

Table 1. HCV vaccine strategies.* Currently explored vaccine strategies including potential advantages and limitations are listed.

Vaccine Strategy	Advantages	Limitations
Peptides	Induction of humoral and cellular immune responses, low toxicity	Immunogenicity limited to few epitopes
Recombinant envelope glycoproteins	Induction of cross-neutralizing neutralizing antibodies, low toxicity, Proof-of-concept as a vaccine for other viruses successful (HBV)	Limited cellular immune response Epitopes restricted to structural proteins
Virus-like particles	Induction of humoral and cellular immune responses, Proof-of-concept as a vaccine for other viruses successful (HPV)	Epitopes restricted to structural proteins Challenge of clinical grade purification
Plasmid DNA	Humoral and strong cellular immune responses, multigenotype approach	Reduced immunogenicity in humans
Live viral vectors		
Gene-deleted adenovirus	Efficient induction of cellular immune responses, experience in clinical trials	Pre-existing immunity to adenovirus may limit immunogenicity in humans
Vaccinia virus	Efficient induction of cellular immune responses, experience in clinical trials	Dissemination in patients with immunodeficiency
Semliki forest virus	Efficient induction of humoral and cellular immune responses	Limited experience in humans

* Adapted from Barth H., Blum H.E., Liang T.J., Baumert T.F. Novel vaccine strategies. In: "State-of-the-Art of Hepatology" (Blum, H.E, Grisham, J.W., Manns, M.P., eds) Kluwer Academic Publishers, Dordrecht, 2004, p. 516-522.