

Department of Biotechnology
Ministry of Science and Technology
Govt of India

Call for Pre-proposals on Biotechnological Interventions for Improving Productivity of Fruits and Vegetable Crops

Fruits and vegetables play an important role in human health and nutrition. Improvement in fruit and vegetable productivity and quality forms a key strategy to maximize our economic benefits and nutritional security.

Conventional breeding has although contributed significantly towards the improvement of the fruit and vegetable yield, quality and their resistance to biotic and abiotic stresses. In recent years, biotechnological approaches such as marker-assisted selection (MAS) has brought about a significant change in the manner we exploit the genetic resources which carry important desirable traits. Some of the important traits include resistance to virus infections, nutritional quality improvement, increasing shelf life, post harvest process quality, etc. In India biotechnology research efforts are being pursued in many of the fruit and vegetable crops. However, some of the crops which still need attention for certain traits, have been identified, viz. Onion (Purple blotch, Bolting, Sprouting); Cucurbits: Bottle Gourd, Cucumber, Water Melon (Mildews and Fruit fly); Chillies (Fruit borer and Bud Necrosis, Anthracnose, Leaf Curl Virus, Capsaicinoid content); Citrus (Citrus Greening, Canker, *Phytophthora*, Seedless mandarin, Limonene reduction); Grapes (Mildews); Pomegranate (Bacterial blight); Guava (Pink flesh and soft seed, nutritional quality).

Department of Biotechnology is inviting pre-proposals/concept notes from scientists working in Indian research institutes/universities on the above mentioned vegetable/fruit crops vis-à-vis identified traits. The focus should be on molecular breeding approach to address the identified problem. However, wherever it is absolutely necessary, genetic modification route may be adopted following the necessary prescribed bio-safety measures. In addition to these traits in respect to identified crops, other traits of importance can also be considered.

The pre-proposals/concept notes should be restricted to 4–5 pages defining (a) clear cut objectives, (b) work plan, (c) expected outcome, (d) bio-data of the investigator/s giving details regarding the expertise along-with the list of research papers in the proposed research area and (e) tentative budget estimates.

The concept notes/pre-proposals will be examined by expert committee and PI's of the short-listed concepts will be asked to submit their detailed proposals for further consideration.

Interested scientists may submit five hard copies of the Pre-proposal/Concept Note to **Dr Meenakshi Munshi**, Director, Room No. 705, Department of Biotechnology, Block-2, CGO Complex, Lodhi Road, New Delhi 110 003 latest by **15 March 2013**. Soft copy of the same may also be submitted through an e-mail: meenakshi29.dbt@nic.in, Ph: 011-2436 1035.