CURRICULUM VITAE

Ram Rajasekharan, PhD, FNA, FASc, FNASc, FNAAS, JC Bose National Fellow

Director

Central Food Technological Research Institute (CFTRI)

Council of Scientific and Industrial Research (CSIR), MYSORE-570 020

INDIA

Telephone: 91-821-2517760; Fax: 91-821-2516308

E-mail: ram@cftri.res.in ram@cftri.com

Mobile phone: +91-9483521260

Educational Qualifications

Ph.D. Biochemistry, Indian Institute of Science, Bangalore, India (1987)

M.Sc. Integrated Biology, Madurai Kamaraj University, Madurai, India (1981)

B.Sc. Zoology, Madurai Kamaraj University, Madurai, India (1979)

Research Area

- Biochemistry and molecular biology of plant lipids
- Fats and oils – as nutraceuticals and dietary supplements

Professional Experience

Academic:

Aug. 2012 to date - Director, Central Food Technological Research Institute, Council of Scientific and Industrial Research, Mysore 570 020.

Dec. 2007 to Apr. 2015 - Professor, Department of Biochemistry, Indian Institute of Science (IISc), Bangalore 560012.

April 2009 to Aug. 2012 - Director, Central Institute of Medicinal and Aromatic Plants, Council of Scientific and Industrial Research, Lucknow 226015.

July 2007 to Oct. 2010 – Associate Professor, School of Science, Monash University, Sunway campus, Malaysia.

Apr. 2001 to Dec. 2007 - Associate Professor, Department of Biochemistry, Indian Institute of Science, Bangalore.

Apr. 1995 to Mar. 2001 - Assistant Professor, Department of Biochemistry, Indian Institute of Science, Bangalore.

Apr. 1991 to Aug. 1994 - College Assistant Professor, Plant Genetic Engineering Laboratory, New Mexico State University Las Cruces, NM 88003, USA.

Feb. 1989 to Apr. 1991 - Research Scientist Associate, E. I. duPont de Nemours Company, AgBiotech, DuPont Experimental Station, Wilmington, DE 19880, USA.

Feb. 1987 to Feb. 1989 - Post-Doctoral Fellow, Department of Microbiology, University of Illinois, Urbana, IL 61801, USA.

Teaching:

- Sept. 2006 to Oct. 2010, teaching Undergraduate level Biochemistry courses at Monash University, Sunway Campus, Malaysia.
- Aug. 1995 to Feb. 2009, General Biochemistry course at the Indian Institute of Science as part of the course curriculum for the PhD students.
- Number of Ph.Ds guided: Awarded: **25.**

Industrial:

- Sep. 1994 to Mar. 1995 - Visiting Professor, Monsanto Company, 700, Chesterfield Parkway North, St. Louis, MO 63198, USA.
- May 2002 to Nov. 2002* - Founder Research Director, Bijam Biosciences Pvt. Ltd, Hyderabad. To set-up R&D Facilities at Hyderabad for M/s Nagarjuna Fertilizers & Chemicals Ltd.
- June 2005 to Dec. 2005* - Founder Chief Scientific Officer at TICEL Bio Park, Tamil Nadu State Government, Chennai. To develop the Tamil Nadu State BioPark as a research driven operation and management.

*Served during the leave of absence from Indian Institute of Science, Bangalore, India

Honors:

- J.C. Bose National Fellow (2013) instituted by the Department of Science and Technology, New Delhi.
- Fellow of Indian National Science Academy, New Delhi (2012).
- Elected Corresponding Member of the International Conference on the Bioscience of Lipids (ICBL; http://www.icbl.unibe.ch; 2010-2013).
- Fellow of Indian Academy of Sciences, Bangalore (2006).
- Fellow of the National Academy of Sciences, Allahabad (2005).

- Fellow of National Academy of Agricultural Sciences, New Delhi (2003).
- Elected Member of Guha Research Conference, Hyderabad (2002).

Awards:

- Professor G. V. Joshi Memorial Award - Indian Society of Plant Physiology (NCCP-2016) at University of Agricultural Sciences, Bangalore.
- Sir J C Bose Memorial Award 2014, Instituted by the Indian Science Monitor.
- Technology Award for Life Sciences - 2012, instituted by the Council of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, New Delhi.
- Prof. I. S. Bhatia Memorial Award - 2011, Instituted by the Society of Biological Chemists, India.
- Pro Vice-Chancellor Award for excellence in Research - 2009, instituted by Monash University.
- Pro Vice-Chancellor Award for excellence in Research - 2008, instituted by Monash University.
- National Academy of Sciences, India - Reliance Industries: Platinum Jubilee Award for Application Oriented Innovations in Biological Sciences (2008).
- Sir C. V. Raman State Award in Life Sciences - 2004, instituted by the Ministry of Science and Technology, Government of Karnataka, Bangalore, India.
- National Bioscience Award for Career Development - 2002, instituted by the Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi.
- Nagarjuna Group Agricultural Biotechnology Excellence Award – 1999, instituted by Nagarjuna Fertilizers and Chemicals Limited, Hyderabad, India.

Patents

1. Rajasekharan R, Rodrigues R, and Reddy S (2001) A novel herbicide comprising phytotoxins of *Lasiodiplodia theobromae* fungus, A process of producing the herbicide and a method of using the same - US Patent **6,277,786.**

2. Rajasekharan R, and Daniel J (2002) A process for preparing a novel synergistic solid/semi-solid organic composition - US Patent **6,391,928**.

3. Rajasekharan R, and Bhardwaj K (2002) Process of isolation and utilization of rice bran lipase - PCT International Publication No. **WO 02/101033**.

4. Rajasekharan R (2007) A novel triacylglycerol biosynthesis in the cytosol of eukaryotes - US Patent **7,229,815**.

5. Rajasekharan R, and Daniel J (2007) A novel reversible solid/semi-solid composition and a process for preparing the same. Indian Patent **208610**.

6. Rangarajan PN, Rajasekharan R, and Mohanty A (2010) Cells expressing Pichia cytochrome C. US Patent **7,892,792**.

7. Rajasekharan R, Vivek Babu CS, and Venketa Rao DK (2013) Method of protecting plant(s) and a process thereof. US Patent **8,383,128**.

8. Rajasekharan R, and Vivek Babu CS (2013) Strains of fungi and a process for production of insecticide thereof. US Patent **8,497,090**.

9. Rout PK, Nannaware AK, and Rajasekharan R (2014) Green process and catalyst for conversion of cellulose from aromatic biomass waste to hydroxymethyl furfural. US Patent **20140350271A1**; PCT Int. Appl. (2013), **WO 2013102911**, A1 20130711.

List of publication

1. Rajvanshi PK, Arya M and **Rajasekharan R** (2017) Stress Regulatory Transcription Factors Regulate Fatty Acid Oxidation in Budding Yeast. ***J. Biol. Chem.*** JBC/2017/801704 M (Accepted).

2. Sreedhar R V, Prasad P, Reddy LPA, **Rajasekharan R** and Srinivasan M (2017) Unravelling a Stearidonic Acid-Rich Triacylglycerol Biosynthetic Pathway in the Developing Seeds of *Buglossoides arvensis*: A Transcriptomic Landscape. ***Sci. Rep.*** Sep 5;7(1):10473. doi: 10.1038/s41598-017-09882-y.

3. Yadav PK and **Rajasekharan R** (2017) The m6A Methyltransferase Ime4 Epitranscriptionally Regulates Triacylglycerol Metabolism and Vacuolar Morphology in Haploid Yeast Cells. ***J. Biol. Chem.*** DOI: 10.1074/jbc.M117.783761 (in press).

4. Arya M, Srinivasan M and **Rajasekharan R** (2017) Human Alpha Beta Hydrolase Domain Containing Protein 11 and Its Yeast Homolog Are Lipid Hydrolase. ***Biochem. Biophys. Res. Commun.*** 487, 875-880.

5. Yadav PK and **Rajasekharan R** (2017) Cardiolipin Deficiency Causes Triacylglycerol Accumulation in *Saccharomyces cerevisiae*. ***Mol. Cell. Biochem.*** 434, 89-103.

6. Yadav KK, Singh N, Rajvanshi PK and **Rajasekharan R** (2016) The RNA Polymerase I Subunit Rpa12p Interacts with the Stress-Responsive Transcription Factor Msn4p to Regulate Lipid Metabolism in Budding Yeast. ***FEBS Lett*.** 590, 3559–3573.

7. Visvanathan R and **Rajasekharan R** (2016) ATG15 Encodes a Phospholipase and Is Transcriptionally Regulated by YAP1 in *Saccharomyces cerevisiae*. ***FEBS Lett*.** 590, 3155–3167.

8. Yadav PK and **Rajasekharan R** (2016) Misregulation of a DDHD Domain-Containing Lipase Causes Mitochondrial Dysfunction in Yeast. ***J. Biol. Chem.*** 291, 18562-18581.

9. Yadav KK and **Rajasekharan R** (2016) The Transcription Factor GCN4 Regulates PHM8 and Alters Triacylglycerol Metabolism in *Saccharomyces cerevisiae*. ***Curr. Genet.*** 62, 841-851.

10. Singh N, Yadav KK and **Rajasekharan R** (2016) ZAP1-Mediated Modulation of Triacylglycerol Levels in Yeast by Transcriptional Control of Mitochondrial Fatty Acid Biosynthesis. ***Mol. Microbiol***. 100, 55-75.

11. Kanagavijayan D, **Rajasekharan R**, and Srinivasan M (2016) Yeast MRX Deletions Have Short Chronological Life Span and More Triacylglycerols. ***FEMS Yeast Res***. 16 (1), fov109.

12. Vijayakumar A, Vijayaraj P, Vijayakumar AK, and **Rajasekharan R** (2016) The Arabidopsis ABHD11 Mutant Accumulates Polar Lipids in Leaves as a Consequence of Absent Acylhydrolase Activity. ***Plant Physiol.*** 170, 180-193.

13. Yadav KK, Singh N, and **Rajasekharan R** (2015) The PHO4 Transcription Factor Regulates Triacylglycerol Metabolism under Low Phosphate Conditions in *Saccharomyces cerevisiae*. ***Mol. Microbiol.*** 98, 456-472.

14. Sreedhar RV, Kumari P, Rupwate SD, **Rajasekharan R**, and M. Srinivasan (2015) Exploring Triacylglycerol Biosynthetic Pathway in Developing Seeds of Chia (*Salvia hispanica* L.): A Transcriptomic Approach. ***PLoS One***. Apr. 13; 10(4):e0123580. doi: 10.1371/ journal.pone. 0123580. eCollection.

15. Rani SH, Saha S, and **Rajasekharan R** (2013) A Soluble Diacylglycerol Acyltransferase Is Involved in Triacylglycerol Biosynthesis in Oleaginous Yeast, *Rhodotorula glutinis*. ***Microbiology*** 159, 155-166.

16. Vijayaraj P, Jashal CB, Vijayakumar A, Rani SH, Venkata Rao DK, and **Rajasekharan R** (2012) A Bifunctional Enzyme That Has Both Monoacylglycerol Acyltransferase and Lipase Activities. ***Plant Physiol.*** 160, 667-683.

17. Rupwate SD, Rupwate PS, and **Rajasekharan R** (2012) Regulation of Lipid Biosynthesis by Phosphatidylinositol-Specific Phospholipase C Through the Transcriptional Repression of Upstream Activating Sequence Inositol Containing Genes. ***FEBS Lett***. 586, 1555-1560.

18. Parthibane, V, Iyappan R, Vijayakumar V, Venkateshwari V, and **Rajasekharan R** (2012) Serine/Threonine/Tyrosine Protein Kinase Phosphorylates Oleosin, a Regulator of Lipid Metabolic Functions. ***Plant Physiol***. 159, 95-104.

19. Parthibane V, Rajakumari S, Venkateshwari V, Iyappan R, and **Rajasekharan R** (2012) Oleosin Is a Bifunctional Enzyme That Has Both Monoacylglycerol Acyltransferase and Phospholipase Activities. ***J. Biol. Chem.*** 287, 1946-1954.

20. Rupwate SD and **Rajasekharan R** (2012) C2 Domain Is Responsible for Targeting Rice Phosphoinositide Specific Phospholipase C. ***Plant Mol. Biol.*** 78, 247-258.

21. Hima Rani S, Anantha Krishna TH, Saha S, Negi AS, and **Rajasekharan R** (2010) Defective in Cuticular Ridges (*DCR*) of *Arabidopsis thaliana*, a Gene Associated with Surface Cutin Formation, Encodes a Soluble Diacylglycerol Acyltransferase. ***J. Biol. Chem***. 285, 38337-38347.

22. Rajakumari S, **Rajasekharan R** and Daum G (2010) Triacylglycerol Lipolysis Is Linked to Sphingolipid and Phospholipid Metabolism of the Yeast *Saccharomyces cerevisiae*. ***Biochim. Biophys. Acta*** 1801, 1314-1322.

23. Reddy VS, Venkat Rao DK, and **Rajasekharan R** (2010) Functional Characterization of Lysophosphatidic Acid Phosphatase from *Arabidopsis thaliana.* ***Biochim. Biophys. Acta*** 1801, 455-461.

24. Ghosh AK, Chauhan N, Rajakumari S, Daum G, and **Rajasekharan R** (2009) At4g24160, a Soluble Acyl-Coenzyme A-Dependent Lysophosphatidic Acid Acyltransferase. ***Plant Physiol***. 151, 869-881.

25. Ghosh AK, Ramakrishnan G, Chandramohan C, and **Rajasekharan R** (2008) CGI-58, The Causative Gene for Chanarin-Dorfman Syndrome, Mediates Acylation of Lysophosphatidic Acid. ***J. Biol. Chem****.* 283, 24525-24533.

26. Ghosh AK, Ramakrishnan G, and **Rajasekharan R** (2008) *YLR099C* (*ICT1*) Encodes for a Soluble Acyl-CoA Dependent Lysophosphatidic Acid Acyltransferase Responsible for Enhanced Phospholipid Synthesis upon Organic Solvent Stress in *Saccharomyces cerevisiae*. ***J. Biol. Chem****.* 283, 9768-9775.

27. Reddy VS, Singh AK, and **Rajasekharan R** (2008) The *Saccharomyces cerevisiae* PHM8 Gene Encodes a Soluble Magnesium Dependent Lysophosphatidic Acid Phosphatase. ***J. Biol. Chem****.* 283, 8846-8854.

28. Srinivas M, Rajakumari S, Narayana Y, Joshi B, Katoch VM, **Rajasekharan R** and K. N. Balaji (2008) Functional characterization of a phospholipase C activity of Rv3487c and its localization to cell wall in *Mycobacterium tuberculosis*. ***J. Biosci****.* 33, 221-230.

29. Reddy MM, Rudrabhatla P, and **Rajasekharan R** (2007) Importance of Threonine Residues in the Regulation of Peanut Serine/Threonine/Tyrosine Protein Kinase Activity. ***Plant Science*** 172, 1054-1059.

30. Reddy MM, and **Rajasekharan R** (2007). Serine/threonine/tyrosine protein kinase from *Arabidopsis thaliana* is dependent on serine residues for its activity. ***Arch. Biochem. Biophys***. 460, 122-128.

31. Reddy MM, and **Rajasekharan R** (2006) Role of Threonine Residues in the Regulation of Manganese-Dependent Arabidopsis Serine/Threonine/Tyrosine Protein Kinase Activity. ***Arch. Biochem. Biophys***. 455, 99-109.

32. Srinivasan M, Nachiappan V and **Rajasekharan R** (2006) Potential application of urea-derived herbicides as cytokinins in plant tissue culture. ***J. Biosci****.* 31, 599-605.

33. Saha S, Enugutti B, Rajakumari S and **Rajasekharan R** (2006) Cytosolic Triacylglycerol Biosynthetic Pathway in Plants: Molecular Cloning and Expression of Peanut Cytosolic Diacylglycerol Acyltransferase. ***Plant Physiol****.* 141, 1533-1543.

34. Rajakumari S, Srinivasan M and **Rajasekharan R** (2006) Spectrophotometric Method for Quantitative Determination of Nonionic, Ionic and Zwitterionic Detergents. ***J. Biochem. Biophys. Method*** 68, 133-137.

35. Rudrabhatla P, Reddy MM and **Rajasekharan R** (2006) Genome-Wide analysis and Experimentation of Plant Serine/Threonine/Tyrosine-Specific Protein Kinases. ***Plant Mol. Biol.*** 60, 295-320.

36. Rudrabhatla P and **Rajasekharan R** (2004) Functional Characterization of Peanut Serine/Threonine/Tyrosine Protein Kinase: Molecular Docking and Inhibition Kinetics with Tyrosine Kinase Inhibitors. ***Biochemistry*** 43, 12123-12132.

37. Raychaudhuri S, and **Rajasekharan R** (2003) Non-Organellar Acyl Carrier Protein from Oleaginous Yeast Is a Homologue of Ribosomal Protein P2. ***J. Biol. Chem.*** 278, 37648-37657.

38. Daniel J, Abraham L, Balaji K and **Rajasekharan R** (2003) Biosynthesis of Stearate-Rich Triacylglycerol in Developing Embryos and Microsomal Membranes from Immature Seeds of *Garcinia indica* Chois. ***Curr. Sci.*** 85, 363-370.

39. Daniel J, and **Rajasekharan R** (2003) Organogelation of Plant Oils and Hydrocarbons by Long-Chain Saturated Fatty Acids, Fatty Alcohols, Wax Esters, and Dicarboxylic Acids. ***J. Am. Oil Chem. Soc.*** 80, 417-421.

40. Raychaudhuri S, Reddy MM, Rajkumar NR, and **Rajasekharan R** (2003) Cytosolic Iron Superoxide Dismutase Is a Part of Triacylglycerol Biosynthetic Complex in Oleaginous Yeast. ***Biochem. J.*** 372, 587-594.

41. Rudrabhatla P, and **Rajasekharan R** (2003) Mutational Analysis of Stress Responsive Peanut Dual Specificity Protein Kinase: Identification of Tyrosine Residues Involved in Regulation of Protein Kinase Activity. ***J. Biol. Chem.*** 278, 17328-17335.

42. Lata S, Bhardwaj K, and **Rajasekharan R** (2003) A Single Step Procedure for the Synthesis of Photoreactive and Radioactive Glycerolipids. ***Anal. Biochem.*** 313, 155-159.

43. Rudrabhatla P, and **Rajasekharan R** (2002) Developmentally Regulated Dual-Specificity Kinase from Peanut That Is Induced by Abiotic Stresses. ***Plant Physiol.*** 130, 380-390.

44. Gangar A, Raychaudhuri S, and **Rajasekharan R** (2002) Alteration in the Cytosolic Triacylglycerol Biosynthetic Machinery leads to decreased Cell Growth and Triacylglycerol Synthesis in Oleaginous Yeast. ***Biochem. J.*** 365, 577-589.

45. Shekar S, Tumaney AW, Rao TJVS and **Rajasekharan R** (2002) Isolation of Lysophosphatidic Acid Phosphatase from Developing Peanut Cotyledons. ***Plant Physiol.*** 128, 988-996.

46. Bhardwaj K, Raju A, and **Rajasekharan R** (2001) Identification, Purification and Characterization of a Thermally Stable Lipase from Rice Bran: New Member of the (Phospho)lipase Family. ***Plant Physiol.*** 127, 1728–1738.

47. Gangar A, Karande AA, and **Rajasekharan R** (2001) Purification and Characterization of Acyl-Acyl Carrier Protein Synthetase from Oleaginous Yeast and Its Role in Triacylglycerol Biosynthesis. ***Biochem. J.*** 360, 471–479.

48. Gangar A, Karande AA, and **Rajasekharan R** (2001) Isolation and Localization of a Cytosolic 10S Triacylglycerol Biosynthetic Multienzyme Complex from Oleaginous Yeast. ***J. Biol. Chem***. 276, 10290-10298.

49. Tumaney AW, Shekar S, and **Rajasekharan R** (2001) Identification, Purification of Monoacylglycerol Acyltransferase from Developing Peanut Cotyledons. ***J. Biol. Chem***. 276, 10847-10852.

50. Reddy PS, Rodrigues R, and **Rajasekharan R** (2001) Shoot Organogenesis and Mass Propagation of *Coleus forskohlii* from Leaf-Derived Callus**. *Plant Cell. Tiss. Org. Cult***. 66, 183-188.

51. Tumaney AW, and **Rajasekharan R** (1999) Synthesis of Azidophospholipids and Labeling of Lysophosphatidylcholine Acyltransferase from Developing Soybean Cotyledons. ***Biochim. Biophys. Acta*** 1439, 47-56.

52. Tumaney, AW, Narkunaraja S, and **Rajasekharan R** (1999) Identification of Lysophosphatidic Acid Acyltransferase in Microsomal Membranes of Developing Castor Endosperm**. *Curr. Sci***. 76, 660-664.

53. Shockey JM, **Rajasekharan R**, and Kemp JD (1995) Photoaffinity Labeling of Developing Jojoba Seed Microsomal Membranes with a Photoactive Analog of Acyl-Coenzyme A. ***Plant Physiol.*** 107, 155-160.

54. **Rajasekharan R**, and Nachiappan V (1994) Use of Photoreactive Substrates for Characterization of Lysophosphatidate Acyltransferases from Developing Soybean Cotyledons. ***Arch. Biochem. Biophys***. 311, 389-394.

55. **Rajasekharan R**, and Kemp JD (1994) Synthesis of Photoreactive Phosphatidylethanolamine and Its Interaction with Phospholipase A_2. ***J. Lipid Res***. 35, 45-51.

56. Nachiappan, V., and **Rajasekharan R** (1994) Enzymatic Synthesis of [^{32}P]Acyl-*sn*-Glycerol-3-Phosphate using Diacylglycerol Kinase. ***Anal. Biochem***. 222, 283-285.

57. **Rajasekharan R**, Nachiappan V, and Roychowdhury HS (1994) Photoaffinity Labeling of Microsomal Membrane Proteins with Photoreactive Acyl-CoA Analogs. ***Eur. J. Biochem***. 220, 1013-1018.

58. Nachiappan V, Mufti SI, Chakravarthi A, Eskelson CD, and **Rajasekharan R** (1994) Lipid Peroxidation and Ethanol-Related Tumor Promotion in Fischer-344 Rats Treated with Tobacco-Specific Nitrosamines. ***Alcohol Alcoholism*** 29, 565-574.

59. **Rajasekharan R**, Marians RC, Shockey JM, and Kemp JD (1993) Photoaffinity Labeling of Acyl-CoA Oxidase with 12-Azidooleoyl-CoA and 12-[(4-Azidosalicyl)amino]dodecanoyl-CoA. ***Biochemistry*** 32, 12386-12391.

60. **Rajasekharan R**, and Sastry PS (1990) Effect of Thiocarbamate, Urea and Uracil Herbicides in Lipid Metabolism in Groundnut (*Arachis hypogaea*) Leaves. ***Biochem. Cell Biol***. 68, 567-573.

61. Rajasekharan S, **Rajasekharan R**, and Vaidyanathan CS (1990) Substrate Mediated Purification and Characterization of *meta*-Hydroxybenzoic Acid-6-Hydroxylase from *Micrococcus*. ***Arch. Biochem. Biophys***. 278, 21-25.

62. **Rajasekharan R,** and Sastry PS (1988) Effect of Phenoxy Acids and Their Derivatives on Lipid Metabolism in Groundnut (*Arachis hypogaea*) Leaves. ***Pestic. Biochem. Physiol****.* 33, 26-36.

63. **Rajasekharan R**, Ray TK, and Cronan JE, Jr. (1988) A Direct Nonchromatographic Assay for 1-Acyl-*sn*-Glycerol-3-Phosphate Acyltransferase. ***Anal. Biochem****.* 173, 376-382.

64. **Rajasekharan R**, and Sastry PS (1987) Effect of Pyridazinone Herbicides on Lipid Metabolism in Groundnut (*Arachis hypogaea*) Leaves. ***Pestic. Biochem. Physiol****.* 29, 163-175.

Invited Reviews and Book Chapters:

1. Singh N, Yadav KK, and **Rajasekharan R** (2017) Effect of Zinc Deprivation on the Lipid Metabolism of Budding Yeast. ***Curr. Genet.*** DOI: 10.1007/s00294-017-0704-9. PMID: 28500379.

2. Yadav KK, Singh N, and **Rajasekharan R** (2016) DDHD domain-containing lipases: Targets for the treatment of rare diseases. ***J Rare Dis Res & Treatment.*** 1 (2): 34-38.

3. Vijayakumar A, and **Rajasekharan R** (2016) Distinct Roles of Alpha/Beta Hydrolase Domain Containing Proteins. ***Biochem Mol Biol J.*** DOI: 10.21767/2471-8084.100018.

4. Rout PK, Nannaware AD, Prakash O, Kalra A, and **Rajasekharan R** (2016) Synthesis of hydroxymethyl furfural from cellulose using green processes: A promising biochemical and biofuel feedstock. ***Chem. Eng. Sci.*** 142, 318–346.

5. Yadav KK, Singh N, and **Rajasekharan R** (2015) Responses to Phosphate Deprivation in Yeast Cells. ***Curr. Genet.*** 62, 301-307 851.

6. Rout PK, Nannaware AD, and **Rajasekharan R** (2014) Depolymerization of cellulose and synthesis of hexitols from cellulose using heterogeneous catalysts. ***ChemBioEng. Rev***. 1, 96–116.

7. **Rajasekharan R**, and Nachiappan V (2010) Biosynthesis and regulation of fatty acids. In *Plant Developmental Biology - Biotechnological Perspectives*: Volume 2, Chapter 6, pp. 105-115 (Pua, E. C. and Davey, M., Eds.) Springer Publishing Company, Heidelberg, Germany.

8. Rupwate SD, and **Rajasekharan R** (2012) Plant Phosphatidylinositol-Specific Phospholipase C – An insight. ***Plant Signaling & Behavior***. 7, 1281-1283.

Membership of Association and institution:

- *Chairman,* Food and Agriculture Sectorial Committee of the South Asian Regional Standards Organization (serving).
- *Chairman* of Drink & Drinking Water Sectional Committee, FAD 14, Bureau of Indian Standards, Ministry of Consumer Affairs, Food & Public Distribution, New Delhi (serving).

- *Chairman*, Expert Committee to suggest parameters - Mid Day Meal Scheme, Department of School Education and Literacy, Ministry of Human Resource Development, New Delhi (serving).
- *Chairman,* Research Advisory Committee, Indian Institute of Food Processing Technology Thanjavur, Tamil Nadu (serving).
- *Co-Chairperson* of Interview Boards, DRDO – Recruitment and Assessment Centre, Ministry of Defence, New Delhi (serving).
- *Acting Director,* Academy of Scientific & Innovative Research (AcSIR), Set up by an Act of Parliament, An Institute for National Importance (served).
- *Chairman*, Task Force on "Biotechnological Approaches for Food and Nutritional Security", Department of Biotechnology, Ministry of Science & Technology, New Delhi (served).
- *Chairman*, Project Screening Committee-2 on Research & Development of National Medicinal Plants Board, Department of AYUSH, Ministry of Health and Family Welfare, New Delhi (served).
- *Chairman*, Evaluation Committee for an independent evaluation of the "Technology Development and Utilization Programme for Women (TDUPW)" scheme of DSIR, Ministry of Science & Technology, New Delhi (served).
- *Member,* KVPY, National Fellowships for Students Interested in Research Careers, National Management Committee (serving).
- *Member*, Review Committee on Genetic Manipulation (RCGM) in Department of Biotechnology, Ministry of Science & Technology, New Delhi (serving).
- *Member* of the Committee to suggest/recommend to the Government for formulation specifications of food grains for central pool procurement, Ministry of Consumer Affairs & Food and Public Distribution, New Delhi (serving).
- *Member* of Project Approval Committee (PAC), Plan Coordination Division, Ministry of Food Processing Industries, New Delhi (serving).
- *Member* of Board of Basmati Export Development Foundation, Agriculture and Processed Food Products Export Development Authority, Ministry of Commerce & Industry, New Delhi (serving).
- *Member* of Vision Group on Biotechnology, Department of Information Technology, Biotechnology and Science & Technology, Government of Karnataka (serving).

- *Member* of Research Council, CSIR-Central Electrochemical Research Institute, Karaikudi (served).
- Member of Research Council, CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow (served).
- *Member* of Research Council, CSIR-Center for Cellular and Molecular Biology, Hyderabad (served).
- *Member* of Expert Panel, Maharshi Dayanand University, Rohtak, Haryana (serving).
- *Member* in Council of Scientific and Industrial Research (CSIR)-Plant Sciences Taskforce - EMR-II, Ministry of Science & Technology, New Delhi (served).
- *Adjunct Professor* at Mangalore University, Mangalore, Karnataka (serving).
- *Member* of Kerala Skill Development (Serving).
- *Member* of Spice Board, Govt. of India (Serving).
- *Member* of Coconut Board, Govt. of India (Serving).
- *Research Advisory Boards* (Private and Public Universities in four).
- *Jury Member* for Confederation of Indian Industry – Food safety award (serving).