सत्यमेव जयते

Department of Biotechnology
Ministry of Science and Technology
Government of India

Public Health and Nutrition Programme

CALL FOR Letter of Intents (LOI) on Nutritional strategies for prevention and treatment of intra-individual double burden of anthropometric undernutrition and metabolic over nutrition

(Last date for submission 27th of April, 2022)

BACKGROUND

Prevalence rates of anthropometric undernutrition (stunting, underweight and wasting) during early childhood in India continue to be high. Data on child growth from two national surveys - the NFHS-4 and CNNS, show that linear growth faltering occurs mainly in the first two years of life, after which the proportion of stunted or underweight children appears to stabilize. These surveys are cross sectional, and longitudinal follow up data is required to confirm and accurately quantify this early growth faltering in children who are born appropriate for gestational age and small for gestational age. It is also important to evaluate all exposures during growth- particularly food intake after 6 months, and morbidity. Outcomes of interest will be anthropometric growth and the rate of accretion of body fat during early growth, and the relation of these to growth along or across percentiles.

An important finding that came from the CNNS, was that half of stunted or underweight children aged 5-19 years, had at least one biomarker of metabolic overfeeding – like high blood sugar or high blood lipids (cardiometabolic risk factors that track into later life and are associated with non-communicable diseases). This is the classical intra-individual double burden of malnutrition, occurring within the same child, and occurring in childhood. We do not know when this begins: it could even start in the first 2 years of life. This could be due to enthusiastic efforts at restitutive feeding that are often implemented in response to growth faltering in stunted and underweight children. In many instances, these restitutive efforts are predominantly cereal based. The consequences of enthusiastic feeding could be in terms of inappropriate anthropometric growth (weight in preference to height), or in terms of the body composition like body fat content or muscle mass accretion, or in terms of

metabolic markers of nutritional homeostasis. Other functional markers, like those of cognitive growth are also unknown. The time course of this apparently faltered growth, and its consequences in a longitudinal framework are relatively unknown. The same phenomenon could be occurring later in adult life, in a similar or different forms.

Hence, to address the prevention and treatment of intra-individual double burden of malnutrition, especially in children in relation to specific diet patterns, LOIs consisting of independent components or multi-centric network program in both clinical and basic research are invited on the following broad objectives :-

1. In-depth understanding of nutritional requirements of children aged 6 months to 5 years for optimal physical growth and body composition.

2. Temporal fat accretion patterns and their association with cardiometabolic risk factors in relation to life style factors in apparently healthy children and adolescents from different socioeconomic milieus.

3. Evaluate the effect of dietary and life style interventions on intra-individual double burden of anthropometric under nutrition and metabolic over nutrition.

ELIGIBILITY

Applications may be submitted by public and private universities, colleges, Institutes, non-profit organizations (recognized by DSIR as a Scientific and Industrial Research Organization (SIRO). It is expected that some of the projects will be collaborative efforts between Basic scientists, Clinicians, Biochemists etc.

The deadline for submission of the LOI is **27th of April, 2022**. The review of the proposals would be as per norms of DBT.

The LOIs which are focused and those with translational potential would be preferred.

The evaluation would be in accordance with the stated goals of the programme, uniqueness, track record of the main investigators and feasibility of doing the proposed research in their present setting. The decision would thereafter be communicated to investigators/coordinators. While experience in the area will be valued but will not be limiting for the right proposal.

How to Apply: Interested investigators/clinical researchers/scientists and clinicians with credible ideas working in recognized R&D Institutions can come together to submit the LOIs through email to **nutritionpfn2022@gmail.com** as per the format given below. The point of contact is Dr. A. Vamsi Krishna, Scientist-E, Department of Biotechnology, Block- 2, Room No.724, 7th Floor, CGO Complex, Lodhi Road, New Delhi – 110003, Landline: 011-24363725. The investigators are advised not to submit hard copies of LOIs.

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Proforma for LOI:

1. (i) Project/ Programme Title
   (ii) Specific Area of your proposal
   (iii) Single or Multi-centric
   (iv) Names (s) of the Investigator(s)
   (v) Institute address, Contact numbers etc.

2. Indicate category of domain expertise and potential PIs (Basic and/or clinical research). Multifaceted and multi-institutional collaborations encouraged.

3. Scientific Hypothesis and key questions to be addressed and Primary Objectives (100 words)

4. Detailed work plan vis a vis projected objectives (500 Words)

5. Preliminary Data

6. What is the novelty in your approach?

7. Feasibility of doing the study in your present institution/workplace.

8. Tentative budget (under the headings Non-recurring/Manpower/Recurring).

9. List 4-6 statements on expected deliverables (a) study outcomes (or) translational outcomes.

10. Professional Experiences and Training relevant to the project

11. CV of the investigators as per format (Annexure I).

12. Any other highlights

(Annexure I)

1. Name : ……..……..

2. Date of Birth : ..…….

3. Sex (M/F): ..……

4. Designation ……..

5. Department : ……..……

6. Institute/University : ……..……

7. Address : ……..……
……..……

PIN : ..... Telephone : ..... e-mail: ……..

8. Specialization/Research Areas ……..

9. Education Details (Post-graduation onwards & Professional Career)

SR. NO.	DEGREE AWARDED	INSTITUTION/PLACE	YEAR	FIELD OF STUDY

10. Employment Details: Position and Employment (Starting with the most recent employment):

SR. NO.	INSTITUTION/PLACE	DESIGNATION	FROM DATE	TO DATE

11. Awards/Honors Details

12. Details of ongoing/completed projects.

13. Publications of the last 5 years in relevant area as mentioned in the call only