

Title of the Technology:

Dihydrofolate formulation for dietary supplementation as an effective nutraceutical supplement and method of preparation thereof

Background/Problem to be addressed:

Unmetabolized synthetic folate has been reported in the serum of individuals in developed nations where mandatory folate fortification is implemented. Consequently, there is a shift towards using biological folate derivatives for fortification. In response to this trend, we have developed methods to produce dihydrofolate tablets and capsules with enhanced stability.

Scientific merit /Technical highlights over existing solutions:

Currently dihydrofolate based products are not available in the market.

Societal Relevance:

Anaemia due to dihydrofolate deficiency is highly prevalent in India, with folate deficiency being a significant contributing factor. Reports indicate that over 50% of individuals in low-income groups suffer from folate deficiency in India. Unlike synthetic folic acid, dihydrofolate can be readily absorbed and utilized by the body, making it an effective molecule for the amelioration of anaemia.

Market size/Commercial Potential:

The global folate market size is valued around one billion US dollar, and is expected to grow at 6% per year.

Current stage of Development (Technology Readiness Level (TRL) ):

TRL 5

USP of technology/Competitive products and advantages over competition:

Extent of indigenisation & import substitution, if applicable:

100% Indigenous

Novelty, IP and Competitive Landscape and IP/Patent Applications, filed/granted:

Provisional patent application filed, India Patent Application Number: 202411023759

Details of PIs, funding agency and third party, if involved in development:

Dr. Bijesh P.

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