

Name : Dr. Arvind Goja
Designation : Assistance Professor
Email ID : arvind.goja@dpu.edu.in
Contact Number : 02067919444



Academic Qualifications : Ph.D

Teaching Experience : 9 years

Research Interest : Metabolomics and Nutraceuticals

Honors and Awards:

- Judge for 5th Annual Graduate Exhibition 2014, Wayne State University, Detroit, MI
 - **Editorial Board Member** for scientific peer reviewed journals. Journal of Nutrition and Health Systems (www.kenkyuonline.org) and Journal of Toxicology and Forensic Cases (<http://jtfcjournal.com/>).
 - **Course Faculty (Trainer/Lecturer) for the Workshop entitled: Nutrition, Metabolomics and Bioinformatics** at Universiti Kebangsaan, Malaysia from 13th to 23rd May 2013.
 - Invited Global Fellow Speaker at **Third International Food and Nutrition Conference (IFNC)** Tuskegee, Alabama, 2011
 - **Coca-Cola Company Research Award** for poster competition for 'Diet and Cancer Research Interest Section'. (Experimental Biology Conference, New Orleans, 2009)
 - **Thomas C. Rumble University Graduate Fellowship**, Wayne State University, Department of Nutrition and Food Science, Detroit, Michigan (2005-2006)
 - **Gold medal awardee** for LUMC fellowship by the Grace Braganza Research Lab (GBRL) St. Xavier's College, Ahmadabad, India for research and submission of *Project on Plant Tissue Culture And Phytochemistry Of Vincarosea* (2001-2002).
-

Research Experience:

July 2014– August 2015:

- Worked as Research Specialist at Toxicology Research Laboratory (Dept. of Pharmacology), University of Illinois at Chicago. The projects involved evaluating different novel drugs for efficiency/dose as radioprotectors and radiomitigators in various cells lines and in-vivo models.

2011– July 2014:

- Involved with evaluation of plasma metabolites (metabolomics) for chronic hemodialysis patients with vitamin E tocotrienol supplementation and correlating with their plasma lipid profiles and investigating probable biomarkers for the disease.
- Evaluated the effect of Oil Palm Phenolics (OPP) and curcumin in Alzheimer's disease (AD) rat model. Evaluating cognitive behavior and memory of AD induced rat model using water maze experiments. Magnetic resonance Imaging (MRI) was used to detect any changes in the brain volume, plaque deposition and other parameters.
- Correlated the effect of Oil Palm Phenolics (OPP) and curcumin in Alzheimer's disease (AD) rat model using urine metabolomics and to discover early potential biomarkers for AD.
- Explored the anti-carcinogenic effect of Oil Palm Phenolics (OPP) in pancreatic tumor transgenic KPC mouse model
- Studied the anti-carcinogenic effect of garcinol in pancreatic tumor transgenic KPC mouse model. Correlation of urinary metabolomic profile with mRNA and protein expression in liver and pancreatic tissue, as well as ultrasound and MRI images of tumor progression/regression.
- Evaluated the effect of algal infusion Proalgazyme (PAZ) on lipid metabolism in a diet induced hypercholesterolemic hamster model. Correlation of plasma lipoprotein profile with mRNA and protein expression in the liver tissue
- Investigated biomarkers associated with hypercholesterolemia and administration of PAZ, and any specific compounds responsible for the increase in HDL cholesterol using the metabolomics approach.
- Evaluated the Effects of Oil Palm Phenolics on Inflammation and oxidative stress in relation to amyloid beta plaques in FAD-mutant and wild type B103 Cells.
- Investigate the treatment of non-small cell lung cancer with delta-tocotrienol and its effect on cell growth, apoptosis, and NF-κB signaling pathway. Investigation of relative transcription levels of correlated genes, protein expression, and miRNA microarray.

- Review of scientific literature and determine scientific conclusions, assist in grant/proposal preparation and submission, prepare and deliver presentations at national and international meetings.
- Provided task-oriented support for graduate and undergraduate students

2005-2011:

- Ph.D. in Nutrition and Food Science, Wayne State University, Detroit, MI
Dissertation Title: Metabolomic Profiling to Investigate Effect of Curcumin in Lung Cancer.
Major: Nutritional Biochemistry
Minor: Human Physiology.
My dissertation involved evaluating effect/s of curcumin in lung cancer induced hamster model and to correlate and compare urinary metabolomic profile with the DNA fragmentation.
- Investigated the effect of curcumin in a lung cancer hamster model, analyzing the histo-pathological evidence.
- The project involved discovering potential early biomarkers for lung cancer.

Along with my dissertation thesis worked simultaneously on various other projects in collaboration with other labs.

- Evaluated metabolomic profile for the project “Multi-functional approach for assessing diet-induced hypercholesterolemia on brain cholesterol metabolism in aged Brown Norway rats – a possible model for Alzheimer’s disease” in collaboration with Dr. Pramod Khosla’s research group.
- Evaluated urinary metabolomic profile of control and pre-eclamptic pregnant women in collaboration with Wayne state medical school.

Society membership and Affiliations

1. American Society for Nutrition (2009 –2015)
2. American Federation of Teachers (2007- 2015)
3. WSU Graduate Employees' Organizing Committee (2006-2011)
4. Nutrition and Food Science Graduate Student Organization (Associate member)
5. Phi Tau Sigma WSU Chapter (Founding Member)

Poster Presentations

1. **Arvind Goja**, Hyojin Jeon, Anahita Daruwalla, Aryamitra Banerjee, RajanGiri, KasimKabirov and Alex Lyubimov. ATM-14, a Novel Anti-Oxidant Radio-Mitigator

- Targeting Mitochondria. Oxidative Injury and Redox Biology, Poster Session, Society of Toxicology, 54th Annual meeting (Mar 22nd -26th, 2015)
2. Geamanu, Nadia Sadaat, **Arvind Goja**, Smiti Gupta. Effect of ProAlgaZyme on plasma lipid profile in diet induced hypercholesterolemic hamsters. EB April 2013, Boston, MA
 3. Andreea Geamanu, Nadia Sadaat, **Arvind Goja**, Smiti Gupta. Effect of ProAlgaZyme on plasma lipid profile in diet induced hypercholesterolemic hamsters. EB April 2013, Boston, MA
 4. Nadia Saadat, Sarah Akhtar, Fadi Abdulahad, Andreea Geamanu, **Arvind Goja**, ShilpaVemuri, Nurul Razalli, Smiti Gupta. Anticancer effects of garcinol in pancreatic cancer transgenic mouse model, Wayne State University Graduate Student Research Day, Sept 2012, Detroit, MI
 5. Andreea Geamanu, Nadia Sadaat, **Arvind Goja**, Smiti Gupta. Effect of ProAlgaZyme on plasma lipid profile in diet induced hypercholesterolemic hamsters. EB 2012, San Diego, CA
 6. Andreea Geamanu, Nadia Sadaat, **Arvind Goja**, Monika Wadehra, Xiangming Ji, Smiti Gupta. Algal Extract and its subfractions increase plasma HDL-Cholesterol via up-regulation of Apo A1, ABCA1, SRB1 and inhibition of CETP in hamsters. EB 2011, Washington D.C.
 7. **Arvind Goja**, Andreea Geamanu, Nadia Sadaat, Smiti V. Gupta. Potential 1H NMR urinary metabolomic biomarkers for Lung cancer in hamster model. EB, Washington, D.C.
 8. Andreea Geamanu, Nadia Sadaat, **Arvind Goja**, Monika Wadehra, Xiangming Ji, Smiti Gupta. Algal Extract and its subfractions increase plasma HDL-Cholesterol via up-regulation of Apo A1, ABCA1, SRB1 and inhibition of CETP in hamsters. Wayne State University Graduate Conference 2011, Detroit, MI
 9. Inaam Abdul Karim, Andreea Geamanu, Nadia Saadat, **Arvind Goja**, Smiti Gupta. Time course for improvement in hamster's lipid profile after administration of ProAlgaZyme. Wayne State University Undergraduate Research Conference 2010, Detroit, MI
 10. Sarah Akhtar, Andreea Geamanu, Nadia Saadat, **Arvind Goja**, Smiti Gupta. ProAlgaZyme and its Subfractions improve Hamster plasma lipid profile via down regulation of CETP gene expression. Wayne State University Undergraduate Research Conference 2010, Detroit, MI
 11. Sarah Akhtar, Andreea Geamanu, Nadia Saadat, **Arvind Goja**, Smiti Gupta. ProAlgaZyme and its Subfractions improve Hamster plasma lipid profile via down regulation of CETP gene expression." National Conference of Undergraduate Research 2010, Ithaca, NY
 12. Andreea Geamanu, **Arvind Goja**, Shaistha Zaheeruddin, Smiti Gupta. Efficacy of curcumin in lung cancer hamster model. EB 2009, New Orleans, LA

13. **Arvind Goja**, Shaistha Zaheeruddin, Andreea Mateescu, Nadia Sadaat, Smiti V. Gupta. Effects of curcumin on Lung cancer; Metabolomic Approach. EB 2009, New Orleans, LA
 14. 'Urinary metabolomic profile: biomarkers for hypercholesterolemia induced Alzheimer's disease?' (2006), Metabolomics Society held at Harvard Medical School (Boston)**Arvind Goja** and Smiti Gupta
 15. 'Urinary metabolomic profile: biomarkers for hypercholesterolemia induced Alzheimer's disease?' This presentation involved more recent and in-depth research conducted by us since 2006 – (2007)Metabolomic Society held at Imperial College (UK):**Arvind Goja** and Smiti Gupta
-

Published Abstracts

1. Nadia Saadat, Arvind Goja and Smiti Gupta Dietary garcinol retarded pancreatic cancer progression in kras and p53 transgenic mouse model. *April 2014 The FASEB Journal vol. 28 no. 1 Supplement*829.29
2. **ShilpaVemuri, Arvind Goja, Nadia Sadaat, Poornima Gowthaman, Michael Chrusciel and Smiti Gupta**, Effect of oil palm phenolics (OPP) on pancreatic cancer (PC) in transgenic mouse model (KPC)(*FASEB J. April 2013, 27 (Meeting Abstract Supplement) 863.10*)
3. Andreea Geamanu, Nadia Saadat, Arvind Goja, Smiti Gupta. Effect of an algal infusion (AI) on plasma metabolomic profile in hypercholesterolemic hamsters. *FASEB J April 9, 2013 27:1073.4*
4. Nadia Saadat, Sarah Akhtar, Aminder Gill, Nurul Razalli, ShilpaVemuri, **Arvind Goja**, Andreea Geamanu, Doina David, Smiti Gupta. Anticancer effects of Garcinol in pancreatic cancer transgenic mouse model. *FASEB J April 9, 2013 27:235.8*
5. Andreea Geamanu, Nadia Saadat, **Arvind Goja**, Smiti Gupta. Effect of ProAlgaZyme on plasma lipid profile in diet induced hypercholesterolemic hamsters. *FASEB J March 29, 2012 26:1015.9*
6. Andreea Geamanu, Nadia Sadaat, **Arvind Goja**, Monika Wadehra, Xiangming Ji, Smiti Gupta. Algal Extract and its subfractions increase plasma HDL-Cholesterol via up-regulation of Apo A1, ABCA1, SRB1 and inhibition of CETP in hamsters. *FASEB J March 17, 2011 25:594.2*
7. **Arvind Goja**, Andreea Geamanu, Nadia Saadat, Smiti V. Gupta. Potential 1H NMR urinary metabolomic biomarkers for Lung cancer in hamster model. *FASEB J March 17, 2011 25:984.1*

8. Shaistha Zaheeruddin, **Arvind Goja** and Smiti Gupta. Effect of Curcumin on BOP Induced Oxidative Stress in Hamster Model: Correlation with Metabolomic Profile, *FASEB J April 2010*
9. Andreea Geamanu, **Arvind Goja**, Shaistha Zaheeruddin, Smiti Gupta. Efficacy of curcumin in lung cancer hamster model. *FASEB J April 22, 2009 23:897.16*
10. **Arvind Goja**, Shaistha Zaheeruddin, Andreea Mateescu, Nadia Sadaat, Smiti V. Gupta. Effects of curcumin on Lung cancer; Metabolomic Approach. *FASEB J April 22, 2009 23:897.15*
11. **Naomi Yamada, Deepinder Kaur, Arvind Goja, Mo'ath Bataineh, Ryan H Saab, Susan M Irtenkauf, Scott E Bowen, Smiti V Gupta and Pramod Khosla** . Multi-functional approach for assessing diet-induced hypercholesterolemia on brain cholesterol metabolism in aged Brown Norway rats – a possible model for Alzheimer's disease (*FASEB J. April 2007 21 (Meeting Abstract Supplement) A109*)

Publications :

- 1) Dietary Garcinol arrests pancreatic cancer in p53 and K-RAS conditional mutant mouse model. Nadia Sadaat, Sarah Akhtar, Nurul H. Razalli, Andreea Geamanu , **Arvind Goja**, Doina David,. Smiti V. Gupta. The Journal of Nutrition 2015 (submitted and under review)
- 2) ProAlgaZyme subfraction improves the lipoprotein profile of hypercholesterolemic hamsters, while inhibiting production of betaine, carnitine, and choline metabolites. Andreea Geamanu, **Arvind Goja**, Nadia Saadat, Pramod Khosla, Smiti V Gupta *Nutrition & Metabolism* 2013, **10:55** (27 August 2013)
- 3) "Potential of tocotrienols in lung cancer." Book Chapter (Book title: Tocotrienols; Vitamin E Beyond Tocopherols, second edition). Xiangming Ji, **Arvind Goja** and SV.Gupta, 2012
- 4) "Delta-tocotrienol suppresses Notch-1 Pathway by Up-regulating miR-34a in Non-small Cell Lung Cancer Cells". (International Journal of Cancer 2012, Mar. 21) Ji X, Wang Z, Geamanu A, **Goja A**, Sarkar FH, Gupta SV.
- 5) ProAlgaZyme and its sub-fractions increase plasma HDL-cholesterol via up regulation of ApoA1, ABCA1 and SRB1 and inhibition of CETP in hypercholesterolemic hamsters. (J of Nutrition and Dietary Supplements. 2012:4, 17-14). Andreea Geamanu, Nadia Saadat, **Arvind Goja** and SVGupta.

- 6) ProAlgaZyme and its Subfractions improve Hamster plasma lipid profile via down regulation of CETP gene expression. Proceedings of the National Conference of Undergraduate Research (NCUR) 2011, Ithaca, NY. Sarah Akhtar, Andreea Geamanu, Nadia Saadat, **Arvind Goja**, Smiti Gupta
- 7) Change in metabolomic profile with curcumin supplementation in a lung cancer model (submitted to Nutrition and Metabolism) **Arvind Goja**¹, Andreea Geamanu¹, Nadia Saadat¹, Xiangming Ji¹, Doina David² and Smiti V Gupta¹
- 8) Positive correlation between urinary metabolomic profiles and diet induced B-amyloid plaque Development in aged Brown Norway Rats. **Arvind Goja**, Naomi Yamada, Pramod Khosla and Smiti Gupta. (manuscript in progress)



Dr. D. Y. Patil Vidyapeeth's

Dr. D. Y. Patil Biotechnology & Bioinformatics Institute,
Tathawade, Pune - 411033
