

demonstrated that DENV-specific Abs can enhance Zika infection [Nature. 2016;536(7614):48-53. doi: 10.1038/nature18938, Nat Immunol. 2016;17(9):1102-8.].

SUMMARY

The disclosure provides anti-DENV antibodies, polypeptides containing variant Fc
5 regions, and methods of using the same.

In one aspect, the present disclosure refers to the use of in the manufacture of a medicament for treating or preventing Zika virus infection, wherein the antibody comprises a VH sequence of SEQ ID NO: 6 and a VL sequence of SEQ ID NO: 7, wherein the antibody further comprises the amino acid sequence of SEQ ID NO: 59.

In another example, the present disclosure refers to the use of an antibody in the manufacture of a medicament for treating or preventing Zika virus infection, the antibody comprising (a) a VH sequence having at least 95% sequence identity to the amino acid sequence of any one of SEQ ID NOs: 2-6; (b) a VL sequence having at least 95% sequence identity to the amino acid sequence of any one of SEQ ID NOs: 8-10; or (c) a VH sequence of
 5 identity to the amino acid sequence of any one of SEQ ID NOs: 2-6 and a VL sequence of any one of SEQ ID NOs: 8-10.

In yet another example, the present disclosure refers to the use of an antibody that binds to Zika virus in the manufacture of a medicament for treating or preventing Zika virus infection, wherein the antibody comprises:

10 (a) HVR-H1 comprising the amino acid sequence of SEQ ID NO: 12, (b) HVR-H2 comprising the amino acid sequence of SEQ ID NO: 15, (c) HVR-H3 comprising the amino acid sequence of SEQ ID NO: 20, (d) HVR-L1 comprising the amino acid sequence of SEQ ID NO: 21, (e) HVR-L2 comprising the amino acid sequence of SEQ ID NO: 24 and (f) HVR-L3 comprising the amino acid sequence of SEQ ID NO: 27.

15 In some examples, an isolated anti-DENV antibody of the present disclosure binds to DENV E protein. In some examples, an anti-DENV antibody of the disclosure comprises:
 (a) (i) HVR-H3 comprising the amino acid sequence GGX₁ALFYDSYTPX₂DX₃GSWWFDP, wherein X₁ is R or E, X₂ is R or F, X₃ is G, D or L (SEQ ID NO: 42), (ii) HVR-L3 comprising the amino acid sequence QQFX₁X₂LPIT, wherein X₁ is D, S or E, X₂ is D or A (SEQ ID NO:
 20 45), and (iii) HVR-H2 comprising the amino acid sequence VINPRGGSX₁X₂SAQKFQG, wherein X₁ is T or R, X₂ is A or R (SEQ ID NO: 41);
 (b) (i) HVR-H1 comprising the amino acid sequence SX₁YX₂H, wherein X₁ is N or Y, X₂ is I or M (SEQ ID NO: 40), (ii) HVR-H2 comprising the amino acid sequence VINPRGGSX₁X₂SAQKFQG, wherein X₁ is T or R, X₂ is A or R (SEQ ID NO: 41), and (iii)
 25 HVR-H3 comprising the amino acid sequence GGX₁ALFYDSYTPX₂DX₃GSWWFDP, wherein X₁ is R or E, X₂ is R or F, X₃ is G, D or L (SEQ ID NO: 42);
 (c) (i) HVR-H1 comprising the amino acid sequence SX₁YX₂H, wherein X₁ is N or Y, X₂ is I or M (SEQ ID NO: 40), (ii) HVR-H2 comprising the amino acid sequence

WHAT IS CLAIMED IS:

1. Use of an antibody in the manufacture of a medicament for treating or preventing Zika virus infection, wherein the antibody comprises a VH sequence of SEQ ID NO: 6 and a VL sequence of SEQ ID NO: 7, wherein the antibody further comprises the amino acid sequence of SEQ ID NO: 59.

2. The use of claim 1, wherein the antibody comprises a VH sequence as shown in SEQ ID NO: 6, with a human IgG1 CH sequence as shown in SEQ ID NO: 59 and a VL sequence as shown in SEQ ID NO: 7 with a human CL sequence as shown in SEQ ID NO: 60.