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Title	Prof./Dr./Mr./Ms. Dr.	First Name	Amita	Last Name	Gupta	Photograph
Designation		Associate Professor				
Department		Biochemistry				
Address (Campus)		University of Delhi South campus, New Delhi 110021				
(Residence)		C-1/1478, Vasant Kunj, New Delhi 110070				
Phone No (Campus)		91-11-24114172				
Mobile		91-9811509609				
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Email		amitagupta@south.du.ac.in				
Web-Page						
Education						
Subject	Institution	Year	Details			
Ph.D Biochemistry	University of Delhi	2001	Thesis topic: Genetically engineered recombinant antibody fusion proteins for the detection of Human immunodeficiency virus (HIV)			
M. Sc Biochemistry	University of Delhi South campus	1995				
B. Sc Biochemistry	University of Delhi	1993				
Career Profile						
Organisation / Institution	Designation	Duration	Role			
Department of Biochemistry, University of Delhi South campus New Delhi	Scientist	2000-2002	Research			
Department of Biochemistry, University of Delhi South campus New Delhi	Lecturer (ad-hoc)	2002-2006	Teaching and Research			
Department of Microbiology, University of Delhi South campus New Delhi	Assistant Professor	2006-2014	Teaching and Research			
Department of Biochemistry, University of Delhi South campus New Delhi	Associate Professor	2014-Present	Teaching and Research			
Research Interests / Specialization						
<p>Research interests- Infectious disease biology; understanding host-pathogen interaction; modulation of host cell death; identification of novel drug targets for new drug development; pathogen physiology and development of persistence, multi-drug tolerant phenotype, methods for detection of drug-resistant Mycobacteria, molecular and immunodiagnosics for infectious diseases.</p> <p>Specialisation- Recombinant DNA technology, Functional genomics of pathogenic microorganisms, Clinical Microbiology, Antibody/Protein Engineering, Recombinant protein production</p>						

Teaching Experience (Subjects/Courses Taught)			
2002-2007	Metabolism, Proteins and Enzymes, Enzyme kinetics, Expression systems and production strategies for recombinant proteins		
2006-2009	Animal Virology, Production of recombinant proteins, Applications of Recombinant DNA technology in microbiology,		
2009- till date	Molecular Biology		
2011- till date	Immunology		
Guided M. Sc students for practicals.			
Guided M.Sc students for one-year dissertation work.			
Research Guidance			
<ol style="list-style-type: none"> 1. <i>Supervision of awarded Doctoral Thesis- One</i> 2. <i>Supervision of Doctoral Thesis, under progress-Three</i> 3. <i>Supervision of awarded M.Phil dissertations -Two</i> 4. <i>Supervision of M.Phil dissertations, under progress-None</i> 			
Honors & Awards			
<ol style="list-style-type: none"> 1. 2015, Visitor's award for innovation by Hon'ble President of India. 2. 2010, Senior Innovative Young Biotechnologist Award (IYBA) by Department of Biotechnology, Ministry of Science and Technology, Govt. of India 3. 2007, Indian National Science Academy (INSA) Young Scientist Award in the field of Medical Sciences for the year 2006. 4. 2006, Innovative Young Biotechnologist Award (IYBA) 2005 by Department of Biotechnology, Ministry of Science and Technology, Govt. of India. 5. 2005, Shakuntala Amir Chand Award-2003 of Indian Council of Medical Research (ICMR), Government of India. 6. 2005, WIPO (World Intellectual Property Organization, Geneva) Gold Medal for "Best Invention of the Year 2004" for inventing "On-site Detection of HIV(AIDS). 7. 2004, Prof. B.K.Bachhawat Memorial Young Scientist lecture award of The National Academy of Sciences, India. 8. 2004, National Research Development Corporation (NRDC, DSIR, Ministry of Science & Technology, 9. Government of India) award for inventing "On-site Detection of HIV(AIDS)" 10. 2003, awarded Dr. D. L. Srivastava Young Scientist Award by Society of Biological Chemists (India). 11. 2003, awarded Young Scientist Award (New Biology Section) by Indian Science Congress Association. 12. 2001, awarded Outstanding Young Scientist Prize for the year 2001 by International Business Communications, USA. 13. 1995, awarded gold medal for securing first position in Delhi University in M.Sc. (Biochemistry). 			
Publications (LAST FIVE YEARS)			
<u>Books / Monographs</u>			
<u>Year of Publication</u>	<u>Title</u>	<u>Publisher</u>	<u>Co-Author</u>
2005	<i>Phage Display: A molecular fashion show. Manuscript in book entitled "Phages: Their Role in Bacterial Pathogenesis and Biotechnology"</i>	<i>American Society of Microbiology (ASM)</i>	Oppenheim, A V. K. Chaudhary

In Indexed/ Peer Reviewed Journals

<u>Year of Publication</u>	<u>Title</u>	<u>Journal</u>	<u>Co-Author</u>
1999	A simplified Gene-fragment Phage Display system for epitope mapping	<i>Biotechniques</i> Vol 27, Pg 328-334	Gupta,S., Arora,K., Sampath,A. Singh,S. Chaudhary,V. K
2000	Gag-derived proteins of HIV-1 isolates from Indian patients: cloning, expression, and purification of p24 of B- and C-subtypes	<i>Protein Expression Purification</i> Vol 19 Pg321-328	Gupta, S., Arora, K., Chaudhary, V.K
2001	Gag-derived proteins of HIV-1 isolates from Indian patients: cloning, expression, and purification of p17 of B- and C-subtypes	<i>Protein Expression Purification</i> Vol 21 Pg378-385	Gupta, S., Arora, K., Chaudhary, V.K
2001	Mapping of HIV-1 Gag epitopes recognized by polyclonal antibodies using gene-fragment phage display system	<i>Prep Biochem Biotechnol</i> Vol 31 Pg185-200	Gupta, S., Arora, K., Sampath, A., Singh, S.S., Chaudhary, V.K
2001	Recombinant fusion proteins for haemagglutination-based rapid detection of antibodies to HIV in whole blood.	<i>J Immunol Methods</i> Vol 256 Pg121-140	Gupta, S., Chaudhary, V.K
2002	Expression, purification and characterization of an anti-RBCFab-p24 fusion protein for haemagglutination based rapid detection of antibodies to HIV in whole blood.	<i>Protein Expression Purification</i> Vol 26 Pg162-170.	Chaudhary, V.K
2003	Whole-Blood Agglutination Assay For On-Site detection of Human Immunodeficiency Virus infection.	<i>J.Clin. Microbiol.</i> Vol 41(7) Pg 2814-2821	Chaudhary, V.K
2003	High Density Functional Display of Proteins on Bacteriophage Lambda	<i>J. Mol. Biol., Vol 334(2) Pg 241-254</i>	Masanori Onda, Ira Pastan, Sankar Adhya' and Vijay K. Chaudhary
2005	Expression and purification of recombinant 38-kDa and Mtb81 antigens of <i>Mycobacterium tuberculosis</i> for application in serodiagnosis	<i>Protein Expression Purification</i> 40:169-176	Chaudhary, V.K., Kulshreshtha, A., Gupta, G., Verma, N., Kumari, S., Sharma, S.K., Anil K. Tyagi.
2005	Serogroup-reactive and type-specific detection of bluetongue virus antibodies using chicken scFvs in inhibition ELISAs.	<i>J Virol Methods</i> Vol 129(1) Pg 31-39	Fehrsen J, van Wyngaardt W, Mashau C, Potgieter AC, Chaudhary VK, Jordaan FA, du Plessis DH
2005	Expression and purification of recombinant antigens of <i>Mycobacterium tuberculosis</i> for application in serodiagnosis.	<i>Protein Expression Purification</i> Vol 44 Pg75-85.	Abhishek Kulshreshtha, Nitin Verma, S. K. Sharma, Anil K. Tyagi and V. K. Chaudhary
2006	HIV Diagnostics: Saving Lives, Slowing The Pandemic.	<i>Proc. Indian Natl.</i>	

		<i>Acad. Sci. Vol 29 Pg1-15</i>	
2006	Bifunctional recombinant fusion proteins for rapid detection of antibodies to both HIV-1 and HIV-2 in whole blood.	<i>BMC Biotechnology Vol 6 Pg 39</i>	V. K. Chaudhary
2009	Killing activity and rescue function of genome-wide toxin-antitoxin loci of Mycobacterium tuberculosis.	<i>FEMS Microbiol Lett 290: 45–53.</i>	
2009	Directed evolution of an anti-human red blood cell antibody.	<i>mAbs. 1(3) 268-280</i>	V.K. Chaudhary, and R. Bhat
2012	<u>Intraviral protein interactions of Chandipura virus</u>	<i>Arch Virol. 157(10):1949-57</i>	Kumar K, Rana J, Sreejith R, Gabrani R, Sharma SK, Chaudhary VK, Gupta S
2012	Mapping interactions of Chikungunya virus nonstructural proteins	<i>VirusRes.169(1):231-6</i>	Sreejith R, Rana J, Dudha N, Kumar K, Gabrani R, Sharma SK, Vrati S, Chaudhary VK, Gupta S
2013	A robust and efficient method for the isolation of DNA-free, pure and intact RNA from Mycobacterium tuberculosis	<i>Journal of microbiological methods 93:198-202</i>	Balaji V, Gupta N
2013	A Novel Helper Phage Enabling Construction of Genome-Scale ORF-Enriched Phage Display Libraries	<i>PLoS One, 8(9): e75212</i>	N. Shrivastava, P. Grover, A. Singh, K. Mathur, V. Verma, C. Kaur, and V.K. Chaudhary
2013	Elucidating the interacting domains of chandipura virus nucleocapsid protein	<i>Adv Virol, 2013: 594319</i>	Kumar, K., S. Rajasekharan, S. Gulati, J. Rana, R. Gabrani, C.K. Jain, S. Gupta, V.K. Chaudhary
2014	A new microarray platform for whole-genome expression profiling of Mycobacterium tuberculosis	<i>J. Microbiol Methods, 97: 34-43</i>	Venkataraman, B., M. Vasudevan
2014	Rapid restriction enzyme-free cloning of PCR products: a high-throughput method applicable for library construction	<i>PLoS One, 9(10): e111538</i>	V.K. Chaudhary , N. Shrivastava, P. Grover, V. Verma, C. Kaur, and Shilpi Das
2014	Small scale expression, solubilization, and characterization of Chikungunya virus structural proteins	<i>Asian Journal of Pharmaceutical and Clinical Research, 7(5):268-271</i>	N. Dudha, J. Rana, R. Gabrani, V.K. Chaudhary, S. Gupta
2015	Host-pathogen interactome analysis of Chikungunya virus envelope proteins E1 and E2	<i>Virus genes 50, 200-209</i>	Dudha, N., Rana, J., Rajasekharan, S., Gabrani, R., Chaudhary, V. K., and Gupta, S

2015	Host interactions of Chandipura virus matrix protein	<i>Acta tropica</i> 149, 27-31	Rajasekharan, S., Kumar, K., Rana, J., Chaudhary, V. K., and Gupta, S.
2017	Co-expression network analysis of toxin-antitoxin loci in <i>Mycobacterium tuberculosis</i> reveals key modulators of cellular stress.	<i>Sci Rep</i> , 7(1), 5868.	Gupta, A., Venkataraman, B., Vasudevan, M., & Gopinath Bankar, K.
2018	Biotin tagged proteins; Reagents for efficient ELISA-based serodiagnosis and phage display-based affinity selection	<i>Plos One</i> 13(1) e0191315	V. Verma, C. Kaur, P. Grover, and V.K. Chaudhary
<u>Articles</u>			
<u>Conference Presentations</u>			
Presentation at Banaras Hindu University at International Conference on Bacteriophages in River Ganga (2017)			
Presentation at University of Hyderabad on TA loci (2017)			
Presentation at Bhaskaracharya College of Applied Sciences on Microbial Genomics (2017)			
Presentation at University of Hyderabad under GIAN Workshop on Antibody Engineering (2016)			
Presentation at Microarray workshop at AIIMS, New Delhi (2013)			
Presentation at International TB symposium at ICGEB, New Delhi (2009)			
Presentation at Gordon Research Conference on Tuberculosis Drug Development at Oxford, UK (2007)			
Presentation at Onderspoort Veterinary Institute, Pretoria, Republic of South Africa (2003)			
Presentation at the 102 nd General Meeting of American society of Microbiology (ASM) at Salt Lake City, USA (2002)			
Presentation at IBCs International conference on Antibody Engineering at San Diego, California, USA (2001)			
Presentation at IBCs fifth Biomolecular Diversity Conference held at Waltham, Massachusetts, USA (2000)			
Total Publication Profile optional			
<u>Books</u>			
One chapter			
<u>In Indexed/ Peer Reviewed Journals</u>			
Twenty seven publications and Eight patents			
<u>Articles</u>			
<u>Conference Presentations</u>			
Twelve			
<u>Public Service / University Service / Consulting Activity</u>			
Member of Board of Research Studies of Faculty of Interdisciplinary and Applied Sciences			
Member of Faculty of Interdisciplinary and Applied Sciences			
<u>Professional Societies Memberships</u>			
Life member of Society of Biological Chemists (India).			
Life member of Indian Science Congress Association			
Life member of Association of Microbiologists of India.			
<u>Projects (Major Grants / Collaborations)</u>			
<ul style="list-style-type: none"> Genome-wide cloning, expression and purification of toxin and antitoxin proteins of <i>Mycobacterium tuberculosis</i> and development of reagents and studying the physiological role of these proteins Funding Agency: DBT. Duration: March 2007- Feb 2010 Amount sanctioned: 80.0 lacs Antitoxin-Toxin loci of <i>Mycobacterium tuberculosis</i>: Identification and Biochemical Characterization. Funding Agency: DBT. Duration: Apr 2010- Mar 2013 Amount sanctioned: 1 crore A system for enhanced production of recombinant proteins in Mycobacteria. Funding Agency: DST. Duration: Jan 2011- Dec 2013 Amount sanctioned: 42.0 lacs Identification and characterization of Promoters of Toxin Antitoxin loci in <i>Mycobacterium tuberculosis</i> Funding Agency: CSIR. Duration: Oct 2014- Sept 2017 Amount sanctioned: 35.0 lacs 			

- **Understanding the role of Rv1955-Rv1956 Toxin-antitoxin (TA) locus of M. tuberculosis in pathogen biology. Funding Agency: DBT. Duration: Aug 2016- July 2019 Amount sanctioned: 53 lacs**
- **Identification of mycobacterial proteins and novel antigenic epitopes having immunodiagnostic potential and development of reagents for point of care test for tuberculosis. Funding Agency: DBT. Duration: Feb 2018- Feb 2021 Amount sanctioned: 55 lacs**

Other Details

(Signature of Faculty Member)