

Personal Information:

Name : Dr. (Mrs.) VARSHA A. POTDAR

Maiden Name: Ms. VARSHA P. BHAVALKAR

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Passport Number: G7030719 valid up to 12th February 2018

Marital Status : Married

Date of Birth : 9th March 1965

Permanent Address: 4, Vasant Baug Society, Bibvewadi Road Pune 411037

Academic qualifications: M.SC. Ph D.(Chemistry) Pune University

Membership for National: NIL

International bodies : ASPMV and ISID

Employment details : In all 20 yrs Research experience

- 1987 to 1990 – National Chemical Laboratories, Pune
As Project assistant on project
“Synthesis of polycarbonate via non-Phosgene route.”
- 1991 to 2000 - National Institute of Virology, Pune as
Technician in Department of Retrovirology
- 2000 to till date National Institute of Virology, Pune as
Research assistant in Influenza Group
- May 2008 till date working as Senior research
Scientist on project Multisite monitoring of influenza
viruses in India

Awards:

Awarded **young scientist Award for the year 2005**, fellowship given by **ISID International society for infectious diseases, USA.**

Visited Health Protection Agency, center for Infection Colindale UK, for three months (9th September to 1st Dec 2005) successfully completed the project "Application of sensitive methodologies for detection of transmitted HIV drug resistance K 65 R mutation of POI region." Special techniques learnt and used were limiting dilution & pyrosequencing.



Ph.D Dissertations:

Doctorate degree: "Natural Infection of Non Human Primates by Retroviruses"

As a simian species, the langurs are not known to harbor simian retroviruses, except for one report on a simian Type D endogenous retrovirus from spectacled langur (*Trachyphecus obscurus*) from Malaysia. This study describes for the first time natural infection of common hanuman langur (*Semnopithecus entellus*) from India by a novel simian retrovirus (SRV). The new SRV is phylogenetically related to but distinct from the three molecularly characterized serotypes, SRV1-3, of the five known serotypes of SRVs based on sequence analyze from 3' *orf* and *env* region of the viral genome. The novel SRV isolated from the Indian Hanuman langur is provisionally named SRV 6.

ISID fellowship Project: "Application of sensitive methodologies for detection of Transmitted HIV drug resistance"

Optimization of the limiting dilution method for single genome amplification and sequence analysis by Pyrosequencing method, K65 R pol mutant was used. Using Pol region specific primers and conventional sequencing, K 65 R mutants have been identified which is responsible for drug resistance. This K65 R and wild type PCR product has been cloned in p GMT easy vector. Wild and mutant plasmids were mixed together to get 5% of wild to mutant mixtures. 5% mixture was used for further standardizing Limiting dilution protocol to achieve single genome amplification. Amplified Single genome was characterized for wild or mutant type using Pyrosequencing method.

Work experience:

NIV is India's premier institute engaged in research on viral infections of public health importance. The research activities cover the gamut of virology including investigation of outbreaks, isolation and characterization of the etiological agent, understanding the mechanism of spread of the disease through vectors.

Current job responsibilities: overall in charge of molecular characterization and diagnosis of influenza viruses with special reference to new swine influenza.

Preparedness for H1N1 pandemic: Training for H1N1 Detection of A (H1N1) by PCR (National regional labs and 11 South East Asia)

As per CDC protocol till date 12000 samples were tested for swine influenza (4 targets) by real time PCR. Six isolates were fully sequenced to see the pathological markers. 57 H1N1 isolates were screened for anti viral drug susceptibility.

CDC (Center for Disease Control and Prevention) funded Project entitled "Multi-site monitoring of Human Influenza virus Phase-I"

Monitoring genetic variations in circulating influenza viruses has been coordinated by the National Institute of Virology, Pune, India, as referral center. Genetic characterization of influenza viruses and its drug susceptibility to amantidine and Osaltamivir. HA 1 gene sequencing and its phylogenetic relationship with vaccine component.

NIV as a nodal Gov agency to response for emerging viral out breaks so recent H5N1 outbreaks (Navapur, Jalgon and Manipal) were characterized with full genome sequencing and phylogenetic analysis. Responsible for software development (virus limes) and compilation of molecular as well as surveillance data. Influenza molecular standard operating protocols (SOP's) and Technical manual were developed and implemented. Regularly participated in WHO EQA programme for influenza virus.

Guided for MSc virology projects :

- ❖ Worked as paper setter and examiner for M. Sc. Virology course conducted by National Institute of Virology, Pune in affiliation with University of Pune
- ❖ Scientific Guidance provided to M Sc virology project student Three project for the year 2007-2009.
- ❖ Responsible for delivering lectures for M SC virology course for other respiratory viruses
- ❖ Responsible for delivering orientation lectures about NIV as institute which includes guest from National and international agencies

Trainings undertaken:

- WHO sponsored training on Influenza antiviral susceptibility testing at WHO CC, NIMR London UK from **31st March to 11th April 2008**
- Genetic population training for influenza H3 virus at Department of Zoology of Cambridge University from **14th to 18th April 2008 London UK**
- Attained CDC NIV conducted Real time workshop held at MCC Pashan from **8-12 October 2007**

- Advanced Level Real time PCR Course organized by the Molecular Biology Technical Support and Training Center Applied Biosystems, **27- 28 September 2007** Gurgaon (Haryana) New Delhi
- Successfully completed the "Preliminary training for working in High Containment Laboratory at MCC from 9th to 11th March 2005
- Attended the training course entitled " Animal Tissue Culture with special reference to Virology "during the period 1st to 30th June 2004
- Attended the workshop on "Ethics & guidelines in animal experimentation" held At National Institute of Virology, Pune. 20 Dec 2002.
- Workshop on orientation course on Bio-informatics held at Pune University 12-13 March 1997
- WHO sponsored workshop on PCR techniques for South East Asian countries held at NIV 1992

Conferences, Seminar and meetings attended

- Participated as expert faculty member in "Inter-country Workshop on PCR Technology, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, 26-30 July 2010 (WHO organization)
- Poster presented entitled "Neuraminidase sub typing and drug resistance among influenza A viruses circulating in western India at 14th International Congress on Infectious Diseases MARCH 9-12, 2010 • MIAMI, FLORIDA • USA
- Participated as a expert faculty member in Workshop on PCR based diagnosis of influenza A (H1N1), South East Asia 8th to 12th June 2009 at Bangkok Thailand (WHO sponsored)
- Attended Emory university onsite Biosafety level 3 Safety training programme jointly conducted by NIV and Emory university USA at MCC **Pune 16- 20th**
- WHO workshop on straitening network of influenza in South East Asia **Pune 13-16 May 2008**
- Dr Chadha presented poster entitled "Genetic Characterization of Influenza viruses isolated in Western India, 2005-2007". **V A Potdar**, SR Waregaonkar, **MS Chadha**, AC Mishra, at International Conference on Emerging Infectious Diseases, **16-19th March 2008**.
- Ms SR Waregaonkar, presented poster entitled "Genetic analyses of influenza B viruses in India". Waregaonkar S.R. **Potdar V. A.**, Joshi A. A., Broor S. Gunasekharan P, T.N. Naik., Biswas D, Chadha M. S, Mishra A.C. at International conference on viral diseases held at **New Delhi from 11-14 Dec 2007**
- International symposium on Avian Influenza: Epidemiologic, Basic and Applied Research **New Delhi-Oct 29-31 2007**
- Options for control of Influenza VI, Poster presentation on Genetic analysis of A(H3N2) from India, **Toronto Canada 17th June to 23rd June 2007** Potdar VA., Waregaonkar SR., S Broor., P Gunasekharan. TN Naik , MS Chadha, AC Mishra
- DR. K Ray presented poster entitled 'Characterization of the complete genome of H5N1 influenza virus isolates from the poultry outbreak in 2006 in India: Support for involvement of single strain' in Options for the control of Influenza VI at Toronto (Ontario, Canada) during 17-23 June, 2007. **K Ray, VA Potdar**, SS Cherian, SD Pawar , SM Jadhav , Waregaonkar S.R., AA Joshi, AC Mishra
- Presented paper entitled '**Genetic variation of Influenza viruses in India.**' in 7th Asia Pacific congress of Medical Virology, at New Delhi during **13-15 November 2006**. Yeolekar L. R., Waregaonkar S.R., **Potdar V A.**, Broor S., Gunasekharan P. , Biswas D.
- 7th Asia pacific conference on virology, oral presentation on preparedness for detection of human Avian influenza A (H5N1), New Delhi **13th to 15th December 2006**
- Who expert committee meeting on standardizing protocols for avian influenza detection **7-8 May 2006**
- Origins, transmission resistance& susceptibility to AIDS and related viruses, Royal Society of Medicine, London UK 7th **November 2005**
- 9th Annual Resistance Meeting How to interpret & use HIV sequencing data Church House conference centre, London UK **14th September 2005**
- Participated as an organizing committee member in "International Symposium on Emerging Viral infections, NIV, Pune, **October 11-13, 2004**
- Participated as an organizing committee member in MALAI organized by NIV from **3-5 Dec 2003**
- Participated in "The 2nd National HIV Medicine Update" held at Hotel Le Meridien, Pune on **11th to 12 Jan 2003**. Organized by Ruby Hall Clinic, Pune.

- International conference on AIDS held at Mumbai in the year **Jan 2002**
- 69th Annual meeting of The Society of Biological Chemists India Science City Calcutta 7-9 **Dec 2000**
- XXIV Indian Association of Medical Microbiology held at Belgaum **15–17 Nov 2000**
- 2nd national Conference on HIV/AIDS held at Ahmedabad **6 -7 Feb. 1999.**
- First international conference on AIDS India 2000 held at Chennai India **27Nov –1 Dec 1997**
- Annual Congress of Medical Microbiology at Calcutta, India **18-22 Dec 1993**
- IX Indian Microbiology Congress held at Aurangabad **Dec 1992**

Publications

International Journals:

1. Mishra AC, Chadha MS, Choudhary ML, **Potdar V.** Pandemic influenza (H1N1) 2009 is associated with severe disease in India. Plos one 2010:
2. **Potdar V,** Chadha MS, Jadhav SM, Mullick J, Cherian SS, Mishra AC. Genetic Characterization of the Influenza A Pandemic (H1N1) 2009 Virus Isolates from India. PLoS One 2010: 5(3); 1-8. e9693.
3. K. Ray, **V. A Potdar,** S. S Cherian, S. D Pawar,; S. M Jadhav, S.R Waregaonkar, A. A Joshi, A.C Mishra **Virus Genes 2008 DOI 10.1007/s11262-007-** Characterization of Influenza A- H5N1 virus Supports involvement of a single Strain in India during the 2006 poultry Outbreak
4. Nandi J.S., **Potdar V. A.,** et al, **virology, 2003, 311,192-201,** Polymorphism of env gene of SRV6 Naturally infecting Hanuman Langur (*Semnopithecus Entellus*) from two different geographical regions of India.
5. J. Nandi **V. Bhavalkar-Potdar,** et al, **Virology, 2000, 277,6-13,** A Novel type D Simian Retrovirus naturally infecting the Indian Hanuman langur
6. A Elavia, J. Nandi, **V. Bhavalkar-Potdar,** et al **Vox sang 1995: 69, 23-26.** Performance evaluation of particle agglutination test for Ab comparison with enzymes immunoassay
7. J. Nandi, H. Kamat, **V. Bhavalkar,** K. Banarjee, **“Sexually Transmitted Diseases”, 1994: 21,845-846.**Detection of HIV Ab among homosexual men from Bombay
8. J. Nandi, **V. Bhavalkar** et al, **Vox sang, 1994, 67, 406–408** Detection of HIV-1, HBV and HCV antibody in blood donors from Surat, western India,

National Journals:

1. J. Nandi, **V. Bhavalkar,** et al, **The National Medical Journal of India, 1993,6, 156 159.**Detection of HIV infection among the spouses of asymptomatic sero-positive individuals by PCR.
2. LR Yeolekar, P.B Kulkarni, M.R Khude, **V.A. Potdar,** S.R. Waregaonkar, A Y Joshi **Current science vol 99, No 5 sep 2008** Influenza Virus Infection during pilgrimage at Pandharpur,
3. Waregaonkar S. R., **Potdar V. A.,** Joshi A. A., Broor S., Gunasekharan P., T.N.Naik., Biswas D., Chadha M. S., Mishra A.C. **Indian journal of Virology** 2008 vol. 19 issue, 1 Genetic analysis of influenza B viruses in India.

REFERENCES:

1. **Dr. M. S. Chadha Dep. Director, & HOD Influenza Group,** National Institute Of Virology, 20-A, Ambedkar Road, Pune-411011, Tel:020-26127301 ext: 335,
2. **Dr. (Mrs.) V.A. Arankale- Dep. Director, HOD Hepatitis Group** National Institute Of Virology, 20-A, Ambedkar Road, Pune-411011, Tel:020-26127301
3. **Dr A C Mishra-Director, National Institute Of Virology,** 20-A, Dr. Ambedkar Road, Pune - 441001 (M.S.) INDIA.Tel:+91-020-6127301 ext-200

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