

# CIFT to partner start-up to make chitin from silkworm pupae

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KOCHI

The ICAR-Central Institute of Fisheries Technology (CIFT) has entered into a partnership with Ecogenie Biotech, a Bengaluru-based biotechnology start-up, to develop innovative, sustainable solutions for the production of chitin and chitosan from silkworm pupae, leveraging ICAR-CIFT's technology and expertise in the field.

This partnership marks a milestone in the pursuit of eco-friendly and sustainable biotechnological processes. Chitin and chitosan, naturally occurring biopolymers, are derived from crustacean waste and widely used in various industries, including agriculture, health care, and food processing.

The innovative approach of utilising silkworm pupae as a raw material presents a new

frontier in sustainable production, said a press release from CIFT here on Thursday.

India is one of the major producers of silk. In the process, it also generates large quantities of spent silkworm pupae as waste which is not effectively utilised. The present collaboration aims at exploring novel possibilities which can contribute to the circular economy in the country.

## Modified process

Under the Memorandum of Agreement signed between the ICAR-CIFT and Ecogenie Biotech on Thursday, the institute will provide technical know-how for the conventional chemical process of extracting chitin and chitosan. This process, traditionally used for crustacean waste, will be modified to suit silkworm pupae, ensuring that the

end product meets the highest quality standards.

George Ninan, Director, ICAR-CIFT, expressed his enthusiasm for the collaboration: "The partnership with Ecogenie Biotech is a testament to our commitment to advancing sustainable practices in agriculture. By adapting our existing technology for silkworm pupae, we are opening new avenues for eco-friendly production that aligns with global environmental goals."

The scientific team from the ICAR-CIFT comprising Elavarasan K., Jeyakumari A., and C.O. Mohan will lead the technical consultancy for the project.

The collaboration underscores the importance of partnerships between research institutions and industry leaders in driving technological advancements and sustainable development, the press release added.