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"This project could change the face of medicine as it is today"

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-Sanjeev Saxena, chairman and CEO, Actis Biologics

How has work on the "Sustained delivery of MSP36" project progressed since the time it was started?

When we received the funds, we were still getting our infrastructure in place, which was funded by the promoters and other investors. We got consultants from the US to advise us on setting up the required gene therapy infrastructure after which we used the SIBRI funds to order the equipment laid out in our proposal for the project. Once all the internal test and validations of the facilities had been completed and we found the facility met all requirements in our BOD (Basis of Design) document, we started the project with regards to designing various assays and test protocols. We also started the tech transfer process which took 3-4 months. Today, all test protocols are in place. The MSP36 gene has been cloned in E.coli and other systems and we have found the expressions levels. We have also set up protocols for growing the vectors and set up standards against which the lentiviral vector MSP36 can be tested. We are now acquiring the lenti viral vector which has been acquired from a commercially available source and are now awaiting the actual viral vector. Once the vector arrives, the protocols will be followed to clone the MSP36 gene in the lenti viral vector and grow the vectors and express the MSP36 and test the same against the standards which have already been set up.

What is the relevance of this project for your company and for the biotech industry?

Actis Biologics is on the leading edge of innovation and gene therapy is as innovative as it gets. Cancer as we know, is a genetic disease and to correct it, you in fact have to make correction to the gene. Today chemotherapy is given to patients and all that it does is kill the cancer cells. Biotech companies are coming up with drugs to resolve this by giving proteins or enzymes to inhibit the formation of cancer cells or destroy them. Avastin is one such drug, which has been introduced by Genentech. However, none of these get at the root cause of the problem. Actis Biologics research here would go after the root cause and possibly provide a cure as opposed to elimination of symptoms, which other therapies do. Further, we have data which shows that MSP36 is efficacious and lentiviral vector also has been shown to be safe. Now, at Actis Biologics, we are developing the combination, which we believe will be far more effective.

What are the benefits and advantages of your project?

The development of a recombinant MSP36 therapy described in this proposal will provide significant societal benefits by providing a novel therapy for cancer patients. It will be developed for out-patient delivery, saving on hospitalization and associated costs. This therapy also has potential against other tumor types. We believe the success of this project may have major ramifications as this may allow other therapies to be developed and given to the body for not just other types of cancers but also other diseases like cardio, diabetes and neurological disorders. There wont be any need for taking shots by a diabetic everyday or BP medication by a BP patient daily or inhalers by an asthmatic, as a few shots will give the body the correct gene to produce the protein on a continuous basis, 24 hours a day, 7 days a week. Hence, this project could set the trend to change the face of medicine as we know it today.

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