




Faculty Details Proforma for DU Website

Title	Dr.	First Name	SUPRIYA	Last Name	SINGH	Photograph
Designation	Assistant Professor					
Address	Department of Zoology, Gargi College Siri Fort Road, New Delhi-110014					
Phone No Office	011-26494544					
Email	supriya.singh@gargi.du.ac.in					
Educational Qualifications						
Degree	Institution				Year	
Ph.D. in Molecular Biology	National Centre for Disease Control (NCDC), <i>Affiliated to GGSIP University, Delhi, INDIA & The Peter Medawar Building for Pathogen Research, University of Oxford, UK</i> <i>(CSIR-NET Junior & Senior Research Fellow, and Commonwealth Split-Site Doctoral Scholar)</i>				2016	
M.Sc. Zoology	Department of Zoology, Hans Raj College, <i>University of Delhi, INDIA</i>				2008	
B.Sc. Zoology (Hons)	Department of Zoology, Hans Raj College, <i>University of Delhi, INDIA</i>				2006	
Career Profile						
<ul style="list-style-type: none"> • Assistant Professor at Department of Zoology, Gargi College, University of Delhi [January 2015 - Present]. • Principal Investigator, <i>UGC-Faculty Research Promotion Scheme Start-Up Grant</i>, for project entitled “Molecular Characterization of Human Immunodeficiency Virus (HIV) & Impact of HLA on Viral Evolution”, at Department of Zoology, Gargi College, University of Delhi [April 2018-March 2021]. • Commonwealth Scholar (Visiting Student as Part of Overseas Education Institution Award) at The Peter Medawar Building for Pathogen Research, Department of Pediatrics, <i>University of Oxford, Oxford, UK</i>. 						

<ul style="list-style-type: none"> • Research Fellow (Junior Research Fellow and Senior Research Fellow at CSIR, Council for Scientific & Industrial Research) at the National Centre for Disease Control (Ministry of Health and Family Welfare, Govt. of India). During this period, she also worked in NACO's project (National AIDS Control Organization), on "Early Infant Diagnosis (EID) of HIV" with Dried Blood Spot and Whole Blood Samples; Molecular diagnosis of disease pathogens such as HIV, Hepatitis B, Swine Influenza, Tuberculosis; Molecular epidemiology and phylogenetic analysis of viruses such as HIV, Hepatitis B.
Administrative Assignments
<ul style="list-style-type: none"> • <i>Member, Departmental Admission Committee</i> (Zoology), July 2023. • <i>Member, Computer Lab Committee</i>, Gargi College • <i>Member, Foreign Students Committee</i>, Gargi College • <i>Executive Editor</i> for Departmental Magazine Flight, 2015-16. • <i>Member, Departmental Admission Committee</i> (Zoology), May 2019 to August 2019. • <i>Member, Foreign Students Committee</i>, July 2018 - December 2020. • <i>Member, Syllabus Revision for Comparative Anatomy of Vertebrates</i> (Core Zoology), UGC-LOCF (Under-Graduate Curriculum-Learning Outcome-Based Curriculum Framework). • <i>Member, Syllabus Revision for Animal: Form, Structure, and Function</i> (Applied Life Science, Core Zoology I), UGC-LOCF (Under-Graduate Curriculum-Learning Outcome-Based Curriculum Framework). • <i>Member, Syllabus Drafting Committee</i> UGCF 2022 based on NEP 2020 guidelines for Chronobiology, May 2022. • <i>Member, Syllabus Drafting Committee</i> UGCF 2022 based on NEP 2020 guidelines for Comparative Anatomy of Vertebrates, May 2022.
Areas of Interest / Specialization
Molecular Biology, Virology, HIV/ AIDS, Reproductive Physiology
Subjects Taught
Research Methodology, Comparative Anatomy of Vertebrates, Chronobiology, Animal Physiology, Computational Biology
Research Guidance
<ul style="list-style-type: none"> • Supervised three students on project entitled "Study of Intra-Clade C polymorphisms in envelope gene of HIV-1 in African and Indian Sequences", under the <i>Pathfinder Project</i>, Gargi College (2022), University of Delhi. • Supervised three students on project entitled "Characterizing Clade-Specific Virus-Host Interactions in HIV infected clinically asymptomatic and AIDS presenting subjects", funded by <i>Star College Grant, Department of Biotechnology</i>, India, at Department of Zoology, Gargi College (2015), University of Delhi. • Supervised three students on project entitled "Role of HLA and Antiretroviral Drug Resistance in Immune Escape of Human Immunodeficiency Virus (HIV)" at Department of Zoology, Gargi College (2018), University of Delhi.

Publications Profile

1. **Singh S**, Kumar A, Brijwal M, Choudhary A, Singh K, Singh R, Husain M, Dar L (2021). Intra-Clade C signature polymorphisms in HIV-1 LTR region: The Indian and African lookout. *Virus Research*, 297 (2021), 198370. doi: 10.1016/j.virusres.2021.19837
2. Ming-Han Chloe Tsai, **Supriya Singh**, Emily Adland, Philip Goulder. Impact of HLA-B*52:01 Driven Escape Mutations on Viral Replicative Capacity. *Journal of Virology*. DOI: 10.1128/JVI.02025-19.
3. Uma Sharma, Poonam Gupta, Megha Singhal, **Supriya Singh**, Sunil Gupta, S. Venkatesh, Arvind Rai, Mohammad Husain. Comparative Genetic Variability in HIV-1 Subtype C *nef* Gene in Early Age Groups of Infants. *Journal of Medical Virology*. 89 (9), 1606-1619. 2017.
4. Uma Sharma, Megha Singhal, **Supriya Singh**, Artee Chaudhary, Sunil Gupta, S. Venkatesh, Arvind Rai and Mohammad Husain. Early Screening of HIV-1 from Dried Blood Spots in Infants Born to HIV-1 Positive Mothers from North Indian States. *Clinical Research in HIV/AIDS*. (2016), 3(1): 1032.
5. **Supriya Singh**, Shashi Khare, Sudha Prasad, R L Ichhpujani, S S Negi, Sachin Kumar, D S Rawat, Arvind Rai. Correlation of partial *env* gene sequences with disease progression parameters in HIV positive pregnant women from India. *Medical Microbiology and Immunology* (Springer, Germany). 2012: 201(3); 271-276.
6. Shashi Khare, S S Negi, **Supriya Singh**, Megha Singhal, Sachin Kumar, D S Rawat, Arvind Rai. Genetic analysis of *pre-core/core* and partial *pol* genes in unprecedented outbreak of fulminant hepatitis B in India. *Epidemiology and Infection* (Cambridge University Journal, United Kingdom), Available on CJO 2012 DOI:10.1017/S0950268812000349.
7. Sachin Kumar, Shashi Khare, Bano Saidullah, Inderjeet Gandhoke, Hanu Ram, **Supriya Singh**, L S Chauhan, Arvind Rai. Appearance of L90I and N205S Mutations in Effector Domain of NS1 Gene of pdm (09) H1N1 Virus from India during 2009–2013. *Advances in Virology*, 2014; 2014; <http://dx.doi.org/10.1155/2014/861709>.
8. Poonam Gupta, Mohammad Husain, Charoo Hans, Hanu Ram, **Supriya Singh**, Mohammad Misbah, L S Chauhan, Arvind Rai. Sequence heterogeneity in human immunodeficiency virus type 1 *nef* in patients presenting with rapid progression and delayed progression to AIDS. *Archives of Virology* (Springer, Germany). 2014 Apr 19.
9. Mohd Azam, Abida Malik, Meher Rizvi, **Supriya Singh**, Poonam Gupta & Arvind Rai. Emergence of drug resistance- associated mutations in HIV-1 subtype C *protease* gene in north India. *Virus Genes* (Springer, Germany). 2013 Dec; 47(3):422-8.
10. **Supriya Singh**, Shashi Khare, DS Rawat, Saaransh Jain, RL Ichhpujani, Sudha Prasad, Megha Singhal, LS Chauhan, Arvind Rai. Genetic characteristics of the hyper-variable region (V3-V5) of the *env* gene of HIV-1 distinguishing subtype C from subtype B. *International Journal of Advanced Biotechnology and Research*. 2013: 4 (1); 968-975.
11. Sudha Prasad, Megha Singhal, Sanjay S Negi, Sunil Gupta, **Supriya Singh**, D S Rawat, Arvind Rai. Targeted detection of 65 kDa heat shock protein gene in endometrial biopsies for reliable diagnosis of genital tuberculosis. *European Journal of Obstetrics & Gynecology and Reproductive Biology* (Elsevier, USA). 2012: 160 (2):215-8.
12. Archana Choudhry, Shashi Khare, **Supriya Singh**, Simrita Singh, L S Chauhan. Meningococcal disease in India, 2005-2011: A Surveillance Study. *International Journal of*

Medicine & Public Health. 2012. 2(2). Doi 10.5530/ijmedph.2.2.7.

13. Archana Choudhry, Nupur Gupta, **Supriya Singh**, Meena Dutta, Shashi Khare, L S Chauhan. Continued Persistence of Increased Subacute Sclerosing Pan Encephalitis cases in India, 2010- 2012. *Global Journal of Medicine and Public Health*. 2014: 2 (6), 2013: 2277-9604.
14. Archana Choudhry, **Supriya Singh**, Shashi Khare, Arvind Rai, D S Rawat, R K Aggarwal, LS Chauhan. Emergence of Pandemic 2009 Influenza A H1N1, India. *Indian Journal of Medical Research*. 2012 Apr; 135(4): 534–537.

Abstract Publications

15. Abhilasha Mathur (Presenting Author), Geetika Narang, Namrata Sachdeva, Dashleen Kaur, Neelam Sachdeva, **Supriya Singh (Corresponding Author)**. Characterizing Clade-Specific Virus-Host Interactions in HIV Infected Clinically Asymptomatic and AIDS Presenting Subjects. Abstract published in official conference journal, STI and HIV World Congress 2015. 2015; 91 (Suppl 2):A63.
16. **Supriya Singh**, Shashi Khare, Sudha Prasad, Uma Sharma, A Hempenstall, Arvind Rai. **Impact of Maternal Feeding Practices and DC SIGN Receptor Polymorphisms on Vertical Transmission of HIV**. (Abstract) *The Journal of Maternal-Fetal and Neonatal Medicine*. 2014; 27 (S1): 25.
17. **Supriya Singh**, Shashi Khare, Sudha Prasad, RL Ichhpujani, DS Rawat, LS Chauhan, Arvind Rai. **Computational and molecular analysis of HIV release by 'Viral Protein-U' at the time of pregnancy**. *Journal of Molecular Biomarkers and Diagnostics*. 2011, 2:4. doi: <http://dx.doi.org/10.4172/2155-9929.S1.12>
18. **Supriya Singh**, Shashi Khare, RL Ichhpujani, Sudha Prasad, DS Rawat, LS Chauhan, Arvind Rai. **Predilection for G/G and G/C DEFB1 SNP types in HIV infected pregnant women and infants in India**. *The Journal of Antivirals and Antiretrovirals*. 2011, 3:4 doi: <http://dx.doi.org/10.4172/1948-5964.S1.13>
19. Poonam Gupta, Arvind Rai, Charoo Hans, **Supriya Singh**, Megha Singhal, Uma Sharma, L. S. Chauhan, Mohammad Husain **Analysis of HIV-1 nef from patients presenting with rapid progression and delayed progression to AIDS** . *The Journal of Antivirals and Antiretrovirals*. 2011, 3:4. doi: <http://dx.doi.org/10.4172/1948-5964.S1.16>
20. Azam, M., Malik, A., Rizvi, M., **Singh, S.**, Ram, H., Singhal, M., & Gupta, P. (2012). **Prevalence of drug resistance mutations in HIV-1 protease gene from North India**. *BMC Infectious Diseases*, 12(Suppl 1), P84. <https://doi.org/10.1186/1471-2334-12-S1-P84>.
21. **S.Singh**, et al. **Correlation between V3-V5 sequences with co-receptors in HIV positive pregnant women from India**. : *AIDS 2010 – XVIII International AIDS Conference*: Abstract no. MOPE0004”.

Conference Organization/ Presentations/Participation

Conference/Event Organization

- *Co-convener* of the **International E-Conference "NeuroEunoia 2020: A Neuroscience Affair"** held on 16-17 October 2020 hosted by Gargi College.
- *Co-convener* of the **National Webinar Series on the Current Global Pandemic of COVID-19**, organized by Gargi College, University of Delhi, held on May 1st, 2nd & 5th, 2020.

International Conference Participation/Presentation

- Presented poster entitled “Molecular Characterization of DC SIGN Promoter in HIV Infected Pregnant Women” at the *18th Symposium on Infections in the Immunocompromised Host*, organized by the International Immunocompromised Host Society (ICHS). The meeting was held at Langenbeck-Virchow Haus, **Berlin, Germany** from 15-17 June, 2014.
- Delivered oral presentation on “**Impact of Maternal Feeding Practices and DC SIGN Receptor Polymorphisms on Vertical Transmission of HIV**”, at the XXVth European Congress Perinatal Medicine (ECPM) held at 4-7th June, 2014 in Florence, Italy.
- Attended BSI OXFORD IMMUNOLOGY GROUP ANNUAL MEETING 2014 at SAID Business School, Oxford 31st of March -1st April 2014
- Attended meeting *Immune Response to Infections, ITA Askonas: Sixty Years of Immunology* at the Royal Society, **London, United Kingdom**, organized by the British Society of Immunology, from 7th - 8th April, 2014.
- Presented poster entitled “**Computational and Molecular Analysis of HIV release by Viral Protein U**” at the 2nd World Congress on Biomarkers and Clinical Research held at Baltimore, USA from 12-14th September 2011.
- Presented poster entitled “**Correlation between V3-V5 sequences with co-receptor usage in HIV positive pregnant women**” at *XVIIIth International Conference AIDS Conference* held in Vienna, Austria from 18-23rd July 2010.
- Attended the **5th IAS Conference on HIV Pathogenesis, Treatment and Prevention** held in Cape Town, South Africa from 19-22 July 2009.

National Conference Participation/Presentation

- Attended session on FOLDSCOPE held at *Gargi College* on 16 December, 2015.
- Participated in the *National Conference on Combating Industrial Pollution for Sustainable Environment-A fusion of Industrial and Scientific Efforts*, held at Gargi College, University of Delhi, on September 22-23, 2016.
- Attended the 2nd Task Force meet under Star College Scheme on 8th and 9th May, 2018, held at Gargi College, New Delhi.
- Attended the **CME-Uterus Related Infertility**, organised by the Association of Obstetrics and Gynaecologists of Delhi, IVF & Reproductive Biology Centre, Department of Obstetrics and Gynaecology held at Maulana Azad Medical College on 23 September 2009.
- Participated at the *National Conference “Tuberculosis - A Global Challenge”*, held at Kufri, Shimla, on 11th and 12th June, 2011.
- Participated in the *symposium on “World TB Day”*, held at AIIMS, New Delhi, on March 29, 2011.
- Participated in the **XVIII National Conference of Indian Virological Society** organised by Department of Virology, PGIMER, Chandigarh, India.
- Participated in **International Symposium on Molecular Pathology and Applied Genomics** held at the India Habitat Centre, New Delhi on November 6 and 7, 2009.
- Participated at **National Symposium on Microbes and Nanotechnology for Sustainable Environment**, on February, 2019, organised by Department of Botany, Kirori Mal College, University of Delhi.
- Participated at the **4th National Conference of AIDS Society of India, ASICON**, held at SGPGI Convention Centre, Lucknow from December 16-18, 2011.
- Participated in Three Days Lecture Series on “**NEP 2020: Delhi University Undergraduate Curriculum Framework 2022**”, from 27-29 January, 2022, organised by Institute of Lifelong

Learning, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.

- Presented poster at the French Indian Inter-Academic Symposium on Infectious Diseases, held at National Institute of Immunology, Delhi from Nov 30th-Dec3rd, 2010 entitled "**Molecular characterization of the hypervariable region (V3-V5) of the *env* gene in HIV-1 subtype C isolates from India**", Authors : **Supriya Singh (Presenting author)**, Shashi Khare, Sudha Prasad, R L Ichhpujani, Saarang Jain, Megha Singhal, D S Rawat, Arvind Rai.
- Poster entitled "**Direct detection of *M. tuberculosis* by targeting 65 kDa heat shock protein gene in endometrial biopsy samples from infertile women undergoing IVF**"; Megha Singhal (Presenting author), Sudha Prasad, Sunil Gupta, Sanjay S Negi, **Supriya Singh**, Shalini Khanna, Sachin Kumar, D S Rawat, Arvind Rai. Presented at the **French Indian Inter-Academic Symposium on Infectious Diseases** held at the National Institute of Immunology, Delhi from Nov 30 –Dec 03, 2010.

Research Projects (Major Grants/Research Collaboration)

1. **UGC-Faculty Research Promotion Scheme Start-Up Grant**, for project entitled "Molecular Characterization of Human Immunodeficiency Virus (HIV) & Impact of HLA on Viral Evolution", [April 2018-March 2021]
Research Collaborations:
 - *Department of Microbiology, AIIMS*
 - *Department of Biotechnology, Jamia Millia Islamia*

Awards and Distinctions

1. **UK's Commonwealth Split-site Doctoral Scholarship**, 2012, by UK's Commonwealth Commission (funded by *Department of International Health*) to pursue part of doctoral research work at the University of Oxford, UK.
First Period of study: 10 January, 2013 to 09 July, 2013
Second Period of study: 01 February, 2014 to 31 July, 2014
2. Awarded **Full Travel Scholarship** by the *International AIDS Society*, to attend the 5th IAS Conference on *HIV Pathogenesis, Treatment and Prevention* held in Cape Town, South Africa from 19-22 July 2009. The scholarship included registration fee, living allowance and airfare.
3. Awarded **Partial Investigator Travel Grant** for attending the 18th Symposium on Infections in the Immunocompromised Host, held at Langenbeck-Virchow Haus, Berlin, Germany from 15-17 June, 2014, for abstract entitled "Molecular Characterization of DC SIGN Promoter In HIV Infected Pregnant Women".
4. Awarded **Junior and Senior Research Fellowship (JRF and SRF) and Eligibility for Lectureship (NET)** by the *Council for Scientific and Industrial Research (CSIR)* held on 22nd June, 2008.

Contribution to Book Chapters

1. Contributed self-learning material for lesson entitled "**Microbial Classification**", for *BOSSE (Board of Open Schooling and Skill Education)*, Sikkim for the Microbiology module, July 2023.
2. Contributed unit entitled "**Bioinformatics: An introduction**" for M.Sc. (Zoology) Programme of Discipline of Life Sciences, School of Sciences, IGNOU, New Delhi, January 2023.

3. Contributed unit entitled “**Biological Database-II**” for M.Sc. (Zoology) Programme of Discipline of Life Sciences, School of Sciences, IGNOU, New Delhi, January 2023.
4. Contributed unit entitled “**Immunodeficiency**” for M.Sc. (Zoology) Programme of Discipline of Life Sciences, School of Sciences, IGNOU, New Delhi, January 2023.
5. Contributed towards E-content for School of Sciences, IGNOU entitled ‘**Diversity of the microbial world**’ for course on *Basic Microbiology Discipline Specific, Elective Course* offered in B.Sc. (Hons.) Biochemistry Programme, October 2018.
6. Contributed towards E-content for IGNOU entitled ‘**Viruses**’ for course on *Basic Microbiology Discipline Specific, Elective Course* offered in B.Sc. (Hons.) Biochemistry Programme, November 2017.

Participation in Courses/Workshops/FDPs/Orientation Programme/Refresher Course/Student Internships

Workshops

- Participated in online workshop on “**Research Data Management**”, organised by Learning Resource Centre and Internal Quality Assurance Cell, Bennett University in association with Association of Commonwealth Scholars and Fellows (ACSF), and Indian Academy of Medico-Legal Experts (IAMLE) on 2nd August, 2022.
- Participated in workshop on “**Project Management Executive Development Course**”, sponsored by British Council, delivered by *Academy of Leadership and Management*, February 03 - 27, 2022.
- Participated in Professional Development Workshop for UK Alumni on “**Academic Writing Development & Research**” by *University of Sheffield*, UK, from November to December 2021.
- Participated in the workshop on **Next Generation Sequencing (NGS)** at NPSICON 2019, held at Department of Histopathology, PGIMER, Chandigarh, on 17 February, 2019.
- Attended the three-day workshop on “**Calibration, Biosafety and Strategic Information Management System (SIMS)**”, from August 2nd to 4th, 2011, organized by *National AIDS Control Organization (NACO)* at the National Centre for Disease Control.
- Participated in the **3rd workshop on Bioinformatics and Molecular Modelling in Drug Design** organised by Dr. B.R. Ambedkar Centre for Biomedical Research, University of Delhi, during 24-26 February, 2011.
- Participated in the **IUI Workshop** on 9 October 2009 held at IVF & Reproductive Biology Centre, Department of Obstetrics and Gynaecology, Maulana Azad Medical College, New Delhi.

Refresher Courses/Faculty Development Programme/Orientation Programme

- Participated in one-week online Faculty Development Program (Inter-Disciplinary) from 5th July to 11th July, 2022, on **Cancer Awareness** organized by *Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi* under the *Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT)* of the Ministry of Education and *Indian Cancer Society, Delhi*.

- Completed two-week interdisciplinary refresher course on “**Advanced Research Methodology Tools and Techniques**” from 30 January to 14 February, 2021, organized by the *Teaching Learning Centre, Ramanujan College, University of Delhi*.
- Participated in one-week online Faculty Development Programme on “**National Education Policy 2020: Re-Envisioning Higher Education in India**”, from 30 August to 07 September, 2021, organized by the *Teaching Learning Centre, Ramanujan College, University of Delhi*.
- Participated in **Refresher Course in Life Sciences**, at *Centre for Professional Development in Higher Education (CPDHE), University of Delhi*, from June 28 to July 11, 2019.
- Participated in the **122nd four-week Orientation Programme** organized by the UGC-HRDC, *Jamia Millia Islamia, New Delhi* from 25 September to 25 October, 2018.

Courses

- Completed 4-week online course entitled, “**Leadership Communication for Maximum Impact: Storytelling**”, offered through Coursera by the *Northwestern University, USA*, on July 23, 2023.
- Completed one-week online course on “**Infectious Disease Transmission Models for Decision-Makers**”, offered by *Johns Hopkins University, USA*, on 24 June 2023.
- Successfully completed *MicroMasters* program certificate in **Bioinformatics** offered by UMGC and USMx, *University of Maryland*, in collaboration with edX, on June 2020.
- Participated and passed course entitled “**Statistical Analysis in Bioinformatics**” offered by USMx, *University of Maryland*, 30/06/2020.
- Participated and passed course entitled “**Proteins: Alignments, Analysis and Structure**” offered by USMx, *University of Maryland*, 20/09/2019.
- Participated and passed course entitled “**DNA Sequences: Alignments and Analysis**” offered by USMx, *University of Maryland*, 22/06/2019.

Student Internships

- Participated as **Mentor for student internships on Cancer Awareness** from 1st October to 31st December, 2022, organized by *Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi* under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of the Ministry of Education and Indian Cancer Society, Delhi.

Trainings

- Participated in the Leadership Training Session on “**Closing the Execution Gap**”, delivered by *Franklin Covey*, organised by the British Council, on behalf of the Commonwealth Scholarship Commission in the UK, from 26th -27th February, 2022.
- Summer Training in Molecular Biology Techniques from 1st July to 30th September, 2008, at the Division of Biotechnology, National Centre for Disease Control (NCDC), Delhi.

Dr. Supriya Singh
30th July, 2023