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Research Educator (Tenure-track)

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<b>EDUCATION</b>	<b>DATES</b>
<b>Ph.D</b> University of Madras, Chennai, India (Physiology)	2006
<b>MD</b> Tamil Nadu Dr. MGR Medical University, Chennai, India (Alternative Medicine)	2001
<b>BSMS</b> Tamil Nadu Dr. MGR Medical University, Chennai, India (Alternative Medicine)	1994
<b>POSTGRADUATE TRAINING</b>	
Postdoctoral Associate Center for Hearing and Deafness, State University of New York, Buffalo, NY.	2007-2009
Postdoctoral Fellowship Nofer Institute of Occupational Medicine, Lodz, Poland.	2006-2007
Senior Research Fellowship Dr. ALM PG Institute of Basic Medical Sciences, University of Madras, Chennai, India.	2002-2006

<b>FACULTY APPOINTMENTS</b>	
Assistant Professor – Research Educator (Tenure-track) Institute of Environmental Health Sciences (IEHS) Wayne State University, Detroit, MI	2014-present
Assistant Professor – Research Educator (Tenure-track) Dept. of Family Medicine and Public Health Sciences (DFMPHS) (Tenure retreat) Wayne State University, Detroit, MI	2014-present
Assistant Professor – Research Educator (Tenure-track) Dept. of Pharmacology (Secondary Appointment-graduate faculty) Wayne State University, Detroit, MI	2015-present
<b>OTHER PROFESSIONAL APPOINTMENTS</b>	
Senior Research Associate Dept. of Otolaryngology, Head and Neck Surgery Case Western Reserve University, Cleveland, OH	2013-2104
Principal Research Scientist Center for Hearing and Deafness, State University of New York, Buffalo, NY.	2010-2013
Research Assistant Professor Dept. of Communicative Disorders and Sciences State University of New York, Buffalo, NY.	2009-2013
<b>MAJOR PROFESSIONAL SOCIETIES</b>	
Society for Redox Biology and Medicine (invited member)	2019-present
Society of Toxicology	2017-present
American College of Occupational and Environmental Medicine	2014-2016
Society for Neuroscience	2011-present
Association for Research in Otolaryngology	2008-present

<b>HONORS/AWARDS</b>	
College Teaching Award: Wayne State University School of Medicine's recognition of dedication to excellence in teaching	2019
SfRBM Top 100 Initiative: Society for Redox Biology and Medicine recognition of key researchers in redox biology field who are not current members	2019
ARO Travel Award: Association for Research in Otolaryngology's travel award to attend 30th mid-winter meeting	2007
Marie Curie Fellowship: European commission's NOISEHEAR – Transfer Of Knowledge project	2006
Sri Nageswara Rao Pantulu Award: Annual endowment award of the University of Madras for the best research work in Physiology	2006
Gordon Research Conference Travel Award: Travel award to attend GRC on Neuroethology: Behavior, Evolution and Neurobiology	2005
Professor N. Padmanaban Memorial Award: Best paper in Physiology at 26th annual conference of Indian Association of Biomedical Scientists	2005
Best Paper Presentation Award: At 24th Annual conference of Indian Association of Biomedical Scientists	2003

<b>SERVICE</b>	
<b><u>Wayne State University</u></b>	
<b>Departmental/Divisional</b>	
Member of MPH Admissions Committee	2019-present
Member of DFMPHS Research Day Committee	2017, 2018
Member of DFMPHS Faculty Search Committee (Environmental Health)	2016-2017
Member of IEHS Faculty Merit Advisory Committee	2015-2016, 2019-2020
Member of MPH Curriculum Committee	2015-2018
Member of Occupational and Environmental Health Committee for developing a new MPH elective in Urban Environmental Health	2014-2016
<b>Professional</b>	
Member, Accommodations Committee, Association for Research in Otolaryngology	2020-present
Abstract Reviewer – Society for Redox Biology and Medicine’s annual meeting	2017, 2020
<b>Scholarly Service</b>	
<b>Grant Review Committees</b>	
National/International	
Member, NIH/NIDCD Special Emphasis Panel ZDC1 SRB-Z (47)1, reviewed NIDCD’s U01 clinical trial application	2022
Member, NIH AUD study section, reviewed 2 R01 applications	2021
Ad hoc grant reviewer for P30 Pilot Projects, University of Cincinnati and provided written critique on one grant application.	2018, 2019
Ad hoc grant reviewer for Action on Hearing Loss, UK, and provided written critique on one grant application.	2012, 2018, 2019
Ad hoc grant reviewer for Royal National Institute of Deafness, UK, and provided written critique on one grant application	2010

<b>Service for Peer-Reviewed Journals</b>	
<b>Editorship</b>	
Editor of a special issue on “Environmental Exposures and Hearing Loss” for the International Journal of Environmental Research and Public Health	2019-2020
<b>Review of Manuscripts</b>	
Antioxidants and Redox Signaling - 2	2013,2021
Audiology and Neurotology – 1	2014
BMC Women’s Health – 1/year	2015-2017
Brain and Behavior - 1	2020
Brain Research – 2	2014, 2018
Cell Death and Disease - 1	2016
Evidence Based Complementary and Alternative Medicine -1	2013
Experimental Brain Research -1	2015
Expert Opinion on Drug Metabolism and Toxicology - 1	2020
EuPA Open Proteomics - 1	2012
Free Radicals and Antioxidants - 1	2016
Frontiers in Pharmacology - 1	2020
Health and Stress -1	2015
Indian Journal of Pharmacology – 1-2/year	2015-2017
International Journal of Molecular Sciences - 1	2020
International Journal of Nanomedicine – 2	2018
Journal of Clinical Medicine - 1	2020
Journal of Neurochemistry - 1	2020
Journal of Proteome Research – 1	2012
Journal of Proteomics - 1	2013
Journal of the Acoustical Society of America – 1	2019
Journal of Toxicology - 1	2018
Journal of Toxicology and Environmental Health – 1	2018
Journal of Visualized Experiments (JoVE) - 1	2017
Molecular Medicine - 1	2020
Neuroscience Letters – 2	2017
Neurotoxicology - 1	2021
Noise and Health – 1	2021
Occupational and Environmental Medicine – 1	2018
Oriental Pharmacy and Experimental Medicine - 1	2015
Pharmacology, Biochemistry and Behavior - 1	2011
Physiology and Behavior - 1	2014
PLOS ONE – 1	2019
Polish Journal of Environmental Studies - 1	2013
Precision Oncology - 2	2020, 2021
Risk Management and Healthcare Policy Review – 1	2020
Safety Science - 1	2021
Stress and Health – 1	2012
Toxicology and Applied Pharmacology – 1/year	2015-2018
Toxicology Letters – 1-2/year	2015-2021
Toxin Reviews - 1	2020

<p><b>TEACHING</b></p> <p><b>Wayne State University</b></p> <p>Undergraduate students</p> <p>PH 4300/3500 Environmental Health, delivered one/two lectures on air pollution, noise pollution, and one health, every year</p> <p>Graduate students</p> <p>FPH 7420, Principles of Environmental Health, served as the course-director, co-director, or lecturer of this course</p> <p>PHA 5270 Principles of Pharmacotherapy VII: Oncology, Toxicology, Dermatology, Drug-Induced Diseases, delivered one lecture on pulmonary toxicology</p> <p>PHC 7410 and BIO 7011, Principles of Toxicology, deliver two-four lectures on the toxic responses of the respiratory, nervous system, and food toxicology every year</p>	<p>2019, 2020</p> <p>2016-present</p> <p>2017, 2018</p> <p>2014-present</p>
<p><b>Teaching at Other Institutions</b></p> <p>Graduate students</p> <p>Laboratory teaching in the Cell and Molecular Biology lab at the Center for Hearing and Deafness at the University at Buffalo (Protein extraction, assay, immunoblotting, immunolabeling, handling &amp; treatment of animals)</p> <p>Residents/Fellows</p> <p>Laboratory teaching of postdoctoral fellows in the cell and molecular biology lab at the Center for Hearing and Deafness at the University at Buffalo (antibody microarray analysis).</p> <p>Other</p> <p>Member of the Board of Examiners (for PhD thesis evaluation) Tamil Nadu Dr. MGR Medical University, Chennai, India (2 theses)</p> <p>University of Madras, Chennai, India (6 theses)</p>	<p>2009-2013</p> <p>2009-2010</p> <p>2013, 2015</p> <p>2012, 2018, 2019, 2021, 2022</p>

<b>Mentorship</b>	
<p>Doctoral Thesis Advisor for Monazza Shahab, Pharmacology Ph.D. student</p>	2018-present
<p>Academic advisor for 20 MPH students</p>	
Saniya Khan	2021-present
Keri Martin	2020-present
Asma Shakir	2020-present
Mohammad Sharara	2020-present
Brittney Bach	2020-present
Fatemah Moosavi	2020-present
Richa Kaushik	2019-present
Arslan Fahim	2019-present
Felicia Frabis	2019-present
Samuel Seidel	2019-2021
Rouba Ali-Fehmi	2019-2020
Taylor Trott	2018-2021
Natasha Jaffar	2018-2021
Opal Bacon	2018-2020
Abhinav Krishnan	2017-2019
Salman Mahboob	2017-2018
Kurt Wendland	2017-2019
Daryl Datu-On	2016-2019
Sara Dadashzadeh	2016-2018
Daniel McIntyre	2015-2019
Stephanie Krajnik	2015-2017
Sarah Dubaisi	2015-2017
Teena Palathanam	2015-2018
Megan Gordon	2015-2016
Allison McCoin	2015-2016
<p>Mentored Dr. Rajamani Rathinam, postdoctoral researcher in my lab, to design and perform studies on cisplatin-induced ototoxicity and publish the findings in three peer-reviewed articles.</p>	2014-2017
<p>Mentored Ms. Sneha Hinduja, a graduate student, to conduct experimental research on animal models of cisplatin-induced ototoxicity and publish the findings in two peer-reviewed articles.</p>	2010-2012

<b>Essays/Theses/Dissertations Directed</b>	
Member of BMS Essay committee for Jesse Kato	2022
Member of BMS Essay committee for Rachel Steffes	2020
BMS Essay advisor for Christine Chien	2020
Faculty mentor for HON 4998 University Honors Thesis of Kareem Elhage	2019
Member of BMS Essay committee for Alexis Lim & Joshua Hammond	2018
Member of BMS Essay committee for Rewaa Yas	2017
Member of BMS Essay committee for Michael Tsong Chien	2016
Member of BMS Essay committee for Dalia Hasso	2015
<b>Course or curriculum development</b>	
Fully modified and developed “FPH 7420 Principles of Environmental Health,” one of the core courses in the MPH program, to meet the new requirements of the Council for Public Health Education (CEPH)	2016
As a faculty member of the team for developing an elective course for the MPH program I played an important role in designing the curriculum for a 2 credit course entitled “Perspectives in Urban Environmental Health”	2014-2015



## GRANTS, CONTRACTS, AND OTHER FUNDING

### Active Grants and Contracts

Role: Principal Investigator, BRIDGE FUNDING

Title: "Targeting nitration for mitigating cisplatin-mediated ototoxicity." The major goal of this project is to evaluate the efficacy of MnTBAP, a metalloporphyrin, in mitigating cisplatin-induced apoptosis.

Source: Wayne State University-OVPR

08/11/2021-08/10/2022

Total Costs: \$ 18,000

### Pending National/International Grants and Contracts

Role: Principal Investigator, Percent Effort: 35%, 1 R01 DC020299-01A1

Title: "Targeting nitrative stress for treatment of cisplatin ototoxicity." The goal of this study is to delineate the mechanism by which cisplatin-induced nitration of cochlear LMO4 facilitates ototoxicity and test the otoprotective efficacy of inhibitors of nitrative stress.

Source: NIH/NIDCD

12/01/2022-11/30/2027

Total amount requested: \$ 2,140,308

Role: Principal Investigator, Percent Effort: 25%, 1 R01 ES034726-01

Title: "Environmental exposure to lead and noise and hidden hearing loss." The goal of this study is to evaluate the molecular mechanism underlying the interaction between lead and noise exposures in inducing hidden hearing loss.

Source: NIH/NIEHS

12/01/2022-11/30/2027

Total amount requested: \$ 2,314,228

Role: Principal Investigator, Percent Effort: 15%, RH 210015

Title: "Targeting nitrative stress for mitigating hearing loss induced by concurrent ototraumatic exposures." The goals of this project are to define the nitrative stress mechanism underlying hearing loss induced by concurrent exposure to noise and lead and evaluate the otoprotective efficacy of targeting nitrative stress.

Source: Department of Defense

10/01/2022-09/30/2024

Total amount requested: \$ 385,000

## Previously Funded Grants and Contracts

Role: Principal Investigator, Percent Effort: 75%, 1 K01 ES028750-01

Title: “Heavy metal exposure, genetic predisposition, and auditory dysfunction: A cross-sectional study in a high-risk urban cohort.” This study investigates the independent and interactive effects of environmental exposure to lead and cadmium and genetic risks on hearing impairment in firefighters

Source: NIH/NIEHS – TIEHR grant

12/01/2017-11/30/2021

Total Costs: \$ 393,522

*The Transition to Independent Environmental Health Research (TIEHR) Career*

*Transition Award is for newly independent faculty who are within the first 3 years of their first independent faculty appointment*

Role: Co-Investigator, (PI: Vickram Ramkumar), Percent Effort: 5%, R01 DC016835-01A1

Title: “Oral Epigallocatechin Gallate (EGCG) for treatment of cisplatin ototoxicity.” This study evaluated the efficacy of the compound Epigallocatechin Gallate (EGCG) in treating cisplatin-induced ototoxicity

Source: NIH/NIDCD

06/01/2018-05/31/2023

Total Costs (sub-recipient): \$ 61,742

Role: Principal Investigator, GRANTS BOOST

Title: “Role of protein nitration in cisplatin-mediated ototoxicity.” This study evaluated the functional role of LMO4 nitration in cisplatin-induced ototoxicity

Source: WSU-OVPR

08/01/2020-07/31/2021

Total Costs: \$ 35,000

Role: Principal Investigator, Percent Effort: 10%

Title: “Synergism between noise and lead in inducing hearing loss.” The objective of this study was to delineate the interaction between multiple environmental risk factors that cause hearing loss, in order to facilitate the design of effective preventive measures.

Source: CURES Pilot Project Award

05/01/2016 – 07/31/2017

Total Costs: \$ 70,000

Role: Principal Investigator, Percent Effort: 15%

Title: “Characterization of LMO4 nitration in ototoxicity.” The major goal of this study was to establish a cell culture model and characterize the role of nitration of LMO4 in cisplatin-induced ototoxicity by using a selective inhibitor of protein nitration (SRI110).

Source: National Organization for Hearing Research (NOHR)

07/01/2013 – 06/30/2015 (one-year award was extended to two years)

Total Costs: \$ 20,000

Role: Principal Investigator, Percent Effort: 60%, R03 DC010225-03  
 Title: "Role of protein nitration in cisplatin mediated ototoxicity." The primary objective of this study was to identify cochlear proteins nitrated by cisplatin treatment and investigate their role in ototoxicity.  
 Source: NIH/NIDCD  
 07/01/2009 – 06/30/2013  
 Total Costs: \$ 467,906

Role: Principal Investigator, Percent Effort: 100%  
 Title: "Effect of Ocimum sanctum on noise-induced alterations of free radical scavenging enzymes and neurotransmitters in rat brain." This study evaluated the efficacy of an herbal extract in attenuating noise-induced oxidative stress in discrete regions of the brain.  
 Source: Indian Council of Medical Research (ICMR)  
 03/01/2004 – 04/24/2006  
 Total Costs: Rs. 300,000 (INR)

### **Previously Submitted, Not Funded Grants and Contracts**

Role: Principal Investigator, Percent Effort: 35%, 1 R01 DC020299-01  
 Title: "Targeting nitrate stress for treatment of cisplatin ototoxicity."  
 Source: NIH/NIDCD  
 2021  
 Total amount requested: \$ 1,885,060  
*Percentile 15*

Role: Principal Investigator, Percent Effort: 40%, 1 R01 DC018841-01A1  
 Title: "Role of protein nitration in cisplatin-mediated ototoxicity."  
 Source: NIH/NIDCD  
 2020  
 Total amount requested: \$ 1,941,098  
*Percentile 29*

Role: Principal Investigator, Percent Effort: 40%, 1 R01 DC018841-01  
 Title: "Role of protein nitration in cisplatin-mediated ototoxicity."  
 Source: NIH/NIDCD  
 2020  
 Total amount requested: \$ 1,929,686  
*Percentile 19*

Role: Co-Investigator, (PI: Avril Holt), Percent Effort: 10%, 1 R01 DC018932-01A1  
 Title: "Imaging cochlear oxidative stress in vivo for design and evaluation of treatments."  
 Source: NIH/NIDCD  
 2020  
 Total amount requested: \$2,016,164

Role: Principal Investigator, Percent Effort: 10%  
Title: "BTEX exposure, auditory neurodegeneration, and hidden hearing loss."  
Source: CURES Pilot Project  
2020  
Total amount requested: \$65,000

Role: Principal Investigator, Percent Effort: 10%, 1 R21 DC017779-01A1  
Title: Targeting nitrate stress to mitigate cisplatin-induced tinnitus.  
Source: NIH/NIDCD  
2019  
Total amount requested: \$423,500  
*Percentile 37*

Role: Principal Investigator, Percent Effort: 40%, 1 R01 C016596-01A1  
Title: Role of protein nitration in cisplatin-mediated ototoxicity  
Source: NIH/NIDCD  
2019  
Total amount requested: \$ 1,929,727  
*Percentile 25*

Role: Principal Investigator, Percent Effort: 25%, GRANT12744270  
Title: Targeting nitrate stress to mitigate blast-induced auditory injury and dysfunction  
Source: Department of Defense (DoD)  
2018  
Total amount requested: \$ 999,745  
*Overall Score: 2.6 (out of 5)*

Role: Principal Investigator, Percent Effort: 10%, 1 R21 DC017779-01  
Title: Targeting nitrate stress to mitigate cisplatin-induced tinnitus  
Source: NIH/NIDCD  
2018  
Total amount requested: \$423,500  
*Percentile 48*

Role: Principal Investigator, Percent Effort: 20%, GRANT12482082  
Title: Heavy metal co-exposure and susceptibility to noise-induced hearing loss  
Source: Office of Naval Research-Young Investigator Program grant  
2017  
Total amount requested: \$509,196

Role: Principal Investigator, Percent Effort: 25%, 1 R21 ES029659-01  
Title: Lead-induced auditory dysfunction and interaction with noise  
Source: NIH/NIDCD  
2017  
Total amount requested: \$423,500

Role: Principal Investigator, Percent Effort: 40%, 1 R01 DC016596-01  
Title: Role of protein nitration in cisplatin-mediated ototoxicity  
Source: NIH/NIDCD  
2017  
Total amount requested: \$ 1,948,306

Role: Principal Investigator, Percent Effort: 75%, 1 K22 ES026233-01A1  
Title: Gene-environment interplay in firefighters with hearing impairment  
Source: NIH/NIEHS – TIEHR-K22 grant  
2016  
Total amount requested: \$457,738  
*Impact Score 50*

Role: Principal Investigator, Percent Effort: 20%, 1R21DC015823-01  
Title: Interaction between noise and lead in inducing hearing impairment  
Source: NIH/NIDCD  
2016  
Total amount requested: \$423,600

Role: Principal Investigator, Percent Effort: 75%, 1 K22 ES026233-01  
Title: Gene-environment interplay in firefighters with hearing impairment  
Source: NIH/NIEHS – TIEHR-K22 grant  
2015  
Total amount requested: \$454,611  
*Impact Score 54*

Role: Principal Investigator, Percent Effort: 40%, 1 R01 DC015248-01  
Title: Role of LMO4 signaling in cisplatin-induced ototoxicity  
Source: NIH/NIDCD  
2015  
Total amount requested: \$ 1,175,000

Role: Principal Investigator, R01 DC013801-01A1  
Title: Regulation of cochlear apoptosis by nitration of Lmo4  
Source: NIH/NIDCD  
2014  
Total amount requested: \$1,766,000

Role: Principal Investigator  
Title: Role of cochlear protein nitration in mediating apoptotic responses in noise-induced hearing loss  
Source: Action on Hearing Loss, UK  
2014  
Total amount requested: \$159,130

Role: Principal Investigator, R01 DC013801-01  
 Title: Regulation of cochlear apoptosis by nitration of Lmo4  
 Source: NIH/NIDCD  
 2013  
 Total amount requested: \$1,474,500  
*Percentile 46*

Role: Principal Investigator  
 Title: Mechanistic role of Lmo4 nitration in cochlear apoptosis  
 Source: Action on Hearing Loss, UK  
 2013  
 Total amount requested: £150,000

Role: Principal Investigator, R01DC012577-01A1  
 Title: Characterization of the role of Lmo4 nitration in mediating cisplatin ototoxicity  
 Source: NIH/NIDCD  
 2012  
 Total amount requested: \$1,862,375  
*Percentile 38*

## PUBLICATIONS

### Peer-Reviewed Publications

#### Reports of Original Work (\* indicates mentored students)

1. Rosati R, Shahab M\*, Ramkumar V, **Jamesdaniel S**. Lmo4 Deficiency Enhances Susceptibility to Cisplatin-Induced Cochlear Apoptosis and Hearing Loss. *Mol Neurobiol*. 2021. 58(5):2019-2029.  
*Shahab M is a Graduate Student. Journal Impact Factor:4.10*
2. Shahab M\*, Rosati R, Meyers D, Sheilds J, Crofts E, Baker TR, **Jamesdaniel S**. Cisplatin-induced hair cell loss in zebrafish neuromasts is accompanied by protein nitration and Lmo4 degradation. *Toxicol Appl Pharmacol*. 2021. 410: 115342.  
*Shahab M is a Graduate Student. Journal Impact Factor:3.71*
3. **Jamesdaniel S**, Elhage KG\*, Rosati R, Ghosh S, Arnetz B, Blessman J. Tinnitus and Self-Perceived Hearing Handicap in Firefighters: A Cross-Sectional Study. *Int. J. Environ. Res. Public Health*. 2019. 16: 3958.  
*Elhage KG is an Undergraduate Student. Journal Impact Factor:2.47*
4. Rosati R, Shahab M\*, Neumann WL, **Jamesdaniel S**. Inhibition of protein nitration prevents cisplatin-induced inactivation of STAT3 and promotes anti-apoptotic signaling in organ of Corti cells. *Exp Cell Res*. 2019. 381: 105-111.  
*Shahab M is a Graduate Student. Journal Impact Factor:3.25*

5. **Jamesdaniel S**, Rosati R, Westrick J, Ruden DM. Chronic lead exposure induces cochlear oxidative stress and potentiates noise-induced hearing loss. *Toxicol Lett.* 2018. 292: 175-180.  
*Journal Impact Factor:3.86*
6. Rathinam R\*, Rosati R, **Jamesdaniel S**. CRISPR/Cas9-mediated knockout of Lim-domain only 4 retards organ of Corti cell growth. *J Cell Biochem.* 2018. 119: 3545-3553.  
*Rathinam R was a postdoctoral fellow, Journal Impact Factor:3.45*
7. **Jamesdaniel S**, Rathinam R\*, Neumann WL. Targeting nitrate stress for attenuating cisplatin-induced downregulation of cochlear LIM domain only 4 and ototoxicity. *Redox Biol.* 2016. 10: 257-265.  
*Rathinam R was a postdoctoral fellow, Journal Impact Factor:7.13*
8. Manohar S, **Jamesdaniel S**, Ding D, Salvi R, Seigel G, Roth, J. Quantitative PCR analysis and protein distribution of drug transporter genes in the rat cochlea. *Hear Res.* 2016. 332, 46-54.  
*As a co-author, my role was to perform the PCR assays included in this manuscript. Journal Impact Factor:2.97*
9. Rathinam R\*, Ghosh S, Neumann WL, **Jamesdaniel S**. Cisplatin-induced apoptosis in auditory, renal, and neuronal cells is associated with nitration and downregulation of LMO4. *Cell Death Discovery* 2015. 1, 15052.  
*Rathinam R was a postdoctoral fellow, Journal Impact Factor:4.6*
10. **Jamesdaniel S**. Downstream targets of Lmo4 are modulated by cisplatin in the inner ear of Wistar rats. *PLoS One.* 2014. 9(12): e115263.  
*Journal Impact Factor:2.77*
11. Alagramam KN, Stepanyan R, **Jamesdaniel S**, Chen DH, Davis RR. Noise exposure immediately activates cochlear mitogen-activated protein kinase signaling. *Noise Health.* 2014. 16: 400-409.  
*As a co-author, I was responsible for revising and redrafting the manuscript to address the concerns that were raised during a previous review. Journal Impact Factor:1.80*
12. Manohar S, **Jamesdaniel S**, Salvi R. Cisplatin inhibits hippocampal cell proliferation and alters the expression of apoptotic genes. *Neurotox Res.* 2014. 25: 369-380.  
*As a co-author, my role was to discuss the changes in apoptotic genes in the manuscript, and editing and proofing the entire paper. Journal Impact Factor:3.54*
13. **Jamesdaniel S**, Manohar S, Hinduja S\*. Is S-nitrosylation of cochlear proteins a critical factor in cisplatin-induced ototoxicity? *Antioxid Redox Signal.* 2012. 17: 929- 933.  
*Hinduja S was a Graduate Research Student. Journal Impact Factor:7.41*
14. **Jamesdaniel S**, Coling D, Hinduja S\*, Ding D, Li J, Cassidy L, Seigel M, Qu J, Salvi R. Cisplatin-induced ototoxicity is mediated by nitroxidative modification of cochlear proteins characterized by nitration of Lmo4. *J Biol Chem.* 2012. 287: 18674-18686.  
*Hinduja S was a Graduate Research Student. Journal Impact Factor:4.13*

15. **Jamesdaniel S**, Hu B, Habiby Kermany M, Jiang H, Ding D, Coling D, Salvi R. Noise induced changes in the expression of p38/MAPK signaling proteins in the sensory epithelium of the inner ear. *J Proteomics*. 2011. 75: 410-424.  
*Journal Impact Factor:3.87*
16. **Jamesdaniel S**, Ding D, Habiby Kermany M, Jiang H, Salvi R, Coling D. Analysis of cochlear protein profiles of Wistar, Sprague-Dawley and Fischer 344 Rats having normal hearing function. *J Proteome Res*. 2009. 8: 3520-3528.  
*Journal Impact Factor:4.27*
17. Coling D, Chen S, Chi L, **Jamesdaniel S**, Henderson D. Age-related changes in antioxidant enzymes related to hydrogen peroxide metabolism in rat inner ear. *Neurosci Lett*. 2009. 464: 22-25.  
*As a co-author, my role was to perform the enzyme assays included in this manuscript.*  
*Journal Impact Factor:2.18*
18. Tanaka C\*, Chen G, Hu B, Chi L, Li M, Zheng G, Bielefeld EC, **Jamesdaniel S**, Coling D, Henderson D. The effects of acoustic environment after traumatic noise exposure on hearing and outer hair cells. *Hear Res*. 2009. 250: 10-18.  
*Tanaka C was a graduate student, to whom I taught how to perform a protein assay.*  
*Journal Impact Factor:2.97*
19. **Jamesdaniel S**, Ding D, Habiby Kermany M, Davidson B, Knight P, Salvi R, Coling D. Proteomic analysis of the balance between survival and cell death responses in cisplatin mediated ototoxicity. *J Proteome Res*. 2008. 7: 3516-3524.  
*Journal Impact Factor:4.27*  
  
*In earlier publications (prior to 2008) my name is mentioned as "Samson J"*
20. **Samson J**, Wiktorek-Smagur A, Politanski P, Rajkowska E, Pawlaczyk-Luszczynska M, Dudarewicz A, Sha S.H, Schacht J, Sliwinska-Kowalska M. Noise-induced time-dependent changes in oxidative stress in the mouse cochlea and attenuation by d-methionine. *Neuroscience*. 2008. 152: 146-150.  
*Journal Impact Factor:3.28*
21. **Samson J**, Sheela Devi R, Ravindran R. Oxidative stress in brain and antioxidant activity of *Ocimum sanctum* in noise exposure. *Neurotoxicology*. 2007. 28: 679–685.  
*Journal Impact Factor:3.38*
22. **Samson J**, Sheela Devi R, Ravindran R, Senthilvelan M. Stress response in rat brain after different durations of noise exposure. *Neurosci Res*. 2007. 57: 143-147.  
*Journal Impact Factor:2.69*
23. Senthilvelan M, Ravindran R, **Samson J**, Sheela Devi R. Serotonin turnover in different duration of sleep recovery in discrete regions of young rat brain after 24 h REM sleep deprivation. *Brain & Development*. 2006. 28: 526–528.  
*As a co-author, my role was to perform some of the assays included in this manuscript and editing the paper. Journal Impact Factor:1.54*



24. Senthilvelan M, Ravindran R, **Samson J**, Sheela Devi R. Serotonin turnover in discrete regions of young rat brain after 24h REM sleep deprivation. *Neurochem Res.* 2006. 31: 81-84.  
*As a co-author, my role was limited to performing some of the assays included in this manuscript and editing the paper. Journal Impact Factor:2.77*
25. **Samson J**, Sheela Devi R, Ravindran R, Senthilvelan M. Biogenic amine changes in brain regions and attenuating action of *Ocimum sanctum* in noise exposure. *Pharmacol Biochem Behav.* 2006. 83: 67-75.  
*Journal Impact Factor:2.78*
26. Ravindran R, Sheela Devi R, **Samson J**, Senthilvelan M. Noise stress induced brain neurotransmitter changes and the effect of *Ocimum sanctum* (Linn) treatment in albino rats. *J Pharmacol Sci.* 2005. 98: 354-360.  
*As a co-author, my role was limited to performing some of the assays included in this manuscript and editing the paper. Journal Impact Factor:2.58*
27. **Samson J**, Sheela Devi R, Ravindran R, Senthilvelan M. Effect of noise stress on free radical scavenging enzymes in brain. *Environ Toxicol Pharmacol.* 2005. 20: 142-148.  
*Journal Impact Factor:2.75*

### Review Articles

1. Rosati, R., **Jamesdaniel, S**. Environmental exposures and hearing loss. *Int J Environ Res Public Health.* 2020. 17: 4879.  
*Journal Impact Factor:2.47*
2. **Jamesdaniel S**, Salvi R, Coling D. Auditory proteomics: methods, accomplishments and challenges. *Brain Res.* 2009. 1277: 24-36.  
*Journal Impact Factor:2.83*

### Book Authorships, Editorships, and Chapters

1. **Jamesdaniel S**. Oxidative Stress and Hearing Loss. In *Inflammatory Mechanism in Mediating Hearing Loss – SPRINGER*, ed Ramkumar V and Rybak L. 2018. 15-30
2. **Jamesdaniel S**, Samson A. Herbal Antioxidants as Rejuvenators in Alternative Medicine. In *Phytochemicals – Bioactivities and Impact on Health - INTECH*, ed Rasooli I, ISBN 979-953-307-609-5, 2011. 297-312.

### Published Abstracts

1. Rosati R, Rosati R, **Jamesdaniel S**. Cochlear Synaptopathy and Nitrate Stress in Lead-Induced Auditory Dysfunction. *ARO Abstracts, PS 518; 2022, 521*

2. Shahab M\*, Rosati R, **Jamesdaniel S.** MnTBAP, a Peroxynitrite Scavenger, Attenuates Cisplatin-Induced Apoptosis and Cytotoxicity. ARO Abstracts, M 70; 2021.
3. Rosati R, Shahab M\*, **Jamesdaniel S.** Deletion of *Lmo4* in mouse inner ear enhances susceptibility to cisplatin-induced ototoxicity. ARO Abstracts, PS 987; 2020, 43:631.
4. Shahab M\*, Rosati R, **Jamesdaniel S.** Cisplatin-induced loss of hair cells in zebrafish neuromasts is accompanied by nitration and degradation of LMO4. ARO Abstracts, PS 981; 2020, 43:628.
5. Rosati R, Shahab M\*, Neumann W, **Jamesdaniel S.** Inhibition of protein nitration mitigates cisplatin-induced inactivation of STAT3 mediated anti-apoptotic signaling in organ of Corti cells. ARO Abstracts, PS 1016; 2019, 42:645.
5. Rosati R, **Jamesdaniel S.** Lead-Induced Auditory Dysfunction and Potentiation of Noise-Induced Hearing Loss. The Toxicologist, 1469; 2018, 162:113.
6. Rosati R, Rathinam R\*, **Jamesdaniel S.** CRISPR/Cas9-mediated knockout of Lim-domain only 4 retards organ of Corti cell growth. ARO Abstracts, PS 646; 2018, 41:419.
7. Rosati R, **Jamesdaniel S.** Chronic Lead Exposure Induces Cochlear Oxidative Stress and Impairs Hearing. SfRBM's 24th Annual Meeting Abstracts, 92; 2017, 112:73.
8. **Jamesdaniel S,** Rathinam R\*, Rosati R, Neumann W. Targeting Nitritative Stress to Mitigate Cisplatin-induced Ototoxicity. ARO Abstracts, PS801; 2017, 40:540.
9. **Jamesdaniel S,** Rathinam R\*, Neumann W. LMO4 downregulation is a critical factor in cisplatin-mediated ototoxicity. SFN Abstracts, 710.04/FF15; 2016, 38.
10. **Jamesdaniel S,** Rathinam R\*. Overexpression of LMO4 Mitigates Cisplatin-induced Cytotoxicity in UBOC1 cells. ARO Abstracts, PD 64; 2016, 39:293.
11. **Jamesdaniel S,** Rathinam R\*, Neumann W. Inhibition of protein nitration attenuates cisplatin-induced modulation of LMO4 and mitigates the ototoxic effects. SFN Abstracts, 328.04 /O28; 2015, 48.
12. Rathinam R\*, **Jamesdaniel S.** Cisplatin-induced Cytotoxicity is Associated with Down-regulation of LMO4 in Organ of Corti Cell Cultures. ARO Abstracts, PS 815; 2015, 38:496.
13. **Jamesdaniel S.** Cisplatin treatment modulates the cochlear expression of LMO4 downstream targets. SFN Abstracts, 722.05/GG8; 2014.
14. **Jamesdaniel S,** Hinduja S\*. Lmo4 signaling in cisplatin mediated ototoxicity. ARO Abstracts, 305; 2013, 36:234.

15. **Jamesdaniel S**, Hinduja S\*, Ding D. S-Nitrosylation of Cochlear Proteins and Their Biological Significance in Cisplatin Mediated Ototoxicity. ARO Abstracts, 817; 2012, 35:286.
16. Manohar S, Salvi R, **Jamesdaniel S**, Coling D. Protein Profiles in Auditory Cortex and Hippocampus-Similarities and Differences. ARO Abstracts, 83; 2012, 35:30.
17. **Jamesdaniel S**, Coling D, Hinduja S\*, Ding D, Salvi R. Trolox prevents cisplatin-induced hearing loss by attenuating cochlear nitroxidative stress. SFN Abstracts, 477.08/JJ23; 2011.
18. Manohar S, **Jamesdaniel S**, Shillitoe C, Lobarinas E, Sun W, Salvi R, Coling D. Salicylate-Induced Modulation Of Gene And Protein Expression In Rat Auditory Cortex: Molecular Correlates Of Neural Hyperactivity And Tinnitus. 5th International TRI Tinnitus Conference Abstracts, 2011:38.
19. **Jamesdaniel S**, Coling D, Hinduja S\*, Ding D, Salvi R. Nitroxidative Stress in Cisplatin Mediated Ototoxicity. ARO Abstracts, 784; 2011, 34:263.
20. Coling D, Roberston NG, **Jamesdaniel S**, Giersch ABS, Morton CC, Salvi R. Antibody Microarray Analysis of the CochG88E/G88E Mouse Model for DFNA9. ARO Abstracts, 130; 2011, 34:43.
21. Coling D, **Jamesdaniel S**, Salvi R. Role of P53 Signaling in Cisplatin Ototoxicity. ARO Abstracts, 1017; 2010, 33:349.
22. Manohar S, **Jamesdaniel S**, Shillitoe C, Lobarinas E, Salvi R, Coling D. Salicylate-Induced Modulation of Gene and Protein Expression in Rat Auditory Cortex Correlates with Behavioral Phenotype of Central Tinnitus. ARO Abstracts, 824; 2010, 33:282.
23. Tanaka C\*, Henderson D, Bielefeld E, Chen G, Coling D, **Jamesdaniel S**, Li M. The Effect of a Src Inhibitor (KX1-004) on Cisplatin Toxicity and Antineoplastic Activity. ARO Abstracts, 726; 2010, 33:248.
24. **Jamesdaniel S**, Hu B, Kermany MH, Jiang H, Ding D, Salvi R, Coling D. High Throughput Analysis of NoiseInduced Protein Responses in Sensory, Vascular and Neural Components of Chinchilla Cochlea. ARO Abstracts, 675; 2010, 33:230.
25. **Jamesdaniel S**, Ding D, Kermany MH, Jian H, Salvi R, Coling D. Commonality and Diversity in Cochlear Protein Profiles of Wistar, Sprague-Dawley and Fischer 344 Rats with Normal Hearing. ARO Abstracts, 982; 2009, 32:333.
26. Ding D, Jiang H, He J, **Jamesdaniel S**, Manohar S, Salvi R, Coling D. Proteomic Analysis of Mefloquine Ototoxicity. ARO Abstracts, 600; 2009, 32:203.
27. **Jamesdaniel S**, Ding D, Salvi R, Coling D. Cochlear Protein Expression At an Early Stage of Cisplatin Ototoxicity. ARO Abstracts, 698; 2008, 31:237.

28. **Samson J**, Sheeladevi R, Ravindran R, Senthilvelan S. Stress Response in Rat Brain After Different Durations of Noise Exposure. ARO Abstracts, 842; 2007, 30:290.

### Other

1. Rathinam R\*, Rosati R, **Jamesdaniel S**. Cover Image, Volume 119, Number 4, April 2018. J Cell Biochem. 2018. 119.

## PRESENTATIONS

### Podium Presentations (refereed)

1. Overexpression of LMO4 mitigates cisplatin-induced cytotoxicity in UBOC1 cells - Association of Research in Otolaryngology's 39th mid-winter meeting at San Diego, CA, USA, 2016.
2. Prevalence of tinnitus and hearing handicap in firefighters – Occupational Health and Safety Conference, Toronto, ON, Canada, 2015.
3. Cochlear protein nitration in acquired hearing loss - International Conference on proteomics and Bioinformatics, Chicago, IL, USA, 2014.
4. Lmo4 signaling in cisplatin mediated ototoxicity - Association of Research in Otolaryngology's 36th mid-winter meeting at Baltimore, MD, USA, 2013.
5. S-nitrosylation of cochlear proteins and their biological significance in cisplatin mediated ototoxicity - Association of Research in Otolaryngology's 35th mid-winter meeting at San Diego, CA, USA, 2012.
6. Identification and localization of nitrated cochlear proteins in cisplatin mediated ototoxicity - International Conference on proteomics and Bioinformatics, Hyderabad, India, 2011.
7. Nitroxidative stress in cisplatin mediated ototoxicity - Association of Research in Otolaryngology's 34th mid-winter meeting at Baltimore, MD, USA, 2011.
8. Noise induced changes in the expression of p38/MAPK signaling proteins in the sensory epithelium of the inner ear - Lake Ontario Auditory Neuroscience Meeting, The State University of New York, Buffalo, NY, USA, 2010.
9. Commonality and diversity in cochlear protein profiles of Wistar, Sprague-Dawley and Fischer 344 rats with normal hearing - Association of Research in Otolaryngology's 32nd mid-winter meeting at Baltimore, MD, USA, 2009.

10. Proteomic analysis of cisplatin mediated ototoxicity – University at Buffalo Neuroscience Research Day at State University of New York, Buffalo, NY, USA, 2008.
11. Ocimum sanctum activity in attenuating brain dopamine and serotonin changes induced by different durations of noise exposure - International conference on Biotechnology and Neuroscience at Cochin University of Science and Technology, Cochin, India, 2004.
12. Antioxidant activity of Ocimum sanctum in noise stress - International conference on Natural Products, Free Radicals and Radioprotectors in Health at Annamalai University, Chidambaram, India, 2004.
13. Effect of noise stress on free radical scavenging enzymes - Annual conference of Indian Association of Biomedical Scientists at New Delhi, India, 2003.
14. Effect of Ocimum sanctum on noise stress induced lipid peroxidation changes in rat brain - International Conference on Indian System of Medicine at Chennai, India, 2003.

#### **Poster Presentations (refereed)**

1. Cochlear Synaptopathy and Nitritive Stress in Lead-Induced Auditory Dysfunction - Association of Research in Otolaryngology's 45<sup>th</sup> mid-winter meeting, 2022.
2. MnTBAP, a Peroxynitrite Scavenger, Attenuates Cisplatin-Induced Apoptosis and Cytotoxicity - Association of Research in Otolaryngology's 44<sup>th</sup> mid-winter meeting, 2021.
3. Deletion of *Lmo4* in mouse inner ear enhances susceptibility to cisplatin-induced ototoxicity - Association of Research in Otolaryngology's 43<sup>rd</sup> mid-winter meeting at San Jose, CA, USA, 2020.
4. Cisplatin-induced loss of hair cells in zebrafish neuromasts is accompanied by nitration and degradation of LMO4 - Association of Research in Otolaryngology's 43<sup>rd</sup> mid-winter meeting at San Jose, CA, USA, 2020.
5. Inhibition of protein nitration mitigates cisplatin-induced inactivation of STAT3 mediated anti-apoptotic signaling in organ of Corti cells - Association of Research in Otolaryngology's 42<sup>nd</sup> mid-winter meeting at Baltimore, MD, USA, 2019.
6. Lead-Induced Auditory Dysfunction and Potentiation of Noise-Induced Hearing Loss - 57<sup>th</sup> Annual Meeting of Society of Toxicology, San Antonio, TX, USA, 2018.

7. CRISPR/Cas9-mediated knockout of Lim-domain only 4 retards organ of Corti Cell growth- Association of Research in Otolaryngology's 41<sup>st</sup> mid-winter meeting at San Diego, CA, USA, 2018
8. Targeting nitrate stress to mitigate cisplatin-induced ototoxicity - Association of Research in Otolaryngology's 40<sup>th</sup> mid-winter meeting at Baltimore, MD, USA, 2017.
9. LMO4 downregulation is a critical factor in cisplatin-mediated ototoxicity – Annual meeting of the Society for Neuroscience, San Diego, CA, USA, 2016.
10. LMO4 downregulation is a critical factor in cisplatin-mediated ototoxicity – Brain@Wayne Research Symposium, Detroit, MI, USA, 2016.
11. Inhibition of protein nitration attenuates cisplatin-induced modulation of LMO4 and mitigates the ototoxic effects - Annual meeting of the Society for Neuroscience, Chicago, IL, USA, 2015.
12. Cisplatin-induced Cytotoxicity is Associated with Down-regulation of LMO4 in Organ of Corti Cell Cultures - Association of Research in Otolaryngology's 38<sup>th</sup> mid-winter meeting at Baltimore, MD, USA, 2015.
13. Cisplatin treatment modulates the cochlear expression of LMO4 downstream targets - Annual meeting of the Society for Neuroscience, Washington DC, USA, 2014.
14. Trolox prevents cisplatin-induced hearing loss by attenuating cochlear nitroxidative stress - Annual meeting of the Society for Neuroscience, Washington DC, USA, 2011.
15. Antibody microarray analysis of the CochG88E/G88E mouse model for DFNA9 - Association of Research in Otolaryngology's 34<sup>th</sup> mid-winter meeting at Baltimore, MD, USA, 2011.
16. High throughput analysis of noise-induced protein responses in sensory, vascular and neural components of chinchilla cochlea - Association of Research in Otolaryngology's 33<sup>rd</sup> mid-winter meeting at Anaheim, CA, USA, 2010.
17. Cochlear protein expression at an early stage of cisplatin ototoxicity - Association of Research in Otolaryngology's 31<sup>st</sup> mid-winter meeting at Phoenix, AZ, USA, 2008.
18. Stress response in rat brain after different durations of noise exposure – Association of Research in Otolaryngology's 30<sup>th</sup> mid-winter meeting at Denver, CO, USA, 2007.
19. Noise induced biogenic amine alterations in discrete brain regions and attenuating activity of Ocimum sanctum – Elsevier's 15<sup>th</sup> Neuropharmacology conference on new perspectives in neurotransmitter transporter biology, held at Washington DC, USA, 2005.
20. Noise induced alterations of neurotransmitter levels and serotonin turnover in discrete regions of brain - Gordon Research Conference on Neuroethology: Behavior, Evolution and Neurobiology held at Magdalen College, Oxford, UK, 2005.

21. Antioxidant potential of *Ocimum sanctum* encourages its supplementation in oxidative disease treatment - Indo-Australian conference on biotechnology in infectious diseases at Manipal, India, 2005.

### **Invited Lectures/Presentations**

1. Environmental exposures and auditory dysfunction - Division of Behavioral Sciences Meeting, DFMPHS, Wayne State University, Detroit, MI, USA, 2022.
2. Pollution and hearing loss – Clean Air Council meeting of Michigan Environmental Justice coalition, 2020.
3. Nitrate stress and signaling in cisplatin-mediated ototoxicity – ANXIECON, National Conference of Physiologists, University of Madras, Chennai, India, 2019.
4. Biomedical research in alternative medicine – National Institute of Siddha, Chennai, India, 2019.
5. Environmental exposures, Oxidative stress, and auditory dysfunction - Good Morning Detroit seminar series, Detroit, MI, USA, 2019.
6. Environmental exposures and hearing loss - CURES Community Advisory Board Meeting, Detroit, MI, USA, 2018.
7. Targeting nitrate stress in cisplatin-induced ototoxicity – Pharmacology Seminar Series, Southern Illinois University School of Medicine, Springfield, IL, USA, 2018.
8. Nitrate stress in cisplatin-induced ototoxicity –Chemistry Seminar Series, Oakland University, Rochester, MI, USA, 2018.
9. Role of LMO4 and its nitration in cisplatin-mediated ototoxicity – Otolaryngology Seminar Series, Wayne State University, Detroit, MI, USA, 2016.
10. LMO4 signaling in cisplatin-mediated ototoxicity – Pharmacology Seminar Series, Wayne State University, Detroit, MI, USA, 2015.
11. Regulation of cochlear apoptosis by nitration of Lmo4 - Richard King Mellon Foundation Institute for Pediatric Research, University of Pittsburgh, Pittsburgh, PA, USA, 2013.
12. Nitrosative modification of cochlear proteins in cisplatin-induced ototoxicity – Biochemistry Seminar Series, West Virginia University, Morgantown, WV, USA, 2012.
13. Nitroxidative modification of cochlear proteins in cisplatin mediated ototoxicity - Otolaryngology Research Seminar Series, Case Western Reserve University, Cleveland, OH, USA, 2011.
14. Lecture on “Evaluation of antioxidant properties of Kayakarapam herbs” – CME program, TN Dr. MGR Medical University, Chennai, India, 2011.

15. Lecture on “Research methods employed in the evaluation of antioxidants in Siddha Medicine” – CME program, Govt siddha Medical College, Palayamkottai, India, 2011.
16. Proteomic analysis of cisplatin- and noise-induced hearing loss using antibody microarrays – Audiology Speaker Series, University of North Texas, Denton, TX, USA, 2009.
17. Antibody Microarray – a tool to study cochlear protein expression at an early stage of cisplatin ototoxicity – Prof. A. Namasivayam endowment lecture at Dr. ALM PG Institute of Basic Medical Sciences, University of Madras, Chennai, India, 2008.