evaluating their interaction with corresponding major

histocompatibility complex class I molecules. They

potentially induce immune responses (176). The

recombinant vaccine can be designed by using rabies

virus (RV) as a viral vector. RV can be made to

express MERS-CoV S1 protein on its surface so that

an immune response is induced against MERS-CoV.

The RV vector-based vaccines against MERS-CoV

can induce faster antibody response as well as higher

degrees of cellular immunity than the Gram-positive

enhancer matrix (GEM) particle vector-based

vaccine. However, the latter can induce a very high

antibody response at lower doses (167). Hence, the

degree of humoral and cellular immune responses

produced by such vaccines depends upon the vector

used.

Dual vaccines have been getting more popular

recently. Among them, the rabies virus-based

vectored vaccine platform is used to develop

vaccines against emerging infectious diseases. The

dual vaccine developed from inactivated rabies virus

particles that express the MERS-CoV S1 domain of

S protein was found to induce immune responses for

both MERS-CoV and rabies virus. The vaccinated

mice were found to be completely protected from

challenge with MERS-CoV (169). The intranasal