

# Bacterial plasmid DNA enhances the efficacy of vaccine and their advantages in vaccine development

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## Abstract

Many Bacterial components are used as immunogens during vaccine development. Plasmid DNA is one among them. It is a short sequence DNA. It always carries one or more genes responsible for useful characteristics. If we use DNA in vaccine development, it is more practical and less expensive. It has resistance to temperature extremes, storage and transport is also easy. DNA vaccines provide long term immunity. The plasmid DNA induces humoral antibodies and cell mediated immunity against bacterial pathogens. The studies proved that naked plasmid DNA and mutant pathogens plasmid DNA acted as good immunogens. The single and double enzyme digested plasmid DNA also produces good immune responses in many cases. The mixer of plasmid DNA of pathogenic bacteria also produces good immunity which is easy to prepare. Mixer vaccines against more than one diseases and plasmid DNA companied with antigenic proteins or with other subunit components gives enhanced immunity. It is very much useful to produce good vaccines with least cost that acts in short duration. This is very much suitable to developing countries and they are easy to prepare their own indigenous vaccines against various pathogenic infectious diseases.

## Biography

M. Muruganandam completed his MSc, PhD in Zoology and specialization in Biotechnology. He has interest in bacterial vaccine development research. He has published more than hundred publications including ten books. His publications are cited in various databases in more than ten countries. He has an Editorship in twelve international journals.



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