



DEPARTMENT OF BIOTECHNOLOGY
MINISTRY OF SCIENCE AND TECHNOLOGY
Block-2, CGO Complex, Lodhi Road, New Delhi 110 003

CALL FOR PRE-PROPOSAL ON APPLICATION OF MOLECULAR MARKERS FOR CROP IMPROVEMENT UNDER GRAND CHALLENGE PROGRAMME

Molecular breeding has been suggested as a major approach to supplement conventional plant breeding for augmenting yield and quality in all major crops. In this connection the transgenic approach has witnessed strong opposition for a variety of reasons. However, marker-assisted selection (MAS), which is the other molecular breeding approach, has been found to be acceptable and suitable. Also, DNA-based molecular markers have been developed for a variety of traits through marker-trait association (MTA) analysis in all major crops. Most of these markers are available in public domain and can be utilized for MAS. Several countries (including Australia, USA, Canada) and a number of International Agricultural Research Centers (IARCs, including CIMMYT, ICRISAT and IRRI) have already initiated major programmes on MAS in several crops, and also demonstrated its utility in accelerating crop improvement programmes. In several crops, including common bean, rice and pearl-millet, product development has also been possible.

Department of Biotechnology, Government of India is planning to develop a major project under Grand Challenge Programme *on validation and utilization of already identified markers available in public domain for important traits for improving our crops for better productivity through MAS* and invites pre-proposal from Universities, Public and Private Research Institutes and non-profit organization in the country for funding. In particular, concept paper giving a brief outline of the project aimed at improving crop plants through integrated plant breeding involving MAS will be considered. Priority will be given to the projects focused at the delivery of product(s) in the form of a variety or improved genetic stock having potential as a breeding material. Those having expertise in respective areas as evident from the publications in high-impact factor journals or product development may apply. The pre-proposal not exceeding 5–7 pages elaborating the current problems and molecular breeding strategies alleviating the problem in 3–5 years period may be submitted.

Fifteen (15) copies of the duly signed pre-proposal forwarded by the competent authority which should include title of the concept, its preliminary proof, major objectives/milestones, expected deliverables/outcomes along with proof of having expertise in form of publications in high impact factor journals, lowest amount of the budget which you need, projects in hand and association with industry may be submitted positively by **15 July 2008 to Dr R. R. Sinha, Advisor, Department of Biotechnology, Block 2, 6th Floor, CGO Complex, Lodhi Road, New Delhi 110 003**. The Department of Biotechnology encourages joint proposals from competent persons from multiple institutions with clear complementation of activities. Pre-proposals with scientific merit, *only in the desired area as mentioned above* will be short-listed by a screening committee for discussion and development of detailed research proposals.