

Southwest Center for Occupational and Environmental Health
A NIOSH Education and Research Center
July 1, 2011- February 2023

🚩 July 2022 – June 2023

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS

Rahimi, E., Shekarian, Y., Shekarian, N., & **Roghanchi, P.** (2023). Investigation of respirable coal mine dust (RCMD) and respirable crystalline silica (RCS) in the US underground and surface coal mines. *Scientific Reports*, 13(1), 1767.

Salinas, V., Das, M., Jacquez, Q., Camacho, A., Zychowski, K., Hovingh, M., ... & **Roghanchi, P.** (2022). Characterization and Toxicity Analysis of Lab-Created Respirable Coal Mine Dust from the Appalachians and Rocky Mountains Regions. *Minerals*, 12(7), 898.

Jetelina KK, **Molsberry RJ**, Malthaner LQ, Beauchamp AM, Cannell MB, Hall T, Fowler E, Anderson L. Acceptability of a real-time notification of stress and access to self-help therapies among law enforcement officers. *BMC Public Health* 22, 32 (2022). <https://doi.org/10.1186/s12889-021-12423-y>

PRESENTATIONS

Vanegas A, Medina A, **Roghanchi P**, Comparison of Respirable Coal and Silica Dust Monitoring Systems for Underground Coal Mining Applications, Accepted in 2023 SME Annual Conference, Denver, CO, Feb. March 1, 2023.

Oral PRESENTATIONS. 2. Acevedo M, **Roghanchi P**, Computational Risk Analysis of Underground Coal Mines: Modeling Risk Using CDC Employment Demographics Accepted in 2023 SME Annual Conference, Denver, CO, Feb 2-March 1, 2023. Oral PRESENTATIONS.

PROPOSALS

Roghanchi, P Integration of RCMD and RCS Physicochemistry and Toxicity Outcomes in an Occupational Risk Assessment Model, Funded by NIOSH, 09/2021 - 09/2023, Cost: \$401,000, Role: PI

Roghanchi, P Investigation of respirable mine dust and crystalline silica dust characteristics and toxicity in metal/nonmetal mines, Funded by NIOSH (Contract # 75D30122C14685), 09/2022 – 09/2024, Cost: \$290,000, Role Co-PI (share: \$160k)

🚩 July 2021- June 2022

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS

Oyer-Peterson K, Gimeno Ruiz de Porras D, Han I, Delclos GL, Brooks EG, Afshar M, Whitworth KW. A pilot study of total personal exposure to volatile organic compounds among Hispanic female domestic cleaners. *J Occup Environ Hyg*. 2022 Jan 28;1-11. doi: 10.1080/15459624.2021.2000615. PMID: 34731075

Jetelina KK, **Molsberry RJ**, Malthaner LQ, Beauchamp AM, Cannell MB, Hall T, Fowler E, Anderson L. Acceptability of a real-time notification of stress and access to self-help therapies among law enforcement officers. *BMC Public Health* 22, 32 (2022). <https://doi.org/10.1186/s12889-021-12423-y>

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PEER REVIEW

Cheng-Yen Chang, Ran You, Dominique Armstrong, Ashwini Bandi, Yi-Ting Cheng, Philip M Burkhardt, Luis Becerra-Dominguez, Mathew C Madison, Hui-Ying Tung, Zhimin Zeng, Yifan Wu, Lizhen Song, Patricia E Phillips, Paul Porter, John M Knight, Nagireddy Putluri, Xiaoyi Yuan, Daniela C Marcano, James M Tour, Andre Catic, Laure Maneix, Bryan M Burt, Hyun-Sung Lee, David B Corry & Farrah Kheradmand Chronic Exposure to Carbon Black Ultrafine Particles Reprograms Macrophage Metabolism and Accelerates Lung Cancer. *Nature Immunology* 2022

PRESENTATIONS

Kollock, R., Hale, WD., Thomas J., Sanders, G., Peveler, W. (2022). Performance on Physical Abilities Tests are Not Associated to Work-related Casualties. National Strength & Conditioning Association's Annual Conference, New Orleans, LA, July 6-8 2.

Hale, WD., Kollock, R., Sanders, G., Peveler, W. (2022). The Proportion of Casualties Suffered by Firefighters Across Physical Abilities Test Performance Levels. National Strength & Conditioning Association's Annual Conference, New Orleans, LA, July 6-8

PROPOSALS

R01: NIMHD The effectiveness and implementation of personal, health information technology service options to improve mental illness among law enforcement Proposed date: 06/01/2021-05/31/2025 Total Budget: \$2.286 million PI: Katelyn K. Jetelina (**Co-I: Rebecca Molsberry**) Status: Score 46; Resubmitting Feb 2022 Proposal

Internal Funds: Title: Human-Robot Collaborative Lifting Simulation and Experimental Validation Funding agency: Oklahoma State University Type of grant: Internal fund from Vice President for Research Project period: 01/2022-12/2022 Project budget: \$9,868 PI: **Yujiang Xian**

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 16, 2022

Kaysey Aguilar, PhD

Texas A&M Health Science Center

Musculoskeletal discomfort, physical activity, and workstation type: A follow-up study of traditional office worker after long-term remote work

Itamar Lerner, PhD

University of Texas Health Science Center at San Antonio

Investigating objective measures of habitual pre-trauma sleep as potential risk factors for future PTSD

Kimberly Prado, PhD

University of Texas at Austin

Texas Agricultural Workers Cardiovascular Disease Perceptions, risk, and Health Seeking Behavior

Luann Racher, MD

University of Arkansas for Medical Sciences

Occupational Exposure to Aerosolized Human Papilloma Virus: Assessing and Addressing Perceptions and Barriers to Vaccination of At-Risk Health Care Workers

Mark Wilson, PhD

Tulane University

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Physiological and psychological impacts of fabric face masks in the occupational environment: an assessment of real perceived heat stress, cardiovascular load, and work rate

July 1, 2020-June 2021

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS

Figueroa-Solis E, Delclos GL, Gimeno Ruiz de Porras, D. Pilot study determining the feasibility of implementing the Disadvantaged Populations eGFR Epidemiology Study (DEGREE) protocol, point-of-care field measurements and a new module on risk factors for chronic kidney disease of unknown origin in Hispanic outdoor workers. BMC Nephrology. Manuscript 2021

Footwear effect on postural strategy and stability during quiet standing, J. Hausselle, A.G. Haddox, J. Kasitz, **A. Azoug**, 2021, International Biomechanics, 8(1):63-74.

Mandal, S*, Mazumdar, N., Agnew, J. R., Grover, I. B., Song, G., Li, R. (2021). Using artificial neural network modeling to analyze the thermal protective and thermo-physiological comfort performance of textile fabrics used in oilfield-workers' clothing. *International Journal of Environmental Research and Public Health (IJERPH)*, 18(13), 6991.

Mandal, S*, Mazumdar, N., Agnew, J. R., Song, G., Li, R. (2021). Characterization and modeling of thermal protective and thermo-physiological comfort performance of polymeric textile materials – a review. *Materials*, 14 (9), 2397.

Oyer-Peterson K, Gimeno Ruiz de Porras D, Han I, Delclos GL, Brooks EG, Afshar M, Whitworth KW. A pilot study of total personal exposure to volatile organic compounds among Hispanic female domestic cleaners. J Occup Environ Hyg. 2022 Jan 28:1-11. doi: 10.1080/15459624.2021.2000615. PMID: 34731075.

PRESENTATIONS

Cheng-Yen Chang, Reprogramming Mitochondrial Metabolism of Antigen Presenting Cells Accelerates Lung Cancer Progression. Oral PRESENTATIONS. TBMM Student Seminar, zoom. **Date:** January 12, 2021

Mandal, S*, Mazumdar, N., Agnew J. R., Grover, I. B., Song, G., & Li, R. Thermal protective and thermo-physiological comfort performance of textile fabrics used in oilfield-workers' clothing – an artificial neural network modeling based analytical approach. *Global Summit and Expo on Materials Science and Nanoscience (GSEMSN)*, Lisbon, Portugal, September 06-08, 2021.

Arefeen, A., **Xiang, Y.**, Design human-robot collaborative lifting task using optimization. 2021 ASME International Design Engineering Technical Conference & Computers and Information in Engineering Conference, August 17-19, 2021, Virtual Online, Paper Number DETC2021-71818.

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 18, 2021

Sumit Mandal, PhD

Oklahoma State University

Using Artificial Neural Network Modeling to Analyze the Thermal Protective and Thermo-physiological Comfort Performance of Oil and Gas Industry Workers' Clothing

Pedram Roghanchi, PhD

New Mexico Institute of Mining and Technology

Respirable crystalline silica dust characteristics and sources in the mining industry

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Jennifer Scott, PhD
Louisiana State University
Health and wellbeing of H2 workers?

Mark Wilson, PhD
Tulane University
Physiological and psychological impacts of fabric face masks in the occupational environment: an assessment of real perceived heat stress, cardiovascular load, and work rate

Jianan Zhao, MA
Oklahoma State University
Mitigating infection risks to airborne SARS-CoV-2 laden aerosols in the patient rooms via in-table air sanitizers and smart ventilation control

Articles in Review

McDermott BP, Atkins WC, Backes RA, Towne R. Renal Stress Responses to a High Fructose Beverage During and Following Work in the Heat. American Journal of Physiology - Renal Physiology. 2021.

Figueroa-Solis E, Delclos GL, Gimeno Ruiz de Porras, D. Pilot study determining the feasibility of implementing the Disadvantaged Populations eGFR Epidemiology Study (DEGREE) protocol, point-of-care field measurements and a new module on risk factors for chronic kidney disease of unknown origin in Hispanic outdoor workers. BMC Nephrology. Manuscript 2021

PROPOSALS

R01: NIMHD The effectiveness and implementation of personal, health information technology service options to improve mental illness among law enforcement Proposed date: 06/01/2021-05/31/2025 Total Budget: \$2.286 million PI: Katelyn K. Jetelina (Co-I: **Rebecca Molsberry**) Status: Score 46; Resubmitting Feb 2022 Proposal

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🚩 July 1, 2019 – June 2020

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PRESENTATIONS

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 19, 2020

Alcauter, Bethany, Heat stress and Kidney Function Among Immigrant Construction Workers in Texas

Dalwadi, Shraddha, Defining Occupational Ionizing Radiation Exposure with Low Dose Rate Brachytherapy for Prostate Cancer

Harrison, Whitney, Houston Union Firefighters' Perception of Cancer Risk and other Health Outcomes

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Kollock, Roger, Fit-for-Duty: A Preliminary Analysis of the Predictive Value of the Physical Abilities Test (PAT) for Work-related Casualty

Molsberry, Rebecca, Leveraging Personal Technology to Intervene on Continuous Occupational Stress Among Law Enforcement Officers

Oyer-Peterson, Kelly, Exposure to Environmental and Occupational Health Hazards among Vulnerable Domestic Cleaners in San Antonio

Xiang, Yujiang, Model-based Ergonomic Design for Collaborative Lifting

🚩 July 21, 2018 – June 2019

PUBLICATIONS. PRESENTATIONS. FUNDED GRANT APPLICATIONS

PUBLICATIONS

Rodriguez A, Douphrate, D, Gimeno Ruiz de Porras D, Perez A, Hagevoort R, Nonnenmann M, Prot E. (2020) Bovine Tuberculosis case intervention using T.SPOT.TB assay to screen dairy workers in Bailey County, Texas. *Frontiers in Public Health*. 2018-2019 (under review)

Rodriguez A, Douphrate D, Gimeno Ruiz de Porras D, Perez A, Hagevoort R, Nonnenmann M, Cienega L. (2020) Association of category of cattle exposure with self-reported history of tuberculosis among dairy workers in Bailey County, Texas. *Workplace Health and Safety*. 2018-2019 (under review)

Rodriguez A, Douphrate D, Gimeno Ruiz de Porras D, Perez A, Hagevoort R, Nonnenmann M, Cienega L. (2020) Association of category of cattle exposure with tuberculosis knowledge among dairy workers in Bailey County, Texas. *Journal of Agromedicine*

PRESENTATIONS

McDermott, Brendon Backes et al. Poster: Renal stress and plasma volume in response to work in the heat following different hydration regimens central states ACSM (October, 2019)

Waymire et al. Poster: Physiological and perceptual stress compared between hydration beverages during and following work in the heat

McDermott, BP, virtual recorded symposium: Renal function and predisposing conditions for acute injuries in the ultra-endurance sport context ACSM annual meeting (virtual July, 2020)

Backes et al., virtual poster: Renal stress responses to work in the heat comparing different hydration regimens
Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 19, 2019

Azoug, Aurelie, Mitigating posture changes and risks of falling in standing pregnantworkers

Chang, Cheng-Yen, The role of nano-particulated carbon black in lung cancer development

Ibarra-Mejia, Gabriel, Exploring Molecular Changes and Inflammatory Cytokines

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McDermott, Brendon, The Effect of Sugar-Sweetened Electrolyte Beverages on Biomarkers of Hydration and Renal Stress During and Following Industrial Work in the Heat

Perkison, William Brett, The Hurricane Harvey Outreach Protection Plan Worker and Resident Survey

Rodriguez, Anabel, Tuberculosis Among Dairy Workers in Bailey County, Texas

🇺🇸 July 1, 2017 – June 30, 2018

PUBLICATIONS. PRESENTATIONS. FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Pickens, A.W., Robertson, L.D., Smith, M.L., Zheng, Q., Song, S. (2017). Headphone Evaluation for App-Based Automated Mobile Hearing Screening. *International Archive of Otorhinolaryngology*. DOI: 10.1055/s-0037-1607438.

PRESENTATIONS:

Fragoso S, Berumen B, Herrera A, Cavazos I, Gimeno D, Whitworth KW. A community-academic partnership to address occupational and environmental hazards among Hispanic women working as domestic cleaners. Invited talk given at the 2017 Institute for Integration of Medicine and Science (IIMS) Community Engagement Symposium; October 27, 2017, San Antonio, Texas.

🇺🇸 July 1, 2016 – June 30, 2017

PUBLICATIONS. PRESENTATIONS. FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Campos-Fumero A, Delclos GL, Douphrate DI, Felknor SA, Vargas-Prada S, Serra C, Coggon D, Gimeno Ruiz de Porras Dv (2016). Low back pain among office workers in three Spanish speaking-countries: findings from the CUPID study. *Injury Prevention*. 2016 Sep 1. pii: injuryprev-2016-042091. doi: 10.1136/injuryprev-2016-042091. [Epub ahead of print]

Conway SH, Pompeii LA, Roberts RE, Gimeno D, Follis J. Response to Letter to the Editor. *Journal of Occupational and Environmental Medicine*. 2016; 58(8): 319. [DOI: 10.1097/JOM.0000000000000818]

Conway SH, Pompeii LA, Roberts RE, Follis J, Gimeno D. Dose-Response Relation between Long Work Hours and Cardiovascular Disease: Findings from the Panel Study of Income Dynamics. *Journal of Occupational and Environmental Medicine*. 2016; 58(3): 221-226. [PMCID: PMC4782603; DOI: 10.1097/JOM.0000000000000654]

Conway SH, Pompeii LA, Gimeno D, Follis J, Roberts RE. Identifying a Work Hours Threshold for Predicting Risks of Adverse Health Outcomes. *American Journal of Epidemiology*. Accepted for publication: August 2016.

Han, L, Guo Y., Afshar, M., Stock, TH., Symanski, E. 2017. Comparison of trace elements in size-fractionated particles in two communities with contrasting socioeconomic status in Houston, TX. *Environmental Monitoring and Assessment*. 189(2):67. doi: 10.1007/s10661-017-5780-2.

Yoon, H., Kumar, N., Hur, P. (2017). Synergistic Effects on the Elderly People's Motor Control by Wearable

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Skin-Stretch Device Combined with Haptic Joystick. *Frontiers in Neurorobotics*. 11:31.doi: 10.3389/fnbot.2017.00031.

PRESENTATIONS:

Conway SH, Pompeii LA, Roberts RE, Follis J, Gimeno D. "Evidence of a Dose-Response Relationship between Work Hours and Cardiovascular Disease Risk," 25th International Epidemiology in Occupational Health (EPICOH) Conference, Barcelona, Spain, September 2016.

FUNDED GRANT APPLICATIONS:

PI: Zhang, Kai 09/01/2016 - 08/31/2018
R03 - NIOSH
Assessing Heat-Related Morbidity among Migrant and Seasonal Farmworkers
Status: Funded

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 2, 2017

Ahn, Joonhyun, Global Climate Change and Heat Stress in the United States

Gallagher, Kaitlin, Using Walking Breaks to Reduce the Biomechanical and Cardiometabolic Risk Factors Related to Prolonged Occupational Standing

Hur, Pilwon, Enhancing Balance of the Aged Workers Via Sensory Augmentation Toward the Reduction of Injuries Due to Falls

Jones, Raymond for Sirikul, Bovorn, Physiological Strain Incurred During Simulated Fishing Work in a Hot and Humid Environment

Mutambudzi, Miriam, Use of O*NET Job Characteristics to Prospectively Examine Job Strain as a Risk Factor for Incident Diabetes in Older US Workers

Patel, Jenil, Work Related Asthma Among Certified Nurse Aides in Texas

Whitworth, Kristina, Occupational and Environmental Hazards of Domestic Cleaners in San Antonio, TX

📅 July 1, 2015 – June 30, 2016

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Brooks, E. 2016. TRP channels and traffic-related environmental pollution-induced pulmonary disease. *Seminars in Immunopathology*. May 2016, Vol. 38 Issue 3, p331-338.

Haddas R, Yang J, and Sizer P. 2015. Effects of Gender and Recurrent Low Back Pain on Lifting Style. *Central Europe Journal of Sport Sciences and Medicine*. 11:15-28.

Haddas R, Lieberman IH and Yang J. 2016. Effects of Volitional Spine Stabilization on Lifting Task in Recurrent Low Back Pain Population. *Journal of Sport Rehabilitation* 2016 Jun 27. [Epub ahead of print]

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Khurshid SS, Siegel JA, Kinney KA. 2015. Indoor particulate reactive oxygen species concentrations. *Environmental Research.* 132:46-53.

Lim, H, Beasley, C.W., Whitehead, L.W., Emery, R.J., Agopian, A.J., Langlois, P.H., Waller, D.K. and the National Birth Defects Prevention Study, Maternal Exposure to Radiographic Exams and Major Structural Birth Defects, Birth Defects Research (Part A) Clinical Molecular Teratology 2016 Mar 22. doi:10.1002/bdra.23496.

Liu, Y., Roy-Engel, A.M., Baddoo, M., Flemington, E.K, Wang, G., and Wang, H. (2015) The impact of oil spill to lung health - insights from an RNA-seq study of human airway epithelial cells. *Gene.* 2015 Dec 9. pii: S0378-1119(15)01487-0. doi: 10.1016/j.gene.2015.12.016. [Epub ahead of print]

Lee, L.J., Symanski E., Lupo, P.J., Tinker S.C., Razzaghi, H., Pompeii, L.A., Hoyt, A.T., Canfield, M.A., Chan, W., and the National Birth Defects Prevention Study. (2016) Data linkage between the national birth defects prevention study and the occupational information network (O*NET) to assess workplace physical activity, sedentary behaviors, and emotional stressors during pregnancy. *American Journal of Industrial Medicine,* 59(2): 137-149. doi: 10.1002/ajim.22548. PMID: 26681357

Mehta RK. 2015. Impacts of obesity and stress on neuromuscular fatigue development and associated heart rate variability. *International Journal of Obesity.* 39(2): 208-13.

Pickens, A.W., Dakuri, L.V., Zhao, H, Mehta, R., Song, S. (2015) Pilot study validation of a mobile hearing screening application in the general population. *Journal of Occupational and Environmental Health.* Submitted Fall 2015 (In Review)

Thompson, B.J., Stock, M.S., †Banuelas, V.K., and †Akalonu, C. The impact of a rigorous multiple work shift schedule and day vs night shift work on reaction time and balance performance in female nurses: A repeated measures study. *Journal of Occupational and Environmental Medicine (In press)*

Thompson, B.J., Banuelas, V.K., and Stock, M.S. Lower body strength-based fatigue responses of a typically demanding, multi-shift work period in female nurses. Presented at the American College of Sports Medicine national conference, Boston, MA. June 2, 2016. *Med Sci Sport Exerc,* 48 (5 Suppl.)

Yuan L. 2015. Reducing ergonomic injuries for librarians using a participatory approach. *International Journal of Industrial Ergonomics.* 47: 93-103.

Zhang, K., Arauz, R.F., Chen, T.H., Cooper, S.P., Heat Effects Among Migrant and Seasonal Farmworkers: a Case Study in Colorado. *Occupational Environmental Medicine,* 2016;0:1–5. doi:10.1136/oemed-2015-103332.

PRESENTATIONS:

Thompson, B.J., Banuelas, V.K., Akalonu, C., Moore, A., and Stock, M.S. 2015. Does a rigorous multi-shift work schedule impact balance, response time, and strength-related performances in female healthcare workers? Presented at the National Strength and Conditioning Association National Conference, Orlando, FL. July 2015.

Conway SH, Cayuela A, Pompeii LA, Delclos G, Follis J, Ronda E. 2015. Asociación entre jornadas laborales largas y mala salud percibida en trabajadores inmigrantes latinoamericanos y nativos en los Estados Unidos y España (“Association between long work hours and poor self-reported general health among Latin American immigrant and native workers in the US and Spain”), 33rd Conference of the Society for Spanish Epidemiology/ 12th Conference of the Portuguese Association of Epidemiology, Santiago de Compostela, Spain, September 2015.

Queen, A., Jayadas, A., Petrova, A. and Peksoz, S. 2016. Police Officer Duties: Challenges & Opportunities for Interventions. Professional Development Event, Oklahoma State University, Feb 2016.

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Wang Q. 2015. Evacuation simulations of confined spaces in petrochemical facilities. 2015 Mary Kay O'Connor Process Safety Center International Symposium, College Station, October 2015.

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 3, 2016.

Jayadas, Aditya, Empathic & Co-Design: Redesign of Duty Belts for Police Officers

Pickens, Adam, Optimization of Hardware for Optimal Data Collection Using a Mobile Hearing Screening Application (hEAR)

Wang, Jun, Representativeness of Chamber Sampling in Occupational Metal Fume Exposure Assessment

✚ July 1, 2014 – June 30, 2015

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Shan M, Ran Y, Yuan X, Frazier MV, Porter P, Seryshev A, Hong JS, Song L, Zhang, Y, Hilsenbeck, S, Whitehead, L, Zarinkamar N, Perusich S, Corry DB, Kheradmand F. 2014. Agnostic induction of PPAR γ reverses cigarette smoke-induced emphysema. J Clin Invest. 124(3): 1371-1381. doi:10.1172/JCI70587. PMID: PMC3934169

Han, I., Lee, J.S., Eo, S.M., 2014. Measurement of monocyclic aromatic amines in an urban air. Environment and Pollution. 3:21-25.

Lim H, Agopian AJ, Whitehead L, Beasley C, Langlois P, Emery RJ, Waller K. and the National Birth Defects Prevention Study. 2015. Maternal occupational exposure to ionizing radiation and major structural birth defects. Birth Defects Research Plan A: Clinical and Molecular Teratology. First published online 28 Mar 2015. doi: 10.1002/bdra.23340.

Yuan L. 2015. Reducing ergonomic injuries for librarians using a participatory approach. International Journal of Industrial Ergonomics. 47: 93-103.

Mehta RK. 2015. Impacts of obesity and stress on neuromuscular fatigue development and associated heart rate variability. International Journal of Obesity. 39(2): 208-13. doi: 10.1038/ijo.2014.127. Epub 2014 Jul 21. PMID: 25042859.

Khurshid SS, Siegel JA, Kinney KA. 2015. Indoor particulate reactive oxygen species concentrations. Environmental Research. 132:46-53. doi: 10.1016/j.envres.2014.03.026. Epub 2014 Apr 16. PMID: 24742727.

Haddas R, Yang J, and Sizer P. 2015. Effects of Gender and Recurrent Low Back Pain on Lifting Style. Central Europe Journal of Sport Sciences and Medicine (accepted).

Conway SH, Pompeii LA, Roberts RE, Follis J, Gimeno D. 2015. Dose-Response Relation between Long Work Hours and Cardiovascular Disease (under review).

Zhang K, Arauz R, Chen TS, Cooper SP. 2015. Heat effects among migrant and seasonal farmworkers: A case study in Colorado. Environment International (under review).

Haddas R, Lieberman IH and Yang J. 2015. Effects of Volitional Spine Stabilization on Lifting Task in Recurrent Low Back Pain Population. Spine (submitted).

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Yaozhong L, Roy-Engel A, Baddoo MC, Flemington EK, Wang G, Wang H. 2015. The impact of oil spill to lung health - insights from an RNA-seq study of human airway epithelial cells. Toxicology (submitted).

Guo, Y., Afshar, M., Han, J., 2015. Characterization of Size-Segregated Ambient Particulate Matter and Air Toxics. Journal of Air and Waste Management Association. (submitted).

Book Chapter (Not yet reported):

Millet, B. 2013. Design and Development of a Digital Error Reporting System for a Rural Nursing Home. In MA Garcia-Ruiz (Ed.), Cases on Usability Engineering: Design and Development of Digital Products (pp. 255-269). Hershey, PA: Information Science Reference.

PRESENTATIONS:

Haddas R, and Yang J. 2014. Effects of Core Muscle Activation on Injury Risks in Mining Lifting for Healthy Population. Proceedings from the Seventh World Congress on Biomechanics, Boston, MA, July 2014.

Conway SH, Cayuela A, Pompeii LA, Delclos G, Ronda E. 2014. Diferencias en la Exposición a Jornadas Laborales Largas en Latinoamericanos en Estados Unidos y España (“Differences in the Exposure to Long Working Hours in Latin American Immigrants in the United States and Spain”), 32nd Conference of the Society for Spanish Epidemiology/ 11th Conference of the Portuguese Association of Epidemiology, Alicante, Spain, September 2014.

Conway SH. 2014. How Panel Survey Income Data Can Be Utilized to Examine the Health of Workers in the U.S. University of Texas Health Sciences Center, Division of Environmental and Occupational Health Sciences, Research Seminar, September 2014.

Han, J., Guo, Y., Afshar, M. 2014. Land Use Patterns and Size-Resolved Polycyclic Aromatic Hydrocarbons in an Urban Air. The Geological Society of America, Denver, CO, Oct 2014.

Montano CE, Amick BC, Baraniuk MS, Roberts RE, Tullar JM. 2014. Prevalence and incidence of psychiatric disorder treated episodes in an occupational cohort: Sociodemographic and work trends across a 6-year period. Poster session presented at APHA 2014, New Orleans, LA, November 2014.

Montano CE, Amick BC, Baraniuk MS, Roberts RE, Tullar JM. 2014. Investigating the risk of first occupational injury by treated psychiatric disorder episodes of care. Poster session presented at APHA 2014, New Orleans, LA, November 2014. Best poster, Students and New Researchers Poster Competition – OHS Section

Lim H, Agopian AJ, Whitehead L, Beasley CW, Langlois PH, Emery RJ, Waller DK, and the National Birth Defects Preventions Study. 2014. 0306 Parental occupational exposure to ionizing radiation and selected birth defects in the US. Poster PRESENTATIONS, Occup Environ Med, 2014; 71 Suppl 1: A105. doi: 10.1136/oemed-2014-102362.330. PMID: 25018185.

Banuelas, V.K., Thompson, B.J., Akalonu, C., and Moore, A. 2015. Effects of long, cumulative work-shifts on muscle strength and power-related measures of the upper- and lower-body in female nurses. Presented at the Texas Tech University Undergraduate Research Conference, Lubbock, TX, April 2015.

Akalonu, C., Thompson, B.J., Banuelas, V.K., and Moore, A. 2015. Long work shifts' effect on balance, reaction, and vigilance of female nurses. Presented at the Texas Tech University Undergraduate Research Conference, Lubbock, TX, April 2015.

Conway S, Pompeii L, Gimeno D, Roberts R, Follis J. 2015. Identification of a Long Work Hours Cut Point for

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Predicting Elevated Risk of Poor Self-Reported General Health. Presented at the Society for Epidemiologic Research 2015 Annual Meeting, June 2015.

Thompson, B.J., Banuelas, V.K., Akalonu, C., Stock, M.S., and Diersing, D. 2015. Effects of shift type, job position, and a rigorous work period on physical- and performance-related attributes in female nursing workers. Presented at the International Society of Sports Nutrition National Conference, Austin, TX. June 2015.

Lee LJ, Symanski E. 2015. Maternal occupational exposure during pregnancy and adverse birth outcomes: directions for future research; Presented at Future of Occupational Health Symposium, Seattle, WA, June 2015.

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 5, 2015.

Wang Q. Evacuation Simulations of Confined Spaces in Petrochemical Facilities

Thompson B. The Effects of Demanding Work Schedule Characteristics on Fatigue and Performance Capacities in Female Healthcare Workers: Injury Risk Profiling Assessment

Wang H., Engel A. Mutagenic Effects of Oil Spill Chemicals on Human Airway Epithelial Cells

Brooks E. Calcium Channel Activation by Polyaromatic Hydrocarbons

Zhang K. Heat and Health: Developing Heat Vulnerability Indicators for Migrant and Seasonal Farmworkers in California as a Prototype for Texas

Conway S. Health Effects of Long Working Hours

GRANT APPLICATIONS:

09/01/2014-08/31/2017

PI: **David Douphrate, Phd, MPT, MBA, CPE**

U01 UTHSC-Tyler/CDC

Development of Safety Management and Leadership: Training Program for Logging Contractor

Status: Funded

🚩 July 1, 2013 – June 30, 2014

PUBLICATIONS. PRESENTATIONS. FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Massawe, E. 2013. Nanomaterials for Environmental Remediation: Investigating the Role of Nano informatics in Support of Environmental, Health, and Safety Oversight of Nanotechnologies at the Local Level. Journal of Environmental Health, 76(1): 8-17.

Connors KA, Valenti TW, Lawless K, Sackerman J, Onaivi ES, Brooks BW, Gould GG. 2013. Similar anxiolytic effects of agonists targeting serotonin 5-HT(1A) or cannabinoid CB receptors on zebrafish behavior in novel environments. Aquat Toxicol. 2013 Dec 12. pii: S0166-445X(13)00346-9. doi:10.1016/j.aquatox.2013.12.005. PMID: PMC3989442

Robledo C, Peck JD, Stoner JA, Carabin H, Cowan L, Koch HM, Goodman JR. 2014. Is bisphenol-A exposure

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during pregnancy associated with blood glucose levels of diagnosis of gestational diabetes? J Toxicol Environ Health A., 76(14): 865-873. doi: 10.1080/15287394.2013.824395. PMID: PMC3801171

PRESENTATIONS:

Khurshid, S. 2013. Particulate Reactive Oxygen Species in Retail Stores in Austin, Texas. Proceedings of the American Association for Aerosol Research 32nd annual conference, Portland, OR, Oct 2013.

Han, J., Guo, Y. 2013. Characterization of Size-Segregated Particulate Matter in Houston TX. Proceedings of the American Association for Aerosol Research 32nd annual conference, Portland, OR, Oct 2013.

Han, J., 2014. Measurement of Monocyclic Aromatic Amines in an Urban Air. Proceedings of the American Chemical Society 247th National Meeting, Dallas, TX, Mar 2014.

Mehta, R. 2014. Influence of workplace stress and personal factors on musculoskeletal disorders. Proceedings of the Annual TxCOEM Meeting and Symposium, Fort Worth, TX, May 2014.

Saito R, Cherry C, Sartor J. 2014. Antibiotics in Healthcare Environments: Chemical Analysis. Poster session presented at AIHce 2014, San Antonio, TX, June 2014.

Conway, M., Haddas, R., and Yang, J. 2014. Effect of Deliberate Core Muscle Activation on Lifting Performance in a Recurrent Low Back Pain Population, *2014 South Central American Society of Biomechanics Meeting*, Texas Scottish Rite Hospital for Children in Dallas, Dallas, TX, April 2014.

Lewis, K., Haddas, R., and Yang, J., 2014. Effect of Core Muscle Activation on Injury Risks in Mining Lifting for Healthy Population, *2014 South Central American Society of Biomechanics Meeting*, Texas Scottish Rite Hospital for Children in Dallas, Dallas, TX, April 2014.

Lewis, K., Haddas, R., and Yang, J. 2014. Effects of Core Muscle Activation on Injury Risks in Mining Lifting for Healthy Population, 2014 Great Plains Honors Council Conference, Fort Smith, Arkansas, March 2014.

Lee LJ, Lupo PJ, Canfield MA, Chan W, Hoyt AT, Pompeii LA, Razzaghi H, Tinker SC, Symanski E. 2015. Use of the O*NET to assess occupational exposures in a study of adverse pregnancy outcomes. Proceedings of the 12th Annual Regional National Occupational Research Agenda Young/New Investigators Symposium, Salt Lake City, UT, April 2014.

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 20, 2014.

Hawrylak, P. Tracking Adult Vaccination History Using RFID Tags.

Yang, J. Biomechanical Model for Assessing Injury Risks in Mining.

Campos, A. Predictors of Musculoskeletal Symptoms among Office Workers in Costa Rica based on the CUPID Study and Comparison with other Spanish-speaking Countries.

Lee, L. The Linkage of the National Birth Defects Prevention Study and the Occupational Information Network.

FUNDED GRANT APPLICATIONS

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July 1, 2011- February 2023

PI: David Corry, MD*
VA Merit

07/01/2013 – 06/30/2017

Carbon Black Induced Activation of Lung APCs

Status: Funded

*Findings from previous awardee's pilot project (Ming Shan/Ran You) were used to support the grant application. Dr. Corry is a Professor at Baylor College of Medicine.

🚩 July 1, 2012 – June 30, 2013

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Strunk, KC and Strunk, KK. 2012. The contribution of personality and workplace characteristics in predicting turnover intention among sexual assault nurse examiners: A path analytic study. *Journal of Forensic Nursing*, 8(3): 144-50. First published online: 13 June 2012, DOI: 10.1111/j.1939-3938.2012.01141.x.

Book chapter:

Yuan, L. 2012. Reducing Ergonomic Injuries for Librarians Using a Participatory Approach. In M. Soares and F. Rebelo (Eds.), *Advances in Usability Evaluation Part I* (pp.161-170). Boca Raton, FL: CRC Press.

Conference abstract:

Cline H, Stephens M, Flynn D, Marzilli S, Dong, XN. 2012. Muscle Recruitment of Upper Trapezius for Computer Workers with Chronic Neck Pain. *International Journal of Exercise Science: Conference Abstract Submissions*: 2(4): Article 20.

PRESENTATIONS:

Yuan L. 2012. Reducing ergonomic injuries for librarians using a participatory approach. Proceedings of the 4th International Conference on Applied Human Factors and Ergonomics 2012 (AHFE 2012), San Francisco, CA, Jul 2012.

Lewis, P and Hajji, A. 2012. Comparison of Two Models for Estimating Equipment Productivity for a Sustainability Quantification Tool. Proceedings of the 2nd International Conference for Sustainable Design, Engineering and Construction, Ft. Worth, TX, November 2012.

Han, I., Stock, T.H., De Los Reyes, J. M., Delclos, G.L. 2012. Associations between personal exposure to temperature and ambient temperature in middle-school children with asthma. *International Society of Exposure Science*, Seattle, WA. October 28- November 1, 2012.

Lewis, P. and Hajji, A., "Estimating the Economic, Energy, and Environmental Impact of Earthwork Activities," Proceedings of the 2012 Construction Research Congress, West Lafayette, IN, 2012.

Lewis, P and Hazzard, E., "Using Earned Value Management to Quantify Economic, Energy, and Environmental Sustainability in Construction Activities," Canadian Society of Civil Engineers 2013 Annual Conference and 4th Construction Specialty Conference, Montreal, QC, May 2013.

Lewis, P. "One More Thing to Worry About: The Environmental Impacts of Our Fleets," 27th Annual Southeastern States Equipment Managers Conference, Little Rock, AR, June 3, 2013.

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Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 28, 2013

Lewis, P. Prevention through Design (PtD) to Improve the Design of Construction Processes.

Saito, R. Unintentional Exposures to Antibiotics in Healthcare Environments: Air Sampling and Analysis.

Douphrate, D. Safety Leadership and Management Practices among Large-Herd Dairy Owners.

Bae, S. Quantitative Microbial Risk Assessment of Airborne Microorganisms in Retail Stores.

Khurshid, S. Reactive Oxygen Species (ROS) on Respirable Particles in Institutional and Commercial Buildings.

Mehta, R. Influence of Workplace Stress and Personal Factors on Musculoskeletal Disorders.

Han, J. Analytical Method Development and Validation of Personal Air Sampler for Alkylaniline Exposure Assessment

FUNDED GRANT APPLICATIONS:

PI: Kim Waller, PhD*

09/01/2012 – 08/31/2014

CDC/NIOSH

Parental Exposure to Ionizing Radiation and Birth Defects

Status: Funded

*Findings from previous awardee's pilot project (Hyeyeun Lim) were used to support the grant application. Dr. Waller is Ms. Lim's mentor.


PI: X. Neil Dong, PhD

09/01/2012 – 05/30/2013

The University of Texas at Tyler

Rehabilitation strategies to overcome quadriceps weakness for athletes with anterior cruciate ligament (ACL) reconstruction

Status: Funded

 July 1, 2011 – June 30, 2012

PUBLICATIONS, PRESENTATIONS, FUNDED GRANT APPLICATIONS

PUBLICATIONS:

Lau, B.Y., Mathur, P., Gould, G.G., and Guo, S. Identification of a Brain Center Whose Activity Discriminates a Choice Behavior in Zebrafish: Proceedings of the National Academy of Sciences of the United States of America 2011; 108(6):2581-2586. PMID: PMC3038752

Fox, DA, Hamilton, WR, Johnson, JE, Xiao, W, Chaney, S, Mukherjee, S, Miller, DB, O'Callaghan, JP. 2011. Gestational lead exposure selectively decreases retinal dopamine amacrine cells and dopamine content in adult mice. Toxicology and Applied Pharmacology, 256(3): 258-267. PMID: PMC3205288 (Awardee:

Giddabasappa, Anand)

PRESENTATIONS:

Yuan L, Culbertson G. 2011. Effectiveness of a library ergonomics training program. Proceedings of the 55th

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Annual Meeting of Human Factors and Ergonomics Society, Las Vegas, NV, Sept 2011.

Strunk, K.C. 2011. The Personality Characteristics, Organizational Structure and Job Satisfaction of Sexual Assault Nurse Examiners (SANE)". Proceedings of the International Society for Traumatic Stress Studies (ISTSS) 27th Annual Meeting, Baltimore, MD, Nov 2011.

Cline H, Stephens M, Flynn D, Marzilli S, Dong, XN. 2012. Muscle Recruitment of Upper Trapezius for Computer Workers with Chronic Neck Pain. Proceedings of the TACSM Annual Meeting, Austin, TX, Mar 2012.

Stephens M., Cline H., Marzilli S., Dong XN. 2012. Muscle recruitment of upper trapezius for computer workers with chronic neck pain. South Central Regional American Society of Biomechanics Meeting, April 13-14, Dallas, Texas, 2012.

You R. 2012. Immunological aspects of Carbon Black-induced Emphysema. Proceedings of the Baylor College of Medicine Pulmonary Research Meeting, Houston, TX, Apr 2012.

Massawe E. Nanomaterials for Environmental Remediation: the role of nanoinformatics in support of worker and public health oversight. Proceedings of the National Environmental Health Association (NEHA) 2012 AEC, San Diego, CA, Jun 2012.

Socias, C. Assessing the Impact of Loss to Follow-up in a Cohort Study of South Texas Adolescent Farmworkers: Implications for Planning a Cohort Study. Seminar, Epidemiology Seminar (PHD 2990) from the University of Texas School of Public Health, Houston, TX, September 22, 2011.

Proceedings of the NIOSH ERC Pilot Projects Research Symposium, June 29, 2012

Dong, XN. Development of a Portable EMG-based Biofeedback System to Alleviate Chronic Neck Pain of Computer Workers.

Williams, ES. The Relevance of Coal Tar-Based Asphalt Sealants to Workplace Exposures to Polycyclic Aromatic Hydrocarbons.

You, R. Carbon-Induced Immune Cell Activation and Emphysema.

Montano, C. The Association between Mental Disorders and Occupational Injuries among a Cohort of Employees from a Large Oilfield Services Corporation.

Read, T. Development and Testing of an Occupational Health & Safety Program Self-Report Tool.

Lim, H. Parental Exposures to Occupational and Medical Sources of Ionizing Radiation and Risk of Selected Structural Birth Defects

Selde, R. Employer-based Occupational Injury and Illness Surveillance: a Survey of Reporting Practices, Tools and Outcomes.