WHAT IS CLAIMED IS:

1. A method of producing virus in Vero host cells in a bioreactor, the method comprising:

a) providing Vero host cells in the bioreactor;

b) growing the host cells at a constant first dissolved oxygen (dO_2) level of 100%, at a constant pH, and a constant temperature;

c) after b) progressively decreasing the first dO_2 level to a second dO_2 level, wherein the second dO_2 level is from 20% to 90% of the first dO_2 level;

d) after c) holding the dO_2 at the second dO_2 level for at least 2-24 hours, and then infecting the host cells with at least one virus or virus particle to yield host cells infected with the at least one virus or virus particle;

e) incubating the host cells infected with the at least one virus or virus particle to propagate the at least one virus or viral particle into at least one additional virus or viral particle after step d); and

f) after e), harvesting the at least one additional virus or virus particle from the host cells,

wherein the second dO_2 level of step c) is maintained constant through steps d), e), and f), and wherein virus or virus particle yield is increased compared to a method in which the initial dO_2 level of step b) is maintained constant before, during, and after step c).

2. The method of claim 1, wherein the host cells are adherent cells.

3. The method of claim 1 or 2, wherein the bioreactor is a flat-bed bioreactor.

4. The method of any one of claims 1 to 3, wherein the height of the fixed-bed is from 2cm to10 cm.

5. The method of any one of claims 1 to 4, wherein the bioreactor is a single-use flat-bed bioreactor.

6. The method of any one of claims 1 to 5, wherein the second dO_2 level in step c is from 20 to 50% of the first dO_2 level.

7. The method of any one of claims 1 to 6, wherein the first dO_2 level in step c is decreased when the conductivity is 60 mS/cm to 80 mS/cm.

8. The method of any one of claims 1 to 7, wherein the host cell in step d is infected with a virus or virus particle when the conductivity is 90 mS/cm to 110 mS/cm.

9. The method of any one of claims 1 to 8, wherein the infection of the host cells with the virus or virus particle is at multiplicity of infection (MOI) of 0.1 to 0.05.

10. The method of any one of claims 1 to 9, wherein, the infection of the host cells with the virus is at MOI of 0.05.

11. The method of any one of claims 1 to 10, wherein the first dO_2 in step c is decreased 12 to 24 hours prior to infecting the host cells in step d.

12. The method of any one of claims 1 to 11 , wherein the virus or virus particle is selected from a group consisting of Vesicular Stomatitis virus (VSV), adenovirus, Influenza virus, Ross River virus, Hepatitis A virus, Vaccinia virus and recombinant Vaccinia virus, Herpes Simplex virus, Japanese Encephalitis virus, Herpes Simplex virus, West Nile virus, Yellow Fever virus, and chimeras thereof, as well as Rhino virus and Reovirus.

13. The method of any one of claims 1 to 12, wherein the virus or virus particle is a viral vector.

14. The method of any one of claims 1 to 13, wherein the virus or virus particle is the VSV vector.

15. The method of any one of claims 1 to 14, further comprising the step of determining a virus titer by plaque assay method.

16. The method of any one of claims 1 to 15, further comprising the step of purifying or characterizing of the virus or virus particle.

17. The method of any one of claims 1 to 16, further comprising the step of producing a vaccine with the virus or virus particle.

18. The method of any one of claims 1 to 17, wherein the bioreactor has a capacity of from 700 to 800 mL.

19. The method of any one of claims 1 to 17, wherein the bioreactor has a capacity of from 50 to 80 L.

20. The method of any one of claims 1 to 19, wherein the bioreactor includes protein-free media.

21. A method of producing virus in Vero host cells in a bioreactor comprising:

a) providing Vero host cells in the bioreactor;

b) growing the host cells at a constant first dissolved oxygen (dO_2) level of 100%, at a constant pH, and a constant temperature to confluence;

c) after b), decreasing the first dO_2 level to a second dO_2 level, wherein the second dO_2 level is from 20% to 50% of the first dO_2 level;

d) after c), holding the dO_2 at the second dO_2 level for at least 12 hours, and then infecting the host cells with at least one virus or virus particle to yield host cells infected with the at least one virus or virus particle;

e) incubating the host cells infected with the virus or virus particle to propagate the at least one virus or virus particle into at least one additional virus or viral particle after step d); and

f) after e), harvesting the at least one additional virus or virus particle from the host cells,

wherein the second dO_2 level of step c) is maintained constant through steps d), e), and f), and wherein virus or virus particle yield is increased compared to a method in which the initial dO_2 level of step b) is maintained constant before, during, and after step c).

22. The method of any one of claims 1 to 21, wherein the first dO_2 is decreased by 20% 12 hours prior to infection and maintained at the second level thereafter.

23. The method of any one of claims 1 to 22, wherein the method results in 1.13×10^8 viral titers (pfu/ml) and 9.0×10^{10} total viral production.

24. The method of any one of claims 1 to 23, wherein the harvesting occurs two days after infection.