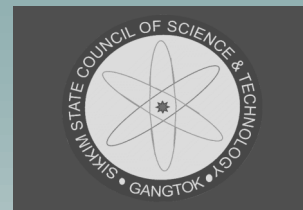


Advance Level State Biotech Hub  
Sikkim State Council of Science and Technology  
Vigyan Bhawan, Deorali, Gangtok, 737102



## Series of Workshop & Training Conducted on Biotechnology by ALSBH

Advance level State Biotech Hub (ALSBH), Sikkim State Council of Science & Technology (SSCS&T), conducted series of Hands on training on Biotechnology. The Hands-on training was imparted by Dr. B.C Basistha, Co-ordinator ALSBH, Shri. K.B. Subba (ASO, SBH), Dr Sushen Pradhan, Research Associate (ALSBH) and Neelam Gurung, Perna Pradhan, Pratima Ghimray (SRF, ALSBH). Lectures on Biotechnology and its application and introduction to PCR were also delivered. Lab Manuals were prepared and given to each trainee with detailed procedures of all the experiment. The training programme was designed to provide participants with an insight into the different aspects of Biotechnology and Bioinformatics. The training programme on Biotechnology and Bioinformatics were conducted on 21st August to 26th August 2017 and the theme of the training was "Basics of Bioinformatics, Gene sequence analysis, protein sequence analysis and multiple sequence analysis". The total number of 60 graduates and post graduates students/Research scholars from Sikkim Manipal University, Sikkim University along with the scholars of the host department participated in the workshop. Hands-on training on Biotechnology was designed for the students of class 12, B.Sc. And M.Sc. where they get to learn the concepts of Biotechnology, DNA isolation, Gel electrophoresis and PCR.

A positive feedback was gathered from each student. They requested such programmes may be conducted in future as well and also stated that this sort of training has been very useful in their academics and also helped them gain more interest in the field of research. The training was concluded by interactive session and discussions in the presence Dr. B.C. Basistha, coordinator, Additional Director, DST&CC and all the trainees.

## 25 GOVERNMENT SCHOOLS VISITED BIO-TECHNOLOGY LABORATORY

The Advance Level State Biotech Hub (ALSBH) has been imparting Biotechnology teaching and techniques to stimulate scientific and Biotechnological temper and coordinate with the teachers and students across various Sr.Sec.Schools of the State of Sikkim.

Lab exposure programmes of ALSBH aims to develop scientific reasoning ability, practical skills, increasing understanding of the nature of science and cultivating interest in science and learning among the students. The team of State Biotech Hub practical demonstrates the various Biotechnology instruments along with the working principle and operating procedure.



**Fig1: Participants with Resource persons**

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*Fig 2: Lab exposure & instrument demonstration to school students*

Biotechnology Laboratory experiences promoted students ability to identify questions and concepts. Students learned to use the tools and conventions of science, they developed skills in using scientific equipment correctly and safely, making observations, taking measurements, and carrying out well-defined scientific procedures. The practical hands on exposure gave more confidence compared to the theoretical learning.



*Fig 3: Shri. K. B. Subba, Asstt. Scientific officer receiving the Award*

### State Biotech Hub Conferred with State Meritorious Service Award on Independence Day

Shri. K. B. Subba, Assistant Scientific Officer, who is a co-coordinator of State Advance Level Biotech Hub, received Sikkim State Award for Meritorious Service from Hon'ble Chief Minister of Sikkim, Shri. Pawan Chamling on the occasion of Independence day, 2017. State Government was pleased to confer upon him the state meritorious award for his sincere, dedicated service and his contribution on the following area. He pioneered plant tissue culture in the state and played a vital role on its promotion. He used his expertise to train the entrepreneurs, educated unemployed youths, researchers and assisted in establishment of tissue culture laboratory in the state. He has also successfully executed number of R&D and extension projects, published numbers of research articles. He was instrumental in establishment of Biotechnology Research and Application Centre, Sajong and Molecular Biology Laboratory, Vigyan Bhawan that are now being used for research and trainings by the researchers and students.



*Fig 4: Outreach programme conducted of different government schools of Sikkim*

### BIOTECHNOLOGY OUTREACH PROGRAMME

ALSBH team, Dr. B.C Basistha, coordinator, Shri. K.B. Subba, ASO, Dr Sushen Pradhan, Research Associate and Neelam Gurung, Prerna Pradhan, Pratima Ghimiray (SRF, ALSBH)., conducted outreach programmes on Biotechnology and its application in 10 different schools in all four districts of Sikkim. The topics of discussion centred on an introduction to Biotechnology, its diverse applications and the topics – such as cloning, Recombinant DNA technology etc. were discussed and then proceeded to recent biotechnological innovations, current research and development and options towards embarking on a biotechnology based career.

Total 300 numbers of students along with Principal and teachers also attended the programme. Students actively participated in the programme and were interactive in each event. Positive feedbacks were given by the Principals and the Teachers of the respective schools. All the schools extended their sincere thanks to the Advance Level State Biotech Hub and were hoping to get more of such programme in the future which they found very beneficial for the students. List of the schools are given in Table 1.

### Measurable Achievement of the State Biotech Hub (since its inception)

- ⇒ The fully functional molecular, biochemical, plant tissue and cell culture laboratory established with 100% fund utilization provided for the purpose.
- ⇒ Biotechnology outreach programme conducted in 57 schools across Sikkim.
- ⇒ One PhD awarded using Biotech Hub facility and four more enrolled in different university under Dr.B.C Basistha, mainly due to the established biotech hub laboratory.
- ⇒ Sikkim State Council of Science and Technology constitute a Institutional Biosafety Committee (IBSCs).



- Lecture on Biotechnology
- Seminar on Biotechnology
- Lecture on Biotechnology on Regional language.
- Biotechnology Essay-Competition.
- Hands on Training.
- Outreach Programme.

Sl. No	Name of School	District
1	Sang Sr. Secondary School	East
2	Dikling Sr. Secondary School	East
3	Chujachen Sr. Secondary School	East
4	Rhenock Sr. Secondary School	East
5	Namchi Girls Sr. Secondary School	South
6	Namchi Boys Sr. Secondary School	South
7	Namthang Sr. Secondary School	South
8	Sadam Sr. Secondary School	South
9	Tarpin Sr. Secondary School	East
10	Dalapchand Sr. Secondary School,	East

### **“Half Marathon and Swatchta Hi Seva” campaign conducted by SSCS&T on 21.09.2017**



*Fig5: Half marathon and Swatchta Hi Seva campaign*

The Department of Science, Technology & Climate Change conducted a “Half Marathon” with the aim as “SWATCHTA HI SEVA” on dated 21.09.2017. The marathon was started from Zero Point, Rumtek, East Sikkim and run was end at Sikkim Science Center, Marchak, Ranipool. The marathon started after flag off by Dr. K. Jayakumar, principal Secretary, IAS,DST&CC with brief address, following senior officers of DST&SSCS&T were also participated. Total 60 officials of DST&SSCS&T participated in the marathon and cleaning campaign at Sikkim Science Center, Marchak. All the officers and staff also took oath and pledged to uphold and embrace attitudes and behavior commensurate with the campaign.

On the second day, the campaign was organized at Biotechnology Application and Research Centre, Sajong, Rumtek premises.

### **FUTURE PLAN OF ACTION**

To conduct hands-on training on molecular techniques for school and college students.

To collaborate with other research institutes like SRM, SU,IBSD etc to carry out collaborative research works and trainings.

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