

## **India patents its first transgenic mouse in the United States**

A new mouse model that develops liver cancer in just 12 to 20 weeks, much faster than any of the existing mouse models, has been engineered and tested. It is the first transgenic animal from India for medical research ever to get a patent in the United States. The mouse was engineered by a team led by Mr. Vijay Kumar of the International Centre for Genetic Engineering and Biotechnology (ICGEB), in association with the National Institute of Immunology (NII), both in New Delhi, India. The animal is expected to speed up drug development for liver cancer induced by the hepatitis-B virus (HBV) and also in the development of gene therapy for liver cancer.

The ICGEB-NII transgenic mouse carries a gene that codes for a portion of the X-protein fused with a mouse gene called “c-myc” gene. The team used this novel “bicistronic X-15-c-myc transgene construct” based on its key discovery that putting the two genes in close proximity to each other was necessary to accelerate the formation of liver cancer in mice. Currently available transgenic mouse models take anywhere from 60 weeks to 21 months to develop the disease. The pace at which the cancer of the liver develops in their mouse will enable the evaluation of drugs or screening of suspect compound in about 12-20 weeks. The scientists have bred several hundred transgenic mice and are hoping for a tie-up with drug companies. The scientists are also working to incorporate the transgene in larger animals like rats and rabbits that are easier to work with.

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