WHAT IS CLAIMED IS:

1. A method of sex-sorting a plurality of insects based on sex-specific gene expression, the method comprising:
   (a) delivering an exogenous nucleic acid molecule into an insect from a plurality of insects, wherein the exogenous nucleic acid molecule comprises a promoter region, a male-specific splicing module, a fluorescent marker gene, and a transcription terminator;
   (b) detecting male-specific gene expression of the fluorescent marker gene in the insect; and
   (c) sorting the insect from the plurality of insects based on the detecting of the male-specific gene expression in step (b),
   thereby sex-sorting the insect based on the male-specific gene expression.

2. The method of claim 1, wherein the exogenous nucleic acid molecule further comprises a piggyBac inverted terminal repeat located at each end of an effector region.

3. The method of claim 1, wherein the promoter region comprises a constitutive, inducible, or tissue-specific promoter.

4. The method of claim 1, wherein the promoter region comprises a CMV, CBA, CAG, Cbh, EF-1α, PGK, UBC, GUSB, UCOE, hAAT, TBG, Desmin, MCK, C5-12, NSE, Synapsin, PDGF, MecP2, CaMKII, mGluR2, NFL, NFH, nβ2, PPE, ENK, EAAT2, GFAP, MBP, U6 promoter, a Hr5IE1 promoter, or an OpIE-1 promoter.

5. The method of claim 1, wherein step (a) comprises integrating the exogenous nucleic acid molecule into the genome of the insect.

6. The method of claim 1, wherein step (c) comprises sex-sorting the insect at an early larval stage, wherein the early larval stage is an L1 larvae stage.

7. The method of claim 1, wherein the male-specific splicing module comprises an endogenous or modified sex-specific exonic sequence and a modified male-specific intronic sequence.

8. The method of claim 1, wherein the insect comprises a mosquito or a fruit fly.

9. The method of claim 8, wherein the mosquito comprises a mosquito species from Aedes, Anopheles, or Culex genera.

10. The method of claim 9, wherein the mosquito comprises a *Anophneles gambiae*, *Anopheles stephensi*, *Aedes aegypti*, or *Aedes albopictus*.

11. The method of claim 9, wherein the male-specific splicing module is derived from a *doublesex (Dsx)* gene in the mosquito species from Aedes, Anopheles, or Culex genera.

12. The method of claim 1, wherein the fluorescent marker gene comprises a DsRed gene, an eGFP gene, or any combinations thereof, and wherein the transcription terminator comprises a SV40 poly(A) signal.

13. A method of identifying the sex of an insect based on male-specific gene expression, the method comprising:
    (a) delivering an exogenous nucleic acid molecule into an insect, wherein the exogenous nucleic acid molecule comprises a promoter region, a male-specific splicing module, a fluorescent marker gene, and a transcription terminator; and
    (b) identifying male-specific gene expression of the reporter gene,
    thereby identifying the sex of the insect based on the male-specific gene expression.

14. The method of claim 13, wherein the exogenous nucleic acid molecule further comprises a piggyBac inverted terminal repeat located at each end of an effector region.

15. The method of claim 13, wherein the promoter region comprises a constitutive, inducible, or tissue-specific promoter.

16. The method of claim 13, wherein the promoter region comprises a CMV, CBA, CAG, Cbh, EF-1α, PGK, UBC, GUSB, UCOE, hAAT, TBG, Desmin, MCK, C5-12, NSE, Synapsin, PDGF, MecP2, CaMKII, mGluR2, NFL, NFH, nβ2, PPE, ENK, EAAT2, GFAP, MBP, U6 promoter, a Hr5IE1 promoter, or an OpIE-1 promoter.

17. The method of claim 13, wherein step (a) comprises integrating the exogenous nucleic acid molecule into the genome of the insect.

18. The method of claim 13, wherein step (b) comprises sex-sorting the insect at an early larval stage, wherein the early larval stage is an L1 larvae stage.

19. The method of claim 13, wherein the male-specific splicing module comprises an endogenous or modified sex-specific exonic sequence and a modified male-specific intronic sequence.

20. The method of claim 13, wherein the insect comprises a mosquito or a fruit fly.

21. The method of claim 20, wherein the mosquito comprises a mosquito species from Aedes, Anopheles, or Culex genera.

22. The method of claim 21, wherein the male-specific splicing module is derived from a *doublesex (Dsx)* gene in the mosquito species from Aedes, Anopheles, or Culex genera.

23. The method of claim 13, wherein the fluorescent marker gene comprises a DsRed gene, an eGFP gene, or any combinations thereof, and wherein the transcription terminator comprises a SV40 poly(A) signal.