



DEPARTMENT OF BIOTECHNOLOGY  
Ministry of Science & Technology  
Government of India



CONCEPT NOTES INVITED ON  
"MARINE BIO-ENERGY, NUTRACEUTICALS AND BIO-PROSPECTING"

Department of Biotechnology supports programmes in the area of Aquaculture & Marine Biotechnology, both of strategic and applied nature. As Marine bio-prospecting area is receiving greater attention and India has excellent potential, it is proposed to invite concept notes from the Scientists / Researchers, who have visible and potential leads identified from the marine sources, either individually or in collaboration through a team or institutions. It is desirable that the concept should focus on Identification of algal/microalgal strains for mass production of biomass and lipids in high quantities, Development of photobioreactors using cheaper materials for cultivation of algal biomass and lipid production, Develop engineering systems for reactors/recovery process and harvesting, Alternative means for algal cultivation such as on domestic and industrial wastewaters, Production of secondary metabolites, high-value pigments, proteins, nutraceuticals, etc using suitable algal/cyanobacterial strains, Metabolic engineering approaches for enhanced production of biomass/products, Value-addition and biofortification for the algal biomass for human health benefits, Explore new microalgae for human consumption, e.g., PUFA in Spirulina, Thermochemical processing of algal biomass; biochars from algae and their application

The research should be proposed as network mode involving multi-partners with the available leads identified and evaluated for different activities from marine sources for further characterization and up-scaling through appropriate industry involvement as and when possible. Thus concept should be based on the expertise of marine biology, chemists, microbiologists, biotechnologists, (bio) chemical engineers, and others with clear objectives, timelines and quantifiable output/outcome. Equally, the team can also involve bioinformatics specialists as well the interested industry. The concept note received will be examined by DBT. Short-listed concept notes will be invited for submission of detail proposals for financial support as per the modalities of the Department.

The soft copy of the concept note can be submitted to Dr. S. U. Ahmed, Scientist "D" ([shahaj.ahmed@nic.in](mailto:shahaj.ahmed@nic.in)) with a copy to Dr. A. S. Ninawe, Advisor, DBT ([ninawe.dbt@nic.in](mailto:ninawe.dbt@nic.in)) before 14<sup>th</sup> August, 2015.

Proforma for submission of Concept Notes on Marine Bio-Energy,  
Nutraceuticals and Bio-Propecting under the programme area Aquaculture  
& Marine Biotechnology

(Maximum five single space printed A4 pages using 12 Roman Font)

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1. Title of the project:
  
2. Coordinator/Principal Investigators/Co-investigators:
  - Name:
  - Address:
  - Telephone:
  - Email:
  
3. Background of work (provide state-of-art information, including patent search):
  
4. Leads available/work done by PI /Co-PI :
  
5. Objectives/work packages:
  
6. Nature of networking/complementary between the partners including industrial involvement, if any:
  
7. Methodology in brief:
  
8. Duration:
  
9. Expected outcome/output (in quantifiable terms year-wise):
  
10. Budget:
  - o Non-Recurring:
  - o Recurring
  - o Grand Total (A + B) :
  
11. References (Give details of any three best papers or patents on the topic by each PI)