

Needle free injection technology: A complete insight

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Abstract

Needle free injection technology (NFIT) is an tremendously broad concept which include a wide range of drug delivery systems that drive drugs through the skin using any of the forces as Lorentz, Shock waves, pressure by gas or electrophoresis which propels the drug through the skin, practically nullifying the use of hypodermic needle. This technology is not only touted to be beneficial for the pharma industry but developing world too find it highly useful in mass immunization programmes, bypassing the chances of needle stick injuries and avoiding other complications including those arising due to multiple use of single needle. The NFIT devices can be classified based on their working, type of load, mechanism of drug delivery and site of delivery. To administer a stable, safe and an effective dose through NFIT, the sterility, shelf life and viscosity of drug are the main components which should be taken care of. Technically superior needle-free injection systems are able to administer highly viscous drug products which cannot be administered by traditional needle and syringe systems, further adding to the usefulness of the technology. NFIT devices can be manufactured in a variety of ways; however the widely employed procedure to manufacture it is by injection molding technique. There are many variants of this technology which are being marketed, such as Bioject® ZetaJet™, Vitajet 3, Tev-Tropin® and so on.



Biography

Reddenna Languluri has completed his PhD at the age of 29 years from Madhav University, India. He is the Associate professor of JNTUA University. He has over 60 publications that have been cited over 20 times, and his publication H-index is 10 and has been serving as an editorial board member of reputed Journals.

Publications

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- H/H Blood Group System: A Rare Blood Group
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