

CURRICULUM VITAE

Vengatesh Ganapathy, PhD

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Academic Appointments

Assistant Professor of Research, April 2019 – present
Department of Otolaryngology-Head and Neck Surgery,
Mentor: Lurdes Queimado, MD, PhD
University of Oklahoma Health Sciences Center, OKC, USA.

Postdoctoral Fellow, June 2012 - March 2019
Department of Otolaryngology-Head and Neck Surgery
Mentor: Lurdes Queimado, MD, PhD
University of Oklahoma Health Sciences Center, OKC, USA.

Research Scientist and Head In Charge, Nov 2011 – April 2012
Sri Manakula Vinayagar Medical College and Hospital, Pondicherry, India

Research Fellow, April 2000 – May 2001
Mentor: Selvam Ramasamy, PhD
University of Madras, Chennai, TN, India

Education

Ph.D. Biochemistry-Endocrinology (Interdisciplinary), Awarded April 2011
University of Madras, Tamil Nadu, India.
Advisor: Michael Aruldas, PhD
Dissertation: Gestational exposure to hexavalent chromium leads to specific temporal changes in the expression of androgen and estrogen receptors in the epididymis of puberal and adult rats

M.S. Biochemistry, Awarded June 2001
University of Madras, Tamil Nadu, India.
Advisor: Selvam Ramasamy, PhD
Thesis: Study on the anti-oxidant status and biochemical changes in the blood of chronic renal Failure (CRF) patients

B.S. Biochemistry, Awarded June 1998
University of Madras, Tamil Nadu, India.

Peer-Reviewed Publications

Summary (updated on 08/30/2024)

SUMMARY

- **758** total citations (Google Scholar)
- ***h-index* = 11** (Google Scholar): ***h-index* = 10** (ResearchGate)
- **20** peer-reviewed primary publications (published)
- **1** in pending (Submitted)
- **6** progress
- **2** Book Chapters
- **2** Books
- **16** Abstracts

My Publication link:<https://scholar.google.com/citations?user=0p7SVBsAAAAJ&hl=en>

1. Sadhasivam B, Manyanga J, **Ganapathy V**, Acharya P, Bouharati C, Chinnaiyan M, Mehta T, Mathews B, Castles S, Rubenstein DA, Tackett AP, Zhao YD, Ramachandran I, Queimado L. Exposure to Secondhand Smoke Extract Increases Cisplatin Resistance in Head and Neck Cancer Cells. *Int J Mol Sci*. 2024 Jan 14;25(2):1032. Impact factor: 5.6.
2. Manyanga J, **Ganapathy V**, Bouharati C. et al. Electronic cigarette aerosols alter the expression of cisplatin transporters and increase drug resistance in oral cancer cells. *Sci Rep* 11, 1821 (2021), Impact factor: 4.3. *Cited by 24 according to Google Scholar*
3. Queimado L, Wagener T, **Ganapathy V**. Electronic cigarette aerosols induce DNA damage and reduce DNA repair: Consistency across species. *Proc Natl Acad Sci* .2018, 115: E5437–E5438I, Impact factor: 11.2. *Cited by 8 according to Google Scholar*
4. **Ganapathy, V**, Manyanga J, Brame L, McGuire D, Sadhasivam B, Floyd E, Rubenstein DA, Ramachandran I, Wagener T, Queimado L. Electronic cigarette aerosols suppress cellular antioxidant defenses and induce significant oxidative DNA damage. *PLoS One*. 2017; 18:1-20, Impact factor: 4.41. *Cited by 176 according to Google Scholar.* *Manuscript documenting that e-cigarettes reduce DNA repair has been in PLoS One's top 10% most cited articles for the past 3 years.*
5. Kumar KM, Aruldas MM, Banu SL, Sadasivam B, **Ganapathy V**, Ganesh KM, Navaneethabalakrishnan S, Navin AK, Michael FM, Venkatachalam S, Stanley JA, Ramachandran I, Banu SK, Akbarsha MA. Male reproductive toxicity of CrVI: In-utero exposure to CrVI at the critical window of testis differentiation represses the expression of Sertoli cell tight junction proteins and hormone receptors in adult F1 progeny rats. *Reprod Toxicol*. 2017; 69:84-98, Impact factor: 3.121. *Cited by 25 according to Google Scholar*
6. **Ganapathy V**, Ramachandran I, Rubenstein DA, Queimado L. Detection of in vivo DNA damage induced by very low doses of mainstream and sidestream smoke extracts using a novel assay.

- Am J Prev Med.* 2015; 48(1 Suppl 1): S102-10. Impact factor: 5.043. Cited by 21 according to Google Scholar. Manuscript recognized as a landmark study by Action to Quit (April, 2015).
7. **Ganapathy V**, Ramachandran I, Rubenstein D, Queimado L. Detection of in vivo DNA damage induced by very low doses of mainstream and sidestream smoke extracts using a novel assay. *J Okla State Med Assoc.* 2015 Nov; 108(11):500-8. *Re-printed (Tobacco Use Prevention and Cessation Issue)*.
 8. Stanley JA, Neelamohan R, Suthagar E, **Ganapathy, V.**, Jayakumar J, Chandrasekaran M, Banu SK, Aruldhas MM. Lipid peroxidation and antioxidants status in human malignant and non-malignant thyroid tumours. *Hum Exp Toxicol.* 2015; 35 (6), 585-597, Impact factor: 2.06. Cited by 43 according to Google Scholar
 9. Ramachandran I, **Ganapathy V**, Gillies E, Fonseca I, Sureban SM, Houchen CW, Reis A, Queimado L (2014). Wnt inhibitory factor 1 suppresses cancer stemness and induces cellular senescence. *Cell Death Dis.* 2014; 22(5): e1246, Impact factor: 8.46. Cited by 91 according to Google Scholar
 10. Annapoorna K, Anbalagan J, Neelamohan R, **Vengatesh G**, Stanley J, Amudha G, Aruldhas MM. Transient gestational and neonatal hypothyroidism-induced specific changes in androgen receptor expression in skeletal and cardiac muscles of adult rat. *HormMetab Res.* 2013; 45(3):197-205. Impact factor: 2.56. Cited by 5 according to Google Scholar
 11. Sekar P, **Vengatesh G**, Kathiresh Kumar M, Balaji S, Akbarsha MA and Aruldhas MM. Impact of gestational and lactational exposure to hexavalent chromium on steroidogenic compartment of post-natal rat testis. *J Endocrinol Reprod.* 2011; 15: 15-26, Impact factor: 1.05. Cited by 8 according to Google Scholar
 12. Anbalagan J, Sashi AM, **Vengatesh G**, Stanley JA, Neelamohan R, Aruldhas MM. Mechanism underlying transient gestational-onset hypothyroidism-induced impairment of posttesticular sperm maturation in adult rats. *FertilSteril.* 2010; 93(8): 2491-2497, Impact factor: 7.32. Cited by 43 according to Google Scholar
 13. Samuel JB, Stanley JA, Roopha DP, **Vengatesh G**, Anbalagan J, Banu SK, Aruldhas MM. Lactational hexavalent chromium exposure-induced oxidative stress in rat uterus is associated with delayed puberty and impaired gonadotropin levels. *Hum Exp Toxicol.* 2010; 30(2): 91-101, Impact factor: 2.06. Cited by 34 according to Google Scholar
 14. Venkataraman P , Krishnamoorthy G, **Vengatesh G**, Srinivasan N, Michael Aruldhas M, Arunakaran J. Protective role of melatonin on PCB (Aroclor 1254) induced oxidative stress and changes in acetylcholine esterase and membrane bound ATPases in cerebellum, cerebral cortex and hippocampus of adult rat brain. *Int J Dev Neurosci.* 2008; 26(6): 585-591, Impact factor: 2.69. Cited by 65 according to Google Scholar
 15. Arudhas M, Subramanian S, Sekar P, **Vengatesh G**, Chandrahasan G, Govindarajulu P, Akbarsha MA. *In vivo* spermatotoxic effect of chromium as reflected in the epididymal epithelial principal cells, basal cells and intraepithelial macrophages of a non-human primate (*Macaca radiata* Geoffroy) *FertilSteril.* 2006;86(4 Suppl): 1097-1105, Impact factor: 7.32. Cited by 33 according to Google Scholar
 16. Arudhas M, Subramanian S, Sekar P, **Vengatesh G**, Chandrahasan G, Govindarajulu P, Akbarsha MA. Chronic chromium exposure-induced changes in testicular histoarchitecture are associated with oxidative stress: study in a non-human primate (*Macaca radiata* Geoffroy). *Hum.*

Reprod.2005; 20(10): 2801-281320, Impact factor: 6.91. Cited by 181 according to Google Scholar

17. P Sekhar, S Subramanian, NS Venkatesh, AMJ Sashi, N Kalpana, J Anbalagan, **G Vengatesh**, P Govindarajulu, MA Akbarsha, MM Aruldhas (2003). Gestational Exposure to Chromium Alters the Histoarchitecture of Adult Rat Testis: a Light Microscopic Study. *Journal of Endocrinology and Reproduction ;7: 86-87, Impact factor: 1.05*
18. AMJ Sashi, NS Venkatesh, **G Vengatesh**, P Sekhar, J Anbalagan, N Kala, P Govindarajulu, MA Akbarsha, MM Aruldhas (2003). Transient Hypothyroidism during the Second Week of Gestation has a Temporal and Region-Specific Effect on the Histoarchitecture of the Epididymis at Prepuberal, Puberal and Adult Rats. *Journal of Endocrinology and Reproduction ;7: 75-75, Impact factor: 1.05. Cited by 1 according to Google Scholar*
19. M. Aruldhas A. MJ. Sashi , N S. Venkatesh, **G. Vengatesh**, P. Sekhar , J. Anbalagan¹, N. Kala, P. Govindarajulu , M. A. Akbarsha (2003). Transient Gestational Hypothyroidism-Induced Changes in the Pituitary Testicular Axis Differ from that of Neonatal Onset Hypothyroidism. *Journal of Endocrinology and Reproduction ;7: 75-75. Impact factor: 1.05. Cited by 1 according to Google Scholar*
20. Aruldhas M, Kalpana N, **Vengatesh G**, Sakhilabanu K, Govindarajulu P (2001). Genetics of medullary thyroid carcinoma. *J.Endocrinol Reprod. 5:59-76, Impact factor: 1.05*

Pending

21. **Ganapathy V**, Jagannathan R, Chinnaiyan M, Chengizkhan G, Sadhasivam B, Manyanga J, Ramachandran I and Queimado L. E-Cigarette Use and Oral Health: A Molecular Effects Perspective E-Cigarettes. [Manuscript submitted for publication].

In Progress

22. **Ganapathy V**, Chinnaiyan, M, Wagener Y, and Queimado L. Measuring DNA damage to assess the use of electronic cigarettes as a tobacco harm reduction strategy
23. **Ganapathy V**, Wagener Y, and Queimado L. Electronic cigarettes induce DNA damage in the oral epithelium of users
24. **Ganapathy V**, Manyanga J, Sadhasivam S, Chinnaiyan M, and Queimado L. E-cigarette aerosols induce oxidative stress and alters the NRF2 pathway
25. **Ganapathy, V.**, Manyanga, J., Sadhasivam, S., Chinnaiyan, M., and Queimado, L. E-cigarette use and cellular oxidative stress
26. Manyanga J, **Ganapathy V**, Sadhasivam B, and Queimado L. Electronic Cigarettes: On the Potential Role in Cancer Pathogenesis
27. **Ganapathy, V** and Queimado L et al. A Unique DNA Damage Detection Assay for Early Diagnosis of Oropharyngeal Cancer

Book Chapters

Corresponding Author

1. Jaganathan, R., Ravindran, R., Queimado, L., Sadhasivam, B., Chengizkhan, G., Chinnaiyan, M., Gor, R., Ramachandran, I., Akmal, N.S.B.T. and **Ganapathy, V.** # (2024). Artificial Exosomes: As

Innovative Drug Carriers for Colorectal Cancer Treatment. Chapter 6, Colorectal Cancer Diagnosis: Advancements and Applications. CRC Press (Taylor Francis), (In Press).

2. Gor, R., Queimado, L., **Ganapathy, V.**, Ramalingam, S., Floyd, E., Ramachandran, I. and Sadhasivam, B. (2024). In Vivo perspective of microrobots/ microbots in colorectal cancer. Chapter 13, Colorectal Cancer Diagnosis: Advancements and Applications. CRC Press (Taylor Francis), (In Press).

Books

1. **Ganapathy, V.** (2011). Gestational exposure to hexavalent chromium leads to specific temporal changes in the expression of androgen and estrogen receptors in the epididymis of puberal and adult rats. PhD Dissertation. University of Madras, India.
2. **Ganapathy, V.** (2011). Study on the anti-oxidant status and biochemical changes in the blood of chronic renal failure (CRF) patients. MS Dissertation. University of Madras, India.

Published Abstracts Presented at Scientific Meetings (Ganapathy, V., presented, unless indicated)

1. **Ganapathy V**, Chinnaiyan M, Brobst D, Sadhasivam B, Nshimiyimana JD, Zhao Y, Wagener T, Queimado L. (2024). Measuring oral DNA damage to evaluate electronic cigarette use as a tobacco harm reduction strategy. 84 (7_Supplement): LB086. Cancer Research. DIO: 10.1158/1538-7445.AM2024-LB086.
2. **Ganapathy V**, Manyanga J, McGuire D, Brobst D, Sadhasivam B, Chinnaiyan M, Georgescu C, Wren J, Queimado L. (2023). E-cigarette aerosol exposure increases NF-kB and modulates inflammatory markers in oral epithelial cells. 83 (7_Supplement): 4470. Cancer Research. DIO: 10.1158/1538-7445.AM2023-4470
3. Sadhasivam B, Manyanga J, **Ganapathy V**, Bouharati C, Rubenstein D, Wren J, Acharya P, Zhao D, Queimado L. (2023). Secondhand smoke exposure alters cisplatin-induced cell death and alters cell death and survival pathway in HNSCC. 83 (7_Supplement): 384. Cancer Research. DIO: 10.1158/1538-7445.AM2023-384.
4. **Ganapathy V**, Manyanga J, Queimado L. (2021). Differential expression of antioxidant and detoxifying enzymes induced by e-cigarette aerosol (vol. 81 (13)). Cancer Research. DOI: 10.1158/1538-7445.AM2021-2021
5. Sadhasivam B, Jackson CC, Smith KM, Coles T, Jhingan I, Stewart R, Hahn EH, Johnston SE, Zhao YD, **Ganapathy V**, Queimado L. (2021). DNA damage level correlates with grade of cervical dysplasia: a potential biomarker to assess cervical cancer risk (vol. 81 (13)). Cancer Research. DOI: 10.1158/1538-7445.AM2021-2547
6. Chinnaiyan M, Brobst D, Sadhasivam B, **Ganapathy V**, Johnston SE, Zhao YD, Kreml G, Queimado L. (2021). DNA damage on HPRT as a biomarker of susceptibility to tobacco-induced cancer (vol. 81 (13)). Cancer Research. DOI: 10.1158/1538-7445.AM2021-2075

7. **Ganapathy V**, Wagener TL, Queimado L. (2019). Electronic cigarettes induce DNA damage in the oral epithelium of users (vol. 79 (13), pp. 1756-1756). Cancer Research. DOI: 10.1158/1538-7445.AM2019-1756
8. Sadhasivam B, Gunderson C, Hahn EH, Johnson SE, Zhao YD, **Ganapathy V**, Queimado L. (2019). Mitochondrial DNA damage: a promising tool to screen cervical cancer risk (vol. 79 (13), pp. 4219-4219). Cancer Research. DOI: 10.1158/1538-7445.AM2019-4219
9. **Ganapathy V**, Manyanga J, McGuire D, Brobst D, Wagener T L, Rubenstein D, Ramachandran I, Queimado L. (2017). Electronic cigarette aerosols increase cellular reactive oxygen species and induce significant oxidative DNA damage (vol. 77 (13), pp. 502-502). Cancer Research. DOI: 10.1158/1538-7445.AM2017-502
10. **Ganapathy V**, Manyanga J, Brame L, Rubenstein D, Wagener TL, Ramachandran I, Queimado L. (2016). Electronic cigarettes induce significant DNA damage and reduce cellular antioxidant levels (vol. 76 (14), pp. 3593-3593). Cancer Research. DOI: 10.1158/1538-7445.AM2016-3593
11. Ramachandran I, Raju R, Brame L, **Ganapathy V**, Brabcova E, Naifeh M, Reasoner J, Krempf G, Medina J, Cheng L, Queimado L. (2016). Wnt Inhibitory Factor 1 Is Silenced By Promoter Hypermethylation In Head And Neck Cancer. JAMA Otolaryngology Head and Neck Surgery.
12. **Ganapathy V**, McGuire D, Manyanga J, Brame L, Rubenstein D, Ramachandran I, Queimado L. (2016). Electronic cigarette aerosols induce significant oxidative DNA damage (vol. 150 (1)). The Toxicologist, Supplement to Toxicological Sciences.
13. **Ganapathy V**, Ramachandran I, Queimado L. (2014). A novel assay to predict cisplatin resistance in cancer cells (vol. 74 (19), pp. 2831-2831). Cancer Research. DOI: 10.1158/1538-7445.AM2014-2831
14. Ramachandran I, **Ganapathy V**, Queimado L. (2014). Wnt inhibitory factor 1 reduces the growth and migration of human adenoid cystic carcinoma cells (vol. 74 (19), pp. 5274-5274). Cancer Research. DOI: 10.1158/1538-7445.AM2014-5274
15. **Ganapathy V**, Ramachandran I, Krempf G, Chissoe G, Zhao YD, Queimado L. (2014). DNA damage in peripheral blood cells predicts oropharyngeal cancer risk. JAMA Otolaryngology Head and Neck Surgery.
16. **Ganapathy V**, Mills WK, Thavathiru E, Ramachandran I, Chandler L. A., Reis, A., Queimado, L. (2013). A novel assay to predict susceptibility to tobacco-induced disease (vol. 73 (8), pp. 4679-4679). Cancer Research. DOI: 10.1158/1538-7445.AM2013-4679

Resource Generation and Funded Research

Current

NIH-funded R01CA242168

Queimado (PI)

2020-2025

Title: Biological Impact of Exclusive and Dual E-cigarette Use on Oral Cancer Risk

Role: Trainee/DNA Damage study Leader – contributed to study design and implementation.

Participated in all practical aspects of project from biological sample collection, to data

generation, data analysis and manuscript writing. Provided training for postdoctoral fellows and students.

Complete

NIH-funded R01CA204891 Wagener, T. L. (PI), Queimado, L. (Site PI) 2016-2022

Title: A novel molecular assay for early detection and assessment of cancer risk

Role: Trainee//DNA Damage Study Leader – Generated data for the successful completion of the grant. I implemented all the assays for the completion of Aim 3. To evaluate changes in biomarkers of toxicant effect among participants assigned to G1, G2, and UBC (Clinical Trial ID: NCT03113136) I trained other lab members including a postdoctoral fellow. Together we isolated DNA and performed qPADDa on more than 900 buccal mucosa samples. I analyzed the data and drafted the manuscript. First authorship in manuscript reporting findings (under preparation).

HPRC-FY22 Seed Grant Ganapathy (PI) 2021 - 2023

Title: Role of antioxidant and detoxification defense mechanisms in e-cigarettes induced oxidative stress," Sponsored by Oklahoma Tobacco Settlement Endowment Trust (TSET) Health Promotion Research Center, State, Total Direct Costs: \$50,000.00

Role: PI. I designed the project and lead its full implementation. I trained diverse team members including a research technician and PhD student from the OUHSC graduate of the Graduate Program in Biomedical Sciences (GPiBS). We have presented our findings locally and at a national conference. Our first manuscript titled "E-cigarette aerosols induce oxidative stress and alters the NRF2 pathway" is in the final editing stage. A follow up NIH grant submission to further expand this study is planned for early 2024.

PHF Bridge grant Queimado (PI) 2019-2020

Title: Biological impact of exclusive and dual e-cigarette use on oral cancer risk

Role: Trainee/Leading analyst – I assisted with the writing of the proposal and lead the implementation of this project. I work with a large team to assure the accuracy of data collection and data analysis. I assisted with manuscript writing. Co- authorship in manuscript reporting findings (under preparation).

PHF Bridge grant Queimado (PI) 2018-2019

Title: The Role of Electronic Cigarettes in Oral Mucosa Genotoxicity and Oncogenesis

Role: Trainee/Leading analyst – I helped with research plan implementation and generated data as a team member that contributed to the funding of R01CA242168. Lead author on manuscript reporting findings, the manuscript is titled "E-Cigarette Use and Oral Health: A Molecular Effects Perspective E-Cigarettes. [Manuscript submitted for publication]

NIH-funded R33CA202898 Queimado (PI) 2016-2020

Title: A novel molecular assay for early detection and assessment of cancer risk

Role: Trainee – Lead research plan implementation and generated data for the successful completion of the grant as a team member). Lead author on manuscript reporting findings.

OCAST Queimado (PI) 2016-2019

Title: Studying the Effects of Tobacco Smoking on Oral Stem Cells

Role: Trainee – Lead subproject characterizing the effect of tobacco on oral cancer cells. Generated data for the successful completion of the grant as a team member.

PHF grant

Queimado (PI)

2016-2017

Title: Assessing the Effects of Electronic Cigarette Aerosol on Oral Cancer Risk

Role: Trainee/DNA Damage Study Leader – Lead a subproject documenting the effects of e-cigarette aerosols on oral cells. Generated data for the successful completion of the grant as a team member).

OTRC grant

Queimado (PI)

2016-2017

Title: Studying Cancer Risk and Therapy Resistance Associated with Electronic Cigarette Use

Role: Trainee – Facilitated project implementation. Trained and guided a GPIBs PhD student and a Master Student assuring all assays were performed accurately. Generated data for the successful completion of the grant as a team member.

OTRC grant

Queimado (PI)

2013-2015

Title: Quantification and Mapping of DNA Damage Induced by E-Cigarette Components

Role: Trainee – Facilitated project implementation. Trained and guided a Master Student. Generated data for the successful completion of the grant as a team member.

OTRC grant

Queimado (PI)

2012-2014

Title: A Novel Assay to Predict Susceptibility to Tobacco-Induced Disease In Diverse Populations

Role: Trainee – I was responsible for determining if the levels of tobacco-induced DNA damage vary significantly within Native Americans according to their smoking history.

Honors, Special Recognitions and Awards

- 2022** **Recognition of Exceptional Performance and Dedication** 10 years in the Department of Otolaryngology Head and Neck Surgery Research work: *Tobacco/e-cigarette toxicity in human (in-vivo)/ head and neck cancer cells (in-vitro)*, Awarded by the Dr. Greg A. Kreml, ORL Department Chair, OUHSC
- 2021** My first authored publication has been **recognized as top 10% most-cited articles in *PLoS One***, from 2018 – 2021, to date 176 citation
Title: Electronic cigarette aerosols suppress cellular antioxidant defenses and induce significant oxidative DNA damage.
- 2018** Invited Reviewer, abstracts for the Society for Research on Nicotine and Tobacco Annual Meeting.
- 2016** I am one of the lead researchers that developed a novel DNA damage detection assay **recognized and funded by NIH/NCI (over \$1,000,000) as an Innovative Molecular Analysis Technology (IMAT), R33CA202898 (Queimado, PI).**

- 2015** I am the first author of a manuscript *recognized nationally as a “landmark study”*. This manuscript published on the *American Journal of Preventive Medicine* documented that a single puff of secondhand smoke causes significant DNA damage and was featured on “**Action To Quit**”, a national tobacco control policy program dedicated to reducing tobacco-related death, disease and cost through communication, education, and advocacy. Newsletter (April 8, 2015) <http://www.prweb.com/releases/2015/03/prweb12557818.htm>
This research was also featured on Oklahoma News 9's "Medical Minute" segment. Watch the segment here: **DNA damage induced by secondhand smoking.** <https://www.news9.com/story/5e364c6c5c62141fdeeb199b/medical-minute:-secondhand-smoke>
- 2014** I co-mentored Lacy Brame, a undergraduate student who **won the Oklahoma State Grand Prize Award for Excellence Research** at the EPSCoR Research Capitol Day on April 1, 2014, Oklahoma City, OK for the work done in Dr. Queimado’s lab. This prize included a \$10,000 award.
Title: A Novel Assay to Predict Cancer Resistance to Cisplatin.
- 2014** I co-mentored Casey Butler, a medical student who won **the Jesus E. Medina M.D. Award** for Excellence Research by a Medical Student at the 1st Annual Otorhinolaryngology Research Day, won. April 12, 2014, OUHSC, Oklahoma City, OK.
Title: Assessing in vivo DNA damage to predict susceptibility to tobacco-associated cancer.
- 2013** I co-mentored Lacy Brame a undergraduate student who won **The Outstanding Poster Presentation Award** for Summer Undergraduate Research Experience at the OUHSC Summer Research Symposium, work done in Dr. Queimado’s lab. July 19, 2013, Oklahoma City, OK.
Title: A Novel Assay to Predict Cancer Resistance to Cisplatin
- 2013** **Outstanding Poster Presentation Award (1st Place)** 2013 Stephenson Cancer Center Annual Cancer Research Symposium, OKC, OK.
Title: PADDA, A novel assay to characterize mainstream and sidestream smoke-induced DNA damage
- 2007** **Senior Research Scholarship (2007-2009):** An independent research project funded by the Indian Council of Medical Research, Government of India. Project entitled: “Molecular mechanism underlying spermatotoxicity of chromium exposure during gestational and neonatal life”.
- 2004** **University Research Scholarship (2004-2007):** An Independent research project funded by the University of Madras, Government of Tamil Nadu, India. Project entitled: “Impact of gestational exposure to chromium on androgen estrogen receptors expression in the rat epididymis during post-natal development”.

Invited talks

International

Ganapathy V, Manyanga J, Sadhasivam B, Bouharati C, Mehta T, Zhao D, and Queimado L. The Electronic Cigarette Enigma: Role in DNA Damage, Cisplatin Resistance and Stemness. International virtual learning series webinar, September 28th 2020, convener (Karpagam Academy of Higher Education), Coimbatore, Tamil Nadu, India. Oral presentation

Ganapathy V, Manyanga J, Sadhasivam B, Bouharati C, Mehta T, Zhao D, and Queimado L. Electronic Nicotine Delivery System: effects on DNA damage, cisplatin resistance and stemness in oral epithelial cells. 83rd International virtual learning series webinar, September 14th 2020, convener (Arulmigu Kalasalingam College of Pharmacy), The Tamil Nadu Dr. M.G.R. Medical University, Chennai, Tamilnadu, India. Oral presentation

Local

Ganapathy V, Manyanga J, Sadhasivam B, Chinnaiyan M., and Queimado L. Effects of e-cigarettes on oxidative stress and NRF2 pathway. April 21st, 2023, convener (The Center for Pregnancy & Newborn Health (CPNH) at the University of Oklahoma Health Sciences Center), 800 Research Park, Conference Room 407 Oklahoma City, OK. Oral presentation

Refereed Professional Presentations

International Platform Oral Presentations

Ganapathy V, Brobst D, Manyanga J, Sadhasivam B, Chinnaiyan M, and Queimado L. "E-cigarette aerosols modulate the expression of antioxidant and inflammation markers in human bronchial cells", Society for Research on Nicotine and Tobacco (SRNT) 29th Annual Meeting, San Antonio, TX, USA. March 3rd 2023. Oral presentation

Manyanga J, Bouharati C, **Ganapathy V**, Sadhasivam B, Queimado L., "Exposure to Electronic Cigarettes Aerosol Increases Cisplatin Resistance in Pharyngeal Cancer Cells", SRNT 25th Annual Meeting, Society for Research on Nicotine and Tobacco (SRNT), San Francisco, CA, USA. February 2019. Oral Presentation

Ramachandran I, Raju R., Brame L, **Ganapathy V**, Brabcova E, Naifeh M, Reasoner J, Krempf G, Medina J, Cheng, L, and Queimado L. WNT inhibitory factor 1 is silenced by promoter hypermethylation in head and neck cancer. American Head and Neck Society (AHNS) 9th International Conference on Head and Neck Cancer, July 16-20, 2016, Seattle, WA, USA. Oral presentation

Ganapathy V, Mills W, Thavathiru E, Ramachandran I, Chandler L, Reis A, Queimado L. A novel assay for assessment of tobacco-induced cancer risk. Society for research on nicotine and tobacco (SRNT) 22nd Annual Meeting March 2-5, 2016, Chicago, IL, USA. Oral presentation

Ganapathy V, Ramachandran I, Krempf G, Chisoe D, Zhao YD and Queimado L. DNA damage in peripheral blood cells predicts oropharyngeal cancer risk. The International Federation of Head and Neck Oncologic Societies (IFHNOS) 5th World Congress and the American Head and Neck Society (AHNS) 2014 Annual Meeting, July 26-30, 2014. New York, NY, USA. Oral presentation

National Platform Oral Presentations

Queimado L, Wagener T, Zhao Y, Kreml G, **Ganapathy V**. A novel molecular assay for early detection and assessment of cancer risk. 19th Annual Innovative Molecular Analysis Technologies (IMAT) Principal Investigators Meeting, November 27-29, 2018, Rockville, MD, USA. Oral presentation

Queimado L, Wagener, T, Zhao Y, Kreml G, **Ganapathy V**. A novel molecular assay for early detection and assessment of cancer risk. 18th Annual Innovative Molecular Analysis Technologies (IMAT) Principal Investigators Meeting, December 6-8, 2017, Rockville, MD, USA. Oral presentation

Local Platform Oral Presentations

Chinnaiyan M, Sadhasivam B, Coles T, Mahmood Z, Chissoe G, Brobst D, **Ganapathy V** and Queimado L. Investigating Mutagenic Risk Among POD and MOD based Electronic Cigarette Users. 11th Annual Otolaryngology Head and Neck Surgery Research Day, April 20th, 2024, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA. Oral.

Chinnaiyan M, Brobst D, Chissoe G, Sadhasivam B, **Ganapathy V**, and Queimado L. Impact of Cannabis and E-Cigarettes use and co-use on oral inflammatory Markers. 49th Annual Graduate Research Education and Technology (GREAT) Symposium, University of Oklahoma Health Sciences Center, Oklahoma City, OK, April 1-4, 2024. Oral.

Ganapathy V, Brobst D, Manyanga J, Sadhasivam B, Chinnaiyan M, and Queimado L, E-cigarette aerosols induce the expression of NRF2 and its downstream targets in human bronchial cells and modulate inflammatory markers. 2023 Stephenson Cancer Center Annual Cancer Research Symposium, March 10, 2023, Oklahoma City, OK, USA. Oral presentation

Chinnaiyan M, Milton A, Chissoe G, Sadhasivam B, **Ganapathy V**, Brobst D and Queimado L. Comparison of Puff Topography Among POD and MOD Based Electronic Cigarette Users. 10th Annual Otolaryngology Head and Neck Surgery Research Day, April 15th, 2023, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA. Oral.

Ganapathy V, Brobst D, Manyanga J, Barbara M, Sadhasivam B, Chinnaiyan M, and Queimado L. E-cigarette aerosol increases the oxidative stress and alters inflammatory markers in oral cells. 6th Annual Otolaryngology Head and Neck Surgery Research Day, April 2, 2022, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA. Oral Presentation.

Sadhasivam B, Manyanga J, **Ganapathy V**, Bouharati C, Mehta T, Mathews B, Castles S, Rubenstein D, Tackett AP, Acharya P, Zhao D, and Queimado L. Secondhand Smoke Exposure Alters Drug Transporters and Induces Cisplatin-Resistant in Head and Neck Cancer Cells. 9th Annual Otolaryngology Head and Neck Surgery Research Day, April 2, 2022, OUHSC, Oklahoma City, OK, USA. Oral Presentation.

Brobst, D, **Ganapathy V**, Chissoe G, Sadhasivam B, Chinnaiyan M, Johnson K, and Queimado L. Oral Molecular Changes in Exclusive and Dual Users of Combustible and Electronic Cigarettes. 9th Annual Otolaryngology Head. Oral Presentation

Chinnaiyan M, Chissoe G, Acharya P, Sadhasivam B, **Ganapathy V**, Brobst D, Johnson K, Zhao YD, and Queimado L. Marijuana Use And Co-Use Among Tobacco And Non-Tobacco Products Users. 9th Annual Otolaryngology Head and Neck Surgery Research Day, April 2, 2022, OUHSC, Oklahoma City, OK, USA. Oral Presentation.

Coles T, Sadhasivam B, Chinnaiyan M, Chissoe G, **Ganapathy V**, Brobst D, Johnson K, and Queimado, L. Evaluation of E-cigarette Mutagenicity in Vapers Using Ames Test. 9th Annual Otolaryngology Head and Neck Surgery Research Day, April 2, 2022, OUHSC, Oklahoma City, OK. USA. Won Jesus E. Medina M.D. Award for Excellence in Research by a Medical Student. Oral presentation

Milton A, Chinnaiyan M, Chissoe G, Brobst D, Sadhasivam B, **Ganapathy V**, and Queimado L. Puff Topography Among Single and Dual Users of Combustible Cigarettes, Pod-Based, and Mod-Based Electronic Cigarettes. 9th Annual Otolaryngology Head and Neck Surgery Research Day, April 2, 2022, OUHSC, Oklahoma City, OK. Oral Presentation.

Sadhasivam B., Raj V, Hahn EH, **Ganapathy V**, Chinnaiyan M, Wagener TL, and Queimado L. E-Cigarette and mitochondria: implications on oral health. 8th Annual Otolaryngology Head and Neck Surgery Research Day, May 8, 2021, OUHSC, Oklahoma City, OK. USA. Oral Presentation.

Sadhasivam B., Gunderson C., Coles T, Stewart R, Hahn EH, Johnson SE, Zhao YD, **Ganapathy V**, and Queimado L. Nuclear DNA Damage as a Potential Tool to Predict Cervical Cancer Risk. NIH Virtual IDeA Program Meeting, September 22, 2020. USA. Oral Presentation.

Queimado L., Theodore L, Wagener, Zhao D, Sadhasivam B, Chinnaiyan M., **Ganapathy V**, Electronic cigarettes as a harm reduction strategy: a DNA damage perspective. 9th Annual Stephenson Cancer Center Research Symposium, Feb 7th, 2020, OUHSC, Oklahoma City, OK, USA. Oral presentation

Ganapathy V, Johnston SE, Zhao YD, Wagener TL, Queimado L. "DNA damage detection in the oral epithelium of electronic cigarette users and tobacco smokers", 6th Annual Otolaryngology Head and Neck Surgery Research Day, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA., April 27, 2019. Oral presentation

Brobst D, **Ganapathy V**, Sadhasivam B, Chinnaiyan M, Queimado L. "Expanding and Validating PADD: Moving a Novel DNA Damage Detection Assay to New Genes", 6th Annual Otolaryngology Head and Neck Surgery Research Day, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA., April 27, 2019. Oral presentation

Manyanga J, Bouharati C, Mehta TR, Sadhasivam B, Zhao YD, **Ganapathy V**, Queimado L. "In vitro effects of e-cigarettes in therapy resistance: Implications for clinical practice", 6th Annual Otolaryngology Head and Neck Surgery Research Day, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA. April 27, 2019. Oral presentation

Sadhasivam B, Gunderson CC, Hahn EH, Johnston SE., Zhao YD, **Ganapathy, V**, Queimado L., "Optimization of mitochondrial DNA damage detection to predict cancer risk", 6th Annual Otolaryngology Head and Neck Surgery Research Day, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA. April 27, 2019. Oral presentation

Chinnaiyan M, Brobst D, **Ganapathy V**, Sadhasivam B, Queimado L. "Quantification of DNA damage on HPRT as a biomarker of cancer risk", 6th Annual Otolaryngology Head and Neck Surgery Research Day, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA., April 27, 2019. Oral presentation

Sadhasivam B, Gunderson C, Hahn E, Johnston S, Zhao Y, **Ganapathy V**, Queimado L. "Mitochondrial DNA damage: a promising tool to screen cervical cancer risk", 44th Annual Graduate Research Education and Technology (GREAT) Symposium, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA, April 2019. Oral presentation

Queimado L, Manyanga J, Brame L, McGuire D, Sadhasivam B, Floyd, E, Brobst D, Zhao D, Rubenstein D, Wagener T, Ramachandran I, and **Ganapathy V**, Electronic Cigarette aerosols induce DNA damage and decrease repair. 7thAnnual Stephenson Cancer Center Research Symposium, Feb 2, 2018, OUHSC, Oklahoma City, OK, USA. Oral presentation

Ganapathy V, Manyanga J, Sadhasivam B, Brobst D, Wagener T, Floyd E, Zhao Y, and Queimado, L. Electronic cigarette aerosol induces differential gene expression of antioxidant and detoxifying enzymes in head and neck cancer cells. 5th Annual Otolaryngology Head and Neck Surgery Research Day, OUHSC, April 7, 2018, Oklahoma City, OK, USA. Oral presentation

Sadhasivam B, Brobst D, **Ganapathy V**, Manyanga J, Kreml G, Vasan N, Cannon T, Medina T, Wagener T, Floyd E, Zhao D, and Queimado L. Cancer risk assessment in tobacco exposed populations. 5th Annual Otolaryngology Research Day, April 7, 2018, Oklahoma City, OK, USA. Oral presentation

Manyanga J, Bouharati C, Sadhasivam B, **Ganapathy V**, and Queimado L. The Electronic Cigarette Enigma: Role in DNA Damage and Stemness. 42nd Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, April, 12, 2018, Oklahoma City, OK, USA. Flash talk, 1ST Place Judged Winner. Oral presentation

Manyanga J, Bouharati C, **Ganapathy V**, and Queimado, L. Mechanisms of Cisplatin Resistance Induced by Secondhand Smoke Exposure. 42nd Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, April, 2018, Oklahoma City, OK, USA. Oral presentation

Manyanga J, Sadhasivam B, Bouharati C, **Ganapathy V**, Mehta T, Brobst D, and Queimado L. Mechanisms of Cisplatin Resistance Induced by Secondhand Smoke Exposure. 5th Annual Otolaryngology Head and Neck Surgery Research Day, OUHSC, April 7, 2018, Oklahoma City, OK, USA. Oral presentation

Sadhasivam B, Brobst D, **Ganapathy V**, Zhao D, and Queimado L. Cancer risk assessment in tobacco exposed populations. 5th Annual Otolaryngology Head and Neck Surgery Research Day, OUHSC, April 7, 2018, Oklahoma City, OK, USA. Oral presentation

Queimado L, Manyanga J, Brame L, McGuire D, Sadhasivam B, Floyd E, Brobst D, Zhao D, Rubenstein D, Wagener T, Ramachandran I, and **Ganapathy V**. Electronic Cigarette aerosols induce DNA damage and decrease repair. Society for Research on Nicotine and Tobacco 24th Annual Meeting, February 21-24, 2018, Baltimore, MD, USA. Oral presentation

Manyanga J, Bouharati C, **Ganapathy V**, and Queimado L. Electronic cigarettes: effects on DNA damage, cisplatin resistance and stemness in oral epithelial cells. Cell Biology (Cell 6010) Graduate Research Seminar. November 28, 2017. OUHSC, Oklahoma City, OK, USA. Oral presentation

Ganapathy V, Ramachandran I, Brobst D, Manyanga J, Sadhasivam B, Mowls D, Kreml G, Zhao D, and Queimado L. High sensitivity DNA damage detection assay: A novel tool to assess head and neck cancer risk. 4th Annual Otolaryngology Research Day, April 8, 2017, Oklahoma City, OK, USA. Oral presentation

Manyanga J, Sadhasivam B, **Ganapathy V**, and Queimado L. Secondhand Smoke Increases Cisplatin Resistance in Oral Cancer Cells. 4th Annual Otolaryngology Head and Neck Research Day, OUHSC, April 8, 2017, Oklahoma City, OK, USA. Oral presentation

Sadhasivam B., **Ganapathy V**, Brobst D, Manyanga J, and Queimado L. DNA Damage detection: sensitivity among q-PADDA, comet and LORD-Q assays. 4th Annual Otolaryngology Head and Neck Research Day, OUHSC, April 8, 2017, Oklahoma City, OK, USA. Oral presentation

Manyanga J, Bouharati C, **Ganapathy V**, Queimado L. Electronic cigarettes: effects on DNA damage, cisplatin resistance, and stemness in oral epithelial cells. Cell Biology (Cell 6010) Graduate Research Seminar. OUHSC, November 15, 2016, Oklahoma City, OK, USA. [Oral presentation](#)

Ganapathy V, Manyanga J, Brame L, Rubenstein DA, Wagener T, Ramachandran I, and Queimado L. Short- and long-term exposure to electronic cigarette aerosols induce significant DNA damage. OUHSC 3rd Annual Otorhinolaryngology Research Day, May 21, 2016, Oklahoma City, OK, USA. Oral presentation

McGuire D, **Ganapathy V**, Manyanga J, Brame L, Rubenstein DA, Wagener T, Ramachandran I, and Queimado L. Electronic cigarettes induce oxidative DNA damage and suppress repair mechanisms. OUHSC 3rd Annual Otorhinolaryngology Research Day, May 21, 2016, Oklahoma City, OK, USA. Oral presentation

Manyanga J, Bouharati C, **Ganapathy V**, and Queimado L. Electronic cigarette aerosol increases cisplatin resistance in oral epithelial cancer cells. OUHSC 3rd Annual Otorhinolaryngology Research Day. Oklahoma City, OK, USA, May 21, 2016. Oral presentation

Ganapathy V, Manyanga J, Brame L, Rubenstein DA, Wagener T, Ramachandran I, and Queimado L. Short- and long-term exposure to electronic cigarette aerosols induce significant DNA damage. OUHSC 3rd Annual Otorhinolaryngology Research Day, May 21, 2016, Oklahoma City, OK, USA. Oral presentation

McGuire D, **Ganapathy V**, Manyanga J, Brame L, Rubenstein DA, Wagener T, Ramachandran I, and Queimado L. Electronic cigarettes induce oxidative DNA damage and suppress repair mechanisms. OUHSC 3rd Annual Otorhinolaryngology Research Day, May 21, 2016, Oklahoma City, OK, USA. Oral presentation

Manyanga J, Bouharati C, **Ganapathy V** and Queimado L. Electronic cigarette aerosol increases cisplatin resistance in oral epithelial cancer cells. OUHSC 3rd Annual Otorhinolaryngology Research Day, May 21, 2016, Oklahoma City, OK, USA. Poster presentation

Mathew B, Mannyanga J, **Ganapathy V**, Rubenstein D and Queimado L. Effects of E-cigarette aerosols on oral epithelial stem cells. OTRC Summer Scholar Program Final Presentation Seminar. Aug. 12, 2015, Oklahoma City, OK, USA, Oral presentation

Ganapathy V, Mills W, Jinkins J, Ramachandran I, Chandler L, Chisoe G and Queimado L. A novel DNA damage detection assay to predict high risk of oropharyngeal cancer. 2nd Annual Otolaryngology Research Day, April 18, 2015, Oklahoma City, OK, USA. Oral presentation

Brame L, **Ganapathy V**, Ramachandran I, Wagener T, Rubenstein D. and Queimado L. Exposure to electronic-cigarette aerosol extract induces significant DNA damage. 2nd Annual Otolaryngology Research Day, April 18, 2015. Oklahoma City, OK, USA. Oral presentation

Mannyanga J, **Ganapathy V**, Rubenstein D and Queimado L. Mainstream and sidestream smoke regulate normal and cancer epithelial cell stemness. 2nd Annual Otolaryngology Research Day, April 18, 2015, Oklahoma City, OK, USA. Oral presentation

Ganapathy V, Mills W, Jinkins J, Ramachandran I, Chandler L, Chisoe G and Queimado L. A novel DNA damage assay to improve cancer risk assessment and early diagnosis. Emerging topics in genome instability Symposium, April 9-10, 2015, Oklahoma Medical Research Foundation, Oklahoma City, OK, USA. Oral presentation

Ganapathy V, Kabbani MA, Woods C, Mowls D, Ramachandran I, Chisoe D, Krempf G, Zhao YD, Queimado L. A unique DNA damage detection assay for early diagnosis of oropharyngeal cancer. 39th Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, OUHSC, April 1, 2015, Oklahoma City, OK, USA. Oral presentation

Butler C, Mills WK, Thavathiru E, **Ganapathy V**, Chandler L, Chisoe G, Reis A and Queimado L. Assessing in vivo DNA damage to predict susceptibility to tobacco-associated cancer. 1st Annual Department of Otorhinolaryngology Research Day, OUHSC, April 12, 2014. Oklahoma City, OK, USA. Won the Jesus E. Medina M.D. Award for Excellence Research by a Medical Student. Oral presentation.

Ganapathy V, Ramachandran I, Rubenstein D and Queimado L. A Unique Assay Detects *in vivo* DNA Damage in Human Oral Cells Exposed to Low Doses of Tobacco Smoke Extracts. 1st Annual Department of Otorhinolaryngology Research Day, OUHSC, April 12, 2014. Oklahoma City, OK, USA. Oral presentation

Brame L, **Ganapathy V**, Ramachandran I and Queimado L. A novel assay to predict cancer resistance to cisplatin. 1st Annual Department of Otorhinolaryngology Research Day, OUHSC, April 12, 2014, Oklahoma City, OK, USA. Oral presentation

Ganapathy V, Mills WK, Thavathiru E, Ramachandran I, Chandler L, Reis A and Queimado L. A novel assay to predict susceptibility to tobacco-induced disease. 37th Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, OUHSC, April 1, 2013, Oklahoma City, OK, USA. Oral presentation

International Poster Presentations

Ganapathy V, Chinnaiyan M, Brobst D, Sadhasivam B, Nshimiyimana JD, Zhao Y, Wagener T, Queimado L. Measuring oral DNA damage to evaluate electronic cigarette use as a tobacco harm reduction strategy. AACR Annual Meeting 2024, San Diego, CA, April 2024. Poster presentation

Ganapathy V, Manyanga J, McGuire D, Brobst D, Sadhasivam B, Chinnaiyan M, Georgescu C, Wren J, Queimado L. E-Cigarette Aerosol Exposure Increases NF-KB and Modulates Inflammatory Markers in Oral Epithelial Cells, AACR Annual Meeting 2023, Orlando, FL, April 2023. Poster presentation

Sadhasivam B, Manyanga J, **Ganapathy V**, Bouharati V, Rubenstein D, Wren J, Acharya P, Zhao D, Queimado L. Secondhand Smoke Exposure Alters Cisplatin-induced Cell Death and Alters Cell Death and Survival Pathway in HNSCC, AACR Annual Meeting 2023, American Association for Cancer Research, Orlando, FL, April 2023. Poster presentation

Sadhasivam B, Chinnaiyan M, Coles T, Chissoe G, Brobst D, **Ganapathy V**, and Lurdes Queimado L. E-Cigarette Use Increases Mutagenicity Among Vaping Population In Oklahoma. SRNT 29th Annual Meeting, Society for Research on Nicotine and Tobacco (SRNT), San Antonio River walk, TX, March 2023. Poster presentation

Chinnaiyan M, Chissoe G, Acharya P, Sadhasivam B **Ganapathy V**, Brobst D, Zhao YD and Queimado L. Prevalence of marijuana use and co-use among tobacco product users in Oklahoma City metropolitan population. SRNT 29th Annual Meeting, Society for Research on Nicotine and Tobacco (SRNT), San Antonio River walk, TX, March 2023. Poster presentation

Ganapathy V, Brobst D, Manyanga J, and Queimado L. E-cigarette aerosol alters the expression of antioxidant and detoxification enzymes and inflammatory markers in lung cells. 2022 Stephenson Cancer Center Annual Cancer Research Symposium, March 4, 2022, Virtual Meeting. USA. Virtual Poster presentation

Sadhasivam B, Manyanga J, **Ganapathy V**, Bouharati C, Mehta T, Mathews B, Castles S, Rubenstein D, Tackett AP, Acharya P, Zhao D, and Queimado L. Cisplatin Resistance In Head And Neck Cancer: Impact Of Secondhand Smoke Exposure. American Head and Neck Society (AHNS) Annual Meeting at COSM 2022, April 27-28, 2022, Dallas, TX. USA. *Awarded the Stephenson Cancer Center Trainee Research Conference and Workshop Travel Award*. Poster presentation

Sadhasivam B, Raj V, Hahn EH, **Ganapathy V**, Wagener TL, and Queimado L. E-cigarette aerosol increases mitochondrial biogenesis in oral epithelial cells. Society for Research on Nicotine and Tobacco (SRNT) 27th Annual Meeting, February 24-27, 2021, Virtual Meeting. Virtual Poster presentation.

Chinnaiyan M, Brobst D, Sadhasivam B, **Ganapathy V**, Johnston SE, Zhao YD, Kreml G, and Queimado L. DNA damage on HPRT as a biomarker of susceptibility to tobacco-induced cancer.

American Association for Cancer Research (AACR) Annual Meeting 2021, April 10-15, 2021, Virtual Meeting. USA. *Awarded the Stephenson Cancer Center Travel Award.* Poster presentation

Ganapathy V, Manyanga J, and Queimado L. Differential Expression of Antioxidant and Detoxifying Enzymes Induced by E-cigarette Aerosol. American Association for Cancer Research (AACR) Annual Meeting 2021, April 10-15, 2021, Virtual Meeting. USA. Virtual Poster presentation.

Sadhasivam B, Jackson CG, Smith KM, Coles T, Jhingan I, Stewart R, Hahn EH, Johnston SE, Zhao YD, **Ganapathy V**, and Queimado L. DNA damage level correlates with grade of cervical dysplasia: A potential biomarker to assess cervical cancer risk. American Association for Cancer Research (AACR) Annual Meeting 2021, April 10-15, 2021, Virtual Meeting. Awarded the Stephenson Cancer Center Travel Award. *Virtual poster presentation*

Ganapathy V, Manyanga J, Brobst D, Georgescu C, Wren J, and Queimado L. E-Cig Aerosol Reduces the Expression of Key Antioxidant Regulators and Increases Inflammatory Markers. Society for Research on Nicotine and Tobacco (SRNT) 27th Annual Meeting, February 24-27, 2021, Virtual Meeting. USA. Virtual poster presentation.

Manyanga J, **Ganapathy V**, Brobst D, Georgescu C, Wren J, and Queimado L. Exposure to E-cigarette Aerosol Extracts Alters the Expression of Cytochrome P450 Mono-oxygenase Enzymes SRNT 27th Annual Meeting, Feb 24-27, 2021, Baltimore, Maryland, USA. Poster presentation

Ganapathy V, Manyanga J, Queimado. Electronic Cigarette Aerosol Induces Differential Gene Expression of Antioxidant and Detoxifying Enzymes in Human Oral Epithelial Cells, AACR Annual Meeting 2020, American Association for Cancer Research (AACR), San Diego, CA, USA, April 2020. Poster presentation

Sadhasivam B, Gunderson CC, Coles T, Stewart R, Hahn EH, Johnston SE, Zhao Y D, **Ganapathy, V**, Queimado L. DNA Damage Detection by Q-PADDA: A Promising Biomarker to Assess Cervical Cancer Risk, AACR Annual Meeting 2020, American Association for Cancer Research (AACR), San Diego, CA, USA. April 2020. Poster presentation

Chinnaiyan M, Brobst D, Sadhasivam B, **Ganapathy V**, Johnston SE, Zhao YD, Kreml G, Queimado L. DNA Damage on HPRT as a Biomarker of Susceptibility to Tobacco-Induced Cancer, AACR Annual Meeting 2020, American Association for Cancer Research (AACR), San Diego, CA, USA, April 2020. Poster presentation

Queimado L, Wagener TL, Zhao YD, Sadhasivam B, Chinnaiyan M, **Ganapathy V**. Using In Vivo DNA Damage to Assess Electronic Cigarettes as a Harm Reduction Tool", SRNT 26th Annual Meeting, Society for Research on Nicotine and Tobacco (SRNT), New Orleans, LA, USA, March 2020. Poster presentation

Ganapathy V, Wagener T, and Queimado L. Electronic cigarettes induce DNA damage in the oral epithelium of users. American Association for Cancer Research (AACR) 110th Annual meeting, March 29-April 3, 2019, Atlanta, GA, USA. Poster presentation

Sadhasivam B, Gunderson C, Hahn E, Johnston S, Zhao YD, **Ganapathy V** and Queimado L. Mitochondrial DNA damage: a promising tool to screen cervical cancer risk. American

Association for Cancer Research (AACR) 110th Annual meeting, March 29-April 3, 2019, Atlanta, GA, USA. Poster presentation

Manyanga J, **Ganapathy V**, Rubenstein D, Wagener T and Queimado L. Electronic cigarettes increase cellular reactive oxygen species and reduce cellular antioxidant capacity. Society for Research on Nicotine and Tobacco (SRNT) 23rd Annual Meeting, March 8-11, 2017, Florence, Italy. Poster presentation

Queimado L, Manyanga J, Brame L, McGuire D, Rubenstein D, Wagener T, Ramachandran I, Zhao D, and **Ganapathy V**. Electronic cigarette aerosol extracts significant DNA damage in normal and cancer cells. Society for Research on Nicotine and Tobacco (SRNT) 23rd Annual Meeting, Florence, Italy. March 8-11, 2017. Poster presentation

Ganapathy V., Zhao D, Manyanga J, McGuire D, Brobst D, Wagener T, Rubenstein D, Ramachandran, I., and Queimado, L. Electronic cigarette aerosols increase cellular reactive oxygen species and induce significant oxidative DNA damage. American Association for Cancer Research (AACR) 108th Annual meeting, April 1 - 5, 2017, Washington, D.C., USA. Poster presentation

Manyanga J, Bouharati C, **Ganapathy V**, Sadhasivam B, and Queimado L. Active and Passive Smoking Increase Epithelial Normal and Cancer Stemness and Induce Drug Resistance. 6th Annual Stephenson Cancer Center Research Symposium, January 27, 2017, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, McGuire D, Manyanga J, Brame L, Rubenstein D, Ramachandran I and Queimado L. Electronic cigarette aerosols induce significant oxidative DNA damage. The Society of Toxicology 55th Annual Meeting and ToxExpo, March 13–17, 2016, New Orleans, Louisiana, USA. Poster presentation

Manyanga J, **Ganapathy V** and Queimado L. Active and passive smoking increase epithelial normal and cancer stemness. 2016 Society for Research on Nicotine and Tobacco 22nd Annual Meeting. March 2-5, 2016. Chicago, IL, USA. Poster presentation

Mathews B, Manyanga J, **Ganapathy V** and Queimado L. Nicotine activates the WNT/beta-catenin pathway and increases the stemness of head and neck cancer cells. Society for Research on Nicotine and Tobacco 22nd Annual Meeting. March 2-5, 2016. Chicago, IL, USA. Poster presentation

Ganapathy V, Ramachandran I, and Queimado L., A novel assay to predict cisplatin resistance in cancer cells. American Association for Cancer Research (AACR) 105th Annual meeting, April 6-10, 2014, San Diego, California, USA. Poster presentation

Ramachandran I, **Ganapathy V**, Queimado L. Wnt inhibitory factor 1 reduces the growth and migration of human adenoid cystic carcinoma cells. American Association for Cancer Research (AACR) 105th Annual meeting, April 6-10, 2014, San Diego, California, USA. Poster presentation

Ganapathy V, Mills, W, Thavathiru E, Ramachandran I, Chandler L, Reis A, Queimado L. A novel assay to predict susceptibility to tobacco-induced disease. American Association for Cancer Research (AACR) 104th Annual meeting, April 6-10, 2013, Washington, DC, USA. Poster presentation

Kumar KM, Banu S, **Ganapathy V**, Balaji S, Shobana N, Akbarsha MA, Stanley JA, Banu SK, Aruldas MM. Transient gestational exposure to hexavalent chromium-induced infertility of the male progeny is associated with decreased expression of Sertoli cell nuclear receptors. 46th Annual Meeting of the Society for the Study of Reproduction, "Reproductive Health: Nano to Global", July 2013, Montréal, Québec, Canada. Poster presentation

National Poster Presentations

Chinnaiyan M, Brobst D, Chissoe G, Sadhasivam B, **Ganapathy V** and Queimado L. Insights into Oral Inflammation: A Study on Cannabis and Tobacco Products Use. Cannabis Clinical Outcomes Research Conference (CCORC) 2024, Orlando, Florida. Poster (accepted), May 2024.

Chinnaiyan M, Chissoe G, Acharya P, Sadhasivam B, **Ganapathy V**, Brobst D, Zhao Y, Queimado L. Prevalence of marijuana use and co-use among combustible tobacco and electronic cigarette users in Oklahoma City metropolitan population, 7th Annual Conference of Research Society on Marijuana (RSMj), Long Beach, CA, July 2023. Poster presentation

Kumar KM, Banu SL, **Ganapathy, V.**, Balaji S, Shobana N, Stanley JA, Banu SK, Akbarsha MA, Aruldas MM. In-utero hexavalent chromium exposure decreased expression of Sertoli cell nuclear receptors. XXXII – National symposium of Society for reproductive biology and comparative endocrinology, held at Holy Cross College, Trichy, Tamil Nadu, India – January 2014. Won the First Prize for Best Poster Presentation. Poster presentation

Balaji S, Kumar MK, Sheerin Banu L, **Ganapathy V**, Shobana N, Navin AK, Akbarsha MA, Srinivasan N, Aruldas MM. Gestational exposure to hexavalent chromium disrupts pituitary - testis axis and hormone receptors in Sertoli cells of F₁ progeny. International Conference on Recent trends in Biomedical Sciences and 32nd Annual Meeting of the Society for Reproductive Biology and Comparative Endocrinology, Holy Cross College, Trichy, Tamil Nadu, India, 7th to 9th Jan 2014. Poster presentation

Kumar KM, Karthick Ganesh M, **Ganapathy V**, Akbarsha MA and Michael Aruldas. Transient gestational exposure to hexavalent chromium (CrVI)– affects the sex determination of Wistar rats. XXX-National symposium of National symposium of Society for Reproductive Biology and Comparative Endocrinology, held at University of Karnataka, Dharwad, India – January 2013. Won the First Prize for Best Poster Presentation. Poster presentation

Sheerin Banu L, Kathiresh Kumar M, Balaji S, Navin AK, **Ganapathy V**, Srinivasan N, Jayaraman G and Aruldas MM. Transient exposure of pregnant rats to CrVI alters the expressions of specific cell surface and nuclear receptors in Sertoli cells of adult progeny. National Conference and 30th Annual Symposium of the Society for Reproductive Biology and Comparative Endocrinology on Novel Aspects and Emerging Trends in Reproduction and Endocrinology, Department of Zoology, University College of Science, Mohanlal Sukhadia University, 30th Jan-1st February, 2012, Udaipur, India. Poster presentation

Balaji S, Indira A, Kathiresh Kumar M, Sheerin Banu L, **Ganapathy V**, Srinivasan N, Jayaraman G and Aruldas MM. Expression patterns of androgen, estrogens, thyroid hormones and retinoid X receptors mRNA in Sertoli cells of postnatal rats with transient gestational exposure to hexavalent chromium. International Symposium on Current Trends in Endocrine and

Reproductive Health and 29th Annual Meeting of the Society for Reproductive Biology and Comparative Endocrinology. Department of Zoology, Mysore University, 10th to 12th Feb 2011, Karnataka, India. Poster presentation

Sheerin Banu L, Kathiresk Kumar M, Balaji S, **Ganapathy V**, Srinivasan N, Jayaraman G, and Aruldas MM. Transient gestational exposure to CrVI alters the mRNA expressions of steroid/thyroid receptors in Sertoli cells of pre-puberal rats. International symposium on current trends in Endocrine and Reproductive health and 29th Annual meeting of the Society for Reproductive Biology and Comparative Endocrinology. Department of Zoology, Mysore University, 10th to 12th February 2011, Karnataka, India. Poster presentation

Kathiresk Kumar M, Sheerin Banu L, Balaji S, **Ganapathy V**, Srinivasan N, Jayaraman G, and Aruldas MM. Transient neonatal exposure of hexavalent chromium modifies tight junction proteins in adult rat Sertoli cells. International Symposium on Current Trends in Endocrine and Reproductive Health and 29th Annual Meeting of the Society for Reproductive Biology and Comparative Endocrinology. Department of Zoology, Mysore University, 10th to 12th February 2011, Karnataka, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Mechanism underlying infertility of male rats subjected to gestational exposure to hexavalent chromium” in 28th National symposium on “Reproductive Biology and Comparative Endocrinology, Jawaharlal Nehru University, February 2010, New Delhi, India. _Poster presentation

Ganapathy V, Aruldas MM *et.al.* Impaired sperm forward motility in rats with gestational exposure to CrVI is associated with normal AR expression in the epididymis” in 27th National symposium on Reproductive Biology and Comparative Endocrinology, University of Hyderabad, January 2009, Hyderabad, India. Poster presentation

Kumar KM, Banu SL, **Ganapathy V**, Stanley JA, Anbalagan J, Suthagar E, Akbarsha MA, Srinivasan N, Jayaraman G, Aruldas MM. Transient neonatal exposure to hexavalent chromium results in specific changes in Sertoli cell nuclear receptors of pre-puberal rats. International Conference on, “Frontiers in Biomedical Sciences”, held at Holy Cross College, August 2009, Tamil Nadu, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Gestational exposure to chromium modulates the expression of ER isoforms in the epididymis of puberal rats in a dose- and duration-dependent manner in 26th National symposium on Reproductive Biology and Comparative Endocrinology, Holy Cross College, January 2008, Trichi, India. Poster presentation

Kanchana K, Anbalagan J, Kumar KM, **Ganapathy V**, Stanley JA, Aruldas MM. Transient neonatal hypothyroidism-induced changes in the mrna expression pattern of FSHR, 5 α -reductase (type I/II) in Sertoli cells of adult wistar rats. XXVI – National symposium of Society for reproductive biology and comparative endocrinology, held at Holy Cross College, January. 2008, Trichy, Tamil Nadu, India. Poster presentation

Kumar KM, Kanchana K, Anbalagan J, **Ganapathy V**, Stanley JA, Aruldas MM. Transient neonatal hypothyroidism-induced changes in the mrna expression pattern of LHR, 5 α -reductase (type I/II) in Leydig cells of adult Wistar rats. XXVI – National symposium of Society for

reproductive biology and comparative endocrinology, held at Holy Cross College, January. 2008, Trichy, Tamil Nadu, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Impact of gestational exposure of chromium on the transcription and translation of the androgen receptor in the epididymis of pubertal rats in 25th National Symposium on Reproductive Biology and Comparative Endocrinology held at Kovalam, University of Kerala, January 2007, Kerala, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Gestational and neonatal exposure to chromium disrupts pituitary –testicular axis in post-natal rats in 24th National Symposium on Reproductive Biology and Comparative Endocrinology. Indian Institute of Technology, February 2006, Roorkee, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Effect of persistent chromium exposure from gestation to adulthood on androgen and estrogen receptors concentration and their gene expression in the epididymis of adult rats in 23rd National Symposium on Reproductive Biology and Comparative Endocrinology, VisvaBarathi, Central University, February 2005, Santiniketan, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Persistent exposure to chromium from gestation period decreased the specific activity of antioxidant enzymes in the epididymis for adult rats” in 22nd National symposium on Reproductive Biology and Comparative Endocrinology, University of Madras, January 2004, Chennai, India. Poster presentation

Ganapathy V, Aruldas MM *et.al.* Transient hypothyroidism during the second week of gestation has a temporal and region specific effect on the histoarchitecture of the epididymis at prepuberal, puberal and adult rats in 21st National symposium on Reproductive Biology and Comparative Endocrinology. Banaras Hindu University, February 2003, Varanasi, India. Poster presentation

Local Poster Presentations

Chinnaiyan M, Sadhasivam B, Coles T, Mahmood Z, Chissoe G, Brobst D, **Ganapathy V** and Queimado L. Assessing Mutagenic Risk Among POD and MOD based E-Cigarette Users. 2024 Stephenson Cancer Center Annual Cancer Research Symposium, Poster, March 2024.

Chinnaiyan M, Chissoe G, Acharya P, Sadhasivam B, **Ganapathy V**, Brobst D, Zhao YD, and Queimado L. Prevalence of marijuana use and co-use among combustible tobacco and electronic cigarette users in Oklahoma City metropolitan population. 7th Annual RSMj Meeting. The Research Society on Marijuana (RSMj). Long Beach, California. Poster, July 21 – 23, 2023.

Chinnaiyan M, Milton A, Chissoe G, Sadhasivam B, **Ganapathy V**, Brobst D and Queimado L. Comparison of Puff Topography Among POD and MOD Based Electronic Cigarette Users. 2nd Annual Translational Institute Research Meeting Day. April 2023. University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA. Poster.

Sadhasivam B, Chinnaiyan M, Coles M, Chissoe M, Brobst D, **Ganapathy V**, Queimado L. Increased mutagenicity observed in Oklahoma vaping population. March 10, 2023, Stephenson Cancer Center Annual Cancer Research Symposium, Oklahoma City, OK, USA. Poster.

Chinnaiyan M, Chissoe G, Acharya P, Sadhasivam B, **Ganapathy V**, Brobst D, Johnson K, Zhao YD, and Queimado L. Prevalence of marijuana use and co-use among combustible tobacco and electronic cigarette users. 2022 Stephenson Cancer Center Annual Cancer Research Symposium, March 4, 2022, Virtual Meeting. USA. Virtual poster presentation.

Milton A, Chinnaiyan M, Chissoe G, Brobst D, Sadhasivam B, **Ganapathy V**, and Queimado L. Puffing Topography Among Exclusive Combustible Cigarette Users and Dual Users of Cigarettes and Pod-Based or Mod-Based Electronic Cigarettes. 2022 Stephenson Cancer Center Annual Cancer Research Symposium, March 4, 2022, Virtual Meeting. USA. Virtual poster presentation.

Sadhasivam B, Manyanga J, **Ganapathy V**, Bouharati C, Mehta T, Mathews B, Castles S, Rubenstein D, Tackett AP, Acharya P, Zhao D, and Queimado L. Secondhand Smoke Exposure Alters Drug Transporters and Induces Cisplatin-Resistant in Head and Neck Cancer Cells. 2022 Stephenson Cancer Center Annual Cancer Research Symposium, March 4, 2022, Virtual Meeting. USA. *Won second place prize for Outstanding Poster Presentation.* Virtual poster presentation

Sadhasivam B, Raj V, Hahn EH, **Ganapathy V**, Chinnaiyan M, Wagener TL, and Queimado L. E-Cigarette Aerosol Alters Mitochondria DNA Damage and Biogenesis. 2021 Stephenson Cancer Center Annual Cancer Research Symposium, February 5, 2021, Virtual Meeting. *Won second place prize for Outstanding Poster Presentation.* Virtual poster presentation

Ganapathy V, Manyanga J, Brobst D, Georgescu C, Wren J, and Queimado L. E-Cigarette Aerosol Alters Antioxidant Master Regulator and Modulates Inflammatory Responses in Oral Epithelial Cells. 2021 Stephenson Cancer Center Annual Cancer Research Symposium, February 5, 2021, Virtual Meeting. Virtual poster presentation.

Chinnaiyan M, **Ganapathy V**, Sadhasivam B, Zhao YD, Wagener TL, and Queimado L. Measuring DNA Damage to Assess the Use of Electronic Cigarettes as a Tobacco Harm Reduction Strategy. 2021 Stephenson Cancer Center Annual Cancer Research Symposium, February 5, 2021, Virtual Meeting. *Won first place prize for Outstanding Poster Presentation. Won Flash Talk Award.* Virtual poster presentation

Ganapathy V, Manyanga J, Queimado L. E-cig aerosol alters anti-oxidant and detoxifying enzyme expression levels in the human oral epithelial cells. 9th Annual Stephenson Cancer Center Research Symposium, Feb 7th, 2020, OUHSC, Oklahoma City, OK, USA. Poster presentation

Manyanga J, **Ganapathy V**, Georgescu C, Wren J, and Queimado L. Effects of e-cigarette aerosol extracts on cytochrome p450 monooxygenase enzymes. 9th Annual Stephenson Cancer Center Research Symposium, Feb 7th, 2020, OUHSC, Oklahoma City, OK, USA. Poster presentation

Sadhasivam B, Gunderson C, Coles T, Stewart R, Elizabeth H, Johnston S, Zhao D, **Ganapathy V**, Queimado L. DNA damage detection by q-PADDA: a promising tool for assessment of cervical cancer risk. 9th Annual Stephenson Cancer Center Research Symposium, Feb 7th, 2020, OUHSC, Oklahoma City, OK, USA. Poster presentation

Chinnaiyan M, Brobst D, Sadhasivam B, **Ganapathy V**, Johnston J, Zhao D, Kempl G, and Queimado L. Quantification of DNA damage on HPRT as a biomarker of cancer risk. 9th Annual Stephenson Cancer Center Research Symposium, Feb 7th, 2020, OUHSC, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Wagener T, and Lurdes Queimado. PADDAs, A novel assay, detects high levels of DNA damage in oral epithelium of electronic cigarette users. 8th Annual Stephenson Cancer Center Research Symposium, Feb 1, 2019, OUHSC, Oklahoma City, OK, USA. Poster presentation

Sadhasivam B, Gunderson C, Hahn E, Johnston S, Zhao D, **Ganapathy V**, and Queimado L. A novel promising biomarker to assess cervical cancer risk. 8th Annual Stephenson Cancer Center Research Symposium, Feb 1, 2019, OUHSC, Oklahoma City, OK, USA. Poster presentation

Manyanga J, Sadhasivam B, Bouharati C, **Ganapathy V**, Mehta T, Brobst D, and Queimado L. Secondhand smoke exposure increases cisplatin resistance in oral cancer cells. 7th Annual Stephenson Cancer Center Research Symposium, Feb 2, 2018, OUHSC, Oklahoma City, OK, USA. Poster presentation

Manyanga J, Sadhasivam B, Bouharati C, **Ganapathy V**, Mehta T, Brobst D, and Queimado L. Secondhand smoke exposure increases cisplatin resistance in oral cancer cells. Society for Research on Nicotine and Tobacco 24th Annual Meeting, February 21-24, 2018, Baltimore, MD, USA. Poster presentation

Manyanga J, **Ganapathy V**, and Queimado L. Electronic cigarettes: implications in epithelial cancer and non-cancer stemness. Implications in epithelial cancer and non-cancer stemness. Cell Biology Retreat. October 28, 2017. OUHSC, Oklahoma City, OK, USA. Poster presentation

Manyanga J, Bouharati C, **Ganapathy V**, and Queimado L. Secondhand smoke: effects on drug resistance, and stem cell proliferation in oral epithelial cells. 6th Annual Stephenson Cancer Center Research Symposium, OUHSC, January 27, 2017, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Manyanga J, Brame L, Rubenstein D, Wagener T, Ramachandran I, Queimado L. Electronic cigarettes induce significant DNA damage and reduce cellular antioxidant levels. 6th Annual Stephenson Cancer Center Research Symposium. OUHSC, January 27, 2017, Oklahoma City, OK, USA. Poster presentation

Manyanga J, Bouharati C, **Ganapathy V**, and Queimado L. Electronic cigarettes increase stemness and drug resistance in cancer and non-cancer oral epithelial cells. Cell Biology Research Day - November 18, 2016. OUHSC, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Manyanga J, Brame L, Rubenstein D, Wagener T, Ramachandran I, Queimado L. Electronic cigarettes induce significant DNA damage and reduce cellular antioxidant levels. American Association for Cancer Research (AACR) 107th Annual meeting, April 16-20, 2016, New Orleans, Louisiana, USA, Poster presentation

Manyanga J, Bouharati C, **Ganapathy V** and Queimado L. Electronic cigarettes increase stemness and drug resistance in cancer and non-cancer oral epithelial cells Annual Cell Biology Research Retreat, Nov18, 2016, Oklahoma City, OK, USA. Poster presentation

Manyanga J, Bouharati C, **Ganapathy V** and Queimado L. Electronic Cigarettes increase the stemness and drug resistance in cancer and non-cancer epithelial cells. 40th Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, OUHSC, March 28-31, 2016. Oklahoma City, OK, USA. Poster presentation

Mathews B, Manyanga J, **Ganapathy V**, and Queimado L. nicotine activates the WNT/ β -catenin pathway and increases the stemness of head and neck cancer cells. 40th Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, OUHSC, March 28-31, 2016. Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Mills W, Thavathiru E, Ramachandran I, Chandler L, Reis A, Queimado L. A unique high sensitivity assay to predict susceptibility to tobacco-induced disease. 5th Annual Stephenson Cancer Center Research Symposium, 2016, Oklahoma City, OK, USA. Poster.

Manyanga J, Bouharati C, **Ganapathy V**, and Queimado L. Active and passive smoking increase epithelial normal and cancer stemness and induce drug resistance. Stephenson Cancer Center's Cancer Research Symposium, January 29th, 2016, Oklahoma City, OK, USA. Won 2nd Place Prize for Best Poster Presentation. Poster presentation

Mathews B, Manyanga J, **Ganapathy V** and Queimado L. Nicotine activates the WNT/beta-catenin pathway and increases the stemness of head and neck cancer cells. 4th Annual College of Medicine Student Research Symposium at OUHSC on Wednesday, January 27th, 2016, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Mills W, Thavathiru E, Ramachandran I, Rubenstein D, Chandler L, Chissoe G and Queimado L. A novel assay reveals differential strand repair of DNA damage induced by active and passive smoke. Emerging topics in genome instability Symposium, April 9-10, 2015, Oklahoma Medical Research Foundation, Oklahoma City, OK, USA. Poster presentation

Brame L, **Ganapathy V**, Ramachandran I, Wagener T, Rubenstein DA, and Queimado L. Exposure to electronic-cigarette aerosol extract induces significant DNA damage. Emerging topics in genome instability Symposium, April 9-10, 2015, Oklahoma Medical Research Foundation, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Mills W, Jinkins J, Ramachandran I, Chandler L, Chissoe G, and Queimado L. Using DNA damage to improve cancer risk assessment and early diagnosis. Emerging topics in genome instability Symposium, April 9-10, 2015, Oklahoma Medical Research Foundation, Oklahoma City, OK, USA. Poster presentation

Brame L, **Ganapathy V**, Ramachandran I, Wagener T, Rubenstein D, and Queimado L. Exposure to electronic-cigarette aerosol extract induces significant DNA damage. 39th Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, OUHSC, April 1, 2015, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Manyanga J, Brame L, Mowls D, and Queimado L. Nicotine increases the stemness of head and neck cancer cells. 4th Annual Stephenson Cancer Center Research Symposium, 2015, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Woods C, Kabbani MA, Ramachandran I, Kreml G, Chissoe D, Zhao YD, Queimado L., DNA Damage in Peripheral Blood Cells Predicts Oropharyngeal Cancer Risk. 4th Annual Stephenson Cancer Center Research Symposium, 2015, Oklahoma City, OK, USA. Poster presentation

Manyanga J, **Ganapathy V**, Rubenstein D. and Queimado L. Exposure to mainstream and sidestream smoke increases the stemness of epithelial normal and cancer cells. 4th Annual

Stephenson Cancer Center Research Symposium, January 30, 2015, Oklahoma City, OK, USA.
Poster presentation

Brame L, **Ganapathy V**, Ramachandran I, Wagener T, Rubenstein DA, and Queimado L. Exposure to electronic-cigarette aerosol extract induces significant DNA damage. 4th Annual Stephenson Cancer Center Research Symposium, 2015, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Ramachandran I, Jinkins J, Chissoe D, Reis A, Rubenstein D, Queimado L. A Novel Assay Detects High Levels of In Vivo DNA Damage After Exposure to Very Low Dose of Tobacco Smoke. 38th Annual Graduate Research Education and Technology Symposium (GREAT) Symposium, OUHSC, 2014, Oklahoma City, OK, USA. Poster presentation

Brame L, **Ganapathy V**, Ramachandran I, Queimado L. A Novel Assay to Predict Cancer Resistance to Cisplatin. 19th Annual Research Day at the Capitol, April 1st, 2014, Oklahoma City, OK, USA. Won the Grand Prize Award (\$10,000) for Excellence Research at the EPSCoR Research Day. Poster presentation

Ganapathy V, Ramachandran I, Mills WK, Thavathiru E, Reis AMC, Queimado L. Predicting Oral Cancer Risk and Treatment Efficacy. Oklahoma Health Research Conference, March 31, 2014, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Ramachandran I, Rubenstein DA, Queimado L. Quantification of DNA damage caused by cigarette smoke using primer-anchored DNA damage detection assay. Society for Research on Nicotine and Tobacco 20th Annual Meeting, Feb. 5-8, 2014, Seattle, WA, USA. Poster presentation

Ganapathy V, Ramachandran I, Rubenstein D, and Queimado L., Quantification of DNA damage caused by cigarette smoke using primer-anchored DNA damage detection assay. 3rd Annual Stephenson Cancer Center Research Symposium, Jan 31st, 2014, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Mills W, Ramachandran I, Jinkins J, Thavathiru E, Chandler L, and Queimado L. Measuring tobacco-induced DNA damage to predict cancer susceptibility in diverse populations. 3rd Annual Stephenson Cancer Center Research Symposium, Jan 31st, 2014, Oklahoma City, OK, USA. Poster presentation

Brame L, **Ganapathy V**, Ramachandran I, Queimado L. A novel assay to predict cancer resistance to cisplatin. OUHSC, Summer Research Symposium, July 19, 2013, Oklahoma City, OK, USA, Poster Presentation. Won prize for Outstanding Poster Presentation, at OUHSC. Poster presentation

Ganapathy V, Ramachandran I, Rubenstein D, Mills WK and Queimado L. PADD, A novel assay to characterize mainstream and sidestream smoke induced DNA damage. 2nd Annual Stephenson Cancer Center Research Symposium, March 29, 2013, Oklahoma City, OK, USA. Won first prize for Best Postdoctoral Research Poster Presentation. Poster presentation

Mills WK, Thavathiru E, **Ganapathy V**, Chissoe G, Chandler L, Reis A and Queimado L. High sensitivity DNA damage detection assay: potential tool to predict cancer risk and response to treatment. 2nd Annual Stephenson Cancer Center Research Symposium, March 29, 2013, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Mills W, Ramachandran I, Thavathiru E, Chandler L, Chissoe, D and Queimado, L., Assessing *in vivo* DNA damage to predict susceptibility to tobacco-induced disease in diverse populations. 2nd Annual Stephenson Cancer Center Research Symposium, March 29, 2013, Oklahoma City, OK, USA. Poster presentation

Ganapathy V, Mills WK, Thavathiru E, Reis AMC and Queimado L. Predicting Oral Cancer Risk and Treatment Efficacy. 2012 Oklahoma Health Research Conference, March 13, 2013, Oklahoma City, OK, USA. Poster presentation

Butler C, Mills WK, Thavathiru E, **Ganapathy V**, Chandler L, Reis A and Queimado L. DNA damage detection in the oral mucosa smokers vs. non-smokers. University of Oklahoma College of Medicine Research Symposium, Spring 2013, Oklahoma City, OK, USA. Poster presentation

Butler C, Mills WK, Thavathiru E, **Ganapathy V**, Chandler L, Reis A and Queimado L. High Sensitivity Primer Anchored DNA Damage Detection Assay: Potential Use in Predicting Human Cancer Risk and Guiding Treatment. OU College of Medicine Student Research Symposium, January 23, 2013. OUHSC, Oklahoma City, OK, USA. Poster presentation

Professional Service

Reviewer, Pilot Grants, Oklahoma Shared Clinical and Translational Resources (OSCTR), Oklahoma City, OK, 2024

Professional Trainings

May, 2024: Participated in NIH Grant Writing Seminar presented by John Robertson, PhD, GWSW, hosted by Health Promotion Research Center, OUHSC, OKC.

2024: Raising a Resilient Scientist, 1) Communication Skills To Build Trainee Resilience, 2) Promoting Trainee Resilience, 3) Building a Welcoming and Inclusive Research Group, 4) Difficult Conversations, Conflict, and Feedback.

October, 2023: HPRC NIH grant training, Health Promotion Research Center (HPRC), Oklahoma City, OK.

November, 2023: Participated in HPRC All Staff Workshop - Be a Team Worth Joining and Leaders Worth Following: Enriching Your Team Culture by Growing Your Self- and Team-Awareness presented by Brandon Jennings, PharmD, BCACP, hosted by Health Promotion Research Center, OUHSC, OKC.

March, 2023: Participated Webinar and Training sponsored by QIAGEN: 1) Drug treatment data investigation using Omicsoft and Ingenuity Pathway Analysis, 2) Comprehensive Molecular Tumor Analysis: Integrating RNAseq and Tumor Immune Microenvironment for Targeted Therapy, 3) New user training: Large dataset analysis and knowledge base queries using QIAGEN IPA, 4) Biomarker discovery and disease pathology investigation using OmicSoft and Ingenuity

Pathway Analysis, 5) IPA Deeper Dive: Generating Novel Discoveries in IPA - even when you don't have data, 6) Multimics (metabolomics, proteomics, transcriptomics) analysis using QIAGEN Ingenuity Pathway Analysis.

November, 2021: Participated in NIH-Sponsored Grant Writing Seminar presented by Lauren Broyles, PhD, Nov. 2021, hosted by The Stephenson Cancer Center's Education, Training and Career Enhancement Core and the Health Promotion Research Center, OUHSC, OKC.

September 29, 2021: ORA Noon Conference: Introduction to Grant Writing/Grant Writing Basics, Office of the Vice President for Research University of Oklahoma Health Sciences Center

Service and Leadership

Editorial Board Member

Molecular and Cellular Oncology –(Frontiers), 2020 – 2022, Impact Factor 4.7

Nutrients (MDPI), 2019 – present, Impact Factor 5.9

Symbiosis Journal of Biochemistry (SOJB), 2018 – present

Reviewer (*Ad hoc reviewer*)

International Journal of Molecular Sciences, 2018 – present

International Journal of Environmental Research and Public Health, 2018 – present

Cancer Cell International, 2017 – present

Journal of Experimental Pharmacology, 2017 – present

Journal of Hepatocellular Carcinoma, 2020 – present

Journal of Nutrition and Diet Supplements, 2017 – present

Biochemical Pharmacology, 2017 – present

Cancer Growth and Metastasis, 2017 – present

OncoTargets and Therapy, 2018 – present

Lung Cancer: Targets and Therapy, 2018 – present

Toxics, 2017 – present

Children, 2018 – present

Genes, 2017 – present

Cells, 2017 – present

Biology, 2018 – present

Cancers, 2018 – present

BioMed Central, 2018 – present

Annual Meeting Abstracts, Society for Research on Nicotine & Tobacco, 2018 – 2019

Membership in Professional Organizations

Member, Society for Research on Nicotine & Tobacco, 2014- Present

Associate member, The American Association for Cancer Research, 2012- Present

Member, Society for Reproductive Biology and Comparative Endocrinology, 2003-2012

Student Mentorship***Research – Doctoral***

- Winter-2021 Barbara Mensah, PhD student
Program: Graduate Program in Biomedical Sciences (GPiBS)
Institution: The University of Oklahoma Health Sciences Center
Role: Taught her the basics of oxidative stress mechanisms, Western blotting
- 2014-2016 Jimmy Manyanga, PhD student
Program: Graduate Program in Biomedical Sciences (GPiBS)
Institution: The University of Oklahoma Health Sciences Center
Role: Taught him basic molecular biology techniques qPCR, and qPADDa and cell culture and western blotting
- Oct.-Dec/2015 Celia Bouharati, PhD student (5th Year)
Program: Diplome de Formation Approfondiee Sciences Pharmaceutiques
Institution: Universite' d'Auvergne, Facult'dePharmacie, Clermont, France
Role: Taught her basic molecular biology techniques and cell culture
- 2015-2016 Dana Mowls, B.S., PhD student
Institution: The University of Oklahoma Health Sciences Center, OK
Thesis named for Outstanding Thesis Award
Role: Taught her basic molecular biology techniques qPCR, and qPADDa

Research – Graduate

- Summer 2018 Elizabeth H. Hahn, MD student (MS1)
Program: Summer Research Fellowship, OTRC
Institution: The University of Oklahoma Health Sciences Center
Role: Teaching molecular biology concepts and DNA isolation
- Summer 2017 Samuel Castles, MD student (MS2)
Program: Summer Research Fellowship, Oklahoma Academy of Otolaryngology
Institution: The University of Oklahoma Health Sciences Center
Won the Jesus E. Medina M.D. Award for Excellence Research by a Medical Student.
Oral Presentation at the 5th Annual Department of Otorhinolaryngology Research Day, OUHSC, Oklahoma City, OK, March, 2018.
Role: Teaching molecular biology concepts and technique
- 2015-2017 Basil Mathew, MD student (MS2)
Program: Summer Research Fellowship, OTRC; Medical School Research Program
Institution: The University of Oklahoma Health Sciences Center

Won the Jesus E. Medina M.D. Award for Excellence Research by a Medical Student.
Oral Presentation at the 3rd Annual Department of Otorhinolaryngology Research Day,
OUHSC, Oklahoma City, OK, April, 2016.

Role: Trained him to do cell culture, Spheroid Assay, protein array

2014-2016 Lacy S. Brame,
Program: Biostatistics and Epidemiology Master Program
Institution: The University of Oklahoma Health Sciences Center, OK
Thesis named for Outstanding Thesis Award
Role: Taught her basic molecular biology techniques qPCR, and qPADDA

Summer 2015 Dehra McGuire, MD student (MS2)
Program: Medical School ORL Summer Research Program
Summer Research Fellowship, Oklahoma Academy of Otolaryngology
Institution: The University of Oklahoma Health Sciences Center
Role: Taught her basic molecular biology techniques qPCR, and qPADDA, and trained her
on cell culture, quantification of oxidative DNA damage

2013-2014 Majd A. Kabbani, MD student (MS4)
Program: Medical School Research Program
Institution: The University of Oklahoma Health Sciences Center
Role: Taught him basic molecular biology techniques qPCR, and qPADDA

Summer 2014 Clifton Woods, MD student (MS2)
Program: Medical School ORL Summer Research Program
Summer Research Fellowship, Department of Otorhinolaryngology
Institution: The University of Oklahoma Health Sciences Center
Role: Taught him basic molecular biology techniques DNA isolation and qPCR

2013-2014 Casey Butler, Medical Student (MS3)
Program: Medical School ORL Summer Research Program
Institution: The University of Oklahoma Health Sciences Center
Won the Jesus E. Medina M.D. Award for Excellence Research by a Medical Student.
Oral Presentation at the 1st Annual Department of Otorhinolaryngology Research Day,
OUHSC, Oklahoma City, OK, April 12, 2014.
Role: Taught him basic molecular biology techniques qPCR, and qPADDA

Research –Undergraduate

2013-2014 Lacy S. Brame, B.S.,
Summer Undergraduate Research Experience Program (SURE),
The University of Oklahoma Health Sciences Center, OK
Won first prize for Best SURE Research Poster Presentation at the OUHSC, Summer
Research Symposium, July 19, 2013, Oklahoma City, OK.

Won the Grand Price at the EPSCOR Research Day, (April 1st 2014) at the State Capitol, Oklahoma City, OK, April 12, 2014. This included a Merit Award with a \$7,000 prize, which includes a \$500 award + \$4,000 internship + \$2,500 award to the lab. Lacy competed with a total of 26 outstanding undergraduate students nominated by all Oklahoma college campus across Oklahoma State

Role: Taught her basic molecular biology techniques qPCR, qPADD and Cell culture

Research- High School

2013-2014 Sneha Sibimon
 Program: Undergraduate Research Program from Oklahoma School of Science and Mathematics, Oklahoma City, OK.
 Institution: The University of Oklahoma Health Sciences Center, OK
 Project: Quantifying tobacco-induced DNA damage in American Indians.
 Role: Taught her basic molecular biology techniques qPCR

Research- Postdoctoral Fellows

2018-Present Mayilvanan Chinnaiyan, Ph.D.
 Program: Postdoctoral Fellow, Department of Otorhinolaryngology
 Institution: The University of Oklahoma Health Sciences Center, OK
 Role: Taught him basic molecular biology techniques qPCR, and qPADD

2016-Present Balaji Sadhasivam, Ph.D.
 Program: Postdoctoral Fellow, Department of Otorhinolaryngology
 Institution: The University of Oklahoma Health Sciences Center, OK
 Role: Taught him basic molecular biology techniques qPCR, qPADD and Cell culture

2016-2017 Toral Metha, Ph.D.
 Program: Postdoctoral Fellow, Department of Otorhinolaryngology
 Institution: The University of Oklahoma Health Sciences Center, OK
 Role: Taught her basic molecular biology techniques qPCR, and qPADD

Research Assistants

2016-2023 Daniel E. Brobst, B.S.
 Program: Research Technician
 Institution: The University of Oklahoma Health Sciences Center, OK
 Role: Taught him basic molecular biology techniques, and qPADD

2013-2014 Jeremy Jinkins, B.S.
 Program: Research Technician
 Institution: The University of Oklahoma Health Sciences Center, OK
 Role: Taught him basic molecular biology techniques qPCR, and qPADD

Methodological Specialties

- Transcriptomics ingenuity pathway analysis for Molecular and Cellular Functions; Physiological System Development and Function; and Diseases and Disorders.
- Biomarker quantification for DNA Damage, immunological status, and inflammation, including ELISA Bio-Plex Pro Human Inflammation Assays
- Detailed processing of biological samples (Blood, Urine, Saliva, Oral epithelial cells) for diverse endpoint studies
- Isolation of specific blood proteins (e.g., isolation of ankyrin and spectrin proteins from the blood of patients with chronic renal failure)
- Experimental animal handling and complex exposure and surgical procedures (Rats and Mice)
- Establishing primary cell culture (head and neck cancer cells, Sertoli cells, Leydig cells and thyroid cells)
- 2D and 3D cell culture techniques and assays (MTT, clonogenic, spheroid assay, live cell imaging with Incucyte S3)
- Quantification of reactive oxygen species (ROS), free radicals and 8-Oxoguanine (highly mutagenic)
- Chromatography Techniques: Ion-Exchange chromatography, Gel Exclusion Chromatography
- DNA Damage and Methylation quantification assays: PCR-based Primer-anchored DNA damage detection assay (PADDA), Fingerprinting strand-specific DNA damage (f-PADDA) and LORDq assay for DNA damage quantifications and Methylation-specific PCR
- Other Molecular Biology Techniques, including Cloning, Transformation, Western Blot, RNA, DNA and Protein isolation, Western Blot analysis, qPCR, Cell Flow, Reverse transcriptase - Polymerase Chain Reaction (RT-PCR) and Real Time RT-PCR
- Statistical Analyses and Graph creation using diverse programs including Prism (GraphPad).

List of Professional References

- 1. Lurdes Queimado, M.D., Ph.D.**
Presbyterian Health Foundation Chair in Otorhinolaryngology
Director, ORL Basic and Translational Research
Director, HPRC Tobacco Regulatory Science Lab
Associate Director, Pilot Projects Core, OSCTR
TSET Scholar, Stephenson Cancer Center
Professor, Dept. Otolaryngology Head and Neck Surgery
University of Oklahoma Health Sciences Center
800 Research Parkway, Room 431
Oklahoma City, OK 73104
Lurdes-Queimado@ouhsc.edu
405/271-4232 Ext. 14232
- 2. Greg A. Kreml, MD, F.A.C.S.**
The Paul and Ruth Jonas Chair in Cancer
Professor and Chairman
Department of Otolaryngology
The University of Oklahoma Health Sciences Center

Department of Otolaryngology Head and Neck Surgery
800 Stanton L Young Blvd, Suite 1400
Oklahoma City, OK 73104
Greg-Krempl@ouhsc.edu
(405)271-5504

3. **Ilangoan Ramachandran, M.Sc., M.Phil., Ph.D.**
Assistant Professor
Department of Endocrinology
Dr. ALM PG Institute of Basic Medical Sciences
University of Madras, Taramani Campus
Chennai 600 113, Tamil Nadu, INDIA
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+91-9445678213