

# Curriculum Vitae

**Dr.K.Gokulakrishnan**  
**Assistant Professor, Department of Neurochemistry**  
**National Institute of Mental Health and Neurosciences (NIMHANS)**  
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**Specialization:** Disease Biology; Clinical significance and subclinical relevance of cellular and molecular alterations in metabolic diseases/psychotic disorders; Insulin signaling, gut microbiome, epigenetics and metabolomics aspects of gestational diabetes & Schizophrenia, Unraveling mechanisms of Proinflammation, Oxidative stress, and biomarker(s) identification for early disease prediction; Complementary medicine including molecular benefits of lifestyle intervention; Non-invasive point-of-care (POC) clinical measures and medical devices.

## EDUCATIONAL QUALIFICATIONS:

<b>Course</b>	<b>Subject</b>	<b>University/Board</b>	<b>Year</b>
<b>Ph.D</b>	Biochemistry and Molecular Biology	Madras Diabetes Research Foundation [University of Madras], Chennai, India	2009
<b>M.Sc</b>	Biochemistry	University of Madras, Chennai, India	2001
<b>B.Sc</b>	Biochemistry	University of Madras, Chennai, India	1998

**Position and Employment (Starting with the most recent employment)**

<b>SI No.</b>	<b>Institution Place</b>	<b>Position</b>	<b>From (Date)</b>	<b>To (date)</b>
1.	National Institute of Mental Health and Neurosciences (NIMHANS)	Assistant Professor, Department of Neurochemistry	May 2019	till date
2.	Madras Diabetes Research Foundation	Head, Department of Research Biochemistry & Scientist	Jan, 2017	May 2019
3.	Madras Diabetes Research Foundation	Scientist	2010	2016 Dec
4.	Emory University, Atlanta, USA	Post-doctoral Fellow	2012	2014
5.	University of Michigan, Ann Arbor, USA	Short term Post-doctoral Training	2010	2010
6.	Madras Diabetes Research Foundation	Senior Research Fellow (CSIR)	2006	2009
7.	Madras Diabetes Research Foundation	Junior Research Fellow (ICMR)	2003	2006

**RESEARCH FELLOWSHIPS / AWARDS:**

- 1. Visiting Fellow - Interaction on Clinical Epigenetics & Metabolomics for Biomarker Discovery** at Genome Analysis Center, Helmholtz Zentrum München, Munich, Germany (Feb 2018 & March 2019).
- 2. EASD's Young Scientist Training Program – German Diabetes Centre, Düsseldorf, Germany** and also awarded the **Travel Grant**.
- 3. Best Oral Presentation Award** from the Research Society for the Study of Diabetes in India (RSSDI) 2014.

4. **Best Poster Presentation Award** from the Research Society for the Study of Diabetes in India (RSSDI) 2014.
5. **EASD's Young Scientist Training Program** - Hannover Medical School, Institute of Clinical Biochemistry, Hannover/Germany (undergone training on Clinical aspects of beta cell dysfunction)
6. Travel Grant award to attend **EASD's Young Scientist Training Program**
7. **Visiting Fellow – Interaction on Clinical laboratory standardization and quality control program** at NorthWest Lipid Research Laboratory, University of Washington, Seattle, USA (June - July 2013)
8. **Young Scientist Seed Grant Award, 2013 - NIH/NHLBI, USA**
9. **D43-Postdoctoral Fellowship Award**– from the **Emory University, Atlanta, USA** as part of a NIH/Fogarty supported Chronic, Non-Communicable Diseases and Disorders Across the Lifespan (NCD-LIFESPAN) training program [September 2012 - Aug 2014].
10. **Young Scientist Award** from Science and Engineering Research Board (SERB) - Department of Science and Technology (DST) under Fast track proposal for Young Scientist scheme [2012]
11. Short term **Post Doctoral Training at University of Michigan**, Ann Arbor, USA [May – July 2010]
12. **Young Scientist Travel award** for participation in the 19<sup>th</sup> International Diabetes Federation, Cape Town, South Africa, December, 2006
13. **SRF** (Senior Research Fellowship) from the **Council of Scientific and Industrial Research [CSIR]**, Govt of India.
14. **JRF** (Junior Research Fellowship) from the **Indian Council of Medical Research [ICMR]**, Govt of India.
15. Qualified – Graduate Aptitude Test in Engineering (**GATE - 2003**)

**Professional Memberships:**

1. Editorial Member – Cardiovascular Diabetology Journal
2. Life member - Research Society for the Study of Diabetes in India (**RSSDI**)
3. Member - European Association for the Study of Diabetes (**EASD**).

**Nominated & Served as PhD examiner for students outside the MDRF:**

- National Chemical Laboratory (NCL), Pune
- Vellore Institute of Technology, Vellore.

**Reviewer for the research grants:**

- Department of Biotechnology (DBT), India
- Department of Science and Technology (SERB), India
- BIRAC-BIG

**Reviewer for the various journals including:**

Cardiovascular Diabetology, British Journal of Clinical Pharmacology, Indian Journal of Medical Research (IJMR), BMC Endocrine Disorders, Diabetes Research and Clinical Practice (DRCP), International Journal of Diabetes in Developing Countries, BMC Gastroenterology, Journal of diabetes and metabolic disorders, Hormone and Metabolic Research, Indian Heart Journal, Journal of Clinical Laboratory Analysis, Journal of Diabetes Research.

**PhD students under my supervision at the Research Biochemistry Department of MDRF (affiliated to the University of Madras) working on the following topics:**

- **Mr. Gautam Kumar Pandey** - Clinical significance of Retinol Binding Protein-4 (RBP4) and Adiponectin in obesity mediated type 2 diabetes with molecular studies involving human, animal and 3T3-L1 adipocyte model system **(PhD Thesis submitted)**
- **Ms. Sangeetha V** - Investigating the role of novel biomarkers in gestational diabetes with perspectives on the pathophysiology.
- **Ms. Shanthini K** - Identification of metabolic biomarkers for risk stratification in obese adolescent population in India.

**Summer training & End-semester project training to students:**

So far, >60 summer students trained and 5 project students were directly supervised and guided for their end-semester project work.

**Additional Responsibilities:**

- **2010-2019:** Academic Coordinator, MDRF (Training programmes for Undergraduate & Post graduate students; short-term exposure training and end-semester project training)
- **2010 - 2019:** Member, Institutional Animal Ethics Committee, MDRF
- **2014 - 2019** – Recognized Ph.D supervisor – University of Madras (**presently guiding 3 students for their Ph.D program**)
- **2018 Organizing Secretary: Indo German Clinical Metabolomics workshop** “REsearch and Diagnostics in Frequent Human Metabolic Diseases (REDIMED)”
- **June 2019 onwards - Associate Quality Manager** – Clinical Biochemistry Unit - NIMHANS

**RESEARCH GRANTS AWARDED (as – Principal Investigator)**

SI No.	Title of Project	Funding Agency	Status	Total award amount
1.	Metabolomic profiling to explore biomarkers in the early prediction of gestational diabetes mellitus	SERB - DST	Ongoing	Rs. 80.88 lakhs
2.	Identification of metabolic biomarkers for risk stratification in obese adolescent population in India – <u>IMERSAI</u>	ICMR (Indo German Grant)	Ongoing	Rs. 47.54 lakhs
3.	Evaluating a ‘biomarker’ role for Retinol Binding Protein-4 (RBP4) in patients with type 2 diabetes	DBT	Completed	Rs. 36.09 lakhs
4.	Evaluation of long term effect of lifestyle intervention on adiposity, inflammation and gut hormones among overweight and obese adults	NIH/NHLBI	Completed	USD 20,000
5.	An evaluation of clinical and molecular biomarkers in adolescents in relation to insulin resistance and obesity	ICMR	Completed	Rs. 28.26 lakhs
6.	Evaluation and Molecular Profiling of Adiponectin Isoforms in Type 2 Diabetes - DST-SERB Young Scientist Award	DST - SERB	Completed	Rs. 15.58 lakhs
7.	Role of circulating cell free microRNAs in prediabetes and Type 2 Diabetes	MIRF – MDRF	Completed	Rs.5.0 lakhs

**RESEARCH GRANTS AWARDED (as Co-Investigator)**

SI No.	Title of Project	Funding Agency	Status	Total award amount
1.	Assessment of dietary AGEs and mechanistic studies to evaluate the effect of dietary AGEs on inflammatory markers in subjects at risk for type 2 diabetes	DBT	Ongoing	Rs. 50.48 lakhs
2.	Molecular biomarker role of chemokines in Diabetic Retinopathy	DBT	Ongoing	Rs. 52.54 lakhs
3.	Impact of Lifestyle Intervention on miRNA biomarkers and glucose metabolism	ICMR- INSERM	Ongoing	Rs. 42.04 lakhs
4.	Serum microRNA profiling to explore biomarkers of prediabetes and diabetes	DBT	Completed	Rs. 54.30 lakhs

**CONTRACT RESEARCH GRANTS WITH PHARMA INDUSTRY:**

S.No	Project	Sponsor	Total award amount
1.	Development of the cell based assay for GLP-1 receptor agonist activity	Amneal Pharma, USA	Rs. 16.44

**ONGOING COLLABORATIONS:**

SI No.	Collaborator	Institute	Project details
<b>National Institutions</b>			
1.	Prof.Nikhil Tandon	All India Institute of Medical Sciences, New Delhi	Gestational Diabetes

2.	Dr. Venkateswarlu Panchagnula	National Chemical Laboratory (NCL), Pune	Metabolomics
3.	Prof. Sudha Vidyasagar	Manipal University	Early Beta cell dysfunction and type 2 diabetes
4.	Dr. Umaram	Seethapathi Hospital, Chennai	Gestational Diabetes
<b>International Institutions</b>			
5.	Prof. Jerzy Adamski	Helmholtz Zentrum Munchen, Munich, Germany	Metabolomics
6.	Prof Saravanan Ponnusamy	University of Warwick Coventry, UK	Gestational Diabetes
7.	Prof. Graham Ball	Nottingham Trent University	Bioinformatics
8.	Prof. K.M.Venkat Narayan	Emory University, USA	Type 2 diabetes

**RESEARCH PUBLICATIONS IN ACCREDITED JOURNALS (Total publications 50):**

1. Pandey GK, Vadivel S, Raghavan S, Mohan V, Balasubramanyam M, **Gokulakrishnan K**. High molecular weight adiponectin reduces glucolipotoxicity-induced inflammation and improves lipid metabolism and insulin sensitivity via APPL1-AMPK-GLUT4 regulation in 3T3-L1 adipocytes. *Atherosclerosis*. 2019 Jul 12;288:67-75  
**(Corresponding Author)** (*Elsevier publishers*).
2. Krishnasamy S, Ravi V, Rajaraman B, Kumar Thulasingham S, Dhevasena CS, Pathak A, Swaminathan K, Sundaresan M, Ayyappa KA, Arunkumar G, Kuppan G, Ramadas N, Vedantham S. Role of VEGF(165b)/VEGF(TOTAL) ratio in gestational diabetes mellitus. *Gynecol Endocrinol*. 2019 Apr 9:1-4

3. Pramodkumar TA, Jayashri R, **Gokulakrishnan K**, Velmurugan K, Pradeepa R, Venkatesan U, Saravanan P, Ram U, Anjana RM, Mohan V. Association of 1,5 Anhydroglucitol with Gestational Diabetes Mellitus. *J Diabetes Complications* 2018 Nov. [Epub ahead of print].
4. Jayashri R, Venkatesan U, Rohan M, **Gokulakrishnan K**, Shanthi Rani CS, Deepa M, Anjana RM, Mohan V, Pradeepa R. Prevalence of vitamin B(12) deficiency in South Indians with different grades of glucose tolerance. *Acta Diabetol.* 2018 Oct 13. [Epub ahead of print]
5. **Gokulakrishnan K**, Ranjani H, Weber MB, Pandey GK, Anjana RM, Balasubramanyam M, Prabhakaran D, Tandon N, Narayan KM, Mohan V. Effect of lifestyle improvement program on the biomarkers of adiposity, inflammation and gut hormones in overweight/obese Asian Indians with prediabetes. *Acta Diabetol.* 2017 Jun 15 (*Springer publishers*). **(Corresponding Author)**
6. Reddy S, Amutha A, Rajalakshmi R, Bhaskaran R, Monickaraj F, Rangasamy S, Anjana RM, Abhijit S, **Gokulakrishnan K**, Das A, Mohan V, Balasubramanyam M. Association of increased levels of MCP-1 and cathepsin-D in young onset type 2 diabetes patients (T2DM-Y) with severity of diabetic retinopathy. *J Diabetes Complications.* 2017; 31:804-809 (*Elsevier publishers*).
7. Anand K, Vidyasagar S, Lasrado I, Pandey GK, Amutha A, Ranjani H, Mohan Anjana R, Mohan V, **Gokulakrishnan K**. Secreted frizzled-related protein 4 (SFRP4): A novel biomarker of beta cell dysfunction and insulin resistance in individuals with prediabetes and type 2 diabetes. *Diabetes Care.* 2016; 39:e147-8 (*American Diabetes Association*). **(Corresponding Author)**
8. Pramodkumar TA, Jayashri R, **Gokulakrishnan K**, Velmurugan K, Pradeepa R, Anjana RM, Mohan V. Relationship of glycemic control markers -1,5 Anhydroglucitol, Fructosamine and glycated hemoglobin among Asian Indians with different degrees of glucose intolerance. *Indian J Endocrinol Metab.* 2016 ;20:690-695 (*Endocrine Society of India*).
9. Priya MM, Amutha A, Pramodkumar TA, Ranjani H, Jebarani S, **Gokulakrishnan K**, Pradeepa R, Unnikrishnan R, Anjana RM, Mohan V.  $\beta$ -Cell Function and Insulin Sensitivity in Normal Glucose-Tolerant Subjects Stratified by 1-Hour Plasma Glucose Values. *Diabetes Technol Ther.* 2016 ;18:29-33 (*Mary Ann Liebert, Inc. publishers*).



10. **Gokulakrishnan K**, Manokaran K, Pandey GK, Amutha A, Ranjani H, Anjana RM, Mohan V. Relationship of betatrophin with youth onset type 2 diabetes among Asian Indians. *Diabetes Res Clin Pract.* 2015; 109:71-6 (*Elsevier publishers*). **(Corresponding Author)**
11. Amutha A, Ali MK, Unnikrishnan R, Anjana RM, Ranjani H, **Gokulakrishnan K**, Mohan V, Narayan KM. Insulin sensitivity and secretion in youth onset type 2 diabetes with and without visceral adiposity. *Diabetes Res Clin Pract.* 2015; 109:32-9 (*Elsevier publishers*).
12. **Gokulakrishnan K**, Amutha A, Ranjani H, Bibin SY, Balakumar M, Pandey GK, Anjana RM, Ali MK, Venkat Narayan KM, Mohan V. Relationship of adipokines and proinflammatory cytokines among Asian Indians with obesity and youth onset type 2 diabetes. *Endocr Pract.* 2015; 21:1143-51 (*The American Association of Clinical Endocrinologists*).
13. Pandey GK, Balasubramanyam J, Balakumar M, Deepa M, Anjana RM, Abhijit S, Kaviya A, Velmurugan K, Miranda P, Balasubramanyam M, Mohan V, **Gokulakrishnan K**. Altered circulating levels of Retinol binding protein 4 (RBP4) and Transthyretin (TTR) in relation to insulin resistance, obesity and glucose intolerance in Asian Indians. *Endocr Pract.* 2015;21:861-9 (*The American Association of Clinical Endocrinologists*). **(Corresponding Author)**
14. Adaikalakoteswari A, Jayashri R, Sukumar N, Venkataraman H, Pradeepa R, **Gokulakrishnan K**, Anjana R, McTernan PG, Tripathi G, Patel V, Kumar S, Mohan V, Saravanan P. Vitamin B12 deficiency is associated with adverse lipid profile in Europeans and Indians with type 2 diabetes. *Cardiovasc Diabetol.* 2014; 13:129 (*BioMed Central*).
15. Indulekha K, Surendar J, Anjana RM, Geetha L, **Gokulakrishnan K**, Pradeepa R, Mohan V. Metabolic obesity, adipocytokines and inflammatory markers in Asian Indians. *Diabetes Technol Ther.* 2015 ;17(2):134-41 (*Mary Ann Liebert, Inc. publishers*).
16. **Gokulakrishnan K**, Maheswari K, Mahalakshmi MM, Kalaiyarasi G, Bhavadharini B, Pandey GK, Ramesh J, Ram U, Mohan V. Association of Soluble (Pro) Renin Receptor with Gestational Diabetes Mellitus. *Endocr Pract.* 2015; 21:7-13 (*The American Association of Clinical Endocrinologists*).
17. Shiny A, Regin B, Balachandar V, **Gokulakrishnan K**, Mohan V, Babu S, Balasubramanyam M. Convergence of innate immunity and insulin resistance as

- evidenced by increased nucleotide oligomerization domain (NOD) expression and signaling in monocytes from patients with type 2 diabetes. *Cytokine*. 2013; 64:564-70 (*Elsevier publishers*).
18. Jayashree B, Bibin YS, Prabhu D, Shanthirani CS, **Gokulakrishnan K**, Lakshmi BS, Mohan V, Balasubramanyam M. Increased circulatory levels of lipopolysaccharide (LPS) and zonulin signify novel biomarkers of proinflammation in patients with type 2 diabetes. *Mol Cell Biochem*. 2014 ; 388:203-10 (*Springer Link publishers*)
  19. **Gokulakrishnan K**, Aravindhan V, Amutha A, Abhijit S, Ranjani H, Anjana RM, Unnikrishnan R, Miranda P, Narayan KM, Mohan V. Serum adiponectin helps to differentiate type 1 and type 2 diabetes among young Asian Indians. *Diabetes Technol Ther*. 2013;15:696-702 (*Mary Ann Liebert, Inc. publishers*).
  20. Priya M, Anjana RM, Chiwanga FS, **Gokulakrishnan K**, Deepa M, Mohan V. 1-Hour Venous Plasma Glucose and Incident Prediabetes and Diabetes in Asian Indians. *Diabetes Technol Ther*. 2013;15:497-502 (*Mary Ann Liebert, Inc. publishers*).
  21. Monickaraj F, **Gokulakrishnan K**, Prabu P, Sathishkumar C, Anjana RM, Rajkumar JS, Mohan V, Balasubramanyam M. Convergence of adipocyte hypertrophy, telomere shortening and hypoadiponectinemia in obese subjects and in patients with type 2 diabetes. *Clin Biochem*. 2012; 45:1432-8 (*Elsevier publishers*).
  22. Indulekha K, Surendar J, Anjana RM, **Gokulakrishnan K**, Balasubramanyam M, Aravindhan V, Mohan V. Circulating levels of high molecular weight (HMW) adiponectin and total adiponectin in relation to fat distribution, oxidative stress and inflammation in Asian Indians. *Dis Markers*. 2012; 33(4):185-92 (*Hindawi publishing Corporation*).
  23. Monickaraj F, Aravind S, **Gokulakrishnan K**, Sathishkumar C, Prabu P, Prabu D, Mohan V, Balasubramanyam M. Accelerated aging as evidenced by increased telomere shortening and mitochondrial DNA depletion in patients with type 2 diabetes. *Mol Cell Biochem*. 2012; 365:343-50 (*SpringerLink publishers*).
  24. **Gokulakrishnan K**, Velmurugan K, Ganesan S, Mohan V. Circulating levels of insulin-like growth factor binding protein-1 in relation to insulin resistance, type 2 diabetes mellitus, and metabolic syndrome (Chennai Urban Rural Epidemiology Study 118). *Metabolism*. 2012; 61:43-6. (*Elsevier publishers*).
  25. **Kuppan G**, Anjana RM, Deepa M, Paramasivam P, Chandrakumar S, Kaliyaperumal V, Mohan V. Inflammatory markers in relation to nonalcoholic fatty liver disease in urban

- South Indians. *Diabetes Technol Ther.* 2012;14: 152-8 (*Mary Ann Liebert, Inc. publishers*).
26. **Gokulakrishnan K**, Deepa M, Monickaraj F, Mohan V. Relationship of body fat with insulin resistance and cardiometabolic risk factors among normal glucose-tolerant subjects. *J Postgrad Med.* 2011; 57:184-8 (*Medknow Publications*).
27. Sandeep S, **Gokulakrishnan K**, Deepa M, Mohan V. Insulin resistance is associated with increased cardiovascular risk in Asian Indians with normal glucose tolerance—the Chennai Urban Rural Epidemiology Study (CURES-66). *J Assoc Physicians India.* 2011; 59:480-4. (*The Association of Physicians of India*).
28. Mohan V, Goldhaber-Fiebert JD, Radha V, **Gokulakrishnan K**. Screening with OGTT alone or in combination with the Indian diabetes risk score or genotyping of TCF7L2 to detect undiagnosed type 2 diabetes in Asian Indians. *Indian J Med Res.* 2011; 133:294-9 (*India Council of Medical Research*).
29. Balasubramanyam M, Aravind S, **Gokulakrishnan K**, Prabu P, Sathishkumar C, Ranjani H, Mohan V. Impaired miR-146a expression links subclinical inflammation and insulin resistance in Type 2 diabetes. *Mol Cell Biochem.* 2011;351: 197-205. (*SpringerLink publishers*).
30. **Kuppan G**, Balasubramanyam J, Monickaraj F, Srinivasan G, Mohan V, Balasubramanyam M. Transcriptional regulation of cytokines and oxidative stress by gallic acid in human THP-1 monocytes. *Cytokine.* 2010; 49:229-34 (*Elsevier publishers*).
31. Sandhya N, **Gokulakrishnan K**, Ravikumar R, Mohan V, Balasubramanyam M. Association of hypoadiponectinemia with hypoglutathionemia in NAFLD subjects with and without type 2 diabetes. *Dis Markers.* 2010; 29:213-21 (*Hindawi publishing Corporation*).
32. Gkrania-Klotsas E, Ye Z, Cooper AJ, Sharp SJ, Luben R, Biggs ML, Chen LK, **Gokulakrishnan K**, Hanefeld M, Ingelsson E, Lai WA, Lin SY, Lind L, Lohsoonthorn V, Mohan V, Muscari A, Nilsson G, Ohrvik J, Chao Qiang J, Jenny NS, Tamakoshi K, Temelkova-Kurktschiev T, Wang YY, Yajnik CS, Zoli M, Khaw KT, Forouhi NG, Wareham NJ, Langenberg C. Differential white blood cell count and type 2 diabetes:systematic review and meta-analysis of cross-sectional and prospective studies. *PLoS One.* 2010; 18: 5(10):e13405 (*PLOS publishers*).

33. **Gokulakrishnan K**, Anjana RM, Indulekha K, Anuradha S, Mohan V. Association of hypo adiponectinemia with non-alcoholic fatty liver disease in urban south Indians-CURES - 81). *Indian J Med Res.* 2010; 132:271-7 (*Indian Council of Medical Research*).
34. Sandeep S, **Gokulakrishnan K**, Velmurugan K, Deepa M, Mohan V. Visceral & subcutaneous abdominal fat in relation to insulin resistance & metabolic syndrome in non-diabetic south Indians. *Indian J Med Res.* 2010; 131:629-35 (*Indian Council of Medical Research*).
35. Luo M, Oza-Frank R, Narayan KM, **Gokulakrishnan K**, Mohan V. Serum total adiponectin is associated with impaired glucose tolerance in Asian Indian females but not in males. *J Diabetes Sci Technol.* 2010; 4:645-51 (*SAGE journals*).
36. Narasimhan S, **Gokulakrishnan K**, Sampathkumar R, Farooq S, Ravikumar R, Mohan V, Balasubramanyam M. Oxidative stress is independently associated with non-alcoholic fatty liver disease (NAFLD) in subjects with and without type 2 diabetes. *Clin Biochem.* 2010; 43:815-21 (*Elsevier publishers*).
37. Mohan V, **Gokulakrishnan K**, Ganesan A, Kumar SB. Association of Indian Diabetes Risk Score with arterial stiffness in Asian Indian nondiabetic subjects: the Chennai Urban Rural Epidemiology Study (CURES-84). *J Diabetes Sci Technol.* 2010; 4:337-43 (*SAGE journals*).
38. **Gokulakrishnan K**, Indulekha K, Ganesan S, Anuradha S, Mohan V. Adiponectin and carotid intimal medial thickness in subjects with and without glucose intolerance (CURES-82). *Diabetes Technol Ther.* 2010; 12:109-15 (*Mary Ann Liebert, Inc. publishers*).
39. Anuradha S, Mohan V, **Gokulakrishnan K**, Dixit M. Angiotensin-2 levels in glucose intolerance, hypertension, and metabolic syndrome in Asian Indians (Chennai Urban Rural Epidemiology Study-74). *Metabolism.* 2010; 59:774-9 (*Elsevier publishers*).
40. Mohan V, Vijayachandrika V, **Gokulakrishnan K**, Anjana RM, Ganesan A, Weber MB, Narayan KM. A1C cut points to define various glucose intolerance groups in Asian Indians. *Diabetes Care.* 2010; 33:515-9 (*American Diabetes Association*).
41. **Gokulakrishnan K**, Deepa R, Sampathkumar R, Balasubramanyam M, Mohan V. Association of leukocyte count and hsCRP with metabolic abnormalities in subjects with normal glucose tolerance (CURES - 64). *J Assoc Physicians India.* 2009; 57:27-32 (*The Association of Physicians of India*).

42. **Gokulakrishnan K**, Deepa R, Sampathkumar R, Balasubramanyam M, Mohan V. Association of leukocyte count with varying degrees of glucose intolerance in Asian Indians: the Chennai Urban Rural Epidemiology Study (CURES-26). *Metab Syndr Relat Disord*. 2009; 7:205-10 (*Mary Ann Liebert, Inc. publishers*).
43. **Gokulakrishnan K**, Mohanavalli KT, Monickaraj F, Mohan V, Balasubramanyam M. Subclinical inflammation/oxidation as revealed by altered gene expression profiles in subjects with impaired glucose tolerance and Type 2 diabetes patients. *Mol Cell Biochem*. 2009; 324:173-81. (*SpringerLink publishers*).
44. **Gokulakrishnan K**, Deepa R, Mohan V. Association of high sensitivity C-reactive protein (hsCRP) and tumour necrosis factor-alpha (TNF-alpha) with carotid intimal medial thickness in subjects with different grades of glucose intolerance--the Chennai Urban Rural Epidemiology Study (CURES-31). *Clin Biochem*. 2008; 41:480-5 (*Elsevier publishers*).
45. Mohan V, Sandeep S, Deepa M, **Gokulakrishnan K**, Datta M, Deepa R. A diabetes risk score helps identify metabolic syndrome and cardiovascular risk in Indians - the Chennai Urban Rural Epidemiology Study (CURES-38). *Diabetes Obes Metab*. 2007;9:337-43 (*Wiley Online Library*).
46. **Gokulakrishnan K**, Deepa R, Velmurugan K, Ravikumar R, Karkuzhali K, Mohan V. Oxidized low-density lipoprotein and intimal medial thickness in subjects with glucose intolerance: the Chennai Urban Rural Epidemiology Study-25. *Metabolism*. 2007;56:245-50 (*Elsevier publishers*).
47. Mohan V, **Gokulakrishnan K**, Sandeep S, Srivastava BK, Ravikumar R, Deepa R. Intimal media thickness, glucose intolerance and metabolic syndrome in Asian Indians--the Chennai Urban Rural Epidemiology Study (CURES -22). *Diabet Med*. 2006;23:845-50 (*Wiley Online Library*).
48. **Gokulakrishnan K**, Deepa R, Mohan V, Gross MD. Soluble P-selectin and CD40L levels in subjects with prediabetes, diabetes mellitus, and metabolic syndrome--the Chennai Urban Rural Epidemiology Study. *Metabolism*. 2006;55(2):237-42 (*Elsevier publishers*).
49. Mohan V, **Gokulakrishnan K**, Deepa R, Shanthirani CS, Datta M. Association of physical inactivity with components of metabolic syndrome and coronary artery disease--the Chennai Urban Population Study (CUPS no. 15). *Diabet Med*. 2005;22:1206-11 (*Wiley Online Library*).

50. Mohan V, Deepa R, Velmurugan K, **Gokulakrishnan K**. Association of small dense LDL with coronary artery disease and diabetes in urban Asian Indians – the Chennai Urban Rural Epidemiology Study (CURES-8). *J Assoc Physicians India*. 2005;53:95-100 (*The Association of Physicians of India*).

#### **CHAPTERS IN TEXT BOOK :**

1. Ranjit Unnikrishnan I, **Gokulakrishnan K** Novel markers of diabetes complications. In: RSSDI Update – 2015, Jaypee Brothers. The Health Sciences Publishers., pp.371-74.
2. Deepa R, **Gokulakrishnan K**, Mohan V. Coronary artery disease among Indian diabetic subjects. In: Type 2 Diabetes in South Asians: Epidemiology, Risk Factors and Prevention. Mohan V, Gundu HR Rao (Eds), Under the Aegis of SASAT. Jaypee Brothers Medical Publishers. 2006, pp.242-255.
3. Mohan V. **Gokulakrishnan K**, Ranjit Unnikrishnan I, Deepa R. Epidemiology of hypertension in India: Lessons from the Chennai Urban Population Study (CUPS). In: Type 2 Diabetes in South Asians: Epidemiology, Risk Factors and Prevention. Mohan V, Gundu HR Rao (Eds), Under the Aegis of SASAT. Jaypee Brothers Medical Publishers. 2006, pp.317-330.

#### **ORAL PRESENTATION IN CONFERENCES:**

1. Altered circulating levels of Retinol binding protein 4 (RBP4) and Transthyretin (TTR) in relation to insulin resistance, obesity and glucose intolerance in Asian Indians - **42<sup>nd</sup> Annual Conclave of RSSDI, Bangalore, 2014**
2. **Gokulakrishnan K**, Manokaran K, Pandey GK, Amutha A, Ranjani H, Anjana RM, Mohan V. Novel biomarkers of beta cell dysfunction. **International Conference on Recent Discoveries of Diabetic Biomarkers and Challenges Ahead, Chennai, 2-3 March 2015**
3. Beneficial legacy effect of lifestyle intervention on adiposity and inflammation in overweight/obese people with prediabetes - **Ninth and Final Semi-Annual Global Health Centers of Excellence Steering Committee meeting** - The National Heart, Lung, and Blood Institute [NHLBI], and the UnitedHealth Chronic Disease Initiative, **Bethesda, Maryland, USA** (April 2014).
4. **Gokulakrishnan K**. **Introduction to Scientific and Medical Writing**. The Tamil Nadu Dr.M.G.R Medical University, 2<sup>nd</sup> December 2011

5. High molecular weight (HMW) adiponectin in relation to fat distribution, oxidative stress and inflammation – **39<sup>th</sup> Annual Meeting of RSSDI (Research Society for the Study of Diabetes in India), Mumbai, November 6 – 9, 2011**
6. Association of subclinical atherosclerosis with non-alcoholic fatty liver disease in Asian Indians – **39<sup>th</sup> Annual Meeting of RSSDI (Research Society for the Study of Diabetes in India), Mumbai, November 6 – 9, 2011**
7. Inflammatory Markers in relation to Non-Alcoholic Fatty Liver Disease in Urban South Indians – **39<sup>th</sup> Annual Meeting of RSSDI (Research Society for the Study of Diabetes in India), Mumbai, November 6 – 9, 2011**
8. Adiponectin and Carotid Intimal Medial Thickness in subjects with and without Glucose Intolerance- (CURES- 82) – **37<sup>th</sup> Annual Meeting of RSSDI (Research Society for the Study of Diabetes in India), Ahmedabad, November 5 – 8, 2009**
9. HbA1c cut points to define various glucose intolerance groups in Asian Indians. – **37<sup>th</sup> Annual Meeting of RSSDI (Research Society for the Study of Diabetes in India), Ahmedabad, November 5 – 8, 2009**
10. Association of Tumour Necrosis Factor - $\alpha$  with impaired glucose tolerance, diabetes and metabolic syndrome in south Asians – The Chennai Urban Rural Epidemiology Study [CURES] - **National Seminar on “Molecular Basis of Diseases – Current Perspectives and New Frontiers”, University of Madras, Chennai, March, 2006**
11. Carotid Intimal Medial Thickness in subjects with impaired glucose tolerance in south Indians – The Chennai Urban Rural Epidemiology Study [CURES] - **23<sup>rd</sup> Annual National Conference 2005, Indian Society for Medical Statistics [ISMS], K.L.E Society’s Jawaharlal Nehru Medical College, Belgaum, India January, 2006**

**POSTERS PRESENTED IN CONFERENCES/SYMPOSIUMS:**

1. **Kuppan Gokulakrishnan**, Sudha Vidyasagar, Kaviya Anand, Ian Lasrado, Gautam Kumar P, Anandkumar Amutha, Harish Ranjani, Ranjit Mohan Anjana, Viswanathan Mohan. Exploring the role of secreted frizzled related protein 4 as a novel biomarker of beta cell dysfunction, insulin resistance and type 2 diabetes. - **51st EASD Annual Meeting, Stockholm, Sweden, September 2015.**
2. Kalaivani M, Gautam Kumar P, Amutha A, Anjana RM, Ranjani H, Mohan V, **Gokulakrishnan K.** Association of Betatrophin with type 2 diabetes – a biomarker for

beta cell proliferation - among Asian Indians with youth onset of type 2 diabetes. - **42<sup>nd</sup> Annual Conclave of RSSDI, Bangalore, 2014.**

3. Priya M, Anjana RM, Amutha A, **Gokulakrishnan K**, R Guha Pradeepa, Deepa M, Mohan V. Development of a new software to compute Indian Body fat percentage in Asian Indians. **7<sup>th</sup> International conference on Advanced Technologies and Treatment for diabetes [ATTD], February 5-8, 2014.**
4. **Gokulakrishnan K**, Amutha A, Bibin YS, Ranjani H, Balakumar M, Anjana RM, Gauthamkumar P, Ali MK, Venkat Naryan KM, Mohan V. "Relationship of adipokines, proinflammatory cytokines with obesity and youth onset type 2 diabetes among Asian Indians", **World Diabetes Congress organized by International Diabetes Federation [IDF], Melbourne, Australia, 2013.**
5. **Gokulakrishnan K**, Anjana R.M, Shiny A, Ranjani H, Amutha A, Bibin YS, Mohan V. Circulating levels of adipokines, proinflammatory cytokines with metabolic syndrome among young Asian Indians. **5<sup>th</sup> World Congress of Diabetes India. Cochin, Kerala. 2013.**
6. **Gokulakrishnan K**, Ranjani H, Anjana RM, Balakumar M, Regin BS, Gauthamkumar P, Mohan V. Relationship of Advanced Glycation Endproducts (AGEs) with adipokines and inflammatory cytokines among Overweight/Obese adolescents in Urban South India. **5<sup>th</sup> World Congress of Diabetes India. Cochin, Kerala. 2013.**
7. Priya M, Anjana RM, Amutha A, **Gokulakrishnan K**, R Guha Pradeepa, Deepa M, Mohan V. Comparison of Two New body fat percent (BF%) formulae the "Indian BF% (IBF%) formulae" against BF% measured using dual-energy X-ray absorptiometry. **RSSDI 2013, at Noida.**
8. **Gokulakrishnan K**, Aravindhan V, Amutha A, Shiny A, Ranjani H, Anjana RM, Ranjith U, Priya M, VenkatNarayan K.M , Mohan V. Serum Adiponectin helps to differentiate type 1 and type 2 diabetes among young Asian Indians. **RSSDI 2012, at Chennai.**
9. Jayashree B, **Gokulakrishnan K**, Shanthirani CS, Prabu D, Lakshmi BS, Narayanan RB, Mohan V & Balasubramanyam M. Increased levels of serum lipopolysaccharide (LPS) signify a novel biomarker of proinflammation in patients with type 2 diabetes. **RSSDI 2012, at Chennai.**
10. Prabu P, **Gokulakrishnan K**, Sathishkumar C, Deepa M, Mohan V & Balasubramanyam M. Impaired circulatory miR-126 expression in subjects with prediabetes and in patients with type 2 diabetes. **RSSDI 2012, at Chennai.**



11. Priya M, Anjana RM,Chiwanga F.S, **Gokulakrishnan K**, Deepa M, Mohan V. Predictive 1-Hour venous plasma glucose value cut points for identification of incident prediabetes and diabetes in Asian. **RSSDI 2012, at Chennai.**
12. Finny Monickaraj S, **Gokulakrishnan K**, Prabu, P, Sathishkumar C, Anjana, M, Rajkumar JS, Mohan V, Balasubramanyam M. Association of adipocyte hypertrophy and hypoadiponectinemia in obese subjects and in patients with type 2 diabetes. – **39<sup>th</sup> Annual Meeting of RSSDI (Research Society for the Study of Diabetes in India), Mumbai, November 6 – 9, 2011**
13. N.Sandya, **K.Gokulakrishnan**, R.Sampathkumar, S.Farooq, R.Ravikumar, V.Mohan, M.Balasubramanyam. Inter-dependency of oxidative stress and insulin resistance in Non Alcoholic Fatty Liver Disease (NAFLD) subjects with and without Type 2 Diabetes. Poster presentation at "**Advances in Free Radical Research, Natural Products, Antioxidants and Radio protectors in Health**" held between January 11-13, 2010 at Hyderabad, India.
14. **Gokulakrishnan K**, Sampathkumar R, Balasubramanyam M, Deepa R, Mohan V Association of leukocyte count and high sensitivity CRP with glucose intolerance and metabolic syndrome in South Indians. Poster presentation at **19th World Diabetes Congress organized by International Diabetes Federation [IDF]** held between December 3 - 7, 2006 at Cape Town, South Africa.
15. **Gokulakrishnan K**, Kavitha V, Suja D, Sujatha N, Balasubramaniam D. Plasma antioxidant status in rural population using alcohol, tobacco, cigarette. **Satellite symposium on "Free radicals in Health and Diseases"** by– December 1999, at University of Madras, Chennai.

#### **CONTRIBUTIONS TO ABSTRACTS PRESENTED IN CONFERENCES / SYMPOSIUM:**

1. **Gokulakrishnan K**, Velmurugan K, Ganesan S, Mohan V. Circulating levels of insulin-like growth factor binding protein-1 in relation to insulin resistance, type 2 diabetes mellitus, and metabolic syndrome. **World Diabetes Congress organized by International Diabetes Federation [IDF]** December 4 - 8, 2011 at Dubai.
2. Association among short telomeres, mitochondrial DNA depletion and hypoadiponectinemia in patients with Type 2 diabetes. **World Diabetes Congress organized by International Diabetes Federation [IDF]** December 4 - 8, 2011 at Dubai.
3. Deepa R, Anjana M, **Gokulakrishnan K**, Mohan V. [presented by Dr.R.Deepa] Circulating oxidized low-density lipoprotein and its association with carotid intimal media thickness in subjects with glucose intolerance. Poster presentation at **41<sup>st</sup> European Association for the Study of Diabetes [EASD]** held between September 10 – 15, 2005 at **Athens, Greece.**

4. Mohan V, Deepa R Velmurugan K, **Gokulakrishnan K**. [presented by Dr.V.Mohan] Association of LDL subfractions with coronary artery disease and diabetes in native Indians – The Chennai Urban Rural Epidemiology Study [CURES]. Poster presentation at **American Diabetes Association 64<sup>th</sup> Scientific Sessions** held between June 4 – 8, 2004 at Orlando, Florida.

**WORKSHOP / HANDS ON TRAINING ATTENDED:**

<b>Workshop/Hands on Training</b>	<b>Venue</b>	<b>Year</b>
International Training course on Surveying and Evaluating Ethical Review Practices by the Forum of Ethical Review Committees in the Asian & Western Pacific Region (FERCA)	National Institute for Research in Tuberculosis (NIRT), Chennai	2016
MDRF- Indian Society for Clinical Research : Advanced Good Clinical Practice and Indian Regulations in Clinical Trials	Madras Diabetes Research Foundation (MDRF), Chennai	2015
MDRF – University of Minnesota, USA workshop on “Advanced Techniques in Genomics of Type 2 diabetes”	Madras Diabetes Research Foundation (MDRF), Chennai	2010
MDRF-ICMR workshop on “Techniques in Genomics in relation to Diabetes & Related Disorders”	Madras Diabetes Research Foundation (MDRF), Chennai	2009

**RESEARCH METHODOLOGY & STATISTICS**

<b>Course</b>	<b>Venue</b>	<b>Year</b>
short-term Course on Basics of Biostatistics	Madras Diabetes Research Foundation (MDRF)	<b>2012</b>
In-house workshops on “Clinical Research Training” sponsored by National Institutes of Health, USA	Madras Diabetes Research Foundation (MDRF)	2004, 2005 & 2006
Pre-conference CME on “ Biostatistical techniques in clinical trials” 24 <sup>th</sup> Annual National Medical Statistics Conference by Indian Society for Medical Statistics [ISMS]	PSG Institute of Medical Sciences & Research, Coimbatore	2006

Pre-conference CME on “Statistical Methods in Biomedical Research” 23 <sup>rd</sup> Annual National Medical Statistics Conference by Indian Society for Medical Statistics [ISMS]	K.L.E Society’s Jawaharlal Nehru Medical College, Belgaum	2006
MDRF-UAB (University of Alabama, Birmingham) “National Seminar on Epidemiology of Non-Communicable diseases” sponsored by National Institutes of Health, USA	Madras Diabetes Research Foundation (MDRF)	2004, 2005 & 2006

**CONTRIBUTIONS TO INSTITUTION’S SCIENTIFIC ACTIVITIES:**

Coordinated in organizing the following scientific programmes

S No	Scientific Programme	Venue	Year
1.	Public exhibition on Diabetes awareness	Chennai	2003
2.	ADA-MDRF post-graduate course in Diabetology	Chennai	2004, 2006
3.	MDRF-UAB “National Seminar on Epidemiology of Non-Communicable diseases”	Chennai	2004, 2005 - 2007
4.	Indo-Swedish Symposium on “Genomics and Proteomics of Diabetes” sponsored by Dept of Biotechnology (DBT), Govt. of India	Chennai	2006
5.	Inspire Science Camp For Students	Chennai	2010
6.	Diabetes Fest program	Chennai	2011
7.	Editor : The MDRF Annual report 2010-2012, 2013-16	Chennai	2012, 2016
8.	Editor : The MDRF DSIR-SIRO Report 2013-2016	Chennai	2013, 2017
9.	Dr Mohan’s International Diabetes Update	Chennai	2014, 2015, 2016

**COMPUTER KNOWLEDGE:**

Microsoft Office

**Statistical Software Knowledge:** SPSS Statistical packages, Epi-info, Medcalc, Istat

**Brief Profile**

**Dr.K.Gokulakrishnan, Ph.D**  
**Assistant Professor, Department of Neurochemistry**  
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**Mobile: +91-9962465824**

Dr. Gokulakrishnan possesses domain expertise in biomarker research and disease biology and develops precision intervention strategies. He has over 16 years of research experience with multidisciplinary clinical and basic research skills and has published over 50 research papers in peer reviewed journals and also coauthored three chapters in textbooks. He is currently working on certain unique programmes such as understanding ‘metabolic obesity’ in Indians, Insulin signaling, gut microbiome, epigenetics and metabolomics aspects of gestational diabetes, Schizophrenia and psychotic disorders, biomarker(s) identification for early disease prediction, complementary medicine including molecular benefits of lifestyle intervention and Non-invasive point-of-care (POC) - clinical measures and medical devices.

He received – the Young Scientist Award from Department of Science and Technology from the Government of India and also completed two year Junior Faculty Fellowship program at the Emory University, Atlanta, USA. He is a Visiting Fellow to NorthWest Lipid Research Laboratory, University of Washington, Seattle, USA. He has also undergone the EASD Young Scientist Training Programs at Hannover and Dusseldorf, Germany.

He has independently received research grants from various funding agencies including the Indian Council of Medical Research (ICMR), Department of Biotechnology, Department of Science and Technology, Government of India and also from the National Heart, Lung, and Blood Institute (NHLBI), USA. He is a visiting fellow to Genome Analysis Center, Institute of Experimental Genetics, Helmholtz Zentrum München, Munich, Germany and involved in Mass spectrometry standardization for Metabolomic biomarkers between India and Germany.

The long term goal of his lab is to understand the molecular mechanisms of metabolic diseases/psychotic disorders and to identify diagnostic/predictive biomarkers of disease, identify drug targets and develop precision intervention strategies. He has been continuously acquiring additional skills to establish my independent research career.