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Title: Applications of Transgenic Animals

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Abstract

The field of animal biotechnology has been simultaneously expanding and its development has been a part of the transgenic technology. The transgenesis started long back in 1980. Important improvement of the transgenic methods has been made and are still being achieved to reduce cost as well as killing of animals and to improve the relevance of the models. This includes gene transfer and design of reliable vectors for transgene expression. Basically, the transgenic animal or engineered animal refers to an animal in which there has been a deliberate modification or changes of the genome i.e. the material responsible for inherited characteristics in contrast to spontaneous mutation of the animal. The present study about it highlights on various scopes & application of transgenesis in various fields of agro baaed or medo based field. Major application areas that has been enlisted in the study are the field of plants & animal husbandry like enhancement of quality, height, quantity & other values of animal economic parameters as milk production, milk quality, enhanced prolificacy and reproduction which increases the ovulation rate in merino sheep, wool & hair quality; nutritional fields; field of medicine & like treatment of mastitis, BSE, CJD, AIDS, neoplasm, congenital & genetic disorders, Alzheimer's disease, cardiovasculopathies, coagulopathies, auto-immune diseases, diabetes; field of surgery like organotransplants such as kidney, liver etc. Pharmaceutical & other various developing fields; fields of environmental uses etc. Organotransplants is an issue which has caused a lot of ethical and scientific discussions till date. This study reviews applications of genetically modified or engineered animal models in various aspects of researches, productions & treatments like xenotransplantations; it had proven to be a new direction in the field of drug development and clinical trials.

Prasenjit Das **Dr. Manisha Nanda**

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