

Dr. Sudheer Kumar Yannam

Senior Scientist

Traditional Food & Sensory Science

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EDUCATION

- Ph.D. in Biochemistry, Sri Venkateswara University, Tirupati, Andhra Pradesh, India (2010).
- M.Sc in Biochemistry, Sri Venkateswara University, Tirupati, Andhra Pradesh, India (2004).
- B.Sc in Biochemistry, Microbiology, Chemistry, Sri Venkateswara University, Tirupati, Andhra Pradesh, India (2002).

POSITIONS HELD

March 2018 - Present	Senior Scientist, CSIR-CFTRI, Mysore, India
May 2016 – Oct 2017	Postdoctoral Research Associate, Tennessee State University, TN, USA
May 2015 – Apr 2016	Research Associate, Clarkson University, Potsdam, NY, USA
Aug 2014 – Apr 2015	Scientist, Caprienzymes, Ranipet, India
May 2013 – May 2014	Group Leader, Bioprocess development, Codon Biosciences Pvt. Ltd., Goa, India
Aug 2011 – April 2013	Postdoctoral Fellow, Centre for Structural and Functional Genomics, Concordia University, Canada
Jul 2010 – Jul 2011	Research Associate (DBT), Indian Institute of Chemical Technology, Hyderabad, India

PUBLICATIONS

1. Shivalingaiah, Sushmitha Basavapattana, Sunanda Tuladhar, Arehally M. Mahalakshmi, Prathibha Muthukumar, **Sudheer Kumar Yannam**, Luay Rashan, Musthafa Mohamed Essa et al. "Sleep and Gonadotrophin Hormones." *International Journal of Nutrition, Pharmacology, Neurological Diseases* 11, no. 1 (2021): 17.
2. **Yannam, S. K.**, Patras, A., Pendyala, B., Vergne, M., Ravi, R., Gopisetty, V. V. S., & Sasges, M. (2020). Effect of UV-C irradiation on the inactivation kinetics of oxidative enzymes, essential amino acids and sensory properties of coconut water. *Journal of Food Science and Technology*, 1-9.
3. Kumar, S. S., Arya, M., Nagbhushan, P., Giridhar, P., Shetty, N. P., **Yannam, S. K.**, & Mahadevappa, P. (2020). Evaluation of Various Drying Methods on Bioactives, Ascorbic Acid and Antioxidant Potentials of *Talinum triangulare* L., foliage. *Plant Foods for Human Nutrition, methods*, 12, 13.
4. Estifae, P., Su, X., **Yannam, S. K.**, Rogers, S., & Thagard, S. M. (2019). Mechanism of E. coli inactivation by direct-in-liquid electrical discharge plasma in low conductivity solutions. *Scientific reports*, 9(1), 2326.
5. Ward, D. M., Patras, A., Kilonzo-Nthenge, A., **Yannam, S. K.**, Pan, C., Xiao, H., & Sasges, M. UV-C treatment on the safety of skim milk: Effect on microbial inactivation and cytotoxicity evaluation. *Journal of Food Process Engineering*, e12944.
6. Kilonzo-Nthenge, A., Liu, S., **Yannam, S.**, & Patras, A. (2018). Atmospheric Cold Plasma Inactivation of Salmonella and Escherichia coli on the Surface of Golden Delicious Apples. *Frontiers in nutrition*, 5.
7. Vybhav Gopisetty, Ankit Patras, Agnes Kilonzo-Nthenge, **Sudheer Yannam**, Rishipal R. Bansode, Michael Sasges, Mallory Burns, Matthew J Vergne, Che Pan, Hang Xiao (2018). Impact of UV-C

irradiation on the quality, safety, and cytotoxicity of cranberry-flavoured water using a novel continuous flow UV system. *LWT-Food Science and Technology*, 95, 230-239.

8. **Sudheer Kumar Yannam**, Pooya Estafie, Shane Rogers and Selma Mededovic Thagard (2018). Application of high voltage electrical discharge plasma for the inactivation of *Escherichia coli* ATCC 700891 in tangerine juice. *LWT-Food Science and Technology*, 90: 180-185.
9. Manreet Singh Bhullar, Ankit Patras, Agnes Kilanzo-Nthenge, Bharat Pokharel, **Sudheer Kumar Yannam**, Kanyasiri Rakariyatham, Che Pan, Hang Xiao, Michael Sasges (2017). Microbial inactivation and cytotoxicity evaluation of UV irradiated coconut water in a novel continuous flow spiral reactor. *Food Research International*, 103: 59-67.
10. Ankit Patras, Sharath Julakanti, **Sudheer Kumar Yannam**, Rishipal R Bansode, Mallory Burns and Matthew J Vergne (2017). Effect of UV irradiation on aflatoxins reduction: a cytotoxicity evaluation study using Human Hepatoma cell line. *Mycotoxin Research*, 33: 343-350.
11. **Sudheer Kumar Yannam**, Poondla Vijay Kumar and OVS Reddy (2016). *Effect of fermentation conditions on alcohol production by yeast during processing of mango wine*. *Journal of Innovative Biology*, 3: 291-296.
12. Poondla Vijay Kumar, **Sudheer Kumar Yannam**, Gummadi Sathyanarayana Naidu, Subramanyam Rajagopal and Obulum Vijayasarithi Reddy (2016). *Enhanced production of pectinase by Saccharomyces cerevisiae isolate using fruit and agro-industrial wastes: Its application in fruit and fiber processing*. *Biocatalysis and Agricultural Biotechnology*, 6: 40-50.
13. **Y. Sudheer Kumar**, R.S. Prakasham and O.V.S. Reddy (2014). *Production, Optimization and purification polygalacturonase from mango peel waste produced by Aspergillus foetidus under submerged fermentation*. *Food Technology and Biotechnology*, 52: 359-367.
14. Prakasham Reddy Shetty, Sudheer Kumar Buddana, **Yannam Sudheer Kumar**, and Guntugu Girija Shankar (2014). *Production and characterization of protein encapsulated silver nanoparticles by marine isolate Streptomyces parvulus SSNP11*. *Indian Journal of Microbiology*, 54: 329-336.
15. Prakasham Reddy Shetty, Buddana Sudheer Kumar, **Yannam Sudheer Kumar**, and Guntugu Girija Shankar (2012). *Characterization of silver nanoparticles synthesized by a green approach using marine isolate Streptomyces albidoflavus*. *Journal of Microbiology and Biotechnology*, 22: 614-621.
16. **Y. Sudheer Kumar**, S. Varakumar and O.V.S Reddy (2012). *Evaluation of antioxidant and sensory properties of mango (Mangifera indica L.) wine*. *Journal of Food*, 10: 12-20.
17. **Y. Sudheer Kumar**, Poondla Vijay Kumar and O.V.S Reddy (2012). *Pectinase Production from Mango Peel using Aspergillus foetidus and its Application in Processing of Mango Juice*. *Food Biotechnology*, 26:107-123.
18. S. Varakumar, **Y. Sudheer Kumar** and O.V.S Reddy (2011). *Carotenoid composition of Mango (Mangifera indica L.) wine and its antioxidant activity*. *Journal of Food Biochemistry*, 35: 1538-1547.
19. **Y. Sudheer Kumar**, S. Varakumar and O.V.S Reddy (2010). *Production and optimization of polygalacturonase from mango (Mangifera indica L.) peel using Fusarium Monaliforme in solid state fermentation*. *World Journal of Microbiology and Biotechnology*, 26: 1973-1980.
20. L.V.A Reddy, **Y. Sudheer Kumar** and O.V.S Reddy (2010). *Analysis of volatile aroma constituents of wine produced from Indian mango (Mangifera indica L.) by GC-MS*. *Indian Journal of Microbiology*, 50: 183-191.
21. **Yannam Sudheer Kumar**, Reddy Shetty Prakasham and Obulum Vijaya Sarathi Reddy (2009). *Optimization of fermentation conditions for mango (Mangifera indica L.) wine production by employing response surface methodology*. *International Journal of Food Science and Technology*, 44: 2320-2327.

BOOK CHAPTERS

Srinivasa Rao, P., **Sudheer Kumar, Y.**, Rao Ravella, S., Umakanth, A. V., Hobbs, P. J. and Reddy, B. V. S. 2010. Brown mid-rib sorghum as a novel substrate for biofuel production. in: Prakasham, R. S., Deshpande, S. and SrinivasaRao, P. (ed.) *Brown midrib sorghum: current status and potential as novel ligno-cellulosic feedstock of bioenergy* Lambert Academic Publishing, Saarbrucken. pp. 74-95

R&D PROJECTS

Principal Investigator

1. Project Title: "Design and development of reactor for processing of coconut-based beverages with UV-C Irradiation", funded by Coconut Development Board, Kochi.
Funding amount: 26.75 lakhs (2019-2021).

Co-Principal Investigator

1. Project Title: Co-PI, for the project entitled "Development of Sensory Lexicon for Selected Coconut Based Products", funded by Coconut Development Board, Kochi.
Funding amount: 10.45 lakhs (2019-2021).

RESEARCH PROJECTS INVOLVED

1. Value addition to aromatic black rice of North-East regions (CSIR-CFTRI).
2. Product development, scale-up and shelf-life extension of selected Indian traditional sweets (CSIR-CFTRI).
3. Food and Consumer Safety Solutions (CSIR).
4. Nutraceuticals and Nutritionals (CSIR).
5. CSIR 100 days agenda (CSIR).
6. Moisture Sorption Isotherm (MSI) studies & the prediction of shelf life of Pepsico's selected food products-Fruit and Nut granola and Berry blast (Industry Sponsored).
7. Process for the preparation of cashew butter, flavoured cashew paste, sauces and snack bar (Industry Sponsored).
8. Development of products based on mahua flower and setting up of production unit (Govt. sponsored).

ACADEMIC ACTIVITIES

Assistant Professor, AcSIR, CSIR- Human Resource Development Centre, (CSIR-HRDC) Campus, Ghaziabad, UP, India

PhD Students Guided: 3 (working)

Dissertation Students Guided: 5

Research expertise

- Expertise in Food Processing, Food Safety, Sensory and Product development.
- The food safety research includes the removal of pathogens and mycotoxins, using non-thermal processing technologies such as germicidal ultraviolet light.
- The design and fabrication of a UV-C treatment system are for improved food manufacturing.

Research Interests

- Developing UV light-based technologies for food applications
- Technology Validation and Reactor Optimization
- New product development
- Studies on the Impact of food and its components on health and wellness
- Development of new sensory evaluation methods using E-Nose and E-Tongue