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Innovative technologies for animal care from Geniron Labs

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Biotech Innovations Award 2012 was presented to three innovative start-up companies under the fourth edition of Biotechnology Entrepreneurship Students Team (BEST) of Association of Biotechnology Led Enterprises (ABLE).

Dog bites are the main source of rabies transmission. In India alone 22,000 human deaths are reported, representing nearly 40 percent of rabies death in the world. Reports suggest that around `125 crore is spent on post-bite vaccination in India. Therefore realizing the importance of this issue, Geniron Biolabs started a chemical sterilent project in August 2011, with a prime objective to make a "Rabies free India". The project was initiated keeping in mind that the control of dog population through chemical sterilization is faster as it is non-invasive and easy to perform as compared to surgical castration. The fixed formulation of drug will be injected intra-testicularly, which causes fibrosis of testicular tissue, leading to the reduction of testicular size rendering sterility in male dogs.

The company that bagged the first prize at the ABLE BEST Awards 2012, has also initiated a project for developing pregnancy detection kit in cows in October 2012. This project is to aid the farmers in early detection of pregnancy in cows thus increasing the productivity of livestock and economic upliftment of the farmers. Since the dairy industry runs on a motto "one calf every year" i.e., each cow should give birth to a calf every year, the team at Geniron believes that the pregnancy detection plays a crucial role. Currently, pregnancy detection is carried out during 60-75th day of pregnancy through trans-rectal palpation, which requires technical experts. If the animal is non-pregnant, there is a burden on animal caretaker to rear and even the calving period is increased. The company is developing a lateral flow pregnancy kit (similar to human's pregnancy strips), which can detect pregnancy as early as 30th day of pregnancy, which is faster, cheaper and moreover it can be performed by non-technical persons like animal caretaker. The novel marker for the same has been identified in the urine of pregnant cattle. Pregnancy kit runs on the same principle that is similar to any other lateral flow assay kit, where the novel markers are trapped by the specific antibodies and giving colored line indicating positive to the test.

For both the projects, the initial research was conducted from the company's internal capital of around `5 lakh. Right now, the company has applied for funding through Biotechnology Ignition Grant (BIG) scheme under Biotechnology Industry research Assistance Council (BIRAC). "We have applied for nearly `50 lakh for each project and it is under process," revealed Dr Goutham G, chief executive officer of the company. The other founding members in the team include Dr Hemanna Gowda; Dr Prashanth; Dr Shishir Kumar Gupta and Dr Nikhil Raj.

Talking about the relevance of PPPs in India, Dr Goutham mentioned, "PPP plays an important role where the young entrepreneurs from the start-ups are nurtured by the grants and soft loans provided by different government schemes, and it not only channelizes our ideas into execution but also helps in creating a better and healthy society."

The company expects to receive support from the government funding agencies, so that they can develop an improved and very effective way of tackling the issue of dog population. For the pregnancy detection kit, the initial testing of the drug on cell culture assays has given a promising result. Right now, the team at Geniron is working on the preclinical trials in rat model. The company is planning to launch the product by the end of 2017 in the Indian market.