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**Education: PhD (Jadavpur University, Kolkata)**

**Professional appointments:**

2013-till date	Jawaharlal Nehru University	Professor
2007-2013	Institute of Microbial Technology	Senior Principal Scientist
2002-2007	Institute of Microbial Technology	Scientist EII
1998-2002	Institute of Microbial Technology	Scientist EI

1996 - 1997	University Paris VII, Paris	Post Doctoral Fellow
1991 - 1996	Institute of Microbial Technology	Scientist C
1987- 1990	Institute of Microbial Technology	Scientist B

## Research Interest

- Signal transduction pathway in Fungi
- Structure and functional analysis of Group III hybrid histidine kinase
- Mechanism of action of antifungal agent/s using chemical genomics

## List of publications:

- Wasi M, Khandelwala NK, Vishwakarma P, Lynn AM, Mondal AK and Prasad R (2018) Inventory of ABC proteins and their putative role in salt and drug tolerance in *Debaryomyces hansenii*. **Gene** 676, 227-242. doi: 10.1016/j.gene.2018.07.029
- Chawla S, Kundu D, Randhawa A and Mondal AK (2017). The serine/threonine phosphatase DhSIT4 modulates cell cycle, salt tolerance and cell wall integrity in halo tolerant yeast *Debaryomyces hansenii*. **Gene** 606, 1–9 doi: 10.1016/j.gene.2016.12.022
- Randhawa A, Chawla S, Mondal AK (2016) Functional dissection of HAMP domains in NIK1 ortholog from pathogenic yeast *Candida lusitanae*. **Gene** 577 (2), 251-257. doi 10.1016/j.gene.2016.12.022
- Khandelwal NK, Chauhan N, Sarkar P, Esquivel BD, Coccetti P, Singh A, Coste AT, Gupta M, Sanglard D, White TC, Chauvel M, d'Enfert C, Chattopadhyay A, Gaur NA, Mondal AK, Prasad R. (2018) Azole resistance in a *Candida albicans* mutant lacking the ABC transporter CDR6/ROA1 depends on TOR signaling. **J Biol Chem**. 293(2):412-432. doi: 10.1074/jbc.M117.807032.

- Shariq M, Dhamgaye S, Nair R, Goyal N, Jain V, Mukhopadhyay A, Mondal AK, Mukhopadhyay G and Prasad R (2017) The global regulator Ncb2 escapes from the core promoter and impacts transcription in response to drug stress in *Candida albicans*. **Scientific Reports**. 7, 46084. doi: 10.1038/srep46084.
- Rawal M, Banerjee A, Shah A, Firoz Khan MF, Sen S, Saxena AK, Monk B, Cannon RD, Bhatnagar R, Mondal AK and Prasad R (2016) Newly identified motifs in *Candida albicans* Cdr1 protein nucleotide binding domains are pleiotropic drug resistance subfamily-specific and functionally asymmetric. *Sci. Rep.* 6, 27132. doi: 10.1038/srep27132.
- Pal S, Mondal AK, Sahoo DK (2016) Molecular strategies for enhancing microbial production of xylitol. **Process Biochemistry** doi:10.1016/j.procbio.2016.03.017
- Khandelwal N, Kaemmer P, Foerster TM, Singh A, Alix T, Coste AT, Andes DR, Hube B, Sanglard D, Chauhan N, Kaur R, Christophe d'Enfert C, Mondal AK and Prasad R (2016) Pleiotropic effects of a vacuolar ABC transporter MLT1 of *Candida albicans* on cell function and virulence. **Biochem J** Mar 29. pii: BCJ20160024
- Shah AH, Banerjee A, Rawal MK, Saxena AK, Mondal AK, Prasad R (2015) ABC transporter Cdr1p harbors a critical acid/base pair between the intracellular loop and nucleotide-binding domain important for protein trafficking. **FEMS Yeast Res.** 15 (5): fov036 DOI: <http://dx.doi.org/10.1093/femsyr/fov036>
- Bari VK, Sharma S, Alfatah M, Mondal AK and Ganesan K (2015) Plasma membrane proteolipid 3 protein modulates Amphotericin B resistance through sphingolipid biosynthetic pathway. **Scientific Reports**. 5, 9685; DOI:10.1038/srep09685
- Defosse TD, Sharma A, Mondal AK, de Bernonville TD, Latgé JP, Calderone R, Courdavault V, Clastre M, Papon N (2015) Hybrid histidine kinases in pathogenic fungi. **Molecular Microbiology** 95(6), 914–924
- Harsimran Kaur, Shikha Singh, Yogendra S. Rathore, Anupam Sharma, Kentaro Furukawa, Stefan Hohmann, Ashish and Alok K Mondal (2014) Differential Role of HAMP-like Linkers in Regulating the Functionality of the Group III Histidine Kinase DhNik1p. **J Biol Chem**. 289, 20245–20258.
- Dhanda SK, Singla D, Mondal AK and Raghava GPS (2013) DrugMint: A webserver for predicting and designing of drug-like molecules. **Biology Direct**. 8:28 doi:10.1186/1745-6150-8-28
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- Randhawa A and Mondal AK (2013) The sixth HAMP domain negatively regulates the activity of the group III HHK containing seven HAMP domains. **Biochem Biophys Res Commun**. 438: 140-144

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- Furukawa K, Randhawa K, Kaur H, Mondal AK and Hohmann S (2012) Fungal fludioxonil sensitivity is diminished by a constitutively active form of the group III histidine kinase. **FEBS Letter** 586(16):2417-22
- Kumar S, Randhawa A, Ganesan K, Raghava GPS and Mondal AK (2012) Draft genome sequence of salt tolerant yeast *Debaryomyces hansenii* var. *hansenii* MTCC 234. **Eukaryotic Cell** 11(7):961-962.
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- Biswas D, Datt M, Ganesan K and Mondal AK (2010) Cloning and characterization of thermotolerant xylitol dehydrogenases from yeast *Pichia angusta*. **Appl Microbiol Biotechnol.** 88, 1311-1320.
- Meena N, Kaur H and Mondal AK (2010) HAMP or a Linker. **J Biol Chem.** 285 (23), 1e8.
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- Tripathi R, Naorem Singh S, Dureja C, Haldar S, Mondal AK, Raychaudhuri S (2010) VopF, a type III effector protein from a non-O1, non-O139 *V. cholerae* strain demonstrates toxicity in *Saccharomyces cerevisiae* model. **J Med Microbiol.** 59(Pt 1):17-24.
- Minhas A, Biswas D and Mondal AK (2009) Development of host and vector for high efficiency transformation and gene disruption in *Debaryomyces hansenii*. **FEMS Yeast Res.** 9, 95–102
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- Aggarwal M, Radhakishan, K.V. and Mondal A. K. (2008). Creation of salt-insensitive 3'(2'), 5'-bisphosphate nucleotidase by modeling and mutagenesis approach. **Arch Biochem Biophys** 469, 174–183.
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#### Book Chapter:

- Aggarwal M and Mondal AK. (2009) *Debaryomyces hansenii*: A highly osmotolerant and halotolerant yeast. In Kunze G & Satyanarayana T (ed) *Yeast Biotechnology: Diversity and Applications*. Springer, 65-84.

#### List of Patents:

- Mondal AK, GS Prasad GS and Chakrabarti T. Strains of yeast *S. cerevisiae* and a process for the preparation of such strains of yeast. US Patent No 5693526, 1997
- Mondal AK, GS Prasad GS and Chakrabarti T. Novel strains of yeast of genus *Saccharomyces* species *cerevisiae* and a process for the preparation of such strains of yeast. (European Patent no. EP0798382 B1 dated 12/11/2003)