CLAIMS

1. An isolated nucleic acid molecule operably comprising:
    a. a first inducible promoter comprising two tetracycline operator sequences (a $TetO_2$ sequence);
    b. an E2A gene under control of the first inducible promoter;
    c. a viral associated (VA) non-coding RNA under control of a second inducible promoter or a constitutive promoter;
    d. a third inducible promoter comprising a second $TetO_2$ sequence;
    e. an E4 gene under control of the third inducible promoter; and
    f. an antibiotic resistance gene.
2. The isolated nucleic acid molecule of claim 1, wherein the first inducible promoter is native to the E2A gene.
3. The nucleic acid molecule of claim 1, wherein the second inducible promoter is a promoter native to the VA non-coding RNA.
4. The nucleic acid molecule of claim 1, wherein the constitutive promoter is an H1 promoter.
5. The isolated nucleic acid molecule of claim 1, wherein the third inducible promoter is native to the E4 gene.
6. The nucleic acid molecule of claim 1, wherein the nucleic acid sequence comprises a core insulator sequence inserted between the E4 gene and the antibiotic resistance gene.
7. The nucleic acid molecule of claim 1, wherein the nucleic acid sequence is flanked on both the 5′ and 3′ ends by transposon-specific inverted terminal repeats (ITR), and wherein the nucleic acid sequence comprises a core insulator sequence inserted between the ITR and elements 1a-1f on the 3’ end and a core insulator sequence inserted between the ITR and elements 1a-1f on the 5’ end.
8. An isolated nucleic acid molecule operably comprising:
    a. a first inducible promoter comprising a $TetO_2$ sequence;
    b. an E2A gene under control of the first inducible promoter;
    c. a viral associated (VA) non-coding RNA under control of a second inducible promoter or a constitutive promoter;
    d. a third inducible promoter comprising a $TetO_2$ sequence;

e. an E4 gene under control of the third inducible promoter;
f. an expression cassette encoding a protein ortholog of the VA RNA and a peptide protein tag under the control of a depressible promoter comprising a human Cytomegalovirus (CMV) promoter and a $TetO_2$ sequence;
g. a termination sequence; and
h. an antibiotic resistance gene.

9. The isolated nucleic acid molecule of claim 8, wherein the first inducible promoter is native to the E2A gene.
10. The nucleic acid molecule of claim 8, wherein the second inducible promoter is a promoter native to the VA non-coding RNA.
11. The nucleic acid molecule of claim 8, wherein the constitutive promoter is an H1 promoter.
12. The isolated nucleic acid molecule of claim 8, wherein the third inducible promoter is native to the E4 gene.
13. The isolated nucleic acid molecule of claim 8, wherein the protein ortholog is an influenza non-structural 1 protein (NS1), Ebola viral protein 35 (VP35), orthoreovirus sigma 3 protein (σ3), group C rotavirus non-structural protein 3 (NSP3), vaccinia virus E3L protein (E3L), herpes simplex virus type 1 US11 protein (US11), Epstein-Barr virus SM protein (SM), baculovirus PK2 protein (PK2), hepatitis C virus non-structural protein 5A protein (NS5A), human herpes virus-8 protein vIRF-2 (vIRF-2), human immunodeficiency virus protein Tat, vaccinia virus K3L protein (K3L), Herpes Simplex virus protein γ134.5/ICP34.5, and human papilloma virus-18 E6 protein (E6).
14. The nucleic acid molecule of claim 8, wherein the nucleic acid sequence comprises a core insulator sequence inserted between the E4 gene and the expression cassette.
15. The nucleic acid molecule of claim 8, wherein the nucleic acid sequence is flanked on both the 5′ and 3′ ends by transposon-specific inverted terminal repeats (ITR), and wherein the nucleic acid sequence comprises a core insulator sequence inserted betweenthe ITR and elements 8a-8h on the 3’ end and a core insulator sequence inserted between the ITR and elements 8a-8h on the 5’ end.
16. An isolated nucleic acid molecule operably comprising a plasmid encoding:

a. a first inducible promoter comprising a $TetO_2$ sequence;

b. a Rep78 gene, including a silenced p19 promoter located within the Rep78 gene coding region, wherein the silenced p19 promoter comprises mutations in SP1, TATA-1, and/or TATA-2 sites;
c. a second inducible promoter comprising a $TetO_2$ sequence;
d. a Rep52 gene under control of the second inducible promoter;
e. termination sequence and;
f. an antibiotic resistance gene.

17. The isolated nucleic acid molecule of claim 16, wherein the first inducible promoter is human cytomegalovirus (CMV) immediate early enhancer-promoter, CMV immediate early enhancer fused chicken β-actin promoter (CAG), human ubiquitin C (UbC) promoter or Rous sarcoma virus (RSV) promoter.
18. The isolated nucleic acid molecule of claim 16, wherein the second inducible promoter is human CMV immediate early enhancer-promoter, CMV immediate early enhancer fused chicken β-actin promoter (CAG), human ubiquitin C (UbC) promoter or Rous sarcoma virus (RSV) promoter.
19. The nucleic acid molecule of claim 16, wherein the nucleic acid sequence comprises a core insulator sequence inserted between the termination sequence and the antibiotic resistance gene.
20. The nucleic acid molecule of claim 16, wherein the nucleic acid sequence is flanked on both the 5′ and 3′ ends by transposon-specific inverted terminal repeats (ITR), and wherein the nucleic acid sequence comprises a core insulator sequence inserted between the ITR and elements 16a-16f on the 3’ end and a core insulator sequence inserted between the ITR and elements 16a-16f on the 5’ end.
21. An isolated nucleic acid molecule operably comprising:
    a. a first inducible promoter comprising a $TetO_2$ sequence;
    b. a VP1 gene;
    c. a second inducible promoter comprising a $TetO_2$ sequence;
    d. a VP2 gene and a VP3 gene; and
    e. an antibiotic resistance gene.
22. The isolated nucleic acid molecule of claim 21, wherein the first inducible promoter is human cytomegalovirus (CMV) immediate early enhancer-promoter, CMV immediate early

enhancer fused chicken β-actin promoter (CAG), human ubiquitin C (UbC) promoter or Rous sarcoma virus (RSV) promoter.

23. The isolated nucleic acid molecule of claim 21, wherein the second inducible promoter is human CMV immediate early enhancer-promoter, CMV immediate early enhancer fused chicken β-actin promoter (CAG), human ubiquitin C (UbC) promoter or Rous sarcoma virus (RSV) promoter.
24. The isolated nucleic acid molecule of claim 21, further comprising a gene of interest (GOI) downstream of the VP3 gene and upstream of the antibiotic resistance gene.
25. The isolated nucleic acid molecule of claim 24, wherein the nucleic acid molecule comprises a core insulator sequence inserted between the VP3 gene and the GOI and between the GOI and the antibiotic resistance gene.
26. The nucleic acid molecule of claim 21, wherein the nucleic acid sequence comprises a core insulator sequence inserted between the VP1 gene and the second inducible promoter and TetO2 sequence.
27. The nucleic acid molecule of claim 21, wherein the nucleic acid sequence comprises a core insulator sequence inserted between the VP2 and VP3 gene of d) and the antibiotic resistance gene of e).
28. The nucleic acid molecule of claim 21, wherein the nucleic acid sequence is flanked on both the 5′ and 3′ ends by transposon-specific inverted terminal repeats (ITR), and wherein the nucleic acid sequence comprises a core insulator sequence inserted between the ITR and elements 21a-21e on the 3’ end and a core insulator sequence inserted between the ITR and elements 21a-21e on the 5’ end.