CURRICULUM VITAE

Dr. Hari Mohan

(Assistant Professor)

Centre for Medical Biotechnology,

Maharshi Dayanand University,

Rohtak-124001

Phone no.: +919671027033

E-mail: **harimohan.cmbt@mdurohtak.ac.in**

Teaching and Research experience:

- Assistant Professor in Centre for Medical Biotechnology, Maharshi Dayanand University, Rohtak (since 28th September, 2010).
- Additional assignment of Veterinary Officer in Central Animal House, Maharshi Dayanand University, Rohtak (since 28th December, 2010).

Academic Qualification:

Ph.D (2015) entitled "**Clinical and epidemiological characterization of human rotavirus among children from Haryana**" Centre for Biotechnology, Maharshi Dayanand University, Rohtak, Haryana-124001.

Degree/ Class	Institute/Board	Year of passing	%age marks
Ph.D	**Maharshi Dayanand University, Rohtak, Haryana**	**2015**	**70**
M.V.Sc	**College of Veterinary Sciences, CCSHAU, Hisar**	**2009**	**86.3$**
B.V.Sc.&A.H.	**College of Veterinary Sciences, CCSHAU, Hisar**	**2007**	**81.19***
10+2	**Board of school education , Haryana**	**2001**	**69**
Matric	**Board of school education, Haryana**	**1999**	**76**

Member of National/International scientific societies:

- ☐ Life member of "The Association of Microbiologist of India (AMI)"
- ☐ Life member "Indian Science Congress"
- ☐ Life member "Indian Society of Veterinary Immunology and Biotechnology"
- ☐ Life member "Laboratory Animal Scientists' Association (India)"

- Life member “Indian Association of Virologist”
- Life member “Biosafety Society of India”

Awards

- **Certificate of Appreciation by MDU, Rohtak, 2022**
- **Sir F.M. Burnett Memorial Award, 2021**
- **DST- Young scientist** award, 2013
- **Dr. B.D. Behl** Gold Medal.
- **Dr. D.P. Banerjee** Gold Medal.
- **Dr. P.K. Dwarkanath** Gold Medal.
- **Merit** Gold Medal.
- **Certificate of Honour**
- Academic Excellence Award, **Xceft merit award by Alembic Pharmaceuticals** for securing **First position in B. V. Sc. & A. H. batch 2007.**
- Awarded **Junior Research Fellowship** by Department of Biotechnology, Government of India, on the basis of **all India based competition for M.V.Sc (Animal Biotechnology) degree program** for getting 7th rank (2007-2009).
- **CSIR-NET- JRF**
- **DBT-JRF**
- **ICAR-NET**

Laboratory Animal Welfare Experience:

- Worked as Organizing Secretary for one day Seminar cum Workshop on ‘Animal Ethics and Experimentation’ organized by Central Animal House, MDU Rohtak on 22 October, 2016.
- Working as Veterinarian in Institutional Animal Ethics Committee, Maharshi Dayanand University, Rohtak since 2014

Key publications

1. Subodh, Ravina, Priyanka, Jagriti Narang, Hari Mohan, Biosensors for phytohormone Abscisic acid and its role in humans: A review, Sensors International, Volume 4, 2023, 100234, ISSN 2666-3511, https://doi.org/10.1016/j.sintl.2023.100234.

2. Dahiya, T., Ravina, Mann, A. *et al.* Impedimetric immunosensor based on chitosan-modified gold wire with Au@rGO nanocomposite for the detection of brain natriuretic peptide (BNP). *J Mater Sci* **58**, 4739–4752 (2023). https://doi.org/10.1007/s10853-023-08311-y

3. Pradakshina Sharma, Homa Hassan, Mohd. Rahil Hasan, Tarab Fatima, Hari Mohan, ManikaKhanuja, Samander Kaushik, Jagriti Narang, PBIS-based system integrated with zinc–silver nanocomposite for the detection of Chikungunya virus, Biosensors and Bioelectronics: X, Volume 13, 2023, 100303, ISSN 2590-1370,https://doi.org/10.1016/j.biosx.2022.100303.**(Impact 10.61)**
4. Vandna, Ahlawat S, Sharma KK, Mohan H. Proteomic, biochemical, histopathological, and elevated plus maze analysis reveals the gut damaging role of ketoprofen with Yersinia enterocolitica and altered behavior in Wistar rats. Toxicol Appl Pharmacol. 2022 Nov 11;457:116315. doi: 10.1016/j.taap.2022.116315. Epub ahead of print. PMID: 36372189. **(Impact 4.46)**
5. Gupta A, Gawandi S, Vandna, Yadav I, Mohan H, Desai VG, Kumar S. Analysis of fluoro based pyrazole analogues as a potential therapeutics candidate against Japanese encephalitis virus infection. Virus Res. 2022 Oct 3;323:198955. doi: 10.1016/j.virusres.2022.198955. Epub ahead of print. PMID: 36202293. (Impact Factor 6.286)
6. Ravina, Kumar A, Manjeet, Twinkle, Subodh, Narang J, Mohan H. Analytical performances of different diagnostic methods for SARS-CoV-2 virus - A review. Sens Int. 2022;3:100197. doi: 10.1016/j.sintl.2022.100197. Epub 2022 Jul 30. PMID: 35935464; PMCID: PMC9338831.

7. Ravina, Paramjeet Singh Gill, Ashok kumar, Jagriti Narang, Minakshi Prasad, Hari Mohan,Molecular detection of H1N1 virus by conventional reverse transcription PCR coupled with nested PCR, Sensors International,Volume 3, 2022, 100178, ISSN 2666-3511, https://doi.org/10.1016/j.sintl.2022.100178.

8. Ravina, Gill PS, Narang J, Kumar A, Mohan H. Development of amperometric biosensor based on cloned hemagglutinin gene of H1N1 (swine flu) virus. 3 Biotech. 2022 Jun;12(6):141. doi: 10.1007/s13205-022-03200-8. Epub 2022 Jun 1. PMID: 35664651; PMCID: PMC9156826.(Impact Factor 2.893).

9. Singh V, Ahlawat S, Mohan H, Gill SS, Sharma KK. Balancing reactive oxygen species generation by rebooting gut microbiota. J Appl Microbiol. 2022 Jun;132(6):4112-4129. doi: 10.1111/jam.15504. Epub 2022 Mar 6. PMID: 35199405. (Impact 4.061)

10. Amit Kumar a, Shruti Ahlawat a, HariMohan, Krishna Kant Sharma, Stabilization–destabilization and redox properties of laccases from medicinal mushroom Ganoderma lucidum and human pathogen Yersinia enterocolitica International Journal of Biological Macromolecules 167 (2021) 369–381 (**Impact factor: 8.025**)

11. Ahlawat S, Kumar P, Mohan H, Goyal S, Sharma KK. Inflammatory bowel disease: tri-directional relationship between microbiota, immune system and intestinal epithelium. Crit Rev Microbiol. 2021 Mar;47(2):254-273. doi: 10.1080/1040841X.2021.1876631. Epub 2021 Feb 12. PMID: 33576711. (**Impact factor: 7.349**)

12. Kumar Deepak ,Laller Kuldip Singh, Kumar Ashwani , Singh Dharmpal, TaxakSusheela, Rathi Raveena and Hari Mohan (2021) Associations of ApoE gene polymorphism with Coronary Artery Disease in patients from North Indian State Haryana. Research Journal of Biotechnology Vol. 16 (3) 186-193.

13. Ravina, Manjeet, Mohan H, Narang J, Pundir S, Pundir CS. A changing trend in diagnostic methods of Influenza A (H3N2) virus in human: a review. 3 Biotech. 2021 Feb;11(2):87. doi: 10.1007/s13205-021-02642-w. Epub 2021 Jan 20. PMID: 33495723; PMCID: PMC7816835. **(**Impact Factor 2.893**)**

14. Mohan Hari[1*], Ravina[1], Maini Enakshi[1], Kumar Deepak[2]andChaudaharyKamla· 2021 Biosynthesis and characterization of silver nanoparticles by Pseudomonas pseudoalcaligenes, Research Journal of Biotechnology Vol. 16 (4) 2021.

15. Khatri R, Mohan H, Brar B, Prasad M, Pundir CS. A Novel Amperometric Genosensor for Rapid Detection of Canine Parvovirus in Feces. J Nanosci Nanotechnol. 2021 Jun 1;21(6):3524-3530. doi: 10.1166/jnn.2021.18998. PMID: 34739803.
16. Ahlawat S, Shankar A, Vandna, Mohan H, Sharma KK. Yersinia enterocolitica and Lactobacillus fermentum induces differential cellular and behavioral responses during diclofenac biotransformation in rat gut. Toxicol Appl Pharmacol. 2021 Nov 15;431:115741. doi: 10.1016/j.taap.2021.115741. Epub 2021 Oct 5. PMID: 34619158. **(Impact 4.46)**
17. Yadav N, Dahiya T, Chhillar AK, Rana JS, Saini HM. Nanotechnology in Cancer Diagnostics and Therapeutics: A Review. Curr Pharm Biotechnol. 2022;23(13):1556-1568. doi: 10.2174/1389201023666211222165508. PMID: 34951360.. **(Impact 2.829)**
18. Deepak Kumar1 , Jayanta Borkakoti2 , Hari Mohan3 , Rahul Karna2 , Premashis Kar2 Seroprevalence of Hepatitis C Virus in Liver Disease Patients and Blood Donors from Northern India Tropical Gastroenterology 2021;42(1):20-27
19. R Ravina, Dalal A, Mohan H, Prasad M, Pundir CS. Detection methods for influenza A H1N1 virus with special reference to biosensors: a review. Biosci Rep. 2020 Feb 28;40(2):BSR20193852. doi: 10.1042/BSR20193852. PMID: 32016385; PMCID: PMC7000365. (**Impact factor: 3.976**)
20. Barnali Nath, Vandna, Hari Mohan Saini, Minakshi Prasad, Sachin Kumar. 2020. Evaluation of Japanese encephalitis virus E and NS1 proteins immunogenicity using a recombinant Newcastle disease virus in mice. Volume 38, Issue 7, 1860-1868 Vaccine https://doi.org/10.1016/j.vaccine.2019.11.088 (**Impact factor: 4.169**)
21. Ferrin Antonya,1, Yoya Vashia,1, Sudhir Morlaa,1, Vandna, Hari Mohan, Sachin Kumar, 2020, Therapeutic potential of Nitazoxanide against Newcastle disease virus: A possible modulation of host cytokines, Cytokine, 2020;131:155115. (**Impact factor: 3.926**)
22. Prasad Minakshi, Hari Mohan, Manjeet, Ravina, Basanti Brar, Mohammad Shafiq, C.S. Pundir. Organic Polymer and Metal Nano-particle Based Composites for Improvement of the Analytical Performance of Electrochemical Biosensors. Current Topics in Medicinal Chemistry, 20(11) 2020 [1029 - 1041] (**Impact factor: 3.570**)
23. Deepak Kumar, Kuldip Singh Laller, Dharmpal Singh, SusheelaTaxak, Vandna Singh and Hari Mohan. MTHFR polymorphism in patients of coronary artery disease from

Haryana: Does A1298C polymorphism associate with disease? International Journal of Scientific Research, 2020; 9 (1), 55-57.

24. Ravina[a],AnitaDalal[b],ParamjeetSinghGill[c],JagritiNarang[d],HariMohan[a]. 2020. Genosensor for rapid, sensitive, specific point-of-care detection of H1N1 influenza (swine flu), Process Biochemistry, Volume 98, 2020, Pages 262-268 (**Impact factor: 4.885**)

25. Deepak Kumar, Kuldip Singh Laller, Dharmpal Singh, SusheelaTaxak, Vandna Singh, Hari Mohan, Associationsof methylenetetrahydrofolate reductase C677T polymorphism with coronary artery diseasepatientsfromNorthIndian state Haryana BIOMEDICINE-40(2)-2020 published 2020-11-11

26. Ravina, Hari Mohan, Paramjeet Singh Gill, Ashok Kumar. 2019. Hemagglutinin gene based biosensor for early detection of swine flu (H1N1) infection in human. Int J Biol Macromol. 2019 Feb 26. pii: S0141-8130(18)35071-2. doi: 10.1016/j.ijbiomac.2019.02.149. [Epub ahead of print] (**Impact factor: 8.025**)

27. Poonam , Rahul Khatri , **Hari Mohan** , Minakshi and Pundir CS. 2017. Etiology, Epidemiology, Pathogenesis and Diagnosis of Marek's Disease in Chickens: A Mini review. *Journal of Veterinary Science & Medical Diagnosis.* 6:4

28. Rahul Khatri , Poonam , Hari Mohan , Minakshi and Pundir CS. 2017. Epidemiology, Pathogenesis, Diagnosis and Treatment of Canine Parvovirus Disease in Dogs: A Mini Review *Journal of Veterinary Science & Medical Diagnosis.* 6:3

29. Ishwar Dutta Sharma, Jyoti Dabas, Rahul Khatri and **Hari Mohan.** 2016. Electropherotypes and g-types of group a rotaviruses detected in children of Age <5 years with gastroenteritis in Haryana, *International Journal of Current Research 8, Issue, 11, pp.41748-41751, November, 2016*

30. MinakshiP,*, Basanti Brar, Sunderisen K, Jiju V Thomas , Savi J, Ikbal, Koushlesh Ranjan, UpenderaLambe, Madhusudan Guray, Nitish Bansal, Pawan Kumar, Vinay G Joshi, Rahul Khatri, **Hari Mohan**, C S Pundir, Sandip Kumar Khurana and Gaya Prasad. 2016. Canine Parvovirus – An insight in to diagnostic aspect. *Journal Of Experimental Biology And Agricultural Sciences* I4(3S): 279-290.

31. **Hari Mohan,** Subhash Kharb. 2015. Rabies- Still a challenge in developing world. Journal of Innovative Biology Vol. 2, Issue 3, P. 239-244

32. **Hari Mohan**, Ray, P. and Gakhar, S.K. **2014.**Genotypic Linkages Of Vp6 Gene Of Human Rotavirus Isolates Circulating In Pediatric Patients With Acute Gastroenteritis In Haryana And Comparison Of Antigenic Epitopes With Vaccine Strains. *Int. J. Curr. Res.* **6(10):** 9129-9134.
33. **Hari Mohan** and Kharb, S. **2014.** Human brucellosis: A silent but dreadful disease. J Innov. Biol. 1(3):163-167
34. Yadav, A.K., **Hari Mohan** and S. Khobrai. **2013**. Screening And Identification Of Human Rotavirus By Elisa And RNA-PAGE Method. *International Journal of Current Research.* 5(5): 1262-1265.
35. Guriyan, D., Paliwal, N., **Hari Mohan** and K. Chaudhary. **2013.** Ethanol production by xylose fermenting yeast cultures using a mixture of dextrose and xylose. *Research and Reviews: A Journal of Biotechnology.* 3(1):10-13.
36. Guriyan, D. and **Hari Mohan**. **2013.** Mesenchymal stem cells: isolation, identification and therapeutic potential for acute respiratory distress syndrome (ARDS) and Liver Diseases. *Research & Reviews: A Journal of Biotechnology.*1 (3): 14-23.
37. **Hari Mohan**, Minakshi, Kumar, P. and G. Prasad. **2012.** Detection of group B Rotavirus in buffalo calves in Haryana state of Northern India. *The Indian Journal of Field Veterinarians.* 7(3):71-74. Renamed to The Indian Journal of Veterinary Sciences and Biotechnology
38. Guriyan, D. and **Hari Mohan**. **2012.** Hematopoietic Stem Cells: Sources and Therapeutic Potential for Autoimmune Diseases and Cancer. *Research & Reviews: Journal of Oncology and Haematology.*1 (3): 6-14.
39. Paliwal, N., Guriyan, D., **Hari Mohan**, Gakhar, S.K. and K. Chaudhary. **2012.**Production of Ethanol from Rice Straw using Xylose Fermenting Yeast Isolates. *Research and Reviews: A Journal of Biotechnology.* 2 (3): 12-19.
40. Minakshi, P, Prasad, G., Nanda, T., Swati Dahiya, Ranjan, K., Kumar, A. and **Hari Mohan.** 2011. Single tube method for rapid detection of BHV-1 in buffalo bull semen. *International Journal of Applied Engineering Research*. 6(5): 879-883.

Book chapters:

1. Prasad Minakshi, Mayukh Ghosh, Rajesh Kumar, Harshad Sudhir Patki, Hari Mohan Saini, Koushlesh Ranjan, Basanti Brar. 2019. Single cell metabolomics: Technology and Applications. Single-cell Omics Volume 1: Technological Advances and Applications; 283-318. **Editors:** Debmalya Barh Vasco Azevedo. Elsevier Publications
2. Prasad Minakshi, Rajesh Kumar, Mayukh Ghosh, Hari Mohan Saini, Koushlesh Ranjan, Basanti Brar, Gaya Prasad. 2019. Single-Cell Proteomics: Technology and Applications. Single cell metabolomics: Technology and Applications. Single-cell Omics Volume 1: Technological Advances and Applications; 319-354. **Editors:** Debmalya Barh Vasco Azevedo. Elsevier Publications
3. Mohan H, Ravina, DalalA, Prasad M,Biosensor fabrication with nanomaterials, Handbook of Nanomaterials for Sensing Applications, 2020, **Editors:** Chaudhery Hussain Suresh Kailasa**Paperback ISBN:** 9780128207833 **eBook ISBN:** 9780128208847 (Elsevier Press)
4. Minakshi Prasad, Mayukh Ghosh, Suman, Harshad Sudhir Patki, Sandeep Kumar, Basanti Brar, Neelesh Sindhu, Parveen Goel, Samander Kaushik, Hari Mohan,Shafiq Syed and Rajesh Kumar, 2021. **Imaging Techniques in Veterinary Disease Diagnosis. 103-146. Advances in Animal Disease Diagnosis (CRC press Taylor and Francis group)**
5. Mohan, H., Vandna, Soni, S., Syed, S. (2022). Targeting Reactive Oxygen Species (ROS) for Cancer Therapy. In: Chakraborti, S. (eds) Handbook of Oxidative Stress in Cancer: Therapeutic Aspects. Springer, Singapore. https://doi.org/10.1007/978-981-16-1247-3_273-1 Print ISBN978-981-16-1247-3Online ISBN978-981-16-1247-3
6. Ravina, Deepak Kumar, Minakshi Prasad, and Hari Mohan. 2022. Biological recognition elements in the book 'Electrochemical Sensors: From Working Electrodes to Functionalization and Miniaturized Devices' Woodhead Publishing Series in Electronicand Optical Materials; 213-240
7. Minakshi Prasad, B. Brar, UP Lambe, Hari Mohan, 2018, 'Nano based methods for detection of outer membrane proteins in bacteria' in 10 day training program Sept 18-Sept 27 2018 (https://www.researchgate.net/ publication/ 328118186_)

8. Ravina, Subodh, Sharma, K.K., Mohan, H. (2023). Detection Methods for H1N1 Virus. In: Aquino de Muro, M. (eds) Virus-Host Interactions. Methods in Molecular Biology, vol 2610. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-2895-9_10Virus-Host Interactions: Methods and Protocols | SpringerLink

Details of Projects under implementation

S. No	Title	Amount granted in Lakhs	Duration	Role	Agency
1	Effect of urbanization on gut microbiome, mycobiome and virome in patients with Inflammatory Bowel Disease from Northern India	Rs. 64.54830/	2019-2022	Co-PI	ICMR
2	Assessment of the clinical protection induced by two different vector HVT-based Newcastle Disease vaccines against genotype XIII NDV challenge'	Rs. 10.99940/	2021-23	PI	CevaPolychem Pv
3	Development of Point of care sensor for detection of Hemorrhagic Septicemia in bovine	Rs. 17 lacs	2022-25	PI	HSCSIT, Haryana

Details of Projects completed during the last 5 years

Sr. No	**Title**	**Cost in**	**Duration**	**Role**	**Agency**
1	Molecular surveillance and characterization of Rotaviruses associated with acute gastroenteritis in the children of Haryana	21.42/-	2013-16	P.I.	DST SERB
2	Development of RT-PCR for detection of Rotavirus	6.20/-	2012-16	Co P.I.	DBT
3	Screening of Rotavirus from stool samples by PAGE	0.10/-	2015	P.I.	R.K. Found
4	Prevalence and Genotyping of Hepatitis	0.20/-	2016	P.I.	R.K. Found

	C virus in Rohtak				
5	Development of DNA sensor for differentiation o and buffalo meat	0.50	2019	P.I.	R.K. Fund
6	DBT-HRD Project for M.Sc. Medical Biotechnology	68.00/-	2012-201	Coordinat	DBT

Session chaired:

1. Chair person of the technical session in two days National conference on 'Natural products and human health: Opportunities and Challenges in Present Scenerio' on 9-10 April 2021 under UGC STRIDE programme component I.
2. Chairperson on **2/19/2022** in one week UGCSTRIDE workshop held on 14th to 19th February 2022. One week UGC-STRIDE workshop on **"**Microbial Metabolites: Biotechnological Advances**" by Department of Microbiology, MDU, Rohtak**

Invited talks/Extension lecture in conference/symposium/workshops

- Invited talk on 'Recent advances in biosensor technology' in the workshop conducted by Department of Animal Biotechnology, Lala Lagpat Rai University of Veterinary and Animal Sciences 2021
- Invited talk on 'Awareness program on HIV, TB and Vector Borne Diseases' on World AIDS day on 1.12.2021 by Pt. Neki Ram Sharma Government College, Rohtak, Haryana
- Guest speaker in the National Conference/CME on 'Quality Control in Clinical and Molecular Biochemistry' organized by Department of Biochemistry, Pt. B.D. Sharma PGIMS, Rohtak on 5th October 2017.
- Invited talk on 'Recent advances in biosensor technology' in the workshop conducted by Department of Animal Biotechnology, Lala Lagpat Rai University of Veterinary and Animal Sciences

Organization of conference/symposium/workshops/National Seminar (as organizing secretary)

- Organized International workshop on "Intellectual Property Rights" on 11th February 2019
- Worked as organizing secretary for one day National Workshop on 'Real Time PCR: Introduction and Applications' organized by Centre for Medical Biotechnology on 18 September 2015 sponsored by R.K. Foundation.

- Worked as Organizing Secretary for one day Seminar cum Workshop on 'Animal Ethics and Experimentation' organized by Central Animal House, MDU Rohtak on 22 October, 2016.
- National Seminar on **'Stem Cell and Human Medicine'** scheduled on March 1, 2014, Centre for Medical Biotechnology, M.D. University, Rohtak. (Funded by R.K. Foundation)

Paper and poster presentation at National/International Symposium/conferences:

- Presented paper on First detection of bovine group B rotavirus among buffalo calves in India by RNA-PAGE and RT-PCR in XV Annual Convention of Indian Society for Veterinary Immunology and Biotechnology (ISVIB) and held at CCS HAU, February 26-28, 2009.
- Presented poster on Molecular Characterization of a G3P[3] Genotype of Group A Rotavirus in Buffalo in India in XV Annual Convention of Indian Society for Veterinary Immunology and Biotechnology (ISVIB) held at CCS HAU, February 26-28, 2009.
- Presented poster on 'Cloning and expression of the major capsid protein VP6 of buffalo rotavirus in *Escherichia coli*' in 10th Annual Research Festival 'Biosparks 2012' organized by School of Life Sciences, JNU, New Delhi, from 14-15th of March 2012.
- Presented paper on 'Detection of swine rotavirus in buffalo calves: an evidence of interspecies transmission' in International conference on Microbial, plant and animal research (ICMPAR 2012) March 29-31, 2012 organized by MITS, Lakshmangarh, Sikar.
- Presented poster in the XXII Annual convention of Indian Society for Veterinary Immunology and Biotechnology and National Symposium on Immunomics and Proteogenomics in Livestock Health and Productivity on the topic '**Genotypic linkages of VP6 gene of human rotavirus isolates circulating in pediatric patients with acute gastroenteritis in Haryana indicated close proximity of antigenic epitopes with bovine strains'** held on December 17-19, 2015 at ICAR-National Research Centre on Equines, Hisar.
- Presented poster in The Twelfth International Rotavirus Symposium held from 7-9 September 2016 in Melbourne, Australia on the topic'**Epitope comparison of VP7 & VP4 antigens between Indian Rotavirus field strains and vaccine strains ahead of inclusion in national immunization program'** organized by Sabin Vaccine Institute.

- Oral presentation on 'Molecular analysis of VP4 gene of group A human Rotavirus circulating among diarrhoeic children in Haryana, India' in National Seminar on 'Frontiers in Genetics and Genomics' held on November 22, 2016 at CMBT, MDU, Rohtak

Preparation of Online content

Participated in preparation of MHRD UGC-ePathshala program as content writer and content reviewer and developed following nine modules (four quadrant each of) in the paper Animal Cell Biotechnology

Sr. No.	Title of module	Available at
1	Module 1: History, scope and future perspective of animal cell biotechnology	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
2	Module 13: Genetic Engineering and Applications	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
3	Module 17: Sperm and Embryo sexing and disease transmission	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
4	Module 18: Pregnancy Diagnosis in Animals	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
5	Module 20: Assisted Reproductive Technologies	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
6	Module 21: Host Pathogen Interactions	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
7	Module 26: DNA sequencing	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
8	Module 28: Biomarkers for animal disease diagnosis	https://epgp.inflibnet.ac.in/ahl.php?csrno=3
9	Module 32: Superbugs- problem of modern world	https://epgp.inflibnet.ac.in/ahl.php?csrno=3

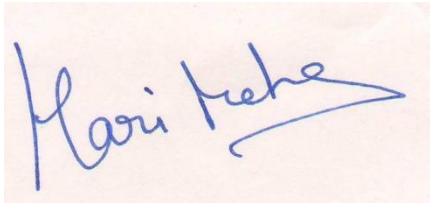
Nucleotide sequences submitted to NCBI with accession number - 57

1. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-9/G9P[4]/CMBT/MDU/Rohtak VP4 (VP4) gene, partial cds. KJ855217.
2. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A VP4 (VP4) gene, partial cds. KJ804256.
3. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-25/CMBT/MDU/Rohtak VP4 (VP4) gene, partial cds. KJ855214
4. Mohan,H., Ray,P. and Gakhar,S.K. 2012.Rotavirus A isolate HRVA/HR-23/isolate/G9P[8]/CMBT/MDU/Rohtak VP4 (VP4) gene, partial cds. KJ855215.
5. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-15/G1P[8]/CMBT/MDU/Rohtak VP4 (VP4) gene, partial cds. KJ855216.

6. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A VP4 (VP4) gene, partial cds. KJ855232.
7. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-48/G9P[4]/CMBT/MDU/Rohtak VP4 (VP4) gene, partial cds. KJ855219.
8. Mohan,H., Ray,P. and Gakhar,S.K. 2013.. Rotavirus A isolate HRVA/HR-67/G12P[6]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017283
9. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-120/G1P[8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017284.
10. Mohan,H., Ray,P. and Gakhar,S.K. 2013.Rotavirus A isolate HRVA/HR-176/G1P[8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017285.
11. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-192/G12P[6]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017286.
12. Mohan,H., Ray,P. and Gakhar,S.K. 2013.Rotavirus A isolate HRVA/HR-209/G1P[8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017287.
13. Mohan,H., Ray,P. and Gakhar,S.K. 2013.Rotavirus A isolate HRVA/HR-218/G12P[6]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017288.
14. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-222/G1P[8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017289.
15. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-223/G1P[8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017290
16. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-254/G1P[8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017291.
17. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-271/G1[P8]/CMBT/MDU/Rohtak VP4 gene, partialcds. KP017292.
18. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-302/G1[P8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017293
19. Mohan,H., Ray,P. and Gakhar,S.K. 2013. .Rotavirus A isolate HRVA/HR-310/G1[P8]/CMBT/MDU/Rohtak VP4 gene,partialcds. KP017294
20. Mohan,H., Ray,P. and Gakhar,S.K. 2014. Rotavirus A isolate HRVA/HR-336/G1[P8]/CMBT/MDU/Rohtak VP4 gene, partialcds. KP017295.
21. Mohan,H., Ray,P. and Gakhar,S.K. 2014. Rotavirus A isolate HRVA/HR-353/G2[P4]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017296.
22. Mohan,H., Ray,P. and Gakhar,S.K. 2014.Rotavirus A isolate HRVA/HR-389/G1[P8]/CMBT/MDU/Rohtak VP4 gene, partial cds. KP017297.
23. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A VP7 (VP7) gene, partial cds. KJ804255.

24. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-21/G1P[8]/CMBT/MDU/Rohtak VP7 gene, partial cds. KP017279.
25. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-30/G1P[8]/CMBT/MDU/Rohtak VP7 gene, partial cds. KP017280.
26. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-48/G9P[4]/CMBT/MDU/Rohtak VP7 gene, partial cds. KP017281.
27. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-49/G9P[8]/CMBT/MDU/Rohtak VP7 gene, partial cds. KP017282.
28. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-90/G9P[11]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds . KP054246.
29. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-109/G1P[ut]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054247
30. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-141/G12P[6]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054248.
31. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-157/G9P[6]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054249.
32. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-176/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054250.
33. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-209/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054251.
34. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-218/G12P[6]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. . KP054252
35. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-222/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054253
36. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-254/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054254
37. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-271/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. . KP054255
38. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-294/G1P[ut]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. . KP054256
39. Mohan,H., Ray,P. and Gakhar,S.K. 2013.Rotavirus A isolate HRVA/HR-302/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds .KP054257.
40. Mohan,H., Ray,P. and Gakhar,S.K. 2013. Rotavirus A isolate HRVA/HR-310/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054258.

41. Mohan,H., Ray,P. and Gakhar,S.K. 2014. Rotavirus A isolate HRVA/HR-336/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds .KP054259
42. Mohan,H., Ray,P. and Gakhar,S.K. 2014. Rotavirus A isolate HRVA/HR-353/G2P[4]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054260
43. Mohan,H., Ray,P. and Gakhar,S.K. 2014. Rotavirus A isolate HRVA/HR-389/G1P[8]/CMBT/MDU/Rohtak VP7 (VP7) gene, partial cds. KP054261
44. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A isolate HRVA/HR-9/G9P[4]/CMBT/MDU/Rohtak VP6 (VP6) gene, partial cds. KJ855229
45. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A VP6 (VP6) gene, partial cds. KJ804257
46. Mohan,H., Ray,P. and Gakhar,S.K. 2012. Rotavirus A VP6 (VP6) gene, partial cds. KJ855230
47. Mohan,H., Ray,P. and Gakhar,S.K. 2012.Rotavirus A isolate HRVA/HR-9/G9P[4]/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds. KJ855220
48. Mohan,H., Ray,P. and Gakhar,S.K.2012.Rotavirus A nonstructural protein 4 (NSP4) gene, partial cds. KJ804258
49. Mohan,H., Ray,P. and Gakhar,S.K.2012. Rotavirus A isolate HRVA/HR-15/isolate/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds.KJ855221
50. Mohan,H., Ray,P. and Gakhar,S.K.2012. Rotavirus A nonstructural protein 4 (NSP4) gene, partial cds. KJ855231
51. Mohan,H., Ray,P. and Gakhar,S.K.2012.Rotavirus A isolate HRVA/HR-25/CMBT/MDU/Rohtak nonstructural protein 4 (VP4) gene, partial cds . KJ855222
52. Mohan,H., Ray,P. and Gakhar,S.K.2012.Rotavirus A isolate HRVA/HR-30/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds. KJ855223
53. Mohan,H., Ray,P. and Gakhar,S.K.2012. Rotavirus A isolate HRVA/HR-34/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds. KJ855224
54. Mohan,H., Ray,P. and Gakhar,S.K.2012.Rotavirus A isolate HRVA/HR-40/G9P[8]b/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds. KJ855225
55. Mohan,H., Ray,P. and Gakhar,S.K.2012. Rotavirus A isolate HRVA/HR-45/G9P[8]/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds. KJ855228
56. Mohan,H., Ray,P. and Gakhar,S.K.2012.Rotavirus A isolate HRVA/HR-48/G9P[4]/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds.KJ855226
57. Mohan,H., Ray,P. and Gakhar,S.K.2012.Rotavirus A isolate HRVA/HR-49/CMBT/MDU/Rohtak nonstructural protein 4 (NSP4) gene, partial cds. KJ855227



Dr. Hari Mohan