BCIL Biotech Consortium India Limited

Novel Solid Emulsion based Curcumin Formulation with Enhanced Bioavailability

TECHNOLOGY AVAILABLE FOR TRANSFER

UNMET NEED & OPPORTUNITY

More than 60 percent synthetic drugs/phyto-constituents are poorly water soluble. It is a great challenge for pharmaceutical industries to overcome this issue by adopting novel formulation strategies. The total weight of unit dosage form increases above 1 g. It becomes cumbersome for such quantities of powders to be compressed into tablets or, fill them into capsules as well as to administer them as unit dosage forms. Technologies are therefore desirable for overcoming poor aqueous solubility and oral bioavailability of drugs.

UNIQUE SELLING PROPOSITION

1. Enhancement of bioavailability of curcumin by 25 folds as compared to raw curcumin extracts
2. Due to multi-benefits of this synbiotic combination, it is expected to be commercialized into a product for the treatment of diseases such as diabetes, inflammatory bowel syndrome, rheumatoid arthritis, cardiovascular and neurodegenerative diseases.
3. Significantly reduced dosage and ease of administration

TECHNOLOGY

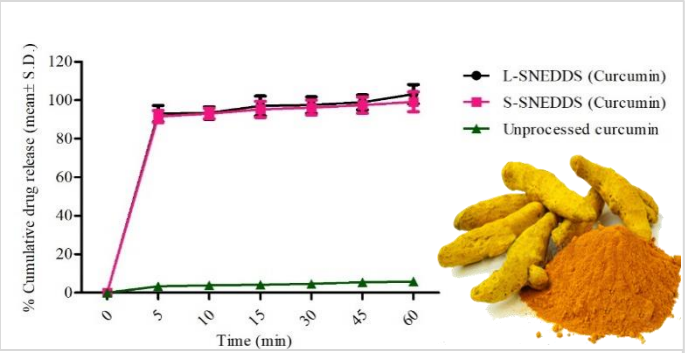
The solid emulsion of present invention is prepared using novel synbiotics composition. The said dried emulsion formulation is a free-flowing powder which can also be converted in to spheroids. The dried emulsion is easily reconstituted after diluting with water. Since liquid self- nanoemulsifying drugs (L-SNEDDS) suffer from challenges such as handling and transportation issues, this synbiotic formulation acts as a bio sorbent for conversion of L-SNEDDS to S-SNEDDS with enhanced bioavailability and synergistic effects.

The emulsion is easy to prepare at lab and at a industrial scale without the need of any time-consuming expensive procedures. This combination has proven to be cost-effective, non-toxic, easily available and additionally helps in enhancing the bioavailability of poorly soluble drugs such as lipophilic and

STAGE OF DEVELOPMENT

Proof of Concept data available

Animal studies ongoing



Drug release of curcumin SNEDDS and unprocessed curcumin

INTELLECTUAL PROPERTY

Indian and PCT applications filed in 2019 & 2020.

LICENSING OPPORTUNITY

BCIL is looking for a suitable industrial partner for commercialization of nutraceutical formulation with enhanced bioavailability

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