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**LENGTHY TABLES**

The patent application contains a lengthy table section. A copy of the table is available in electronic form from the USPTO web site (<http://seqdata.uspto.gov/?pageRequest=docDetail&DocID=US20140194306A1>). An electronic copy of the table will also be available from the USPTO upon request and payment of the fee set forth in 37 CFR 1.19(b)(3).

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**SEQUENCE LISTING**

The patent application contains a lengthy "Sequence Listing" section. A copy of the "Sequence Listing" is available in electronic form from the USPTO web site (<http://seqdata.uspto.gov/?pageRequest=docDetail&DocID=US20140194306A1>). An electronic copy of the "Sequence Listing" will also be available from the USPTO upon request and payment of the fee set forth in 37 CFR 1.19(b)(3).

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What is claimed is:

1. A substantially purified nucleic acid molecule comprising a nucleotide sequence which is or is complementary to or which is a degenerate variant of a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 9112.

2. A substantially purified nucleic acid molecule according to claim 1, wherein said nucleic acid molecule encodes a *D. v. virgifera* protein or fragment thereof.

3. A substantially purified nucleic acid molecule according to claim 2, wherein said *D. v. virgifera* protein or fragment thereof is a receptor or fragment thereof which specifically binds a bacterial protein.

4. A substantially purified nucleic acid molecule according to claim 3, wherein said bacterial protein is an insecticidal protein.

5. A substantially purified nucleic acid molecule according to claim 4, wherein said insecticidal protein is selected from the group consisting of insecticidal proteins produced by *B. thuringiensis*, *B. sphaericus*, *Photorhabdus*, and *Xenorhabdus* species.

6. A substantially purified nucleic acid molecule according to claim 2, wherein said *D. v. virgifera* protein or fragment thereof is a homologue of a non-*D. v. virgifera* insect protein or fragment thereof.

7. A substantially purified nucleic acid molecule according to claim 2, wherein said *D. v. virgifera* protein or fragment thereof is a homologue of a protein or fragment thereof produced by a bacterium or eukaryotic organism, wherein said eukaryotic organism is selected from the group consisting of plant, fungi, algae, arachnid, invertebrate animal, and vertebrate animal.

8. A substantially purified nucleic acid molecule according to claim 2, wherein said *D. v. virgifera* protein or fragments thereof exhibits a percentage identity with a homologue of between about 90% identity and 99% identity.

9. A substantially purified nucleic acid molecule according to claim 2, wherein said *D. v. virgifera* protein or fragments thereof exhibits a percentage identity with a homologue of between about 70% identity and about 90% identity.

10. A substantially purified first nucleic acid molecule capable of specifically hybridizing to a second nucleic acid molecule which is or is complementary to a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 9112.

11. A transformed cell comprising a polynucleotide sequence which comprises:

a) a promoter sequence which functions in said cell and is operably linked to

b) a structural nucleic acid comprising a first nucleotide sequence which is or is complementary to a second nucleotide sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 9112, wherein said second nucleotide sequence encodes a *D. v. virgifera* protein or fragment thereof and is operably linked to

c) a 3' non-translated sequence that functions in said cell to cause termination of transcription.

12. The transformed cell according to claim 11, wherein said cell is selected from the group consisting of an insect cell, a mammalian cell, a plant cell, an algal cell, a bacterial cell, and a fungal cell.

13. The transformed cell according to claim 11, wherein said *D. v. virgifera* protein or fragment thereof is a receptor or fragment thereof, wherein said receptor binds a bacterial protein.

14. The transformed cell according to claim 12, wherein said bacterial protein is an insecticidal protein toxin.

15. The transformed cell according to claim 14, wherein said toxin is selected from the group consisting of toxins produced by *B. thuringiensis*, *B. sphaericus*, *Photorhabdus*, and *Xenorhabdus* species.

16. The transformed cell according to claim 15, wherein said receptor is disposed at the surface of said cell.

17. A method for screening a candidate toxin comprising:

a) culturing cells comprising a polynucleotide sequence which comprises: i) a promoter sequence which functions in said cell and is operably linked to ii) a structural nucleic acid comprising a first nucleotide sequence which is or is complementary to a second nucleotide sequence selected from the group consisting of SEQ ID