



**Department of Biotechnology  
Ministry of Science & Technology  
Government of India**

**Call for proposal on “DBT Initiative on Chemical Ecology of the North East Region (NER) of India”**

Significant scientific efforts have been made over the last decades to map, describe and harness the rich biodiversity (plants, animals, insects and microbes) of the North East Region (NER) of India, one of major biodiversity hot-spots of the world. Having achieved the current state of advanced scientific knowledge (plant, animal and microbial biology and chemistry) sets the stage for the next-level scientific questions to decipher inter- and intra-species interactions, communications and synergies. Studies of this dynamic interplay mediated by the small-molecules and their macromolecular counterparts have given rise to a new scientific discipline of Chemical Ecology. This new **“DBT Initiative on Chemical Ecology of the North East Region of India”** aims to bring together researchers in complementary disciplines (biology, crop and soil sciences, entomology, horticulture, forestry, microbiology, pathology, biochemistry, molecular biology and natural-products chemistry) to explore the role chemical signals play in shaping the unique ecosystems of the NER by studying interactions at the molecular level and discovering novel molecules for improving human life and environment.

The proposals are invited in the field of Chemical Ecology to understand the mechanistic basis of rich biodiversity of the North East Region. These may include chemical studies on predator-prey, parasite-host, herbivore-plant, virus-vector, inter- and intra-specific interactions in the NE ecosystems. The proposals should focus on studying structure of small molecules and their dynamic role in ecology, while addressing new fundamental and applied biological questions. The proposals should deploy advanced investigations to help understand the following questions:

- (i) How organisms communicate through chemical interactions (both short and long-distance interactions) to shape the unique biosphere of the North East Region, e.g. studying pheromones and semiochemicals?
- (ii) How global climatic change and anthropogenic pressures are affecting the fragile ecological settings of the North East Region?
- (iii) By studying the molecules so discovered in microbes, fungi, plants, and animals of NER, the proposals should strive to mimic nature's flavours and fragrances, medicines, and toxins, and

learn how to put them to use for a healthier life and cleaner environment such as managing agricultural pests and mitigating vector transmission of human, domestic animal, and wildlife diseases; developing nutraceuticals and pharmaceuticals for betterment of humans etc.

- (iv) Establishing a critical mass of trained manpower in the field of Chemical Ecology in the NE region.

**Eligibility:** Researchers / Scientists working in the Government Organisations / Universities /Academic Institutions / National Laboratories / SIRO recognised Non-Profit Organisations, with sound scientific & technical backgrounds and relevant publications in the proposed areas can submit projects proposals.

**Norms for Assistance:** The proposals should be NER centric with multi-institutional participation from institutions within NER or with outside NER Institutions. If the projects are with outside NER institutions then the budget sharing should be in the ratio of up to 60:40 between NER and outside NER institutions, respectively.

**Mode of Submission:**

- The Applicants should submit a full the proposal on or before the deadline through DBT eProMIS portal (<http://dbtepromis.nic.in/Login.aspx>) under the “**NER Programme**”.
- **Two hard copies** of the proposal should also be submitted to **Dr. Vaishali Panjabi, Scientist ‘E’**, Department of Biotechnology, Block-2, 7<sup>th</sup> Floor, CGO Complex, Lodi Road, New Delhi-110003.
- A softcopy of the proposal should also be submitted to [nerdiv@dbt.nic.in](mailto:nerdiv@dbt.nic.in).

**Deadline for submission of the proposal:** **16<sup>th</sup> November 2020.**

**Contact for further information:**

- **Dr. Vaishali Panjabi, Scientist ‘E’, DBT, New Delhi**
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