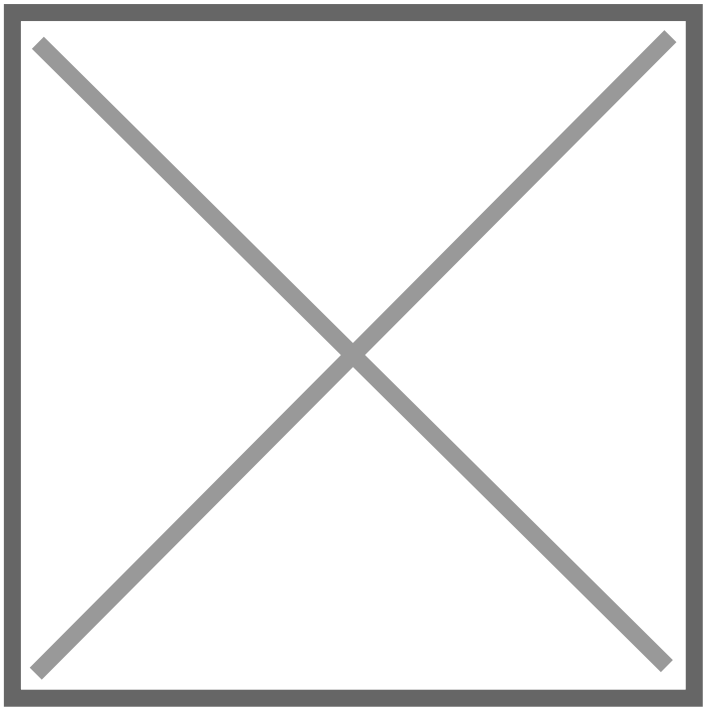
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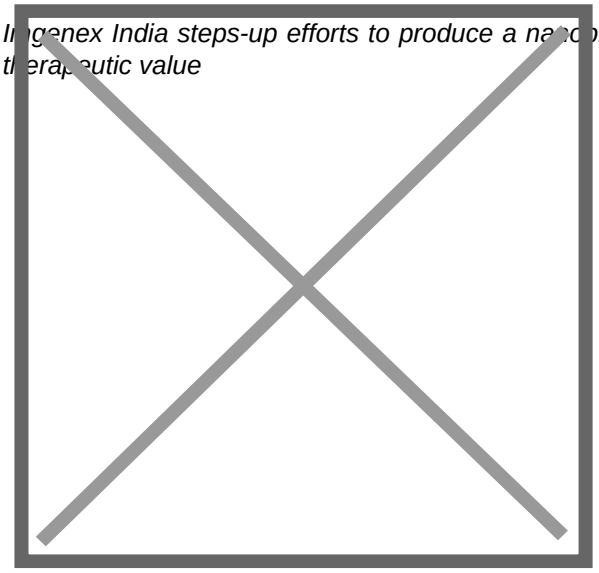
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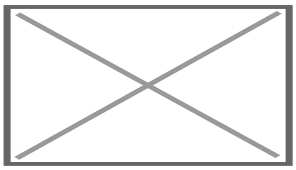
Mission: Tackling osteoporosis using nanobiotech

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Imgenex India steps-up efforts to produce a nanobiotechnology osteoporosis drug at an affordable price, and with increased therapeutic value





One out of three women and one out of eight men in India suffer from osteoporosis, making India one of the largest affected countries in the world. Adding to this, all currently available osteoporosis drugs are manufactured abroad. Keeping these in view, Orissa-based Imgenex India took a pioneering initiative on this front.

The company initiated a project on nanotechnology-based delivery of peptide inhibitors for the treatment of osteoporosis in collaboration with the Institute of Life Sciences, Bhubneshwar, with funding support from SBIRI scheme of the Department of Biotechnology (DBT). Imgenex India was incorporated in 2004 by initial funding from Dr Sujay Singh, who is the CEO of the company. Subsequently, infrastructure and equipment procurement was done using bank loans. Since it is the first biotech company to develop antibodies and peptides in Orissa, it had to undergo many local regulatory hurdles.

Thanking DBT for its support, Dr Sujay Singh, CEO, Imgenex, says, Ã¢â?¬Å?The SBIRI funding helped us to validate our hypothesis that selected peptides can inhibit osteoclast formation. This funding also helped us to buy a flow cytometer for cell analysis and advanced chromatography systems for protein purification. These instruments are essential for the funded project and also helpful for our drug discovery program.Ã¢â?¬?

Dr Singh feels that the central and state governments should relax some of the export and import regulations to promote small start-up biotech companies. Ã¢â?¬Å?Success of a start-up company depends on the quality of people and support of family members. We are lucky to have both,Ã¢â?¬? adds Dr Singh.

Industry impact: Imgenex has successfully tested the efficacy of several peptides to prevent osteoclast formation in cell culture condition and in the mouse model. Next logical steps would be to do pre-clinical and clinical studies. Since this is an innovator drug, it might not be possible to predict the final outcome and approval of these peptides as osteoporosis drug. However, based on the laboratory data and scientific rationale, Dr Singh believes that these peptides would be successful in the treatment of osteoporosis.

Way Forward: The company is hopeful that DBT will provide phase II funding to continue this project. If successful, patients in India can avail osteoporosis drugs at an affordable price. Besides that the efforts are on to increase the therapeutic value of the drug by using nanotechnology to target drug molecule to the diseased site.

While strongly supporting the concept of PPPs, Dr Singh says, Ã¢â?¬Å?It is commendable that the DBT is promoting PPP programs, such as, SBIRI and BIPP. Our goal is to improve biotech awareness in Orissa through research collaborations, educational training and hosting or sponsoring national and international meetings.Ã¢â?¬?

Rahul Koul in New Delhi