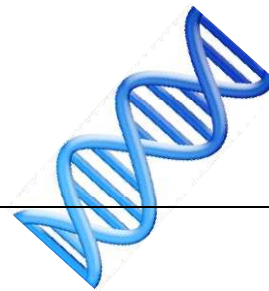




## DEPARTMENT OF BIOTECHNOLOGY

Ministry of Science & Technology  
Government of India



### INVITATION FOR CONCEPT NOTES ON "MARINE SYNTHETIC BIOLOGY"

Department of Biotechnology supports programmes in the area of **Aquaculture & Marine Biotechnology**, both of strategic and applied nature. It was felt that Marine Synthetic Biology is an important area having tremendous potential to explore marine eco-systems to make unique molecules and also enhance yields of plant, animal and marine based products. It is proposed to invite concept notes from the Scientists / Researchers, who have visible and potential leads identified from the marine sources in collaboration through a team or institutions. It is desirable that the concept should focus on **shrimp health** as a broad area under which marine based and other compounds can be screened and developed as anti-viral against White Spot Syndrome Virus (WSSV). The area will cover phenoloxidase as target, immunostimulants and micro-biome in Shrimp. Modification, improvement and production of all these products can be attempted through Synthetic Biology. The concept should be based on application of marine synthetic biology, chemistry and others disciplines for discovery of new molecules and finer characterization of the known molecules. Equally, the team can also involve bio informatics specialists as well the interested industry. The concept note received will be examined by the Departmental Committee constituted for the purpose. The theme based concept proposals should be submitted by giving emphasis on shrimp health as a broad area under which marine based and other compounds can be screened and developed as anti-viral against WSSV including phenoloxidase as target, immunostimulants and micro-biome in shrimp and modification, improvement and production of all these products attempting through Synthetic Biology approach.

The Department would also like to focus on **Capacity Building in Marine Synthetic Biology** for which separate concept notes are requested from the Scientists / Researchers, who have visible and potential expertise and infrastructure leads for development of foundation courses as well as development of laboratory tools especially relevant to marine synthetic biology.

The concept note can be submitted in both soft and hard copies to Dr. S. U. Ahmed, Scientist "D". Programme Scientist, ([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)) on or before **30<sup>th</sup> June, 2015** in the prescribed format (**attached**).

**The short-listed concepts will only be called for submitting the detail proposals.**

**Proforma for submission of Concept Notes on Marine Synthetic Biology  
pertaining to the theme on Shrimp Health and Capacity Building 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-I:**

**5. Objectives/work packages:**

**6. Nature of networking/complementary between the partners:**

**7. Methodology in brief:**

**8. Duration:**

**9. Expected outcome/output (in quantifiable terms yearwise):**

**10. Budget:**

- **Non-Recurring:**
- **Recurring**
- **Grand Total (A + B) :**

**11. References (Give details of any three best papers or patents on the topic by each PI)**