

CURRICULUM VITAE

DR. RANGA RAO AMBATI, M.Sc., Ph.D.,

Associate Professor & Senior Scientist

Department of Biotechnology (NBA Accredited-2026 & ABET-2030)

School of Biotechnology and Pharmaceutical Sciences

Vignan`s Foundation for Science, Technology and Research

(Deemed to be University, Accredited by NAAC "A+")

Vadlamudi, Guntur, Andhra Pradesh-522 213; India;

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Scopus and Google Citations and h-Index:

- ❖ **Google citation index: 6029; h-Index: 27; i10-Index: 53**
- ❖ **Scopus Citations-4149; h-index: 24; Scopus Author ID:16204124700;**
- ❖ **WoS Researcher ID: K-2898-2012; ORCID: 0000-0002-5735-4489; Vidwan-ID: 83913**
- ❖ **More than 100 papers published including research articles, reviews, edited books and book chapters.**
- ❖ **Top authors list in Marine Drugs upon the citation (<https://exaly.com/journal/15225/marine-drugs/top-authors>)**
- ❖ **Listed One Among World's Top-2% Scientists Reputed by Stanford University, USA consecutively for five years (2020-2024).**
- ❖ **Completed three projects as PI and CO-PI; Involved in various research projects as member**
- ❖ **Supervising Ph.D, M.Tech, B.Tech Students for their minor and major projects**
- ❖ **Serving as editorial board member, guest editor, and reviewer for several high impact factor International Journals.**
- ❖ **https://scholar.google.co.in/citations?user=4SV_NdQAAAAJ&hl=en**
- ❖ **https://www.researchgate.net/profile/Dr_Ranga_Rao_Ambati**
- ❖ **<https://www.scopus.com/authid/detail.uri?authorId=14052519700>**
- ❖ **http://www.mdpi.com/journal/marinedrugs/most_cited**

Scientrometric Analyses of Indian Scientist Indicating: Contribution of Dr. Ranga Rao Ambati

- ❖ **Listed One Among World's Top 2% Scientists Reported by Stanford Univeristy, USA consecutively for five years (2020-2024);**
 - Ioannidis, John P.A. (2024), "August 2024 data-update for "Updated science-wide author databases of standardized citation indicators"", Elsevier Data Repository, V7, doi: 10.17632/btchxktzyw.7
 - Ioannidis, John P.A. (2023), "October 2023 data-update for "Updated science-wide author databases of standardized citation indicators"", Elsevier Data Repository, V6, doi: 10.17632/btchxktzyw.6
 - Ioannidis, John P.A. (2022), "September 2022 data-update for "Updated science-wide author databases of standardized citation indicators"", Elsevier Data Repository, V5, doi: 10.17632/btchxktzyw.5
 - Baas, Jeroen; Boyack, Kevin; Ioannidis, John P.A. (2021), "August 2021 data-update for "Updated science-wide author databases of standardized citation indicators"", Mendeley Data, V3, doi: 10.17632/btchxktzyw.3
 - JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. <https://doi.org/10.1371/journal.pbio.3000918>;

- Ioannidis JPA, Baas J, Klavans R, Boyack KW (2019) A standardized citation metrics author database annotated for scientific field. *PLoS Biol* 17(8): e3000384. <https://doi.org/10.1371/journal.pbio.3000384>
- ❖ **Most Cited (2064), Most downloaded article (36138), Most viewed (74976):** (<https://exaly.com/journal/15225/marine-drugs/top-authors>)
 - Ranga Rao A., Phang, S.M., Sarada, R., Ravishankar, G.A. (2014): Astaxanthin: sources, extraction, stability, biological activities and its commercial applications-A Review. *Marine Drugs*, 12(1): 128-152.
- ❖ **Highly cited papers are those that perform in the top 1% based on the number of received citations (compared to peer papers published in the same research filed in the same year) identified by Essential Science Indicators (ESI) of Clarivate, from each of the 10 database years.** <https://research.hkbu.edu.hk/research-highlights/research-publications/highly-cited-papers>
- ❖ **In the survey conducted by SRM Institute of Science and Technology, Kattankulathur, Chengalpeta, Tamil Nadu, India; on Fish research in India based on the Scopus database. One of our papers highly cited articles in Fish Research publications among 12 most cited articles in India.**
 - Ravichandran, S., Vivekanandhan, S., & Siva, N. (2022). Fish research in India based on the Scopus database: A scientometric analysis. *IJAR*, 8(4), 315-324.
- ❖ **In the survey done by Shoolini University of Biotechnology and Management Sciences on “Scientometric analysis of biotechnology research output in India during the year 2008-2017”. One of our papers reported as most citation article among 15 most cited articles in India during the year 2008-2017**
 - Sharma et al (2019) "Scientometric analysis of biotechnology research output in India during 2008-2017" *Library Philosophy and Practice (e-journal)*, 2983. <https://digitalcommons.unl.edu/libphilprac/2983>
- ❖ **Another survey done by Director of Education and CSIR-National Institute of Science Communication & Information Resources, New Delhi on “Pharmaceutical Research in India: A Scientometric Analysis of International Collaboration” One of our papers reported as highly cited article among the top 10 highly cited articles**
 - Pathak M and Prasanna Kumari NK (2019), Pharmaceutical Research in India: A Scientometric Analysis of International Collaboration” *Journal of Scientific & Industrial Research*, Vol: 78, November 2019, pp: 738-741. (<http://nopr.niscair.res.in/handle/123456789/51198>)

Research Interests:

Biological Sciences; Biotechnology, Food Science and Technology

International Visits (Visit. Asst. Prof., Post-doc, Invited Speaker, and Guest Lectures):

❖ USA (3 times), CANADA, BRAZIL, MALAYSIA, RUSSIA, CHINA (3 times), OMAN, INDONESIA

Education:

2012	Ph.D (<i>Biotechnology</i>), CSIR-Central Food Technological Research Institute (CFTRI), Govt. of India, University of Mysore, Mysore, India.
2003	M.Sc (<i>Biochemistry of Oils & Fats</i>), Acharya Nagarjuna University, Andhra Pradesh, India.
2007	General course on Intellectual Property, World Intellectual Property Organization, Geneva, Italy
2001	PGDIT (<i>Information Technology</i>), MAHE (Deemed to be University), Manipal, India
1999	B.Sc (<i>Chemistry, Maths, Physics</i>), Acharya Nagarjuna University, Andhra Pradesh, India
1998	Post-graduate diploma in computer applications, IRTD, Hyderabad, India

Professional Experience (Teaching-Cum-Research):

Sept, 2017-till date	Director , Advanced Research Centre (ARC), Department of Biotechnology, VFSTR Deemed to be University, Andhra Pradesh, India.
July 2019-till date	Associate Professor & Senior Scientist , Department of Biotechnology, VFSTR Deemed to be University, Andhra Pradesh, India.
Sept 2017-July 2019	Assistant Professor & Scientist , Department of Biotechnology, VFSTR Deemed to be University, Andhra Pradesh, India.
Sept, 2016- Sept 2017	Visiting Research Assistant Professor , Food Science and Technology Programme, Beijing Normal University-Hong Kong Baptist University, Guangdong, P.R.China.
Sept, 2015-Sept, 2016	Lead Scientist , R& D Division, CAROT Labs Pvt Ltd, Chennai, India
May, 2015-Sept, 2015	Vice-President-R&D , GKS Pvt Ltd, Jawaharlal Nehru Technological University, Kakinada, India
Dec, 2012-Dec 2014	Visiting Senior Research Fellow (Associate Professor Grade) , University of Malaya, Malaysia
May, 2011- Dec, 2012	Postdoctoral Research Associate , Arizona State University, Arizona, USA
Oct, 2007-May, 2011	Senior Research Fellow , CSIR-Central Food Technological Research Institute, Govt. of India, Mysore, India
Jan, 2004-Oct, 2007	Research Assistant , CSIR-Central Food Technological Research Institute, Govt. of India, Mysore, India
Jun, 2003-Dec, 2003	Chemist (Oils, fats, and Oleochemicals) , Swastik Oleochemicals Ltd, Hyderabad, India

List of Publications:

1. Severo, I. A., de Lira, G. S., **Ranga Rao A.**, Ravishankar G.A., Vargas, J. V. C., Ordonez, J., & Mariano, A. B. (2024). Disruptive potential of microalgae proteins: Shaping the future of the food Industry. **Future Foods, Volume-9, 100318, Impact factor-7.2, Scopus Indexed**
 2. Hissashi I, Carlos R.S., Denisse T. M. A., Juliana C. C. B., Gilberto V. M. P., Luciana P. S. V., Maria C.M., **Ranga Rao A.**, Ravishankar G. A., Julio C.C. (2024) Lutein from microalgae: an industrial perspective of its production, downstream, processing, and market. **Fermentation, 10(2), 106, Impact factor-5.12; SCIE Indexed.**
 3. Hong DD, Thom LT, Ha NC, Thu NTH, Hien HTM, Tam LT, Dat NM, Duc TM, Tru NV, Hang NTM and **Ranga Rao A** (2023) Isolation of Fucoxanthin from *Sargassum oligocystum* Montagne, 1845 Seaweed in Vietnam and its neuroprotective activity. **Biomedicines. 11(8):2310; Impact factor-4.7; SCIE Indexed.**
 4. Ramachandran Vinayagam, Kyung Eun Lee, **Ranga Rao A.**, Rohit Gundamaraju, Mohamed Fawzy Ramadan and Sang Gu Kang (2023): Recent development in black garlic: Nutraceutical applications and health-promoting phytoconstituents. **Food Reviews International. 39(6), 3534-3554; Impact Factor : 5.8; SCIE Indexed.**
 5. Vijay, K., Ambedkar, R., Sowmya, P. R. R., Ramaiah, S., **Ranga Rao, A.**, Gundamaraju, R., Hanumathappa, M., Malarvili, M.B., Manikam, R., and Lakshminarayana, R. (2023). Prevention of aspirin-mediated secondary toxicity by combined treatment of carotenoids in macrophages. **3 Biotech, 13(7): 223; Impact factor-2.8, SCI Indexed.**
 6. Lwamba C, Aboushanab SA, **Ranga Rao A***, Kovaleva EG. (2023) Innovative green approach for extraction of piperine from black pepper based on response surface methodology. **Sustainable Chemistry; 4(1):40-53. ISSN: 2673-4079; Google Scholar.**
 7. Saied AA, Shaimaa MK, Irina FG, Irina GD, Natalia AK, Ravishankar GA, **Ranga Rao A*** and Elena GK (2023) Isoflavones derved from plant materials: bioavailability, anti-cancer, anti-aging potentials and microbiome modulation. **Critical Reviews in Food Science, and Nutrition; 63(2), 261-287; Impact Factor: 10.2, SCI Indexed**
 8. Jinnath R.R, **Ranga Rao A***, Ravishankar GA, Md Shahjahan, and Saleha K* (2023) Utilization of astaxanthin from microalgae and carotenoid rich algal biomass as a feed supplement in aquaculture and poultry industry: An overview. **Journal of Applied Phycology, 35, 145-171. Impact factor: 3.3. SCI Indexed;**
 9. Indranil Chattopadhyay, Wenying Lu, Rishya Manikam, M.B. Malarvili, **Ranga Rao A** & Rohit Gundamaraju (2023) Can metagenomics unravel the impact of oral bacteriome in human diseases? **Biotechnology and Genetic Engineering Reviews, 39:1, 85-117; Impact factor: 3.2; SCI Indexed;**
 10. De Carvalho, Júlio Cesar, Luis Daniel Goyzueta-Mamani, Denisse Tatiana Molina-Aulestia, Antônio Irineudo Magalhães Júnior, Hissashi Iwamoto, **Ranga Rao A**, Gokare A. Ravishankar, and Carlos Ricardo Soccol (2022) Microbial astaxanthin production from agro-industrial wastes-raw materials, processes, and quality. **Fermentation, 8, 10: 484. Impact Factor: 5.12; SCIE Indexed**
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11. Yaakob MA, Mohamed RMSR, Al-Gheethi A, Ravishankar GA, and **Ranga Rao A***. (2021) Influence of nitrogen and phosphorus on microalgal growth, biomass, lipid, and fatty acid production: An overview. **Cells**, **10(2): 393. Impact Factor:6.0; SCI Indexed**
 12. Rohit G, Ravichandra V, **Ranga Rao A**, and Lakshminarayana R, Lu W, and Rajaraman Eri D (2021) Tunicamycin via ER stress mediated 6th hour time point aggravates cell migration, cell invasion and cell proliferation in colonic epithelial cells. **Advances in Cancer Biology Metastasis. 2, 100007; Scopus Indexed**
 13. Sravani Nalapur and **Ranga Rao A** (2021) A review on neurotoxins from *Clostridium botulinum* against neuro-muscular disorders. **Journal of Advances in Biology and Biotechnology. Pages: 24 (7): 7-14. Google Indexed**
 14. Indranil C, **Ranga Rao A**, and Rohit G (2021) Exploring the cross talk between inflammation and epithelial mesenchymal transition in cancer. **Mediators of Inflammation, Vol-2021, article ID: 9918379, 13 Pages; Impact Factor: 4.529; SCI indexed**
 15. Pleissner, D., Lindner, A. and **Ranga Rao A** (2020) Techniques to control microbial contaminants in nonsterile microalgae cultivation. **Applied Biochemistry Biotechnology; 192(4): 1376-1385, Impact Factor: 3.094; SCI Indexed**
 16. Solovchenko, A., Lukyanov, A., Ravishankar, G. A., Pleissner, D., and **Ranga Rao A*** (2020). Recent developments in microalgal conversion of organics-enriched waste streams. **Current Opinion in Green and Sustainable Chemistry, 24:61-66; Impact Factor:9.3; SCIE Indexed**
 17. A. Venkata Narayana, S. Asha, P. Sudhakar, B. Sumalatha, **A. Ranga Rao**, D. John Babu, Abraham Peele K, and T.C.Venkateswarulu (2020) Plackett-burman design for screening of fermentation process parameters and their effects on l-methionine production by *Corynebacterium glutamicum*. **Current Trends in Biotechnology and Pharmacy; 14(2): 182-189. Impact Factor: 0.13; Scopus Indexed**
 18. Venkateswarulu TC, Eswaraiah G, Krupanidhi S, Abraham Peele K, Indira M, Venkata AV, Bharath Kumar R, John Babu D, and **Ranga Rao A*** (2020) Screening of Ipomoea tuba leaf extract for identification of bioactive constituents and evaluation of its in vitro anti-proliferative activity against MCF-7 and HeLa Cells. **Food Technology and Biotechnology, 58 (1): 71-75; Impact Factor: 2.4; SCIE indexed**
 19. Venkateswarulu TC, Abraham Peele K, Krupanidhi S, Prakash Narayana Reddy K, Indira M, **Ranga Rao A**, Bharat Kumar R, and Viday Prabhakar K (2020) Biochemical and molecular characterization of lactase producing bacterium isolated from dairy effluent. **Journal of King Saud University-Science. 32(2): 1581-1585. Impact Factor: 3.8. SCIE indexed**
 20. Srikanth, K., J.V. Rao, and **Ranga Rao A.**, (2020) Trace elements in *Endectyon fructicosa* collected from a sewage of outfall site, Therespuram, Tuticorin coast, India; **International Journal of Environmental Science and Technolgy; 17: 267-272. Impact Factor: 3.1; SCI indexed**
 21. John Babu D, Sumalatha B, Venkata Narayana A, Venkateswarlu T.C., King Pulipati, and **Ranga Rao A*** (2019) Simultaneous biosorption of chromium (III) and chromium (IV): application of multiple response optimizations. **Agricultural Research and Technology Open Access Journal (ISSN: 2471-6774), 23(2): 284-293. Google Indexed; Publons**
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22. Venkata Narayana A, **Ranga Rao A**, John Babu D, Venkateswarlu T.C., Abraham Pele K, and Sumalatha B (2019) Plackett-Burman design for screening of fermentation process parameters and their effects on γ -decalactone production by *Sporidiobolus Salmonicolor*. **Journal of Advance Research in Dynamical and Control System**; **11(9)**; **47-54**; **Scopus Indexed**
 23. **Ranga Rao A***, Deepika G, Ravishankar GA, Sarada R, Narasimharao BP, Bo L, and Su Y* (2019) "Industrial potential of carotenoid pigments from microalgae: Current trends and future prospects". **Critical Reviews in Food Science and Nutrition**; **59 (12)**: **1880-1902**; **Impact Factor: 10.2**; **SCI Indexed**
 24. Eswaraiiah G, Venkateswarulu TC, Krupanidhi S, Abraham Peele K, Indira M, Venkata Narayana A, Bharath Kumar R, and **Ranga Rao A*** (2019) GC-MS analysis for leaf extract of *Suaeda nudiflora* and screening of their *invitro* anti-proliferative effect against MCF 7 and HeLa cells; **Agri Res and Technology Open Access J.** **22(1)**: **26-30**; **Google Indexed**; **Publons**
 25. Xin Xiong, **Ranga Rao A**, Zongwei Cai, and Bo Lei* (2019) Development of an aqueous scalable purification protocol for nattokinase with universal applicability for other *bacillus*-producing fibrinolytic enzymes. **CYTA Journal of Food.** **17(1)**: **112-120**; **Impact Factor: 2.478**; **SCIE indexed**
 26. Srikanth K, Sukesh K, **Ranga Rao A**, Pavan G and Ravishankar GA (2019) Emerging contaminants effect on aquatic ecosystem: Human health–A review. **Agricultural Research and Technology Open Access Journal (ISSN: 2471-6774)**; **19(1)**: **1-6**. **IF-1.49**; **Times cited:11**; **Google Indexed**; **Publons**
 27. Hessami MJ, Cheng SF, **Ranga Rao A**, Yeong Hui Yin Siew Moi Phang (2019) Bioethanol production from agarophyte red seaweed, *Gelidium elegans* using a novel sample preparation method for analysing bioethanol content by gas chromatography. **3- Biotech Journal.** **9(1)**: **25**; **Impact Factor: 2.8**; **SCI Indexed**
 28. Rohini K.K., **Ranga Rao A***, Aswani Kumar Y, Krupanidhi S, and Prakash Narayana R (2018) Recent advances in probiotics as live biotherapeutics against gastrointestinal diseases. **Current Pharmaceutical Design.** **24(27)**: **3162-3171**; **Impact Factor: 3.1**; **SCI Indexed**
 29. **Ranga Rao A*** and Ravishankar GA (2018) Algae as source of functional ingredients for health benefits. **Agriculture Research and Technology Open Access Journal**; **14(2)**, **ARTOAJ.MS.ID.555911**; **Google Indexed**; **Publons**.
 30. Xin Xiong, **Ranga Rao A**, Cai Z, and Bo L* (2018) Purification and characterization of fibrinolytic enzyme from a bacterium isolated from soil. **3-Biotech Journal.** **8(2)**: **90**; **Impact Factor: 2.893**; **SCI Indexed**
 31. Muthukumaran J, Ramachandran V, **Ranga Rao A**, Xu B* and Stephen M. C (2018) Guava leaf extract diminishes hyperglycemia, oxidative stress and inhibits inflammation and beta-cell death by regulating NF-kB signaling pathway in STZ induced diabetic rats. **Biomed Research International.** **18:2018: 4601649**, **Impact Factor: 3.4**, **SCI Indexed**
 32. **Ranga Rao A*** Vijayaramu D, and G.A. Ravishankar (2017) Secondary metabolites from algae for nutraceutical applications. **Novel Techniques in Nutrition Food Science**, **1(1)**:**1-2**; **Google Indexed**; **Publons**.
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33. **Ranga Rao A***, Deepika G, G.A. Ravishankar, R. Sarada, Narasimha Rao BP, Su Yand Lei B, (2017) *Botryococcus* as an alternative source of carotenoids and its possible applications-An overview. **Critical Reviews in Biotechnology**, **38 (4): 541-558. Impact Factor:9.0; SCIE Indexed**
 34. Yedukondalu K[#], **Ranga Rao A[#]**, Prakash Narayana R, Sampath Kumar N.S, Rajesh K.P and Vijaya RD (2017) Congenital hypothyroidism: facts, facets & therapy. **Current Pharmaceutical Design**. **23(16): 2308-2313 (#Equal contribution) Impact Factor: 3.31, SCI Indexed**
 35. Siew Moi, P., Emienor, M.M., **Ranga Rao, A.**, NikMeriam, N.S., Naiza, A.M., Phaik, E.L., Xavier, D., Cyrille, S., Kan, E.L. (2015) Checklist of microalgae collected from different habitats in peninsular malaysia for selection of algal biofuel feed stocks. **Malaysian Journal of Science**, **34(2), 148-174. Impact factor: 0.32; Scopus Indexed**
 36. **Ranga Rao, A***, Sarada, R., Darmesh S.M., Ravishankar, G.A. (2015): Evaluation of hepatoprotective and antioxidant activity of astaxanthin and astaxanthin esters from microalga-*Haematococcus pluvialis*. **Journal of Food Science and Technology**, **52(10), 6703-6710. Impact Factor: 3.1; SCIE Indexed**
 37. **Ranga Rao A***, Phang SM, Sarada R and Ravishankar, GA (2014) Astaxanthin sources, extraction, stability, biological activities and its commercial applications-A Review. **Marine Drugs**, **12(1): 128-152; Impact Factor: 5.4; SCIE Indexed**
 38. **Ranga Rao A***, Ravishankar, G.A. (2014) Micro algal Biotechnology- New Research into this growing Market. **Food Asia Pacific**, **2(1), 24.**
 39. Gundamaraju R., Vemuri, R.C., Singla, R.K., Manikam, R., **Ranga Rao, A.**, Sekaran, S.D. (2014): Strophanthus hispidus attenuates the Ischemia Reperfusion induced myocardial infarction and reduces mean arterial pressure in renal artery occlusion. **Pharmacognosy Magazine**, **10(39): 557-562. Impact Factor: 0.7; SCIE Indexed**
 40. **Ranga Rao, A.**, Baskaran, V., Sarada, R., Ravishankar, G.A* (2013): In vivo bioavailability and antioxidant activity of carotenoids from micro algal biomass- A repeated dose study. **Food Research International**, **54(1): 711-717; Impact Factor: 8.1, SCI indexed**
 41. **Ranga Rao A**, Sindhuja HN, Dharmesh SM, Udaya Sankar K, Sarada R, Ravishankar GA (2013) Effective inhibition of skin cancer, tyrosinase and antioxidative properties by astaxanthin and astaxanthin esters from Green alga *Haematococcus pluvialis*. **Journal of Agricultural Food Chemistry**, **61(16): 3842-3851. Impact Factor:6.1; Scopus & WOS Indexed.**
 42. Sarada R*, **Ranga Rao, A.**, Sandesh, B.K., Dayananda, C., Anila, N., Vikas, S.C., Ravishankar, G.A. (2012): Influence of different culture conditions on yield of biomass and value added products in microalgae. **Dynamic Biochemistry Process Biotechnology Molecular Biology**, **6(2): 77-85; Google Indexed.**
 43. **Ranga Rao, A.**, Sarada, R*, Ravishankar, G.A. (2012) Cultivation of green alga *Botryococcus braunii* in raceway, circular ponds under outdoor conditions and its growth, hydrocarbon production. **Bioresource Technology**, **123C: 528-533. Impact Factor: 11.44; SCIE indexed.**
 44. **Ranga Rao A** (2011) Production of astaxanthin from cultured green alga *Haematococcus pluvialis* and its biological activities. **Ph.D Thesis, University of Mysore, Mysore.**
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45. Rajesha, J*., **Ranga Rao, A.**, Madhusudhan, B., Ravishankar, G.A., KarunaKumar, M. (2011): Hematological and histopathological studies of endosperm rich fraction of flaxseed in chicks. **International Journal of Pharmaceutical Sciences and Research**, **2(6): 1455-1459. Impact Factor: 0.59; ESCI, Scopus Indexed**
 46. Rajesha, J*., **Ranga Rao, A.**, KarunaKumar, M., Ravishankar, G.A. (2011): Hepatoprotective potential of hull fraction from India flaxseed cultivar. **Asian Journal of Medical Sciences**, **1:20-25. Google Indexed**
 47. **Ranga Rao A.**, Sarada, R*, Ravishankar, G.A., (2010) Enhancement of carotenoids in green alga- *Botryococcus braunii* in various autotrophic media under stress conditions. **International Journal of Biomedical Pharmaceutical Sciences**, **4(2):87-92; Google Indexed**
 48. **Ranga Rao, A.**, Harshvardhan Reddy, A., Aradhya SM. (2010) Antibacterial properties of *Spirulina platensis*, *Haematococcus pluvialis* and *Botryococcus braunii* micro algal extracts. **Current Trends in Biotechnology and Pharmacy**, **4(3): 807-817. Impact Factor: 0.13; Scopus Indexed**
 49. **Ranga Rao, A.**, Raghunath Reddy, R.L., Sarada, R., Baskaran, V., Ravishankar, G.A*. (2010): Characterization of micro algal carotenoids by mass spectrometry and their bioavailability and antioxidant properties in rat model. **Journal of Agricultural and Food Chemistry**, **58: 8553–8559. Impact Factor: 6.1; SCIE indexed**
 50. Sharma A*., **Ranga Rao, A.**, Dayananda, C., Sarada, R., Ravishankar, G.A. (2010): *Botryococcus braunii*, a new elicitor for secondary metabolite production in *Capsicum frutescens*. **Functional Plant Science and Biotechnology**, **9-13, ISSN 1749-0472; Google Indexed**
 51. Rajesha, J*., **Ranga Rao, A.**, Madhusudhan, B., KarunaKumar, M. (2010) Antibacterial properties of secoisolariciresinol diglucoside isolated from Indian flaxseed cultivars. **Current Trends in Biotechnology and Pharmacy**, **4(1): 551-560. Impact Factor: 0.13; Scopus Indexed;**
 52. VijayKumar, H., **Ranga Rao, A.**, Varakumar, S., Nagaraja, N. (2010) Evaluation of *in vitro* antioxidant activity of 5H-dibenz [b, f] azepine and its analogues. **Journal of Physical Sciences**, **21(1): 79-92; Scopus indexed**
 53. **Ranga Rao, A.**, Sarada, R*., Baskaran V., Ravishankar, G.A. (2009): Identification of carotenoids from green alga *Haematococcus pluvialis* by HPLC and LC-MS (APCI) and their antioxidant properties. **Journal of Microbiology and Biotechnology**, **19(11): 1333–1341. Impact Factor: 2.8; SCIE Indexed.**
 54. Rajesha, J*., Madhusudhan, B., Mahadevaswamy, M., Jagannatha Rao, R., Ravishankar, G. A., **Rangarao, A.** (2009): Effects of flaxseed and *spirulina* biomass in layer diet on lipid profile and quality characteristics of egg yolk. **Journal of Food Science and Technology**, **46 (6): 509-514. Impact Factor: 3.1; SCIE Indexed**
 55. **Ranga Rao, A.**, Sarada, R*., Ravishankar, G.A. (2007): Stabilization of astaxanthin in edible oils and its use as an antioxidant. **Journal of the Science of Food and Agriculture**, **87(9): 957-965. Impact Factor: 4.1; SCI Indexed**
 56. **Ranga Rao, A.**, Sarada R*., Ravishankar, G.A. (2007): Influence of CO₂ on growth and hydrocarbon production in *Botryococcus braunii*. **Journal of Microbiology and Biotechnology**, **17: 414-419. Impact Factor: 2.8; SCIE Indexed.**
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57. **Ranga Rao A**, Dayananda C, Sarada R*, Shamala TR, Ravishankar GA (2007) Effect of salinity on growth of green alga *Botryococcus braunii* and its constituents-hydrocarbons, fats, carbohydrates, and carotenoids. **Bioresource Technology, 98(3): 560-564. Impact factor: 11.4; SCI Indexed.**
 58. **Ranga Rao, A.**, Sarada, R*., Baskaran, R., Ravishankar, G.A. (2006): Antioxidant activity of *Botryococcus braunii* extract elucidated in *in vitro* models. **Journal of Agricultural and Food Chemistry, 54: 4593-4599. Impact Factor: 6.1; SCIE Indexed**
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Edited Books (*Academic Press, CRC Press, Springer Nature, and Wiley publishers*):

1. **Biotechnological Production of Bioactive Phytochemicals of Medicinal Value: A Comprehensive Treatise.**
Editors: P. B. Kavi Kishor, T. Pullaiah, P. Suprasanna, **A. Ranga Rao** and A. Romano
Pages: 1-655; ISBN: 9780443218187; Elsevier publishers, USA. Publication Date: 11th July, 2024
2. **Handbook of Plant Based Meat analog: Innovation, Technology and Quality**
Editors: G. A. Ravishankar, **A. Ranga Rao**, Reza Tahergorabi, and Anand Mohan
Pages: 1-600; ISBN: 9780443218460, Elsevier publishers, USA. Publication date: 15th May, 2024.
3. **Algae Mediated Bioremediation: Industrial Prospectives**
Editors: G. A. Ravishankar, **A. Ranga Rao**, and Se-Kwon Kim
Page No: 1-354; ISBN: 978-3527352470; Wiely-VCH GmbH, Germany, Volumes-I;
Publication date: 17th April, 2024
4. **Algae Mediated Bioremediation: Industrial Prospectives**
Editors: G. A. Ravishankar, **A. Ranga Rao**, and Se-Kwon Kim
Page No: 355-715; ISBN: 978-3527352470; Wiely-VCH GmbH, Germany, Volumes-II;
Publication date: 17th April, 2024
5. **Sustainable Global Resources of Seaweeds: Bioresources, cultivation, trade and multifarious applications; Volume-I**
Editors: **A. Ranga Rao** and G. A. Ravishankar
1st edition, ISBN: 978-3-030-91954-2 (Hardcover); 978-3-030-91955-9 (eBook)
Publication date: 29 March 2022; Pages: 656; Times cited: 05
Springer Nature Switzerland AG 2022 Springer, Cham
6. **Sustainable Global Resources of Seaweeds: Food, pharmaceutical and health applications; Volume-II;**
Editors: **A. Ranga Rao** and G. A. Ravishankar
1st edition, ISBN: 978-3-030-92173-6 (Hardcover); 978-3-030-92174-3 (eBook)
Publication date: 27 March 2022, Pages: 650; Times cited: 02;
Springer Nature Switzerland AG 2022 Springer, Cham
7. **Global Perspectives on Astaxanthin: From Industrial Production to Food, Health, and Pharmaceutical Applications.**
Editors: G. A. Ravishankar and **A. Ranga Rao**
1st edition; Paperback ISBN: 9780128233047; eBook ISBN: 9780128233054
Publication Date: 9th April, 2021; Pages: 824 ; Academic Press (An imprint of Elsevier);
525 B Street, Suite 1650, San Diego, CA 92101, United States

8. **Handbook of Algal Technologies and Phytochemicals: Volume-I Food, Health and Nutraceutical Applications.**

Editors: G. A. Ravishankar and **A. Ranga Rao**

1st edition, ISBN: 9780367149796 (Hardback); Pages: 322;

Publication: 31 July 2019; CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487-2742, United States.

9. **Handbook of Algal Technologies and Phytochemicals: Volume II Phycoremediation, Biofuels and Global Biomass Production.**

Editors: G. A. Ravishankar and **A. Ranga Rao**

1st edition, ISBN: 9780367178192 (Hardback); Pages: 317; Publication: 12 July 2019

CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487-2742, United States.

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5. Sunzida Sultana, Saleha Khan, Aparna Nerusu, Yahia Mahmud, Md Mahfuzul Haque, Ravishankar Aswathanarayana Gokare and **Ranga Rao A*** (2024) Seaweed protein-based meat analogs: Current trends and future prospects (Chapter-8). In: *G. A. Ravishankar, A. Ranga Rao, T. Reza and A. Mohan (Eds.) Handbook of Plant Based Meat analog: Innovation, Technology and Quality*; Page no: 147-167; ISBN: 9780443218460; Elseiver publishers, USA. Publication Date: 17th May 2024; **Scopus indexed**.
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Talks/Conferences/ Symposia Invited /Seminars:

Invited Talks(Speaker):

1. **Ranga Rao A** (2024) “ Cultivation of *Chlorella* in raceway ponds and photobioreactors for possible Industrial applications” was delivered in National Seminar on “ Algal Biodiversity, Biotechnology and Environmental Sustainability (NSABBES)-2024), Organized by P.G. Department of Botany, Berhampur University, Berhampur, Odisha, India on 20th -21st August, 2024.
 2. **Ranga Rao A** and G. A. Ravishankar (2022) “Bioactivities from microalgae for functional food applications” was delivered in 1st International Autumn School-Conference on Food Biotechnology, Ural Federal University, Yekaterinburg, Russia on 9-12th November 2022.
 3. **Ranga Rao A** and G. A. Ravishankar (2022) “Possible degradation/oxidation products of astaxanthin and its esters from green microalga in *in vivo* models: Isolation and structural elucidation of metabolites by HPLC and LCMS (Atmospheric pressure chemical ionization)” was delivered in 6th International Conference on Modern Synthetic Methodologies for Creating Drugs and Functional Materials, Ural Federal University, Yekaterinburg, Russia on 7-11th November, 2022 (ISBN: 9785604442760)
 4. **Ranga Rao A** and G. A. Ravishankar (2022) Potential health benefits of bioactive molecules with special reference to microalgae: applications, opportunities, and challenges” was delivered in International Conference on Frontiers in Nutrition and Medical Genomics and Drug Discovery (Inbix22), organized by Department of Biotechnology, VFSTR (Deemed to be University) under the Aegis of Bioclues, Vadlamudi, Guntur Dist., Andhra Pradesh, India, on 30th October-2nd November, 2022.
 5. **Ranga Rao A**, G. A. Ravishankar and K. Srikanth (2022) Progress and Challenges of microalgal biomass, lipids, fatty acids production coupled with photobioreactors for biofuel production” was delivered in National Conference on “Circular bioeconomy and Bioengineering approaches for a clean Environment and health” organized by Department of Biotechnology, VFSTR (Deemed to be University), Vadlamudi, Guntur Dist., Andhra Pradesh, India, on 09-10th September 2022.
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6. **Ranga Rao A*** (2022) Influence of predators on biomass productivity in mass algal culture; was delivered in National Seminar on Future of Algal Biotechnology (FAB-2022), 18th June 2022, organized by Department of Microbiology, National Repository for Microalgae and Cyanobacteria, School of Life Sciences, Bharathidasan University, Tamilnadu, India.
 7. **Ranga Rao A** and G. A. Ravishnakar (2022) Exploitation of algal cell factories for industrial applications through adaptation of sterile and non-sterile production strategies was delivered at DBT-ICGEB colloquium webinar on “Algal cell factories new perspectives and their multifaceted applications” organized by International Centre for Genetic Engineering and Biotechnology on 3rd March 2022, New Delhi, India.
 8. **Ranga Rao A** (2021) Encapsulation of microalgae and its metabolites for various applications was delivered at High-End Characterization of Microalgae: Overcoming the Technological Barriers organized by TERI-Deakin Nanobiotechnology Centre (TD-NBC) along with International Iberian Nanotechnology Laboratory (INL), Braga, Portugal through DBT -TDNBC - DEAKIN – Research Network Across continents for learning and innovation (DTD-RNA) network, 3-4 March 2021, New Delhi, India.
 9. **Ranga Rao A**, Anila Narayanan, Daris.P.Simon, Kathiresan Shanmugam, Sarada Ravi, and Ravishankar A G (2020) Bioinformatics and Omics approaches: Production of natural bioactive compounds from algae for human health applications. International symposium on bioinformatics for disease and therapeutics, 21-22 December 2020, VFSTR University, Vadlamudi, Guntur, Andhra Pradesh, India.
 10. **Ranga Rao A** (2019) Participated Seminar on “ChiP & Immunohistochemistry-ICC/IF” organized on 4th December 2019 by Abcam, UK at Indian Institute of Science (IISc), Bangalore, India.
 11. **Ranga Rao A** (2019) Participated International Seminar on “Explore Research on Funding Opportunities in Europe” jointly organized by Marie Curie Alumni Association and Department of Sciences & Humanities at VFSTR Deemed to be University, 30 August 2019. Andhra Pradesh, India.
 12. **A. Ranga Rao** (2020) Presented a talk on “Sources of Fucoxanthin and its biological activities” in Technical Webinar on “Fucoxanthin from Micro and Macroalgae” held on 17 June 2020 organized by European Algae Biomass Association, Portugal.
 13. **A. Ranga Rao** (2020) Presented a talk on “An impact of grazers in commercial Algal culture” in the virtual colloquium on “Recent advances in Microalgal Biotechnology” organized by the Plant Cell Biotechnology Department, CSIR-CFTRI, Mysore on 27 July 2020 at CSIR-CFTRI, Mysore, India
 14. **Ranga Rao A** and Ravishankar GA (2019) Importance of Micro and Macro algae for Industrial applications as presented in 13th Annual Convention of ABAP & International Conference on “Environmental Sustainability, Human Health and Development (ABAP & ICESHHD-19), 20-22 December 2019 at VFSTR University, Andhra Pradesh, India.
 15. Venkateswarulu TC, Abraham Peele K, Krupanidhi S, Prakash Narayana Reddy K, Indira M, **Ranga Rao A**, Bharat Kumar R, and Viday Prabhakar K (2019) Characterization of lactase producing bacterium isolated from dairy effluent was presented in 13th Annual Convention of ABAP & International Conference on “Environmental Sustainability, Human Health and Development (ABAP & ICESHHD-19), 20-22 December 2019 at VFSTR University, Andhra Pradesh, India.
 16. Ravishankar GA* and **Ranga Rao A** (2018) “Global trends in research on algal biomass production, coupled to its commercial utilization as a sustainable source of bioactive compounds for health food applications” 19th World Congress of Food Science and Technology, 23-27 October, 2018, Mumbai, India
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17. **Ranga Rao A*** (2018) “Algae for food, nutraceutical, pharmaceutical, animal feed, bioremediation and biofuel applications” was presented at 4thInternational Symposium for Distinguished Young Scholars, 11-15 April 2018 at Xian Jiaotong University, Shaanxi, Xian, China.
 18. **Ranga Rao A*** (2018) “Role of algae in foodscience and nutritionalsecurity-AnOverview” was presented in the online conference on Advances in FoodScience & Nutrition during 26-27th March, 2018, Euroscicon 40 Bloomsbury Way, Lower Ground Floor, London, United Kingdom.
 19. **Ranga Rao A*** (2017) Algae as source of functional foods for health benefits was presented at 2nd International Symposium for Changan Young Scholars (CHD, 2017), 15-18 November 2017 at Changan University, Xian, Shaanxi, China.
 20. **Ranga Rao A***, Deepika G, G.A. Ravishankar, R. Sarada, Narasimha Rao BP, Su Y and Lei B (2017) *Botryococcus braunii*: an alternative source of carotenoids and its possible applications was presented at TYAN International Conference, 22-24 August 2017, Rio de Janeiro, Brazil.
 21. **Ranga Rao A***(2016) “Industrial potential of carotenoid pigments from micro-algae for health benefits” was presented at First International Forum for Academic Youths and Elites. 18-20 December, 2016 Guangzhou University, Guangzhou, China.
 22. **Ranga Rao A***(2015) “ Mass algal culture in raceway ponds and photobioreactors for biomass and lipid production” was presented at National symposium on Algae for Human Welfare, 21-22 August, 2015 at PRGC, Kakinada, East Godavari, India.
 23. **Ranga Rao A***(2015) “Industrial Application of Microalgae: Current trends and Future Prospects” was presented at National Seminar on Science led Development for Environmental Sustainability, 21 February, 2015 at Indian National Science Academy (INSA), New Delhi, India.
 24. **Ranga Rao A***(2014) “Advances in Microalgal Biotechnology for food, feed and biofuel applications” will be presented at International Conference on Marine and Agriculture Biotechnologies on 15-17 December 2014 at Kakinada, India.
 25. **Ranga Rao A*** and Ravishankar G.A., (2014) “Astaxanthin: Challenges, Opportunities and Its Global Market” presented at The World Academy of Sciences (TWAS) 25th General Meeting on 26-29 October, 2014 at Sultanate of Oman, Muscat.
 26. Yingchun Gong, Zixuan Hu, **Ranga Rao A**, Sommerfeld Milton and Qiang Hu* (2014) Comparative study of zooplankton predators in mass cultures of several microalgae of commercial interest. 7th Asian Pacific Phycological Forum (APPF), 20-24 September 2014, Wuhan, China.
 27. **Ranga Rao A*** (2014) “Production of microalga carotenoid pigments for health food applications: Biomass production, pigment characterization and analyses of biological activities” was presented at 17th World Food Congress of the International Food Science and Technology (IUFoST), 17-21st August, 2014, Montreal, Canada.
 28. **Ranga Rao A***, Ravishankar GA, Sarada R, Phang, SM, (2014) “Food Application of carotenoids with special reference to Microalgae” was presented at 17th World Food Congress of the International Union of Food Science and Technology (IUFoST), 17-21st August, 2014, Montreal, Canada.
 29. **Ranga Rao A*** Sindhuja HN, Shylaja MD, Udaya Sankar K, Sarada R, Ravishankar GA, and Phang SM (2014) “The protective role of astaxanthin and astaxanthin esters from green microalga-
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Haematococcuspluvialis on UV-DMBA induced skin carcinogenesis rats: possible mechanism of action". 17th International Carotenoid Symposium (ICS), June 29- July 4, 2014, Park City, Utah, USA.

30. **Ranga Rao A*** (2013) "Bioenergy molecules from cultured green microalga-*Botryococcusbraunii* and its use in biofuel feed stock" 26th July, 2013, Bilik Azalea, IPS Building, IOES, University of Malaya, Malaysia.
31. **Ranga Rao A***(2005) "Isolation and characterization of carotenoids by various analytical approaches". 11th August, at Department of Oils & Fats, V.R.S & Y.R.N College, Chirala, Andrapradesh, India.
32. **Ranga Rao A*** (2004) "Production of lipids and hydrocarbons from microalgae". 18th October at Department of Oils & Fats, V.R.S & Y.R.N College, Chirala, Andrapradesh, India.

Oral presentations:

33. **Ranga Rao A***, Dhinesh C.S., and VijayaRamu D (2018) Production of biomass and lipidsfromalgae for possible biofuel applications. A National level Technical, Cultural and Sports Feston 5-6 January 2016 at RVR & JC Engineering College, Guntur, Andhra Pradesh, India.
 34. Pavana Lakshmi A, Swathi N, Harinagasri G, VijayaRamu D, and **Ranga Rao A*** (2018) Algae: a future prospective for Food security. A National level Technical, Cultural and Sports Fest (Youth Fest-2018) on 5-6 January 2016 at RVR & JC Engineering College, Guntur, Andhra Pradesh, India
 35. Su Y*, Cui K, Mas, **Ranga Rao A**, Shuanglin D and Lei B (2017) "Mathematical modeling of growth of shrimps (*FenneropenaeusChinensis*) in high density breeding pond" was presented at 2nd International Conference on Modelling, Simulation, and Applied Mathematics (MSAM), 26-27 March, 2017, Bangkok, Thailand.
 36. **Ranga Rao A*** Sarada R, Baskaran V, Ravishankar GA and Phang SM (2013) " Biological activities of astaxanthin from green microalga-*Haematococcuspluvialis* and its use in functional foods". 9th Johor Scientific Meeting, 23-25th, September 2013, Johor State Health Department, Johor Bahru, Malaysia.
 37. **Ranga Rao A***, Sarada R, SM Darmesh, G.A. Ravishankar and Phang Siew Moi (2013) "Antioxidant and hepatoprotective potential of astaxanthin and astaxanthin esters from green microalga-*Haematococcuspluvialis* by *In vivo* model", 2nd Natural Pigments Conference for South East Asia (NP-SEA)-2013, 12-13th July, 2013, University of Ma Chung, Ma Chung Research Center for Photosynthetic Pigments, Indonesia.
 38. **Ranga Rao A.**, Yingchun Gong, Zixuan Hu, Milton Sommerfeld and Qiang Hu* (2012) "Comparative study of predators in mass cultures of *Chlorella zofingiensis*, *Scenedesmusdimorphus* and *Nannochloropsisocceana* in ponds and photobioreactors". Algae Biomass Summit(ABO), 24-27th Sep 2012, Algae Biomass Organization, USA.
 39. **Ranga Rao A**, R. Sarada* and G.A. Ravishanakar. (2009). "Production of carotenoids from green algae *Botryococcusbraunii* cultured in various autotrophic media under different stress conditions". National Conference on Recent Developments in Cultured Algae, April 4-5th, OASTC (Ministry of Environmental Science), Andhra University, Visakhapatnam, Andhra Pradesh.
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40. **Ranga Rao A**, R. Sarada, V. Baskaran and G.A. Ravishankar* (2009). "Bioavailability of astaxanthin and its esters from cultured green alga- *Haematococcuspluvialis* elucidated in experimental rats". 41st National Conference of Nutrition Society of India (NSI), 19-21st November, National Institute of Nutrition, Hyderabad, Andhra Pradesh.
41. **Ranga Rao A**, R. Sarada*,V. Baskaran and G. A. Ravishankar. (2006). "Antioxidant activity of *Botryococcusbraunii* extract elucidated in *in vitro* models". International Conference on Current Trends in Algal Bioresource and Utilization, 4-6th December, Department of Ecology and Environmental Science, Assam University, Assam, India.
42. **Ranga Rao A**, R. Sarada*, C. Dayananda, R. Vidhyavathi and G.A. Ravishankar (2005). "Antioxidant activity of *Haematococcuspluvialis* extracts in *in vitro* models". National Seminar on Nutritional Status and Prospects, 23rd – 24th September, School of Biotechnology, Dr. G.R.D. College of Science, Coimbatore, Tamilnadu.
43. **Ranga Rao A*** (2004)"Hydrogenation technology of oils and fatty acids". Association of Microbiologists of India (AMI), Mysore Unit, CFTRI Campus, Mysore, India.

Poster presentations:

44. Rajesha J*, **Ranga Rao A**, M. Karunakumar and G.A. Ravishankar. (2010) "Hematological and histopathological studies of endosperm rich fraction of flaxseed in chicks". 7th International Conference on Functional Foods in the Prevention and Management of Metabolic Syndrome, 3rd-4th December, at Southern Methodist University (SMU), Dallas, TX, USA.
45. Rajesha J*, **Ranga Rao A**, M. Karuna Kumar and G. A. Ravishankar (2010). "Hepatoprotective potential of hull fraction from India flaxseed cultivar". International Society of Antioxidants in Nutrition and Health (ISANH), 29-30th April, at Paix, Paris.
46. **Ranga Rao A**, R. L. Raghunath Reddy, V. Baskaran, R. Sarada and G.A. Ravishankar* (2010). "Comparative bioavailability and antioxidant property of carotenoids of micro algae *Spirulina platensis*, *Haematococcuspluvialis* and *Botryococcusbraunii* biomass elucidated in experimental rats". 7th Gordon Research Conference on Carotenoids, 17th-22nd January, Ventura beach Marriott, Ventura, California, USA.
47. Vijay Kumar H, **Ranga Rao A**, R. Naresh*, M.N. Manjunath, Devendra J Haware and K. Anbalagan. (2008). "Leaching of heavy metals (Fe, Cr, Ni and Cu) from stainless steel coupons/cookware in food simulants and food materials". 6th International Food Convention (IFCON- 2008), 15-19th December, Central Food Technological Research Institute, Mysore.
48. Sarada R*, C. Dayananda, **Ranga Rao A**, T.R. Shamala, P. Srinivas and G.A. Ravishankar (2006). "Saturated and unsaturated hydrocarbon production from *Botryococcusbraunii* sps from Indian fresh water bodies and culture collection centers". International Conference on Applied Phycology and Algae in Biotechnology and Environment, 14th-15th February, Department of Biotechnology, Delhi University, New Delhi, India.
49. **Ranga Rao A**, B. Sandesh Kamath. And R. Sarada* (2004). "Stability of astaxanthin at different temperature in *Haematococcus* cells and edible oils". 16th Indian Convention of Food Scientists and Technologists (ICFOST-2004), 9-10th December, Central Food Technological Research Institute, Mysore.

50. Sandesh Kamath, R. Sarada*, Jagannath Rao R. Vidhyavathi and **Ranga Rao A.**, (2004). "Enhancement of egg yolk colour in layer chicken feed with microalga *Haematococcus pluvialis*". 16th Indian Convention of Food Scientists and Technologists (ICFOST), 9-10th December, Central Food Technological Research Institute, Mysore.
 51. Sandesh Kamath, B.R. Brinda, M.S. Ravikumar, **Ranga Rao A.**, R. Sarada*, and G.A Ravishankar. (2004). "Scale up studies of green algae – *Haematococcus pluvialis*". National Symposium on Micro Algal Biotechnology, 11-13th March, Bharathidasan University, Tiruchirapalli.
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Workshops:

1. **A. Ranga Rao** (2024) Attended Workshop on "Intersection of Biotechnology & Informatics in Genomics for Transforming Health Care (IBIGTH)". 12th -13th April, 2024. Organized by Department of Biotechnology, School of Biotechnology and Pharmaceutical Sciences, VFSTR (Deemed to be University), Vadlamudi, Guntur, Andhra Pradesh, India.
 2. **A. Ranga Rao** (2020) Attended Hands on workshop on Quantitative Genetics and Genomics in Plant breeding. 23-27 November, 2020. VFSTR (Deemed to be University), Guntur, Andhra Pradesh, India.
 3. **A. Ranga Rao** (2019) Attended one day National workshop on Recent Trends in Bioanalytical and Molecular Biology (BAMB-2019) on 29 January 2019 Organised by the Department of Biotechnology (UG) and Microbiology (P.G), JKC College, Guntur, Andhra Pradesh, India.
 4. **A. Ranga Rao** (2011) Attended one day workshop on RCR Phase-II titled "Recognizing, Reporting and Avoiding, Research Misconduct" Office of Research Integrity and Assurance, 25 October, 2011, Arizona State University, USA
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FDPs/Short-Term Course/Refresher Course/Training Program

5. A. Ranga Rao (2024), Attended online training programme on "**NEP Orientation and Sensitization Programme**" during 3rd-13th August, 2024 organized by the Mahatma Hansraj Malaviya Mission Teacher Training Centre, Hansraj College, University Grants Commission (UGC), in collaboration with Vivekanand College, University of Delhi, Delhi, India.
6. A. Ranga Rao (2024) Attended in one week online faculty development programme on "**Current Science, and Developments in Nanobiotechnology**" during 29th January, 2024-2nd February, 2024, organized by Department of Biotechnology, Chaitanya Bharathi Institute of Technology in association with Microbiologists Society India (MBSI), Hyderabad, India.
7. **A. Ranga Rao** (2023) Participated in the 7 Day National level Online Faculty Development Program on "**Outcome Based Education (OBE)**" during 8-15 March, 2023 organized by St. James college of Nursing and St. James College of Pharmaceutical Sciences, Chalakudy in association with The Kerala State Higher Education Council, Kerala, India.
8. **A. Ranga Rao** (2023) Participated in FDP on "**Recent Advancements in Science and Technology**" during 6-10 March, 2023, organized by Department of Science, Alliance University, Bangalore, India.

9. **A. Ranga Rao** (2022) Participated in the FDP entitled “*Recent Advances in Science & Technology Innovations*” during 20-24 June 2022, organized by Department of biotechnology, VFSTR (Deemed to be University), Guntur, Andhra Pradesh, India, In collaboration with ICAR-Indian Agricultural Research Institute, New Delhi.
10. **A. Ranga Rao** (2022) Science Academics Refresher Course on *Spectroscopic Techniques: New facets in contemporary fields of chemical, material and pharmaceutical sciences* (6.5.22 to 20.6.22), Organized by Department of Department of Sciences and Humanities, VFSTR Deemed to be University, Vadlamudi, Guntur, Andhra Pradesh during 6th May 2022–20th May 2022, Sponsored by Indian Academy of Sciences, Bengaluru, Indian National Science Academy, New Delhi, The National Academy of Sciences, India, Prayagraj
11. **A. Ranga Rao** (2021) Participated in the Popular Science Webinar lectura on “*Metabolic Engineering of Plant Secondary metabolites for Value Addition with reference to Economically Important Crops and Champion algal forms*” on 18th September, 2021, Organized by Jointly by Department of Biosciences, Union Christian College, Aluva and The National Academy of Sciences India, Prayagraj, Kerala Chapter, Kerala
12. **A. Ranga Rao** (2021) Participated in International Faculty Development Programme (FDP) on “*Recent Trends in Transforming life Sciences-Focus on Acadmia & Industry Symbiosis*” during 13-18 September 2021, Organized by Department of Biotechnology, Nizam College, Osmania University in Association with Government city college and Loyola Academy, Hyderabad.
13. **A. Ranga Rao** (2021) Participated in FDP Program on “*Biotechnology for 21st Century*” during 19-24 July 2021, Sponsored by Department of Biotechnology, Ministry of Science and Technology, Govt. Of Inda, New Delhi, Organized by Marian Star Centre, PG and Research Department of Botany, St. Mary`s College (Autonomous), Thoothukudi, Tamilnadu.
14. **A. Ranga Rao** (2021) Participated in One week National level faculty Development programme on “*Intellectual property rights for academia*” during 20-25 September, 2021. Organized chandra kamal Bezbaruah commerce College, Jorhat, India in association with CSIR-IICT, Hyderabad, Telangana, India.
15. **A. Ranga Rao** (2021) Participted in Faculty Development Program (FDP) on “*Innovative Teaching methods and effective presentation skills: Developing Next Generation Teachers*” during 16-20 August, 2021 organized by the IES Institute of Pharmacy, IES University, Bhopal, India.
16. **A. Ranga Rao** (2021) Attended One-week online faculty development programme on “*Chemistry for Societal Advancements*” during 26-31 June 2021 (7 Days), Organised by Department of Chemistry, K.L. University in association with Akademi of Sciences, Amaravati, Andhra Pradesh, India.
17. **-A. Ranga Rao** (2021) Attended online five day faculty development program on on “*Life Sciences for Engineers*” during 23-27 June 2021 (5 Days), Organised by Department of Chemistry, GITAM School of Science, Hyderabad, in association with Department of Chemistry, GITAM School of Science, Bengaluru.
18. **A. Ranga Rao** (2020) Attended NordAqua Online Course Autumn-2020: Algae based biotechnologies and their impacto n Nordic bluebioeconomy. 17, 23 and 26 November, 2020; Total active course participation: 7 hours; In assocaition with University of Turku, Turku, Finland.
19. **A. Ranga Rao** (2020) Attended Virtual Faculty Development Program on Teaching learning and assessment from 23 Nov, 2020-3 Dec 2020 (10 days), Ministry of Eduction-sponsored Pandit Madan Mohan Malyviya National Mission on Teachers and Teaching, Organized by Teaching learning Centre, Central University of Rajasthan, Rajasthan, India

20. **A. Ranga Rao** (2020) Attended Virtual Faculty Development Program on “ Challenges and Opportunities in Diverse Fields: Preand Post Pandemic Era” on 2-6 September 2020, organized by the Department of Biochemistry, Rayalaseema University, Kurnool, Andhra Pradesh.
 21. **A. Ranga Rao** (2020) Participated in the 3 Day online FDP on “E-learning Management System” during the dates-29th June to 1st July 2020; organized by Yogi Vemana University, Kadapa, Andhra Pradesh, India.
 22. **A. Ranga Rao** (2019) Attended QIP-Short Term Course on “*Biophysical alaysi to study structure and functions of proteins and nuleic acids*” on 2-6 December 2019 at Indian Institute of Science (IISC), Govt. of India, Bangalore, India. (With financial support by IISC)
 23. **A. Ranga Rao** (2018) Attended Faculty Development Programme(FDP) on Teaching Enrepreneur Development Skills in Higher Education Institutions. 1-7 June 2018 at Vignans Nirula Institute of Technology & Science For Women, Andhra Pradesh, India.
 24. **A. Ranga Rao** (2017) Attended Faculty Development Programme on Effective Implementation of Outcome Based Education (OBE) during 02-08 June 2017 at Vignan Pharmacy College, Andhra Pradesh, India.
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Attended Webinars:

25. **Ranga Rao A.** (2024) Attended a webinar, “SAMBHAV”-Sustainable Advancements for Modernizing Bharat’s Food Processing Vision” Organized by National Institute of Food Technology Entrepreneurship and Management (NIFTEM), An Institute of National Importance under the Ministry of Food Processing Industries, Govt. of India, Kundli, India on 28th March, 2024.
 26. **A Ranga Rao** (2020) Attended “E-learning Program on Bioinformatics as Cartographic tool in Drug Discovery” during 19-30 May 2020 organised by the Department of Bioinformatics, Alagappa University, Karaikudi, Tamilandu.
 27. **A. Ranga Rao** (2020) Attended Webinar on “Role of NMR in the Strucutre Analysis of Organic Compounds” on 20th May, 2020. Organized by Vignan Pharmacy College, Vadlamudi, Andhra Pradesh.
 28. **A. Ranga Rao** (2020) Participated “International E-conference on Recent Trends in Drug Discovery, Diagnostics and Therapeutics” during 2-4 July 2020 organized by Department of Biotechnology, VFSTR University, Vadlamudi, Andhra Pradesh.
 29. **A. Ranga Rao** (2020) Participated Webinar on “Current status of epidemiology, pathogenesis, diagnosis, therapeutics, & Vaccines For CoVID-19” organized by Faculty of Biosciences, Institute of Bio-Sciences and Technology, Shri Ramswaroop Memorial University on 14/05/2020.
 30. **A. Ranga Rao** (2020) Participated in the national level webinar on “Molecular Structure, Pathogenecity and Development of Scientific temper aspects of nCOVID-19” organized by the Department of Biotechnology and Microbiology, Jagarlamudi Kuppaswamy Choudary College, Guntur, Andhra pradesh on 23rd May 2020.
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Professional Services:

Journal editorial team member and peer reviewer

Reviewer	Journal of Clearner Production, Algal Research, Biomass conversion and biorefinery, Marine Drugs, Journal of Applied Aqaculutre, Bioengineering (MDPI), Journal of Marine Science and
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Engineering (MDPI), Foods (MDPI), Biomass Conversion and Biorefinery (Springer), Critical Reviews in Food Science and Nutrition (Taylor and Francis), Trends in Food Science and Technology (Elsevier); Food and Chemical Toxicology (Elsevier), Food Technology and Biotechnology; Journal of the American Oil Chemists Society (Springer); Food Chemistry (Elsevier); European Food Research and Technology (Springer); Journal of Applied Phycology (Springer), Energy & Fuels (ACS); LWT-Food Science and Technology (Elsevier); Food Research International (Elsevier); International Journal of Molecular Sciences (Open access, MDPI); Current Pharmaceutical Design (Bentham Sciences); Journal of Food Science and Technology (Springer); Algal Research Journal (Elsevier); Malaysian Journal of Science (Malaysia); Herald Journal of Agricultural and Food Science Research (Nigeria); Journal of Tropical Agricultural Science (Malaysia); African Journal of Food, Agriculture, Nutrition Development (Africa),

Associate Editor /Editorial Team Edelweiss Journal of Food Science and Technology, USA; Food Science and Engineering, Singapore The Open Food Science Journal, Bentham Open, UAE; The Open Microalgae Biotechnology, Bentham Open, UAE; Journal of Food, Nutrition, and Population Health, iMedpub LTD., UK., Life Science Global, Canada; Indo Global Journal of Pharmaceutical Sciences,

Special issue Editor 2013 Guest Editor, Frontiers in Animal Sciences, Switzerland
 Guest Editor, Mediators of Inflammation, Hindawi publishers,
 Expert review committee member, CRDF grant for Malaysian technology development corporation SdnBhd, Kuala Lumpur, Malaysia

Professional experience in R&D

- ❖ Worked on *Haematococcus*, *Botryococcus*, *Spirulina*, *Chlorella*, *Nannochloropsis* and *Scenedesmus* species
- ❖ Mass culture in photobioreactors (PBRs)-annular, tubular, bubble column, flat panel and high rate algal pond for high value compounds
- ❖ Microalgae grown in waste water (*Palm Oil Mill Effluent*) for bioremediation applications
- ❖ Developed mass cultivation methods for the microalgae under outdoor conditions
- ❖ Enhanced culture conditions for algal growth, carotenoids, hydrocarbon and lipids content
- ❖ Worked on microalgal pigments-astaxanthin, β -carotene, lutein and phycocyanin
- ❖ Isolation, extraction and purification of bioactive compounds from algal biomass
- ❖ Evaluated biological activity of carotenoids in *in vitro* and *in vivo* models
- ❖ Analysis of biochemical composition in microalgae biomass
- ❖ Observed the contamination issues in open and closed system during the cultivation of microalgae
- ❖ Identification and quantification of various predators in mass algal culture
- ❖ Downstream processing of carotenoids, lipids, fatty acids and hydrocarbons
- ❖ Safety assessment of feeding of microalgae biomass and carotenoids

Responsibilities and administration duties:

- ❖ Data collection, data Interpretation, statistical analysis
- ❖ Maintaining log books, documentation, and calibration of instruments
- ❖ Assisting scientists in writing research proposals for funding agencies or industries
- ❖ Developing analytical methods for isolation, purification and characterization of bioactive molecules
- ❖ Technical/annual reports, research papers preparation, attending conferences
- ❖ Technical presentations/Project review meetings
- ❖ Guiding students like M.Sc, M. pharma, B.Tech and M.Tech for their projectwork

Supervised under graduate students for their project work:

-
- ❖ Pavana Lakshmi, Swathi, and Harinagasri for their project on “*Algae: A Future Prospective For Food Security*”
 - ❖ Srivani, Dhanalakshmi, and Toni for their research project on “*Alternative source of omega fatty acids from algae for dietary supplements*”
 - ❖ Ms. Predha and Nooshin (2013), Research Assistant (RA), Topic: Enhancement of carotenoid production from green microalgae- *Chlorococcum* (Role: Supervisor)
 - ❖ O. M. Hin (2013), Topic: Evaluation of biomass and lipid productivity of microalgae in photobioreactors and high rate algal pond (Role: Co-Supervisor)
 - ❖ Mr. Cheng Yau Tan (2013), improve biomass and lipid productivity by using palm oil mill effluent (Role: Co-Supervisor)
 - ❖ CH. KeerthanaSowbhagya (Reg. No: 151FA01008); M. Kavya Sri (Reg. No. 151FA01020); and P. HimaBindu (Reg. No: 151FA01037), Pigments from tomato waste for functional food applications (2017-2018) (Role: Supervisor)
 - ❖ Mr. Srivani (Reg. no: 151FA01078); Ms. Dhanalakshmi (Reg. No. 151FA01076); and Toni (Reg. No: 151FA01082); Alternative Source of omega fatty acids from algae for dietary supplements (2017-2018), Role: Supervisor
 - ❖ Ms. J. Sowmya (Reg. No: 151FA01095); N. Sandhya (Reg. No: 151FA01102); and K. Jhansi Rani (Reg. No: 151FA01105).
 - ❖ Ms. A. Pavana Lakshmi (Reg. No: 161FA01121); N. Swathi (Regd No: 161FA01125); and G. Hari Naga Sri (Reg No. 161FA01131); Algae: a future prospective for food security (2017-2018).
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Academic and Administrative Duties:

- ❖ Acting as Director for Advanced Research Centre; Bioresource Utilization Management, Department of Biotechnology, VFSTR University
- ❖ Acting as Coordinator for National Board of Accreditation (NBA) at the Department Level.
- ❖ Selected as team member for University Core research team at the University level.
- ❖ **Guiding four Ph.D Students:**
 - **Mr. Bhagatsingh Chinta (VU19P2BT-014, Date of Joining: 09.02.2019); Thesis title: Evaluation of Plasma Glycated CD59 as a Biomarker for Predicting Nephropathy in Type-2 Diabetic Patients in correlation with the FRMD3 Mutations in These Patients;**
 - **Mr. Jonna Veera Seshaiyah (VU18P2BT-005, Date of Joining: 16.06.2020): Thesis title: Preparation, Characterization of Microspheres and Controlling the Release of Drug Material**
 - **Mr. N. Murali Krishna (Date of Joining: 15.07.2021): Ph.D Course work to be completed.**
 - **Mr. K. Venu Gopal (Date of Joining: 09.03.2022): Ph.D Course work to be completed.**
- ❖ Involved in preparing documents during the UGC, NAAC, NBA, ABET-ANSAC and AICTE Visit
- ❖ Involved in preparing five years research plan (2018-2023) for the Biotechnology Department
- ❖ Coordinator at the department level for Vignana's University News Letter
- ❖ Appointed as valuator for biochemistry, nanobiotechnology, bioanalytical Techniques, Nano biotechnology in food and agricultural industries, and Bioproducts and Bio-entrepreneurship
- ❖ Prepared syllabus for Algal Biotechnology (16BT253), Plant Biotechnology (16BT262) and Nano biotechnology in food and agricultural industries (16BT455)
- ❖ Attended invigilation duties (weekly, mid and end semester), moderation, counseling duties at the Department and University level
- ❖ Prepared e-content for Biochemistry (19BT201), lecture notes, power point presentation, question papers; evaluator student papers during the weekly test, and mid exams.
- ❖ Selection committee member: Evaluated student information from biotechnology and bioinformatics for the award of best outgoing student

- ❖ Member in the disciplinary committee for Vignans Mahotsav (5-6 Jan 2018) and Srujanankura (2-3 Feb 2018)
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Organized Symposiums/Seminars/Conferences/Webinars/Guest Lectures

1. Involved as member in *organizing committee*, A National Seminar to celebrate-World Water Day "*Water for Peace*" organized by Centre for Environmental Pollution Control (CEPC), VFSTR (Deemed to be University), Vadlamudi, Guntur Dist., Andhra Pradesh, India dated on 22nd March, 2024.
 2. Involved as *organizing coordinator*, Guest lecture on "*The Future of Artificial Intelligence (AI) and Engineering*" from Prof. Patrick Phelan, Assoc. Dean of Graduate Programs, Fulton Schools of Engineering, Professor, School for Engineering of Matter, Transport and Energy, Senior Global Futures Scientist, Global Futures Scientists and Scholars, Arizona State University-USA, organized by Department of Biotechnology in association with Advanced Computer Science Engineering (ACSE), VFSTR Deemed to be University, Vadlamudi, Guntur, Andhra Pradesh, India dated on 13th March, 2024. (*Attended more than 500 Students from across the Departments*).
 3. Involved as member in *organizing committee*, International Conference on "*Frontiers in Nutrition and Medical Genomics and Drug Discovery (Inbix22)*", organized by Department of Biotechnology, VFSTR (Deemed to be University) under the Aegis of Bioclues, Vadlamudi, Guntur Dist., Andhra Pradesh, India, during 30th October-2nd November, 2022.
 4. Involved as member *organizing committee*, National Conference on "*Circular bioeconomy and Bioengineering approaches for a clean Environment and health*" organized by Department of Biotechnology, VFSTR (Deemed to be University), Vadlamudi, Guntur Dist., Andhra Pradesh, India, during 09-10th September 2022.
 5. Involved as *Scientific co-ordinator*, virtual A National Symposium on "*Integrated Bioprocess Technology: Advances and Future Prospects (IBTAFP-2021)*" during 7-8 Jan 2021, Department of Biotechnology, VFSTR University, Vadlamudi, India.
 6. Involved as *Organizing Secretary*, Virtual International Symposium on "*Bioinformatics (InSyB-2020) for Disease Therapeutics*" during 21-22 December 2020, Department of Biotechnology, VFSTR University, Vadlamudi, India
 7. Involved as *Convenor*, Webinar on "*Changing Horizons in Combating COVID-19*", 12th June 2020, Department of Biotechnology, VFSTR University, Vadlamudi, India
 8. Involved as *organizing coordinator*, Guest lecture on "*Seaweed (Marine algae) Cultivation for the products of Human Importance*" from Prof. P. V. Subba Rao, FNASc, CSIR-CSMCRI, India organized by Department of Biotechnology, VFSTR (Deemed to be University), Vadlamudi, Guntur Dist., Andhra Pradesh, India dated on 9th February, 2019.
 9. Involved as member in *Organizing Committee*, Conducted 13th Annual Convention of ABAP & International Conference on "*Environmental Sustainability, Human Health and Development (ABAP & ICESHHD-19)*", 20-22nd December 2019 at VFSTR University, Andhra Pradesh, India.
 10. Involved as member in *Organizing Committee*, Conducted A National Conference on "*Recent Advances in Biotechnology-An Awareness on Conservation of Medicinal Plants for Healthcare*", 16-17th August 2018.
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Professional Memberships:

- ❖ Associate of Microbiologists of India (AMI), India (*AMI ID: 5359-2023*)

Life member

❖ Association of Food Scientists & Technologies of India, CSIR-CFTRI Campus, Mysore, India (ID: AFST/LM/4-2021/KKN/3782)	Life member
❖ Society for Applied Biotechnology, India (LM2014/156)	Life member
❖ National Environmental Science Academy, India (No. 608)	Life member
❖ Asia PGPR Society of Sustainable Agriculture, USA (Membership ID: 2021/362)	Life member
❖ Andhra Pradesh Academy of Sciences, Andhra Pradesh, India (APAS/LM/2019/646)	Life member
❖ International Association of Engineers (IAENG), Hong Kong	Member
❖ Global Harmonization Initiative (GHI)	Member
❖ Scientific Board of Biological, pharmaceutical & Medical Sciences	Member
❖ International Institute of Chemical, Biological and Environmental Engineering,	
❖ Society of Chemical Industry, London, UK	2014
❖ International Carotenoid Society, Utah, USA	2014
❖ University of Malaya Algae culture collection (UMACC)	2013
❖ University of Malaya, Malaysia (Registered no. 1059)	
❖ Algal Biomass Summit, USA	2013
❖ Executive Member, Association of Microbiologists of India, Mysore Chapter, Mysore, India	2008-2011
❖ Nutrition Society of India, Hyderabad, India	2009
❖ Society of Biological Chemist, Mysore, India	2009
❖ Association of Food Scientist and Technologists of India, Mysore, India	2004

Bioanalytical Skills:

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- ❖ Isolation and purification of molecules: Open column chromatography, thin layer chromatography,
 - ❖ Identification and Quantification of molecules: UV-vis spectrum, High performance liquid chromatography
 - ❖ Liquid chromatography mass spectrum (LC-MS), Nuclear Magnetic Resonance (NMR)
 - ❖ Fatty acid analysis: Gas liquid chromatography (GC), Gas chromatography mass spectrum (GC-MS).
 - ❖ Biochemical techniques: Protein, catalase, superoxide dismutase, peroxidase, carbohydrate, phosphate, serum glutamic oxaloacetic transaminase, serum glutamic pyruvic transaminase, alkaline phosphatase
 - ❖ Cell culture studies: Phase contrast microscope, fluorescence microscope.
 - ❖ Animal studies: Anti-oxidant, Anti-lipid peroxidation, Bioavailability, Anti-heptoprotective activity, Anti-cancer, Histopathology and hematology
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References available upon request

Updated on 22nd October, 2024