

CURRICULAM-VITAE

DIGVIJAY VERMA

ASSISTANT PROFESSOR

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Research area of interest : **METAGENOMICS**
: **MICROBIOMICS**
: **MICROBIAL DIVERSITY**
: **INDUSTRIAL ENZYMES**

POST-DOC EXPERIENCE

Jan 1, 2014 to March 31, 2015 : DBT-Research associate at CSIR-IGIB, New Delhi,
April 1, 2015 to August 20, 2015 : SERB-Young Scientist at CSIR-IGIB, New Delhi,
August 21, 2015 to November 22, 2017 : SERB-Young Scientist at NSIT, New Delhi

TEACHING EXPERIENCE

Jan 15, 2014 to May 15, 2014 : NSIT, University of Delhi, New Delhi
Jan 14, 2016 to November 22, 2017 : Gargi college, University of Delhi, New Delhi
November 23, 2017 to till date : DEM, Babasaheb Bhimrao Ambedkar University

Project handled: SERB funded project under SERB-Young Scientist Scheme (Ongoing 2015-18)

Project title: Diversity of oral microbiome of smokeless tobacco induced oral cancer patients as compared to tobacco chewers and non tobacco chewer healthy individuals: A metagenomic approach

EDUCATIONAL QUALIFICATION

2014 : DBT-Postdoctoral fellow at CSIR-IGIB, New Delhi
2013 : Ph.D. (**Microbiology**) from University of Delhi South Campus, New Delhi, India.
PhD title: Recovery and expression of thermo-alkali-stable xylanase gene using metagenomic approach
2005 : M.Sc. (**Biotechnology**), Department of Biotechnology, Chaudhary Charan Singh University, Meerut, India

ACADEMIC DISTINCTION

- 2005 : Department topper in M.Sc. (Biotechnology) and awarded **special eligibility certificate**
- 2006 : Qualified CSIR-NET-Lectureship exam conducted by Council of Scientific and Industrial Research (**CSIR**)
- 2007-2008 : **Senior research fellow (SRF)** from Indian Council of Agriculture research
- 2008-2012 : **Junior Research fellow (JRF)** and **SRF** from Department of Biotechnology (**DBT**)
- 2012-2013 : Qualified senior research fellowship (**SRF**) from **CSIR**
- 2014 : Qualified DBT- postdoctoral fellowship (**DBT-RA**)
- 2015 : Qualified **SERB** start up grant for **Young Scientist**
- 2017 : Best poster award at NSIT, University of Delhi during the conference **BESCON, 2017**

PUBLICATIONS

1. **Verma D** and Vasdev K **2018**. Understanding the potential of the human microbiome. J System Biology research (Accepted).
2. **Verma, D.** and Satyanarayana, T. **2013**. Improvement in thermostability of GH11 xylanases by site directed mutagenesis. *Ind. J. Microbiol. and Biotechnol*, 40: 1373-81.
3. **Verma, D.** and Satyanarayana, T. **2013**. Cloning and expression of xylanase gene in *Bacillus subtilis* and optimization of fermentation conditions for extracellular xylanase from recombinant strain. *Biotechnology Progress* 29: 1441-1447.
4. **Verma, D.,** Ashima, A., and Satyanaryana, T. **2013**. Thermo-alkali-stable endoxylanase of an extremely thermophilic bacterium *Geobacillus thermodenitrificans* TSAA1: Cloning, expression, characteristics and its applicability in generating xylooligosaccharides. *Applied Biochemistry and Biotechnology* 170: 119-130.
5. **Verma, D.,** Kawarabayasi, Y., Miyazaki, K. and Satyanarayana, T. **2013**. Cloning, expression and characteristics of a novel alkalistable and thermostable xylanase encoding gene (*MxyI*) retrieved from compost-soil metagenome. *PlosONE* 8 (1): e52459. doi:10.1371/journal.pone.0052459.
6. **Verma, D.** and Satyanaryana, T. **2012**. Cloning, expression and applicability of thermo-alkali-stable xylanase of *Geobacillus thermoleovorans* in generating xylooligosaccharides from agro-residues. *Bioresource Technology*, 107: 333-338.
7. **Verma, D.** and Satyanaryana, T. **2012**. Phytase production by the unconventional yeast *Pichia anomala*. in fed batch and cyclic fed batch fermentations. *African J Biotechnology*, 11: 13705-13709.
8. Kaur, P. **Verma, D.** and Satyanarayana, T. **2011**. Recycling of spent medium from *Pichia anomala* MTCC-4133 phytase fermentation for the production of useful microbial products. *Kavaka*, 39: 8-14.
9. **Verma, D.** and Satyanarayana, T. **2011**. An improved protocol for DNA extraction from alkaline soil and sediment samples for constructing metagenomic libraries. *Applied Biochemistry and Biotechnology*, 165: 454-464.

10. **Verma, D.** and Satyanarayana, T. **2014.** Novel alkalistable and thermostable xylanase encoding gene (*Mxyl*) retrieved from compost soil metagenome. In: Encyclopedia in metagenomics. **John Craig Venter Institute (JCVI).**
11. Kumar, V., **Verma, D.** and Satyanarayana, T. **2013.** Extremophilic Bacterial Xylanases: Production, Characteristics and Applications *Current Biotechnology.*
12. **Verma, D.** and Satyanaryana, T. **2012.** Molecular approaches for ameliorating microbial xylanases. *Bioresource Technology*, 117: 360-367.
13. **Verma D.,** and Satyanarayana, T. **2016.** Retrieval of xylanase genes from environmental metagenomes by metagenomic approaches. In: Biotechnology Progress and Applications, Eds: Saif Hameed and Zeeshan Fatima. pp: 19-34. (ISBN 978-93-5124-729-6 (Hardbound).
14. **Verma, D.** and Satyanarayana, T. **2015.** Cloning, expression and characteristics of a novel alkalistable and thermostable xylanase encoding gene (*Mxyl*) retrieved from compost-soil metagenome. In: Contemporary issues in Biotechnology.
15. **Verma, D.** and Satyanarayana, T. **2014.** Developments in the retrieval of novel biocatalysts by metagenomics approaches. Eds. Robert W. Li, In: Metagenomics: Methods, Applications and Perspectives.
16. **Verma, D.,** Kumar, V. and Satyanarayana, T. **2013.** Biotechnological applications of microbial xylanases. In: Productivity 54, pp.19-25.
17. Kumar,V., **Verma, D.,** Archana, A. and Satyanarayana, T. **2013.** Thermostable bacterial xylanases. Eds. Satyanarayana, T., Littlechild, J. and Kawarabayasi, Y. In: Thermophilic microbes in environmental and industrial biotechnology. pp. 813-857.
18. **Verma, D.,** Kawarabayasi, Y. and Satyanarayana, T. **2010.** Developments in metagenomic for accessing novel genes for useful microbial products. In: Applications in Microbiology (Ed. P.C. Trivedi), Aavishkar Publishers, Jaipur, pp. 27-57.

INTERNATIONAL RESEARCH EXPERIENCE

- Worked as Guest researcher under the project supported by **DST-JSPS** at Laboratory of Microbial Genetics, Dept. of Biosecience and Biotechnology, **Kyushu University, Fukuoka, Japan** under **Dr. T. Oshima** from 31st October to 1st, December, 2010.
- Worked as Research fellow under the project supported by **DST-JSPS** Enzyme Exploration Research Group of Institute for Biological Resources and Functions, **AIST, Tsukuba, Japan** under **Dr. Kentaro Miyazaki** from 1-29, November, 2009.

NATIONAL RESEARCH EXPERIENCE

- Attended **Hands-on Nextgen Sequencing and Bioinformatics workshop** held at Center for Cellular and Molecular Biology, **CCMB, Hyderabad** during 24-30th September, 2015.
- Worked as **SRF** at University of Delhi South Campus, New Delhi, India under **Prof. T. Satyanarayana** in a project entitled “Improving growth of marine Seabass and Tiger shrimp by ameliorating phosphate assimilation using cell bound phytase of the *Pichia anomala*” from 15, March, 2007 to 31, May, 2008.

Dr. DIGVIJAY VERMA