

# Dr. Samander Kaushik

M. Sc (Bio-tech), LL. B (Hons) Ph. D (AIIMS)

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EDUCATION	<b>DOCTOR OF PHILOSOPHY (Ph. D)</b> <b>MICROBIOLOGY (VIROLOGY)</b>	<b>2010</b>
	Ph. D from Department of Microbiology, <b>All India Institute of Medical Sciences (AIIMS)</b> , Ansari Nagar, New Delhi, 110029, INDIA. Thesis Title “ <b>Antigenic and Molecular Chacterization of Influenza Viruses from Acute Respiratory Infection – A Survillance and Molecular study</b> ”	
	<b>MASTER OF SCIENCE (M. Sc) BIO-ECHNOLOGY</b>	<b>1999-2001</b>
	Passed with first division from Department of Biosciences, Maharshi Dayanand University, Rohtak, Haryana, India	
	<b>BACHELOR OF LAW -LL. B (Hons)</b>	<b>2013-2015</b>
	Passed with first division from Department of Law, Maharshi Dayanand University, Rohtak, Haryana, India	
	<b>BACHELOR OF SCIENCE (B. Sc)</b>	<b>1996-1999</b>
CURRENT POSITION	<b>Assistant Professor of Biotechnology, Centre for Biotechnology, M.D University, Rohtak (Haryana)</b> <b>Teaching:</b> Virology, Animal-biotechnology and Animal Cell Culture	<b>Aril 2010- Till Date</b>
AWARDS	<b>Senior Research Officer (SRO)</b>	<b>May 2009–Mar 2010</b>
	<b>Senior Research Fellow (ICMR, New Delhi)</b>	<b>Aug 2008 –Apr 2008</b>
	<b>Institute Fellowship (AIIMS, New Delhi)</b>	<b>Feb 2008 - July 2008</b>
	<b>Senior Research Fellow (CSIR/UGC)</b>	<b>Oct 2004 - Sept 2007</b>
	Awarded Senior Research Fellowship from Council of Scientific and Industrial Research, Delhi, India.	
	<b>Junior Research Fellow (CSIR/UGC)</b>	<b>Sept 2002 –Sept 2004</b>
	Awarded Junior Research Fellowship from Council of Scientific and Industrial Research, Delhi, India.	

<b>PROJECT</b>	<ul style="list-style-type: none"> <li>➤ Rapid Detection and Typing of Influenza A and B Viruses by Reverse Transcriptase- Loop Mediated Isothermal Amplification (RT-LAMP) Funded by University Grant Commission, New Delhi</li> <li>➤ Development of multiplex RT-PCR for Dengue Viruses Funded by Department of Science and Technology, Haryana (India)</li> <li>➤ Department of Biotechnology Government of India (DBT-MDU) interdisciplinary Life Science Programme for advanced research and education</li> <li>➤ To evaluate Protection of arsenic induced oxidative stress, Mitochondrial oxidative damage and apoptotic cell Death by Hydroxytyrosol in Rat Brain</li> </ul> <p><b>Two more projects are in pipeline.</b></p>
<b>TRAVEL GRANT</b>	<p>Received “Travel Grant” from “<b>Indian Council of Medical Research, New Delhi</b>” for attending the international conference” <b>Options for Control of Influenza VI</b>” held at Toronto, Ontario Canada in June 2007.</p>
<b>PUBLICATION</b>	<ol style="list-style-type: none"> <li>1. Vikrant Sharm, Sulochana Kaushik, Pooja Pandit, Divya Dhull, Jaya Parkash Yadav, <b>Samander Kaushik</b>. Green synthesis of silver nanoparticles from medicinal plants and evaluation of their antiviral potential against chikungunya virus. Applied Microbiology and Biotechnology. 27 October 2018 <a href="https://doi.org/10.1007/s00253-018-9488-1">https://doi.org/10.1007/s00253-018-9488-1</a></li> <li>2. Kaushik Sulochana, <b>Kaushik Samander</b>, Sharma V, Yadav JP. Antiviral and therapeutic uses of medicinal plants and their derivatives against dengue viruses. Phcog Rev 2018; 12:177-85</li> <li>3. Sharma V, Kaushik S, Kumar R, Yadav JP, <b>Kaushik S</b>. Emerging trends of Nipah virus: A review. Rev Med Virol. 2018 Sep 24: e2010. doi: 10.1002/rmv.2010.</li> <li>4. Vikrant Sharma, Dhruva Chaudhry, <b>Samander Kaushik*</b> (2018) Evaluation of clinical applicability of reverse transcription-loop-mediated isothermal amplification assay for detection and subtyping of Influenza A viruses. Journal of Virological Methods 253, 18–25</li> <li>5. Vikrant Sharma , Deepak Kumar , Divya Dhull , Sulochana Kaushik Jaya Parkash Yadav, <b>Samander Kaushik</b> Molecular Detection of Hepatitis C Virus (HCV) by Conventional One-step RT-PCR Coupled with Nested PCR, International Blood Research &amp; Reviews 7(2): 1-6, 2017; Article no.IBRR.34463</li> <li>6. Vikrant Sharma, Deepak Kumar, Divya Dhull, Sulochana Kaushik and <b>Samander Kaushik</b> (2017). Molecular Detection of Hepatitis B Viruses (HBV) Int. Blood Res. &amp; Reviews 7 (1): 1-6, 2017; Article no. IBRR.31171</li> </ol>

7. Sulochana Kaushik, Vikrant Sharma, Dhruva Chaudhary, Sanjeev Nanda, Jaya Parkash Yadav and **Samander Kaushik**. Standardization of one-step single tube RT-PCR for rapid detection of all circulating strains of dengue Viruses Int. J of Curr Res Vol. 8, Issue, 10, pp.40334-40338, October 2016
8. Vikrant Sharma and **Samander Kaushik** (2016) Comparative Analysis of Molecular Methods for Detection of Influenza Viruses, British Microbiology Research Journal 17 (3) 1-10, 2016 Article no. BMRJ.28858
9. Panda A, Khalil S, Mirdha BR, Singh Y, **Kaushik S** (2015) Prevalence of Naegleria fowleri in Environmental Samples from Northern Part of India. PLoS ONE 10(10): e0137736. doi:10.1371/journal.pone.0137736
10. Dhakad S, Mali PC, **Kaushik S**, Lal AA, Broor S. Comparison of multiplex RT-PCR with virus isolation for detection, typing and sub-typing of influenza virus from influenza-like illness cases. Ind J Med Microbiol. Jan-Mar;33(1):73-7, 2015
11. **Samander Kaushik**, Kiran Sharma, Vikrant Sharma, Divya Dhull, Dhruv Chaudhary and Sanjiv Nanda. Multiplex polymerase chain reaction for the detection of herpes simplex Viruses (hsv1 and hsv2) International Journal of Current Research Vol. 6, Issue, 02, pp.4896-4899, February 2014
12. Broor S, Krishnan A, Roy DS, Dhakad S, **Kaushik S**, Mir MA, Singh Y, Moen A, Chadha M, Mishra AC, Lal RB. Dynamic patterns of circulating seasonal and pandemic A(H1N1) pdm09 influenza viruses from 2007-2010 in and around Delhi, India. PLoS One. 2012;7(1): e29129.
13. Shobha Broor, Swati Gupta, Sarita Mohapatra, **Samander Kaushik**, Muneer A. Mir, Priti Jain, Lalit Dar, Renu B. Lal Emergence of 2009A/H1N1 cases in a tertiary care hospital in New Delhi, India, Accepted 19 May 2011. Published Online 4 August 2011. Influenza and Other Respiratory Viruses 2011; 1-6
14. Parvaiz A. Koul, Muneer A. Mir, Nargis K. Bali, Mamta Chawla-Sarkar, Mehuli Sarkar, **Samander Kaushik**, U.H. Khan, Feroze Ahmad, Rebecca Garten, Renu B. Lal, Shobha Broor Pandemic and seasonal influenza viruses among patients with acute respiratory illness in Kashmir (India); Influenza and Other Respiratory Viruses May 16; 2011; 1-7
15. Das RR, Sami A, Lodha R, Jain R, Broor S, **Kaushik S**, Singh BB, Ahmed M, Seth R, Kabra SK. Clinical Profile and Outcome of Swine Flu in Indian Children. Indian Pediatr. 2011 May 7; 48 (5):373-8.

	<p>16. Gupta S, Mahaptra S, <b>Kaushik S</b>, Broor, S et al" Emergence of 2009A/H1N1 Cases in a Tertiary Care Hospital in New Delhi; Plos one 2010; 21-25</p> <p>17. Shobha Broor Harendra Singh Chahar · <b>Samander Kaushik</b>. Diagnosis of influenza viruses with special reference to novel H1N1 2009 influenza virus. Indian J Microbiol (December 2009) 49:301–307</p> <p>18. Bharaj P, Sullender WM, Kabra SK, Mani K, Cherian J, Tyagi V, Chahar HS, <b>Kaushik S</b>, Dar L, Broor S. Respiratory viral infections detected by multiplex PCR among pediatric patients with lower respiratory tract infections seen at an urban hospital in Delhi from 2005 to 2007. Virol J. 2009 Jun 26; 6: 89-92</p> <p>19. <b>Kaushik S</b>, Bharaj P, Dhakad S, Jain P, Kumar R, Broor S. Influenza virus strains circulating in and around New Delhi during Dec 2004-Sept 2008 Indian Journal of Virology 20 (1), 32-32</p> <p>20. Bharaj P, Chahar HS, <b>Kaushik S</b>, Jain P, Kabra SK, Sullender W, Broor S. Development of mutiplex RT-PCR for detection of viruses in acute lower respiratory tract infections in children. Indian Jou of Virology 20 (1), 20-21</p> <p>21. Diddi K, <b>Kaushik S</b>, Dar L, Broor S. Concomitant outbreak of chikungunya and dengue fever, India. Indian Journal of Virology 20 (1), 36-36</p> <p>22. Booklet “Standardize Avian Influenza Diagnosis in referral Laboratories in India publish by WHO, Dec 2007.</p> <p>2-3 Paper in the processing with the various journals may be published after some time.</p>
<b>BOOKLET</b>	<b>Standardize Avian Influenza Diagnosis in referral Laboratories in India Published by WHO.</b>
<b>TECHNICAL CAPABILITIES</b>	<p><b>Sample Collection:</b></p> <ul style="list-style-type: none"> <li>❖ Hands-on experience in sample collection for respiratory viruses from hospitals as well as field studies.</li> <li>❖ Filling the questionnaire and data management related to the recruited patients as well as community population.</li> </ul> <p><b>Virological:</b></p> <ul style="list-style-type: none"> <li>❖ Influenza Virus Isolation.</li> <li>❖ Dengue and other falvivivirus isolation</li> <li>❖ Hemagglutinin Assay (HA)</li> <li>❖ Hemagglutinin Inhibition Assay (HI)</li> <li>❖ IFA &amp; DFA</li> <li>❖ TCID<sub>50</sub> Determination</li> </ul>

	<p><b>Spectroscopic Techniques:</b></p> <ul style="list-style-type: none"> <li>❖ UV-vis, Fluorescence.</li> </ul> <p><b>Molecular Biology:</b></p> <ul style="list-style-type: none"> <li>❖ DNA, RNA, isolation from Clinical sample.</li> <li>❖ RNA isolation by GT Method, Compact MegnaPure Roche, Commercial kits</li> <li>❖ Polymerase Chain Reaction (Simple, Multiplex)</li> <li>❖ Cloning, Plasmid Isolation</li> <li>❖ Restriction Digestion analysis.</li> <li>❖ DNA Purification from agarose gel as well as from PCR Product.</li> <li>❖ Real-Time RT –PCR.</li> <li>❖ RT-LAMP</li> <li>❖ Other medical diagnostic techniques</li> </ul> <p><b>Animal Cell Culture:</b></p> <ul style="list-style-type: none"> <li>❖ Media Preparation.</li> <li>❖ Maintenance of various cell lines (MDCK, HEP-II).</li> <li>❖ Virus Isolation</li> <li>❖ Virus characterization</li> </ul>
<p><b>WORKSHOPS, SYMPOSIAS AND PRESENTATION</b></p>	<ul style="list-style-type: none"> <li>❖ One Week Short-Term Training course on “Advanced Analytical Instrumentation Techniques” was held at Human Resource Development Centre, Guru Jambheshwar University, Hisar during 10.12.2018 to 15.12.2018.</li> <li>❖ <b>Dr Samander Kaushik</b> organizing as organizing secretary for one-day National Conference &amp; Workshop on the “Emerging Infectious Diseases” on 27<sup>th</sup> Nov 2017 sponsored by Dr Radha Krishan Foundation at Central for Biotechnology, Maharshi Dayanand University, Rohtak</li> <li>❖ Participate in the Workshop on “<b>Molecular Virological Techniques for Dengue and Chikungunya</b>” being held at National Institute of Virology (NIV), Pune during June 22 - July 10, 2015</li> <li>❖ Attend the 12<sup>th</sup> Workshop on ‘<b>Molecular Virology</b>’ being held during <b>March 20 to March 31, 2015</b> at Indian Institute of Science, Bangalore India.</li> <li>❖ International Research colloquium on Adv. in Microbial Biotech: Prospects (AMBF-2012) Department of Microbiology, MDU, Rohtak 20<sup>th</sup> Nov. 2012</li> <li>❖ Participated in National Symposium” Fight against Malaria: Prospects and Perspectives” organized by Centre for Medical Biotechnology, M.D. University (09.03.2013)</li> <li>❖ Advance in Electron Microscopy in Virology Research &amp; 3D Imaging workshop 20-21 October 2012 NIV, Pune</li> <li>❖ National Seminar on Recent advancement in Application of Genetics organized on March 20, 2012 by Dept. of Genetics, MDU Rohtak</li> </ul>

	<ul style="list-style-type: none"> <li>❖ Participate in the five days DST-Inspire programme from April 28-May2, 2012 organized by the Centre for Biotechnology, MDU Rohtak</li> <li>❖ Participate in the CME on “Arboviral Infections of Public Health Concern” organized 3-5 September 2012 by PGIMER Chandigarh.</li> <li>❖ <b>Samander kaushik</b>, shivram Dhakad, Muneer Renu lal, AC Mishra, Manpreet Chadha Shobha Broor: Real time RT-PCR for the Detection and typing of Seasonal influenza viruses and its comparison with Virus Isolation <b>IAMM, MICROCON 2009</b> organized on Nov 5-8, 2009 by JSS MC, Mysore.</li> <li>❖ Shivram Dhakad, <b>Samander kaushik</b> Muneer Shobha Broor: Comparison of Influenza virus detection and typing by virus isolation and RT-PCR <b>IAMM, MICROCON 2009</b> organized on Nov 5-8, 2009 by JSS MC, Mysore.</li> <li>❖ <b>Samander Kaushik</b>, Preeti Bharaj, Shivram Dhakad, Priti Jain, Rajender Kumar Shobha Broor; Influenza Virus Strains Circulating in and around New Delhi During Dec 2004-Sept 2008. XVIII National Conference of Indian Virological Society, Chandigarh, India, Dec 2008.</li> <li>❖ Bharaj, P.; Broor, S.; Dhakad, S.; <b>Kaushik, S.</b>; Jain, P.; Kabra, S.K. Multiplex RT-PCR for typing and subtyping of human influenza virus during a surveillance study. Third European Influenza Conference 14-17 September 2008 at the Tivoli Marina Vilamoura hotel, Vilamoura, Portugal.</li> <li>❖ Preeti Bharaj, Harender Singh Chahar, <b>Samander Kaushik</b> Priti Jain, S.K Kabra, Wayne Sullender, Shobha Broor; Development of Multiplex RT-PCR For Detection of Viruses in Acute Lower Respiratory Tract Infections in Children at XVIII National Conf of Indian Viro Society, Chandigarh, India, Dec 2008.</li> <li>❖ Diddi K, <b>Samander Kaushik</b>, Shobha Broor; Concomitant outbreak of Chikungunya and Dengue Fever, India. at XVIII National Conference of Indian Virological Society, Chandigarh, India, Dec 2008.</li> <li>❖ <b>Samander Kaushik</b>, Preeti Bharaj, Shobha Broor; Surveillance of Human Influenza Virus Strains Circulating in New Delhi. <b>Options for Control of Influenza VI</b>” held at Toronto, Ontario Canada in June 2007.</li> <li>❖ <b>Samander Kaushik</b>, Preeti Bharaj, Shobha Broor; Surveillance of Human Influenza Virus Strains Circulating in National Capital of India. At Asia Pacific Congress of Medical Virology, New Delhi, India.</li> <li>❖ Broor S Bharaj, P. and <b>Kaushik S.</b> 2007. Comparison of Influenza Virus Typing by Hemagglutinin Inhibition Assay and RT-PCR Options for the Control of Influenza VI. Toronto, Canada</li> <li>❖ <b>Samander Kaushik</b>, Preeti Bharaj, Shobha Broor; Influenza Virus Surveillance in New Delhi. At XXIX National Congress of Indian Association of Medical Microbiologists, Chennai, India.</li> <li>❖ Attended the “<b>Training Program to Control AIDS</b>” at department of Microbiology, All India Institute of Medical Sciences, New Delhi, Feb 2009.</li> </ul>
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	<ul style="list-style-type: none"> <li>❖ Attended a workshop organized by NIV-ICMR-CDC on “<b>Real-time RT-PCR for detection of Human and Avian Influenza Viruses</b>” at National Institute of Virology, Pune, October 2007.</li> <li>❖ Attended a workshop organized by NIV-ICMR-CDC on “<b>Influenza Viruses Strain Surveillance</b>” at National Institute of Virology, Pune, January 2007</li> <li>❖ Attended a National Symposium on “Nano-technology in Medicine” at All India Institute of Medical Sciences, New Delhi, and January 2007.</li> <li>❖ Participated in the <b>WHO Meeting “Expert Group Meeting to standardize Avian Influenza Diagnosis in referral Laboratories in India”</b> at National Institute of Virology, Pune, April 2006.</li> <li>❖ Participated in the <b>AIIMS Golden Jubilee celebrations conference on “HIV/AIDS and TB”</b> held at AIIMS, New Delhi, India. In January 2006.</li> <li>❖ Attended a workshop organized by NIV-ICMR-CDC on “<b>Influenza Viruses Strain Surveillance</b>” at National Institute of Virology, Pune, July 2004</li> <li>❖ <b>INDO- US SYMPOSIUM- 2006</b> on Viral Diagnostics, Epidemiology and Pathogenesis, AIIMS, New Delhi, India, Nov. 2006.</li> <li>❖ Attended Symposium on Stem Cell Applications organized at AIIMS, New Delhi, India (August 2008).</li> </ul>
<b>PERSONAL DETAILS</b>	<p> <b>Name</b> : <b>Dr Samander Kaushik</b>  <b>Date of Birth</b> : August 10, 1975  <b>Nationality</b> : Indian  <b>Sex</b> : Male  <b>Marital Status</b> : Married  <b>Language Know</b> : English &amp; Hindi  <b>Present Designation</b> : Assistant Professor  <b>Department</b> : Centre for Biotechnology  <b>Room Number</b> : Room No 217, CBT, 1<sup>st</sup> floor  <b>Institute</b> : M. D University, Rohtak (Haryana)  <b>Contact number</b> : 09017733717 </p>
<b>REFERENCES</b>	<p> <b>Prof. Shobha Broor</b>  Department of Microbiology,  All India Institute of Medical Sciences,  New Delhi-110029, INDIA  Phone: +91-9958968787  Fax: +91-11-2658-8663  e-mail: <a href="mailto:shobhabroor@gmail.com">shobhabroor@gmail.com</a>  <b>Dr Lalit Dar</b>  Department of Microbiology  All India Institute of Medical Sciences  New Delhi-110029, INDIA  Phone: +91-11-2659-4926  Fax: +91-11-2658-8663  E Mail: <a href="mailto:lalitdar@gmail.com">lalitdar@gmail.com</a> </p>

