

Curriculum Vitae

Dr. Ashok Kumar Chauhan

(Senior Scientist)

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Employment:

Senior Scientist

Mar 2018-till date

Applied DNA Sciences India Pvt Ltd, Ahmedabad, Gujarat

Job profile:

- Working on DNA-based technologies that enable supply chain security, anti-counterfeiting and anti-theft technology
- DNA testing - based on genetic fingerprint for cotton type (e.g. Egyptian, Pima)
- DNA analysis of SigNature molecular tags in different samples using Real-time PCR
- Writes and revises SOP's, forms and other controlled documents as needed
- Train new laboratory personnel on techniques used within the laboratory
- Perform and direct testing on samples submitted to the laboratory according to SOP's set forth by Applied DNA Sciences, Inc. USA
- Plan and review the analysis of data
- Discuss the results of experiments with staff
- Generate laboratory reports and supporting documentation as it relates to all work within the laboratory
- Applied scientific principles to analysis, identification, and classification of customer materials related to investigative work.

Senior Fellow

Feb 2016- Mar 2018

Value Addition Research & Development division

National Innovation Foundation (NIF)-India

Ahmedabad, Gujarat

Job profile:

- Plan research strategies for value addition on Innovative Ideas, Scouting innovations and traditional medicinal knowledge from students and grassroots innovators

Education:

Ph.D. in Applied Biochemistry

2008-2015

(Thesis title: "*Isolation and Characterization of Microorganisms for Biodesulfurization of Crude Oil*")

(Biotechnology Division)

CSIR-Indian Institute of Toxicology Research-Lucknow
and Banaras Hindu University (BHU)

	Master of Science in Applied Biochemistry VBS Purvanchal University, U. P. India	2004 - 2006
	Bachelor of Science in Biology DDU Gorakhpur University, U. P. India	1999 - 2002
Awards/ Fellowship	Indian Council of Medical Research, Junior Research Fellowship-2008 Indian Council of Medical Research, Senior Research Fellowship-2010	
Experience:	CSIR-Indian Institute of Toxicology Research (CSIR-IITR) Senior Research fellow (SRF-ICMR) Dec 2010- Dec 2013 Junior Research fellow (JRF-ICMR) Dec 2008- Dec 2010	
	<ul style="list-style-type: none"> Isolated a desulfurizing bacterium <i>Gordonia sp.</i> IITR100 and PCR-amplification, cloning, DNA-sequencing and expression of desulfurizing (<i>dszA, B & C</i>) genes. Purification of expressed proteins through affinity chromatography. Benzonaphthothiophene (BNT) metabolism using recombinant <i>E.coli</i> and <i>Gordonia sp.</i> IITR100 as a biocatalyst and characterize metabolites with GC-MS 	
	Division of Microbiology, IARI-New Delhi Project fellow with <i>Dr. Radha Prasanna</i> April 2008- Sept 2008	
	Worked in project entitled “Development of DNA based molecular marker for identification of Microbial Consortium in Cyanobacteria”	
Technical: proficiency	Microbiology: <ul style="list-style-type: none"> Selective enrichment and screening of pure culture for desulfurization Bacterial identification Bacterial cell counting Liquid and solid culture of bacteria Toxicological studies on bacteria Antibiotic sensitivity assay Preparation of chemically competent cells Bacterial Lyophilization Bacterial transformation Microscopy Molecular biology: <ul style="list-style-type: none"> DNA sequencing, Shotgun sequencing on ABI 3100 Genetic Analyzer Primer designing PCR amplification, Gradient PCR, Multiplex PCR Real-Time PCR (RT-PCR) DNA-cloning, sub-cloning Restriction digestions, Ligations TA-Vector construction PCR-based mutagenesis DNA, Plasmid isolation from bacteria DNA-probe preparation by DIG-labelling for Southern hybridization Southern hybridization DNA gel analysis, Quantification and Extraction 	

Electrophoresis:

- Agarose gel electrophoresis
- Pulsed-Field Gel Electrophoresis (PFGE), for analyzing megaplasmiids
- DNA-PAGE
- SDS-PAGE

Analytical methods:

- Spectrophotometry
- Chromatography: Thin layer, Affinity, HPLC, GC

Scientific skills:

- Designing laboratory experiments and analyzing obtained research data
- Scientific writing
- Experience of analyzing GC-MS data
- Knowledge of NBA filing

Bioinformatics software

- DNA Sequence alignment and annotation
- DNA STAR, Version-5.57/5.52
- Nebcutter V2.0
- Chem Draw ultra 7.0
- MS office

Languages known:

- English, Hindi

DNA sequence submission in GenBank:

1. Submitted 11.5 kb DNA sequence of *Gordonia* sp. strain IITR100, dibenzothiophene desulfurization (*dszABC*) genes cluster and flanking regions at NCBI (GenBank accession no. - **KC693733.1**)
2. Submitted 8 kb DNA sequence of *Mycobacterium phlei* strain SM120-1, dibenzothiophene desulfurization (*dszABC*) genes cluster and flanking regions at NCBI (GenBank accession no. - **KP202690**)

List of publications and communications:

- **Chauhan, A. K.**, Ahmad, A., Singh, S. P., & Kumar, A. (2015). Biodesulfurization of Benzonaphthothiophene by *Gordonia* sp. IITR100. *International Biodeterioration & Biodegradation*. **104**:105-111
- **Chauhan AK**, Ahmad A, Singh SP, Kumar A (2015) Nucleotide sequencing of *dszABC* genes from a desulfurizing strain *Mycobacterium phlei* SM120-1. *International Journal of Applied Biochemistry* **3**:1-5.
- **Chauhan, A. K.**, Singh, S. P., & Kumar, A. (2014). Cloning, Sequencing and Characterization of the 'Desulfurization Gene Cluster' From an Isolated Strain *Gordonia* sp. IITR100. *Journal of Applied Biotechnology*, **2**(2), p65.
- Ahmad, A., **Chauhan, A. K.**, Javed, S., & Kumar, A. (2014). Desulfurization of thianthrene by a *Gordonia* sp. IITR100. *Biotechnology letters*, 1-6.

- Ahmad, A., **Chauhan, A. K.**, Kushwaha, H. N., Javed, S., & Kumar, A. (2014) Preferential desulfurization of dibenzyl sulfide by an isolated *Gordonia* sp. IITR100. **3 Biotech**, 1-7.
- Prasanna, R., Madhan, K., Singh, R. N., **Chauhan, A. K.**, & Nain, L. (2010). Developing biochemical and molecular markers for cyanobacterial inoculants. **Folia microbiologica**, 55(5), 474-480.

References:

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Dr. Ashwani Kumar

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