

Alexandra Nichole Nail, Ph.D.  
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University of Louisville  
Department of Pharmacology and Toxicology  
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## EDUCATION

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2019	University of Kentucky, Ph.D. Microbiology
2013	Morehead State University, M.S., Biology
2011	Morehead State University, B.S., Biology

## TRAINING

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01/2021 – Present	Postdoctoral Fellow, University of Louisville, Department of Pharmacology and Toxicology, University of Louisville, Louisville, KY 40202
07/2019 – 12/2020	Postdoctoral Scholar, University of Kentucky, Department of Pharmacology, University of Kentucky, Lexington, KY 40506

## ACADEMIC AND PROFESSIONAL APPOINTMENTS

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2024 – present	NIEHS K99/R00 Pathway to Independence Award Postdoctoral Fellow
2024	American Cancer Society Postdoctoral Fellow, University of Louisville, Louisville, KY 40202
2023	Postdoctoral Scholar, Department of Pharmacology and Toxicology, University of Louisville, Louisville, KY 40202 (2-year fellowship)
2021 – 2023	NIH T32 Postdoctoral Fellow, Department of Pharmacology and Toxicology, University of Louisville, Louisville, KY 40202
2013 – 2019	Graduate Research Assistant, Department of Microbiology, Immunology, Molecular Genetics, University of Kentucky, Lexington, KY 40506
2011 – 2013	Graduate Teaching Assistant, Department of Biology, Morehead State University, Morehead, KY, 40351

## PEER REVIEWED/ORIGINAL RESEARCH MANUSCRIPTS

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1. Tomlinson M.M., Pugh F., **Nail A.N.**, Newton J.D., Udoh K., Abraham S., Kavalukas S., Guinn B., Tamimi R.M., Laden F., Iyer H., States J.C., Ruther M., Ellis C.T., Dupré N.C. (2024). Heavy-Metal Associated Breast Cancer and Colorectal Cancer Hot Spots and their Demographic and Socioeconomic Characteristics. *Cancer Causes & Control*. 35(10):1367-1381.
  2. Augenstein I., **Nail A.N.**, Ferragut Cardoso A.P., States J.C., & Banerjee M. (2024). Chronic arsenic exposure suppresses proteosomal and autophagic protein degradation. *Environmental Toxicology and Pharmacology*, 107:104398.
  3. Ferragut Cardoso A. P., **Nail A. N.**, Banerjee M., Wise S. S., & States, J. C. (2023). miR-186 induces tetraploidy in arsenic exposed human keratinocytes. *Ecotoxicology and environmental safety*, 256: 114823.
  4. Schweer D., Anand N., Anderson A., McCorkle J.R., Neupane K., **Nail A.N.**, Harvey B., Hill K.S., Ueland F., Richards C., & Kolesar J. (2023) Human macrophage-engineered vesicles for utilization in ovarian cancer treatment. *Front Oncol*. 12:1042730.
  5. **Nail A.N.**, McCaffrey L.M., Banerjee M., Ferragut Cardoso A.P., & States J.C. (2022) Chronic arsenic exposure suppresses ATM pathway activation in human keratinocytes. *Toxicology and Applied Pharmacology*. 446:116042.
  6. **Nail A.N.**, Spear B.T., & Peterson M.L. (2020). Highly homologous mouse Cyp2a4 and Cyp2a5 genes are differentially expressed in the liver and both express long non-coding antisense RNAs. *Gene*. 767(30).

7. **Nail A.N.**, Smith J.J., Peterson M.L., & Spear B.T. (2020). Evolutionary Analysis of the Zinc Finger and Homeoboxes Family of Proteins Identifies Multiple Conserved Domains and a Common Early Chordate Ancestor. *Genome Biology and Evolution*. 12(3):174-184.
8. Savage C., Arnold W., **Gjevre-Nail A.**, Koestler B., Bruger E., Barker J., Waters C., & Stevenson B. (2015). Intracellular concentrations of borrelia burgdorferi cyclic di-amp are not changed by altered expression of the cdaA synthase. *PLoS ONE*. 10(4).

## OTHER PUBLICATIONS

### REVIEWS & BOOK CHAPTERS

1. **Nail A.N.**, Xu M., Bastick J.C., Patel D.P., Rogers M.N., & States J.C. (2023). Arsenic and Human Health: New Molecular Mechanisms for Arsenic-Induced Cancer. *Current Pollution Reports*. 9:784-797.
2. **Nail A.N.**, Ferragut Cardoso A.P., Montero L.M., & States J.C. (2023). miRNAs and arsenic-induced carcinogenesis. *Advances in Pharmacology*. 96, 203–240.
3. **Nail A.N.**, Ferragut Cardoso A.P., Banerjee M. & States J.C. (2022). Circulating miRNAs as Biomarkers of Toxic Heavy Metal Exposure. In *Genomic and Epigenomic Biomarkers of Toxicology and Disease*, S.C. Sahu (Ed.).
4. Ferragut Cardoso A.P., Banerjee M., **Nail A.N.**, Lykoudi A., & States J.C. (2021). miRNA dysregulation is an emerging modulator of genomic instability. *Seminars in Cancer Biology*. 76: 120-131.

### SCIENTIFIC COMMUNICATION ARTICLES

1. **Nail, A.N.** (2018). Joshua-Tor recognized as 'one of the top scientists in her field'. *ASBMB Today*. 17(4):32.
2. **Nail, A.N.** (2018). Arteries and bacterial lipids don't mix. *ASBMB Today*. 17(1):19.
3. **Nail, A.N.** (2017). New metabolic screening developed for newborns. *ASBMB Today*. 16(9):11.
4. **Nail, A.N.** (2017). Sex and genetics affect fatty-liver development. *ASBMB Today*. 16(2):11.
5. **Nail, A.N.** (2016). Sustaining seabass. *ASBMB Today*. 15(8):14.

## SCIENTIFIC CONTRIBUTION INDICES

### All

1. Total Citations: 185
2. H-Index: 6
3. i10-Index: 3

### Since 2020

1. Total Citations: 179
2. H-Index: 6
3. i10-Index: 3

## CERTIFICATION

- 2025 Columbia University Sharp Training Program, PI Crash Course: Skills for Future or New Lab Leaders  
2022 EMBO Training: Laboratory Leadership Course Training Certificate

## PROFESSIONAL MEMBERSHIPS

- |                |  |
|----------------|--|
| 2024 – Present | American Association for Cancer Research, Associate Member                       |
| 2021 – Present | Society of Toxicology, Postdoctoral Member                                       |
| 2020 – Present | National Postdoctoral Association, Postdoctoral Member                           |
| 2016 – 2019    | American Society for Biochemistry and Molecular Biology, Graduate Student Member |

## **HONORS & AWARDS**

2024	Postdoctoral Platform Presentation Honorable Mention, Midwest DNA Repair Conference, Louisville, KY 40202
2024	Postdoctoral Fellow Achievement Award Society of Toxicology Women in Toxicology Specialty Section
2024	1 <sup>st</sup> Place Postdoctoral Research Award Society of Toxicology Metals Specialty Section
2024	Stratacor Postdoctoral Award Society of Toxicology Dermal Toxicology Specialty Section
2023	1 <sup>st</sup> Place Postdoctoral Platform Presentation Ohio Valley Society of Toxicology Regional Chapter
2023	Research!Louisville 2 <sup>nd</sup> Place Excellence in Health Disparities Research Award
2023	Society of Toxicology Best Postdoctoral Publication Award
2023	3 <sup>rd</sup> Place Society of Toxicology Metals Specialty Section Postdoctoral Research Award
2022	2 <sup>nd</sup> Place Postdoctoral Award 11 <sup>th</sup> Metals Toxicity and Carcinogenesis Conference
2022	1 <sup>st</sup> Place Postdoctoral Platform Presentation Ohio Valley Society of Toxicology Regional Chapter
2022	University of Louisville Office of Research and Innovation Sponsored Attendance for 2022 NPA Conference
2022	1 <sup>st</sup> Place Postdoctoral Award Graduate Student Leadership Council 3-minute thesis Society of Toxicology
2022	Society of Toxicology Dermal Toxicology Speciality Section Stratacor Postdoctoral Award
2021	Research!Louisville 1 <sup>st</sup> Place Postdoctoral Fellow Poster Presentation Award
2021	University of Louisville Center for Integrative Sciences Travel Award Recipient
2020	Morehead State University Athletic Hall of Fame Inductee
2020	University of Kentucky 1-minute pitch Society of Postdoctoral Scholars competition finalist
2017	University of Kentucky 3-minute thesis competition semi-finalist
2017	American Society for Biochemistry and Molecular Biology Graduate Student Travel Award
2016	American Society for Biochemistry and Molecular Biology Graduate Student Travel Award
2015	United WAY Back on Track Scholarship Program Recipient
2013	Morehead State University Outstanding Graduate Student College of Science and Technology

## **ADMINISTRATIVE SERVICES**

### **LEADERSHIP ACTIVITIES**

2024 – present	Center for Integrative Environmental Health Sciences Career Development Program Internal Advisory Committee Representative
2023 – present	Co-Organizer, Ohio Valley Society of Toxicology Regional Chapter Summer Trainee Virtual Meeting.
2022 – present	Ohio Valley Society of Toxicology Regional Chapter Postdoctoral Representative
2022 – present	Society of Toxicology Dermal Toxicology Specialty Section Postdoctoral Representative
2022 – present	Postdoctoral Association Chapter Executive Committee, University of Louisville, Louisville, KY 40202
2016 – 2018	Biomedical Graduate Student Organization Founding Vice President, University of Kentucky, Lexington, KY 40506
2016 – 2018	Training and Research Advisory Committee Student Member, University of Kentucky, Lexington, KY 40506

2016 – 2017 Microbiology, Immunology, and Molecular Genetics Elected Student Representative, University of Kentucky, Lexington, KY 40506

#### VOLUNTEER AND OUTREACH ACTIVITIES

2024 Session Chair and Judge, Midwest DNA Repair Conference, Louisville, KY 40202

2022 – 2023 Judge, Research!Louisville, University of Louisville, KY 40202

2023 Outreach Lecture, Environmental Health Sciences Club, University of Louisville, School of Medicine, Louisville, KY 40202

2013 – 2017 Fayette County Public Schools District Science Fair Judge, Lexington, KY 40506

2017 Morton Middle School Science Fair Judge, Lexington, KY 40506

#### EDUCATIONAL ACTIVITIES

##### INSTRUCTOR

2024 Instructor, Course: Cancer Biology (BIOC-675-01-4242), University of Louisville, Louisville, KY 40202

2023 Instructor, Course: Molecular Toxicology (PHTX-661-01-4202), University of Louisville, Louisville, KY 40202

2016 Student Instructor, Course: Critical Scientific Readings (Integrated Biomedical Sciences Program, IBS 610), 3 hr lecture (1), University of Kentucky, Lexington, KY 40506

#### SUPERVISION OF LABORATORY PERSONNEL

<b>Name</b>	<b>Period</b>	<b>Position</b>
Ashley Chavez	05/2024 – 07/2024	Summer Medical Student (T35)
Tala Maya	05/2024 – 07/2024	Summer Medical Student (T35)
Kai H. Reynolds	10/2023 – 12/2023	Undergraduate Student
Aliyah N. Bailey	05/2023 – 07/2023	Summer Medical Student (R25)
Manting Xu	05/2022 – 07/2022	Summer Medical Student (R25)
Kai H. Reynolds	05/2022 – 07/2022	Incoming Undergraduate (R25)
Lakyn K. Montero	05/2021 – 07/2021	Summer Medical Student (R25)
Katie Bernardo	01/2017 – 12/2018	Undergraduate Student
James Brown	06/2018 – 12/2018	Undergraduate Student

**GRANTS AND CONTRACTS**

<b>Agency/Number</b>	<b>Title</b>	<b>Role</b>	<b>Project Period</b>	<b>Budget Award</b>
National Institutes of Health (NIH) K99/R00 Postdoctoral Fellowship, National Institute of Environmental Health Sciences (NIEHS), 1K99ES036286-01	Unraveling the molecular link between heavy metal exposure and triple-negative breast cancer	PI	08/2024 – 07/2025	\$124,087
Louisville Research Core (LRC) Voucher Program	Determination of Gene Fusions in Cadmium-transformed Human Breast Epithelial Cells	PI	04/2024 – 10/2024	\$9,156
American Cancer Society, Postdoctoral Fellowship, PF-23-1153675-01-DMC	Diminished DNA Damage Signaling as a Driver of Heavy Metal-Induced Genomic Instability and Carcinogenesis	PI	01/2024 – 08/2024	\$147,500
Center for Integrative Health Sciences Research Voucher Program	Disruption of Human MRN Complex Signaling by Heavy Metal Exposure	Co-I	08/2022 – 03/2023	\$10,000

**ORAL PRESENTATIONS (INTERNATIONAL/NATIONAL)**

1. **Nail, A.N.**, Chronic Heavy Metal Exposure Disrupts the DNA Damage Response to Promote Carcinogenesis, Midwest DNA Repair Conference, Louisville, KY, 2024
2. **Nail A.N.**, Metals Specialty Section Award Presentation, Chronic Cadmium Exposure Disrupts Metal Homeostasis and DNA Double-Strand Break Signaling, Society of Toxicology Annual Conference, Salt Lake City, UT, 2024.
2. **Nail A.N.**, Dermal Speciality Section Stratacor Award Presentation, A Novel Arsenic Methyltransferase Splice Variant is Expressed in Human Keratinocytes, Society of Toxicology Annual Conference, Salt Lake City, UT, 2024.
3. **Nail A.N.**, Selected Oral Presentation, Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Metal Toxicity and Carcinogenesis 11<sup>th</sup> Annual Conference, Montreal, Canada, 2022.
4. **Nail A.N.**, SOT Dermal Speciality Section Stratacor Award Presentation, Chronic Arsenic Exposure Reduces DNA Damage Response Activation in Human Keratinocytes, San Diego, CA, 2022

## ORAL PRESENTATIONS (LOCAL/REGIONAL)

1. **Nail A.N.**, Postdoctoral Platform Presentation, Chronic Cadmium Exposure Disrupts Metal Homeostasis and DNA Double-Strand Break Signaling, Ohio Valley Society of Toxicology Annual Conference, West Lafayette, IN, 2023.
2. **Nail A.N.**, Center for Integrative Environmental Health Sciences Large Voucher Presentation, Disruption of Human MRN Complex Signaling by Heavy Metal Exposure, Research!Louisville, Louisville, KY, 2023.
3. **Nail A.N.**, Postdoctoral Platform Presentation, Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Ohio Valley Society of Toxicology Annual Conference, Louisville, KY, 2022.
4. **Nail A.N.**, Postdoctoral Platform Presentation, Reduced DNA Damage Response Activation in Keratinocytes Chronically Exposed to Toxicologically Relevant Concentrations of Sodium Arsenite, Ohio Valley Society of Toxicology Annual Conference (Virtual), 2022.
5. **Nail A.N.**, Dissertation Defense Seminar, Evolution of the Zfx transcription factor family and analysis of Zfx2 target genes Cyp2a4 and Cyp2a5 in mouse liver, Microbiology, Immunology, and Molecular Genetics Seminar, Lexington, KY, 2019.
6. **Nail A.N.**, 3-minute Thesis Presentation, RT-qPCR: a cautionary tale. University of Kentucky, Lexington, KY, 2017.
7. **Nail A.N.**, Hepatic zonal control of sex-dependent cytochrome p450 enzymes. Microbiology, Immunology, and Molecular Genetics Seminar, Lexington, KY, 2016
8. **Nail A.N.**, Zfx2 regulates sex-biased liver genes. Microbiology, Immunology, and Molecular Genetics Seminar, Lexington, KY, 2016.
9. **Nail A.N.**, Heme Oxygenase-1: Tipping the balance between healthy and unhealthy obesity, Microbiology, Immunology, and Molecular Genetics Seminar, Lexington, KY, 2014.
10. **Nail A.N.**, Metronidazole effects on hindgut microflora residing within the subterranean termite *Reticulitermes flavipes*, Master's Thesis Seminar, Morehead State University, Morehead, KY, 2013.

## POSTER PRESENTATIONS (INTERNATIONAL/NATIONAL)

(Asterisks are posters presented by mentees supervised by Dr. Nail)

1. **Nail A.N.**, Banerjee M., Xu M., Reynolds C.H., Styblo M., Cable P.H., Wilkey D.W., Merchant M.L., Ferragut Cardoso A.P., Thomas S., States J.C. Human Keratinocytes Exhibit Poor Arsenic Methylation Capacity, Society of Toxicology Annual Meeting, Orlando, FL, 2025.
2. **Nail A.N.**, Bailey A.N., Cai L., States J.C. Chronic Cadmium Exposure Disrupts Metal Homeostasis and DNA Double-Strand Break Signaling, Society of Toxicology Annual Meeting, Salt Lake City, UT, 2024.
- 3.\* Reynolds C.H., **Nail A.N.**, Styblo M., Cable P., States J.C. A Novel Arsenic Methyltransferase Splice Variant is Expressed in Human Keratinocytes, Society of Toxicology Annual Meeting, Salt Lake City, UT, 2024.
- 4.\* Bailey A.N., **Nail A.N.**, States J.C. Chronic Cadmium Exposure Suppresses the DNA Damage Response. SOT Annual Meeting, Society of Toxicology Annual Meeting, Salt Lake City, UT, 2024.
5. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Society of Toxicology Annual Meeting, Nashville, TN, 2024.
6. Augenstein I., Banerjee M., Ferragut Cardoso A.P., **Nail A.N.**, States J.C. Chronic Arsenic Exposure Inhibits Both Autophagy and Proteosomal Protein Degradation in Human Keratinocytes, Society of Toxicology Annual Meeting, Nashville, TN, 2023.
7. Ferragut Cardoso A.P., **Nail A.N.**, Banerjee M., Wise S.S., States J.C., miR-186 Interacts with Arsenic to Induce Aneuploidy in Human Keratinocytes, Regulatory and Non-Coding RNAs Cold Spring Harbor Meeting Laurel Hollow, NY, 2022.
8. Ferragut Cardoso A.P., **Nail A.N.**, Banerjee M., Wise S.S., States J.C., Overexpression of miR-186 Accelerates Chromosomal Instability in Arsenic-Exposed Human Keratinocytes. Society of Toxicology Annual Meeting, San Diego, CA, 2022.
9. **Nail A.N.**, McCaffrey L., Ferragut Cardoso A.P., Banerjee M., States J.C., Chronic Arsenic Exposure Reduces DNA Damage Response Activation in Human Keratinocytes, Society of Toxicology Annual Meeting, San Diego, CA, 2022.

10. **Nail A.N.**, McCaffrey L., Ferragut Cardoso A.P., Banerjee M., States J.C., Reduced DNA Damage Response Activation in Keratinocytes Chronically Exposed to Toxicologically Relevant Concentrations of Sodium Arsenite, Mammalian DNA Repair Gordon Research Conference, Ventura, CA, 2021.
11. **Nail A.N.**, Jiang J., Peterson M.L., Spear B.T. E3- $\beta$ globin-D<sup>d</sup> mice: A new model to study hepatic zonal regulation of sex-biased cytochrome p450 mRNA expression. American Society for Biochemistry and Molecular Biology Annual Meeting, Chicago, IL, 2017.
12. **Nail A.N.**, Creasy K.T., Peterson M.L., Spear B.T. Zhx2: a potential regulator of sex-biased liver gene expression. American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, CA, 2016.

## POSTER PRESENTATIONS (LOCAL/REGIONAL)

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### (Asterisks are posters presented by mentees supervised by Dr. Nail)

- 1.\* Chavez A.V., **Nail A.N.**, Bailey A.N., States J.C. Chronic Cadmium Exposure Promotes Breast Epithelial Cell Malignant Transformation by Suppression of the DNA Damage Response. Research!Louisville, Louisville, KY, 2024.
- 2.\* Maya T.M., **Nail A.N.**, Thomas S., Wise S.S., States J.C. Ker-CT Cells: A New Model to Study iAs-induced Genomic Instability in Keratinocytes. Research!Louisville, Louisville, KY, 2024.
3. **Nail A.N.**, Bailey A.N., Cai L., States J.C. Chronic Cadmium Exposure Disrupts Metal Homeostasis and DNA Double-Strand Break Signaling, Research!Louisville, Louisville, KY, 2023.
- 4.\* Bailey A.N., **Nail A.N.**, States J.C. Chronic Cadmium Exposure Suppresses the DNA Damage Response. Research!Louisville, Louisville, KY, 2023.
5. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes. Brown Cancer Center Retreat, Louisville, KY, 2023.
6. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Midwest DNA Repair Symposium, Iowa City, IA, 2023.
7. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Research!Louisville, Louisville, KY, 2022.
8. Augenstein I., Banerjee M., Ferragut Cardoso A.P., **Nail A.N.**, States J.C. Chronic Arsenic Exposure Inhibits Both Autophagy and Proteosomal Protein Degradation in Human Keratinocytes, Research! Louisville, Louisville, KY, 2022.
- 9.\* Reynolds C.H., **Nail A.N.**, Banerjee M., States J.C. Does Cadmium Reduce DNA Damage Signaling by the MRN Complex in Lung Epithelial Cells? Research!Louisville, Louisville, KY, 2022.
- 10.\* Xu M., **Nail A.N.**, Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces DNA-PKcs Phosphorylation and Causes Continued DNA-PKcs Cleavage in Immortalized Human Keratinocytes, Research! Louisville, Louisville, KY, 2022.
- 11.\* McCaffrey L., **Nail A.N.**, Ferragut Cardoso A.P., Banerjee M., States J.C. DNA Damage Response Dysregulation in Keratinocytes Chronically Treated with Low Dose Arsenic, Research!Louisville, Louisville, KY, 2021.
12. **Nail A.N.**, McCaffrey L., Ferragut Cardoso A.P., Banerjee M., States J.C., Reduced DNA Damage Response Activation in Keratinocytes Chronically Exposed to Toxicologically Relevant Concentrations of Sodium Arsenite, Research!Louisville, Louisville, KY, 2021.
13. **Nail A.N.**, Karimian K., Schroder K., Bernardo K., Smith J.J., Peterson M.L., Spear B.T. Characterization and Evolution of Zhx Genes in Chordates. Microbiology, Immunology, and Molecular Genetics Annual Retreat, Berea, KY, 2018.
14. **Nail A.N.**, Creasy K.T., Jang J., Peterson M.L., Spear B.T. Zhx2: A potential role for sexual dimorphism in liver cancer. Markey Cancer Center Research Day, Lexington, KY, 2016.
15. **Gjevre A.N.**, Dhara A., Watts E., Sinai A. Development of a system to selectively modulate gene expression in Toxoplasma gondii tissue cysts: application to N-linked glycosylation. Microbiology, Immunology, and Molecular Genetics Retreat, Berea, KY, 2016.

## **PUBLISHED ABSTRACTS**

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### **(Asterisks are posters presented by mentees supervised by Dr. Nail)**

1. **Nail A.N.**, Bailey A.N., Cai L., States J.C. Chronic Cadmium Exposure Disrupts Metal Homeostasis and DNA Double-Strand Break Signaling, Society of Toxicology Annual Meeting, Salt Lake City, UT, 2024 The Toxicologist. 63<sup>rd</sup> Annual SOT meeting, March 2024.
- 2.\* Reynolds C.H., **Nail A.N.**, Styblo M., Cable P., States J.C. A Novel Arsenic Methyltransferase Splice Variant is Expressed in Human Keratinocytes, Society of Toxicology Annual Meeting, Salt Lake City, UT, 2024 The Toxicologist. 63<sup>rd</sup> Annual SOT meeting, March 2024.
3. Bailey A.N., **Nail A.N.**, States J.C. Chronic Cadmium Exposure Suppresses the DNA Damage Response. SOT Annual Meeting, Society of Toxicology Annual Meeting, Salt Lake City, UT, 2024 The Toxicologist. 63<sup>rd</sup> Annual SOT meeting, March 2024.
4. Nail A.N., Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Society of Toxicology Annual Meeting, Nashville, TN, 2023 The Toxicologist. 62<sup>nd</sup> Annual SOT meeting, March 2023.
5. Augenstein I., Banerjee M., Ferragut Cardoso A.P., **Nail A.N.**, States J.C. Chronic Arsenic Exposure Inhibits Both Autophagy and Proteosomal Protein Degradation in Human Keratinocytes, Society of Toxicology Annual Meeting, Nashville, TN, 2023 The Toxicologist. 62<sup>nd</sup> Annual SOT meeting, March 2023.
6. Ferragut Cardoso A.P., **Nail A.N.**, Banerjee M., Wise S.S., States J.C., Overexpression of miR-186 Accelerates Chromosomal Instability in Arsenic-Exposed Human Keratinocytes. Society of Toxicology Annual Meeting, San Diego, CA, 2022 The Toxicologist. 61<sup>st</sup> Annual SOT meeting, March 2022.
7. **Nail A.N.**, McCaffrey L., Ferragut Cardoso A.P., Banerjee M., States J.C., Chronic Arsenic Exposure Reduces DNA Damage Response Activation in Human Keratinocytes, Society of Toxicology Annual Meeting, San Diego, CA, 2022 The Toxicologist. 61<sup>st</sup> Annual SOT meeting, March 2022.

## **ABSTRACTS (National/Local/Regional)**

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### **(Asterisks are posters presented by mentees supervised by Dr. Nail)**

1. **Nail A.N.**, Bailey A.N., Cai L., States J.C. Chronic Cadmium Exposure Disrupts Metal Homeostasis and DNA Double-Strand Break Signaling, Research!Louisville, Louisville, KY, October 2023.
- 2.\* Bailey A.N., **Nail A.N.**, States J.C. Chronic Cadmium Exposure Suppresses the DNA Damage Response. Research!Louisville, Louisville, KY, October 2023.
3. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes. Brown Cancer Center Retreat, Louisville, KY, September 2023.
4. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Midwest DNA Repair Symposium, Iowa City, IA, June 2023.
6. **Nail A.N.**, Montero L., Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces ATM Pathway Activation in Human Keratinocytes, Research!Louisville, Louisville, KY, October 2023.
7. Augenstein I., Banerjee M., Ferragut Cardoso A.P., **Nail A.N.**, States J.C. Chronic Arsenic Exposure Inhibits Both Autophagy and Proteosomal Protein Degradation in Human Keratinocytes, Research! Louisville, Louisville, KY, October 2023.
- 8.\* Reynolds C.H., **Nail A.N.**, Banerjee M., States J.C. Does Cadmium Reduce DNA Damage Signaling by the MRN Complex in Lung Epithelial Cells? Research!Louisville, Louisville, KY, September 2022.
- 9.\* Xu M., **Nail A.N.**, Ferragut Cardoso A.P., Banerjee M., States J.C. Chronic Arsenic Exposure Reduces DNA-PKcs Phosphorylation and Causes Continued DNA-PKcs Cleavage in Immortalized Human Keratinocytes, Research! Louisville, Louisville, KY, September 2022.
10. Martinez M., **Nail A.N.**, Cardoso A., States J.C., Banerjee M. Effect of Arsenic Exposure on m6A Methylation in Human Keratinocytes. Research! Louisville, Louisville, KY, October 2022.



11. Martinez M., **Nail A.N.**, Cardoso A., States J.C., Banerjee M. Effect of Arsenic Exposure on m6A Methylation in Human Keratinocytes. Undergraduate Research Poster Session for R25 CEP Undergraduates, University of Louisville, Louisville, KY, August 2022.
12. Ferragut Cardoso A.P., **Nail A.N.**, Banerjee M., Wise S.S., States J.C., miR-186 Interacts with Arsenic to Induce Aneuploidy in Human Keratinocytes, Regulatory and Non-Coding RNAs Cold Spring Harbor Meeting Laurel Hollow, NY, May 2022.
13. **Nail A.N.**, McCaffrey L., Ferragut Cardoso A.P., Banerjee M., States J.C., Reduced DNA Damage Response Activation in Keratinocytes Chronically Exposed to Toxicologically Relevant Concentrations of Sodium Arsenite, Mammalian DNA Repair Gordon Research Conference, Ventura, CA, October 2021.
- 14.\* McCaffrey L., **Nail A.N.**, Ferragut Cardoso A.P., Banerjee M., States J.C. DNA Damage Response Dysregulation in Keratinocytes Chronically Treated with Low Dose Arsenic, Research!Louisville, Louisville, KY, October 2021.
15. **Nail A.N.**, McCaffrey L., Ferragut Cardoso A.P., Banerjee M., States J.C., Reduced DNA Damage Response Activation in Keratinocytes Chronically Exposed to Toxicologically Relevant Concentrations of Sodium Arsenite, Research!Louisville, Louisville, KY, October 2021.
16. **Nail A.N.**, Karimian K., Schroder K., Bernardo K., Smith J.J., Peterson M.L., Spear B.T. Characterization and Evolution of Zhx Genes in Chordates. Microbiology, Immunology, and Molecular Genetics Annual Retreat, Berea, KY, May 2018.
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18. **Nail A.N.**, Creasy K.T., Peterson M.L., Spear B.T. Zhx2: a potential regulator of sex-biased liver gene expression. American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, CA, March 2016.
19. **Nail A.N.**, Creasy K.T., Jang J., Peterson M.L., Spear B.T. Zhx2: A potential role for sexual dimorphism in liver cancer. Markey Cancer Center Research Day, Lexington, KY, May 2016.
20. **Gjevre A.N.**, Dhara A., Watts E., Sinai A. Development of a system to selectively modulate gene expression in *Toxoplasma gondii* tissue cysts: application to N-linked glycosylation. Microbiology, Immunology, and Molecular Genetics Retreat, Berea, KY, May 2016.