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Despite a large percentage of the rural agrarian economy being directly dependent on animal husbandry, veterinary health remains relatively under appreciated in India. In such a scenario, Hester Biosciences, an Ahmedabad-based veterinary vaccines company, took the lead to initiate R&D in veterinary vaccines. Its R&D efforts of the past decade are culminating into a slew of products slated for release. Leading its research activities is Dr JK Pal, vice president, research and development.

Dr Pal says that he always wanted to work in the field of veterinary microbiology and vaccines. Hence, while pursuing his masters in veterinary microbiology at Birsa Agricultural University, Ranchi, he simultaneously worked on developing goat pox vaccine. Dr Pal then pursued his PhD from West Bengal University of Animal and Fishery Sciences in 1997 and focused on developing rinderpest vaccine in Vero cell line against the rinderpest virus, an organism that causes diarrhea, and severe economic loss in cattle. Dr Pal's earlier experience in creating the goat pox vaccine proved to be significant, as he is currently working on perfecting the same vaccine. With the initial technology being sourced from the Indian Veterinary Research Institute, Bareilly, currently lab trials for the vaccine are underway and the development is slated to be finished in the next year.

After his doctoral education, Dr Pal chose to move to the animal vaccines industry with a job at Hester Biosciences. His visit to Maine Biological Laboratories USA, with whom Hester Biosciences had collaborated, seemed to be an opportunity in disguise. This proved to be a valuable learning experience since he became acquainted with various aspects in R&D, production and quality control in the manufacture of poultry vaccines. In 2006, Dr Pal took over the mantle of vice president, R&D at Hester from his previous role as the head of quality control department. Since then, he has been heading a number of projects focused on developing solutions to the emerging poultry diseases such as chicken anemia and infectious laryngotracheitis. Another project on variant infectious bronchitis, hopes to cover the entire spectrum of strains of the diseases.

Dr Pal speaks optimistically about the research efforts for the development of a thermostable Newcastle disease vaccine that they are currently working on. He says, "This is especially relevant to countries like India and Africa, where poultry are grown on a smaller scale in backyards and where maintaining conditions for the cold storage of vaccines becomes difficult. During our research, we changed the stabilizer component in the vaccine, which helped to reduce the dependance on a cold chain for its storage. The lab trials are now completed and we have applied for a license."

Other projects such as a PPR vaccine for small ruminants like goats and sheep and a vaccine against Brucella arbotus, a bacteria which causes abortion in cattle, are in advanced stages of development. Dr Pal and his team are also developing the manufacturing processes for animal health products such as animal probiotics. Other allied projects include developing an animal disease diagnostic such as an ELISA kit for poultry and veterinary use.

Commenting of his journey, Dr Pal says, "I always wanted a career in veterinary vaccines and today, I am very happy that I am able to do that, since I truly believe that prevention is better than cure."