

Curriculum Vitae

1. Name: Dr. Bibhuti Bhusan Pal

2. Date of birth: 5th January 1961

3. Institution: ICMR-Regional Medical Research Center Chandrasekharpur, Bhubaneswar-23,
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4. Present Address: Dr. Bibhuti Bhusan Pal, PhD, FZSI,
Ex-Scientist-G (Director Grade Scientist),
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5. Whether belong to SC/ST: No

6. Educational Qualification:

Examination (Year)	Name of the University	Subjects taken	Class/Division
B.Sc. (1980)	Utkal University Bhubaneswar	Chemistry, Botany, Zoology	1 st Class with distn.
M.Sc. (1982)	Utkal University Bhubaneswar	Zoology special paper- Cytogenetic	1 st Class
Ph.D. (1992)	Utkal University Bhubaneswar	“Pesticide induced mammalian chromosome aberration”	

7. Professional career/ position held:

Employer	Designation	Experience
Secretary, B.R. Sc. College, Cuttack	Lecture in Zoology	Lectureship, July ‘83- Oct.’84
Dr. S.P Bhunya, Reader Principal Investigator U.G.C scheme, Utkal University, Bhubaneswar	Junior Research Fellow	Effects of pesticides on mammalian chromosomes Oct.’84-dec.’85
Director, Regional Medical Research Centre, Bhubaneswar-23, Odisha	Research Assistant	Microbiology, Dec.’85- May’95. Mycobacterial Mutagenesis, Cryptosporidiosis related to

		diarrhoea, HIV /AIDS
Director General, ICMR, New Delhi, RMRC, Bhubaneswar	Research Officer	Pathology and Microbiology Division. May, '95-Sep-2001, Diarrhoeal disorders study, HIV/AIDS
Director General, ICMR, New Delhi, RMRC, Bhubaneswar	Senior Research Officer	Pathology and Microbiology Division. Sep'2001-August, 2006, Diarrhoeal disorders study, HIV/AIDS
Director General, ICMR, New Delhi, RMRC, Bhubaneswar	Assistant Director (Scientist – D)	Microbiology Division. Sep '2006-Aug-2010, Diarrhoeal disorders study,
Director General, ICMR, New Delhi, RMRC, Bhubaneswar	Deputy Director (Scientist – E)	Microbiology Division. Sep 2010- Aug, 2015, Diarrhoeal disorders study,
Director General, ICMR, New Delhi, RMRC, Bhubaneswar	Senior Deputy Director (Scientist – F)	Sep 2015- Aug 2021, Diarrhoeal disorders study
Director General, ICMR, New Delhi, RMRC, Bhubaneswar	Director Grade Scientist, Scientist-G	Microbiology Division. Sept, 2021 to 31.01.2023, Diarrhoeal disorders study

8. Research Specialization (Major Field of scientific Research):

- Molecular epidemiology of Diarrhoeal Disorders with special reference to cholera in Odisha.
- Sero- surveillance of HIV infection in different risk group population in Odisha.
- Mycobacterial Mutagenesis: Isolation of mycobacterial mutants by NTG treatments and to find out their auxotrophic requirements and their stability.

9. Awards/Prize/Certificate etc won.

- Certificate: Received letter of appreciation from Secretary cum Commissioner of Health, Odisha for notable work on Prevention and control of diarrhoeal disorders in the tribal areas of Odisha**
- Received the R.K. Rath award (best paper presentation) at 27th annual conference of IAPM (Orissa chapter) on 9.9.2000. The paper was – “Molecular epidemiology of *V. cholerae* associated with outbreak of diarrhoeal disorders following the super cyclone in Orissa.”**
- Received the F.Z.S.I. Award from the Zoological society of India during “29th All India Congress of Zoology” held on June 2017 at ICAR-CIFRI, Barrackpore, Kolkatta-120, India as a Fellow of the Society, duly elected, as laid down by the Constitution.**
- Zoological society of India felicitated for the outstanding work in life science during its 31st “All India Congress of Zoology” held at Agartala on 15th January, 2019.**
- Received best paper award in Bacteriology in IJMM, 2020 during Microcon, 2021 held at Guwahati.**

10. Training programme:

1. ICMR WHO workshop on “Biomedical Communication” at Regional Medical Research Center (ICMR) , Bhubaneswar , India , 28th Sept to 1st Oct , 1993.
2. Attended the NICED/JICA Training programme held at Kolkata on diarrhoeal disorders during Nov-Dec, 1999.
3. Invited and attend the JICA Training programme held at Kolkata on diarrhoeal disorders during 2007.
4. WHO fellowship on introductory course on, Field Epidemiology, Thailand, June, 2009

11. National/International Conferences/Seminars etc. attended:

- a. **National**: Attended many national conferences in different parts of India from 1986 to 2016.
 1. Attended 7th All India Congress of Cytology & Genetics, Dec., 1990 at Kalyani University and paper presented entitled “Mutagenicity testing of Blitox (*Copper Oxychloride*) *in vivo* mouse system”.
 2. Attended AIDS Awareness camp at Gania during 1995.
 3. Attended 19th National Congress of IAMM during 5th to 8th Oct. 1995 at JIPMER, Pondicherry and presented a paper entitled “Sero- prevalence of HIV infection among the jail inmates in Odisha”.
 4. Attended the National Seminar cum Workshop on “Current trends in the Etiological Diagnosis of Diarrhoeal diseases”, 14th-15th Feb., 1996 at IBMS, Madras.
 5. Attended National Symposium on Rapid diagnosis of Infection in Imuno-compromised Host and Presented a paper “Drug users-A New risk group for HIV Infection in Odisha” at AIIMS during 1997.
 6. Attended workshop on HIV/AIDS surveillance conducted by NACO, New-delhi in Calcutta during 13-14th Feb., 1997
 7. Attended 39th annual conference of Association of Microbiologists of India held at Mangalore during 5-7th Dec., 1998 and presented a paper entitled “Bacteriology of acute diarrhoeal cases- A hospital-based study”.
 8. Attended workshop on HIV/AIDS organized by CRPF, BBSR and talked on Lab diagnosis of HIV/AIDS 16th -19th Dec, 1998.
 9. Attended National conference of Laboratory medicine and workshop on Gene amplication techniques in disease diagnosis from 12th -25th Jan., 2000 at AIIMS, New Delhi, Presented a paper entitled “Emergence and re-emergence of *V.cholerae* O139 in Orissa.”
 10. Attended 28th Annual conference of Orissa Chapter of IAPM at BBSR on 9th Sept., 2000 and presented a paper on “Molecular epidemiology of *V.cholerae* associated with outbreak of diarrhoeal disorders following the super cyclone in Orissa” **and received the best paper presentation “Dr R.K.Rath Award”.**
 11. Attended 29th Annual conference of Orissa Chapter of IAPM at MKCG, Berhampur on 8th Sept. 2001.

12. Invited to talk on Cholera and its fatality in Orissa, at annual conference of Zoological society of Orissa on role of zoology in Bioterrorism at Utkal University, BBSR, 30th-31st Dec.,2001.
13. Attended 29th Annual conference of the Indian Immunology society and Symposium on Immunoparasitology Nov.,2002.
14. Attended the workshop “Biodiversity for generating wealth and biotechnological intervention” organized by ILS, BBSR,2004.
15. Attended 30th annual conference of IAMM held at Nagpur and presented a paper entitled “Switching over of Ogawa to Inaba serotype of *V.cholerae* causing outbreak of cholera in Orissa, India” in 2006.
16. Attended the National Seminar on “Medical Anthropology in India- Bio-cultural prospective” and presented the paper on “Socio-Cultural Behaviour associated with cholera outbreak in the tribal area of Orissa” 24-25th March, 2011 Utkal University, Vani Vihar, Orissa.
17. Attended Annual Conference of The Indian Society for Malaria and other Communicable Disease & the Indian association of epidemiologist,15-17th April,2011 RMRC, BBSR, Orissa.
18. Invited and attended National seminar on “Trends in microbial bioremediation of environmental soil”, 24-25th Sept., 2011, OUAT, BBSR, Orissa.
19. Delivered as guest lecturer in the 51st annual conference of National Academy of Medical sciences on Emerging *V.cholerae* and drug resistant in cholera at SUM hospital, BBSR, 14-16th Oct, 2011
20. Attended the workshop organized by Director of water management Bhubaneswar on “Water quality issues, opportunities and socio-cultural concerns of water use in agriculture” on 7th Aug, 2013 and presented the key note address on “Overall impacts of using multi quality water sources on soil-water-plant-animal in continuum”.
21. Attended the 11th annual conference of the Lymphology society of India organized at RMRC, BBSR, from 13.12.2013-14.12.2013 and presented the paper entitled “Incidence of different bacterial pathogens associated with filarial patients from coastal areas of Odisha.”
22. Addressed the college lecturers in a refresher course program “Cholera :present scenario” on 6.03.2014 at Post graduate Dept. of Zoology, Utkal University, Vani Vihar, BBSR.
23. Attended meetings and presented the Odisha data in the meeting on evidence of cholera in India, organized by THSTI, Gurgaon, Delhi on 22nd November, 2016
24. Attended and presented the paper on “Outbreaks/ Epidemics of cholera in the tribal areas of Odisha” the 40th Annual Conference of Indian Association of Medical Microbiologists (MICROCON) on 23rd-27th November, 2016, PGIMR, Chandigarh.
25. Attended and presented the paper on “Sequential outbreaks of cholera due to Haitian variants of *V. cholerae* O1 in Odisha” the 41st Annual Conference of Indian Association of Medical Microbiologists (MICROCON) on 22nd -26th November, 2017, RIMS, Ranchi.
26. Attended and presented the paper on “Sequential outbreaks of cholera due to Haitian variants of *V. cholerae* O1 in Odisha” the 42nd Annual Conference of Indian Association of Medical

Microbiologists (*MICROCON*) on 28th November -2nd December, 2018, NIMHANS, Convention Centre, Bengaluru.

27. Attended and presented the paper on “Prevention and control of cholera in Odisha, India: A way forward” the 31st All India Congress of Zoology and National Seminar 2019 held at College of Fisheries, CAU, Lembucherra (Agartala), Tripura on 15-16th January, 2019.

28. Attended and chaired session at conference on “1st Indian fisheries outlook 2022” at CIFRI, Barrackpore, Kolkata on 22-24th March 2022.

(b) International:

1. Attended International conference on Opportunistic pathogens in AIDS at AIIMS, New Delhi and presented a paper on “Epidemiology of HIV/AIDS in Orissa” in 2008.
2. Attended the 13th ISID, international conference on enteric infectious diseases, 4-9 April, 2009, Kolkata, organized by US-Japan collaboration with NICED, Kolkata and presented a paper entitled “El Tor variants of *V.cholerae* O1 with *ctxB* gene of the classical strain causing epidemics of several cholera during 2007 in Orissa, India- A Potential threat”.
3. Delivered A guest lecturer at International Seminar on “Environmental occupational Health: Issue and challenges” on Environment and water borne diseases organized by Asian Institute of Public Health, 16th Nov., 2011 at Bhubaneswar.
4. Attended the 3rd International colloquium on Health system and control of neglected diseases in Asia from 21-23rd Nov., 2013 at Institute of Public health, Bengaluru; presented the paper “Reemergence of El Tor variant *V.cholerae* O1 causing cholera epidemic during 2010 in the tribal area of Odisha.”
5. Attended the 14th International Conference on Diarrheal Disease & Nutrition (ASCODD) from 30th Oct-1st Nov., 2017 at Kochi, India; presented the paper “Endemicity of cholera in Odisha, India.”

12. Membership of National and International Bodies:-

National: 1. Live member of Zoological society of India.

2. Live member of Indian Association of Medical Microbiologist (No.1669).

13. List of publications:

(a) International:

1. Pal BB, Samal D, Nayak SR, Pany S. Spectrum of *ctxB* genotypes, antibiogram profiles and virulence genes of *Vibrio cholerae* serogroups isolated from environmental water sources from Odisha, India. BMC microbiology. 2023 Dec;23(1):1-3.
2. Malick, R.C., Das, B.K., Pal, B.B., Bera, A.K., Maurye, P. and Sahoo, A.K., 2022. Molecular identification, whole-cell protein profiling, antibiotics sensitivity and pathogenicity of *Chryseobacterium gleum* recovered from diseased fishes of freshwater wetlands in India. *Aquaculture*, p.738411.

3. Pany S, Sharma BM, Sen SK, **Pal BB***. Association of PVL Gene in MSSA and MRSA Strains among Diabetic Ulcer Patients from Odisha, India. *The International Journal of Lower Extremity Wounds*. 2022
4. **Pal BB*, Behera DR, Nayak SR, Nayak AK. Origin and Dissemination of Altered El Tor *Vibrio cholerae* O1 Causing Cholera in Odisha, India: Two and Half Decade's View. *Frontiers in microbiology*. 2021;12.**
5. **Pal BB***, Nayak SR, Nayak AK, Behera DR, Pany S, Pati S. Variants of *ctxB* alleles of *Vibrio cholerae* O1 caused sequential cholera outbreaks in the tribal areas of Odisha, India. *Journal of water and health*. 2021;19(6):1021-9.
6. **Behera DR, Nayak AK, Nayak SR, Nayak D, Swain S, Maharana PK, Biswal B, Pany S, Pati S, Pal BB*. Genomic diversities of *ctxB*, *tcpA* and *rstR* alleles of *Vibrio cholerae* O139 strains isolated from Odisha, India. *Environmental Microbiology Reports*. 2021 Oct 19.**
7. Pany S, Sen SK, Prasanna G, Pati S, **Pal BB***. Spectrum of Micro-biota associated with patients suffering from diabetic ulcer patients. *Journal of Pure and Applied Microbiology*. 2021;15(2):598-603
8. **Pal BB***, Mohanty A, Biswal B, Nayak SR, Das BK, Lenka PP. Haitian variant *Vibrio cholerae* O1 Ogawa caused cholera outbreaks in Odisha. *Indian Journal Of Medical Microbiology*. 2021;39(4):513-517.
9. **Nayak AK, Nayak SR, Behera DR, Pal BB*. Dissemination of *Vibrio cholerae* O1 isolated from Odisha, India. *Environmental Microbiology Reports*. 2021;13(3):355-63.**
10. **Pal BB***, Nayak AK, Nayak SR. Emergence and spread of different *ctxB* alleles of *Vibrio cholerae* O1 in Odisha, India. *International Journal of Infectious Diseases*. 2021;105:730-2.
11. **Pal BB***, Nayak SR, Biswal B, Das BK. Environmental reservoirs of *Vibrio cholerae* serogroups in the flowing freshwater environs from the tribal areas of Odisha, Eastern India. *Environmental Microbiology Reports*. 2021;13(2):119-125.
12. **Pal BB***, Behera D, Nayak SR, Nayak AK, Biswal B, Pati S. Dissemination of Polymyxin B Sensitivity in El Tor *Vibrio cholerae* O1 Strains in Odisha, India. *Japanese Journal of Infectious Diseases*. 2021;74(2):169-171.
13. **Nayak SR, Nayak AK, Biswal BL, Pati S, Pal BB***. Spread of Haitian variant *Vibrio cholerae* O1 causing cholera outbreaks in Odisha, India. *Japanese Journal of Infectious Diseases*. 2021;74(2):137-143.
14. **Nayak SR, Nayak AK, Biswal BL, Jena RP, Samal SK, Pal BB***. Incidence of bacterial enteropathogens among diarrhea patients from tribal areas of Odisha. *Japanese Journal of Infectious Diseases*. 2020;73(4):263-267.
15. **Bhattacharya M, Malick RC, Mondal N, Patra P, Pal BB, Patra BC, Das BK.** Computational characterization of epitopic region within the outer membrane protein

- candidate in Flavobacterium column are for vaccine development. *Journal of Biomolecular Structure and Dynamics*. 2020;38(2):450-459.
16. Mohanty A, **Pal BB***. Prevalence of Panton Valentine Leukocidin (PVL) gene of *Staphylococcus aureus* Isolated from Different Sepsis Cases in Odisha, India. *Indian Journal of Public Health Research & Development*. 2019;10(4).
 17. **Pal BB***, Mohanty A, Biswal B, Nayak SR. New variant of *Vibrio cholerae* O139 in Odisha, India. *Journal of clinical microbiology*. 2019;57(5):e01877-18.
 18. Biswal B, Kar SK, **Pal BB**, Dwibedi B. Bacterial and Viral Etiology of Acute Respiratory Illness among Children from two Different Geographical Localities of Odisha. *Journal of Pure and applied Microbiology*. 2018 Jun;12(2):993-1000.
 19. Mohanty A, Mohapatra K, **Pal BB***. Isolation and Identification of *Staphylococcus aureus* from Skin and Soft Tissue Infection in Sepsis Cases, Odisha. *Journal of Pure and applied Microbiology*. 2018;12(1):419-424.
 20. **Pal BB***, Nayak SR, Khuntia HK. (2018). Epidemiology and antibiogram profile of *Vibrio cholerae* isolates between 2004-2013 from Odisha, India. *Japanese journal of infectious diseases*. 2018;71(2), 99-103.
 21. **Pal BB***, Khuntia HK, Nayak SR, Mohanty A, Biswal B. *Vibrio cholerae* O1 Ogawa Strains Carrying the ctxB7 Allele Caused a Large Cholera Outbreak during 2014 in the Tribal Areas of Odisha, India. *Japanese journal of infectious diseases*. 2017;70(5), 549-553.
 22. Kar SK, **Pal BB***, Khuntia HK, Samal SK, Khuntia CP, Achary KG. Emergence and spread of Tetracycline resistant *V. cholerae* O1 El Tor variant during 2010 cholera epidemic in the tribal areas of Orissa, India. *International Journal of Infectious Disease*. 2015;33:e45-e49.
 23. Kumar P, Rao GN, **Pal BB**, Pal A. Hyperglycemia-induced oxidative stress induces apoptosis by inhibiting PI3-kinase/Akt and ERK1/2 MAPK mediated signaling pathway causing down regulation of 8-oxoG-DNA glycosylase levels in glial cells. *International Journal of Biochemistry and cell biology*. 2014;53:302-319.
 24. Khuntia H.K, **Pal .B .B**, Samal S.K, and Kar S.K. (2013) Rapid spread of *Vibro cholera* O1 El Tor variant in Odisha, Eastern India, in 2008 and 2009. *Journal of clinical Microbiology*. Vol 51(6), 1909-1912.
 25. **Pal BB***, Khuntia HK, Samal SK, Kerketta A.S, and Kar SK. (2012). Large outbreak of cholera cause by El tor variant O1 in the Eastern coast of Orissa, India during 2009. *Epidemiol Infect.* 1-8.
 26. Dash, D.P., Das, B.K., Marhual, N., Samal S.K, **Pal, B.B** (2012). In vitro antibacterial activity of aquatic weed *spirodellapolyrrhiza* to human bacterial pathogens. *e-planet.*; 10 (2): 17 – 21.

27. **Pal, B.B.,* H .K. Khuntia, S.K. Samal, S.K. Kar and B. Pattnaik. (2010) Epidemics of severe cholera caused by El Tor *Vibrio cholerae* O1 Ogawa possessing the *ctxB* gene of the classical biotype in Orissa, India. *International Journal of Infectious Disease*. vol.14, 384-389.**
28. Khuntia HK, Samal SK, Kar SK and **Pal BB*** (2010). An Ogawa Cholera Outbreak 6 Months after the Inaba cholera outbreaks in India, 2006. *Journal of Microbiology, Immunology and Infection*.
29. Das, A., Manickam, P., Hutin, Y., Pattanaik, B., **Pal, B.B.**, Chhotray, G.P., Kar, S.K. and Gupte, M.D. (2009) Two sequential outbreaks in two villages illustrate the various modes of transmission of cholera. *Epidemiol Infect* 137, 906.
30. Das A, Manickam P, Hutin Y, **Pal BB**, Chhotray GP, Kar SK, and Gupte MD. (2009). An Outbreak of Cholera Associated with an Unprotected Well in Parbatia, Orissa, Eastern India, 2003. *Journal of Health, Population and Nutrition*.
31. HK Khuntia, **BB Pal**, PK Meher, GP Chhotray. (2008) Environmental *Vibrio Cholerae* O139 may be the progenitor of outbreak of cholera in coastal area of Orissa, Eastern India, 2000: Molecular Evidence. *The American journal of tropical medicine and hygiene* 78 (5), 819-822.
32. Samal, S.K., Khuntia, H.K., Sarangi, A.K., Nayak, S.R., Sahoo, N., Chhotray, G.P. and **Pal, B.B.*** (2008). Incidence of bacterial enteropathogens among hospitalized diarrhoea patients from Orissa, India. *Japanese J. Infectious Disease, JJID* 61, 350-355.
33. Khuntia, H.K., **Pal, B.B.** and Chhotray, GP (2008). .Quadriplex PCR assay simultaneous for detection of biotype, serotype, toxigenic potential and central regulating factor of *V. cholerae*. *Journal of clinical Microbiology* 46, 2399-2401.
34. **Pal, B.B.***, Khuntia, H.K., Sasmal, S.K., Das, S.S. and Chhotray, G.P. (2006). Emergence of *Vibrio cholerae* O1 biotype El Tor serotype Inaba causing outbreaks of cholera in Orissa, India. *Japanese J. Infectious Disease, JJID* .59:266–9
35. Chhotray GP, **Pal BB**, Khuntia HK, Chowdhury NR, Chakraborty S, Yamasaki S, Ramamurthy T, Takeda Y, Bhattacharya SK, Nair GB. (2002). Incidence and molecular analysis of *Vibrio cholerae* associated with cholera outbreak subsequent to the super cyclone in Orissa, India. *Epidemiol Infect.* ;128:131- 138.
36. **Pal BB**, Bhunya SP (1995). Mutagenicity testing of a rodenticide, zinctox (zinc phosphide) in a mouse in vivo system. *In Vivo.* ; 9:81- 84.
37. **Pal, B.B.** and Bhunya, S.P. (1992). Genotoxic effect of a preservative sodium metabisulphite as revealed by mammalian in vivo bioassays. *Cytologia* 57 455-461.
38. Subramanyam, V.R., **Pal, B.B.** and Mohanty, K.K. (1989). Inducibility and stability of auxotrophic mutations in *Mycobacterium fortuitum*, *M. smegmatis* and *M. vaccae*. *Letters in Applied Microbiology*, 8 161-164.
39. Subramanyam VR, Broadhead RL, **Pal BB**, Pati JB, Mohanty G (1989). Cryptosporidiosis in children of eastern India. *Annual Tropical Paediatrics.* ;9:122- 125

40. Bhunya, S.P. and **Pal, B.B.**(1986). Cytogenetic effects of nickel fluoride in mouse. *The nucleus* , 29(3) 132-136.

(b) National:

- 1) **Pal BB***, Mohanty A, Biswal B, Nayak SR, Das BK, Lenka PP. Haitian variant *Vibrio cholerae* O1 Ogawa caused cholera outbreaks in Odisha. Indian Journal of Medical Microbiology. 2021 Mar 31.
- 2) Pany S, Sen SK, Prasanna G, Pati S, **Pal BB***. Spectrum of Bacterial Infections Associated with Diabetic Ulcer Patients. J Pure Appl Microbiol. 2021;15(2):598-603.
- 3) G.P. Chhotray , M.R. Ranjit , **B.B. Pal** , P.K. Meher and H.K. Khuntia. (2017) Incidence and Molecular Analysis of *Vibrio cholerae* among Some Primitive Tribes in Odisha, India International Journal of Current Microbiology and Applied Sciences. Vol: 6(1). 51-61
- 4) T Bhotra, MM Das, **BB Pal**, DV Singh. (2016) Genomic profile of antibiotic resistant, classical *ctxB* positive *Vibrio cholerae* O1 biotype El Tor isolated in 2003 and 2005 from Puri, India: A retrospective study. Indian journal of Medical microbiology; 34(4): 413-567
- 5) **Pal, B.B.**, Pattnaik, S. K., Mohanty, A., Samal, S. K., Khuntia, H. K. and Nayak, S. K. (2016) Incidence of Aeromonas species isolated from Diarrhoea patients and water samples from coastal districts of Odisha, India. Int.J. Curr. Microbiol. App.Sci 5(7): 990-999.
- 6) **Pal, B.B.***, Badaik S., Swalsingh G., Khuntia H.K., Sahoo P., and Pal S.B. (2016) In vitro Vibriocidal Efficacy of Monofloral Honey Against Different Sero groups of *Vibrio cholerae*. *Journal of Pure and Applied Microbiology*. Vol. 10(1): 593-598.
- 7) **Pal .B .B***, Khuntia H.K, Jena R.P, Samal S.K, and Kar S.K(2015) Altered El Tor *Vibrio cholerae* in the Southern Part of Odisha, India during 2011. *Journal of Pure and applied Microbiology*.vol.9 (2): 291-296.
- 8) Samal S.K, Das, B.K., **Pal, B.B.***(2014). Isolation, biochemical characterization, antibiotic susceptibility study of Aeromonashydrophila isolated from freshwater fish. *Int.J.Curr.Microbiol.App.Sci* ; 3(12): 259-267.
- 9) Khuntia H.K, **Pal .B .B***, Samal S.K, Khuntia C.P. and KarS.K . (2014) Cholera due to *V.cholerae* O1 El Tor variant in Odisha, India 2011: At the edge of eighth pandemic. *Journal of Pure and applied Microbiology*. Vol 8(2), 1579-1583
- 10) **Pal .B .B***, Mohanty A., Khuntia H.K, Jena R.P., Samal S.K, and Kar S.K.(2014)Incidence of different Bacterial Pathogens associated with hospitalized Septic patients from Bhubaneswar. *Journal of Pure and applied Microbiology*. Vol 8(2), 1585-1590.
- 11) Khuntia, H.K., Samal, S.K., Nayak, S.R., S, Kar, S.K. and **Pal, B.B.***(2011). Incidence and molecular analysis of Toxigenic *E.coli*, causing diarrhea among children in Odisha, India. *Journal of Pure and applied Microbiology*, vol5 (1),223-227, .

- 12) Khuntia H K, Samal SK, Sahoo R K, Bihari K B, Kar S K and **Pal B B.***(2010) Isolation and characterization of thermophilic bacteria from hot spring in Orissa, India *.Bioscience, Biotechnology Research Asia*,7(1),449-51.
- 13) Khuntia, H.K. Samal, S.K. Sahoo, R.K. Kar, S.K. and **Pal, B.B.*** (2009). Escalating emergence of Fluoroquinolone-Resistant Strains of *Vibrio cholerae* O1 and O139 among Hospitalized Patients with Cholera in Orissa, India *Journal of Pure and applied Microbiology*3(2), 811
- 14) Khuntia HK, Samal SK, Kar SK, **Pal BB *** (2009). Emergence of nalidixic acid resistant *Vibrio cholerae* O139 in Orissa, India and identification of its responsible protein component.*Journal of Pure and Applied Microbiology* 3 (1), 371-374.
- 15) Khuntia HK, Samal SK, Sarangi AK, Nayak SR, Kar SK, **Pal BB ***(2008). Ecological interaction of toxigenic *Vibrio cholerae* in aquatic environment. *Current World Environment* 3 (1), 109-113.
- 16) Khuntia, H.K., Samal, S.K., Nayak, S.R., Sarangi, A.K., Mohanty, P., Kar, S.K. and **Pal, B.B.***(2008). Incidence, serotype, antibiogram and toxigenicity of *V.cholerae*during 2000, six months after the super cyclone, 1999 in Orissa, India. *Journal of Pure and Applied Microbiology* , 187-204.
- 17) Khuntia, H.K., Samal, S.K., Sarangi, A.K., Nayak, S.R., Sahoo, D., Kar, S.K. and **Pal, B.B.*** (2008).Spectrum of multiple antibiotic resistance among clinical strains of *Vibrio cholerae* O1 and O139 isolated during 1999-2003 in Orissa, India. *Biomedical and Pharmacology Journal*; 1(1):177-184.
- 18) **Pal, B.B.***, Khuntia, H.K., Acharya, A.S. and Chhotray, G.P (2003). Drug abusers-A new high risk population from HIV infection in Orissa. *Indian Journal Medical Microbiology* 21;262-264.
- 19) Das A; Mohapatra SB; Misra PR; Mishra RK; **Pal BB*(2003)**.In vitro vibriocidal activity of Punica Granatum. *Phytomedica*,21;49-58.
- 20) **Pal, B.B.***, Khuntia, H.K., Anuradha, A., Chhotray, G.P. (2000) . Emergence of *Vibrio cholerae* 0139 sero group during 1995 in Orissa, India: A retrospective study. *Indian Journal Medical Microbiology* 18, 195-196.
- 21) **Pal BB***, Acharya AS, Satyanarayana K(1999). Seroprevalence of HIV infection among jail inmates in Orissa. *Indian Journal Med Res.*; 109 : 199-201.
- 22) **Pal,B.B.** and Bhuyan,S.P(1998). Genotoxic effect of an insecticide, carbaryl in mouse in vivo test system. *Perspectives Cytology Genetics* , 9, 479-483.
- 23) **Pal, B.B.** and Bhunya, S.P(1995). Clastogenicity of copper acetate (fungicide): An in vivo study in mice. In: *PerspectivesCytology Genetics*Vol 8 709-714.
- 24) **Pal, B.B.** and Bhunya, S.P(1992). Mutagenicity testing of Blitox (Copper oxychloride) in vivo mouse system. *PerspectCytolGenet* 7 408.IF-0.28
- 25) Bhunya, S.P. and **Pal, B.B**(1985). Clastogenicity testing of a processed tobacco, Khaini(Lime mixed) in the meiotic chromosomes of a grasshopper, *Crotogonustrachypterus*. *Pranikee*, 6 88-91