Transgene reports excellent results from TrabiOral™ oral insulin studies

21st May, 2012

Transgene announced today that its proprietary oral delivery technology, TrabiOral™, has shown spectacular results for the delivery of insulin in the animal efficacy studies conducted on diabetic rats in Hyderabad recently.

TrabiOral™ demonstrated sustained optimal glycemic levels for around 10 hours following the oral dosage of insulin, as can be seen in the graphs below, which is fantastic.

Globally, diabetes has evolved into one of the most common non-communicable diseases and has taken the form of an epidemic in most developed and industrialized countries. According to the International Diabetes Federation, it is the fourth or fifth leading cause of death in most developed nations. The formidable task of administering insulin orally has been pursued over the last several decades with a view to helping ease the pain and stress caused during delivery of insulin injections to the millions of diabetic patients worldwide. The convenience of an oral insulin product would be of significant benefit to patients and may increase their compliance in taking insulin, but so far no one has succeeded in bringing an oral product into the market, making oral insulin one of the Holy Grails of the pharma/biotech world.

The global insulin market is estimated to be around $15 billion. If successful, an insulin pill could reach peak sales of between $5 billion to $10 billion, estimates Vincent Meunier, an analyst at Exane BNP Paribas in Paris. “It would be one of the biggest drugs of all time,” Meunier says.

Apart from delivery of insulin orally, which is itself of immense benefit to the diabetic population and has blockbuster potential, TrabiOral™ has shown controlled and sustained release of the active molecules, which would result in much better control of administration through maintenance of steadier plasma levels, and often decrease side effects by reducing peak plasma levels. This means that it could be potentially be used to target both the Type I and Type II diabetic population, which gives it incredible additional significance.

TrabiOral™ is the result of over 10 years of intense R&D work by Transgene on oral delivery technologies, and combines several novel inventions to produce an orally active transport system that is capable of transporting Insulin and other drugs across the intestinal epithelium into systemic circulation. Further, TrabiOral™ uses TBL’s patented targeted nano-encapsulation technology for increased drug loading and amplifying uptake mechanism, two of the most important factors in oral drug delivery.

The versatility of the TrabiOral™ platform is its ability to deliver different protein and peptide based drugs. Apart from insulin currently, TrabiOral™ is being extended to the oral delivery of monoclonal antibody drugs and also a fusion protein drug, which gives it massive potential.

Patents have already been filed on this breakthrough technology platform.

Hypoglycemic activity of TrabiOral™ Insulin in Diabetic Wistar Rats