

CDRI's wonder molecule

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GTDF is a novel compound, isolated from the bark of the Himalayan Elm (*Ulmus wallichiana*) by CDRI medicinal chemist Dr Rakesh Maurya and team, is now being synthesized in laboratory. It was discovered as an adiponectin-mimicking molecule by CDRI scientist Dr Sabayasachi Sanyal and his team. It's an orally active molecule that improves metabolic parameters in a preclinical disease setting and holds therapeutic promise in metabolic diseases caused by Adiponectin deficiency.

Adiponectin is a hormone which regulates glucose and fat metabolism. A large number of clinical studies have already established that the plasma level of this hormone is diminished in multiple diseases like insulin resistance, obesity, type 2 diabetes, cardiovascular diseases, and even cancers. However, there are some logistic problems for its manufacturing at the laboratory.

As lifestyle diseases are a major threat, this discovery could pave the way for the treatment of these diseases. The currently available options are only for their management. Thus, the discovery of GTDF as an orally active adiponectin is of paramount importance, said Dr Sanyal in an interview with BioSpectrum.

The study was conducted with Sanjay Gandhi Post-graduate Institute of Medical Sciences (SGPGI) and Zydus research Center on an academic collaboration basis.

"However, this is still at a nascent stage, it will require a lot of research and funding before it is finally available in the market,"

said Dr Sanyal. He further mentioned that in future they plan to study the effects of GTDF on each individual organ and its other potential benefits as well as conduct detailed toxicology and safety pharmacology studies along with pharmacokinetics in large animals.

"We are looking for willing industrial partners for this particular aspect of our study", he concluded.