

ROHIT UPADHYAY

Senior Research Fellow (SRF)
Food Chemistry & Technology Laboratory
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Career Objective

I am seeking for an opportunity to utilize my current educational training and skills in research activity. My future plans include conducting research and teaching.

Current Research Interests

- Oils and fats chemistry
- Food chemistry
- Novel extraction and analytical technologies
- Food process modeling

Academic Credentials

2012 – present	Ph. D (Food Process Engineering) (Appearing)	Agricultural & Food Engineering Department, Indian Institute of Technology Kharagpur, Kharagpur – 721302, West Bengal, India
2008 – 2010	M. Sc (Food Technology) First Division; CGPA: 2.7/3.0	Central Food Technological Research Institute, Mysore – 570020, India
2005 – 2008	B. Sc (Honors) (Biomedical Sciences) First Division, Grade: 74.7%	Acharya Narendra Dev College, University of Delhi, Delhi – 110019, India
2004 – 2003	10+2 (AISSCE - CBSE) First Division; Grade: 79.6%	Kendriya Vidyalaya Badarpur, New Delhi – 110044, India
2002 – 2001	10th (AISSE - CBSE) First Division; Grade: 77.0%	Kendriya Vidyalaya Badarpur, New Delhi – 110044, India

Work Experience

1. June 2012 – Until date

Senior Research Fellow, Agricultural & Food Engineering Department, IIT Kharagpur
I am presently enrolled for PhD under the guidance of Prof. H. N. Mishra. I joined as SRF in an industrial consultancy project (Code: PSAS) funded by Synthite Industry Limited, Kochi. My area of research involved elucidation and characterization of antioxidant potential, synergistic behavior and stability of oleoresin from rosemary and sage. I worked on different *in-vitro* chemical assays and instrumental analysis to assess their antioxidant activity and application as natural preservative in stabilization of lipid based food matrix. I have developed the mathematical shelf life prediction models using the results obtained from instrumental and wet chemical analysis. During this period, I had opportunity to receive operational training on GC-MS/MS instrument (TSQ-8000, ThermoScientific), Electronic-Nose (Alpha Mos), Rancimat (Metrohm), FT-NIR (Bruker Optics) and Antioxidant Analyzer (Photochem, Analytik Jena).

2. November 2011 – April 2012

Junior Research Fellow, Centre of Food Science & Technology, BHU, Varanasi
During my tenure, I worked in the area of extraction and characterization of the antioxidant compounds from millets and vegetables. My work involved bio-analytical analyses using GC-MS and HPLC instrumentation. During this period, I had opportunity to receive an operational training on GC-MS instrument. (QP-2010 Ultra, Shimadzu).

3. July 2010 – July 2011

Food Regulatory Affairs Officer Trainee, Nestle India Limited, Gurgaon
I was involved in the preparation and analysis of regulatory norms for culinary and beverage section. I prepared several customized reports related to food regulatory and scientific affairs. During this period I had the gained the opportunity to develop the practical understanding of Food Safety and Standards Act and Regulations.

Honors and Awards

1. Recipient of Prime Minister's Fellowship Scheme for Doctoral Research – 2013 jointly promoted by Science & Engineering Research Board (SERB), Govt. of India and Confederation of Indian Industry (CII).
2. Qualified CSIR-UGC Combined NET – Life Sciences (December 2011) for Junior Research Fellowship (JRF) and Lectureship (LS) (All India Rank: 72).
3. Qualified GATE-2012 in Life Sciences category with all India rank of 294 (All India Rank: 294; Score: 461; Percentile: 97.2).
4. Recipient of prestigious AHN PEOUNG UG GOLD MEDAL for best Dissertation & Investigation in Post Graduation, CFTRI, Mysore, 2011.

5. Professionally certified by Nestle India Limited to carry out the routine regulatory jobs in Food Regulatory Affairs, 2011.
6. Recipient of prestigious Summer Research Fellowship sponsored by Indian Academy of Sciences(Bangalore), Indian National Science Academy (Delhi), and National Academy of Sciences(Allahabad), 2007.
7. Recipient of India Development Education Award by Indian Society for Integrated Women and Child Development on the occasion of World Children Summit, 2002.

Publications

Articles in Refereed Journals

1. **Upadhyay, R.**, Ramalakshmi, K., & Rao, L.J.M. (2012). Microwave-assisted extraction of chlorogenic acids from green coffee beans. *Food Chemistry*, 130(1), 184–188. (IF: 3.259)
2. **Upadhyay, R.**, & Rao, L.J.M. (2013). An outlook on chlorogenic acids – occurrence, chemistry, technology, and biological activities. *Critical Reviews in Food Science & Nutrition*, 53(9), 968–984. (IF: 5.548)
3. **Upadhyay, R.**, Jha, A., Singh, S.P., Kumar, A., & Singh, M. (2013). Appropriate solvents for extracting total phenolics, flavonoids and ascorbic acid from different kinds of millets. *Journal of Food Science & Technology*, 1–7. DOI: 10.1007/s13197-013-0976-0. (IF: 2.024)
4. **Upadhyay, R.**, & Mishra, H. N. (2014). Antioxidant activity measurement of oleoresin from rosemary and sage. *Industrial Crops and Products*, 61, 453–459. (IF: 3.208)
5. **Upadhyay, R.**, & Mishra, H. N. (2015). Predictive modeling for shelf life estimation of sunflower oil blended with oleoresin rosemary (*Rosmarinus officinalis* L.) and ascorbyl palmitate at low and high temperatures. *LWT-Food Science and Technology*, 60, 42–49. (IF: 2.468).

Conference Presentation

1. Poster presentation
Upadhyay, R. & Mishra, H.N. (2014). Oxidative stability of sunflower oil supplemented with rosemary (*Rosmarinus officinalis*) extract under elevated temperature conditions, In: *Institute of Food Technologists' Annual Meeting and Food Expo (IFT)*, New Orleans, LA USA, 21–24 June, 2015 (Abstract published in the proceedings of IFT's Annual Meeting and Food Expo).

Research dissertations

Post graduation (2008-10)

Department: Department of Spice & Flavor Science, CFTRI, Mysore.

Supervisor: Dr. L Jagan Mohan Rao, Senior Principal Scientist

Dissertation: Chlorogenic acids-occurrence, chemistry, technology and biological activities.

Investigation: Microwave assisted extraction of chlorogenic acids from green coffee beans.

Under graduation (2005-08)

Institute: Institute of Genomics and Integrated Biology, Delhi.

Supervisor: Professor S K Brahamchari

Project title: Role of bacterial infections in triggering metal allergies.

Workshops and Seminars

1. Workflow Solutions for Pesticide and POPs Analysis by GCMS and HRGCMS, organized by ThermoFisher Scientific India Pvt. Ltd., held at IIT Kharagpur, 26th February 2014.
2. Author Workshop, jointly organized by Springer and IIT Kharagpur, held at IIT Kharagpur, 12th February 2014.
3. National Workshop cum Demonstration on High Pressure Processing of High Value Perishable Commodities, organized by Agricultural & Food Engineering Department, IIT Kharagpur, 22nd March 2013.

Technical Expertise

Antioxidant Analyzer (Photochem[®]), Electronic-Nose, FT-NIR, GC-MS/MS, HPLC, Microwave Extractor, Rancimat, Super-Critical Fluid Extractor, Spray Dryer, Ultrasonic Extractor, UV-Visible Spectrophotometer and other instruments used for routine proximate analysis of food samples.

Computer Skills

- On platforms: Windows 7, Windows Vista and Windows XP.
- Application packages: Microsoft Office 2010, Adobe Photoshop,
- Statistical packages: Design Expert 7.0, SPSS 20.0, MATLAB 2012, Origin 9.1.

Extracurricular Activities

- Member of organization committee at IIT Kharagpur for CII – IIT Certified Professional Course on Food Safety & Quality Management, held at IIT Kharagpur, 19 February – 7 March, 2013 & 16 – 28 September, 2013.
- Event organization, playing cricket, listening music.

Personal Information

Father's Name I. D. UPADHYAY
Date of Birth 16th March, 1987
Gender Male
Marital Status Unmarried
Nationality Indian
Languages Known English, Hindi

References

- 1. Dr. H. N. Mishra**
Professor of Food Technology, Agricultural & Food Engineering Department
IIT Kharagpur, Kharapur-721302, India
E-mail: hnm@agfe.iitkgp.ernet.in / ☎ 0322-283130
- 2. Dr. T. K. Goswami**
Professor, Agricultural & Food Engineering Department
IIT Kharagpur, Kharapur-721302, India
E-mail: tkg@agfe.iitkgp.ernet.in / ☎ 0322-282243
- 3. Dr. L. Jagan Mohan Rao**
Senior Principal Scientist, Department of Spice & Flavor Science
CFTRI, Mysore-570020, India
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- 4. Dr. Pradeep Singh Negi**
Principal Scientist, Fruit and Vegetable Technology Department
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Declaration:

I hereby declare that all the information provided by me are factual and best to my knowledge and belief.

Date: 20/10/2014
Place: IIT Kharagpur

(Rohit Upadhyay)