

## **Dr. G. SARAVANAN M.Sc., M.Phil., Ph.D.,**

Assistant Professor & Head, Department of Biochemistry,  
K.S. Rangasamy College of Arts and Science (Autonomous),  
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**Address:** 16, Thattan kadu, PSF (PO), Karur (District),  
Tamilnadu, India-639113.



### **EDUCATION:**

2008-2011	<b>Ph.D., Biotechnology</b> (Interdisciplinary in Biochemistry)	Bharathiyar University, Coimbatore Tamilnadu, India
2004-2005	<b>M.Phil., Biotechnology</b>	Bharathidasan University Tamilnadu, India. <b>(First Class; Percentage: 74%)</b>
1999-2001	<b>M.Sc., Biochemistry</b>	Bharathidasan College of Arts and Science Erode Tamilnadu, India. <b>(First Class; Percentage: 60.16%)</b>
1996-1999	<b>B.Sc., Biochemistry</b>	K.S.R College of Arts and Science Tiruchengode, Tamilnadu, India. <b>(First Class; Percentage: 74%)</b>

### **EMPLOYMENT:**

01.02.2015-Present	<b>Assistant Professor &amp; Head</b> , Department of Biochemistry, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode, Tamilnadu, India-637215
01.06.2007-31.01.2015	<b>Assistant Professor</b> , Department of Biochemistry, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode, Tamilnadu, India- 637215
29.08.2003-24.04.2007	<b>Lecturer</b> , Kandaswami Kandar 's College, Namakkal, Tamilnadu, India
01.06.2001-30.05.2003	<b>Junior Project Fellow</b> , Nagarjuna herbal Concentrate, Kerala, India

## **RESEARCH PUBLICATIONS:**

Scopus Profile: <https://www.scopus.com/authid/detail.uri?authorId=36764130800>

Google Scholar Profile:

<https://scholar.google.co.in/citations?hl=en&user=JrB37y4AAAAJ>

1. **Saravanan G** and Prakash J. Effect of garlic on lipid peroxidation in experimental induced Myocardial infarction in rats. *Journal of Ethnopharmacology*, **2004**, 94: 155-158. **(IF: 3.414)**.
2. **Saravanan G**, et al., Antidiabetic properties of S-allyl cysteine, a garlic component on Streptozotocin-induced diabetes in rats. *Journal of Applied Biomedicine*, **2009**, 7: 151-159.
3. Saravanan G., et al., Modulatory effect of S-allylcysteine on glucose metabolism in streptozotocin induced diabetic rats. *Journal of Functional Foods*, **2009**, 1; 336-340. **(IF: 3.197)**.
4. **Saravanan G**, et al., Influence of Terminalia belerica fruits extracts on glycoprotein components in streptozotocin induced diabetic rats. *Biosciences Biotechnology Research Asia*, **2009**, 6; 727-732.
5. **Saravanan G**, et al., Antidiabetic effect of S-allylcysteine: Effect on plasma and tissue glycoproteins in experimental diabetes. *Phytomedicine*, **2010**, 17; 1086-1089. **(IF: 4.180)**.
6. **Saravanan G**, Ponmurugan P. Beneficial Effect of S-allylcysteine (SAC) on Blood Glucose and Pancreatic Antioxidant System in Streptozotocin Diabetic Rats. *Plant food for Human Nutrition*, **2010**, 65; 374-378. **(IF: 2.598)**.
7. **G Saravanan**. Effect of Proteolysis in Erythrocyte Damage of Diabetic Complications. *International Journal of Endocrinology and Metabolism*, **2011**, 9 (1); 276-277.
8. **Saravanan G**, Ponmurugan P. Ameliorative potential of S-allyl cysteine on oxidative stress in STZ induced diabetic rats. *Chemico-Biological Interactions*, **2011**, 189; 100-106, (IF: 2.9). **(IF: 3.407)**.
9. **Saravanan G**, Ponmurugan P. Ameliorative potential of S-allylcysteine: Effect on lipid profile and changes in tissue fatty acid composition in experimental diabetes. *Experimental and Toxicologic Pathology*, **2012**; 64, 639-644.
10. **Ganapathy Saravanan**, Ponnusamy Ponmurugan. Antidiabetic effect of S-allylcysteine: Effect on Thyroid hormone and circulatory antioxidant system in experimental diabetic rats. *Journal of Diabetes and Its Complications*, **2012**; 26: 280-285. **(IF: 2.684)**.

- 11. Ganapathy Saravanan**, Ponnusamy Ponnurugan. Amaranthus viridis Linn., a common spinach, modulates C-reactive protein, protein profile, ceruloplasmin and glycoprotein in experimental induced myocardial infarcted rats. Journal of the Science of Food and Agriculture, **2012**; 92: 2459–2464. **(IF: 2.422)**.
- 12. G Saravanan**, P Ponnurugan. S-allylcysteine Improves Streptozotocin-Induced Alterations of Blood Glucose, Liver Cytochrome P450 2E1, Plasma Antioxidant System, and Adipocytes Hormones in Diabetic Rats. International journal of endocrinology and metabolism, **2013**; 11 (4), 10927.
- 13. Ganapathy Saravanan**, Ponnusamy Ponnurugan, Mustapha Shabana Begum.. Effect of S-allylcysteine, a sulphur containing amino acid on iron metabolism in streptozotocin induced diabetic rats. Journal of Trace Elements in Medicine and Biology, **2013**, 27: 143-147. **(IF: 2.895)**.
- 14. Saravanan G.**, et al., Cardioprotective activity of Amaranthus viridis Linn: Effect on serum marker enzymes, cardiac troponin and antioxidant system in experimental myocardial infarcted rats. International Journal of Cardiology, **2013**; 165: 494-498. **(IF: 3.471)**.
- 15. Ganapathy Saravanan**, Ponnusamy Ponnurugan. Attenuation of streptozotocin-induced alterations in acetylcholinesterase and antioxidant system by S-allylcysteine in rats. Food Bioscience, **2013**; 4, 31-37. **(IF: 3.220)**.
- 16. Ganapathy Saravanan**, et al., Anti-obesity action of gingerol: effect on lipid profile, insulin, leptin, amylase and lipase in male obese rats induced by a high-fat diet. Journal of the Science of Food and Agriculture, **2014**; 94: 2972–2977. **(IF: 2.422)**.
- 17. Ganapathy Saravanan**, et al., Modulatory Effects of Diosgenin on Attenuating the Key Enzymes Activities of Carbohydrate Metabolism and Glycogen Content in Streptozotocin-Induced Diabetic Rats. Canadian Journal of Diabetes, **2014**; 38, 409-414. **(IF: 2.887)**
- 18. Ganapathy Saravanan**. Diosgenin reorganises hyperglycaemia and distorted tissue lipid profile in high-fat diet–streptozotocin-induced diabetic rats. Journal of the Science of Food and Agriculture, **2015**; 95: 3177–3182. **(IF: 2.422)**.
- 19. Sathibabu Uddandrao, G. Saravanan**, et al., Protective Efficacy of *Datura metel* & *Anacardium occidentale* Methanolic Extracts on Free Radical Induced DNA Damage *in vitro*. International Journal of Medicobiological Research, **2016**, 1 (8), 423-430.
- 20. Sathibabu Uddandrao, Brahmanaidu, Meriga, Saravanan**. The potential role of S-allylcysteine as antioxidant against various disorders in animal models. Oxidants and Antioxidants in Medical Science, **2016**, 5(3):79-86.

21. Brahmanaidu, **Saravanan** et al., Effects of S-allylcysteine on biomarkers of polyol pathway in experimental type 2 diabetes in rats. *Canadian Journal of Diabetes*, **2016**; 40: 442-448. **(IF: 2.887)**
22. Brahmanaidu, **Saravanan** et al., Ameliorative potential of gingerol: Promising modulation of inflammatory factors and lipid marker enzymes expressions in HFD induced obesity in rats. *Molecular and Cellular Endocrinology*, **2016**, 419, 139-147. **(IF: 3.693)**
23. Pavithra, **Saravanan** et al., Therapeutic potentiality of *Kedrostis foetidissima* (Jacq.) Cogn., leaf extracts on free radicals induced oxidative damage in the biological system. *Oxidants and Antioxidants in Medical Science*, **2017**; 6(1): 14-18.
24. Sathibabu Uddandrao, Brahmanaidu, **Saravanan**. Therapeutical perspectives of S-allylcysteine: effect on diabetes and other disorders in animal models. *Cardiovascular & Hematological Agents in Medicinal Chemistry*, **2017**; 15: 71-77. **(IF: 0.5)**
25. Brahmanaidu, **Ganapathy Saravanan** et al., Reversal of endothelial dysfunction in aorta of streptozotocin-nicotinamide-induced type-2 diabetic rats by S-Allylcysteine. *Molecular and Cellular Biochemistry*, **2017**; 432: 25-32. **(IF: 2.884)**
26. Balaji **Saravanan Ganapathy**, et al., Antiobesity potential of Piperonal: promising modulation of body composition, lipid profiles and obesogenic marker expression in HFD-induced obese rats. *Nutrition & Metabolism (London)*, **2017**; 14: 72. **(IF: 3.599)**
27. Sathibabu Uddandrao, **G Saravanan**. Ameliorative potential of Cucurbita maxima seed oil against highfat diet-Streptozotocin induced Type 2 diabetes in rats. *Wide Spectrum*, **2018**, 6 (7), 5-15.
28. Nivedha P, **Saravanan** et al., Supplementation of Carrot Incorporated Paneer Attenuates Diabetes through its Antioxidant Potential in Streptozotocin-Nicotinamide-Induced Diabetic Rats. *INNOSC Theranostics and Pharmacological Sciences*, 2018; 1 (1) 1-4.
29. Nivedha, **Saravanan** et al., An Endeavour to Formulate Carrot juice Incorporated Buffalo Milk Paneer as Better Nutritional Source; Organoleptic and Nutritional Evaluation. *Indian Journal of Dairy Science*, 2018, 71(2):1-5.
30. Rajalakshmi, **Saravanan** et al., Bio-modification of Cotton and Micro-denier Polyester with Sericin to Develop Potent Antibacterial and Antifungal Textile Products. *Journal of the Institution of Engineers (India): Series E*, **2018**; **2018**, 99 (2) 119-127.

31. Sathibabu Uddandrao, **Saravanan Ganapathy** et al., Anticancer activity of pomegranate extract: effect on hematological and antioxidant profile against ehrlich-ascites-carcinoma in Swiss albino mice. *Oriental Pharmacy and Experimental Medicine*, **2018**, DOI: <https://doi.org/10.1007/s13596-018-0348-4>.
32. Kalaivani, **Saravanan**, Vadivukkarasi et al., Anti obese potential of Cucurbita maxima seeds oil: effect on lipid profile and histoarchitecture in high fat diet induced obese rats. *Natural Product Research*, **2018**, 32:24, 2950-2953. **(IF: 1.999)**
33. Rameshreddy, **Ganapathy Saravanan** et al., Obesity-alleviating potential of asiatic acid and its effects on ACC1, UCP2, and CPT1 mRNA expression in high fat diet induced obese Sprague-Dawley rats. *Molecular and Cellular Biochemistry*, **2018**; 442: 143-154. **(IF: 2.884)**
34. Sathibabu Uddandrao, **Ganapathy Saravanan** et al., Beneficial Role of Some Natural Products to Attenuate the Diabetic Cardiomyopathy through Nrf2 Pathway in Cell Culture and Animal Models. *Cardiovascular Toxicology*, **2018**; 2018; 18: 199-205. **(IF: 2.630)**
35. Sathibabu Uddandrao, **G. Saravanan** et al., Restorative Potentiality of S-Allylcysteine against Diabetic Nephropathy through Attenuation of Oxidative stress and Inflammation in Streptozotocin-Nicotinamide induced Diabetic Rats. *European Journal of Nutrition*, **2018**; DOI: <https://doi.org/10.1007/s00394-018-1795-x>. **(IF: 4.449)**
36. Balakrishnan, **Saravanan** et al., Ameliorative potential of Saudi Arabian date fruit (*Phoenix dactylifera* L.) varieties against Freund's complete adjuvant induced arthritis in rats. *Oriental Pharmacy and Experimental Medicine*, **2019**; DOI: <https://doi.org/10.1007/s13596-019-00377-x>.
37. Pavithra, **Saravanan Ganapathy** et al., Identification of bioactive factors from *Abrus precatorius* by GC-MS, NMR and evaluation of its antioxidant activity. *Materials Today: Proceedings*, **2019**; DOI: <https://doi.org/10.1016/j.matpr.2019.05.417>.
38. LiZaoni, **Saravanan Ganapathy** et al., Asthma-alleviating Potential of 6-Gingerol: Effect on cytokines, related mRNA and c-Myc, NFAT1 expressions in Ovalbumin sensitised Asthma in Rats. *Journal of Environmental Pathology, Toxicology and Oncology*, **2019**; 38(1): 41-50. **(IF: 1.241)**
39. Swapna, **G. Saravanan** et al., Effects of Asiatic acid, an active constituent in *Centella asiatica* (L.): Restorative perspectives of Streptozotocin-Nicotinamide induced Changes on Lipid Profile and Lipid Metabolic Enzymes in Diabetic Rats. *Comparative Clinical Pathology*, **2019**; DOI:10.1007/s00580-019-02955-6.

40. Kalaivani, **Saravanan**, Vadivukkarasi et al., Reversal of high fat diet-induced obesity through modulating lipid metabolic enzymes and inflammatory markers expressions in rats. *Archives of Physiology and Biochemistry*, **2019**; 125(3):228-234. **(IF: 2.110)**
41. Brahmanaidu, Sathibabu Uddandrao, **Saravanan G.** Diabetic Cardiomyopathy: molecular mechanisms, detrimental effects of conventional treatment, and beneficial effects of natural therapy. *Heart Failure Reviews*, **2019**; 24(2):279-299. **(IF: 4.015)**
42. Sathibabu Uddandrao, **G. Saravanan** et al., Anti-obesity efficacy of Asiatic acid: Down-regulation of Adipogenic and Inflammatory processes in high fat diet induced obese rats. *Archives of Physiology and Biochemistry*, **2019**, DOI:https://doi.org/10.1080/13813455.2018.1555668. **(IF: 2.110)**
43. Swapna Kalidhindi, Veera Venkata Sathibabu Uddandrao<sup>1</sup>, Vadivukkarasi Sasikumar, Nivedha Raveendran and **Saravanan Ganapathy**. Mitigating Perspectives of Asiatic Acid in the Renal Derangements of Streptozotocin-Nicotinamide Induced Diabetic Rats. *Cardiovascular & Hematological Agents in Medicinal Chemistry*, **2020**, 18, 37-44.
44. V.V. Sathibabu Uddandra, Parim Brahmanaidu and **Saravanan Ganapathy**, Evaluation of the Antioxidant and Antidiabetic Potential of the Poly Herbal Formulation: Identification of Bioactive Factors. *Cardiovascular & Hematological Agents in Medicinal Chemistry*, **2020**, 18, 1-13
45. Kalaiseziyen Pavithra and **Ganapathy Saravanan**. A Review on Phytochemistry, Pharmacological Action, Ethanobotanical Uses and Nutritional Potential of *Kedrostis foetidissima* (Jacq.) Cogn. *Cardiovascular & Hematological Agents in Medicinal Chemistry*, **2020**, 18, 1-16.
46. V. V. Sathibabu Uddandrao , Brahmanaidu Parim , Ravindarnaik Ramavat, **Saravanan Ganapathy**. Effect of S-allylcysteine against diabetic nephropathy via inhibition of MEK1/2-ERK1/2-RSK2 signalling pathway in streptozotocin-nicotinamide induced diabetic rats. *Archives of Physiology and Biochemistry*, **2020**. (Article in press). **(I.F 2.1)**
47. K. Pavithra, V. V. Sathibabu Uddandrao, **G. Saravanan**. Phenolic fraction extracted from *Kedrostis foetidissima* leaves ameliorated isoproterenol-induced cardiotoxicity in rats through restoration of cardiac antioxidant status. *Food Biochem.* **2020**, 44(11), e13450.. **(I.F 1.7)**.

48. Govindasami Sangeethadevi , Sathibabu Uddandrao V V , Rani Antony Rathinasamy Jansy Isabella , **Ganapathy Saravanan**. Attenuation of lipid metabolic abnormalities, proinflammatory cytokines, and matrix metalloproteinase expression by biochanin-A in isoproterenol-induced myocardial infarction in rats. *Drug Chem Toxicol* . **2021**,15;1-12.
49. Uddandrao, V.V.S., Parim, B., Singaravel, S., ...Sasikumar, V., **Saravanan, G**. Polyherbal Formulation Ameliorates Diabetic Cardiomyopathy Through Attenuation of Cardiac Inflammation and Oxidative Stress Via NF- $\kappa$ B/Nrf-2/HO-1 Pathway in Diabetic Rats. *Journal of cardiovascular pharmacology*, **2022**, 79(1), pp. e75–e86. **(I.F 4.3)**.
50. Sethumathi, P.P., V. V. Sathibabu Uddandrao., **Saravanan, G**. et al. Biochanin A Attenuates Hyperglycemia in High-Fat Diet–Streptozotocin–Induced Diabetic Rats by Modulating the Activities of Carbohydrate-Metabolizing Enzymes in Vital Organs. *Revista Brasileira de Farmacognosia/ Brazilian Journal of Pharmacognosy* 2022, 32, 608–617. **(IF: 2.464)**.
51. V. V. Sathibabu Uddandrao, P. Chandrasekaran, **G. Saravanan**, et al., Phytoformulation with hydroxycitric acid and capsaicin protects against high-fat-diet-induced obesity cardiomyopathy by reducing cardiac lipid deposition and ameliorating inflammation and apoptosis in the heart. *Journal of Traditional and Complementary Medicine*. 2024, 14 162-172. **(IF: 3.3)**.
52. V. V. Sathibabu Uddandrao, Parim Brahma Naidu, P. Chandrasekaran & **G. Saravanan**. Pathophysiology of obesity-related infertility and its prevention and treatment by potential phytotherapeutics. *International Journal of Obesity* 2024, 48, 147–165. **(IF: 4.2)**.
53. Chandrasekaran P, V. V. Sathibabu Uddandrao, Vadivukkarasi S, **Saravanan G**. Partially Purified Polysaccharides from *Lentinus edodes* (Mushroom) Scavenge Free Radicals and Induce Apoptosis in MCF-7 Cancer Cells by Regulating Apoptotic Genes. *Indian Journal of Pharmaceutical Education and Research*. 2024; 58(2):535-545. **(IF: 0.8)**.
54. Tamilmani P, Sathibabu Uddandrao VV, Chandrasekaran P, **Saravanan G**, Brahma Naidu P, Sengottuvelu S, Vadivukkarasi S. Linalool attenuates lipid accumulation and oxidative stress in metabolic dysfunction-associated steatotic liver disease via Sirt1/Akt/PPRA- $\alpha$ /AMPK and Nrf-2/HO-1 signaling pathways. *Clinics and Research in Hepatology and Gastroenterology*. 2023, 47(10), 102231. **(IF: 2.6)**.

- 55.** P. P. Sethumathi, V. V. Sathibabu Uddandrao, P. Chandrasekaran, S. Sengottuvelu, P. Tamilmani, P. Ponmurugan, S. Vadivukkarasi, M. Santhanakumar, M. Shabana Begum and **G. Saravanan**. Biochanin-A Protects Rats from Diabetes-associated Cardiorenal Damage by Attenuating Oxidative Stress through Activation of Nrf-2/HO-1 Pathway. *Biosciences Biotechnology Research Asia*. 2023, 20(2).
- 56.** Sethumathi PP, V.V. Sathibabu Uddandrao, Chandrasekaran P, Sengottuvelu S, Tamilmani P, Ponmurugan P, Vadivukkarasi S, Santhanakumar M, Shabana Begum M, **Saravanan G**. Biochanin-A attenuates high-fat diet and streptozotocin-induced hyperlipidemia and oxidative stress in rats by improving antioxidant status and lipid metabolic markers. *Asian Pacific Journal of Tropical Biomedicine*. 2023, 460-468.

#### **ABSTRACTS PUBLISHED:**

1. Brahmanaidu, Sathibabu Uddandrao, **Saravanan**, Balaji. The beneficial potential of polyherbal formulation in protecting against streptozotocin-nicotinamide-induced cardiomyopathy through Nrf2-regulated anti-inflammation, anti-oxidant and anti-fibrosis in C57BL/6J mice. *Free Radical Biology and Medicine*, 2018, 128; S21–S46. **(IF: 5.657)**.

#### **CONFERENCE PROCEEDINGS PUBLISHED:**

1. Jansy Isabella Rani, Nivedha, Sathibabu Uddandrao, **Saravanan** and Vadivukkarasi. Evaluation of Anti-obesity activity of Biochanin A against high-fat diet (HFD)-induced obesity in rats. CSIR Sponsored National Conference on “Translating the Science of Nutrition into Art of Healthy Living (TSNAHL)”, **2019**, ISBN: 978-93-5346-732-6.
2. Sangeethadevi, Nivedha, Sathibabu Uddandrao, **Saravanan** and Vadivukkarasi. Evaluation of Cardioprotective activity of Biochanin-A against isoproterenol-induced myocardial infarction in rats. CSIR Sponsored National Conference on “Translating the Science of Nutrition into Art of Healthy Living (TSNAHL)”, **2019**, ISBN: 978-93-5346-732-6.
3. Nivedha, Sathibabu Uddandrao, **Saravanan**, Brahmanaidu, Vadivukkarasi. Anti-diabetic potential of Cucurbita maxima seed oil by enhancing the antioxidant status in streptozotocin-nicotinamide induced Diabetic Rats. CSIR Sponsored National Conference on “Translating the Science of Nutrition into Art of Healthy Living (TSNAHL)”, **2019**, ISBN: 978-93-5346-732-6.



4. Sathibabu Uddandrao, P. Brahmanaidu and **Ganapathy Saravanan**. Attenuation of Diabetic nephropathy by S-Allylcysteine through its antioxidant efficacy in Streptozotocin-Nicotinamide induced diabetic rats. Proceedings of Life Science: Research, Practices and Applications for Sustainable Development. **2018**, ISBN: 938700007-9.
5. Sathibabu Uddandrao, **Ganapathy Saravanan**, Brahmanaidu. Renoprotective capability of S-Allylcysteine against Streptozotocin Nicotinamide induced Diabetic Nephropathy in Rats. Proceedings of International Conference on “Herbal and Natural Components as the Future of Pharmacology” **2017**, ISBN: 978-93-84234-04-1.
6. Ramesh Reddy, Sathibabu Uddandrao, Parim Brahmanaidu and **Saravanan**. Ameliorative Potentiality of Asiatic acid against the High Fat Diet induced Obesity in Sprague dawley Rats. Herbal and Natural Components as the Future of Pharmacology”, **2017**, ISBN: 978-93-84234-04-1.
7. Nivedha, **Saravanan**, et al., Evaluation of Sensory and Nutritional values of Carrot juice Incorporated Cow Milk Paneer. Herbal and Natural Components as the Future of Pharmacology”, **2017**, ISBN: 978-93-84234-04-1.
8. Swapna, Sathibabu Uddandrao, P. Brahmanaidu and **Saravanan**. Attenuation of Hyperglycaemia through Asiatic acid in High Fat Diet induced Obese Rats. Herbal and Natural Components as the Future of Pharmacology”, **2017**, ISBN: 978-93-84234-04-1.
9. Kalaivani, **Saravanan** and Vadivukkarsi. Extraction of Oil from *Cucurbita maxima* seeds and Evaluation of its Anti Obesity potentiality in High Fat Diet induced Obese Rats. Herbal and Natural Components as the Future of Pharmacology”, 2017, ISBN: 978-93-84234-04-1.
10. Sathibabu Uddandrao and **Ganapathy Saravanan**. Pharmacological evaluation of S- Allylcysteine, a garlic component for hypoglycemic activity and its effect on hepatic enzymes of glucose metabolism in STZ-NAD induced diabetic rats. Proceedings of ICMR Sponsored National Conference on Challenging Issues and Technological Approaches in Medicine- CITAM **2016**, ISBN No: 81-8446-755-9.

## **BOOKS**

1. **G. Saravanan and P.Ponmurugan**. Antidiabetic Properties of S-allylcysteine in Experimental Diabetes, Lambert Academic Publishers, Germany, 2013. ISBN: 978-3659212246.

**2. G. Saravanan and P.Ponmurugan.** Animal Studies: Experimental Procedures, Narosa Publishers, New Delhi, 2013. ISBN: 978-1842657799

### **CHAPTERS IN BOOKS**

1. Attenuation of Obesity-Associated Oxidative Stress by Cucurbita maxima Seed Oil in High Fat Diet-Induced Obese Rats. Book entitled "**Pathophysiology of Obesity-Induced Health Complications**" published in Springer, Switzerland, **2020**. Advances in Biochemistry in Health and Disease. ISBN 978-3-030-35357-5 ISBN 978-3-030-35358-2 (eBook), <https://doi.org/10.1007/978-3-030-35358-2>

### **JOURNAL EDITORSHIP:**

Editorial Board Member, (2017-Tilldate), Cardiovascular & Hematological Agents in Medicinal Chemistry, Bentham Science Publishers, USA.

1. **Current Scenario on Natural Products Chemistry.** Cardiovascular & Hematological Agents in Medicinal Chemistry, 2017, Vol. 15, No. 2. **Bentham Science publishers.**

2. **Natural Products Chemistry and Drug Design - 2020**". Cardiovascular & Hematological Agents in Medicinal Chemistry 2020, Vol. 18, No. 1. **Bentham Science publishers.**

### **INVITED REVIEWER FOR JOURNALS:**

1. Cardiovascular Toxicology (Springer-Nature)
2. Journal of Food Biochemistry (Wiley Online Library)
3. Biological Trace Element Research (Springer-Nature)
4. International Urology and Nephrology (Springer-Nature)
5. Plant Foods for Human Nutrition (Springer-Nature)
6. Molecular and Cellular Endocrinology (Elsevier)
7. Journal of Applied Medicine (Elsevier)
8. Biomedicine & Pharmacotherapy (Elsevier)
9. BMC Complementary and Alternative Medicine (BioMed Central)
10. Neuropsychobiology (Karger Publishers)
11. Human & Experimental Toxicology (SAGE Journals)
12. Oriental Pharmacy and Experimental Medicine (Springer-Nature)

### **RESEARCH INTERESTS:**

1. My entire scientific career has been devoted to study human and animal metabolic disorders such as diabetes mellitus and obesity. In my many years of experience, I have dedicated my main efforts to the natural products for the amelioration of diabetes mellitus and obesity studies in animal models.
2. Identification of mode of action of natural products for the amelioration various diseases, molecular mechanisms identification with RT-PCR and Western blot, Histopathological and Biochemical pathways analysis.

### **AWARDS AND RECOGNITIONS:**

1. Best Researcher Award- Periyar University, Salem, Tamilnadu, India, 2019.
2. Best Scientist Award – Nature Science Foundation, Coimbatore, Tamilnadu, India, 2018.

### **MENTORING EXPERIENCES:**

1. **Ph.D., Mentor:** Currently 3 Ph.D., Scholars are Pursuing Ph.D. Two student completed PhD.
2. **Post Graduate Mentor:** To guide the post graduate students to complete their academic projects in the field of Biochemistry from 2007 to till date.
3. **Under Graduate Mentor:** To guide the under graduate students to complete their academic projects in the field of Biochemistry from 2017 to till date.

### **RESEARCH EXPERIENCES (FUNDED PROJECTS):**

1. **Principal Investigator:** Effects of S-allylcysteine in streptozotocin - nicotinamide induced renal damage in rats.

**Funding Agency:** DST-SERB, Government of India

**Sanctioned Amount:** 37.1 Lakhs

**Duration:** 3 years

**Ref. No:** SR/SO/HS-0227/2012, Dt: 10-11-2014.

**Status:** Completed

2. **Principal Investigator:** Beneficial effect of poly herbal formulation against diabetic cardiomyopathy and to understand its mode of action in streptozotocin-nicotinamide induced diabetic rats.

**Funding Agency:** ICMR-SRF, Indian Council of Medical Research (ICMR), Government of India, New Delhi

**Sanctioned Amount:** 15.73 Lakhs

**Duration:** 3 years

**Ref. No:** 45/2/2019/MP/BMS, Dt: 22.01.2019.

**Status:** Completed

3. **Principal Investigator:** Cardioprotective activity of Partially purified phenolic fraction from *Kedrostis foetidissima* leaves against Isoproterenol induced myocardial infarction in rats.

**Funding Agency:** ICMR-SRF, Indian Council of Medical Research (ICMR), Government of India, New Delhi

**Sanctioned Amount:** 15.73 Lakhs

**Duration:** 3 years

**Ref. No:** 45/24/2018-BIO/BMS; Dt: 16-04-2018.

**Status:** Completed

4. **Principal Investigator:** Evaluation of Antioxidant, Anti lipid peroxidation and Antiglycation activities of bioactive factors isolated from *Abrus precatoriu*.

**Funding Agency:** Tamilnadu State Council for Science and technology (TNSCST), Chennai, Tamilnadu

**Sanctioned Amount:** 10000

**Duration:** 6 months

**Ref. No:** BS-28

**Status:** Completed

5. **Principal Investigator:** Anti-Cancer and anti-oxidant activity of polysaccharide extracted from *Lentinus edodes* and inhibitory action against Aromatase, Estrone Sulfatase, and  $17\beta$ -Hydroxysteroid Dehydrogenase through molecular docking studies.

**Funding Agency:** ICMR

**Sanctioned Amount:** Rs.20,07,330/

**Duration:** 3 years (2020-2023)

**Ref. No:** 2020-0224

**Status:** Ongoing

### **Patents**

Design patent published on 10.05.2024 entitled Artificial Intelligence based water treatment device.

**CONFERENCE ORGANIZED AS SECRETARY:**

1. DST-SERB Sponsored National Conference on "Human Microbiome in Health and Disease" on 27<sup>th</sup>& 28<sup>th</sup> November, 2014.
2. DBT Sponsored National Workshop on "Entering the Life Science Research Arena through Big Data" on 23<sup>rd</sup> and 24<sup>th</sup> August, 2016.

### **RESEARCH TECHNIQUES/INSTRUMENTATION/SKILLS:**

1. **Biochemistry and Molecular Biology:** Immunohistochemistry and immunocytochemistry, Isolation of protein, DNA and RNA extraction, Electrophoresis (PAGE, Agarose), Real Time -PCR, Western blot.
2. **Plant Biochemistry:** Extraction and purification of Plant based compounds, GC-MS, HPLC, NMR and FT-IR.
3. **Animal Experiments:** Wistar Albino Rats, Sprague Dawley Rats, Mice
4. **Microscopy:** Fluorescence, Phase contrast, Live cell imaging, Confocal and Apotome microscope.

### **CONFERENCE PAPER PRESENTATIONS:**

- ❖ Presented a paper entitled "Cardioprotective effect of SMCS in isoproterenol induced myocardial infarction in rats "in symposia conducted in Department of plant Science, School of life sciences, Bharathidasan university, Tiruchirappalli, on 5<sup>th</sup>-6<sup>th</sup> January 2009.
- ❖ Presented a paper entitled "Antidiabetic activity of *D-Pinitol* on streptozotocin-induced diabetic rats" in symposia conducted in Dept of Biological sciences, Muthayammal college, Rasipuram, on 9<sup>th</sup> -10<sup>th</sup> January 2009.
- ❖ Presented a paper entitled "Screening on Laccase" in symposia conducted in Ayyanadar Janakiammal College, Sivakasi, February 2010.
- ❖ Presented a paper entitled "Effect of s -allyl cysteine in trace elements in seminar Food processing and technology conducted at Periyar university on 2012.
- ❖ Presented a paper entitled "Effects of S-allylcysteine on biomarkers of polyol pathway in experimental type II diabetes in rats" in 11th International Food Data Conference conducted at NIN- ICMR, Hyderabad on November 3-5, 2015.
- ❖ Presented a Paper entitled "Pharmacological evaluation of S- Allylcysteine, a garlic component for hypoglycaemic activity and its effect on hepatic enzymes of glucose metabolism in STZ-induced diabetic rats" in National conference on New Horizon Of Nanotechnology In Bioscience, Periyar University, Salem.

❖ Presented a Paper entitled “Effects of S-Allylcysteine on Biomarkers of the Polyol Pathway in Rats with Type 2 Diabetes”. 11th International Food Data Conference conducted at NIN- ICMR, Hyderabad on November 3-5, 2015.

**REFERENCES:**

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