



**DEPARTMENT OF BIOTECHNOLOGY**  
**Ministry of Science and Technology**  
**Government of India**

**Call for R & D Proposals on Food to Food Fortification**

Indian diets among poor people are monotonous and cereal centric. As a consequence, they are deficient in micronutrients and are not balanced in terms of the daily requirement of many nutrients. This has led to several public health problems in the country particularly more among the poor, like, iron (and other nutrient) deficiency anemia, stunting, low quality pregnancy leading to low birth weight, and vitamin A, folate, vitamin B12, zinc, omega-3 PUFA and vitamin D deficiency. Food to food fortification could be a powerful tool to tackle the public health problems prevalent in India. Taking this into account, the **Department of Biotechnology (DBT) solicits R & D proposals in the following identified thrust areas:-**

- **Development of food-to-food fortification programs for combating micronutrient deficiencies of public health significance with the following considerations:**
  - Public health problem linked to a nutrient or combined nutrient deficiencies (example: anemia linked to iron/folate/B12; stunting linked to zinc/quality of protein intake; bone density linked to vitamin D and calcium intake)
  - Development of high nutrient value food that complements the identified specific nutrient deficient diet (example: high iron content/bioavailability foods – processed millets or green leafy vegetables or fruit or herbs or their extracts; high quality proteins).
  - Estimated Average requirements (EAR) based on Recommended Dietary Allowances (RDA) for different nutrients for the Indian population of different age groups, which could form the basis of food fortification programmes in the country.
- **Operational Aim:** To generate evidence based appropriate and innovative food product development including an attention to shelf life and ease of distribution with eco-friendly packaging. All products or high nutrient foods should be tested for their claim, in appropriately designed human studies – (Clear definition of benefits by clinical or human randomized control trials).
- **Development of an informatics tool that could assist food-to-food fortification analyses of nutrient density in diets. This could also be developed as an ‘app’ based on the existing scientific data.**
- **Technological interventions such as nanotechnology, microencapsulation for food to food fortification programmes**

**Eligibility:** Proposals may be submitted by scientists/ interdisciplinary groups working in recognised R & D Institutions.

**Screening of proposals:** The proposals will be examined by constituted expert committee for consideration of financial support by DBT.

**Submission of Proposal:**

The R & D proposals are to be submitted online by the following steps:

- a) Open DBT epromis website (<http://dbtpromis.nic.in/login.aspx>) and consult the user manual for project Investigator and thereafter submit R & D proposal online to DBT under the programme area : “Public Health, Food and Nutrition”. b) Send a soft copy of the R & D proposal by email to [vk.addanki@nic.in](mailto:vk.addanki@nic.in). c) Also submit 01 hard copies to Dr. A.Vamsi Krishna, Scientist-D, Department of Biotechnology, Block-2, 7<sup>th</sup> Floor (R.No-726), C.G.O. Complex, Lodhi Road, New Delhi 110003. **Last Date of submission: 15<sup>th</sup> June 2015**