



Heidi A Reamer

Current Position
Health Scientist

Discipline Areas
> Toxicology
> Pharmacology
> Industrial Hygiene

Years' Experience
8 Years

Joined Cardno
2012

Education
> BS, Pharmacology
and Toxicology,
University of
Wisconsin, Madison,
2012

Summary of Experience

Ms. Heidi A. Reamer is a Health Scientist with Cardno ChemRisk. She graduated from the University of Wisconsin, Madison, where she earned her BS in Pharmacology and Toxicology in 2012. While working on her undergraduate degree, Ms. Reamer assisted with research that documented germline mortality in RNA interference-defective *C. elegans*. Additionally, Ms. Reamer conducted research at Loyola University, Chicago Stritch School of Medicine as an ASPET Discover Pharmacology Research Fellow in 2011. While at Cardno ChemRisk, Ms. Reamer has managed various litigation projects. Additionally, she has provided support for original research projects related to glyphosate, formaldehyde, PFOA, and noise exposures.

Significant Projects

Litigation Support

Asbestos and Talc

Project manager for various litigation matters related to asbestos from talc, brakes, clutches, gaskets, packing, joint compound, laminate products, and cooling towers. Oversaw the summarization of case-specific exposure and medical claim information. Reviewed and critiqued literature and historical data, performed quantitative exposure assessments, and assisted in preparations for expert reports and testimony.

Food Flavoring Compounds

Project manager for multiple clients that manufacture, distribute and/or utilize food flavoring compounds including 2,3-butanedione (diacetyl), 2,3-pentanedione (acetyl propionyl), and 2,3-hexanedione. Reviewed and assessed government agency and peer-reviewed literature regarding diacetyl exposure at microwave popcorn production and food flavoring manufacturing facilities. Performed exposure assessments to evaluate potential exposures to food flavoring chemicals in the workplace. Conducted site visits at cereal, baking mix, and microwave popcorn manufacturing facilities.

Silica

Analyzed legal standards and recommendations for warnings regarding abrasive blasting operations and silica sand use for use in preparation of reports. Evaluated the adequacy of personal protective equipment that was allegedly worn during abrasive blasting operations.

Quantitative Exposure Reconstruction and Industrial Hygiene

Glyphosate

Assisted in the planning and carrying out of a simulation study to characterize potential exposure to glyphosate from the application of Roundup®. Airborne and patch samples were taken to measure inhalation and dermal exposures, respectively. Further, urinary glyphosate levels were measured to determine internal dose. A risk assessment was performed using a margin of safety approach.

Noise

Assisted in the design and study of the accuracy of a sound level meter smartphone app compared to a traditional noise dosimeter. In a similar study, the accuracy of a wearable smartwatch to measure noise was compared to a traditional noise dosimeter. Collected sound levels in various community settings, including on the subway, at a restaurants, and in coffee shops.

Formaldehyde

Conducted a simulation study to characterize formaldehyde exposures associated with the installation, use and removal of laminate flooring products manufactured in China. Compared the formaldehyde concentrations to irritation thresholds and available literature.

Toxicology

Performed toxicological evaluations of chemicals utilized in Electronic Nicotine Delivery Systems (ENDS) and oral tobacco products in preparation for Premarket Tobacco Product Applications to the U.S. FDA.

Critically reviewed the literature on PFOA and performed a weight of evidence analysis for endocrine disruption.

Analyzed the literature regarding the uptake of different vapors in the respiratory tracts of rats and mice. The information was translated into abstracts and presentations that detailed the characteristics of vapors and their ability to penetrate the upper respiratory tract and the difference in vapor uptake between rodent species.

Laboratory Research Experience

Ms. Reamer has over two years of laboratory research experience in RNA biology and epigenetics. As an undergraduate, she assisted with experiments in the model organism *C. elegans* that identified proteins required for maintenance of RNAi silencing across generations. Further, she conducted experiments to document the germline mortality and eventual sterility of RNAi-deficient strains.

Additionally, Ms. Reamer completed a summer fellowship in molecular pharmacology, where she evaluated signaling pathways and their role in adipocyte differentiation.

- > American Industrial Hygiene Association
- > Society of Toxicology

- > Recipient of American Industrial Hygiene Conference & Expo (AIHce)
 - > Second Place "Best of Session" Poster Award. Session 404. 2016 – *Time Trends in Formaldehyde Emissions from Laminate Flooring Products After Installation*
 - > "Best of Session" Poster Award. Session 401. 2013 – *A Comparison of Reported Peak Concentrations of Diacetyl in the Workplace and Estimated Diacetyl Concentrations in Mainstream Cigarette Smoke.*

Membership to
Professional
Societies

Professional Awards

- > “Best of Session” Poster Award. Session 403. 2013 – *A Comparison of Workday-Duration Occupational Exposures to Diacetyl to Estimated Exposures Associated with Cigarette Smoking*

Publications

- > Jacobs, N., B. Roberts, H. Reamer, C. Mathis, S. Gaffney, and R. Neitzel. 2020. Noise exposures in different community settings measured by traditional dosimeter and smartphone app. *Appl Acoust.* 167:107408.
- > Pierce, J.S., A. Abelmann, J.T. Lotter, P.S. Ruestow, K.M. Unice, E.M. Beckett, H.A. Fritz, J.L. Bare, and B.L. Finley. 2016. An assessment of formaldehyde emissions from laminate flooring manufactured in China. *Reg Tox Pharm.* 81:20-32.
- > Buckley B.A., K.B. Burkhart, S.G. Gu, G. Spraklin, A. Kershner, H.A. Fritz, J. Kimble, A. Fire and S. Kennedy. 2012. A nuclear Argonaute promotes multigenerational epigenetic inheritance and germline immortality. *Nature* 489(7416): 447-451.

Presentations

- > Pierce, J.S., A. Abelmann, P.S. Ruestow, J.T. Lotter, E.M. Beckett, H.A. Fritz, J.L. Bare and K.M. Unice. 2016. Assessment of Indoor Formaldehyde Concentrations Following the Installation and Removal of Laminate Flooring. Podium Presentation at American Industrial Hygiene Conference & Expo (AIHce). May 21-26, 2016. Baltimore, MD.
- > Fritz, H.A., J.T Lotter, A. Abelmann, P.S. Ruestow, E.M. Beckett, K.M. Unice, J.L. Bare and J.S. Pierce. 2016. Evaluation of Diurnal Variations in Formaldehyde Concentrations Following Installation of Laminate Flooring Using Real-Time Sampling. Poster Presentation at American Industrial Hygiene Conference & Expo (AIHce). May 21-26, 2016. Baltimore, MD
- > Fritz, H., M.E. Glynn, K. Neier, J.S. Pierce, A. Urban, S. Gaffney, B.L. Finley. 2014. Comparison of the Upper Respiratory Tract Uptake Efficiencies of Vapors in Rats and Mice. Poster Presentation at the Society of Toxicology Annual Meeting. March 24-27, 2014. Phoenix, Arizona.

Published Abstracts

- > Roberts, B., H. Reamer, C. McMenemy, S. Gaffney, and R. Neitzel. 2019. Noise Exposures in Non-Industrial Settings. Presentation at the American Industrial Hygiene Conference and Exposition (AIHce), May 20-23, 2019. Minneapolis, MN.
- > Jacobs, N., H. Reamer, C. McMenemy, S. Gaffney, and R. Neitzel. 2019. A Sound Meter in Every Pocket: An Evaluation of the NIOSH SLM Application for Non-Technical Users. Presentation at the American Industrial Hygiene Conference and Exposition (AIHce), May 20-23, 2019. Minneapolis, MN.
- > Beckett, E.M., S.E. Brown, D.R. Cheatham, H.A. Reamer, M.L. Kreider. 2019. Weight-of-evidence analysis to assess the potential of PFOA to act as steroidogenesis inducer and inhibitor. The 58th Annual Meeting of the Society of Toxicology. March 11-14, 2019. Baltimore, MD.

- > Jacobs, N., B. Roberts, H. Reamer, C. McMenemy, and S. Gaffney. 2018. Noise Exposures by Traditional Dosimetry and Smartphone App. 11th Conference of the International Occupational Hygiene Association. 2018. Washington, DC.
- > Beckett, E.M., Cheatham, D.R., Reamer, H.A, Brown, S.E., Kreider, M.L. 2018. Weight-of-evidence analysis to assess the potential of PFOA to act as an estrogen receptor agonist. The 57th Annual Meeting of the Society of Toxicology. March 12-15, 2018. San Antonio, TX.
- > Lotter, J.T., K.M. Unice, P.S. Ruestow, A. Abelmann, H.A. Fritz, E.M. Beckett, J.L. Bare and J.S. Pierce. 2016. Formaldehyde Emissions from Small Chamber Testing of Laminate Flooring and Comparison to Exposure Modeling. American Industrial Hygiene Conference & Expo (AIHce). May 21-26, 2016. Baltimore, MD.
- > Ruestow P.S., J.T. Lotter, A. Abelmann, H.A. Fritz, E.M. Beckett, J.S. Pierce, K.M. Unice and J.L. Bare. 2016. Time Trends in Formaldehyde Emissions from Laminate Flooring Products after Installation. American Industrial Hygiene Conference & Expo (AIHce). May 21-26, 2016. Baltimore, MD.
- > Pierce, J.S., A. Abelmann, P. Ruestow, J. Lotter, E. Beckett, H.A. Fritz, J. Bare, K. Unice. 2016. Assessment of indoor formaldehyde concentrations following the installation and removal of laminate flooring. Society of Toxicology Annual Meeting. March 13-17, 2016. New Orleans, LA.
- > Neier, K., M.E. Glynn, H. Fritz, J.S. Pierce, A. Urban, S. Gaffney, B.L. Finley. 2014. Quantitative Evaluation of the Relationship Between Vapor Characteristics and Upper Respiratory Tract Uptake Efficiencies in Rodents. Society of Toxicology Annual Meeting. March 24-27, 2014. Phoenix, Arizona.
- > Spicer, L.J., J.S. Pierce, M.E. Glynn, A. Abelmann, L. Roberts, L.E. Johns, H.A. Fritz, and B.L. Finley. 2013. A Comparison of Workday-Duration Occupational Exposures to Diacetyl to Estimated Exposures Associated with Cigarette Smoking. American Industrial Hygiene Association's Annual Meeting. May 18-23, 2013. Montreal, Canada
- > Pierce, J.S., A. Abelmann, L.J. Spicer, L.E. Johns, L. Roberts, H.A. Fritz, M.E. Glynn, M.E. and B.L. Finley. 2013. A Comparison of Reported Peak Concentrations of Diacetyl in the Workplace to Estimated Diacetyl Concentrations in Mainstream Cigarette Smoke. American Industrial Hygiene Association's Annual Meeting. May 18-23, 2013. Montreal, Canada