

## 3<sup>rd</sup> Indo-Global Summit & Expo on **Healthcare**

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### Nanopatch vs. syringe: Less is more!

**Prabhjot Kaur Dilawari**  
Guru Nanak Dev University, India

Nanopatch is an amazing latest innovation in the field of medical science and nanotechnology which has reduced the pain and psychological phobia of needle and syringe (Trypanophobia) seen in about 20% people thereby improving vaccination compliance. The technology, a one by one centimeter square silicon based vaccine patch with no sharp needles was introduced by Biomedical Engineer Mark Kendall in Tedglobal, 2013, Edinburg, Scotland where Sir Alexander Wood patented his needle-syringe 160 years ago. Visually seen as plain silicon chip smaller than a stamp, microscopically there are about 20000 projections per square inch on its undersurface containing dry vaccine coupled with carboxymethyl cellulose prepared with reactive ion etching method; easily and painlessly applied to skin just like band aid with a spring operated device. Initially microscopic projections breaches through tougher outer layer where it painlessly releases vaccine to inner sub dermal immune cell rich layers almost in fraction of a second; proposed applicability in individual and public health vaccination programs in tetanus, measles, influenza, cholera, anthrax vaccine. Plethora of advantages include simplicity of application, cost effective, no needle phobia, improved vaccination compliance, substantially reduced drug dose, improved immunogenicity, no cold-chain logistics required, long shelf-life, thermal stability and last but not the least no needle-stick injury risk and reduced rate of infections like HIV and Hepatitis B. The only disadvantage anticipated is that outer skin layer varies in thickness and moisture content from person to person (age, gender). High success rates in animal testing and is ready for human trials.

### Biography

Prabhjot Kaur Dilawari has completed her Masters in Hospital Administration (MHA) from Guru Nanak Dev University as a Silver Medalist where at the start of her career as an Academician got recruited as an Assistant Professor. She has graduated as a Dental Surgeon (BDS) from Punjab Government Dental College and Hospital, Amritsar with first division and three years of successful clinical experience in 2 reputed hospitals where she realized that managing the scarce hospital resources is need of hour so decided to choose hospital administration as a career.

Prabhjot Kaur Dilawari

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