NCL studying potency of synthetic peptide

TIMES NEWS NETWORK

Pune: Three years after scientists at the National chemical laboratory (NCL), Pune, isolated the first biologically derived molecule that inhibits HIV-1 protease – responsible for multiplication of the HIV virus — it is yet to find takers from research groups.

A senior NCL scientist attributed the lack of interest to the molecule being a biological compound, which is difficult to isolate. Moreover, it is also difficult to churn out greater quantities of the molecule for research.

But this has not discouraged scientists at the premier chemical laboratory from evaluating the potency of a synthetic peptide, derived from the amino acid sequence of the natural inhibitor.

The breakthrough — made in 2002, after six years of research — has raised hopes in the scientific community that the biological protease inhibitor, if developed into a vaccine, could significantly lessen the chances of side-effects in users.

Senior scientist Mala Rao of the biochemical sciences division at NCL had then told TNN that the HIV-1 protease enzyme is responsible for the multiplication of the HIV virus. With an Indian patent for the development, Rao's group has been looking for national as well as foreign research agencies to conduct further research to test the efficacy and usefulness of the new molecule as an anti-HIV drug in in-vitro conditions.

"We have just begun a joint project with the Rahuri-located agricultural university in this regard. The project is supported by the department of biotechnology," she told TNN.

Laboratory research had earlier shown that the protease inhibitors, in combination with another group of drugs called reverse transcripts inhibitors, dramatically reduce levels of HIV in blood.

The molecules were isolated from a robust microbe that thrives in high temperatures and alkaline conditions in a hot spring at Vajreshwari, in Thane district.

The effort is viewed as a new approach to isolation of rare bio-molecules.

Article dated 18th May, 2005.