

**Maia Hilsabeck, Ph.D.**  
**Toxicologist**

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**Academic and Professional Profile**

Dr. Maia Hilsabeck is a toxicologist with a year of experience examining human health effects related to environmental contaminants, airborne hazards, consumer products, and occupational exposures. She has just under a year of scientific consulting experience in toxicology as well as exposure and risk assessment. Health effects associated with consumer products such as food and liquids are a significant recent focus of Dr. Hilsabeck's work. Her work on contaminated liquids specifically focused on understanding the hazards posed to varying ages and backgrounds within the contaminated population and providing alternative causation of varying illnesses including liver injury. She has contributed work in other consumer products such as kratom and hair dye litigation as well as n-nitrosamines as a contaminant in pharmaceuticals. Dr. Hilsabeck has experience in regulatory practice as she possesses a certificate in preclinical drug development from the Regulatory Science Department at University of Southern California (USC). She received her Ph.D. in Molecular Pharmacology and Toxicology from USC Alfred E. Mann School of Pharmacy and Pharmaceutical Sciences.

**Education and Degrees Earned**

- Ph.D. Molecular Pharmacology and Toxicology, University of Southern California, 2023
- Certificate in Preclinical Drug Development, University of Southern California, 2023
- Master's Degree in Molecular Biosciences and Bioengineering, University of Hawaii, 2017
- Bachelor's Degree in Biology, Chaminade University of Honolulu, 2014

**Professional Honors/Awards**

- Awarded the 2022 Research Poster Award (3<sup>rd</sup> place) at the SoCal Society of Toxicology (SCCSOT) 2022 Annual Meeting
- Awarded the Diversity Supplement for Health Research (2020-2022) from the National Health Genomics Research Institute (NHGRI)
- Awarded the Culty Graduate Student Diversity Scholarship (2018-2019) at University of Southern California School of Pharmacy
- Awarded the Best in MBBE, Oral Award for 2017 at the College of Tropical Agriculture and Human Resources Student Research Symposium at University of Hawaii (Manoa)
- Awarded the Poster Award for 2012 by the Annual Biomedical Research Conference for Minority Students committee at the Endocrine Society Annual Meeting

## **Membership and Service to Professional Societies**

- Society of Toxicology (Graduate student transitioning to associate member)
- University of Southern California Alumni Association 2023

## **Experience Summary (Professional Career)**

### **Paustenbach and Associates**

#### **Toxicologist**

#### **Costa Mesa, Orange County Office**

**May 2023 – Present**

- Consultant concentrating on toxicology, exposure assessment, industrial hygiene, and state-of-the-art, and occupational safety.
- Expert in new assessment methods (NAMs) in toxicology.
- Currently focused on asbestos, airborne particles, consumer products, radionuclides, environmental toxicology (over a wide range of issues), nitrosamines, and carbon monoxide poisoning.
- Involved in litigation work, interpreting toxicological studies, conducting exposure assessments, assessing mathematical models for dose-response curves, and characterizing risks posed by chemicals in the environment.

### **Lab Technician/Manager**

#### **Chapman University; Irvine, CA**

**June 2015 – August 2018**

- Prior to the pursuit of a doctoral degree, managed the laboratory of Dr. Rennolds Ostrom in the School of Pharmacy
- Conducted experiments related to unraveling cells “pre-arrangement” of multiple signaling components in G protein couple receptors (GPCR) signal transduction

## **Graduate Student Researcher**

12/01/20 to  
05/12/23

Graduate research assistant  
School of Pharmacy, Molecular Pharmacology and Toxicology  
University of Southern California  
Dr. Martine Culty; Associate Professor, Department of Pharmacology  
Pharmaceutical Sciences  
*Effects of endocrine-disrupting chemicals, acetaminophen, and NSAIDs on immature Sertoli cells: Impact on male gonad development*

11/05/15 to  
06/30/17

Graduate research assistant  
Molecular Biosciences and Bioengineering  
University of Hawaii at Manoa  
*Proanthocyanidins: a biomarker for wood quality in the Hawaiian native timber-wood tree Acacia koa*

09/21/15 to  
10/26/15

Rotating graduate student  
John A. Burns School of Medicine  
University of Hawaii at Manoa  
Dr. Michelle Tallquist  
*Characterizing mechanisms of Cardiac Fibrosis*

### **Key Project(s)**

1. **Evaluation of the toxicological risks of hydrazine.** Claims related to liver injury (e.g., non-viral acute hepatitis) associated with oral ingestion of hydrazine-contaminated liquids. Carcinogenic effects in the liver reported in the literature were extensively reviewed. Performed comprehensive literature reviews related to hydrazine to understand whether a non-toxic dose could be established based on in vivo, in vitro, and human exposure of varying duration and route of administration (2023-2024).

### **PUBLICATIONS**

#### **Peer-Reviewed Publications**

1. **Corpuz-Hilsabeck, M.,** Mohajer, N., & Culty, M. (2023). Dysregulation of Immature Sertoli Cell Functions by Exposure to Acetaminophen and Genistein in Rodent Cell Models. *Cells*, 12(13), 1804.
2. **Corpuz-Hilsabeck, M.,** & Culty M. (2023). Impact of Endocrine Disrupting Chemicals and Pharmaceuticals on Sertoli Cell Development and Functions. *Frontiers in Endocrinology* 14, 1095894.
3. Tran-Guzman, A., Moradian, R., Walker, C., Cui, H., **Corpuz, M.,** Gonzalez, I., . . . Culty, M. (2022). Toxicity Profiles and Protective Effects of Antifreeze Proteins From Insect in Mammalian Models. *Toxicology letters*. doi:<https://doi.org/10.1016/j.toxlet.2022.07.009>
4. Zhang, M., Li, K., Bai, J., Velema, W.A., Yu, C., van Damme, R., Lee, W.H., **Corpuz, M.L.,** Chen, J.F. and Lu, Z. (2021). Optimized photochemistry enables efficient analysis of dynamic RNA structures and interactomes in genetic and infectious diseases. *Nature communications*, 12(1), pp.1-14.
5. Johnstone TB, Smith KH, Koziol-White CJ, Li F, Kazarian AG, **Corpuz ML,** Shumyatcher M, Ehlert FJ, Himes BE, Panettieri Jr. RA, and Ostrom R. (2018). PDE8 is expressed in human airway smooth muscle and selectively regulates cAMP signaling in  $\beta$ 2AR-AC6. *Am J Resp Cell Molec Biol*, 58(4), 530-541.
6. **Corpuz, M.** (2017). Characterization of Proanthocyanidins as a biomarker for wood quality in the native timber-wood tree *Acacia koa*. Unpublished thesis in partial

fulfillment of the requirements for the degree of Masters of Science, University of Hawaii at Manoa, Hawaii, USA.

7. Ishihara, K.L., **Corpuz, M.**, Morden, C. W., & Borthakur, D. (2017). Evolution of *Acacia koa* on the Hawaiian Islands. In *Agroforestry* (pp. 629-643). Springer, Singapore.
8. Ishihara KL, **Corpuz M**, Morden CW, Borthakur D. (2017). Botany, ecology, and diversity of *Acacia koa* in the Hawaiian Islands. *AJABS* 12: (in press).
9. Beadnell TC, Mishall KM, Zhou Q, Riffert SM, Wuensch KE, Kessler BE, **Corpuz ML**, Jing X, Kim J, Wang G, Tan AC, Schweppe RE. (2016). The Mitogen Activated Protein Kinase Pathway Facilitates Resistance to Src Inhibition in Thyroid Cancer. *Mol Cancer Ther.* 15 (8) 1952-1963; DOI:10.1158/1535-7163.MCT-15-0702

### **CERTIFICATE(S)**

- Preclinical Drug Development from the University of Southern California, Regulatory Science Department

### **Presentations at Scientific Conferences**

1. 2023. (March). Exposure to Genistein and Acetaminophen Mixtures Alters Immature Sertoli Cell Functions. Society of Toxicology 62<sup>nd</sup> Annual Meeting. Nashville, Tennessee. Poster Presentation.
2. 2022. (November). Alteration of Immature Sertoli Cell Functions By Exposure To Genistein, Acetaminophen, and Their Mixture. Johnson & Johnson 8<sup>th</sup> SMDP Open House. Spring House, Pennsylvania/Skillman, New Jersey. Poster Presentation.
3. 2022. (October). Alteration of Immature Sertoli Cell Functions by Exposure to Genistein, Acetaminophen, and Their Mixture. SoCal Society of Toxicology (SCCSOT) 2022 Annual Meeting. La Jolla, California. Poster and Oral Presentation.
4. 2022. (August). Differential Effects of Genistein, Acetaminophen, and Their Mixture on Immature Sertoli Cell Functions. Moving Targets 21<sup>st</sup> Annual Symposium (AAPS). Los Angeles, California. Poster Presentation.
5. 2022. (May). Exposure to Endocrine-Disrupting Chemicals, Acetaminophen, and NSAIDs Alters Immature Sertoli Cell Development. American Society of Andrology & North American Testis Workshop. La Jolla, California. Poster presentation (2).
6. 2018. (April). Inhaled Corticosteroids Stimulate cAMP Production and Enhance  $\beta_2$ AR Signaling in a Non-Genomic Fashion in Human Airway Smooth Muscle Cells. Experimental Biology 2018. San Diego, California. Poster Presentation.

7. 2017. (June). Characterizing Proanthocyanidins as a Biomarker for Wood Quality in Native Timber-Wood Tree Acacia Koa. American Society of Plant Biology 2017. Honolulu, Hawaii. Poster Presentation.
8. 2017. (April). Proanthocyanidins: A Biomarker for Wood Quality in Native Timber-Wood Tree Acacia Koa. 42<sup>nd</sup> Annual Albert L. Tester Symposium 2017. Honolulu, Hawaii. Oral Presentation.
9. 2017. (April). Characterization of proanthocyanidins as a biomarker for wood quality in Acacia koa. College of Tropical Agriculture and Human Resources Student Research Symposium. Honolulu, Hawaii. Oral Presentation.
10. 2016. (April). Identification and Isolation of Tannin Biosynthesis Genes in Acacia Koa. College of Tropical Agriculture and Human Resources Student Research Symposium. Honolulu, Hawaii. Poster Presentation.
11. 2014. (August). Role of Overexpression of TGF-Beta in Hematopoietic Stem Cell Functions. University of Cincinnati/ Children's Hospital Symposium. Cincinnati, Ohio. Poster Presentation.
12. 2013. (November). Mechanism of Resistance to Src Inhibition in Thyroid Cancer. Annual Biomedical Research Conference for Minority Students. Nashville, Tennessee. Poster Presentation.
13. 2013. (August). Mechanism of Resistance to Src Inhibition in Thyroid Cancer. University of Colorado at Denver Symposium. Denver, Colorado. Oral Presentation.
14. 2013. (June). The Effect of Hypothalamic SirT1 Overexpression on Feeding and Reproductive Genes Endocrine Society's 95<sup>th</sup> Annual Meeting. San Francisco, California. Poster Presentation.
15. 2012. (November). The Effect of Hypothalamic SirT1 Overexpression on Feeding and Reproductive Genes. Annual Biomedical Research Conference for Minority Students. San Jose, California. Poster Presentation.
16. 2012. (August). The Effect of Hypothalamic SirT1 Overexpression on Feeding and Reproductive Genes. University of California at San Diego & San Diego State University Joint Symposium. San Diego, California. Poster Presentation.

### **Published Abstracts**

1. Proposed Acceptable Daily Intake (ADI) for Humans for Chronic Oral Exposure to Hydrazine. D. J. Paustenbach, M. Hilsabeck, M. Stevens, B. Deckard, and D. Brew. Poster Presentation at Society of Toxicology Annual Meeting. Abstract #5148. March 10-14, 2024. Salt Lake City, Utah.

2. Exposure to Genistein and Acetaminophen Mixtures Alters Immature Sertoli Cell Functions. M. Corpuz, A. Tran-Guzman, N. Mohajer, and M. Culty. Poster Presentation of Society of Toxicology 62<sup>nd</sup> Annual Meeting. Abstract #4164. March 19-23, 2023. Nashville, Tennessee.
3. Alteration of Immature Sertoli Cell Functions By Exposure To Genistein, Acetaminophen, and Their Mixture. Poster Presentation at Johnson & Johnson 8<sup>th</sup> SMDP Open House. Abstract #18. November 1-3, 2022. Spring House, Pennsylvania/Skillman, New Jersey.
4. Alteration of Immature Sertoli Cell Functions by Exposure to Genistein, Acetaminophen, and Their Mixture. Poster and Oral Presentation at SoCal Society of Toxicology (SCCSOT) 2022 Annual Meeting. Abstract #1. October 6, 2022. La Jolla, California.
5. Exposure to Endocrine-Disrupting Chemicals, Acetaminophen, and NSAIDs Alters Immature Sertoli Cell Development. Poster presentation (2) at American Society of Andrology & North American Testis Workshop. Abstract #48. May 7-10, 2022. La Jolla, California.