Invitation of Expression of Interest (EOI) to out-license Cadalmin™ Antidiabetic extract (ADe) developed by Central Marine Fisheries Research Institute for use against type-II diabetes

This is to invite Expression of Interest (EOI) to out-license Cadalmin™ Antidiabetic extract (ADe) developed by Central Marine Fisheries Research Institute for use against type-II diabetes. Preclinical trials showed no toxicity related significant changes in renal or hepatic function, hematological indices and serum biochemical parameters in the experimental subjects. The results demonstrate a lack of test substance-related general organ or systemic toxicity following oral administration at a dose as high as 2000 mg/kg/d.

Interested registered companies (private or public) with proven track record may approach and send the expression of interest by post and e-mail (director@cmfri.org.in) with a cc to itmucmfri@gmail.com in the prescribed format to the following address from 15 days of publication of the advertisement:

The Director
Central Marine Fisheries Research Institute
Ernakulam North P.O.; Kochi-18, Kerala

Expression of Interest (EOI) Format

<table>
<thead>
<tr>
<th>Name of the firm</th>
<th>Address</th>
<th>Brief profile of the firm concerned</th>
<th>Mode of license (example: % License fee and royalty)</th>
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**Brief Description:**

**Cadalmin**<sup>TM</sup> Antidiabetic extract (ADe) from seaweeds released by the Hon’ble Union minister of Agriculture, Shri Radha Mohan Singh on 26<sup>th</sup> July 2015 at the ICAR Foundation Day in Patna

Cadalmin<sup>TM</sup> Antidiabetic extract (ADe), a nutraceutical product developed by ICAR-Central Marine Fisheries Research Institute with activity against type-II diabetes from seaweeds has been released by the Hon’ble Union minister of Agriculture, Shri Radha Mohan Singh on 26<sup>th</sup> July 2015 at a function in Patna during the ICAR Foundation Day. *In vitro* antidiabetic experiments showed that the active principles effectively inhibited DPP-IV, tyrosine phosphatase, and α-glucosidase. The results demonstrated the potential of the formulation to effectively inhibit the mediators, which are responsible to induce type-II diabetes through various metabolic pathways. The product developed from seaweed was compared with that of standard drugs after administering the animals with streptozotocin (a diabetes inducer). The diabetic control had glucose level recorded at greater than 380 mg/dL, whereas the blood glucose levels maintained at about 74 mg/dL (at 65 mg/kg body weight), when the animals were administered with the active ingredients. The HbA1c levels maintained at about 4.6% (the normal range being 4.3-6.3%) after administering the animals with the nutraceutical product. Preclinical trials showed no toxicity related significant changes in renal or hepatic function, hematological indices and serum biochemical parameters in the experimental subjects. The results also demonstrated a lack of test substance-related general organ or systemic toxicity and hypoglycaemic disorders following oral administration at a dose as high as 2000 mg/kg/d. The active ingredients have been encapsulated in hydroxypropyl methylcellulose shells (hypromellose) replacing the animal derived gelatin in an attempt to improve their greater in vivo dissolution over hard gelatin capsules. The hydroxypropyl methylcellulose was adopted due to the drawbacks associated with the cross-linking of gelatin and drug incompatibilities and the strict regulations regarding the use of animal derived gelatin requiring the absence of bovine spongiform encephalopathy/transmissible spongiform encephalopathy. Time dependent shelf life studies were conducted to identify the oxidative changes for the product in an accelerated shelf-life study, which revealed that no significant reduction of the anti-diabetic activities and the content of active principles of the formulation after the end of study period. Large scale extraction of the active principles from the raw material was optimized in a factory unit. The total yield of the active principles from the raw material in the factory unit was found to be greater than 20%, which demonstrated the commercial feasibility of the nutraceutical product. The product is ready for out-licensing to the pharmaceutical/biopharmaceutical company.
Release of Cadalmin™ Antidiabetic extract (ADe), a nutraceutical product developed by ICAR-Central Marine Fisheries Research Institute with activity against type-II diabetes from seaweeds by the Hon'ble Union minister of Agriculture, Shri Radha Mohan Singh on 26th July 2015 at a function in Patna during the ICAR Foundation Day.
Cadalmin™ Antidiabetic extract (ADe), a nutraceutical product developed by ICAR-Central Marine Fisheries Research Institute
Cadalmin™ Antidiabetic extract (Cadalmin™ ADe) is a nutraceutical product, which provides a unique blend of 100% natural bioactive ingredients extracted from a blend of seaweeds as a natural remedy to type-II diabetes. The bioactive leads with antidiabetic activity were isolated from the seaweeds with an ecofriendly “green” technology.

Cadalmin™ ADe is a natural alternative to the allopathic medications used in the treatment of type-II diabetes.

Antidiabetic activities of Cadalmin™ ADe revealed that the nutraceutical product significantly reduces the blood glucose levels below 100 mg/dL and HbA1c levels below 5% (when used at 65 mg/kg body weight). The active principles significantly inhibit dipeptidyl peptidase-4, tyrosine phosphatase, and α-glucosidase, which are responsible to cause type-II diabetes.

The preclinical trials showed (1) no test substance-related organ or systemic toxicity and (2) no hypoglycemic symptoms, following long-term oral administration of Cadalmin™ ADe.

Ingredients (60 capsules)

Cadalmin™ ADe (per capsule) active principle 400 mg enriched with 100% natural antidiabetic ingredients. The active ingredients have been encapsulated in low moisture content 100% vegetarian based hydroxypropyl methylcellulose capsules.

Recommended dosage

Two capsules twice daily for 3 months. Two capsules once daily thereafter, after monitoring the blood sugar and HbA1c levels. Strictly follow the diabetic diet along with capsule intake.

Discontinuing/dosage alteration of the current medication should be based on the advice of a physician.

Contraindications

People with seafood allergies should consult physician. If pregnant, nursing or under medication, consult your physician before using the product.

For further information please contact:

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PB No 1603
Kochi 682018
Kerala
Cadalmin™ Antidiabetic extract (Cadalmin™ ADe)

A green remedy for type-II diabetes from seaweeds

For further information please contact:
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