

- **Name** Dr. Sonam Kumari
- **Designation** Scientist 'B'
- **Discipline/research area** Fungal biology, Signaling pathway study, Infection biology, Molecular biology, Drug resistance.
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- **Address (off.)** National Institute of Pathology
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New Delhi-110029
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- **Educational Qualifications**

Ph.D. (Human Health)

International Centre for Genetic Engineering and Biotechnology, New Delhi.

M.Sc. (Biotechnology)

Banaras Hindu University, Varanasi, Uttar Pradesh

B.Sc. (Biotechnology)

St. Columba's College, Vinoba Bhave University, Hazaribagh, Jharkhand

- **Research Experience**

From June 2022: Scientist 'B', ICMR-National Institute of Pathology, New Delhi

Jan 2021-April 2022: Research Associate, International Centre for Genetic Engineering and Biotechnology, New Delhi

Title: Metabolic production of industrial metabolites in yeast
Saccharomyces cerevisiae

Aug 2020-Dec 2020- Senior research fellow, International Centre for Genetic Engineering and Biotechnology, New Delhi

Title: Xylose pathway integration in industrial yeast for efficient consumption of C5-sugars.

Aug 2015-July 2020- Ph.D., International Centre for Genetic Engineering and Biotechnology, New Delhi

Title: Role of ABC transporters in *Candida* species

July 2014- June 2014- M.Sc. dissertation work, Banaras Hindu University
Title: Study of synthetic coloring agent sunset yellow on the expression of inflammatory cytokines in Balb/c mice.

- **Awards**

CSIR-JRF, NCCS-DBT JRF, GATE

- **Membership/Fellowship of Professional Societies/Associations:**

American society for microbiology (ASM)-Global outreach contributing membership

- **Publications:** International: 13

- **10 best publications**

1. **Kumari S**, Kumar M, Khandelwal NK, Kumari P, Varma M, Vishwakarma P, Shahi G, Sharma S, Lynn AM, Prasad R, Gaur NA. ABC transportome inventory of human pathogenic yeast *Candida glabrata*: Phylogenetic and expression analysis. **PLoS One**. 2018 Aug 28;13(8):e0202993. (IF: 3.7)

2. Pandey AK, Kumar M, **Kumari S**, Kumari P, Yusuf F, Jakeer S, Naz S, Chandna P, Bhatnagar I, Gaur NA. Evaluation of divergent yeast genera for fermentation-associated stresses and identification of a robust sugarcane distillery waste isolate *Saccharomyces cerevisiae* NGY10 for lignocellulosic ethanol production in SHF and SSF. **Biotechnology for biofuels**. 2019 Dec 1;12(1):40. (IF: 7.67)

3. **Kumari S**, Kumar M, Khandelwal NK, Pandey AK, Bhakt P, Kaur R, Prasad R, Gaur NA. A homologous overexpression system to study roles of drug transporters in *Candida glabrata*. **FEMS Yeast Research**. 2020 Jun 3. (IF: 2.9)

4. Kumar M, Pandey AK, **Kumari S**, Wani SA, Jakeer S, Tiwari R, Prasad R, Gaur NA. Secretome produced by a newly isolated *Aspergillus flavus* strain in engineered medium shows synergy for biomass saccharification with a commercial cellulase. **Biomass Conversion and Biorefinery**. 2020 Aug 11:1-3. (IF: 4.05)

5. Kumar M, Singh A, **Kumari S**, Kumar P, Wasi M, Mondal AK, Rudramurthy SM, Chakrabarti A, Gaur NA, Gow NA. Sphingolipidomics of drug resistant *Candida auris* clinical isolates reveal distinct sphingolipid species signatures. **Biochimica et**

Biophysica Acta (BBA)-Molecular and Cell Biology of Lipids. 2020 Sep 15:158815. (IF: 5.22)

6. Kumari S, Kumar M, Gaur NA and Prasad R, 2021. Multiple roles of ABC transporters in yeast. **Fungal Genetics and Biology**, 150, p.103550. (IF: 3.88)

7. Onchieku NM, Kumari S, Pandey R, Sharma V, Kumar M, Deshmukh A, Kaur I, Mohmmmed A, Gupta D, Kiboi D, Gaur N. Artemisinin Binds and Inhibits the Activity of *Plasmodium falciparum* Ddi1, a Retroviral Aspartyl Protease. **Pathogens.** 2021 Nov;10(11):1465. (IF: 4.5)

8. Pandey AK, Kumar M, **Kumari S,** Gaur NA. Integration of acid pre-treated paddy straw hydrolysate to molasses as a diluent enhances ethanol production using a robust *Saccharomyces cerevisiae* NGY10 strain. **Renewable Energy.** 2022 Jan 18. (IF: 8.6)

9. Kumari S, Kumar M, Esquivel BD, Wasi M, Pandey AK, Kumar Khandelwal N, Mondal AK, White TC, Prasad R, Gaur NA. Unmasking of CgYor1-Dependent Azole Resistance Mediated by Target of Rapamycin (TOR) and Calcineurin Signaling in *Candida glabrata*. **mBio.** 2022 Jan 18;13(1):e03545-21. (IF: 7.78)

10. Shahi G, Kumar M, Khandelwal NK, Banerjee A, Sarkar P, **Kumari S,** Esquivel BD, Chauhan N, Chattopadhyay A, White TC, Gaur NA. Inositol Phosphoryl Transferase, Ipt1, Is a Critical Determinant of Azole Resistance and Virulence Phenotypes in *Candida glabrata*. **Journal of Fungi.** 2022 Jul;8(7):651. (IF: 5.74)

- **Book Chapters**

- **Projects** (preferably write the PI project with titles, years, funding agency and if writing the other project mention your role clearly, like PI/Co-I/Coordinator). Do not put submitted projects.

Ongoing

Completed