

TEACHER'S ACTIVITY REPORT 2016 - 2017

FACULTY: Science

DEPARTMENT/ COMMITTEE: Biochemistry

IQAC ACTIVITY No: SVC/2016-17/BIOCHEM/NN/1

NAME OF THE ACTIVITY: Educational Visit to Institute of Genomics and Integrative Biology

DATE	FACULTY	DEPARTMENT/ COMMITTEE	COORDINATOR NAME
November 4, 2016	Science	Biochemistry	Dr. Nandita Narayanasamy
TIME	VENUE	NUMBER OF PARTICIPANTS	NATURE: Outdoor/Indoor
9.30 am to 4.00 pm	Institute of Genomics and Integrative Biology, Mathura Road, New Delhi.	Number of Students (80) and faculty (2) (B.Sc (H) Biochemistry, B.Sc (H) Physics, B. Sc (H) Zoology, B.Sc (H) Botany PG diploma in Molecular Biology and Biochemical technology)	Outdoor and Indoor
SUPPORT/ASSISTANCE:	Sri Venkateswara College, DU		

BRIEF INFORMATION ABOUT THE ACTIVITY (CRITERION NO. II, V, VII):

TOPIC/SUBJECT OF THE ACTIVITY	IGIB held an Open Day, their annual event where students from schools and colleges are invited to their institute.
OBJECTIVES	The idea of undergraduate and diploma students visiting an institute like IGIB is for them to observe the emerging areas of research in the field of life sciences.
METHODOLOGY	Students were permitted to visit individual laboratories on a rotation, where research scholars interacted with them and answered their queries. There were several experiments that were demonstrated outside the labs, in the foyer, where research scholars had set up simple yet elegant experiments to showcase scientific principles.
OUTCOMES	Students were excited to see cutting-edge research being carried out in the labs and were happy to see various hi-tech facilities such as Drosophila labs, SEM, TEM, Zebra fish facility, NGS machines, microarray work and many more. This served to give them a clear picture of what a day in the life of a researcher looks like as also the meticulous planning required to give reproducible results that can be published.

PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):

Notice & Letters	Student list of participation	Activity report ✓	Photos ✓	Feedback form
Feedback analysis	News clip with details	Certificate	Any other	

IQAC Document No:	Criterion No: II and V	Metric No:
Departmental file no	IQAC file No:	

NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)
Dr. N. Latha Dr. Shalini Sen	Dr. Nandita Narayansamy Teacher in Charge Department of Biochemistry	Dr. N. Latha IQAC Coordinator Sri Venkateswara College

For Reference

Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		

Proofs:

- **Activity Report (next page)**

TRIP TO CSIR-INSTITUTE OF GENOMICS AND INTEGRATIVE BIOLOGY-

(CSIR-IGIB) MATHURA ROAD

NEW DELHI (4TH November, 2016)

On the 4th of November 2016, students of Sri Venkateswara College, Dhaula Kuan, were taken on a trip to one of Delhi's premier research institutes: CSIR-IGIB, "COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH-INSTITUTE OF GENOMICS AND INTEGRATIVE BIOLOGY".



Second and third year students from the departments of **Biochemistry, Physics** and also from the **P.G.Diploma** course were thrilled to visit the institute.

The main areas of research are **Genomics, Proteomics, Molecular medicine, Bioinformatics** and **Environmental Biotechnology**.

The students were first taken to the '**ANIMAL BREEDING AND MANIPULATION ROOMS**', wherein they were given a demo on how to handle model organisms like Mice. They emphasized on the importance to keep mice in an environment which closely resembles their natural habitat. Thus, they were kept in rooms that were absolutely dark, (since mice are nocturnal creatures and are most active during night-time) were provided with balanced diet, and small wooden toys to keep them active and fit! This is to ensure that they are not under undue stress, which might otherwise produce incorrect results upon experimentation with stressed-out mice. There was even a chart describing the levels of discomfort a mouse might experience during an experiment, and if the level of discomfort is too high, the experiment is not allowed to proceed!

They explained that since mice share almost 95% of our genome, are easy to breed and conduct experiments upon therefore, they are used extensively to study many diseases like ASTHAMA, VITILIGO (a disorder where the skin undergoes progressive depigmentation) and TUBERCULOSIS.

Their labs have many sophisticated devices to track and analyze the progression of infectious diseases. One of the devices that they showed us was a **high-end CT-Scanner attached to desktop computers which tracked the spreading of an infection in real-time!**

The next room that the students were taken to was the **"ZEBRA-FISH ROOM"**. The room had many small fish tanks, housing close to 2,500 Zebra-fish. They had **normal wild-type zebra fish; mutants which were fluorescent, one of the mutant strains were called "Casper"** after the lovable cartoon ghost, since the fishes were completely transparent. One day old zebra-fish embryos were put on display and they explained how they go about rearing such mutants (**using the novel CRISPR technique to edit the genome and thus create mutants**) and how they carry out experiments with the impossibly tiny and cute fishes.

We also visited the **SEM and TEM (Scanning and Transmission Electron Microscope)** rooms. The impressive size of the microscopes over-awed us all and it was quite a shock when they showed us the size of the sample that could actually be fixed and visualized under the microscope; suffice it to say that the sample size was incredibly "microscopic". These **fantastic devices can magnify up to 7 lakh times and the TEM can in fact resolve up to 10 ANGSTROM!** We were delighted to see pictures taken by the microscopes, including pictures of **Mitochondria, Golgi apparatus, Bacteriophages, Erythrocytes, Macrophages...even atoms of Gold!**

The data center of the institute stores around few **Petabytes (2⁵⁰ bytes)** of digital information, which goes on to indicate the humongous amount of data being generated by the scientists.

In the end, we took a quick tour of the labs situated in the top floor of the building. The work-desks were chock-a-block with all kinds of auto pipettes, all sizes of beakers, variously labeled samples and what not! Most strikingly, all the apparatus were diligently labeled, reminding us all how important it is to be methodical and meticulous while working in the lab.

The visit to the prestigious research centre proved to be inspiring and reinvigorating, since the students could actually get a feel of how things work in a real laboratory. ***Even as we left, we already had begun planning for the next trip back to IGIB!***

Students Attendance List (2016-17)

S. No.	Roll No.	Name of the Student
1	1216001	Naintara Jain
2	1216004	Sncharita
3	1216006	Kanika
4	1216008	Harshit
5	1216009	Jyotsna
6	1216013	Aditya
7	1216014	Anmol
8	1216017	Sameeksha
9	1216019	Nikita
10	1216020	Harsh
11	1216021	Varun
12	1216023	Bharti
13	1216025	Mahima
14	1216026	Mayank
15	1216030	Taijasi
16	1216031	Pranjal
17	1216032	Sahil Kumar
18	1216033	Drishan
19	1216034	H. Gauri
20	1216035	Swati
21	1216036	Sunny
22	1216038	Aayush
23	1216039	Samruddhi
24	1216041	Vaishali
25	1216042	Vishal
26	1216043	Nandika
27	1216045	Israt
28	1216046	Lulbiakdiki
29	1216047	Ngachansing
30	1216048	Vaishali Goyal
31	1216049	Dawa
32	1216050	Adiba
33	1216051	Priyanka
34	1216052	Prarthana
35	1216053	Astha
36	1216054	Avika
37	1215001	Radhika
38	1215006	Eeshita
39	1215007	Aishwarya
40	1215008	Rohan Kapoor
41	1215010	Abinav

42	1215013	Shagufa
43	1215014	Waqma
44	1215016	Samoel
45	1215017	Bhoomika
46	1215020	Akansha
47	1215021	Ifrah
48	1215022	Shivani
49	1215023	Charvy
50	1215024	Sakshi
51	1215025	Tanushka
52	1215026	Nikita
53	1215027	Himanshi
54	1215028	Mehar
55	1215033	Shivam
56	1215034	Anushka
57	1215037	Surbhi
58	1215039	Vanshika
59	1215040	Md. Areeb
60	1215042	Himani
61	1215045	Akash Kumar
62	1215046	Shivangi
63	1215049	Raju Kumar Thakna
64	1215044	Avtar
65	1215050	Kuldeep
66	1214005	Shraddha
67	1214006	Nikita
68	1214007	Nidhi
69	1214009	Gaurav
70	1214010	Sakshi
71	1214015	Vithika
72	1214016	Krithika
73	1214017	Arshiya
74	1214019	Kriti
75	1214020	Karan
76	1214021	Manish
77	1214022	Anjali
78	1214023	Yashvir
79	1214024	Twinkle
80	1214026	Rohan
81	1214027	Vitasta
82	1214028	Dristi
83	1214031	Rashmika
84	1214033	Tushar
85	1214034	Megha
86	1214036	Aishwarya

87	1214037	Priyanka
88	1214038	Abhilasha
89	1214039	Varsha
90	1214041	Abhishek
91	1214042	Devesh
92	1214043	R. Shriti
93	1214044	Rohit
94	1214045	Lakshay
95	1214046	Devesh
96	3016011	Anjali
97	3016023	Anjali Gaur
98	3016006	Ankit
99	3016016	Bharti
100	3016025	Diksha Motan
101	3016013	Gyan Prakash Rai
102	3016020	Jyoti
103	3016014	Lalit Prakash
104	3016004	Meetaksh Kanoboj
105	3016002	Neetika Naudiyal
106	3016019	Nisha singh
107	3016017	Nisha Sinha
108	3016009	Prabhjot Kaur
109	3016010	Prerna singh
110	3016021	Sunil Kumar
111	3016015	Swechha Pal



SRI VENKATESWARA COLLEGE
(University of Delhi)

Internal Quality Assurance Cell

Chairperson

Prof C. Sheela Reddy
Principal
Sri Venkateswara College

IQAC Coordinator

Dr. N. Latha
Department of Biochemistry

External Members

Prof Debi P Sarkar
Department of Biochemistry
University of Delhi South
Campus

Prof Alo Nag
University of Delhi South
Campus

Dr. Gitanjali Yadav
NIPGR, Delhi

Internal Members

Dr. Meenakshi Bharat
Department of English

Dr. Lalitha Josyula
Department of Electronics

Dr. Namita Pandey
Department of Political
Science

Dr. A. K. Chaudhary
Department of Physics

Dr. K.C. Singh
Department of Physics

Dr. Swarn Singh
Department of Mathematics

Dr. Neeraj Sahay
Department of History

Dr. Vartika Mathur
Department of Zoology

Dr. Shruti Mathur
Department of Commerce

Dr. Padma Priyadarshini
Department of Sociology

Dr. Nimisha Sinha
Department of Biochemistry

Shri D. Venkat Ramana
A.O(I/C)

This is to certify that the Activity report (Teacher/Department /Society/Association) has been submitted for documentation to IQAC, Sri Venkateswara College, University of Delhi.

N. Latha

IQAC Coordinator
Sri Venkateswara College

Coordinator, IQAC
Sri Venkateswara College
(University of Delhi)
Dhaulta Kuan, New Delhi-110021

C. Sheela Reddy

PRINCIPAL
Sri Venkateswara College

PRINCIPAL
Sri Venkateswara College
(University of Delhi)
Dhaulta Kuan, New Delhi-110021