Accordingly, the present invention provides a polypeptide having 23 to 50 amino acids, which polypeptide comprises one or more sequences of SEQ ID NO: 35, a sequence having 85% or more identity with SEQ ID NO: 35, or one or more epitopes having 23 amino acids or more, each epitope having 100% identity with a sub sequence of SEQ ID NO: 35 that has the same length as the epitope,

wherein the polypeptide is immunogenic in a vertebrate expressing a major histocompatibility complex (MHC) allele.

Accordingly, the present invention provides an immunogenic multi-epitope polypeptide, which multi-epitope polypeptide comprises two or more polypeptides wherein the two or more polypeptides comprise one or more sequences as defined herein.

Accordingly, the present invention provides a polypeptide composition comprising one or more polypeptides as defined herein.

Accordingly, the present invention provides a method of producing a polypeptide as defined herein, which method comprises combining two or more epitopes to form the polypeptide.

Accordingly, the present invention provides a polypeptide construct, which construct comprises a polypeptide as defined herein and a carrier.

Accordingly, the present invention provides a method of producing a polypeptide construct as defined herein, which method comprises combining two or more epitopes and/or a polypeptide with the carrier.

Accordingly, the present invention provides a polypeptide construct as defined herein, or a method as defined herein, wherein the carrier comprises an adjuvant and/or an excipient.

The present invention provides a polypeptide composition comprising one or more polypeptides, which polypeptides are immunogenic in a vertebrate, such that they cause the vertebrate to produce immune system cells (or promote the production of such cells) capable of recognising at least one epitope from an arthropod saliva protein fraction, wherein the arthropod saliva protein fraction has a mass of 40kDA or less, and wherein the polypeptides are selected independently from:

(a) the polypeptide sequences of SEQ ID 1-44 or sub-sequences from these sequences, the sub-sequences having 7 amino acids or more:

SEQ ID 1 HLTLFTVAVLLLAAAALLLLLPPAYSTTLTPP
SEQ ID 2 PLSYCHLFLTHTLARALSFSRSDCL
SEQ ID 3 KNVFFALLLVVLVCCLVSVQGNEI
SEQ ID 4 KLLVLLICLFFYHTHCTTAYLWLAMGV
SEQ ID 5 FLKGSFPRFQMCVMLIGFFSSAKCL
SEQ ID 6 NDYQALLGLCCPWIDLAAADLPMRRHAKA
SEQ ID 7 FYSVGKLVKVLLVMAVCCLLLCTAPTGADPL
SEQ ID 8 MKFAFAFVLIALFAVFAVSQALPQPEQAAA
SEQ ID 9 DGASAITKIVLELTPEQAAAV
SEQ ID 10 TLFIFLVCCQIPLFGIMSSDSADPFYWIRVILA
SEQ ID 11 GRVMCLLRLMSTLLVVLSIVGK
SEQ ID 12 LYSGYRLLVLLVMTVCCLLLFIAPTGADPLPGQTQRTL
SEQ ID 13 MYCVIKGKTGGYCNSEGLCTCRAEDLHFLLKPIINKD
SEQ ID 14 NAEDPRTELIGCGSVLFHLAANRLSLQLEEFAVCKR
SEQ ID 15 ALIGLLLCSVQSVTANDPVDALGACSGNLFGLLMTRL
SEQ ID 16 SKLFVLAFLCLALVVVVQSAPQYARGDVPT
SEQ ID 17 SMLVAFATLSVALVVVVAIPANFNYGGGGGYFINGTGQ
SEQ ID 18 IYEKLPAYLSEVSARVNVLQVSLQHDLPNLQ
SEQ ID 19 EMKLAKVALVTISLWFMAWTPYLVINFTGI
SEQ ID 20 LLPAKVIPDKTAAYVAYGGQETLVEHVEVLV
SEQ ID 21 FYTCFLGTSSLAGFKNAVDYDELLKAG