**WHAT IS CLAIMED IS:**

1. An *in vitro* method of delivering a nucleic acid molecule to a bladder cell, comprising contacting the bladder cell with a baculoviral vector, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in the bladder cell to increase or supplement an anti-tumor response.

2. The method of claim 1, wherein the bladder cell is a bladder cancer cell.

~~3. The method of claim 1 or 2, wherein the bladder cell is *in vitro*.~~

~~4. The method of claim 1 or 2, wherein the bladder cell is *in vivo*.~~

~~5. The method of claim 4, wherein the bladder cell is in a subject in need of treatment of bladder cancer and wherein said contacting comprising administering the baculoviral vector to the subject by intravesical instillation.~~

~~6~~3. The method of claim 1, wherein the transgene is a therapeutic transgene for treating bladder cancer.

~~7~~4. The method of claim ~~6~~3, wherein the therapeutic transgene encodes CD40L or IL-15.

~~8~~5. The method of claim 1, wherein the promoter comprises the human cytomegalovirus immediate early promoter.

~~9~~6. The method of claim ~~8~~5, wherein the human cytomegalovirus immediate early promoter comprises the sequence set forth in SEQ ID NO: 1.

~~10~~7. The method of any one of claims 1 and ~~6~~3 to ~~9~~6, wherein the baculoviral vector further comprises post-transcriptional regulatory elements from the woodchuck hepatitis virus, in the 3' untranslated region of the transgene.

~~11~~8. The method of claim ~~10~~7, wherein the post-transcriptional regulatory elements from the woodchuck hepatitis virus comprises the sequence set forth in SEQ ID NO: 2.

~~12.~~9. The method of any one of claims 1 and ~~6~~3 to ~~11~~8, wherein the baculoviral vector further comprises the R segment and at least a portion of the U5 sequence of the long terminal repeat from the human T-cell leukemia virus type 1, in the 5' untranslated region of the transgene.

~~13.~~10. The method of claim ~~12~~9, wherein the R segment and at least a portion of the U5 sequence of the long terminal repeat from the human T-cell leukemia virus type 1 comprises the sequence set forth in SEQ ID NO: 3.

~~14.~~11. The method of any one of claims 1 to ~~13~~10, further comprising adding a transfection agent either prior to or concurrently with said contacting.

~~15.~~12. The method of claim ~~14~~11, wherein the transfection agent is poly-L-lysine, sodium oxychlorosene, dodecyl-B-dd-maltoside (DDM), or sodium dodecyl sulfate (SDS), or any combination thereof.

~~16. A baculoviral vector for use in treating bladder cancer in a subject in need of such treatment, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response, wherein the use comprises intravesical instillation of the baculoviral vector in the subject.~~

~~17.~~13. Use of a baculoviral vector for treating bladder cancer in a subject in need of such treatment, by intravesical instillation of the baculoviral vector, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

~~18.~~14. Use of a baculoviral vector for manufacture of a medicament for treating bladder cancer in a subject in need of such treatment, by intravesical instillation of the baculoviral vector, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

~~19. A baculoviral vector for use in intravesical instillation in the bladder of a subject, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.~~

~~20.~~ 15. Use of a baculoviral vector for intravesical instillation in the bladder of a subject, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

~~21.~~ 16. Use of a baculoviral vector for manufacture of a medicament for intravesical instillation in the bladder of a subject, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

**WHAT IS CLAIMED IS:**

1. An *in vitro* method of delivering a nucleic acid molecule to a bladder cell, comprising contacting the bladder cell with a baculoviral vector, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in the bladder cell to increase or supplement an anti-tumor response.

2. The method of claim 1, wherein the bladder cell is a bladder cancer cell.

3. The method of claim 1, wherein the transgene is a therapeutic transgene for treating bladder cancer.

4. The method of claim 3, wherein the therapeutic transgene encodes CD40L or IL-15.

5. The method of claim 1, wherein the promoter comprises the human cytomegalovirus immediate early promoter.

6. The method of claim 5, wherein the human cytomegalovirus immediate early promoter comprises the sequence set forth in SEQ ID NO: 1.

7. The method of any one of claims 1 and 3 to 6, wherein the baculoviral vector further comprises post-transcriptional regulatory elements from the woodchuck hepatitis virus, in the 3' untranslated region of the transgene.

8. The method of claim 7, wherein the post-transcriptional regulatory elements from the woodchuck hepatitis virus comprises the sequence set forth in SEQ ID NO: 2.

9. The method of any one of claims 1 and 3 to 8, wherein the baculoviral vector further comprises the R segment and at least a portion of the U5 sequence of the long terminal repeat from the human T-cell leukemia virus type 1, in the 5' untranslated region of the transgene.

10. The method of claim 9, wherein the R segment and at least a portion of the U5 sequence of the long terminal repeat from the human T-cell leukemia virus type 1 comprises the sequence set forth in SEQ ID NO: 3.

11. The method of any one of claims 1 to 10, further comprising adding a transfection agent either prior to or concurrently with said contacting.

12. The method of claim 11, wherein the transfection agent is poly-L-lysine, sodium oxychlorosene, dodecyl-B-dd-maltoside (DDM), or sodium dodecyl sulfate (SDS), or any combination thereof.

13. Use of a baculoviral vector for treating bladder cancer in a subject in need of such treatment, by intravesical instillation of the baculoviral vector, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

14. Use of a baculoviral vector for manufacture of a medicament for treating bladder cancer in a subject in need of such treatment, by intravesical instillation of the baculoviral vector, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

15. Use of a baculoviral vector for intravesical instillation in the bladder of a subject, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.

16. Use of a baculoviral vector for manufacture of a medicament for intravesical instillation in the bladder of a subject, the baculoviral vector either (i) having no transgene or (ii) having only a therapeutic transgene operably linked to a promoter that drives expression of the therapeutic transgene in a bladder cell of the subject to increase or supplement an anti-tumor response.