

## Database prepared by Sub-DISC

- ◆ Economically important floral diseases of Sikkim
- ◆ Orchids species of Sikkim
- ◆ Rhododendron species of Sikkim
- ◆ Medicinal plants of Sikkim
- ◆ Scientific profiles of Sikkim
- ◆ Birds of Sikkim
- ◆ Butterflies of Sikkim

## Major Publications:

- Quarterly News letter BIOGYAN.
- Compiled research articles book on Bio-resources of Sikkim published in various national and international journals. (Vol. I, II, III).
- Medicinal plants of Sikkim (200 species).

## Research Area:

Biodiversity, Biotechnology and Bioinformatics

## Further links:

<http://www.dstsikkim.gov.in>

<http://www.sikkim.gov.in>



*Rhododendron niveum* Hook.f.

## BTISnet Head Office:

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## Universities/Institution taking up the courses in Bioinformatics in India:

- Bose Institute, Kolkata
- Jawaharlal Nehru University, New Delhi
- Calcutta University, Kolkata
- Madurai Kamraj University, Madurai
- Pondicherry University, Pondicherry
- Guwahati University, Guwahati
- Pune University, Pune

## Important Bioinformatics sites:

<http://biomastre.uio.no>  
<http://www.in.embnet.org>  
<http://www.bio.net>  
<http://www.expasy.ch>  
<http://www.bioinformaticscentre.org>  
<http://www.biochemucl.ac.uk/bsm>

## For more information please contact

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# BIOINFORMATICS CENTRE SIKKIM

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Website: [www.bioinformaticssikkim.gov.in](http://www.bioinformaticssikkim.gov.in)

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**B**ioinformatics is the combination of biology and computer science and is a new emerging field that helps in collecting, linking and manipulating different types of biological information to discover new biological insights. Owing universal distinguishes, Bioinformatics is now regarded as the sole venture of the future's science. In a view to excel Bioinformatics by means of electronic media in much faster manner, Department of Biotechnology, Government of India launched National Network on Biotechnology known as Biotechnology Information System Network (BTISnet). Under which the department has established various Bioinformatics centers across the country, in the form of Bioinformatics Centre of Excellency, Distributed Information Centre, Distributed Information Sub-DISC and BIF centers.

### **Sikkim Bioinformatics Sub-DISC**

Bioinformatics Sub-DISC, Sikkim State Council of Science & Technology was established in November, 2001 under Department of Science & Technology and Climate Change, Government of Sikkim, with the support of Department of Biotechnology, Government of India.

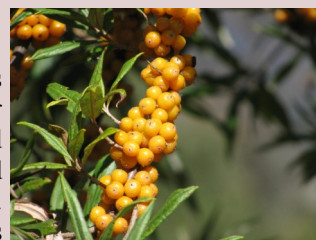
### **Objectives of Sub DISC, Sikkim State Council of Science & Technology**

- To promote Biotechnology and Bioinformatics in the state through trainings, workshops and other awareness programmes.
- Access, search and retrieval of biological information, documents and literature.
- To develop and maintain database of important flora-fauna species of Sikkim.

- Encourage young researchers to take up research work in Bioinformatics and Biotechnology.
- To provide accessing of online journal to the researchers under various scientific aspects.

### **Bioinformatics an Overview**

Bioinformatics encompasses molecular biology, biochemistry and genetics on the one hand, and computer science on the other. It uses methods of various areas of computer science, such as algorithms, combinational optimization, integer linear programming, constraint programming, formal language theory, neural nets, machine learning, database systems, motif recognition, database mining. The exponential growth in biological data, generated from national and international genome projects, offers a remarkable opportunity for the application of modern computer science. The union of biomedicine and computer technology has offered substantial benefits to all scientists involved in biomedical research in support of their general mission of improving quality of health by increasing biological knowledge.



Being an important scientific field, formed by the merge of biology, computer science and information technology, the Bioinformatics is consist of three important sub-disciplines:

- \* The development of new algorithms and statistics which assess relationship among members of large data sets.
- \* The analysis and interpretation of various types of data including nucleotide and amino acid sequence, protein domains, and protein structures
- \* The development and implementation of tools that enable efficient access and management of different types of information.

### **Bioinformatics in Sikkim**

Sikkim Bioinformatics sub-DISC has obtained tremendous achievements within its decade year old period. The centre has attained an authentic biological research database including some major database of flora and fauna species of Sikkim. The centre has become a hub of Bio-resources, as it has been extending support to the researchers through out the country and the world.



### **Important activities running under Sikkim Bioinformatics Sub-DISC:**

- \* Research on Bio-resources of Sikkim by applying Biotechnology and Bioinformatics.
- \* Conduct training/seminars/workshop on sensitization program on Bioinformatics among the scientists, Senior Research Fellows, Junior Research Fellows, researchers etc.
- \* Promote fundamental Bioinformatics in Schools of Sikkim.
- \* Provided free internet connectivity to the researchers and scientific scholars to retrieves biological information.
- \* Facilitate the scientists and research scholars, with free online e-journal through DELCON consortium with the support of Department of Biotechnology, Government of India.