



# **Miranda House**

## **UNIVERSITY OF DELHI**

---

### **Departmental Annual Report - 3**

#### **Departmental Activities: Curriculum and Beyond**

**Department:** Zoology

**Academic Year:** 2017-18

#### **Part A.1**

**Students undertaking project work/field work/internship as part of experiential learning component of coursework**

**Programme:** B.Sc (Hons) Zoology, CBCS

**Semester:** III & IV

**Course:** Core Papers, SEC

**Paper:** Non Chordates, Perspectives in Ecology, Diversity of Chordates, Comparative Anatomy, Physiology: Controlling and Coordinating systems, Physiology: Life sustaining systems, Medical Diagnostics, Sericulture, Animal Behaviour, Animal Biotechnology, Wildlife conservation and Management

**Course Code:** 569

**Paper Code:** 32231101 (Non Chordates), 32231102 (Perspectives in Ecology), 32231201 (Non Chordates: Coelomates), 32231301 (Diversity of Chordates), 32231302 (Physiology: Controlling and Coordinating systems), 32231401 (Comparative anatomy of vertebrates), 32231402 (Physiology: Life sustaining systems), 32233905 (Sericulture), 32233903 (Medical Diagnostics), 32237901 (Animal Behaviour and Chronobiology), 32237903 (Wildlife conservation and management).

**Faculty:** Dr. Nisha Vashishta, Dr. Rekha Kumari, Dr. Jyoti Arora, Dr. Monika Sharma, Dr. Simran Jit, Dr. Pooja Suman, Dr. Deepak Yadav, Dr. Yasha Yadav



# Miranda House

## UNIVERSITY OF DELHI

Number of experiments approved by C.O.C:

Sr. No.	Course Code	Paper Code	Student Name	College Rollno	Rollno.	Total No. of Experiments (If any)	Obt Marks (Comp.-1)[A] (If any)
1	569	32231102	AKASMIKA PRIYADARSANI	267	17047569001		
2	569	32231102	ALPANA	853	17047569002		
3	569	32231102	ANITA	793	17047569003		
4	569	32231102	ANJALI CHAUHAN	276	17047569004		
5	569	32231102	ANSHIKA SHARMA	979	17047569005		
6	569	32231102	ANUKRITI SINGH	948	17047569006		
7	569	32231102	APOORVA	850	17047569007		
8	569	32231102	DEVANSHEE PRAKASH	94	17047569008		
9	569	32231102	ERA STUTI SHARMA	512	17047569009		
10	569	32231102	GUDDU DEVI MAIBRAM	10	17047569010		
11	569	32231102	HIMANTIKA	1102	17047569011		
12	569	32231102	JASMINE	797	17047569012		
13	569	32231102	JINIYA CHATTERJEE	1456	17047569013		
14	569	32231102	KAJAL KAMBOJ	822	17047569014		
15	569	32231102	MANISHA	906	17047569015		
16	569	32231102	MANSI	762	17047569016		
17	569	32231102	NUSRAT CHOUDHARY	162	17047569017		
18	569	32231102	NANDINI	57	17047569018		
19	569	32231102	PRATIMA CHAUDHARY	1096	17047569019		
20	569	32231102	PRIYA	942	17047569020		
21	569	32231102	PRIYANKA	163	17047569021		
22	569	32231102	RACHNA YADAV	1219	17047569022		
23	569	32231102	REENA	1084	17047569023		
24	569	32231102	RITIKA	840	17047569024		
25	569	32231102	RITU YADAV	199	17047569025		
26	569	32231102	SAKSHI SAINI	950	17047569026		
27	569	32231102	SAMIKSHA UNIYAL	565	17047569027		
28	569	32231102	SAPNA DABAS	1375	17047569028		
29	569	32231102	SHIVANGI SAXENA	513	17047569029		



# Miranda House

## UNIVERSITY OF DELHI

---

	569	32231102	SHIVANSHI	302	17047569030			
31	569	32231102	SHTAKSHI SHARMA	927	17047569031			
32	569	32231102	SONAM	1307	17047569032			
33	569	32231102	SRIJAN SINGH	940	17047569033			
34	569	32231102	SUMEDHA	1150	17047569034			
35	569	32231102	SWATI PRIYA	1406	17047569035			
36	569	32231102	TEEKSHA WADHWA	820	17047569036			
37	569	32231102	VAISHALI GITI GOSWAMI	1224	17047569037			
38	569	32231102	YAMINI GUPA	896	17047569038			
39	569	32231102	NIKITA MALIK	919	17047569039			





# Miranda House

## UNIVERSITY OF DELHI

Sr. No.	Course Code	Paper Code	Student Name	College Rollno	Rollno.		
1	569	32233905	ADITI CHAUDHARY	471	16047569001		
2	569	32233905	AMISHA SANWARIA	1367	16047569003		
3	569	32233905	ANJU PANGHAL	739	16047569004		
4	569	32233905	ANUBHUTI KRISHNA	25	16047569005		
5	569	32233905	ANUPAMA YADAV	443	16047569006		
6	569	32233905	ANURADHA	1561	16047569007		
7	569	32233905	BHARTI	501	16047569009		
8	569	32233905	CHANDRIKA BHATT	439	16047569010		
9	569	32233905	KANAN JAMATIA	1261	16047569011		
10	569	32233905	KAVITA	152	16047569012		
11	569	32233905	KM ANSHIKA YADAV	204	16047569013		
12	569	32233905	KM SUSHMITA TRIPATHI	559	16047569015		
13	569	32233905	KOHSHEEN PANDITA	346	16047569016		
14	569	32233905	MADHULIKA SHARMA	520	16047569017		
15	569	32233905	MAYANGLAMBAM POOJA DEVI	1317	16047569018		
16	569	32233905	NEELIMA SHARMA	627	16047569019		
17	569	32233905	NISHTHA	64	16047569020		
18	569	32233905	NOOR	685	16047569021		
19	569	32233905	RAMA RAJPOOT	319	16047569023		
20	569	32233905	RANJANA	1533	16047569024		
21	569	32233905	SAJEEYA AKHTAR	312	16047569025		
22	569	32233905	SHREYATA	674	16047569027		
23	569	32233905	SHRIA MATTOO	583	16047569028		
24	569	32233905	TAMANNA	479	16047569029		
25	569	32233905	VARTIKA SRIVASTAVA	150	16047569031		
26	569	32233905	ZEBA MALIK	145	16047569032		
27	569	32233905	VIBHUTI BHAT	702	16047569033		

Name and Signature of Evaluators:

DR. POOJA SUMAN

*Pooja Suman*  
24/4/18



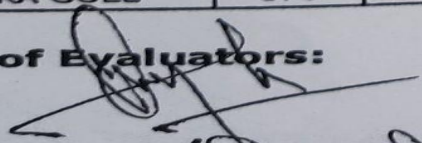


# Miranda House

## UNIVERSITY OF DELHI

Sr. No.	Course Code	Paper Code	Student Name	College Rollno	Rollno.	Te Ex
1	569	32233905	AFREEN SHAKEEL	581	15047569001	
2	569	32233905	ANAMIKA NAOREM	358	15047569002	
3	569	32233905	ARSHIA BHAT	1432	15047569003	
4	569	32233905	AVNI GUPTA	1113	15047569004	
5	569	32233905	BHARATI NIBORIYA	1596	15047569005	
6	569	32233905	BHAVYA SIROHI	688	15047569006	
7	569	32233905	BINDU	928	15047569007	
8	569	32233905	CHANAMTHABAM RANITA	1597	15047569008	
9	569	32233905	DIVYA CHAUHAN	856	15047569010	
10	569	32233905	GARVITA GOYAL	1272	15047569011	
11	569	32233905	JYOTSNA PANDEY	1255	15047569012	
12	569	32233905	KANIKA ANABH	177	15047569013	
13	569	32233905	KIRAN SANKHLA	1625	15047569015	
14	569	32233905	KM RUCHI YADAV	1054	15047569016	
15	569	32233905	KOMAL AHLAWAT	861	15047569017	
16	569	32233905	MEGHALI SINGH	1081	15047569018	
17	569	32233905	NIHARIKA	684	15047569019	
18	569	32233905	NINGTHOUJAM SHILPA DEVI	1610	15047569020	
19	569	32233905	NUPUR VIMAL	1607	15047569021	
20	569	32233905	PALVI GOTRA	39	15047569022	
21	569	32233905	RAJKUMARI NIKITA	527	15047569024	
22	569	32233905	SAKSHI SHARMA	661	15047569025	
23	569	32233905	SHIVANGI MEEL	1462	15047569026	
24	569	32233905	SHREYA SINGH	1405	15047569027	
25	569	32233905	SHRISTI SINGH	690	15047569028	
26	569	32233905	SHRITI KUMAR	83	15047569029	
27	569	32233905	SHRUTI ACHARYA	1213	15047569030	
28	569	32233905	SHWETA MANN	1161	15047569031	
29	569	32233905	VIDHI YADAV	746	15047569034	
30	569	32233905	RITIKA GOEL	870	15047569035	

Name and Signature of Evaluators:

  
(Dr. DEEPA)



# Miranda House

## UNIVERSITY OF DELHI

### Students undertaking project work/field work/internship (beyond the requirements of coursework)

2. Facilitator and mentor at the Experimental summer workshop for undergraduate science students, Flavour of Research, Investigative Projects in Multidisciplinary Contexts held from June-July, 2017. Following students were guided who were working on Antimicrobial textile finishing using eco-friendly natural compounds. Nine students participated in this research project. PI: Dr. Jyoti Arora & Dr. Simran Jit. Vartika Srivastava, Chandrika Bhatt, Rama Rajpoot, Anubhuti Krishna, Vibhuti Bhat Miranda, Perna Aggarwal M.Sc Genetics of Department of Genetics, University of Delhi, Gunjan Gupta M. Sc. Biotechnology, Manav Rachna International University, Anmol Singh Environmental Engineering. In this study, students prepared extracts from various herbs and medicinal plants and did a qualitative and quantitative estimation of antimicrobial activity on cotton against indicator strains.

A handwritten signature in blue ink, likely belonging to Dr. Jyoti Arora, the PI of the project.

#### **Prediction of Antigenic Promiscuous MHC Class II binders of *Mycobacterium tuberculosis* capable of inducing Interferon gamma.**

Palvi, Garvita, Monika Sharma, Sadhna Sharma

Department of Zoology and DS Kothari Centre for Research and Innovation in Science

Education, Miranda House, University of Delhi.

A handwritten signature in blue ink, likely belonging to Monika Sharma, one of the students.



# Miranda House

## UNIVERSITY OF DELHI

---

### THIRD YEAR

#### BHAVYA SIROHI

- Qualified JNU EE 2018-19 for M.Sc. In Environmental Sciences.

#### JYOTSNA PANDEY

- Summer Research Fellowship from Indian Academy of Sciences.
- Bose Karkun award of excellence in Biochemistry and Molecular Biology
- Chandra Sathiraju award of excellence in Biochemistry
- IIT JAM BL- AIR 528

#### KANIKA ANABH

- Summer Research Fellowship from Indian Academy of Sciences.
- JNU CEEB AIR 9
- Qualified JNU EE ( Molecular medicine and Life sciences)
- Qualified for NCBS and IISER Pune Integrated Phd Interview
- IIT JAM AIR 17
- Second Rank in Baseline test conducted by DS Kothari Centre for Research and Innovation in Science Education, Miranda House
- Received DS Kothari Science Award Certificate of appreciation.

#### RAJKUMARI NIKITA

- JNU CEEB: OBC RANK 256

#### BITIKA GOYAL

- IIT JAM BL AIR 250
- IIT JAM BT AIR 820

#### SHRITI KUMAR

- Qualified for TISSNET 2018 for M.A in Natural Resource and Governance.
- Book Grant scholarship from UGC.

#### SHRUTI ACHARYA

- Qualified TISSNET 2018 For M.A Social Work in Public Health and M.A Social Work in Mental Health





# Miranda House

## UNIVERSITY OF DELHI

---

- Dr. Saroj Kesar Meritorious Award for securing Highest marks in Physiology and Functional Histology( Miranda House)
- Academic Award 2017 for securing highest cumulative marks in University Examinations Semester I to Semester IV.
- Book Grant scholarship from UGC.

### VIDHI YADAV

- JNU CEEB : OBC RANK 40; AIR 310

## SECOND YEAR

### ANUBHUTI KRISHNA

- 3rd position in the poster presentation at Daulat Ram College.

### VARTIKA SRIVASTAVA-

- Recipient of INSPIRE scholarship.
- Part of National Service Scheme (NSS).
- 3rd position in the poster presentation at Daulat Ram College.

### VIBHUTI-

- 1st position in Erobern-college sports fest in Taekwondo.
- 3rd position in MHH fresher's marathon.

### ANJU PANGHAL

- 2nd position in walking 5km in inter-college competition.

## FIRST YEAR

### RACHNA

- Delegate at Utkarsh Youth Convention 2018.





# Miranda House

## UNIVERSITY OF DELHI

---

- Participant in the Global Wildlife Programme Conference organized by the Ministry of Environment, Forests and Climate Change, Government of India at Ashoka Hotel New Delhi.
- 2nd prize in photography competition in Fresher's Talent hunt.
- Selected as City head of New Delhi , IRSC.

### SAPNA DABAS

- Bronze medalist at Inter College Taekwondo Championship at Multipurpose Sports Complex , Delhi University dated 31-01-2018 – 02-02-2018.
- Silver medalist at Erobern Sports Fest at Miranda House, University of Delhi in Taekwondo dated 07-02-2018 – 09-02-2018.



# Miranda House UNIVERSITY OF DELHI

---

## A SUMMER INTERNSHIP EXPERIENCE

Being a student of biology, I have always had a keen interest in Human health problems and wanted to pursue some research in this field. Then I came to know about Summer Research Fellowship Program 2017 awarded by Indian Academy of Sciences, Bengaluru. To apply for this competitive fellowship, I was required to develop a research proposal describing my area of interest and an innovative idea to do something new in that field.

After receiving the fellowship, I started working with Dr. Saroj Kant Mohapatra, an assistant professor at National Institute of Biomedical Genomics, Kalyani, West Bengal from the first week of June, 2017. As my guide, Dr. Saroj and his PhD Student were working on the gene data analysis of pediatric patients of Septic Shock (caused mainly due to bacterial infections), they offered me an independent project in which I had to perform the Gene data Analysis of 25 sets of genes involved in the osteoclast differentiation pathway. This set of genes was found to be upregulated in pediatric patients of sepsis (work done by a PhD student of Dr. Mohapatra). So, I had the task of investigating whether these 25 genes were up/down- regulated in pediatric infections other than sepsis. This was pure computational work and needed knowledge of coding and basic programming. As I was not familiar with programming, initially I faced a lot of difficulties in understanding the tit bits of the computational work. During my internship, my guide helped me in learning 'R – an open source programming language' used for statistical computing and graphics. With the help of National Centre for Biotechnology Information Gene Expression Omnibus, I collected the human genome datasets and series matrix files of patients of pediatric infections. A lot of sorting was done with datasets and finally I retrieved the information of the set of 25 genes for each infection, and analysis was done. By using R version 3.4.0, various statistical tests were performed and statistical heatmaps and 3D plots were made for the information that we were able to get after rigorous analysis. I am bound not to discuss the results of the project as Dr. Mohapatra's group is working on it.

At the end of the internship I submitted a detailed report of my work entitled "Gene Expression Analysis of Osteoclast Differentiation Pathway in Pediatric Infections" to IAS, Bangalore and they have published it on an online portal named Authorcafe (an authoring and publishing platform for scholarly writing). After completion of my work, I came back to college with a lot of new experiences along with a reasonable stipend amount. I realized that the most important aspect of any research is that you must be immensely focused and devoted towards your work and that you also need a good power of analysis because that can give you tremendous ideas to work further even if you are getting a negative result.

Jyotsna Pandey

B.Sc. (Hons) Zoology – III Year