

JIGYASA program at CSIR-IICB , Kolkata

Jadavpur Campus

3rd July 2017 Monday (Day I)

- 10.00 a.m. - 10.30 a.m. Registration for K V students in the Red Carpet Room & Tea for all
- 10.30 a.m. - 10.35a.m. Welcome by Flowers
- 10.35 a.m. -10.45 a.m. Inaugural Song
- 10.45 a.m. -10.55 a.m. Lighting of the Lamp
- 10.55 a.m. -11.00 a.m. Welcome address by **Dr. G. Suresh Kumar** Chairman CSIR-IICB JIGYASA 2017
- 11.00 a.m. - 11.10 a.m. Address by **Dr. Samit Chattopadhyay** Director CSIR-IICB
- 11.10 a.m. - 11.20 a.m. Inaugural address by Guest of Honor **Dr. S. Bose** Assistant Commissioner Kendriya Vidyalaya Sangathan
- 11.20 a.m. - 11.30 a.m. Address by Chief Guest **Dr. K . Muraleedharan** Director CSIR-CGCRI
- 11.30 a.m. - 11.45 a.m. Memento Presentation
- 11.45 a.m. - 12.15 noon High tea (for the invitees in the Conference Room)
- 12.15 p.m. - 12.30 p.m. Introductory Talk by Director CSIR-IICB
- 12.30 p.m. -12.45 p.m. "History of CSIR-IICB" Talk by **Dr. Rukhsana Chowdhury**
- 12.45 p.m.- 1.00 p.m. Bio Safety /Chemical Safety Talk by **Dr. Mita C. Debnath**
- * Anchoring by Mrs. Shampoo Sengupta**

1 .30pm- 2 pm

Lunch In the Canteen

Session I: 2pm-5pm

Time	Group I	Group II	Group III
2.00 p.m. – 2.40 p.m	Dip Stick Technology Demonstration Dr. Nahid Ali Volunteer: Mr. Sarfaraj Ahmed Ezazi	Demonstration on Power Point Mr. Debabrata Das	Demonstration on Excel Software & Lecture Mr. Shivkumar Gupta Gupta
2.40 p.m. – 3.20 p.m	Demonstration on Excel Software & Lecture Mr. Shivkumar Gupta	Dip Stick Technology Demonstration Dr. Nahid Ali	Demonstration on Power Point Mr. Debabrata Das
3.20 p.m. – 4.00 p.m	Demonstration on Power Point Mr. Debabrata Das	Demonstration on Excel Software & Lecture Mr. Shivkumar Gupta	Dip Stick Technology Demonstration Dr. Nahid Ali

4.00 p.m. – 4.30 pm Tea in the Canteen

JIGYASA program at CSIR-IICB

Jadavpur Campus

4th July 2017 Tuesday (Day II)

Session II: 10 am- 1 pm

Scientist: Dr. S.N. Bhattacharyya, Dr. S.R. Dumdung & Dr. S. S. Roy

Volunteers: Avijit Goswami, Saikat Banerjee

(Three batches 10 students each will do same experiments in three different labs.)

10.00 a.m. – 10.35 a.m. Demonstration of sub-culture of cells and showing cells
Under simple microscope

10.35 a.m. – 11.15 a.m. Cell harvesting using centrifuge

11.15 a.m. – 11.45 a.m. Staining the cells with DNA-specific fluorescent dye (DAPI)

11.45 a.m. – 12.15 p.m. Preparation of slides with stained cell

12.15 a.m. – 1.00 p.m. Demonstration of stained cells under florescent microscope
to show nucleus

1.30 pm- 2 pm Lunch In Canteen

Session III: 2 pm- 5 pm

Scientist: Dr. Rupak K. Bhadra , Dr. P. Chakraborti, Dr. R. Ain & Dr. S. Biswas

Volunteers: Sougata Niyogi, Mr. Sarfaraj Ahmed Ezazi

(Three batches 10 students each will do same experiments in three different labs.)

2.00 p.m. – 2.40 p.m. LB Media and agar plate preparation

2.40 p.m. – 3.00 p.m. Streaking the bacterial cells having plasmid in it on agar
plate, to show grown colony

3.00 p.m. – 3.30 p.m. Single colony inoculation and incubation in 37C shaker Cell

3.30 p.m. – 4.30 p.m. Plasmid DNA isolation from already grown cells

4.30 p.m. Tea in the Canteen

JIGYASA program at CSIR-IICB

Jadavpur Campus

5th July 2017 Wednesday(Day III)

Session IV: 10 am- 1 pm

Scientist :, Dr. U. Bandyopadhyay, Dr. S. Chattopadhyay & Dr. D. Biswas

Volunteers: Mr. Mahesh Barad , Mr. Kanchan Mal, Mr. Sambit Dulai , Mr. Sandip Dolui, Ms. Aritra Bej, Mr. Subhadeep Mr. Sumantra Ghosh Mr. Avishek Mandal Mr. Chiranjit Biswas, Mr. Ayan Adhikari Mr. Sumantra Ghosh , Ms Priya Baid,

(Three batches of 10 students each will do same experiments in three different labs.)

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| 10.00 a.m. – 10.40 a.m. | Prepare agarose gel and electrophoresis buffer. |
| 10.40 a.m. – 11.10 a.m. | Quantify the DNA concentration by spectrophotometer |
| 11.10 a.m. – 11.40 a.m. | Set-up the restriction digestion of isolated DNA. |
| 11.40 a.m. – 12.15 a.m. | Agarose gel electrophoresis of digested DNA with markers and undigested DNA. |
| 12.15 a.m. – 1.00 p.m. | Checking agarose gel with DNA in UV trans- Illuminator and storing the image in gel documentation unit |

1.30 pm- 2 pm Lunch in the Canteen

Session V: 2 pm-5 pm

(Three batches of 10 students each will do same experiments in three different labs in rotation)

TEM & Gene Coding

Time	Group I (10)	Group II (10)	Group III (10)
2:00 p.m. – 3:00 p.m.	<p>DNA, a double helix, is a genetic material, Demonstration of Discovery Studio to visualize structural aspects of DNA, RNA, Nucleosides and Nucleotides, Swiss PDB Viewer, <i>In silico</i> demonstration of Primary, Secondary, Tertiary and Quaternary structures of proteins</p> <p>Drs. Saikat Chakraborty, Sujay Mukherjee, Nakul Maiti</p>	<p>Introduction: genetic code, Demonstration: Features of a gene, Demonstration of computational methods of finding a gene within a chromosome, Demonstration of decoding the codons, using software tools, Demonstration of various online genes and proteins databases</p> <p>Drs. Sucheta Tripathy, Sandip Paul</p>	<p>Demonstration of TEM architecture, Fundamental understanding of TEM function, the 'ultra microtome' machine for thin section, different TEM Grids and Grid preparation, staining, carbon coating on grids, loading grid in the microscope, Imaging with CCD, TEM images of different samples</p> <p>Siddhartha Roy, Saumen Dutta, Subrata Adak, Krishnananda Chattopadhyay, Jayati Sengupta</p>

3:00 p.m. – 4:00 p.m.	<p>Introduction: genetic code, Demonstration: Features of a gene, Demonstration of computational methods of finding a gene within a chromosome, Demonstration of decoding the codons, using software tools, Demonstration of various online genes and proteins databases</p> <p>Drs. Sucheta Tripathy, Sandip Paul</p>	<p>Demonstration of TEM architecture, Fundamental understanding of TEM function, the 'ultra microtome' machine for thin section, different TEM Grids and Grid preparation, staining, carbon coating on grids, loading grid in the microscope, Imaging with CCD, TEM images of different samples</p> <p>Siddhartha Roy, Saumen Dutta, Subrata Adak, Krishnananda Chattopadhyay, Jayati Sengupta</p>	<p>DNA, a double helix, is a genetic material, Demonstration of Discovery Studio to visualize structural aspects of DNA, RNA, Nucleosides and Nucleotides, Swiss PDB Viewer, <i>In silico</i> demonstration of Primary, Secondary, Tertiary and Quaternary structures of proteins</p> <p>Drs. Saikat Chakraborty, Sujay Mukherjee, Nakul Maiti</p>
4:00 p.m.- 5:00 p.m.	<p>Demonstration of TEM architecture, Fundamental understanding of TEM function, the 'ultra microtome' machine for thin section, different TEM Grids and Grid preparation, staining, carbon coating on grids, loading grid in the microscope, Imaging with CCD, TEM images of different samples</p> <p>Drs. Siddhartha Roy, Saumen Dutta, Subrata Adak, Krishnananda Chattopadhyay, Jayati Sengupta</p>	<p>DNA, a double helix, is a genetic material, Demonstration of Discovery Studio to visualize structural aspects of DNA, RNA, Nucleosides and Nucleotides, Swiss PDB Viewer, <i>In silico</i> demonstration of Primary, Secondary, Tertiary and Quaternary structures of proteins</p> <p>Drs. Saikat Chakraborty, Sujoy Mukherjee, Nakul Maiti</p>	<p>Introduction: genetic code, Demonstration: Features of a gene, Demonstration of computational methods of finding a gene within a chromosome, Demonstration of decoding the codons, using software tools, Demonstration of various online genes and proteins databases</p> <p>Drs. Sucheta Tripathy, Sandip Paul</p>

5.00 p.m. Tea in Canteen

JIGYASA program at CSIR-IICB

Jadavpur Campus

6th July 2017 Thursday (Day IV)

Session VI: 10 am- 1 pm

Volunteers: Mr. Kanchan Mal, Mr. Sabyasachi Chatterjee

(Two batches of 15 students each will do same experiments in two different labs.)

10.00 a.m. – 10.30 a.m. Lecture and Demonstration of various separation techniques

Time	Dr. Arindam Talukdar	Dr. Indu Busan Deb
10.30 a.m. – 11.00 a.m.	Group I (15)	Group II (15)
11.00 a.m. – 11.30 a.m.	Group II (15)	Group I (15)

(Three batches of 10 students each will do same experiments in three different labs.)

Time	Group I (10)	Group II (10)	Group III (10)
11.30 a.m. – 11.50 a.m.	Demonstration of working principle and experimentation of NMR Dr. Indrajit Das & Dr. E. Padmanabhan	Demonstration of working principle and experimentation of X-ray Dr. R. Natarajan & Mr. Sandip Kundu	Demonstration of working principle and experimentation of UV-visible and Fluorescence spectroscopy Dr. G. Suresh Kumar & Dr. Surajit Ghosh

11.50 a.m. – 12.10 p.m.	Demonstration of working principle and experimentation of X-ray Dr. R. Natarajan & Mr. Sandip Kundu	Demonstration of working principle and experimentation of UV-visible and Fluorescence spectroscopy Dr. G. Suresh Kumar & Dr. Surajit Ghosh	Demonstration of working principle and experimentation of NMR Dr. Indrajit Das & Dr. E. Padmanabhan
12.10 p.m.- 12.30 p.m.	Demonstration of working principle and experimentation of UV-visible and Fluorescence spectroscopy Dr. G. Suresh Kumar & Dr. Surajit Ghosh	Demonstration of working principle and experimentation of NMR Dr. Indrajit Das & Dr. E. Padmanabhan	Demonstration of working principle and experimentation of X-ray Dr. R. Natarajan & Mr. Sandip Kundu

(Two batches of 15 students each will do same experiments in two different labs.)

12.30 p.m. – 1.00 p.m. Demonstration of Steam Distillation of Essential oils from Fruits and Flowers

Group I (15): Dr. P. Jaisankar & Group II (15): Dr. Chinmay Chowdhury

1.30 pm- 2 pm Lunch in the Canteen

Session VII: 2 pm-5 pm

All batches will attend the session together

2.00 p.m. – 2.30 p.m. Demonstration of a simple etherification reaction – **Part I**
Dr. Biswadip Banerji

2.30 p.m. – 4.30 p.m. Demonstration of Soap Preparation **Dr. Umesh Pradap Singh & Dr. Ranjan Jana** assisted by Research Scholars **Mr. Pinaki Bhattacharya and Miss. Anushree Achari**

4.30 pm – 5.00 pm. Demonstration of **a simple esterification reaction - Part II** **Dr. Biswadip Banerji**

5.00 p.m. Tea in the Canteen

JIGYASA program at CSIR-IICB

Salt Lake True Campus

7th July 2017 Friday (Day V)

Session VIII: 10 am- 1 pm

10.00 a.m. –11.00 a.m. Laboratory Visit

11.00 a.m. –11.30 a.m. Dream Weaver Demonstration by **Mr. Akash Gupta**

11.30 a.m. –12.00 noon Popular Talk by **Dr. Sibsankar Roy** **Human Genome; Facts and Future**

12.00 noon –12.30 p.m. Popular Talk by **Dr. Ranjan Jana**

12.30p.m. – 1.00 p.m. Popular Talk by **Dr. Snehsikta Swarnakar** “ **Gastric disorder & its remedy by natural products**

1 pm- 2 pm Lunch In the Canteen

Session VIII: 2 pm- 3.45 pm

2.00 p.m. –3.00 p.m. Quiz by **Dr. K. Chattopadhyay** & **Dr. S.Chakraborty**:
Volunteers: Arnab Bandyopadhyay & Dwipanjan Sanyal

3.00 p.m.–3.30 p.m. Certificate Distribution by the Director, **Dr. Samit Chattopadhyay**

3.30 pm – 3.45 p.m. Valedictory session **Dr. G Suresh Kumar** **Chairman** JIGYASA
(CSIR- IICB 2017)

3.45 p.m. Tea in the Canteen