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Education:

- Ph.D. in Veterinary Medical Sciences, Virginia Polytechnic Institute and State University, 1994.
- DVM from VA-MD College of Veterinary Medicine, VPI & SU, 1991.
- MS in Biology, The George Washington University, 1985.
- BA in Fine Arts, The George Washington University, 1982.
- BS in Zoology, The George Washington University, 1981.

Journal Publications:

- Hrubec TC, Seguin RP, Xu L, Cortopassi GA, Datta S, Hanlon AL, Lozano AJ, McDonald VA, Healy CA, Anderson TC, Musse NA, Williams RT. 2021. Altered toxicological endpoints in humans from common quaternary ammonium compound disinfectant exposure. *Toxicology Reports*, 8:646-656.
- Abdelhamid L, Cabana-Puig X, Mu Q, Moarefian M, Swartwout B, Eden K, Das P, Seguin RP, Xu L, Lowen S, Lavani M, Hrubec TC, Jones CN, Luo XM. 2020. Quaternary ammonium compound disinfectants reduce lupus-associated splenomegaly by targeting neutrophil migration and t-cell fate. *Front Immunol*, Oct. 2020. <https://doi.org/10.3389/fimmu.2020.575179>.
- Hrubec TC, Seguin RP, Xu L, Cortopassi GA, Datta S, McDonald VA, Healy CA, Anderson TC, Musse NA, Williams RT. 2020. Altered Toxicological Endpoints in Humans with Quaternary Ammonium Compound. Published on MedRxiv doi: <https://doi.org/10.1101/2020.07.15.20154963>.
- Lebovitz Y, Kowalski EA, Wang X, et al. 2019. Lactobacillus rescues postnatal neurobehavioral and microglial dysfunction in a model of maternal microbiome dysbiosis. *Brain, Behavior, and Immunity*. 2019 Oct;81:617-629. DOI: 10.1016/j.bbi.2019.07.025. PMID: 31351186.
- Hrubec TC, Hunt PA. 2018. Response to Hostetler. *Birth Defects Research*, 110:545-546.
- Hrubec TC, Melin VE, Shea CS, Ferguson EE, Garofola C, Repine CM, Chapman TW, Patel HR, Razvi RM, Sugrue JE, Potinani H, Magnin-Bissel G, Hunt PA. 2017. Ambient and dosed exposure to quaternary ammonium disinfectants causes neural tube defects in rodents. *Birth Defects Res*. 2017 Aug 15;109(14):1166-1178. doi: 10.1002/bdr2.1064. Epub 2017 Jun 15.
- Galagarza OA, Kuhn DD, Smith SA, Hrubec TC. 2017. Hematological and plasma chemistry reference intervals for cultured striped catfish (*Pangasius hypophthalmus*) in recirculating aquaculture systems. *Veterinary Clinical Pathology*. DOI:10.1111/vcp.12513.

7. Melin VE, Melin TE, Dessify B, Nguyen C, Shea CS, Hrubec TC. 2015. Quaternary ammonium disinfectants cause subfertility in mice by targeting both male and female reproductive processes. Published online, 11-12-15. <http://dx.doi.org/10.1016/j.reprotox.2015.10.006>.
8. Hunt P, Hrubec TC. 2015. Letter to the Editor in response to Hostetler. *Reproductive Toxicology* 52: 120–121. doi:10.1016/j.reprotox.2014.11.010.
9. Melin VE, Potinini H, Hunt P, Griswold J, Siems B, Were SR, Hrubec TC. 2014. Exposure to common quaternary ammonium disinfectants decreases fertility in mice. *Reproductive Toxicology*, 50:163-170. Published Online: 8-14-14, DOI: 10.1016/j.reprotox.2014.07.071.
10. Melin VE, Johnstone DW, Etzkorn FA, Hrubec TC. 2014. Drinking water treatment is not associated with an observed increase in neural tube defects in mice. *Environmental Monitoring and Assessment* 186 (6): 3717-3724.
11. Mallela MK, Hrubec TC. 2012. Reduction in valproic acid-induced neural tube defects by maternal immune stimulation: role of apoptosis. *Birth Defects Research Part B: Developmental and Reproductive Toxicology*. Published online: 5 JUL 2012 | DOI: 10.1002/bdrb.21018 Print version 2012, 95:296-303.
12. Goodwin D, Hrubec TC, Klein BG, Strobl JS, Were SR, Han Q, Lindsay DS. 2012. Investigation of age and sex related changes in behavior and neurotransmitter concentrations in mice congenitally infected with *Toxoplasma gondii*. *Journal of Parasitology* 98:706-12, <http://dx.doi.org/10.1645/GE-3068.1>.
13. Hrubec TC, Prater MR, Mallela MK, Gogal RM Jr, Guo TL, Holladay SD. 2012. Diverse ability of maternal immune stimulation to reduce birth defects in mice exposed to teratogens: a review. *Journal of Developmental Origins of Health and Disease*. Published online: CJO doi:10.1017/S204017441100078X. Print 3(3):132-139.
14. Mallela MK, Were SD, Hrubec TC. 2010. Neural tube defects in mice exposed to tap water. *Environmental Toxicology*. Published online: 1 JUN 2010, DOI: 10.1002/tox.20600 Print version 2012, 26(6):633-640.
15. Hrubec TC, Toops KA, Holladay SD. 2009. Prevention of diabetes induced palate defects by maternal immune stimulation. *The Anatomical Record Part A* 292(2):271-276.
16. Gutierrez JC, Prater MR, Hrubec TC, Smith BJ, Freeman LE, Holladay SD. 2009. Heart changes in 17 day-old fetuses of diabetic ICR mothers: Improvement with maternal immune stimulation. *Congenital Anomalies* 49:1-7.
17. Gutierrez JC, Hrubec TC, Prater MR, Smith BJ, Freeman LE, Holladay SD. 2007. Aortic and ventricular dilation and myocardial reduction in gestation day 17 ICR mouse fetuses of diabetic mothers. *Birth Defects Research A: Clinical and Molecular Teratology* 79(6):459-464.
18. Knowles S, Hrubec TC, Smith SA. 2006. Hematology and plasma chemistry reference intervals for cultured shortnose sturgeon (*Acipenser brevirostrum*). *Veterinary Clinical Pathology* 35(4):434-440.
19. Hrubec TC, Yan M, Ye K, Salafia CM, Holladay SD. 2006. Valproic acid induced fetal malformations are reduced by maternal immune stimulation with granulocyte macrophage colony-stimulating factor or interferon γ . *The Anatomical Record Part A* 288A:1303-1309.
20. Hrubec TC, Prater MR, Toops KA, Holladay SD. 2006. Reduction in diabetes induced craniofacial defects by maternal immune stimulation. *Birth Defects Research Part B: Developmental and Reproductive Toxicology* 77:1-9.

21. Hrubec TC, Punareewattana K, Prater MR, Holladay SD. 2005. Reduction of teratogen induced birth defects in mice: Role of maternal immune stimulation. Invited Review: Current Topics in Toxicology 2:33-40.

Book Chapters:

1. Hunt PA, Hrubec TC, Melin VE. 2017. Disinfection in the 21st Century: Is there harm in being clean? In: Integrative Environmental Medicine. Eds. A Cohen and F vom Saal, Oxford University Press, USA.
2. Hrubec TC, Smith SA. 2010. Normal hematology of fishes. In: Schalm's Veterinary Hematology 6th ed., ed. Weiss, D. and J. Wardrop. Wiley Blackwell, Ames, IA.
3. Hrubec TC, Blaylock BL, Holladay SD. 2004. Developmental immunotoxicity of halogenated aromatic hydrocarbons and polycyclic aromatic hydrocarbons. In: Textbook of Developmental Immunotoxicology. Ed. SD Holladay, CRC Press, Boca Raton, FL.
4. Hrubec TC, Holladay SD. 2004. Mycotoxins and other miscellaneous developmental immunotoxicants. In: Textbook of Developmental Immunotoxicology. Ed. SD Holladay, CRC Press, Boca Raton, FL.
5. Hrubec TC, and Smith SA. 2000. Fish hematology. In: Schalm's Veterinary Hematology, ed. Feldman, BF, JG Zinkl, N.C. Jain, 5th ed. Williams and Wilkins, Media, PA.

Awards and Scholarships:

Patricia Rodier Mid-Career Award for Research and Mentoring, Teratology Society and Neurobehavioral Teratology Society, 2019.
Delphi Panel on Core Syllabus on Embryology and Teratology, International Federation of Associations of Anatomists (IFAA) 2016.
Best Poster Award in Basic Science. E. Via College of Osteopathic Medicine, Annual Research Recognition Day 2005, 2006, 2008, 2009, 2013, 2014, 2015, 2018, 2020, and 2022.
Research Scientist Development Award (K01) 2002.

Mentor for Student Awards

Recipients of 2014 Best Student Poster Award at Teratology Society Annual Meeting
Recipients of 2018 Best Student Poster Award at Teratology Society Annual Meeting
Poster Finalist at VCOM Research Day 2013, 2014, 2018, 2020, 2022
2nd place Student Platform Presentation at the Teratology Society National Meeting 2019
Best Undergraduate Student of the Year, College of Science, Virginia Tech 2017
Poster Finalist NCAC- Society of Toxicology 2013
Outstanding PhD Student of the Year, VA-MD College of Veterinary Medicine, 2011.

Invited National Presentations:

1. Finding Genius Podcast, hosted by Richard Jacobs 3-31-2021.
2. Expert testimony for the Toxics Use Reduction Science Advisory Board in Massachusetts, 1-14-2021.
3. Balancing Work and Family. Professional Development Workshop, Society for Birth Defects Research and Prevention, Virtual Meeting 2021.
4. Expert testimony for the Biomonitoring Subcommittee of the Office of Environmental Health Hazard Assessment (OEHHA) California - 3-4-2020.

5. Live interview - Unbreaking Science: Research findings on QAC disinfectants and concerns with increased exposure due to the COVID pandemic 10-19-2020.
6. Cover story interview for Chemical and Engineering News on safety of QACs and the COVID Pandemic. August 3rd, 2020.
7. Social Responsibility, Unintentional Bias, Diversity, and Inclusion; the Important Role of Mentorship Society for Birth Defects Research and Prevention, , San Diego, CA, June 22 – 26, 2019.

Mentorship:

Visiting Scholar: 1

PhD Students: 5

Master's Students: 4

Osteopathic Medical Students: 44

Justin Kula (2-2021 to present)

Veterinary Students: 9

Undergraduate Students: 8

High School Students: 1