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Mobile: +91 9886735628

Dr. BASAVARAJ S. NAINEGALI

PERSONAL STATEMENT

A responsible human being and an aspiring research fellow. Have experience and expertise in experimental wet lab works and short-term teaching exposure. I am waiting to be a part of organization to put forward my expertise with full dedication and achieve my career goals

PROFESSIONAL SUMMARY

- Technically well skilled, planning, resource and time management, and quick learning skills resulting PhD completion from recognized technical university
- 9+ years of research experience in field of Biotechnology Engineering with 11+ peer reviewed international publications and conferences.
- Expertise in developing effective processes, techniques, and analytical methods for new/related projects with research and development in the field of bio-based chemicals and bio-catalysis
- Excellent mentor, motivator, and team leader fostering an atmosphere that encouraged 30+ students to balance their skills with maximum productivity

WORK EXPERIENCE

Central University of Karnataka
Kalaburagi, Karnataka

Jan 2021 to July 2021

Contractual Teaching Faculty in School of Chemical Sciences for B.Voc Food Processing Course

Ph. D. Researcher,
National Institute of Technology Karnataka, Surathkal

Jan 2015 to Dec 2020

Thesis Title: "Studies on selective extraction and purification of bioactive compounds from (*Garcinia indica*) fruits using alcohol based aqueous two-phase systems"

- Developed processes for high recovery/production of nutraceuticals and antioxidant bioactive compounds (Anthocyanin, Hydroxycitric acid, Garcinol and Isogarcinol) for food, coloring, medicinal and cosmetic applications from Kokum fruit (*Garcinia indica*)
- Proposed a process for selective and simultaneous separation and purification of these compounds which reduces multiple steps and wastage of source
- Process optimization by response surface methodology and full characterization of products
- Development of analytical procedures for these compounds
- Mentored and supervised 8 undergraduate and 6 masters student in complementary research projects
- Deliverables: 4 peer reviewed international publications and 2 international conferences and 2 manuscripts are in pipeline
- Simultaneously worked on projects like extraction and purification of melanin from squid ink

Junior Research Fellow,
Chemical Engineering,
Birla Institute of Technology Hyderabad Campus

Sep 2014 to Dec 2014

Title: "Treatment of nitrogenous waste water using microalgae and biofuel production"

- Treatment of ammonia rich waste water from Rhasteriya Fertilizers and Chemicals, Ltd, Mumbai using different strains of microalgae and their consortium
- Use of microalgae cultures like *Chlorella pyrenidosa, Chlorella vulgris, Brotococcus brounii*, consortiums collected from different effluents sites like RCF effluent site (RCF sludge), hussiansagar lake site Hyderabad (Hussiansagar sludge), paddy field water

Assistant Professor, Biotechnology Engineering, Kolhapur Institute of Technology Kolhapur under Shivaji University
Jan 2010 to Sep 2014

- Supervised 10 under graduate (B.E) and 4 post graduate (M.E) research projects involving 30+ students
- Developed 4 curricula, set up bioprocess engineering, Bioinformatics and enzyme technology laboratories and wrote SOPs and lab manuals
- Counseled and mentored 100+ students on research, career, and professional development
- Responsible for designing and dispersion of annual budget of Rs. 30 Lakhs of biotech. department
- Managed semester-wise work distribution of 20 staff and academic time table, library incharge and moodle coordinator of biotech. department
- Conceived, planned, and staffed 2 national level faculty training workshops funded by AICTE and annual social activities for 180+ undergraduate student's association

M. Tech. Research
2007 to 2009

Thesis Title: "Purification and Characterization of cell-associated tannase from *Serratia ficeria* DTC (MTCC 8930)"

B.E. project
2002 to 2006

Thesis Title: "Screening, medium optimization, production and characterization of partially Purified lipase from a lipid degrading Bacillus spp KCL-10"

TECHNICAL SKILLS AND EXPERTISE

Biobased chemicals: Extraction and characterization of nutraceuticals and bioactives from biomass, natural sources, pre-treatment and processing of biomass/extract, Fermentative production of biochemicals and enzymes, Process design and optimization by RSM and ANOVA analysis

Expertise in Solvent Extraction, Liquid-liquid Extraction-Aqueous Two-phase Extraction of biomolecules, Salt and solvent precipitation, Lab scale chromatographic techniques.

Biocatalysis: Isolation, Screening of micro-organisms, Media optimization, Growth studies, Submerged fermentation- Flask studies to lab scale 3 Liters fermentation, Production and purification of enzymes, Design of immobilized single or multiple enzymes, Characterization of enzymes in terms of structural properties, enzyme kinetics, inactivation kinetics, stability, reusability, Designing and optimization of multi-step one pot batch/flow enzymatic reactions by co-immobilized enzymes

Analytical Techniques and Instruments Handled: HPLC- Analytical Method development for Garcinol, Isogarcinol, Anthocyanins, Hydroxycitric acid, Bisphenol A, Quercetin, Melanin, Endosulfan and others. Performed LC-MS for identification and mass detection of compounds, Gas Chromatography, Atomic Adsorption Spectrophotometer (Flame-AAS), UV-visible spectrophotometer, Ultra-sonicator (probe and bath), Density meter, Fermenter (Sartorius Biostat)

Software: Proficient in Design expert, Minitab-17 software, Origin software used for graphing and data analysis, advanced user on Microsoft Windows and Microsoft Office applications

Quality control: Experience in setting Quality control Laboratory in Wine industry (Elite vintage winery, Karnataka). Analysis like ethanol estimation, total acids, volatile acids, extract content, reducing sugar, tannin, free and total sulphur dioxide and metal contents. Lab analysis are according to IS standards for BIS accreditation.

Teaching, Tutoring and Presenting: Teaching assistance to various faculties for laboratory practical's and subjects during Ph.D.

Proposals and writing skills: Have some experience in doing literature and writing proposal for DST/DBT while supporting the supervisor/guide, and procurement of laboratory equipment's for research and laboratory development.

EDUCATION

Ph.D. Biotechnology Engineering (Chemical Engineering Dept.)
2015 – 2020
National Institute of Technology Karnataka, Surathkal, | Mangalore, India

- Thesis defended successfully with **Dr. Satyanarayana Gummadi, IIT Madras, December 2020.**
- Supervised and mentored undergraduate and M.Tech students
- Ph. D. completion with course work
- Gained extensive experience in extraction and purification of bio based compounds

M. Tech. Industrial Biotechnology (Chemical Engineering Dept.) | CGPA: 6.76/10

2007 – 2009

National Institute of Technology Karnataka, Surathkal | Dakshina Kannada, India

B.E. Biotechnology Engineering | 71.86% marks

2002 – 2006

Basaveshwar Engineering College, Bagalkot, Visveswaraiah Technological University, Belgaum, Karnataka. India

- Took courses on e.g. Biochemical Engineering, Upstream and Downstream processes, Fermentation technology, Bioprocess Engineering, Enzyme Technology, IPR in Biotechnology, Environmental Biotechnology, Food Biotechnology, Genetic Engineering and Recombinant DNA technology, Bioremediation techniques
- Obtained degree with first class grades
- Paper and poster presentations and workshops
- Class representative and coordinator for 3 years
- Obtained degree with first class with distinction

PUBLICATIONS

1. **Nainegali, B. S.,** Iyyaswami, R., & Belur, D. P. (2020). Partitioning of bio-active compounds from rinds of G*arcinia indica* using aqueous two-phase system: Process evaluation and optimization. ***Separation and Purification Technology***, 117520. https://doi.org/10.1016/j.seppur.2020.117520. (**SCIE/Scopus, Q1 Quartile Index Impact Factor- 7.312) ISSN: 1383-5866**
2. **Basavaraj S Nainegali,** Regupathi Iyyaswami & Prasanna D. Belur (2020) Alcohol-based aqueous biphasic system applied to partition four different natural bioactive compounds from *Garcinia indica* Choisy. ***Separation Science and Technology***, 55(15), 1-17. https://doi.org/10.1080/01496395.2020.1802485. **(SCIE/Scopus, Q2 Quartile Index Impact Factor- 2.475) Print ISSN: 0149-6395 Online ISSN: 1520-5754**
3. **Nainegali, B. S.,** Iyyaswami, R., & Belur, P. D. (2019). Simultaneous Extraction of four different Bioactive Compounds from *Garcinia indica* and their enrichment using Aqueous Two-Phase Systems. ***Food and Bioproducts Processing***, 114, 185-195. https://doi.org/10.1016/j.fbp.2019.01.002. **(SCIE/Scopus, Q1 Quartile Index Impact Factor- 4.481) ISSN: 0960-3085**
4. **Nainegali, Basavaraj**., I. Regupathi, and Prasanna Belur. D (2017). "Aqueous Two-phase Extraction of anthocyanin from fruits of *Garcinia indica*". *International Journal of Earth Sciences and Engineering*, 10(3), 688-692. DOI:10.21276/ijee.2017.10.0330. **ISSN 0974-5904**
5. Talekar, S., Joshi, G., Chougle, R., **Nainegali, B**., Desai, S., Joshi, A., et al. (2014). Preparation of stable cross-linked enzyme aggregates (CLEAs) of NADH-dependent nitrate reductase and its use for silver nanoparticle synthesis from silver nitrate. ***Catalysis Communications***, 53, 62-66. http://dx.doi.org/10.1016/j.catcom.2014.05.003. **(SCIE/Scopus, Q1 Quartile Index, Impact Factor- 3.626) ISSN: 1566-7367**
6. Belur, P. D., Mugeraya, G., & **Nainegali, B.** (2011). Release of cell associated tannase of *Serratia ficaria* DTC by sonication, surfactants and solvents. *Asian J Biotech*, 3, 91-97. DOI: 10.3923/ajbkr.2011.91.97. **(Google Scholar, Cambridge Scientific Abstract) ISSN: 1996-0700**
7. Belur, P. D., Gopal, M., Nirmala, K. R., & **Basavaraj, N.** (2010). Production of novel cell-associated tannase from newly isolated *Serratia ficaria* DTC. ***Journal of microbiology and biotechnology***, 20(4), 732-736. doi: 10.4014/jmb.0907.07033. **(SCIE/Scopus, Q2 Quartile Index, Impact Factor- 2.351) eISSN 1738-8872 pISSN 1017-7825**

BOOKS/REPORTS/CHAPTERS

1. Ramana, V. L., Regupathi, I., Rashmi, B. S., & **Basavaraj, S. N.** (2016). Partitioning of Nitralase Enzyme from *Pseudomonas putida* in Polymer/Salt Aqueous Two-Phase System. In Biotechnology and Biochemical Engineering (pp. 93-100). Springer, Singapore. https://doi.org/10.1007/978-981-10-1920-3_10, Print ISBN: 978-981-10-1919-7, Online ISBN: 978-981-10-1920-3
2. Dilip, B. S., Iyyaswami, R., **Nainegali, B. S**., & Rashmi, B. S. (2016). Aqueous Two-Phase (Acetonitrile–Potassium Citrate) Partitioning of Bovine Serum Albumin: Equilibrium and Application Studies. In Biotechnology and Biochemical Engineering (pp. 101-109). Springer. https://doi.org/10.1007/978-981-10-1920-3_11, Print ISBN: 978-981-10-1919-7, Electronic ISBN: 978-981-10-1920-3

CONFERENCES

1. **Basavaraj Nainegali**., Regupathi I., and Prasanna B. D, "Partitioning and preliminary purification of Bioactive Compounds from *Garcinia indica* using 1-propanol-magnesium sulphate Aqueous Two-Phase System" **4th International Conference on Bioscience and Biotechnology (BioTech-2019)** 21– 22, February 2019, Kuala Lumpur, Malaysia
2. **Basavaraj Nainegali**., Regupathi I., and Prasanna B. D, "Aqueous Two-phase Extraction of anthocyanin from fruits of *Garcinia indica*." **6th International Engineering Symposium** - **IES 2017** March 1-3, 2017, Kumamoto University, Japan.
3. Dilip, B. S., Iyyaswami, R., **Nainegali, Basavaraj. S**., & Rashmi, B. S. "Aqueous Two-Phase (Acetonitrile–Potassium Citrate) Partitioning of Bovine Serum Albumin" **International conference on Advances in Chemical Engineering (ICACE 2015)**, 20 – 22 December 2015, NITK Surathkal. India.

WORKSHOPS AND RECENT ACTIVITIES

1. Participated and completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary Five Day **Faculty Development Program** on **"Fermentation Technology & Biochemical Engineering"** from 02-08-2021 to 06-08-2021 organised by Department of Biotechnology, Jeppiaar Engineering College, OMR, Chennai - 600119.
2. Participated and completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary Five Day **Faculty Development Program** on **"Nutraceuticals: Basics & Beyond"** from 12-07-2021 to 16-07-2021 at Department of Biotechnology, Bannari Amman Institute of Technology, Sathyamangalam, Tamilnadu - 638401.
3. Attended the Virtual Industrial Tour to the **Industrial Plant of Yakult India Pvt. Ltd** conducted jointly by FT Professional Chapter of Lady Irwin College, University of Delhi in collaboration with Yakult India Company on March 24th 2021.
4. Participated in Webinar Series on **Self Employment – Why and How?** Organised by Swadeshi Vijnana Andolana – Karnataka in December – 2020, Swadeshi Sadana, Guru Naranayana Vidya Vihar, Hebbal, Bangaluru- 560024.
5. Participated and completed **the "Five Day Online Faculty Development Program cum Webinar Series" on "Latest Trends and Future Prospects of Biotechnology"** Organized by Department of Biotechnology, National Institute of Technology Andhra Pradesh from 06-07-2020 to 10-07-2020, NIT Andhra, Tadepalligudem, West Godavari (d), Andhra Pradesh-534101, India
6. Completed the "Two days hands on training on **Spirulina Production Technology** from 23-07-2016 to 24-07-2016 from **GERO-PHYTA Health Care and Nutraceuticals**, Illuppur-622102, Pudukottai Dist, Tamilnadu.

PERSONAL DETAILS

Date of Birth:	03rd September 1984
Father's Name:	Somalingappa R. Nainegali
Sex:	Male
Marital Status:	Married
Nationality:	Indian
Languages:	English, Hindi, Kannada, (read, write & speak), Maharati and Telgu (Limited working Proficiency)

REFERENCES

1. **Dr. Prasanna B. D.** Associate Professor, Department of Chemical Engineering, NITK, Surathkal-575025 Mangalore, Karnataka, India Email: prsn@nitk.edu.in, prsnbhat@gmail.com Mob. No: +91-9483035265
2. **Dr. I. Regupathi,** Associate Professor, Department of Chemical Engineering, NITK, Surathkal-575025 Mangalore, Karnataka, India Email: regupathi@nitk.ac.in, ponregu@gmail.com Mob. No: +91 9731161327
3. **Dr. Sachin Talekar**, Research Professor, Department of Chemical and Biological Engineering, Korea University, Korea. Email: sachintalekar87@korea.ac.kr, sachintalekar7@gmail.com, Mob. No. +8201074253831
4. **Dr. B. S. Hungund**, Professor & Head, Dept. of Biotechnology, KLE Technological University, Vidyanagar, Hubballi, India Email: hungundb@gmail.com, bshungund@bvb.edu.in, bshungund@kletech.ac.in Mob. No:+91-9449169349
5. **Dr. Gangamma S,** Associate Professor, Department of Chemical Engineering, NITK, Surathkal-575025 Mangalore, Karnataka, India, Email: gangamma@gmail.com, gangamma@nitk.edu.in Mob: +91 8792732195

DECLARATION

I hereby declare that all the statements made in this application are true and complete to the best of my knowledge and belief

Place:

Date: **Basavaraj. S. Nainegali**