Claims:

1. A transformed insect comprising at least one exogenous gene, wherein the insect is of a genus selected from the group consisting of *Hermetia*, *Gryllodes*, *Gryllus*, *Acheta*, *Tenebrio*, and *Alphitobius*.

2. The transformed insect of claim 1, wherein the exogenous gene is comprised within somatic cells of the insect or within the germline of the insect.

3. The transformed insect of claim 2, wherein the exogenous gene is stably heritable.

4. The transformed insect according to any one of claims 1-3, wherein the insect is a species genus selected from the group consisting of *Hermetia illucens, Gryllodes sigillatus, Gryllus assimilis, Acheta domesticus, Tenebrio molitor, Tenebrio obscurus,* or *Alphitobius diaperinus*.

5. The transformed insect according to any one of claims 1-3, wherein the insect is a mealworm selected from the group consisting of *Tenebrio molitor*, *Tenebrio obscurus and Acheta domesticus*.

6. The transformed insect of any one of claims 1-5, wherein the insect is an embryo, larva, pupa or adult.

7. The transformed insect of any one of claims 1-6, wherein the insect expresses a recombinant protein encoded by the at least one exogenous gene, the insect expresses at least 2 mg, 5 mg, 10 mg, 15, mg, 20 mg, or 25 mg of the recombinant protein, the insect expresses at least 30 mg, 35 mg, 40 mg, 45 mg of the recombinant protein, or the recombinant protein is at least 10% 15%, 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, or 70% of the total protein expressed by the insect.

8. The transformed insect of claim 7, wherein the recombinant protein is selected from the group consisting of an antibody, an antigen, an antigen-binding molecule, an enzyme, a hormone, a component of a vaccine, and a virus-like particle.

9. The transformed insect of any one of claims 1-8, wherein the at least one exogenous gene is integrated into the insect genome by transposon-mediated integration

10. The transformed insect of any one of claims 1-9, wherein the at least one exogenous gene is under the control of *drosophila melanogaster hsp70* promoter.

11. A reared insect derived from the transformed insect of any one of claims 1-10, wherein the reared insect comprises the at least one exogenous gene.

12. A pupa derived from the transformed insect of any one of claims 1-10 or from the reared insect of claim 11.

13. A larva derived from the transformed insect of any one of claims 1-10 or from the reared insect of claim 11.

14. An egg derived from the transformed insect of any one of claims 1-10 or from the reared insect of claim 11.

15. An adult insect derived from the transformed insect of any one of claims 1-10 or from the reared insect of claim 11.

16. A biomass produced from the transformed insect of any one of claims 1-11 or from the reared insect of any claim 11.

17. A recombinant protein isolated from the transformed insect of any one of claims 1-11 or from the reared insect of claim 11.

18. A method for producing a protein comprising:

a. transforming a first stage of an insect selected from the group consisting of *Hermetia illucens, Gryllodes sigillatus, Gryllus assimilis, Acheta domesticus, Tenebrio molitor, Tenebrio obscurus,* or *Alphitobius diaperinus*, wherein the transformation results in the integration of an expression cassette into the genome of the insect and wherein the

expression cassette comprises a gene encoding a heterologous protein, wherein the heterologous gene is under the control of a heat shock promoter;

b. heat-shocking the transformed insect at a second stage; and

c. harvesting biomass comprising the protein from the transformed insect.

19. A method for producing a protein comprising:

a. transforming an insect selected from the group consisting of *Hermetia illucens, Gryllodes sigillatus, Gryllus assimilis, Acheta domesticus, Tenebrio molitor, Tenebrio obscurus,* or *Alphitobius diaperinus*, wherein the transformation results in the integration of an expression cassette into the germline of the insect and wherein the expression cassette comprises a gene encoding a heterologous protein,

b. breeding the transformed insect to produce a subsequent generation insect; and

c. harvesting biomass comprising the protein from the subsequent generation insect.

20. The method of any one of claims 18-19, wherein the method further comprises isolating the heterologous protein from the biomass.

21. The method of any one of claims 18-19, wherein the method further comprises enriching or partially purifying the heterologous protein from the biomass.

22. The method of any one of claims 18-21, wherein the transforming step comprises transposon-mediated integration of the expression cassette.

23. The method of claim 22, wherein the transforming step further comprises providing a transposase enzyme active in the insect, and wherein the expression cassette is flanked at each end by a transposable element.

24. The method of any one of claims 18-23, wherein the insect is a *Hermetia illucens*.

25. The method of any one of claims 18-23, wherein the insect is a mealworm selected from the group consisting of *Tenebrio molitor*, *Tenebrio obscurus* and *Acheta domesticus*.

26. The method of any one of claims 18-25, wherein the expression vector expresses virus-like particles (VLP).

27. The method of any one of claims 18-25, wherein the method further comprises isolating the heterologous protein from the whole body of the transformed larvae.

28. The method of any one of claims 18-25, wherein the method further comprises isolating the heterologous protein from the hemolymph, the fat body, or secretory glands of the transformed larvae.

29. A method for producing transformed insect comprising transforming an insect egg or embryo of *Hermetia illucens* by providing a transposase enzyme active in the insect, and an expression cassette, wherein the expression cassette comprises a gene encoding a heterologous protein and wherein the expression cassette is flanked at each end by a transposable element, whereby the transformation results in the integration of the expression cassette into the genome of the insect.

30. The method of claim 29, wherein the method further comprises:

a. breeding the transformed insect to produce a subsequent generation insect; and

b. harvesting biomass comprising the heterologous protein from the subsequent generation insect.

31. A transformed insect produced by the method of any one of claims 29-30.

32. A transformed pupae produced by the method of any one of claims 29-30.

33. A transformed embryo produced by the method of any one of claims 29-30.

34. A transformed larva produced by the method of any one of claims 29-30.

35. A population of transformed insects produced by the method of claim 30, wherein the method further comprising a step of mass rearing the transformed insect, prior to the step of harvesting the biomass.