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IIT-H's oral solution for black fungus set for technology transfer

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A 60 mg AmB tablet will be Rs. 200 approx



In 2019 Prof Saptarshi Majumdar and Dr Chandra Shekhar Sharma from the Department of Chemical Engineering, IIT Hyderabad made a proven study about oral nanofibrous AMB to be effective for Kala Azar.

This is a first-ever attempt to fabricate nanofibrous oral tablets of Amphotericin B (AMB) for the potential cure of Leishmaniasis or Kala Azar. With the two years of advancement of examination, the researchers are now confident that the technology can be transferred to suitable pharma partners for large-scale production.

At present, the Kala-Azar treatment is being used as a treatment for Black & other Fungus in the country and its availability & affordability make it need to allow emergency & immediate trial of this oral drug.

In present research funded by DST-Nanomission, a team led by Prof Majumdar and Dr Sharma along with their PhD scholars Mrunalini Gaydhane and Anindita Laha intended to deliver Amphotericin B orally at an extremely slow rate, of course within the therapeutic window.

The purpose was to increase the drug absorption and reduce aggregation, to lower the drug toxicity. For this, the team has selected gelatin an FDA-approved polymer as an excipient for drug molecules.

The team has carried out a cell viability assay (MTT assay) against human kidney fibroblast cells which illustrated no evidence of cell toxicity caused by AmB as well as a minute amount of Glutaraldehyde crosslinker.

Citing the importance of solutions in given circumstances, Dr Sharma, Associate Professor, Department of Chemical Engineering said, “As the main idea behind our research is to find a solution to serve society. The technology developed, is made free from IP, so that it can be mass-produced and is affordable and available to the public at large."