

solid dose injection

Glide Flu Vaccine

Glide SDI® (Solid Dose Injector) is an innovative, patented drug delivery system for the injection of drugs and vaccines in a solid dosage form. The Glide SDI® employs a simple spring based mechanism, which ensures the system is easy to use and cheap to manufacture.

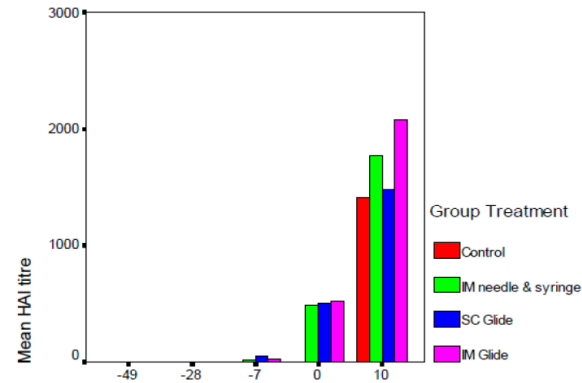
There is generally a substantial reduction in the molecular mobility in the solid state, hence improved stability is expected. Therefore, delivery of vaccines using the Glide system can have significant advantages for vaccination such as stability, portability and ease of use. The purpose of this study was to evaluate the immunogenicity of delivering a flu vaccine using the Glide SDI.

Study Design

The non-clinical study comprised of four treatment groups: water for injection; Glide implant delivered subcutaneously; Glide implant delivered intramuscularly and needle and syringe delivery of the reconstituted implant solution. The Glide implants contained 15µg A/Wisconsin/67/2005 (H3N2) virus.

All models were primed intranasally on Day -49 with A/New Caledonia/20/99 (H1N1 virus) and allowed to recover. The vaccinations for the relevant treatment groups were carried out on Day -28 and -7. On Day 0, all models were challenged with the H3N2 virus.

The serum HI titres were determined at Days -49, -28, -7, 0 and 10.



mean HI titres after immunisation and challenge test

Results & Discussion

A summary of the HI titre following vaccination and challenge are shown in the figure above. Evidently there is no significant difference in the HI titre among all treatment groups after two doses of vaccine.

Group	Seroconverted	Not Seroconverted
Control	0	8
IM Needle & Syringe	2	6
SC Glide	7	1
IM Glide	4	4

seroconversion after a single vaccine injection



the Glide SDI

The HI titre is accepted internationally as the gold standard to indicate protective efficacy of an influenza vaccine. At least 70% seroconversion (as indicated by an HI titre of 1/40) is required for flu vaccine licensing. It is very interesting to note that seroconversion was obtained with a single dose of vaccine for the subcutaneous administration of the Glide solid formulation, whereas only 2 out of the 8 animals were seroconverted after a single liquid injection (see Table below). The data supports the improved efficacy with the Glide mode of vaccine delivery.