




Shivaji College Faculty Details Proforma

Title	DR.	First Name	PARUL	Last Name	KULSHRESHTHA	Photograph
Designation		ASSISTANT PROFESSOR				
Address		DEPARTMENT OF ZOOLOGY, SHIVAJI COLLEGE				
Office Phone No.		-				
Residence		F-023, GULSHAN VIVANTE, SECTOR 137, NOIDA 201301				
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Email		parulkuls26@gmail.com				
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Educational Qualifications		MSc.PhD.				
Degree		University/Institute			Year	
Ph.D.		School of Biotechnology, Jawaharlal Nehru University			2012	
M.Phil./M.Tech.		NA				
PG		Department of Zoology, University of Delhi			2006	
UG		Hindu College, University of Delhi			2004	
Any Other Qualification						
Career Profile						
<u>Positions Held</u>						
<ul style="list-style-type: none"> Working as Assistant Professor at Department of Zoology, Shivaji College, University of Delhi since 24th July 2013 till date. Worked as Assistant Professor from 23rd July 2012 to 31st Oct. 2012 At Department of Zoology of Acharya Narendra Dev College, University of Delhi. Ad hoc Reviewer for prestigious International Journal, PLOS One. Ad hoc Reviewer for Springer Journal, Molecular Biology Reports. Ad hoc Reviewer for Academic Research Journal of Agricultural Science and Research 						
Administrative Assignments						
<ul style="list-style-type: none"> Member of Organizing Committee of Oyster, the Zoology Department Festival. Member of Organizing Committee of Reverb, the LIFE SCIENCE Festival (2017). Member of Organizing Committee of INSPIRE CAMP held every year in College. 						

Areas of Interest/Specialisation
<p>BIOTECHNOLOGY: Development of Diagnostics, Vaccines and Therapeutic agents ZOOLOGY: Epidemeology, Biodiversity and Ecology</p>
Subjects Taught
<ol style="list-style-type: none"> 1. Invertebrate Zoology: BSc.(H) ZOOLOGY, Semester I (Practical and Theory) 2. Biochemistry and Immunology: BSc. LIFE SCIENCE, Semester V (Practical and Theory) 3. Cell Biology: BSc.(H) ZOOLOGY, Semester II (Practical and Theory) 4. Cell Biology: BSc.(H) ZOOLOGY, Semester IV (Practical and Theory) 5. Molecular Biology: BSc. LIFE SCIENCE, Semester IV (Practical and Theory) 6. Genetics and Genomics: BSc.(H) ZOOLOGY, Semester V (Practical and Theory) 7. Comparative Anatomy of Vertebrates: BSc.(H) ZOOLOGY, Semester II (Theory) 8. Comparative Anatomy of Vertebrates: BSc.(H) ZOOLOGY, Semester IV (Practical and Theory) 9. Applied Biology and Biotechnology: BSc. LIFE SCIENCE, Semester V (Practical and Theory) 10. Developmental Biology: BSc.(H) ZOOLOGY, Semester V (Practical and Theory) 11. Evolutionary Biology: BSc.(H) ZOOLOGY, Semester V (Practical and Theory) 12. Medical Diagnostics: BSc. LIFE SCIENCE, Semester III (Practical and Theory) 13. Developmental Biology and Comparative Anatomy of Vertebrates : BSc. LIFE SCIENCE, Semester II (Theory) 14. Cell and Cellular Processes: BSc.(H) ZOOLOGY, Semester II (Theory and Practical) 15. Food, Health and Nutrition: BSc. (H) Biochemistry. Semester III (Theory and Practical) 16. Medical Diagnostics: BSc. LIFE SCIENCE, Semester III (Theory and Practical) 17. Animal Diversity : BSc (H) Botany/ BSc (H), Semester I (theory) 18. Principles of ecology : BSc.(H) ZOOLOGY, Semester I (Practical and Theory) 19. Research Methodology: BSc. LIFE SCIENCE, Semester IV (Theory and Practical) 20. Animal Physiology: BSc (H) Botany/ BSc (H) Biochemistry, Semester II (theory) 21. Animal Biotechnology: BSc. LIFE SCIENCE, Semester V (Theory and Practical) 22. Immunology: BSc. LIFE SCIENCE, Semester VI (Theory and Practical)
Innovation Project/Research Projects (Major Grants/Research Collaboration)
<ol style="list-style-type: none"> 1. Title: "To record the seasonal variation of invertebrate biodiversity in Riparian zone of the Yamuna River in Delhi-NCR region by using foldscope as a research tool." <ul style="list-style-type: none"> • FUNDING AGENCY: DEPARTMENT OF BIOTECHNOLOGY, GOVT. OF INDIA, (2018-2019) 2. TITLE: "A Dried Blood Spot collection study for detection of Brucellosis in Bovine Population of India: an ELISA based system specific to Omp25 and Omp28 proteins of <i>Brucella abortus</i>." <ul style="list-style-type: none"> • FUNDING AGENCY: University of Delhi, 2015 to 2016 <p>Objective of the Project: Development of an ELISA-based diagnostic kit for detection of <i>Brucella abortus</i> infection in Buffalo population of India.</p> <p><u>Project Completed</u> : Independent Research Associate Fellowship in year 2012 from Indian Council of Medical Research for project, "Immunological characterization of the SLH domains present in S-layer proteins of <i>B.anthraxis</i>".</p>
Publications Profile (Research Papers/Books)

List of patents

- Rakesh Bhatnagar and Parul Kulshreshtha. “A novel bispecific monoclonal antibody capable of cross reacting with the lethal factor(LF) and edema factor(EF) and neutralizing edema toxin(ET) as well as lethal toxin(LT) of *Bacillus anthracis*”.
- Indian Patent Application no. 714/DEL/2010 ;
http://www.google.im/patents/WO2011117886A1?cl=de
- International [PCT] Patent Application No. PCT/IN2011/000191

As Corresponding Author*

- A study to identify habits of cattle keepers which inadvertently lead to spread of Brucellosis in Delhi. 2018. Nimita Kant; Parul Kulshreshtha* ; Rashmi Singh; Anuradha Mal; Amita Dwivedi; Riya Ahuja; Rinkle Mehra; Mohit Tehlan; Paritosh Ahmed; Shilpa Kaushik; Shipra .; Shashikant kumar; Aas Mohammad; Shrikrishn Shukla; Damini Singh and Rakesh Bhatnagar. BMC Veterinary Research. *Under Review. Impact Factor: 2.4*
- Prevalence and diagnosis of Brucellosis among naturally infected population of buffalos in India. 2018. Nimita Kant; Damini Singh; Rashmi Singh; Anuradha Mal; Rakesh Bhatnagar and Parul Kulshreshtha*. *Vaccine. Under Review*

As first Author or Co-author

- Joon S, Gopalani M, Rahi A, Parul Kulshreshtha, Gogoi H, Bhatnagar S, Bhatnagar R. Biochemical characterization of the GTP sensing protein, CodY of *Bacillus anthracis*. Pathogens and Diseases. 2017 May 3. doi: 10.1093/femspd/ftx048. [Epub ahead of print]. *Impact Factor: 2.4*
- Parul Kulshreshtha, Ashutosh Tiwari, Priyanka, Shikha Joon, Subrata Sinha and Rakesh Bhatnagar. Investigation of a panel of monoclonal antibodies and polyclonal sera against anthrax toxins resulted in identification of an anti-lethal factor antibody with disease-enhancing characteristics. *Molecular Immunology. Volume 68, Issue 2, Part A, December 2015, Pages 185–193. Impact factor: 3*
- Alisha Dhiman, Sonika Bhatnagar, Parul Kulshreshtha, Rakesh Bhatnagar. (2014) Functional characterization of WalRK: A two-component signal transduction system from *Bacillus anthracis*. FEBS Open Bio, 4 , 65–76
- Parul Kulshreshtha, Hemant Jaiswal, Sneha Agarwal and Rakesh Bhatnagar. (2012). Active immunization of S-layer homology motif protects mice model from anthrax challenge. *Molecular Immunology. 50(1-2): 18-25. Impact factor: 3*
- Parul Kulshreshtha and Rakesh Bhatnagar (2011). Inhibition of anthrax toxins with a bispecific monoclonal antibody that cross reacts with edema factor as well as lethal factor of *Bacillus anthracis*. *Molecular Immunology*48(15-16):1958-65. *Impact factor: 3*
- Shivangi Agarwal*, Parul Kulshreshtha*, D.B. Mukku* and Rakesh Bhatnagar (2008). α -enolase binds to human plasminogen on the surface of *Bacillus anthracis*. *Biochim.Biophys Acta. 1784:986-94. Impact factor: 3.3*

*Equal contribution of the authors

♣ [SEQUENCES IN GENE BANK](#)

- ♣ VHLETscfv: Accession number: JN316285, Sequence of Heavy chain variable region of full length antibody cross-reactive with toxins of anthrax
- ♣ VLLETscfv: Accession number: JN316286, Sequence of Light chain variable region of full length antibody cross-reactive with toxins of anthrax

- [ORAL PRESENTATION](#) at International Conference on Recent Research in Biomedical Engineering, Cancer Biology, Stem Cells, Bioinformatics and Applied Biotechnology(BECBAB-2017) Organized by “Krishi Sanskriti” on 25th February, 2017 at Jawaharlal Nehru University. Title: “3D Bioprinting: a Science of new possibilities and new cures.”
- [ORAL PRESENTATION](#) at ICMBBB International Conference at Dubai from 28th-29th January 2016. Title: “Capability of a Single Antigen to Induce Both Protective and Disease Enhancing Antibody: An Obstacle in the Creation of Vaccines and Passive Immunotherapies.”

POSTER PRESENTATIONS

- Poster entitled, “Seroprevalence survey of brucellosis in buffalo population of Delhi NCR region” was presented at National symposium on Trends in research and Innovations in life sciences at Undergraduate level organized by Dept of Zoology of Deen Dayal Upadhyaya College, New Delhi at School of Biotechnology, Jawaharlal Nehru University, India on 30th March 2016.
- Poster entitled, “Seroprevalence survey of brucellosis in buffalo population of Delhi NCR region” was presented at BioEpoch 2016 at School of Biotechnology, Jawaharlal Nehru University, India on 14th March 2016.
- Poster entitled, “Investigation of a panel of monoclonal antibodies and polyclonal sera against anthrax toxins resulted in identification of an anti-lethal factor antibody with disease-enhancing characteristics” was presented at Bacillus ACT 2015 at Delhi, India on 29th Oct. 2015
- Best Poster Award at Bacillus ACT ‘2011 on 13th August 2011, International conference on *B.anthraxis*, *B.cereus* and *B.thuringiensis* held at Belgium, for poster entitled, “A monoclonal antibody cross-reactive with edema toxin and lethal toxin of *B.anthraxis* protects mice from anthrax toxins.”

Research Guidance (*Supervision of Doctoral Thesis/Dissertations*)

NA

Awards and Distinctions

- ◆ SERB division of Department of Science and Technology, Government of India awarded Travel grant to attend ICMBBB 2016 at Dubai from 28th-29th January 2016.
- ◆ Travel Grant by American Society of Microbiology to attend international Conference, Bacillus ACT 2015.
- ◆ Best Poster Award at Bacillus ACT ‘2011, International conference on *B.anthraxis*, *B.cereus* and *B.thuringiensis* held at Belgium, Title of poster, “A monoclonal antibody cross-reactive with edema toxin and lethal toxin of *B.anthraxis* protects mice from anthrax toxins.”
- ◆ Department of Science and Technology, Government of India awarded Travel grant to attend Bacillus ACT ‘2011.
- ◆ Qualified the National Eligibility Test (NET) taken by Council of Scientific and Industrial Research-University Grants Commission of India to do research and lectureship in India(held in Dec. 2005 and June 2006).
- ◆ Awarded Senior Research Fellowship in 2010 by Indian Council of Medical Research, India, for project entitled, “Immunological characterization of the SLH domains present in S-layer proteins of *B.anthraxis*”.
- ◆ Awarded Research Associate Fellowship in 2012 by Indian Council of Medical Research, India for project entitled, “Immunological characterization of the SLH domains present in S-layer proteins of *B.anthraxis*”.
- ◆ Awarded SCIENCE MERITORIUS Scholarship given by University of Delhi for highest marks in Zoology for year 2002

Memberships

LIFE MEMBER OF 'SOCIETY FOR BIOSAFETY,INDIA'

Other Academic Activities

- Every Semester mentors 10 students for their career choices.
- Developed display cards for disarticulated skeleton of vertebrates.
- Resource person for sessions at INSPIRE CAMP held every year in the college.

Cultural/Extracurricular Activities

- Member of Eco-Club
- Member of NSS

Signature of Faculty Member