



Prof. Pratima Ray received her Bachelors and Master's degree in Zoology from Utkal University. After receiving her M.Phil degree at JNU, she joined the Dept. of Cellular, Viral and Molecular Biology as a Research Associate at the University of Utah, USA. During this period Prof. Ray focused on regulation of gene expression in *E.coli*. Upon her return back to India she earned her Ph.D. in Immunology/Molecular Biology from the University of Delhi. She joined as a Scientist at the International Centre for Genetic Engineering and Biotechnology (ICGEB) where she worked on malarial vaccine development. Most recently she served as a Senior Scientist at the Dept. of Pediatrics at AIIMS where she

was integral part of the rotavirus vaccine development programme. Currently, she is a Professor at the Department of Biotechnology at JamiaHamdard University. She also holds adjunct faculty position at the Centre for Biomedical Engineering at Indian Institute of Technology Delhi. Her current research interests include vaccines and diagnostics against emerging viral diseases in humans. She is an elected life member of American Society of Virology, The Indian Immunology Society and Indian Virology Society.

Current Clinical Interests:

- Rotavirus Diarrhoea
- Chikungunya
- Dengue

Teaching (M.Sc. and B.Sc. Biotechnology, M.Sc. Toxicology and M.Sc. Biochemistry):

Immunology: Immune system in health and diseases, Biotechnology and human health and Vaccines

Molecular Biology: Expression of genetic information, Molecular Toxicology

Biomolecules

Stem cell Research (Foundation Course)

Current Research Programmes:

- Indo-US Program on Human Immunity to Chikungunya Viruses, ***Indo-US VAP, DBT***
- National Hospital Based Rotavirus Surveillance Network at All India Institute of Medical Sciences, New Delhi, ***ICMR***

Selected Publications

- Nayak K, Jain V, K Manpreet, CR Ramesh, Dixit K, Khan N, Sagar R, Gupta S, Islamuddin M, Verma A, Maheshwari D, Aggarwal C, Chawla Y, SR Elluri, Panda H, Sharma P, Bhatnagar P, Sigh P, Raragiri VH, Chandele A, **Ray Pratima***, Kaja MK* (2020). Antibody Response Patterns in Chikungunya Febrile Patients as a Biomarker for Progression to Chronic Arthritis. ***JCI Insight; Vol 9;5(7):e130509. Impact factor:6.1***
- Naushad Khan, Ruchika Bhat, Vineet Jain, Ashok K. Patel, **Pratima Ray*** (2020) Discovery of small molecule inhibitors of Chikungunya virus proteins (nsP2 and E1) using in silico approaches, ***Journal of Biomolecular Structure and Dynamics***, <https://doi.org/10.1080/07391102.2020.1731602>. ***Impact factor:3.31***

- Shipra Gupta, VasundharaRazdanTiku, MariyamGauhar, KahkhasanKhattoon, **Pratima Ray*** (2020). Genetic diversity of G9 rotavirus strains circulating among diarrheic children in North India: A comparison with 116E rotavirus vaccine strain. *Vaccine*; vol 39:646-651 <https://doi.org/10.1016/j.vaccine.2020.12.037>. **Impact Factor: 3.143**
- Naushad Khan, RuchikaBhat, Vineet Jain, Ashok K. Patel, **Pratima Ray*** (2020). Genome Sequencing and Molecular Characterization of Chikungunya Virus from Human Cases in North India, 2016. *Microbiology and immunology* doi: 10.1111/1348-0421.12869 (in press). **Impact Factor: 1.56**
- CPG Kumar, S Giri, , MC Sarkar, V Gopalkrishna, SD Chitambar, **Pratima Ray**, S Venkatasubramanian, BJ Borkakoty, S Roy, J Bhat, B Dwibedi, V Paluru, P Das, R Arora, G Kang, SM Mehendale, NRSN investigators (2020). Epidemiology of rotavirus diarrhea among children less than 5 years hospitalized with acute gastroenteritis prior to rotavirus vaccine introduction in India. *Vaccine*; Vol3;38(51):8154-8160. **Impact factor: 3.143**
- S Giri, CPG Kumar, SA Khakha, MC Sarkar, V Gopalkrishna, SD Chitambar, **Pratima Ray**, S Venkatasubramanian, BJ Borkakoty, S Roy, J Bhat, B Dwibedi, P Das, V Paluru, S Ramani, S Babji, R Arora, SM Mehendale, MD Gupte, G Kang (2020). Diversity of rotavirus genotypes circulating in children <5 years of age hospitalized for acute gastroenteritis in India from 2005 to 2016: Analysis of temporal and regional genotype variation. *BMC Infectious Dis*; Vol 20:740. <https://doi.org/10.1186/s12879-020-05448-y>. **Impact Factor: 2.86**
- Damayanti Y Devi; Arpita Devi; HemangaGogoi; BonditaDehingia; Robin Doley; Alak K Buragohain; Ch. S Singh; Partha P Borah; C Rao; C Rao;**Pratima Ray**; George MVarghese; Sachin Kumar; NimaNamsa. Exploring rotavirus proteome to identify potential B- and T-cell epitope using computational immunoinformatics. *Heliyon* 6 (2020) e05760. **Impact Factor: 1.65**
- Ayan K Das*, MriduDudeja, Sunil K Kohli, **Pratima Ray**, Manvi Singh, PreetSimranKaur(2020). Biofilm synthesis and other virulence factors in multidrug-resistant uropathogenic enterococci isolated in Northern India. *Indian Journal of Medical Microbiology*; vol 38(2):200-209. **Impact Factor: 1.0**
- Akdag AI, Gupta S, Khan N, Upadhayay A, **Ray P*** (2019). Epidemiology and clinical features of rotavirus, adenovirus, and astrovirus infections and coinfections in children with acute gastroenteritis prior to rotavirus vaccine introduction in Meerut, North India. *Journal of Medical Virology*; 92(8):1102-1109. doi: [10.1002/jmv.25645](https://doi.org/10.1002/jmv.25645). **Impact factor: 2.05**
- Raghvendhar S, Tripathi PK, **Ray P**, Patel (2019). Evaluation of medicinal herbs for Anti-CHIKV activity. *Virology* Vol. 533, page45-49. doi: [10.1016/j.virol.2019.04.007](https://doi.org/10.1016/j.virol.2019.04.007). **Impact factor: 2.66**
- Shipra Gupta, SanjeevChaudhary, ParveshBubber, **Pratima Ray*** (2019). Epidemiology and genetic diversity of group A rotavirus in acute diarrhea patients in pre- vaccination era in Himachal Pradesh, India. *Vaccine*, Vol 37(36), p5350-56. doi: [10.1016/j.vaccine.2019.07.037](https://doi.org/10.1016/j.vaccine.2019.07.037). **Impact factor: 3.27**
- B. Siva Raghavendhar, Ashok Patel, S. K. Kabra, R. Lodha, and **Pratima Ray*** (2019). Virus load and clinical features during the acute phase of Chikungunya infection in Children. *PLoS One*, 14(2):e0211036. doi: [10.1371/journal.pone.0211036](https://doi.org/10.1371/journal.pone.0211036). **Impact factor: 2.66**

- SivaramGunishetty et al, (2019). Analysis of dengue specific memory B cells, neutralizing antibodies and binding antibodies in healthy adults from India. *International Journal of Infectious Diseases*, Vol 84S:S57-S63. doi: [10.1016/j.ijid.2019.01.018](https://doi.org/10.1016/j.ijid.2019.01.018). Impact factor: 3.54
- Md. Islamuddin, Shipra Gupta, Vasundhara R Tiku, SatyenderAneja, Praveen Kumar, GeethaGhatwala, SanjeevChaudhary, AmitUpadhyay, **Pratima Ray***(2018). Surveillance and genetic characterization of rotavirus strains circulating in four states of North Indian children. *Infection, Genetics and Evolution*, Vol.62,253-261.<https://doi.org/10.1016/j.meegid.2018.04.030>. Impact factor: 2.61
- Shipra Gupta, Anuja Krishnan, Sumit Sharma, P Kumar, S Aneja, **Pratima Ray***(2017). Changing pattern of prevalence, genetic diversity and mixed infections of viruses associated with acute gastroenteritis in pediatric patients in New Delhi, India. *Journal of Medical Virology*, Vol.90, 469-476. doi:[10.1002/jmv.24980](https://doi.org/10.1002/jmv.24980). Impact factor:2.05
- Vasundhara R Tiku, Baoming Jiang, Praveen Kumar, SatinderAneja, ArvindBagga, M. K. Bhan, **Pratima Ray***(2017). First study conducted in Northern India that identifies group C rotavirus as the etiological agent of severe diarrhea in children in Delhi. *Virology Journal*, 14:100, doi:[10.1186/s12985-017-0767-8](https://doi.org/10.1186/s12985-017-0767-8). Impact factor: 2.47
- Anil Verma,aAnmolChandele,cKaustuvNayak,cMurali Krishna Kaja,cArockiasamyArulandu,dRakeshLodha, **Pratima Ray*** . High yield expression and purification of Chikungunya virus E2 recombinant protein and its evaluation for serodiagnosis. *J Virological Methods*, 2016, Vol 235, 73-79(Impact factor:2.06)
- B. Siva Raghavendhar, **Pratima Ray,*** V.H. Ratagiri, B.S. Sharma, S. K. Kabra, R. Lodha. Evaluation of Chikungunya Virus Infection in Children From India During 2009–2010: A Cross Sectional Observational Study. *Journal of Medical Virology* 2015 9999:1–8(Impact factor: 2.35)
- VR Tiku, S Sharma, AVerma, **P Ray***. Rotavirus diversity among diarrheal children in Delhi, India during 2007-2012. *Vaccine*, 2014, Vol 32:62-67. Impact factor: 3.77
- T Saxena, B Tandon, **P Ray**, AR Ray, R Kulshrestha. Combine miRNA and mRNA signature identifies key molecular players and pathways involved in CHIKV infection in human cells. *PLoS One*, 2013 Nov, Vol 8(11):e79886 (11 pages).Impact factor:4.41
- A Soni, KMenaria, **P Ray**, B. Jayaram. Genomes to Hits *in Silico*- A country path today, a highway tomorrow: A case study of chikungunya. *Cur. Pharm.* 2013 19: 4687.Impact factor: 3.31
- S Moon, JE. Tate, **P Ray** et al. Differential profiles and inhibitory effect on rotavirus vaccines of non-antibody components in breast milk from mothers in developing and developed countries. *Ped. Inf. Dis. J*, 2013 April 11.Impact factor:3.6
- **P Ray***, VH Ratagiri, SK Kabra, et al. Chikungunya infection in India: Results of a prospective hospital based multi centric study, *PLoS ONE*, 2012 Vol. 7(2): e30025.Impact factor: 4.41
- B Nayak, AR Ray, AK Panda, **PRay**. Improved Immunogenicity of Biodegradable Polymer Particle Entrapped Rotavirus Vaccine. *J BiomatAppl*, 2011, Vol. 25, 469-496.Impact factor: 2.64

- S Sharma, T Nakagomi, ONakagomi, VK Paul, MK Bhan, **P Ray***. Convalescent phase sera from children infected with G12 Rotavirus cross neutralize rotavirus strains belonging to the Wagenogroup. *J Gen Virol* 2010, Vol. 91, 1794-99. **Impact factor: 3.57**
- S Moon, Y Wang, A Shane, T Nguyen, **P Ray**, et al. Inhibitory effect of breast milk on ineffectivity of live oral rotavirus vaccines. *Pediatric Infect Dis*, 2010, Vol. 29(10):1-5. **Impact factor: 3.6**
- S Sharma, VK Paul, MK. Bhan and **P Ray***. Genomic characterization of nontypeable rotaviruses and detection of a rare G8 strain from Delhi India. *J Clin Microbiol* 2009, Vol. 47(12): 3998-05. **Impact factor: 4.22**
- S Sharma, **P Ray***, JR Gentsch, et al. Emergence of G12 strains in Delhi, India, in 2000 to 2007. *J Clin Microbiol* 2008, Vol. 46(4): 1343-1348. **Impact factor: 4.22**, Citation: 36
- **The paper has been highlighted in the Nature April 16, 2008 Issue**
- J Malik, SK Gupta, S Bhatnagar, MK Bhan and **P Ray***. Evaluation of IFN- γ Response to Rotavirus and Nonstructural Protein NSP4 of Rotavirus in Children Following Severe Rotavirus Diarrhea. *J Clin Virol* 2008, Vol. 43: 202-06. **Impact factor: 3.61**
- **P Ray***, S Sharma and MK. Bhan. First Detection of G12 Rotaviruses in Newborns with Neonatal Rotavirus Infection at AIIMS, Delhi. *J Clin Microbiol* 2007 Vol. 45(11): 3824-3827. **Impact factor: 4.2**
- V VVerma, P Verma, S Kar, **PRay**, AR Ray. Fabrication of agar-gelatin hybrid scaffolds using a novel entrapment method for in vitro tissue engineering applications. *Biotech. Bioeng.* 2007; Vol. 96(2):392-400. **Impact factor: 3.65**
- **P Ray***, M Fenaux, S Sharma, et al. Quantitative evaluation of rotavirus antigenemia in children with acute rotavirus diarrhea. *J Infect Dis* 2006 Vol. 194 (5): 588-93. **Impact factor: 6.41** Citation: 55
- N Bhandari, P Sharma, RI Glass, **PRay**, MK Bhan. Safety and Immunogenicity of Two Live Attenuated Human Rotavirus Vaccine Candidates, 116E and I321, in Infants: Results of a Randomised Controlled Trial. *Vaccine* 2006 Vol. 24 (31-32):5817-23. **Impact factor: 3.46**
- **P Ray***, J Malik, and MK Bhan. Rotavirus Nonstructural Protein NSP4 Induces Heterotypic Antibody Response during Natural Infection in Children. *J Infect Diseases*, 2003 Vol: 187:1786-93. **Impact factor: 6.41**
- R Bahl, **P Ray** and MK Bhan. Incidence of severe rotavirus diarrhea in New Delhi, India and the G and P types of the infecting strains. *J Infect Diseases* 2005 Vol. 192: S114-9. **Impact factor: 6.41**
- G Kang, SD Kelkar, SD Chitambar, **P Ray** and T Naik. Epidemiological Profile of Rotaviral Infection in India: Challenges for the 21st Century. *J Infect Diseases* 2005 Vol. 192: S120-6. **Impact factor: 6.41**
- RI Glass, MK Bhan, **P Ray** et al. Development of Candidate Rotavirus Vaccines Derived from Neonatal Strains in India. *J Infect Diseases* 2005 Vol. 192: S30-5. **Impact factor: 6.41**