

CURRICULLUM-VITAE

Dr. Dilip Kumar

Address for Correspondence:

Department of Biochemical Engineering

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Career Objective: To get an opportunity in a reputed organization to grow in to an academic leader and to gain new academic heights through constant endeavors, persistent learning and dedicated hard work.

Technical Qualification

Doctor of Philosophy thesis entitled “**Studies on enzymatic biodiesel production from indigenous non-edible feedstock using immobilized *Pseudomonas cepacia* lipase**” under the supervision of **Dr. Bhawna Verma** from the Department of Chemical Engineering and Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi, in **year 2019**.

M. Tech. Chemical Technology with specialization in **Bio-Chemical Engineering** from the Department of Biochemical Engineering and Food Technology, H.B.T.U., (Formerly H.B.T.I), Kanpur in **year 2013**.

B.TECH. Chemical Technology with specialization in **Bio-Chemical Engineering** from the Department of Biochemical Engineering and Food Technology, H.B.T.U., (Formerly H.B.T.I), Kanpur in **year 2000**.

GATE 2010 - Graduate aptitude test in engineering is qualified in biotechnology

Honours / Awards

1. Institute – SRF TA-ship from 28/12/2016 to 27/12/2019 at IIT (BHU), Varanasi
2. Institute – JRF TA-ship from 28/12/2013 to 27/12/2015 at IIT (BHU), Varanasi

Membership

1. Indian Institute of Chemical Engineers (IICHE) - Life Associate Member (LAM-61784)
2. The Biotech Research Society, India (BRSI) - Life Member (LM-2229)

Professional Experience

- Approximately 08 years

Publications

1. **Kumar, D.,** Das, T., Giri, B.S., and Verma, B. Optimization of biodiesel synthesis from nonedible oil using immobilized bio-support catalysts in jacketed packed bed bioreactor by response surface methodology. **Journal of Cleaner Production** 244, 118700. 2020, **SCI, Impact factor (9.297), ISSN: 0959-6526**
2. **Kumar, D.,** Das, T., Giri, B.S., and Verma, B. Preparation and characterization of novel hybrid bio-support material immobilized from *Pseudomonas cepacia* lipase and its application to enhance biodiesel production. **Renewable Energy** 147, 11-24. 2020, **SCI, Impact factor (8.001), ISSN: 0960-1481**
3. **Kumar, D.,** Giri, B.S., and Verma, B. Improved performance of immobilized bio-support material (Polyvinyl alcohol/ AlgNa) and its characterization. **Indian Journal of experimental Biology** 58, 803-810. 2020, **SCI, Impact factor (0.818), ISSN: 0019-5189**
4. **Kumar, D.,** Das, T., Giri, B.S., Rene, E.R., and Verma, B. Biodiesel production from hybrid non-edible oil using bio-support beads immobilized with lipase from *Pseudomonas cepacia*. **Fuel** 255,115801. 2019, **SCI, Impact factor (6.609), ISSN: 0016-2361**
5. **Kumar, D.,** Das, T., Giri, B.S., and Verma, B. Characterization and compositional analysis of highly acidic Karanja oil and its potential feedstock for enzymatic synthesis of biodiesel. **New Journal of Chemistry** 42, 15593-15602. 2018, **SCI, Impact factor (3.591), ISSN: 1144-0546**
6. Mahapatra, S., **Kumar D.,** Singh B., and Sachan, P.K. Biofuels and their sources of production: A review on cleaner sustainable alternative against conventional fuel, in the framework of the food and energy nexus. **Energy Nexus** 4, 100036. 2021, **ISSN: 2772-4271**

Paper Presentation (Oral) in Conference/Seminar

1. **Kumar, D.,** Giri, B.S., and Verma, B. Enhanced performance of immobilized lipase from *Pseudomonas cepacia* on hybrid bio-support material and its characterization. The 3rd National Conference on Materials for Energy Conversion and Storage, Organized by School of Material Science and Technology, Indian Institute of Technology (BHU) - Varanasi, (U.P.), India, October 18-20, 2018.
2. **Kumar, D.,** Singh, V., Yadav, V., and Verma, B. FTIR analysis for quantification of fatty acid butyl biodiesel in biodiesel produced by enzymatic method from vegetable oil. 69th Annual Session of Indian Institute of Chemical Engineers, CHEMCON 2016, Chennai, December 27-30, 2016.
3. **Kumar, D.,** Sinha, A.S.K., and Verma, B. Synthesis of biodiesel from non-edible oil using immobilized lipase enzyme. 68th Annual Session of Indian Institute of Chemical Engineers, CHEMCON 2015, Indian Institute of Technology, Guwahati, December 27-30, 2015.
4. **Kumar, D.,** Sinha A.S.K., and Verma, B. Enzymatic biodiesel production from non-edible oil and its characterization. 5th International Conference on Advances in Energy Research, held at IIT Bombay, December 15-17, 2015.

5. **Kumar, D.,** Singh L.K., and Verma, B. Application of immobilized enzyme system for biodiesel production. TEQIP-II, Sponsored National Conference on Newer Oleochemicals: Production and Industrial Application, Organized by Center of Excellence on “Applied research, training and education in lipid science” in the Department of Oil and Paint Technology, H. B. T. I. Kanpur (U.P.), January 10-11, 2015.
6. **Kumar, D.,** and Katiyar, B.S., Environmental ethics and it’s impacts on sustainable development. A Golden Jubilee National Seminar on Advances in Bioprocesses for Environmental Safety and Nutritional Security, Organized by Department of Biochemical Engineering and Food Technology, H.B.T.I., Kanpur (U.P.), March 02-03, 2013.

Paper Presentation (Poster) in Conference/Seminar

1. **Kumar, D.,** Das, T., Giri, B.S., and Verma, B. A Novel approach for biodiesel production from a hybrid non-edible feedstock using bio-support ball (Polyvinyl Alcohol/Sodium Alginate) immobilized lipase from *Pseudomonas cepacia*. Bio-SD-2018, Organized by CSIR-Indian Institute of Chemical Technology Hyderabad, India, In Association with The Biotech Research Society, India (BRSI), November 22-25, 2018.
2. **Kumar, D.,** Sinha, A.S.K., and Verma, B. Using immobilized *Pseudomonas cepacia* lipase enzyme synthesis of biodiesel from Karanja Oil. International Conference on Multifunctional Materials for Future Applications (ICMFA – 2015), Organized by Department of Chemistry, IIT (BHU) Varanasi, October 27-29, 2015.
3. **Kumar, D.,** Sinha, A.S.K., and Verma, B. Enzymatic production of biodiesel from non-edible oil. Institute Day during 26 -27 February, 2015, in the Department of Chemical Engineering and Technology, IIT (BHU), Varanasi, (U.P.).
4. **Kumar, D.,** and Katiyar, B.S., Waste water management. A Golden Jubilee National Seminar on Advances in Bioprocesses for Environmental Safety and Nutritional Security, Organized by Department of Biochemical Engineering and Food Technology, H.B.T.I, Kanpur (U.P.), March 02-03, 2013.

Faculty Development Program

1. **One Week** Faculty Development Program on **Frontiers in Bioprocess Technology** Organized by Department of Biochemical Engineering, School of Chemical Technology, Harcourt Butler Technological University, Kanpur, September 20-24, 2021.
2. **One Week** Faculty Development Program on **Modern Innovations in Chemical Engineering and Technology** Jointly Organized by Department of Chemical Engineering, and Department of Food Technology, School of Chemical Technology, Harcourt Butler Technological University, Kanpur, August 9-13, 2021.

3. **One Week Faculty Development Program on Advancements in Biotechnology and Nanotechnology** Organized by Department of Biotechnology University Institute of Engineering and Technology, Panjab University, Chandigarh in Association with Department of Chemistry, Government College of Engineering and Technology, Jammu, September 21-26, 2020 (Sponsored by TEQIP-III).
4. **One Week Faculty Development Program on Advances in Enzyme Production and their Industrial Application** Organized by Harcourt Butler Technological Institute, Kanpur, December 19-24, 2013 (Sponsored by TEQIP-II).

Short Term Course/Conference/Seminar Attend

1. **One Week online Short Term Course on Renewable Energy & Effluent Treatment (REET- 2021)** Organized by Department of Chemical Engineering, Institute of Engineering & Technology Lucknow, Uttar Pradesh, March 01-05, 2021.
2. **12 Day Biogas Lab Training** Organized by Indian Biogas Association (IBA) and Malaviya Centre for Innovation and Entrepreneurship (MCIIE), Indian Institute of Technology (BHU) - Varanasi, (U.P.), India, July 02-13, 2018.
3. **06 Day Statistical Analysis and Simulation using Matlab** Organized by Society of Chemical Engineers, Indian Institute of Technology (BHU) - Varanasi, (U.P.), India, March 19-24, 2018.
4. **01 Day A seminar on Avenues in Aeronautical R&D for Indian Defence** Organized by Aeronautics Research & Development Board Aerospace Resources Panel, held at Indian Institute of Technology (Banaras Hindu University), Varanasi (U.P.), March 10, 2018.
5. **05 Day Short Term Course on Recent Advances in Waste Water Treatment** Organized by All India Council for Technical Education in the Department of Chemical Engineering and Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi (U.P.), June 26-30, 2017.
6. **06 Day Short Term Course on Advances in Bioprocess Engineering** Organized by All India Council for Technical Education in the School of Biochemical Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi (U.P.), June 19-24, 2017.
7. **01 Day A workshop on Inclusion in Smart city Planning of India of Renewable Energy & Energy Efficiency (InSPIRE)** Organized by Department of Chemical Engineering and Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi (U.P.), March 25, 2017.
8. **13 Day Intensive Course on Advances in Preparation & Characterization of Heterogeneous Catalysts** conducted by Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi (U.P.), June 08-20, 2015.

9. **01 Day National Symposium on Research Methodology for Future Researchers** organized by Teaching Learning Cell, Indian Institute of Technology (Banaras Hindu University), Varanasi, March 22, 2015.
10. Coordinator of S.R.M. committee, **A Golden Jubilee National Seminar on Advances in Bioprocesses for Environmental Safety and Nutritional Security**, in the Department of Biochemical Engineering and Food Technology, Kanpur (U.P.), March 02-03, 2013.

Quality Manager

M/s Lancer food products Rudrapur (U.K.) Start Date: Dec. 2010-July2011

- Responsible for managing over all, R&D, NPD Quality and manufacturing of products.
- Reporting quality related issues to top management on regular basis.
- Participating in quality management system audits and maintaining relevant documents for reference.

Lab In-charge Technical

M/s. United Biscuits Pvt. Ltd. Kala Amb (H. P.), Start Date: Dec. 2009-Dec. 2010

- Responsible for all new launches and trials of new products in the factory.
- Training and development of manpower.
- Calibrating equipment on a regular basis to ensure performance capacity of various equipments fulfils required norms and standards.
- Responsible for managing over all, R&D, NPD Quality and manufacturing of products.
- Check and control the quality of Raw & Packaging material on day to day basis for every lot & give product quality control clearance.

Quality In-charge

M/s. S. S. FOOD Industries Kala Amb (H.P.) Start Date: Jan. 2007-Nov. 2009

- Testing of all RM /PM received during the shift as against STD.
- In process check and control of parameters.
- Testing and release of finished goods.

- Develop, plan and implement all necessary training and development requirements to the production team.
- Aid in the effective implementation of new products and processes in the production area.

Shift Manager

M/s Gokul Foods Pvt Ltd Fatehpur, CMU Britannia India. (UP). May 2003-Dec. 2006

- Manpower Control and Shift administration.
- Coordinated with Production Planning and Manufacturing Departments in Order to meet monthly volume target
- Manage the team to deliver agreed performance objectives and KPI's including safety, prime cost and conformance to plan.
- Develop, plan and implement all necessary training and development requirements of the team.
- Ensure site standards are complied with across all areas of the business.
- Aid in the effective implementation of new products and processes in the production area.
- Regularly meet all output, quality, hygiene, safety and efficiency targets and standards.

Guest Faculty

- Department of Biochemical Engineering, Harcourt Butler Technical University, Nawabganj, Kanpur – 208002 (U.P.), September 2, 2020 to July 31, 2021
- Department of Biochemical Engineering, Harcourt Butler Technical University, Nawabganj, Kanpur – 208002 (U.P.), September 21, 2021 to till date

Other Relevant Information

During B. Tech Course

- **Industrial training:** Mohan Gold Water Breweries Limited, Mohan Meakin Road, Daliganj, Lucknow- 226020
- **Detail project:** Tetracycline production plant design
- **Equipment Design Project:** Designing of a distillation column
- **Seminar:** Biological removal of nitrogen from urea fertilizer plant effluent

During M. Tech Course

- **Research Project:** Optimization of parameters for acetone - butanol production using agro-residue by Response Surface Methodology.
- **Critical review:** Continuous solid state fermentation
- **Seminar:** Membrane processes in biotechnology

Personal Information

Father's Name	: Shri Jhunnar Ram
Nationality	: Indian
Religion	: Hindu
Category	: Sc
Sex	: Male
Marital Status	: Married
Permanent Address	: Village - Samogara, Post - Pindra, District–Varanasi-221206, (U.P.), India

Declaration: All the information given above is true to the best of my knowledge.

Date:

Place:

(Dilip Kumar)