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What is claimed is:

1. A multivalent immunogenic composition comprising two or more antigens from *Dirofilaria immitis*.
2. The multivalent immunogenic composition of claim 1, wherein the antigens are protein-based, DNA-based, or a combination thereof.
3. The multivalent immunogenic composition of claim 1, wherein the antigens comprise an Abundant Larval Transcript, Small heat shock protein (HSP) 12.6, Thioredoxin Peroxidase 2, or fragments thereof.
4. The multivalent immunogenic composition of claim 3, wherein the Abundant Larval Transcript comprises SEQ ID NO:98 or SEQ ID NO:99; the Small heat shock protein 12.6 comprises SEQ ID NO:100 or SEQ ID NO:101; and the Thioredoxin Peroxidase 2 comprises SEQ ID NO:83 or SEQ ID NO:101.
5. The multivalent immunogenic composition of claim 4, wherein the Abundant Larval Transcript comprises SEQ ID NO:93; the Small heat shock protein 12.6 comprises SEQ ID NO:91; and the Thioredoxin Peroxidase 2 comprises SEQ ID NO:95.
6. The multivalent immunogenic composition of claim 1, wherein the antigens are covalently attached.
7. A recombinant vector comprising nucleic acids encoding the multivalent immunogenic composition of claim 1.

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8. A recombinant host cell comprising the recombinant vector of claim 7.

9. The multivalent immunogenic composition of claim 1 further comprising an adjuvant.

10. A method for inducing a protective immune response in a subject comprising administering the multivalent immunogenic composition of claim 1 to a subject thereby inducing a protective immune response in the subject.

11. The method of claim 10, further comprising administering one or more additional doses of the multivalent immunogenic composition to the subject.

12. The method of claim 10, wherein the immunogenic composition is administered by subcutaneous or intramuscular injection.

13. The method of claim 10, wherein the multivalent immunogenic composition is administered with an adjuvant.

14. A method for immunizing an animal against dirofilariasis comprising administering to a subject a multivalent immunogenic composition comprising two or more antigens, wherein said antigens are selected from an Abundant Larval Transcript antigen comprising SEQ ID NO:121 or SEQ ID NO:122; a Small heat shock protein 12.6 antigen comprising SEQ ID NO:81 or SEQ ID NO:123; a Tetraspanin antigen comprising SEQ ID NO:82; and a Thioredoxin Peroxidase 2 antigen comprising SEQ ID NO:83 or SEQ ID

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NO:124 thereby immunizing the subject against dirofilariasis.

15. The method of claim 14, further comprising administering one or more additional doses of the multivalent immunogenic composition to the subject.

16. The method of claim 14, wherein the immunogenic composition is administered by subcutaneous or intramuscular injection.

17. The method of claim 14, wherein the multivalent immunogenic composition is administered with an adjuvant.