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## Vaccine drug delivery systems

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Vaccines are defined as “preparations given to patients to evoke immune responses leading to the production of antibodies (humoral) or cell-mediated responses that will help in combating infectious agents or non-infectious conditions such as malignancies”. The WHO’s policy recommended universal immunization of all children to reduce child mortality under its Expanded Programme of Immunization (EPI). Immunization is an effective tool for controlling and even eradicating disease. Our country contributes to one-fourth of global under five mortality with a significant number of deaths which can be prevented by vaccines. Immunization needs to be brought closer to the communities for proper coverage. Innovative methods and practices are needed for better immunization. Most vaccines available in the developed world are available in India. Newer delivery systems are the need of the hour and therefore are being extensively researched. Some of the reasons for the need of new vaccine delivery systems are - alarming safety profile of live vaccines, weak immunogenicity of sub-unit vaccines and poor patient compliance to booster doses. Carriers help in sustained release and accurate targeting and are being used in developing of the new vaccine delivery systems. Carrier systems such as liposomes, microspheres, nanoparticles, dendrimers, micellar systems, ISCOMs, plant-derived viruses are being investigated and developed as vaccine delivery systems. Amongst others, development of “needle free technologies”, to help administration of vaccines through different routes into the human body, is generating worldwide interest. This poster will highlight three categories of delivery systems: (i) adjuvants and formulations; (ii) antigen vectors, including live attenuated micro-organisms and synthetic vectors; and (iii) novel devices for vaccine administration.

## Biography

Neeta Bansal is pursuing Residency in Pharmacology (2nd year), SMIMER, Surat affiliated to VNSGU. She is serving as a Tutor in Pharmacology SMIMER, Surat, since 2004.

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