Dr. Naiem Harun Nadaf

ADDRESS FOR CORRESPONDENCE

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Education:

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- Shivaji University Kolhapur (Ph.D. April, 2012)
- Shivaji University Kolhapur (M.Sc. 2007)
 M.Sc. Microbiology, Department of Microbiology, First Class, Year: 2005-2007
- Shivaji University Kolhapur (B.Sc. 2005)
 B.Sc. Microbiology, Rajaram College, Kolhapur First Class, Year: 2002-2005

Work Summary

Teaching Experience:

- 10 years' experience as a Temporary Assistant Professor from July 2012 to till date *(11 month order each year).
- Three years' work experience as Teaching Assistant at Department of Microbiology, Shivaji University, Kolhapur (August 2008 to April 2011 During Ph. D. Studies). Other work Experiences:
- Microbiologist with 6 years hands on laboratory Experience
- Guided various projects of M.Sc. students on Phytochemistry, microbial color production, enzyme technology etc.
- > A team worker with quick learning ability, strong analytical skills and positive attitude.
- ▶ Worked as Quality Director for examination section (CAP section

Research technology skills:

- <u>Microbiology</u>: Various microbial culture techniques, cultivation of microorganism, antimicrobial assays
- <u>Fermentation technology:</u> fermentative production and purification of different microbial products including Enzyme, Proteins, organic acids, pigments, amino acid and sec. metabolites
- <u>Enzyme technology</u>: Extractions and purification of different enzymes (catechol 1,2 dioxygenase, Tannase, tyrosinase etc..) development and standardization of enzyme assays.

- <u>Protein purification</u>: standardization of protein purification protocols e.g. Protein extractions by solvent salt precipitation, purification by various column chromatography's (Ion exchange chromatography, bio-gel column chromatography etc..). Native and SDS-PAGE analysis for molecular weight determination.
- <u>Plant Phytochemistry:</u> Extraction and identification of phytochemicals from plants by Different Extraction methods
- Molecular Biology: DNA Purification, Electrophoretic Techniques
- <u>Instruments known:</u> Microscopy: Light Microscopy, Scanning Electron Microscopy, Spectroscopy: UV-visible Spectrophotometer, GC-MS, FTIR Chromatography: TLC, HPLC, X-Ray Diffraction, different column chromatographies.
- <u>Computer skills</u>: Platforms: Windows, Other: MS Office Suite, Internet,

Research Experience:

- April 2013 Onwards, Department of Microbiology, Shivaji University Kolhapur, Maharashtra, India, Assistant professor and Research: actively engaged in research in following research topics
- i. **Phytochemistry:** Study of bioactive phytochemical extraction form different plant sources and their use against Drug resistant pathogenic microorganism and exploration of their other potential application.
- ii. **Microbial Biodegradation**:Biodegradation of different Industrial Effluent and Its Toxicity Assessments
- iii. **Nanobiotechnology:** Green synthesis of Silver Nanoparticles and their application in various fields.
- iv. **Protein purification:** Purification and characterization of enzymes like protease, tannase etc..
- January 2008 April 2012, Department, Shivaji University Kolhapur, Maharashtra, India, Doctoral Reseach : Biodegradation of halogenated and non halogenated Polyphenolic compounds by *Rhodococcus spp*
- i. Biodegradation of toxic compounds: Conduct research to check the biodegradation of phenols and other polyphenolic compounds like tannic acid and lignins by *Rhodococcus* sp. NCIM 2891.
- ii. Medium Optimization and enzyme purification: medium optimization for the better degradation of these pollutants. Extraction and purification of enzymes responsible for the degradation.
- iii. Evaluation of degradation: Identification and evaluation of biodegradation of pollutants by using various techniques like GCMS, FTIR, UV-VIS Spectrophotometer, HPLC and HPLC technique.
- iv. Toxicity studies:Biodegradation of a Paper and Pulp Effluent and tannic acid by *Rhodococcus* sp. NCIM 2891 and Its Toxicity Assessments by using DNA damage protecting activity, Comet assay of plant and animal cells.

Publication (17):

- Nadaf, N.H. and Ghosh, J.S., 2011. Purification and characterization of catechol 1, 2dioxygenase from *Rhodococcus sp.* NCIM 2891. *Res J Environ Earth Sci*, 3(5), pp.608-613.
- Nadaf, N.H. and Ghosh, J.S., 2011. Production, purification and characterization of tannase from *Rhodococcus* NCIM, 2891. *Current Research Journal of Biological Sciences*, 3(3), pp.246-253.
- 3. Otari, S.V., Patil, R.M., Nadaf, N.H., Ghosh, S.J. and Pawar, S.H., 2012. Green biosynthesis of silver nanoparticles from an *actinobacteria Rhodococcus sp. Materials Letters*, 72, pp.92-94.
- Lokhande, P.S., Karadge, A.D., Patil, K.S., Nadaf, N.H. and Ghosh, J. S., Characterization of anti microbial activity of ethanolic and aqueous extract of the leaves of Saraccaindica against *E. coli* NCIM 2832 and *M. aureus* NCIM 5021. *International Journal of Pharma and Biosciences.* 4 (3): (B), 1344-1347
- Nadaf, N.H. and Ghosh, J.S., 2014. Biodegradation of a paper and pulp effluent by *Rhodococcus sp.* NCIM 2891 and its toxicity assessments. *CLEAN–Soil, Air, Water*, 42(4), pp.456-461.
- Otari, S.V., Patil, R.M., Nadaf, N.H., Ghosh, S.J. and Pawar, S.H., 2014. Green synthesis of silver nanoparticles by microorganism using organic pollutant: its antimicrobial and catalytic application. *Environmental Science and Pollution Research*, 21(2), pp.1503-1513.
- Nadaf, N.H., Gawade, S.S., Muniv, A.S., Waghmare, S.R., Jadhav, D.B. and Sonawane, K.D., 2015. Exploring anti-yeast activity of *Nigella sativa* seed extracts. *Industrial Crops and Products*, 77, pp.624-630.
- Waghmare, S.R., Gurav, A.A., Mali, S.A., Nadaf, N.H., Jadhav, D.B. and Sonawane, K.D., 2015. Purification and characterization of novel organic solvent tolerant 98 kDa alkaline protease from isolated *Stenotrophomonas maltophilia* strain SK. *Protein expression and purification*, 107, pp.1-6.
- 9. Pore, T.S., Khanolkar, A.B. and **Nadaf, N.H.**, 2016. Production, purification, identification of prodigiosin from *Serratia sp.* and its antimicrobial activity. *Research journal of life sciences, bioinformatics, pharmaceutical and chemical science, 1*, pp.1-12.
- Sonawane, K.D., Dandagal, N.R., Naikwadi, A.G., Gurav, P.T., Anapat, S.V., Nadaf, N.H., Jadhav, D.B. and Waghmare, S.R., 2016. Intergeneric fusant development using chitinase preparation of *Rhizopus stolonifer* NCIM 880. *AMB Express*, 6(1), p.114.
- Sitap, M.A., Tilawale, S.R., Nadaf, N.H. and Ghosh, J.S., 2015. Antimicrobial activity of the leaf extracts of Solanum melongena L.(The green variety). *Int J Pharm Res Rev*, 4(3), pp.1-5.
- Jalkute, C.B., Waghmare, S.R., Nadaf, N.H., Dhanavade, M.J., Jadhav, D.B., Pendhari, S.I., Patil, R.S. and Sonawane, K.D., 2017. Purification and characterization of SDS stable protease from *Bacillus safensis* strain CK. *Biocatalysis and agricultural biotechnology*, *10*, pp.91-95.
- 13. Nadaf, N.H., Parulekar, R.S., Patil, R.S., Gade, T.K., Momin, A.A., Waghmare, S.R., Dhanavade, M.J., Arvindekar, A.U. and Sonawane, K.D., 2018. Biofilm inhibition

mechanism from extract of *Hymenocallis littoralis* leaves. Journal of ethnopharmacology, 222, pp.121-132.

- 14. Waghmare, S.R., Randive, S.A., Jadhav, D.B., Nadaf, N.H., Parulekar, R.S. and Sonawane, K.D., 2019. Production of novel antimicrobial protein from *Bacillus licheniformis* strain JS and its application against antibiotic-resistant pathogens. *Journal of Proteins and Proteomics*, 10(1), pp.17-22.
- 15. Sonawane, K. D., Barale, S. S., Dhanavade, M. J., Waghmare, S. R., Nadaf, N. H., Kamble, S. A., ... & More, V. B. (2021). Structural insights and inhibition mechanism of TMPRSS2 by experimentally known inhibitors Camostat mesylate, Nafamostat and Bromhexine hydrochloride to control SARS-coronavirus-2: A molecular modeling approach. *Informatics in medicine unlocked*, 24, 100597.
- 16. Sonawane, K., Barale, S. S., Dhanavade, M. J., Waghmare, S. R., Nadaf, N. H., Kamble, S. A., ... & Naik, N. M. (2020). Homology modeling and docking studies of TMPRSS2 with experimentally known inhibitors Camostat mesylate. *Nafamostat and Bromhexine Hydrochloride to Control SARS-Coronavirus-2*.
- 17. Jagtap, R.R., Mali, G.V., Waghmare, S.R., Nadaf, N.H., Nimbalkar, M.S. and Sonawane, K.D., 2023. Impact of plant growth promoting rhizobacteria Serratia nematodiphila RGK and Pseudomonas plecoglossicida RGK on secondary metabolites of turmeric rhizome. *Biocatalysis and Agricultural Biotechnology*, p.102622.

Presentations in conferences (7):

- N.H.Nadaf and J.S.Ghosh: (2008), Degradation of aqueous phenolics by *Rhodococcus* NCIM-2891; Abstract: 6th National Conference of Indian Association of Applied Microbiologists, Velur, (Namakal) Tamil Nadu 638182, India.
- 2.N. H. Nadaf, J. S. Ghosh and S. P. Govindwar: (2007), Thermophilic Chitinase Activity from an Archeae; Abstract Recent Trends in Life Sciences with special reference to Environmental Biotechnology and Biochemistry, KRP KanyaMahavidyalaya, Islampur. Dist – Sangli 415409 India.
- S. S. Gawade, A. S. Muniv, S. R. Waghmare, K. D. Sonawane, N. H. Nadaf*: (2012) Antiyeast and antioxidant properties of *Nigella sativa* seeds extracts; Abstract National Seminar on medicinal plants: Status and Future, Department of Botany, Shivaji University, Kolhapur (MS) 416004 India.
- 4. S. G. Chougule, S. M. Shinde, N. H. Nadaf, K. D. Sonawane and S. R. Waghmare: (2012), Studies on phytochemical constituents of stem bark from *Carissa carandus* and its antibacterial activity Abstract National Seminar on medicinal plants: Status and Future, Department of Botany, Shivaji University, Kolhapur (MS) 416004 India.
- 5. S. R. Waghmare, N. H. Nadaf, D. B. Jadhav and K. D. Sonawane: (2013) Biosynthesis of silver nanoparticles by using *Candida utilis* and its applications against pathogenic bacteria as a bactericidal agent. Oral presentation in 33rd Annual Session of The Academy of Environmental Biology and "International Conference on Biosciences with Special Reference to Environmental Issues" (ICBEI-2013), organized by Department of Zoology, Shivaji University, Kolhapur, December 19-21, 2013.
- 6. V. S. Mane, M. J. Dhanavade, D. B. Jadhav, S. R. Waghmare, K.D. Sonawane, and N. H. Nadaf*: (2014) Antimicrobial Properties and Phytochemical Analysis of Areca Catechu Linn Abstract XII Conference of Society of Cytologists and National Symposium on

Challenges for Biologists in 21st Century Department of Botany, Shivaji University, Kolhapur (MS) 416004 India.

V. S. Mane, S. S. Patil, D. B. Jadhav, S. R. Waghmare, K.D. Sonawane, and N. H. Nadaf*: (2015) Evaluation of antimicrobial activity of organism isolated from nest of mud waspAbstract: State Level Seminar on Microbiology for a better tomorrow P.E.S's Shri. Ravi S. Naik College of Arts and Science, Farmagudi, Ponda Goa in Association with Microbiologists Society, India; 27, February 2015

Attended Conferences/ workshops (2):

- Attended one day international webinar entitled international webinar on Advances in life science (WebLS-2012) Department of Microbiology Shivaji University, Kolhapur (M. S.), India
- 2. Attended national conference entitled "Recent trends in life science" (RTLS-2011). Department of Biochemistry Shivaji University, Kolhapur 416004 (M. S.), India.

Personal Profile:

- Name : Dr .Naiem Harun Nadaf.
- Name of Father : Shri. Harun Husen Nadaf.
- Name of Mother : Mrs. Mumtaj Harun Nadaf.
- **Date of Birth** : 24th March, 1985.
- Gender : Male
- Nationality : Indian
- Marital status : Married
- Religion/ Caste : Muslim-Pinjari
- Languages Known : Marathi, Hindi, English

Dr. Naiem Harun Nadaf