupuru S, Campbell PJ, Patterson H, Cropp CD, Quinn D, Klimecki W, Nix DE, Warholak T, Karnes JH. Efficacy of personal pharmacogenomic testing as an educational tool in the pharmacy curriculum: A nonblinded, randomized controlled trial. *Clin Transl Sci.* 2021 Nov;14(6):2532-2543. doi: 10.1111/cts.13121. Epub 2021 Aug 25. PMID: 34431601; PMCID: PMC8604226.

Alkhatib N, Sweitzer NK, Lee CS, Erstad B, Slack M, Gharaibeh M, Karnes J, Klimecki W, Ramos K, Abraham I. Ex Ante Economic Evaluation of Arg389 Genetically Targeted Treatment with Bucindolol versus Empirical Treatment with Carvedilol in NYHA III/IV Heart Failure. *Am J Cardiovasc Drugs.* 2021 Mar;21(2):205-217. doi: 10.1007/s40256-020-00425-x. PMID: 32710439.

Amouzougan EA, Lira R, Klimecki WT. Chronic exposure to arsenite enhances influenza virus infection in cultured cells. *J. Appl. Toxicol.*, 2020: 458-469

Hogan DE, Tian F, Malm SW, Kegel LL, Szabo LZ, Hunjan AS, Pemberton JE, Klimecki WT, Polt R, Maier RM. Biodegradability and Toxicity of Cellobiosides and Melibiosides. *J. Surfact. Deterg.*, 2020: 715-724.

Hogan DE, Tian F, Malm SW, Olivares C, Pacheco RP, Simonich MT, Hunjan AP, Tanguay RL, Klimecki WT, Polt R, Pemberton JE, Curry JW, Maier RM. Biodegradability and toxicity of monorhamnolipid biosurfactant diastereomers. *J. Hazardous Materials*, 2018: 364: 600-607

Malm SW, Amouzougan EA, Klimecki WT. Fetal bovine serum induces sustained, but reversible, epithelial-mesenchymal transition in the BEAS-2B cell line. *Toxicol In Vitro.* 2018 Aug;50:383-390. doi: 10.1016/j.tiv.2018.04.008. Epub 2018 Apr 17. PubMed PMID: 29678786; PubMed Central PMCID: PMC6084805.

Ramirez-Andreotta MD, Lothrop N, Wilkinson ST, Root RA, Artiola JF, Klimecki W, Loh M. Analyzing Patterns of Community Interest at a Legacy Mining Waste Site to Assess and Inform Environmental Health Literacy Efforts. *J Environ Stud Sci.* 2016 Sep;6(3):543-555

Beamer PI, Klimecki WT, Loh M, Van Horne YO, Sugeng AJ, Lothrop N, Billheimer D, Guerra S, Lantz RC, Canales RA, Martinez FD. Association of Children's Urinary CC16 Levels with Arsenic Concentrations in Multiple Environmental Media. *Int J Environ Res Public Health.* 2016 May 23;13(5)

Klimentidis YC, Bea JW, Thompson P, Klimecki WT, Hu C, Wu G, Nicholas S, Ryckman KK, Chen Z. Genetic Variant in ACVR2B Is Associated with Lean Mass. *Med Sci Sports Exerc.* 2016 Feb 5. [Epub ahead of print] PubMed PMID: 26848890.

Loh MM, Sugeng A, Lothrop N, Klimecki W, Cox M, Wilkinson ST, Lu Z, Beamer PI. Multimedia exposures to arsenic and lead for children near an inactive mine tailings and smelter site. *Environ Res.* 2016 Apr;146:331-9. doi: 10.1016/j.envres.2015.12.011. Epub 2016 Jan 21. PubMed PMID: 26803211.

Klionsky DJ, Abdelmohsen K, Abe A, Abedin MJ, Abeliovich H, Acevedo Arozena A, Adachi H, Adams CM, Adams PD, Adeli K, Adihetty PJ, Adler SG, Agam G, Agarwal R, Aghi MK,.....Klimecki WT...(1035 authors), Zughayer SM. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy.* 2016 Jan 2;12(1):1-222. PubMed PMID: 26799652..

Lothrop N, Wilkinson ST, Verhougstraete M, Sugeng A, Loh MM, Klimecki W, Beamer PI. Home Water Treatment Habits and Effectiveness in a Rural Arizona Community. *Water (Basel)* 2015; 7(3): 1217-1231.

Zhao F, Malm SW, Hinchman AN, Li H, Beeks CG, Klimecki WT. Arsenite-induced pseudo- hypoxia results in loss of anchorage-dependent growth in BEAS-2B pulmonary epithelial cells. *PlosOne* 2014 Dec 16;9(12):e114549. doi: 10.1371/journal.pone.0114549. eCollection 2014. PMID: 25513814

Zhao F, Klimecki WT. Culture conditions profoundly impact phenotype in BEAS-2B, a human pulmonary epithelial model. *J. Appl. Toxicol.* 2014 Dec 19. doi: 10.1002/jat.3094. [Epub ahead of print] PMID:25524072

Kripke DF, Klimecki WT, Nievergelt CM, Rex KM, Murray SS, Shekhtman T, Tranah GJ, Loving RT, Lee HJ, Rhee MK, Shadan FF, Poceta JS, Jamil SM, Kline LE, Kelsoe JR. Circadian polymorphisms in night owls, bipolars, and in non-24-sleep cycles. *Psychiatry Investig.* 2014 Oct;11(4):345-62. doi: 10.4306/pi.2014.11.4.345. Epub 2014 Oct 20. PMID: 25395965

Beamer PI, Sugeng AJ, Kelly MD, Lothrop N, Klimecki W, Wilkinson ST, Loh M. Use of dust fall filters as passive samplers for metal concentrations in air for communities near contaminated mine tailings. *Environ Sci Process Impacts.* 2014 Jan 27. [Epub ahead of print] PMID: 24469149

Lake AD, Novak P, Hardwick RN, Flores-Keown B, Zhao F, Klimecki WT, Cherrington NJ: The Adaptive Endoplasmic Reticulum Stress Response to Lipotoxicity in Progressive Human Nonalcoholic Fatty Liver Disease. *Toxicological sciences : an official journal of the Society of Toxicology* 2013.

Zhao F, Severson P, Pacheco S, Futscher BW, Klimecki WT: Arsenic exposure induces the Warburg effect in cultured human cells. *Toxicology and applied pharmacology* 2013, 271:72-7.  
Diaz-Villasenor A, Cruz L, Cebrian A, Hernandez-Ramirez RU, Hiriart M, Garcia-Vargas G, Bassol S, Sordo M, Gandolfi AJ, Klimecki WT, Lopez-Carillo L, Cebrian ME, Ostrosky-Wegman P: Arsenic exposure and calpain-10 polymorphisms impair the function of pancreatic beta-cells in humans: a pilot study of risk factors for T2DM. *PloS one* 2013, 8:e51642.

Klionsky DJ, Abdalla FC, Abeliovich H, Abraham RT, Acevedo-Arozena A, Adeli K, Agholme L, et al. Guidelines for the use and interpretation of assays for monitoring autophagy. *Autophagy* 2012, 8:445-544.

Bolt AM, Zhao F, Pacheco S, Klimecki WT: Arsenite-induced autophagy is associated with proteotoxicity in human lymphoblastoid cells. *Toxicology and applied pharmacology* 2012, 264:255-61.

Meza-Montenegro MM, Gandolfi AJ, Santana-Alcantar ME, Klimecki WT, Aguilar-Apodaca MG, Del Rio-Salas R, De la OVM, Gomez-Alvarez A, Mendivil-Quijada H, Valencia M, Meza-Figueroa D: Metals in residential soils and cumulative risk assessment in Yaqui and Mayo agricultural valleys, northern Mexico. *The Science of the total environment* 2012, 433:472-81.

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## Invited Oral Presentations

American Chemical Society Annual Meeting: Invited talk scheduled for August Meeting, Philadelphia, PA. Symposium Topic: Chemical Toxicology in the Study of Health Disparities among Ethnic/Racial Groups (August 2016)

Skaggs Symposium. Cellular Energy Metabolism: An old xenobiotic target in a new translational light. University of Montana, Missoula, Montana, (August, 2014)

Kansas University Medical Center. Arsenic and malignant transformation: Translational findings from vintage biochemistry. Kansas City, Kansas. (March, 2014)

Phoenix Children's Hospital Grand Rounds. Drugs, Genes, and Environment: A conspiracy in unexplained variability. Phoenix, Arizona (August, 2013)

Annual Meeting of the International Society for the Study of Xenobiotics. Life or death decisions: Autophagy in Toxicology. Atlanta, Georgia. (2011)

Annual Meeting of the Mountain West Society of Toxicology. Arsenic and Autophagy: Lifeboat or Torpedo? Breckenridge, Colorado. (September, 2011)

Universidad Autonoma de Coahuila, Facultad de Medicina (Autonomous University of Coahuila, College of Medicine), CONACYT-supported workshop.. Using individual variability to dissect autophagy in lymphoblastoid cell lines. Torreon, Coahuila, Mexico. (2011)

Annual Meeting of the Society of Toxicology. (Organized symposium focusing on autophagy as a xenobiotic response) Arsenic, autophagy, and immunotoxicity. Washington, D.C. (2011)

Arsenic 2010: Third International Congress on Arsenic in the Environment. Autophagy is a biological target of arsenic. Tainan City, Taiwan. (2010)

Annual Meeting of the Mountain West Society of Toxicology. Arsenite-induced autophagy in the immune system. Tucson, Arizona. (2010)

Instituto Tecnológico de Sonora. Human health effects resulting from arsenic exposure. U.S. - Mexico Binational Center workshop series. Cd. Obregon, Sonora, Mexico. (2008)

Annual Meeting of the American College of Toxicology. Models of human variation in arsenic environmental toxicology. Tucson, Arizona. (2008)

Annual Meeting of the Society of Toxicology. Genetics: intrinsic environment and extrinsic environment influence human variability of arsenic metabolism. Baltimore, Maryland (2008)

U.S. - Mexico Binational Center Inaugural Conference. Genetic studies in international collaborations: Is DNA a medical text or a history book? Tucson, Arizona (2007)

Annual Meeting of the Society of Toxicology. Human genetic polymorphisms: Biomarkers of variability in arsenic metabolism. Charlotte, North Carolina (2007)

Universidad Autonoma de San Luis Potosi (Autonomous University of San Luis Potosi). Genetic association studies. U.S. - Mexico Binational Center workshop series. Torreon, Coahuila, Mexico. (2007)

Annual Meeting of the International Society of Environmental Epidemiology. Human Genetics of Arsenic Metabolism. Mexico City, Mexico. (2007)

Annual Meeting of the International Society of Environmental Epidemiology. I proposed and organized a workshop, "Genomic Epidemiology" which I presented, together with Dr. George Watts from the Arizona Cancer Center and Dr. Ana Burgete from INSP (National Public Health Institute of Mexico). Mexico City, Mexico. (2007)

U.S. EPA Workshop on Research and Risk Assessment for Arsenic. Genetic susceptibility to arsenic. Shepherdstown, West Virginia. (2006)

Instituto Nacional de Salud Publica (The National Institute of Public Health). Human genetics and 'Gene by Environment' effects: Should we liberalize the definition of environment? Cuernavaca, Morelos, Mexico. (2006)

University of Texas El Paso, Department of Biological Sciences Seminar Series. Gene by environment interactions in human genetic association studies. El Paso, Texas. (2006)

Universidad Autonoma de Coahuila, Facultad de Medicina. (Autonomous University of Coahuila, College of Medicine). Genetic epidemiology in admixed populations. U.S. - Mexico Binational Center workshop series. Torreon, Coahuila, Mexico. (2006)