# **CURRICULUM VITAE**

### DR. RANGA RAO AMBATI, M.Sc, Ph.D., FSAB., AFAPAS

Associate Professor & Senior Scientist

Director of Centre of Excellence

Department of Biotechnology (NBA Accredited)

Vignan's Foundation for Science, Technology and Research (Deemed to be University, Accredited by NAAC "A")

Andhra Pradesh-522 213; India;

Ph: +91-7358744500;

E-mail: arangarao99@gmail.com;



#### IMPACT FACTOR AND CITATION INDEX

Cumulative Impactor factor: >170; Google citation index: 3888; H-Index: 21; i10-Index: 35

WoS Researcher ID: K-2898-2012; Scopus Author ID:16204124700;

ORCID: 0000-0002-5735-4489;

Vidwan-ID: 83913 (Profile URL: https://vidwan.inflibnet.ac.in/profile/83913)

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 University for the year 2020 and 2021;
  - JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. <a href="https://doi.org/10.1371/journal.pbio.3000918">https://doi.org/10.1371/journal.pbio.3000918</a>;
  - 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
- *Most Cited (1323) and Most downloaded article (29749):* 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. IF: 5.1
- In the survey done by Shoolini Univeristy of Biotechnology and Management Sciences on "Scientometric analysis of biotechnology research output in India during the year 2008-2017". One of our paper 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. <a href="https://digitalcommons.unl.edu/libphilprac/2983">https://digitalcommons.unl.edu/libphilprac/2983</a>)

Another survey done by Director of Education and CSIR-National Institute of Science Coomunication & information Resources, New Delhi on "Pharmaceutical Research in India: A Scientometric Analysis of International Collaboration" *One of our paper reported as highly cited article among the top 10 highly cited articles* (Pathak M and Prasanna Kumari NK (2019), Pharamaceutical 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, Biochemistry, Biotechnology, Microbial biotechnology, Food Science and Technology; Microalgal biotechnology

#### INTERNATIONAL VISITS

USA(3 TIMES), CANADA, BRAZIL, MALAYSIA, CHINA (3 TIMES), OMAN, INDONESIA

## **EDUCATION**

2008-2012	Ph.D (Biotechnology), CSIR-Central Food Technological Research Institute (CFTRI), Govt. of
	India, University of Mysore, Mysore, India.
2001-2003	M.Sc (Oils & Fats), Acharya Nagarjuna University, Andhra Pradesh, India.
2007	General course on Intellectual Property, World Intellectual Property Organization, Geneva, Italy
2001	Post-graduate diploma in information technology MAHE, Deemed University, Manipal, India
1996-1999	B.Sc (Chemistry, Maths, Physics), Acharya Nagarjuna University, Andhra Pradesh, India
1998	Post-graduate diploma in computer applications, IRTD, Hyderabada, India

# PROFESSIONAL APPOINTMENTS (Teaching-Cum-Research)

July 2019-till date	Associate Professor & Sr. 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 Univeristy-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	Sr. Scientist, 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

### HONOURS/AWARDS/FELLOWSHIPS

### **International Academies: Awards of IAFoST and TWAS:**

- **❖** Listed one among the world`s top 2% scientists (most cited scientist) for the year 2021 and 2020 reported by Stanford University, USA
  - (Reference: 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;
  - 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)
- ❖ Received Young Scientist Award (2014) by 17<sup>th</sup> World Congress of Food Science and Technology, International Union of Food Science and Technology (IUFoST), International Academy of Food Science and Technology (IAFOST), 17<sup>th</sup> August 2014, Montreal, Quebec, Canada.
- **♦ Honored TWAS-Young Affiliate-ship** (2014-2018) for four years by The World Academy of Sciences (TWAS)-Regional Office of East South-East Asia and the Pacific, Chinese Academy of Sciences (CAS), China at TWAS 25<sup>th</sup> General Meeting, Muscat, Sultanate of Oman, 26<sup>th</sup> -29<sup>th</sup> October 2014.

## **National Academies/Institutions/Professional Bodies:**

- \* Received Certificate of Excellence-Award in Recognition of Outstanding Performance during the year 2021 in the filed of biotechnology, VFSTR Deemed to be University, Andhra Pradesh, India.
- ❖ Received *Outstanding Performance Award-2021* in the executing high quality research publications and h-index in the field of Biotechnology, VFSTR Deemed to be University, Andhra Pradesh, India.
- ❖ Received Certificate of Appreciation Award-2020 for the academic year 2019-2020 in training and motivating students towards academic excellence, VFSTR Deemed to be University, Andhra Pradesh, India
- ❖ Elected as **Associate Fellow** (2019) of Andhra Pradesh Akademi of Sciences (APAS), Govt. of Andhra Pradesh, India
- ❖ Selected for *QIP-Short Term Course* 2019 by Indian Institute of Science (IISC), Govt. of India, Bangalore, India.
- ❖ Young Biotechnologist Award (award to be received), Society of Applied Biotechnology, India
- ❖ Junior Scientist of the Year Award (2015), National Environmental Science Academy, New Delhi, India.
- ❖ Fellow (2013) of Society of Applied Biotechnology, India
- ❖ Best Presentation (2005), School of Biotechnology, Dr.G.R.D. College of Science, India

## **International Scientific Journals as Editor and Reviewer:**

- \* Received **Outstanding Contribution Award** in reviewing manuscript from Food Chemistry Journal with having H-Index: 221 and impact factor: 6.3; Elsevier publishers, Science cited Indexed Journal.
- ❖ Acting as **Editoriral board member** for more than 8 International Journals;

- ❖ Guest Editor for Special Issues, Mediators of Inflammation, Hindawi publishers, Frontiers in Animal Sciences, Switzerland and Bioengineered Journal, MDPI.
- ❖ Acting as **Reviewer** for more than 25 International high impact journals (*Ex: Bioresource technology, Critical Reviews in Food Science and Nutrition, Trends in Food Science and Technology, Food Research International, Algal research, Food Review International etc.)*

## **International, National and Post Doctoral Fellowships:**

- ❖ Visiting Research Assistant Professor (2016-2017) Beijing Normal University-Hongkong Bapitst University, Guangdong, China.
- \* Early Career Research Grant (2013), University of Malaya, Kuala Lumpur, Malaysia.
- ❖ Visiting Senior Research Fellow (2012-2014), University of Malaya, Kuala Lumpur, Malaysia.
- \* Postdoctoral Research Associate (May, 2011- Dec, 2012), Arizona State University, USA.
- ❖ Carl Storm International Diverstiy Fellowship (2010), Gordon Research Conferences, California, USA
- ❖ Senior Research Fellowship Award (2007), Indian Council of Medical Research (ICMR), Govt. of India, India.

## **International and National Travel Grants:**

- \* Travel grant support (2017) by The World Academy of Sciences (TWAS), The first International Conference of TWAS Young Scientist Network Meeting at Rio de Janeiro, Brazil.
- ❖ Travel grant award (2014) by International Union of Food Science and Technology (IUFoST), 17<sup>th</sup> World Food Congress of the International Food Science and Technology, Montreal, Canada.
- ❖ Travel grant award (2014) by The World Academy of Sciences (TWAS-Italy), 25<sup>th</sup> General Meeting at Oman, Muscat.
- \* Postdoctoral travel grant award (2014) by International Carotenoid Society (ICS), 17<sup>th</sup> International Carotenoid Symposium (ICS), Park City, Utah, USA.
- ❖ Young Scientist travel grant award (2010) by Department of Science and Technology (DST), Govt. of India, India.

## **Invited as Distinguished Scholar at International Symposium:**

- ❖ Invited as Distinguished Scholar-2018 for attending 4<sup>th</sup> International Syposium, Xian Jiao Tong University, China
- **❖ Invited as Distinguished Scholar-2017** for attending 2<sup>nd</sup> International Symposium, Changan University, China
- ❖ Invited as **Distinguished Scholar-2016** for attending First International Forum, Guangzhou University, China

## TEACHING AND LABORATORY EXPERIENCE

- **★ Teaching:** Biochemistry (16BT201); Nanotechnology in Food and Agriculture Sciences (16BT455), Nanobiotechnology (16BT401), Bioproducts and Bioentrepreneurship (21BT102, 16BT102); Algae biotechnology (16BT253; SHET-3301; 3107);
- ❖ Interested subjects for teaching: Biochemistry and Nutrition; nutraceuticals and functional foods; food chemistry, food biochemsitry, food biotechnology, bioanalytical techniques; industrial

- biotechnology, downstream processing, biochemistry of oils & fats, bakery confectionary technology;
- **❖ Laboratory:** Biochemistry, instrumental methods of analysis laboratory; bioanalytical techniques; algal biotechnology;

#### SERVING AS MEMBER IN VARIOUS COMMITTEES

- **External Examiner** for Ph.D thesis evaulation, JSS Academy of Higher Education and Research (Deemed to be University), Karanataka, India.
- **External committee member** for doctoral committee (Ph.D), Department of Biotechnology, Faculty of Engineering and Technology, SRM Institute of Science & Technology, Chennai, India.
- ❖ Internal committee member for doctoral committee, Facutly of Pharmaceutical Sciences, Vignan's University, Andhra Pradesh, India
- **External examiner** for M.Sc (Biotechnology and Microbiology) Students by invitation, JKC college (Autonomous), Andhra Pradesh, India.
- ❖ Member in board of studies (BOS) for UG and PG (Biotechnnology) by invitation, JKC college (Autonomous), Andhra Pradesh, India.
- **External examiner** for B.Tech (Chemical Engineering) students by invitation, RVR & JC College of Engineering (Autonomous), Andhra Pradesh, India.
- \* Committee member in judging panel for the selection of best microalgae awards-Game Changer by invitation BμA, France.

wo	WORKED R & D PROJECTS					
Po	sition	Project Name & Role	<b>Funding Agencies</b>			
*	Senior Scientist, CAROT Labs Private Limited, Chennai, India	Highvalue compounds (astaxanthin, lutein, β-carotene and Omega-3 fatty acids from algae and their funcational food applications <i>Role: Principal Investigator</i> ,	Company			
*	Visiting Senior Research Fellow, University of Malaya, Malaysia	Enhancement of astaxanthin production in microalgae Chlorococcum. Role: Principal Investigator; Project No: RP001i-13SUS, Funding: USD 32,000.00	University Malaya Research Grant, Malaysia			
*	Visiting Senior Research Fellow, University of Malaya, Malaysia	Production of carotenoids from selected Malaysian microalgae for applications in functional foods.  Role: Principal Investigator  Project No: BK007-2013; Funding: USD 5,500.00	University Malaya Research Grant, Malaysia			
*	Senior Research Fellow, University of Malaya, Malaysia	Establishing baseline parameters for application in life cycle analysis of algae biofuel production under tropical conditions-photobioreactors and raceway ponds.  Role: Co-Principal Investigator Project NO: N62909-14-1-N02; Funding: USD	NICOP Grant, Official of Naval Research Global, United Kingdom			

	75,000.00	
<ul> <li>Postdoctoral         Research Associate,         Arizona State         University, USA     </li> </ul>	Development of technology for the prevention of contamination in mass algal culture (Role: Team member)	United States Department of Agricultrue (USDA), USA
<ul> <li>Senior Research         Fellow,         CFTRI, Mysore,         India,</li> </ul>	Elucidation of biological activities of micro algal metabolites and its health benefits. <i>Role: Co-Principal Investigator</i>	Indian Council of Medical Research, Govt. of India, New Delhi, India
<ul> <li>Research Assistant.</li> <li>CSIR-CFTRI,</li> <li>Mysore, India.</li> </ul>	Production of Bioenergy molecules (hydrocarbons) from cultured green alga Botryococcus braunii. Role: Team member	Department of Biotechnology, Govt. of India, New Delhi, India
* Research Assistant CSIR-CFTRI, India.	Development of technology for the production of β-carotene. A food colourant and nutritional supplement from <i>Dunaliella salina</i> . Role: <i>Role: Team member</i>	Department of Biotechnology, Govt. of India, New Delhi, India
* Research Assistant CSIR-CFTRI, Mysore, India.	Development of technology for the production of natural colourants with special reference to astaxanthin from green alga-Haematococcus pluvialis. Role: Team member	Department of Biotechnology, Govt. of India, New Delhi, India

## LIST OF PUBLICATIONS (\*Corresponding Author, IF:Impact factor)

- 1. Jinnath R.R, Ranga Rao A\*, Ravishankar GA, Md Shahjahan, and Saleha K\* (2022) Utilization of astaxanthin from microalgae and carotenoid rich algal biomass as a feed supplement in aquaculture and poultry industry: An overview. Accepted in Press; Journal of Applied Phycology, IF: 3.4. SCI Indiexed;
- 2. Ramachandran Vinayagam, Kyung Eun Lee, **Ranga Rao A**, Rohit Gundamaraju, Mohamed Fawzy Ramadan and Sang Gu Kang (2021): Recent development in black garlic: Nutraceutical applications and health-promoting phytoconstituents. *Food Reviews International. Page no:* 1-21; IF: 6.64; DOI: 10.1080/87559129.2021.2012797;
- 3. 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. Times Cited-49; IF: 6.60; SCI Indexed
- 4. Saied AA, Shaimaa MK, Irina FG, Irina GD, Natalia AK, Ravishankar GA, Ranga Rao A\* and Elena GK (2021) Isoflavones dervied from plant materials: bioavailability, anti-cancer, anti-aging potentials and microbiome modulation. Critical Reviews in Food Science, and Nutrition; Page nos: 1-27; Times Cited: 06; IF: 11.17; SCI Indexed
- 5. Rohit G, Ravichandra V, <u>Ranga Rao A</u>, and Lakshminarayana R, Lu W, and Rajaraman Eri D (2021) Tunicamycin via ER stress mediated 6th hour time point aggravates cell migration, cell invasión and cell proliferation in colonic epitelial cells. **Advances in Cancer Biology Metastasis. 2**, 100007; *Elsevier publishers*, *Google Indexed*
- 6. Sravani Nalapur and <u>Ranga Rao A</u> (2021) A review on neurotoxins from *Clostidium botulinum* against neuro-muscular disorders. *Journal of Advances in Biology and Biotechnology*. Pages: 24 (7): 7-14. *Google Indexed*

- 7. Indranil C, <u>Ranga Rao A</u>, 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; Times Cited: 10; IF: 4.71; SCI indexed
- 8. Pleissner, D., Lindner, A. and <u>Ranga Rao A</u> (2020) Techniques to control microbial contaminants in nonsterile microalgae cultivation. *Applied Biochemistry Biotechnology*; 192(4): 1376-1385, IF: 2.92; NAAS Score: 8.14; Times Cited:07; SCI Indexed
- 9. Solovchenko, A., Lukyanov, A., Ravishankar, G. A., Pleissner, D., and <u>Ranga Rao A\*</u> (2020). Recent developments in microalgal conversion of organics-enriched waste streams. *Current Opinion in Green and Sustainable Chemistry*, 24:61-66; **IF: 6.45, Times Cited: 09; SCI Indexed**
- 10. 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. IF: 0.44, NAAS Score: 3.90; Scopus Indexed
- 11. Venkateswarulu TC, Eswaraiah G, Krupanidhi S, Abraham Peele K, Indira M, Venkata AV, Bharath Kumar R, John Babu D, and <u>Ranga Rao A</u>\* (2020) Screening of Ipomoea tuba leaf extract for identification of bioactive constitutes and evaluation of its in vitro anti-proliferative activity against MCF-7 and HeLa Cells. *Food Technology and Biotechnology 58* (1): 71-75; *IF: 3.91; NAAS Score: 7.52; Times cited: 02; SCI indexed*
- 12. Venkateswarulu TC, Abraham Peeele 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 Univerity-Science*. 32(2): 1581-1585. Times cited: 02; IF: 3.81. SCI indexed
- 13. Srikanth, K., J.V. Rao, and <u>Ranga Rao A.</u>, (2020) Trace elements in Endectyon fructicosa collect from a sewage of outfall site, Therespuram, Tuticorin coast, India; *International Journal of Environmental Science and Technology*; 17: 267-272. IF: 2.86; Times cited: 01; NAAS Score: 8.03; SCI indexed
- 14. 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*
- 15. Venkata Narayana A, <u>Ranga Rao A</u>, 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
- 16. <u>Ranga Rao A\*,</u> 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; IF: 11.17 Times cited: 158; NAAS Score: 12.70; SCI Indexed*
- 17. Eswaraiah 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 antiproliferative effect against MCF 7 and HeLa cells; Agri Res and Technology Open Access J. 22(1): 26-30; Google Indexed; Publons
- 18. 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; IF: 2.25; NAAS Score: 7.61; Times Cited: 07; SCI indexed
- 19. Srikanth K, Sukesh K, Ranga Rao A, Pavan G and Ravishankar GA (2019) Emerging contaminants effect on aquatic ecocystem: Human health—A review. Agri Res and Technology Open Access J. 19(1): 1-6. IF-1.49; Times cited:8; Google Indexed; Publons
- 20. 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; IF: 2.40; Times cited:34; SCI Indexed
- 21. Rohini K.K., <u>Ranga Rao A\*</u>, 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; IF: 3.11, *Times cited: 16; SCI Indexed*
- 22. 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; IF:1.49; Times cited: 04; Google Indexed; Publons
- 23. 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; IF: 2.40; Times Cited: 11; SCI Indexed
- 24. Muthukumaran J, Ramachandran V, <u>Ranga Rao A</u>, 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. IF: 3.41; Times Cited: 52; SCI Indexed*
- 25. <u>Ranga Rao A\*</u> Vijayaramu D, and G.A. Ravishankar (2017) Secondary metabolites from algae for nutraceutical applications. *Novel Techniques in Nutrition Food Science*, 1(1):1-2..IF: New Journal (Invited Contribution); Google Indexed; Publons
- 26. 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. IF: 8.42; Times Cited: 27; SCI Indexed
- 27. Yedukondalu K<sup>#</sup>, Ranga Rao A<sup>#</sup>, Prakash Narayana R, Sampath KumarN.S, Rajesh K.P and Vijaya RD (2017) Congenital hypothyroidism: facts, facets & therapy. *Current Pharmaceutical Design.* 23(16): 2308-2313 (\*Equal contribution) IF: 3.11, Times Cited:21; SCI Indexed
- 28. Siew Moi, P., Emienor, M.M., <u>Ranga Rao, A.,</u> 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; Times Cited: 08; Scopus Indexed*
- 29. Ranga Rao, A\*., Sarada, R., Darmesh S.M., Ravishankar, G.A. (2015): Evaluation of hepatoprotective and antioxidantactivity of astaxanthin and astaxanthin esters from microalga-Haematococcus pluvialis. Journal of Food Science and Technology, 52(10), 6703-6710. IF: 2.70; Times cited: 39; SCI Indexed
- 30. Ranga Rao A\*, Phang SM, Sarada R and Ravishankar, GA (2014) Astaxanthin sources, extraction, stability, biological activities and its comercial applications-A Review. *Marine Drugs*, 12(1): 128-152; IF: 5.11; Times Cited: 1321; SCI Indexed
- 31. **Ranga RaoA\***, Ravishankar, G.A. (2014) Micro algal Biotechnology- New Research into this growing Market. *Food Asia Pacific*, *2*(*1*), *24*.
- 32. Gundamaraju R., Vemuri, R.C., Singla, R.K., Manikam, R., Ranga Rao, A., Sekaran,

- S.D.(2014): Strophanthus hispidus attendates the Ischemia Reperfusion induced myocardial infarction and reduces mean arterial pressure in renal arteryoccusion. *Pharmacognosy Magazine*, 10(39): 557-562. IF: 1.08; Times Cited: 11; SCI Indexed
- 33. Ranga Rao, A., Baskaran, V., Sarada, R., Ravishankar, G.A\* (2013): In vivo bioavail ability and antioxidant activity of carotenoids from micro algalbiomass- A repeated dose study. Food Research International, 54(1): 711-717. IF: 6.47; Times Cited:98; SCI indexed
- 34. Ranga Rao A, Sindhuja HN, Dharmesh SM, Udaya Sankar K, Sarada R, Ravishankar GA (2013) Effective inhibition of skin cáncer, tyrosinase and antioxidative properties by astaxanthin and astaxanthin esters from Green alga *Haematococcus pluvialis*. *Journal of Agricultural Food Chemistry*, 61(16): 3842-3851. IF: 5.27; Times Cited: 188; SCI indexed
- 35. SaradaR\*., 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. *Times Cited:23*; Goolge Indexed
- 36. 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. IF: 9.64; Times Cited:83; SCI indexed
- 37. Ranga Rao A (2011) Production of astaxanthin from cultured green alga *Haematococcus* pluvialis and its biological activities. *Ph.D Thesis*, *University of Mysore*, *Mysore*. *Times Cited*: 11;
- 38. 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 PharmaceuticalSciences and Research*, 2(6): 1455-1459. IF: 0.59; Times Cited: 03; ESCI, Scopus Indexed
- 39. Rajesha, J\*., Ranga Rao, A., KarunaKumar, M., Ravishankar, G.A. (2011): Hepatoprotective potential of hull fractionfrom India flaxseed cultivar. *Asian Journal of Medical Sciences*, 1:20-25. Times Cited: 07; Google Indexed
- 40. Ranga RaoA., 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. Times Cited: 40; Google Indexed
- 41. 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 Biotechology and Pharmacy, 4(3): 807-817. IF: 0.47; Times cited: 47; Scopus Indexed
- 42. <u>Ranga Rao, A, RaghunathReddy, R.L.</u>, 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. IF: 5.27; Times Cited: 193; SCI indexed
- 43. SharmaA\*., 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; Times Cited: 04; Google Indexed
- 44. Rajesha, J\*., Ranga Rao, A., Madhusudhan, B., KarunaKumar, M. (2010) Antibacterial properties of secoisolariciresinol diglucoside isolated from Indian flaxseed cultivars. CurrentTrends in Biotechnology and Pharmacy, 4(1): 551-560. IF: 0.32; Scopus Indexed; Times Cited: 16

- 45. VijayKumar, H., Ranga Rao, A., Varakumar, S., Nagaraja, N. (2010) Evaluation of *in vitro* antioxidant activity of 5H-dibenz [b, f] azepine and itsanalogues. *Journal of Physical Sciences*, 21(1): 79-92. Times Cited: 12; Scopus indexed
- 46. 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 technology*, 19(11): 1333–1341.IF: 2.35; Times Cited:86; SCI Indexed
- 47. Rajesha, J\*., Madhusudhan, B., Mahadevaswamy, M., JagannathaRao, R., Ravishankar, G. A., Rangarao, A. (2009): Effects of flaxseed and *spirulina* biomass in layer diet onlipidprofile and qualitycharacteristics of eggyolk. *Journal of Food Science and Technology*, 46 (6): 509-514. IF: 2.70; Times Cited: 08; SCI Indexed
- 48. Ranga Rao, A., Sarada, R\*., Ravishankar, G.A. (2007): Stabilization of astaxanthin in edible oils and its use as anantioxidant. *Journal of the Science of Food and Agriculture*, 87(9): 957-965. IF: 4.125; Times Cited: 116; SCI Indexed
- 49. Ranga Rao, A., SaradaR\*., Ravishankar, G.A. (2007): Influence of CO<sub>2</sub> ongrowth and hydrocarbon production in *Botryococcusbraunii*. *Journal of Microbiology and Biotechnology*, 17: 414-419. IF: 2.35; Times Cited: 112; SCI Indexed
- 50. 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-9.6*; *Times cited:* 524; SCI Indexed
- 51. Ranga Rao, A., Sarada, R\*., Baskaran, R., Ravishankar, G.A. (2006): Antioxidantactivity of Botryococcus braunii extract elucidated in in vitro models. Journal of Agricultural and Food Chemistry, 54: 4593-4599. IF: 5.27; Times cited:131; SCI Indexed

## EDITED BOOKS (Academic Press, CRC Press, Springer Nature)

1. Sustainable Global Resources of Seaweeds: Bioresources, cultivation, trade and multifarious applications; Volume-I

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

Ist edition, ISBN: 978-3-030-91954-2 (Hardcover); 978-3-030-91955-9 (eBook)

Publication date: 29 March 2022; Pages: 656;

Springer Nature Switzerland AG 2022 Springer, Cham

2. 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

Springer Nature Switzerland AG 2022 Springer, Cham

3. Global Perspectives on Astaxanthin: From Industrial Production to Food, Health, and Pharmaceutical Applications.

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

1<sup>st</sup>edition; Paperback ISBN: 9780128233047; eBook ISBN: 9780128233054

Publication Date: 9<sup>th</sup> April, 2021; Pages: 824; Times Cited: 02

Academic Press (An imprint of Elsevier); 525 B Street, Suite 1650, San Diego, CA 92101, United States

4. Handbook of Algal Technolgies and Phytochemicals: Volume-I Food, Health and Nutraceutical Applications.

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

1<sup>st</sup> edition, ISBN: 9780367149796 (Hardback); Pages: 322; Times Cited: 09; Publication: 31 July 2019; CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487-2742, United States

5. Handbook of Algal Technologies and Phytochemicals: Volume II Phycoremediation, Biofuels and Global Biomass Production. Times cited: 01

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

1<sup>st</sup> 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.

## **BOOK CHAPTERS** (Academic Press, CRC Press, Springer Nature)

- 1. Charu Deepika, Ravishankar Gokare A and Ranga Rao A (2022) Potential Products from Macroalgae: An Overview; In: A. Ranga Rao and G. A. Ravishankar (Eds.) Sustainable Global Resources of Seaweeds: Industrial Perspectives; Volume-I: Bioresources, cultivation, trade and multifarious applications; Page no: 17-44, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 2. Nadeem Nazurally, Sunita Facknath, Swaleha Hudaa Neetoo, Bhanooduth Lalljee, <u>Ranga Rao</u> <u>A</u> and Gokare. A. Ravishankar (2022) Seaweeds in Mauritius: Current trends and future prospects (Chapter-8). In: A. Ranga Rao and G. A. Ravishankar (Eds.) *Sustainable Global Resources of Seaweeds: Industrial Perspectives; Volume-I: Bioresources ,cultivation, trade and multifarious applications; Page no: 129-142, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland*
- 3. Nowrin Akter Shaika, Jinnath Rehana Ritu, Saleha Khan and Ranga Rao A (2022) Prospects and Challenges in Commercialization of Seaweeds in Bangladesh (Chapter-13). In: A. Ranga Rao and G. A. Ravishankar (Eds.) Sustainable Global Resources of Seaweeds: Industrial Perspectives; Volume-I: Bioresources, cultivation, trade and multifarious applications. Page no: 225-247, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland
- 4. Charu Deepika, Juliane Wolf, Navid Moheimani, Ben Hankamer, Brian von Herzen and Ranga Rao A (2022) Utilisation of Seaweeds in the Australian Market Commercialisation Strategies: Current Trends and Future Prospects (Chapter-15); In: A. Ranga Rao and G. A. Ravishankar (Eds.) Sustainable Global Resources of Seaweeds: Industrial Perspectives; Volume-I: Bioresources, cultivation, trade and multifarious applications. Page no: 265-294, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland
- 5. Daina Yesuraj, Charu Deepika, Gokare A Ravishankar and Ranga Rao A (2022) Seaweed-Based Recipes for Food, Health-Food Applications, and Innovative Products Including Meat and Meat Analogs (Chapter-14). In: A. Ranga Rao and G. A. Ravishankar (Eds) Sustainable Global Resources of Seaweeds: Industrial Perspectives, Volume II: Food, pharmaceutical and

- *health applications*. Page no: 267-292, Springer Nature Switzerland **AG**, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 6. Guilherme Augusto Colusse, Jaqueline Carneiro, Maria Eugênia Rabello Duarte, Ranga Rao A, Gokare Aswathanarayana Ravishankar, Julio Cesar de Carvalho, and Miguel Daniel Noseda (2022) Challenges and Recent Progress in Seaweed Polysaccharides for Industrial Purposes (Chapter-22) In: A. Ranga Rao and G. A. Ravishankar (Eds) Sustainable Global Resources of Seaweeds: Industrial Perspectives, Volume II: Food, pharmaceutical and health applications. Page nos: 411-431, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 7. Nadarajan Viju, Stanislaus Mary Josephine Punitha, Ranga Rao A, Gokare A. Ravishankar, Sathianeson Satheesh (2022) Current Trends and Future Prospective of Anti-Biofilm Compounds from Marine Macroalgae: An Overview (Chapter-28). In: A. Ranga Rao and G. A. Ravishankar (Eds) Sustainable Global Resources of Seaweeds: Industrial Perspectives, Volume II: Food, pharmaceutical and health applications. Page no: 519-538, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 8. Rangaswamy Lakshminarayana, Kariyappa Vijay, Rudrappa Ambedkar, Ranga Rao A, and Gokare A. Ravishankar (2022) Biological activities and health benefits of seaweed carotenoids with special reference to fucoxanthin (Chapter-29). In: A. Ranga Rao and G. A. Ravishankar (Eds) Sustainable Global Resources of Seaweeds: Industrial Perspectives, Volume II: Food, pharmaceutical and health applications. Page no: 539-558. Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 9. Tatiana V. Puchkova, Sofia A. Khapchaeva, Vasily S. Zotov, Alexandr A. Lukyanov, Svetlana G. Vasilieva, Ranga Rao A, Gokare A Ravishankar, Alexei E. Solovchenko (2022) Cosmeceuticals from Macrophyte Algae (Chapter-30). In: A. Ranga Rao and G. A. Ravishankar (Eds) Sustainable Global Resources of Seaweeds: Industrial Perspectives, Volume II: Food, pharmaceutical and health applications. Page no: 559-577, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 10. Irina G. Danilovaa,b, Saied A. Aboushanabc, Ksenia V. Sokolovab, Gokare A. Ravishankar, <u>Ranga Rao A</u> and Elena G. Kovaleva (2022) Anti-diabetic Properties of Fucoidan from different Fucus Species (Chapter-31). In: A. Ranga Rao and G. A. Ravishankar (Eds) Sustainable Global Resources of Seaweeds: Industrial Perspectives, Volume II: Food, pharmaceutical and health applications. Page no: 579-595, Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
- 11. Julio Cesar de Carvalho, Denisse Tatiana Molina Aulestia, Marco Aurelio de Carvalho, Eduardo Bittencourt Sydney, Antônio Irineudo Magalhães, Carlos Ricardo Soccol, Ravishankar Gokare A and <u>Ranga Rao A</u> (2022) Bio-refinery approaches for integral use of microalgal biomass. In: Eduardo Jacob-Lopes (Ed.) 3<sup>rd</sup> Generation Biofuels. Acadmemic Press, USA.
- 12. **Ranga Rao A** and Ramadan Hassanien MF (2021) *Nigella sativa* seed extracts in functional foods and nutraceutical applications. In: Ramadan Hassanien MF Black cumin (*Nigella sative*) seeds: Chemistry, Technology, Functionality and Applications. Springer Nature Switzerland AG. Page nos: 501-520, Times Cited: 03; ISBN: 978-3-030-48798-0;
- 13. Jun HC, Dong W, <u>Ranga Rao A</u> and Ravishankar GA (2021) Astaxanthin from *Chromochloris zofingiensis*: feasibility analysis; In: Ravishankar GA and Ranga Rao A (Eds.) *Global Perspectives on Astaxanthin: from Industrial Production to Food, Health, and Pharmaceutical Applications*. Page nos: 37-59, ISBN: 9780128233047, Academic Press, Elseiver publishers, USA
- 14. Anila N, Daris PS, Kathiresan S, Sarada R, Ranga Rao A, and Ravishankar GA (2021)

- Metabolic engineering of astaxanthin pathway and heterologous production in novel organisms; In: Ravishankar GA and Ranga Rao A (Eds.) *Global Perspectives on Astaxanthin: from Industrial Production to Food, Health, and Pharmaceutical Applications*. Page nos: 151-179, ISBN: 9780128233047, Academic Press, Elseiver publishers, USA.
- 15. Ho YH, Wong YK, and Ranga Rao A (2021) Astaxanthin production from *Haematococcus pluvialis* by using Illuminated photobioreactor; In: Ravishankar GA and Ranga Rao A (Eds.) *Global Perspectives on Astaxanthin: from Industrial Production to Food, Health, and Pharmaceutical Applications*. Page nos: 209-224, Times Cited: 01; ISBN: 9780128233047, Academic Press, Elseiver publishers, USA.
- 16. Elham T, Navideh A, Hoda JM, <u>Ranga Rao A</u> and Ravishankar GA (2021) Astaxanthin nanoparticles from fabrication to applications in food formulations including regulatory issues. In: Ravishankar GA and Ranga Rao A (Eds.) *Global Perspectives on Astaxanthin: from Industrial Production to Food, Health, and Pharmaceutical Applications*. Page nos: 519-537, ISBN: 9780128233047, Academic Press, Elseiver publishers, USA.
- 17. Luu TT, Dang DH, <u>Ranga Rao A</u> and Ravishankar G.A (2021) Astaxanthin Production and Technology in Vietnam and Other Asian Countries. In: Ravishankar GA and Ranga Rao A (Eds.) *Global Perspectives on Astaxanthin: from Industrial Production to Food, Health, and Pharmaceutical Applications*. Page nos: 595-633, ISBN: 9780128233047, Academic Press, Elseiver publishers, USA.
- 18. Osman N. K, <u>Ranga Rao A</u>, Ravishankar GA, Tatiana V. G and Elena GK (2021) Astaxanthin from bacteria as a feed supplement for animals. In: Ravishankar GA and Ranga Rao A (Eds.) *Global Perspectives on Astaxanthin: from Industrial Production to Food, Health, and Pharmaceutical Applications*. Page nos: 647-667, Times Cited: 01; ISBN: 9780128233047, Academic Press, Elseiver publishers, USA.
- 19. **Ranga Rao A**\* and Ravishankar G.A. (2019) Potential Health and Nutraceutical Applications of Astaxanthin and Astaxanthin Esters from Microalga. In: *Handbook of Algal Technologies and Phytochemicals: Volume-I: Food, Health and Nutraceutical Applications, Edited by G.A. Ravishankar and* A. Ranga Rao, CRC Press, USA. Page nos: 121-137.
- 20. Chiara Toniolo, Marcello Nicoletti, Paola Del Serrone, Ranga Rao A and Ravishankar G.A. (2019) Champion Microalgal forms for food, and health appliations: Spirulina and Chlorella. In: Handbook of Algal Technologies and Phytochemicals: Volume-I: Food, Health and Nutraceutical Applications, Edited by G.A. Ravishankar and A. Ranga Rao, CRC Press, USA.Page nos: 43-59.
- 21. Shama A, Joyce S.G, Mari, F. D., Ranga Rao A, Ravishankar G.A. and Hudaa N\* (2019). Macroalgae and Microalgae: Novel Sources of Functional Food and Feed. In: *Handbook of Algal Technologies and Phytochemicals: Volume-I: Food, Health and Nutraceutical Applications, Edited by G.A. Ravishankar and A.* Ranga Rao, CRC Press, USA; Page nos: 207-219.
- 22. Mohammad JH, <u>Ranga Rao A\*</u> and Ravishankar G.A. (2019). Opportunities and Challenges in Seaweeds as Feed Stock for Biofuel Production. In: *Handbook of Algal Technologies and Phytochemicals: Volume-II Phycoremediation, Biofuels and Global Biomass Production*, Edited by G.A. Ravishnkar and A. Ranga Rao, Volume-II, CRC Press, USA. Page nos: 39-50
- 23. Madhubalaji C.K, Ajam Shekh, Sijil, P.V., Sandeep Mudliar, Vikas Singh Chauhan, R. Sarada, Ranga Rao A and Ravishankar G.A., (2019) Open cultivation system and closed photobioreactors for microalgal cultivation and biomass production. In: *Handbook of Algal Technologies and Phytochemicals: Volume-II Phycoremediation, Biofuels and Global Biomass Production*, Edited by G.A. Ravishnkar and A. Ranga Rao, Volume-II, CRC Press, USA. Page

- nos: 179-202; Times Cited: 06
- 24. Ranga Rao A\* and Ravishankar GA (2019) Microalgal biomass, lipids and fatty Acids production through open or closed cultivation systems: Challenges and future perspectives. In: Handbook of Algal Technologies and Phytochemicals: Volume-II: Phycoremediation, Biofuels and Global Biomass Production, Edited by G.A. Ravishankar and A. Ranga Rao, CRC Press, USA. Page nos: 91-99.
- 25. Ranga Rao A\* and Ravishankar G.A. (2019). Global microalgal based products for Industrial applications. In: *Handbook of Algal Technologies and Phytochemicals: Volume-II* Phycoremediation, Biofuels and Global Biomass Production, Edited by G.A. Ravishnkar and A. Ranga Rao, Volume-II, CRC Press, USA; Page nos: 267-278. Times Cited: 02;
- 26. Ranga Rao A\*, Sarada R, Ravishankar G.A and Phang SM (2016) Industrial Production of Microalgal Cell-Mass and Bioactive Constituents from Green Microalga-Botryococcusbraunii. In: J. Liu, Z.Sun and Henri Gerken (Eds) Recent Advances in Microalgal Biotechnology, OMICS Group Incorporation; USA, pp.103-126; Times Cited: 08; ISNB:9781632780669
- 27. Sarada R\*, Dayananda C, <u>Ranga Rao A,</u> Shamala TR, Srinivas P and Ravishankar G.A. (2012) Saturated and unsaturated hydrocarbon production from *Botryococcusbraunii* spp. from Indian freshwater bodies and culture collection centers. In: D.B. Sahoo and B.D. Kaushik (Eds) Algal Biotechnology and Environment (1<sup>st</sup>edn), I.K. International Publishing House, Vedams eBooks (P) Ltd. New Delhi, India.; ISBN: 9381141711

#### INVITED TALKS/CONFERENCES/ SYMPOSIA/SEMINARS

- 1. **Ranga Rao Ambati** and G. A. Ravishnakar (2022) Explitation of algal cell factories for industrial applications through adaption of sterile and non-sterile production strategies was delivered at DBT-ICGEB colloquium webinear on "Algal cell factories new perspectives and their multifaceted applications" organized by International Centre for Genetic Engineering and Biotechnology on 3<sup>rd</sup> March 2022, New Delhi, India.
- 2. **Ranga Rao Ambati** (2021) Encapsulation of microalgae and its metabolies 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.
- 3. **Ranga Rao Ambati,** Anila Narayanan, Daris.P.Simon, Kathiresan Shanmugam, Sarada Ravi, and Ravishankar Aswathnarayana Gokare (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.
- 4. **Ranga Rao A** (2019) Paticipated Seminar on "ChiP & Immuniohistochemistry-ICC/IF" organized on 4<sup>th</sup> December 2019 by Abcam, UK at Indian Institute of Science (IISc), Bangalore, India.
- 5. **Ranga Rao A** (2019) Paticipated 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.

#### Invited Talk (Speaker)

- 6. <u>A. Ranga Rao</u> (2020) Presented a talk on "Sources of Fucoxanthin and its biological activities" in Technical Webinar on "Fucoxanhthin from Micro and Macroalgae" held on 17 June 2020 organized by European Algae Biomass Association, Portugal.
- 7. A. Ranga Rao (2020) Presented a talk on "An impact of grazers in comercial Algal culture" in the virtual colloquium on "Recent advances in Microalgal Biotechnology" orgniazed by the Plant Cell Biotechnology Department, CSIR-CFTRI, Mysore on 27 July 2020 at CSIR-CFTRI, Mysore, India
- 8. **Ranga Rao A** and Ravishankar GA (2019) Importance of Micro and Macro algae for Industrial applications as presented in 13<sup>th</sup> 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.
- 9. Venkateswarulu TC, Abraham Peeele 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 13<sup>th</sup> 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.
- 10. Ravishankar GA\* and <u>Ranga Rao A</u> (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" 19<sup>th</sup> World Congress of Food Science and Technology, 23-27 October, 2018, Mumbai, India
- 11. Ranga Rao A\* (2018) "Algae for food, nutraceutical, pharmaceutical, animal feed, bioremediation and biofuel applications" was presented at 4<sup>th</sup>International Symposium for Distingushed Young Scholars, 11-15 April 2018 at Xian Jiaotong University, Shaanxi, Xian, China.
- 12. Ranga Rao A\* (2018) "Role of algae in foodscience and nutritionalsecurity-AnOverview" waspresented in the online conferenceon Advances in FoodScience &Nutrition during 26-27<sup>th</sup>March, 2018, Euroscicon 40 BloomsburyWay, LowerGroundFloor, London, United Kingdom.
- 13. Ranga Rao A\* (2017) Algae as source of functional foods for health benefits was presented at 2<sup>nd</sup> International Symposium for Changan Young Scholars (CHD, 2017), 15-18 November 2017 at Changan University, Xian, Shaanxi, China.
- 14. <u>Ranga Rao A</u>\*, Deepika G, G.A. Ravishankar, R. Sarada, Narasimha Rao BP, Su Yand Lei B (2017) *Botryococcusbraunii:* an alternative source of carotenoids and its possible applications was presented at TYAN International Conference, 22-24 August 2017, Rio de Jeneiro, Brazil.
- 15. 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.
- 16. <u>Ranga Rao A\*</u>(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
- 17. **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 Feburary, 2015 at Indian National Science Academy (INSA), New Delhi
- 18. 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.
- 19. Ranga Rao A\* and Ravishankar G.A., (2014) "Astaxanthin: Challenges, Opportunities and Its Global Market" presented at The World Academy of Sciences (TWAS) 25<sup>th</sup> General Meeting on 26-29 October, 2014 at Sultanate of Oman, Muscat.
- 20. Yingchun Gong, Zixuan Hu, <u>Ranga Rao A,</u>Sommerfeld Milton and Qiang Hu\* (2014) Comparative study of zooplankton predators in mass cultures of several microalgae of commercial interest. 7<sup>th</sup> Asian Pacific Phycological Forum (APPF), 20-24 September 2014, Wuhan, China.
- 21. 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 17<sup>th</sup> World Food Congress of the International Food Science and Technology (IUFoST), 17-21<sup>st</sup> August, 2014, Montreal, Canada.
- 22. <u>Ranga Rao A</u>\*, Ravishankar GA, Sarada R, Phang, SM, (2014) "Food Application of carotenoids with special reference to Microalgae" was presented at 17<sup>th</sup> World Food Congress of the International Union of Food Science and Technology (IUFoST), 17-21<sup>st</sup> August, 2014, Montreal, Canada.
- 23. Ranga Rao A\*Sindhuja HN, Shylaja MD, UdayaSankar K, Sarada R, Ravishankar GA, and Phang SM (2014) "The protective role of astaxanthin and astaxnthin esters from green microalga-*Haematococcuspluvialis* on UV-DMBA induced skin carcinogensis rats: possible mechanism of action". 17<sup>th</sup> International Carotenoid Symposium (ICS), June 29- July 4, 2014, Park City, Utah, USA.
- 24. <u>Ranga Rao A</u>\* (2013) "Bioenergy molecules from cultured green microalga-Botryococcusbraunii and its use in biofuel feed stock" 26<sup>th</sup> July, 2013, Bilik Azalea, IPS Building, IOES, University of Malaya, Malaysia
- 25. Ranga Rao A\*(2005) "Isolation and characterization of carotenoids by various analytical approaches". 11<sup>th</sup> August, at Department of Oils & Fats, V.R.S & Y.R.N College, Chirala, Andrapradesh, India.
- 26. **Ranga Rao A**\* (2004) "Production of lipids and hydrocarbons from microalgae". 18<sup>th</sup> October at Department of Oils & Fats, V.R.S & Y.R.N College, Chirala, Andrapradesh, India.

#### Oral presentation

- 27. **Ranga Rao A\*,** Dhinesh C.S., and VijayaRamu D (2018) Production of biomass and lipidsfromalgaeforpossiblebiofuelapplications. A Nationallevel Technical, Cultural and Sports Feston 5-6 January 2016 at RVR & JC Engineering College, Guntur, Andhra Pradesh, India.
- 28. Pavana Lakshmi A, Swathi N, Harinagasri G, VijayaRamu D, and Ranga Rao A\* (2018) Algae: a future prospective for Food security. A NationallevelTechnical, Cultural and SportsFest (Youth Fest-2018) on 5-6 January 2016 at RVR & JC EngineeringCollege, Guntur, Andhra Pradesh, India
- 29. Su Y\*, Cui K, MaS, <u>Ranga Rao A</u>, Shuanglin D and Lei B (2017) "Mathematical modeling of growth of shrimps (*FenneropenaeusChinensis*) in high density breeding pond" was presented at 2<sup>nd</sup> International Conference on Modelling, Simulation, and Applied Mathematics (MSAM), 26-27 March, 2017, Bangkok, Thailand.
- 30. <u>Ranga Rao A</u>\* Sarada R, Baskaran V, Ravishankar GA and Phang SM (2013) "Biological activities of astaxanthin from green microalga-*Haematococcuspluvialis* and its use in functional foods". 9<sup>th</sup> Johor Scientific Meeting, 23-25<sup>th</sup>, September 2013, Johor State Health Department, Johor Bahru, Malaysia.

- 31. 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", 2<sup>nd</sup> Natural Pigments Conference for South East Asia (NP-SEA)-2013, 12-13<sup>th</sup> July, 2013, University of Ma Chung, Ma Chung Research Center for Photosynthetic Pigments, Indonesia.
- 32. <u>Ranga Rao A.,</u> Yingchun Gong, Zixuan Hu, Milton Sommerfeld and Qiang Hu\* (2012) "Comparative study of predators in mass cultures of *Chlorella zofingiensis*, *Scenedesmusdimorphus* and *Nannochloropsisoceanica* in ponds and photobioreactors". Algae Biomass Summit(ABO), 24-27<sup>th</sup> Sep 2012, Algae Biomass Organization, USA.
- 33. 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 4-5<sup>th</sup>, OASTC (Ministry of Environmental Science), Andhra University, Visakhapatnam, Andhra Pradesh.
- 34. 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". 41<sup>st</sup> National Conference of Nutrition Society of India (NSI), 19-21<sup>st</sup> November, National Institute of Nutrition, Hyderabad, Andhra Pradesh.
- 35. <u>Ranga Rao A</u>, 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, 4-6<sup>th</sup> December, Department of Ecology and Environmental Science, Assam University, Assam, India.
- 36. <u>Ranga Rao A</u>, 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,  $23^{rd} 24^{th}$  September, School of Biotechnology, Dr. G.R.D. College of Science, Coimbatore, Tamilnadu.
- 37. Ranga Rao A\* (2004) "Hydrogenation technology of oils and fatty acids". Association of Microbiologists of India (AMI), Mysore Unit, CFTRI Campus, Mysore, India.

#### Poster presentation

- 38. Rajesha J\*, <u>Ranga Rao A</u>,M. Karunakumar and G.A. Ravishankar. (2010) "Hematological andhistopathological studies of endosperm rich fraction of flaxseed in chicks". 7<sup>th</sup> International Conference on Functional Foods in the Prevention and Management of Metabolic Syndrome, 3<sup>rd</sup>-4<sup>th</sup>December, at Southern Methodist University (SMU), Dallas, TX, USA.
- 39. Rajesha J\*, <u>Ranga Rao A</u>, 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), 29-30<sup>th</sup> April, at Paix, Paris.
- 40. **Ranga Rao A,** R. L. Raghunath Reddy, V. Baskaran, R. Saradaand G.A. Ravishankar\* (2010). "Comparative bioavailability and antioxidant property of carotenoids of micro algae *Spirulina platensis, Haematococcuspluvialis* and *Botryococcusbraunii* biomass elucidated in experimental rats". 7<sup>th</sup> Gordon Research Conference on Carotenoids, 17<sup>th</sup>-22<sup>nd</sup> January, Ventura beach Marriott, Ventura, California, USA.
- 41. Vijay Kumar H, <u>Ranga Rao A.</u>,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 simulates and food materials". 6<sup>th</sup> International Food Convention (IFCON- 2008), 15-19<sup>th</sup> December, Central Food Technological Research Institute, Mysore.
- 42. Sarada R\*, C. Dayananda, Ranga Rao A., T.R. Shamala, P. Srinivasand 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, 14<sup>th</sup>-15<sup>th</sup> February, Department of Biotechnology, Delhi University, New Delhi, India.
- 43. Ranga Rao A, B. Sandesh Kamath. And R. Sarada\* (2004). "Stability of astaxanthin at different temperature in *Haematococcus* cells and edible oils". 16<sup>th</sup> Indian Convention of Food Scientists and Technologists (ICFOST-2004), 9-10<sup>th</sup> December, Central Food Technological Research Institute, Mysore.
- 44. Sandesh Kamath, R. Sarada\*, Jagannath Rao R. Vidhyavathi and Ranga Rao A., (2004). "Enhancement of egg yolk colour in layer chicken feed with microalga *Haematococcuspluvialis*". 16<sup>th</sup> Indian Convention of Food Scientists and Technologists (ICFOST), 9-10<sup>th</sup> December, Central Food Technological Research Institute, Mysore.
- 45. Sandesh Kamath, B.R. Brinda, M.S. Ravikumar, <u>Ranga Rao A</u>, R. Sarada\*, and G.A Ravishankar. (2004). "Scale up studies of green algae *Haematococcuspluvialis*". National Symposium on Micro Algal Biotechnology, 11-13<sup>th</sup> March, Bharathidasan University, Tiruchirapalli.

## WORKSHOPS

- 1. <u>A. Ranga Rao</u> (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.
- 2. 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

### FDPS/SHORT TERM COURSE

- 3. <u>A. Ranga Rao</u> (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.
- 4. 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.
- 5. 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
- 6. 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.

- 7. <u>A. Ranga Rao</u> (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.
- 8. <u>A. Ranga Rao</u> (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)
- 9. <u>A. Ranga Rao</u> (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.
- 10. <u>A. Ranga Rao</u> (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.

## ATTENDED WEBINARS

- 11. <u>A Ranga Rao</u> (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.
- 12. 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.
- 13. <u>A. Ranga Rao</u> (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.
- 14. <u>A. Ranga Rao</u> (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.
- 15. <u>A. Ranga Rao</u> (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 Kuppuswamy Choudary College, Guntur, Andhra pradesh on 23 May 2020

### PROFESSIONAL SERVICES

#### Journal editoral team member and peer reviewer

Reviewer

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 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 Guest Editor, Frontiers in Animal Sciences, Switzerland

Editor 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

Team

- Worked on Haematococcus, Botryocccus, Spirulina, Chlorella, Nannochloropsis and Scendesmusspecies
- \* 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
- \* Evalulated 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 hydrocabons
- Safety assessment of feeding of microalgae biomass and carotenoids

#### Responsibilities and adiminstration 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/anual 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).

## **ACADEMIC DUTIES**

- ❖ Acting as Director-Centre of excellence: Bioresource Utilization Management
- ❖ Acting as Coordinator for National Board of Accreditation (NBA) at the Department Level.
- ❖ Selected as team member for University Core research team, Among 33 members at the University level.
- **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 Seshaiah (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 and AICTE Visit
- ❖ Involved in preparing five years research plan (2018-2023) for the Biotechnology Department
- ❖ Coordinator at the department level for Vignan'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)

### ORGANIZING SYMPOSIUM AND WEBINARS

- 1. Involved as *Scientific coordinator*, Conducted 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, Indai.
- 2. Involved as *Organizing Secretary*, Conducted Virtual International Symposium on Bioinformatics (InSyB-2020) for Disease Therapeutics during 21-22 December 2020, Department of Biotechnology, VFSTR University, Vadlamudi, India
- 3. Involved as *Convenor*, Organized Webinar on "Changing Horizons in Combating COVID-19", 12th June 2020, Department of Biotechnology, VFSTR University, Vadlamudi, India
- 4. Involved as *Organizing Committee*, Conducted 13<sup>th</sup> 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.
- 5. Involved as *Organizing Committee*, Conducted A National Conference on Recent Advacaes in Biotechnology-An Awarness on Conservation of Medicinal Plants for Healthcare, 16-17 August 2018.

#### PROFESSIONAL MEMBERSHIPS

110	TESSIONE MEMBERSHII S	
*	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:	Life member
	2021/362)	
*	Andhra Pradesh Academy of Sciences, Andhra Pradesh, India	Life member
	(APAS/LM/2019/646)	
*	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 Soceity, 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,	2008-2011
	Mysore, India	
	111 Julian	

Soceity of Biological Chemist, Mysore, India
 Association of Food Scientist and Technologists of India, Mysore, India
 2009

#### **BIOANALYTICAL SKILLS**

- ❖ 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, Bioavailablity, Anti-heptoprotective activity, Anti-cancer, Histopathology and hematology

## PERSONAL DETAILS

Date of birth: 13 June 1979
Citizenship: Indian
Marital status: Married
Languages: Fluent in English
Passport: P0085383
Nationality: Indian

## REPORTS ON MY RESEARCH WORK

NewsRx, USA

 $\frac{http://www.newsrx.com/newsletters/Clinical-Oncology-Week/2013-06-17/1306172013240CO.html}{AstaReal Newsletter, Sweden}$ 

http://www.warrenchem.co.za/documentation/newsletters/astareal%20news%20may13.pdf

Natural products insider, http://www.naturalproductsinsider.com/news/2006/06/microalgae-extract-shows-antioxidant-

properties.aspx

UPEI, Canada

http://www.upeikerrlab.ca/aggregator/sources/5

Cardax, Clinical Program Business Wire 2014

http://www.marketwatch.com/story/recent-studies-further-demonstrate-astaxanthins-potential-as-a-safe-and-effective-anti-inflammatory-2014-05-19

http://www.bioportfolio.com/resources/pmarticle/904254/Astaxanthin-sources-extraction-stability-biological-activities-and-its-commercial-applications-a-review.html

Chemeuropean.com

 $\frac{http://www.chemeurope.com/en/publications/548744/effective-inhibition-of-skin-cancer-tyrosinase-and-antioxidative-properties-by-astaxanthin-and-astaxanthin-esters-from-the-green-alga-properties-by-astaxanthin-esters-from-the-green-alga-prop$ 

haematococcus-pluvialis.html

http://www.biomedsearch.com/nih/Effective-Inhibition-Skin-Cancer-Tyrosinase/23473626.html Herbal Ext

http://www.herbalext.com/astaxanthin.html

(A. Ranga Rao)