What is Claimed is:

1. A vessel for culturing cells comprising:

a bottom including a base with an upwardly extending wall at least partially bounding the base of the bottom;

a top including a base with a downwardly extending wall at least partially bounding the base of the top;

a tubular neck with an opening defined therein; and,

one or more shelves, each shelf including a base with an upwardly extending wall at least partially bounding the base of the shelf,

wherein,

the upwardly extending wall of a first shelf of the one or more shelves adjoins the downwardly extending wall of the top,

the first shelf being located intermediate the bottom and the top,

the base of each of the shelves having at least one aperture formed therein, and

wherein,

the bottom, the top and the one or more shelves collectively defining an enclosed volume for culturing cells, the tubular neck extending from the vessel, the enclosed volume being accessible by the opening in the tubular neck.

2. The vessel of Claim 1, wherein the at least one shelf includes a second shelf, the second shelf being located intermediate the bottom and the first shelf, the wall of the bottom adjoining the second shelf.

3. The vessel of Claim 2, wherein the vessel has a first end, a first volume being defined between the top and the first shelf extending a predetermined length from the first end, a second volume being defined between the bottom and the second shelf extending the predetermined length from the first end, the first and second volumes being substantially equal.

4. The vessel of Claim 3, wherein the opening is aligned to permit pipette access to the first volume in proximity to the first end of the vessel.

5. The vessel of Claim 3, wherein a flow aperture is formed in each of the shelves, the first volume being in communication with the flow aperture of the first shelf, the second volume being in communication with the flow aperture of the second shelf.

6. The vessel of Claim 3, wherein the base of the top having a first portion spaced a first distance from the base of the first shelf, the base of the top having a second portion spaced a second distance from the base of the first shelf, the first distance being greater than the second distance.

7. The vessel of Claim 6, wherein the opening is aligned to permit pipette access to the first volume in proximity to the first end of the vessel.

8. The vessel of Claim 6, wherein the second portion extends from the first end of the vessel the predetermined length.

9. The vessel of Claim 6, wherein the base of the top includes a third portion extending between, and joining, the first and second portions of the base of the top.

10. The vessel of Claim 9, wherein the first and second portions of the base of the top are disposed to be generally parallel.

11. The vessel of Claim 10, wherein the third portion is generally flat and disposed at an angle relative to a plane defined by the second portion of the base, the angle being in the range of about 10 – 90 degrees.

12. The vessel of Claim 11, wherein the angle is in the range of about 10 – 30 degrees.

13. The vessel of Claim 11, wherein the angle is about 20 degrees.

14. The vessel of Claim 6, wherein the tubular neck extends from the top.

15. The vessel of Claim 1, wherein the top further includes at least one vented opening.

16. The vessel of Claim 15, wherein a gas permeable membrane extends across the vented opening.

17. The vessel of Claim 1, wherein the opening in the tubular neck is elliptical or semi-circular for at least a portion along the length of the tubular neck.

18. The vessel of Claim 1, wherein the tubular neck extends along a longitudinal axis, the longitudinal axis being disposed at an angle relative to a plane defined by the base of the first shelf, the angle being in the range of about 0 degrees - 90 degrees.

19. The vessel of Claim 18, wherein the angle is about 0 degrees.

20. The vessel of Claim 18, wherein the angle is about 90 degrees.

21. The vessel of Claim 18, wherein the angle is an acute angle.

22. The vessel of Claim 1, wherein a gas-transmission aperture is formed in each of the shelves, the gas-transmission apertures of the shelves being in linear registration to define a gas flow channel.

23. The vessel of Channel 22, wherein the gas flow channel extends into proximity to the opening defined in the tubular neck.

24. The vessel of Claim 22, wherein a flow aperture is formed in each of the shelves, the flow aperture for each of the shelves being spaced from the gas-transmission aperture of the respective shelf.

25. The vessel of Claim 1, wherein each shelf includes a containment wall extending upwardly from the base, the containment wall defined along at least a portion of an aperture.

26. The vessel of Claim 25, wherein the containment wall is bowed along an arcuate longitudinal axis.

27. The vessel of Claim 25, wherein the containment wall is angularly disposed relative to the base of the respective shelf.

28. The vessel of Claim 25, wherein the containment wall has an arcuate cross-section.

29. The vessel of Claim 25, wherein the containment wall includes a non-smooth surface facing away from the respective aperture.

30. The vessel of Claim 25, wherein the containment wall terminates at a free edge, the containment wall being hydrophobic along at least the free edge.

31. The vessel of Claim 30, wherein the base of the respective shelf having hydrophilic portions spaced from the containment wall.

32. An assembly comprising:
a vessel formed in accordance with Claim 1; and,
a cap formed to mount onto the tubular neck.

33. The assembly of Claim 32, wherein the cap is vented.

34. The assembly of Claim 32, wherein the cap is not vented.

35. The assembly of Claim 32, wherein the cap includes a valve for permitting selective access to the enclosed volume.

36. The assembly of Claim 32, wherein the cap includes means for connecting one or more tubes.

What is Claimed is:

1. A vessel for culturing cells comprising:

a bottom including a base with an upwardly extending wall at least partially bounding the base of the bottom;

a top including a base with a downwardly extending wall at least partially bounding the base of the top;

a tubular neck with an opening defined therein; and,

at least one shelf, wherein, each shelf includes a base with an upwardly extending wall at least partially bounding the base of the shelf,

wherein,

the upwardly extending wall of a first shelf adjoins the downwardly extending wall of the top,

the first shelf being located intermediate the bottom and the top,

the base of each of the shelves having at least one aperture formed therein, and wherein,

the bottom, the top and the shelves collectively define an enclosed volume for culturing cells, the tubular neck extending from the vessel, the enclosed volume being accessible by the opening in the tubular neck,

wherein the at least one shelf includes a second shelf, the second shelf being located intermediate the bottom and the first shelf, the wall of the bottom adjoining the second shelf,

wherein the vessel has spaced-apart first and second ends, the tubular neck extending from the second end, a first volume being defined between the top and the first shelf extending a predetermined length from the first end, the predetermined length being less than the spacing between the first and second ends, a second volume being defined between the bottom andthe second shelf extending the predetermined length from the first end, the first and second volumes being substantially equal,

wherein the opening is aligned to permit pipette access to the first volume in proximity to the first end of the vessel between the top and the first shelf,

wherein a flow aperture is formed in each of the shelves in proximity to the first end of the vessel, the first volume being in communication with the flow aperture of the first shelf, the second volume being in communication with the flow aperture of the second shelf,

wherein the base of the top having a first portion spaced a first distance from the base of the first shelf, the base of the top having a second portion spaced a second distance from the base of the first shelf, the first distance being greater than the second distance, and,

wherein the second portion extends from the first end of the vessel the predetermined length.

2. The vessel of Claim 1, wherein the base of the top includes a third portion extending between, and joining, the first and second portions of the base of the top.

3. The vessel of Claim 2, wherein the first and second portions of the base of the top are disposed to be generally parallel.

4. The vessel of Claim 3, wherein the third portion is generally flat and disposed at an angle relative to a plane defined by the second portion of the base, the angle being in the range of about 10 – 90 degrees.

5. The vessel of Claim 4, wherein the angle is in the range of about 20 – 40 degrees.

6. The vessel of Claim 4, wherein the angle is about 30 degrees.

7. The vessel of Claim 1, wherein the tubular neck extends from the top.

8. The vessel of Claim 1, wherein the top further includes at least one vented opening.

9. The vessel of Claim 8, wherein a gas permeable membrane extends across the vented opening.

10. The vessel of Claim 1, wherein the opening in the tubular neck is elliptical or semi-circular.

11. The vessel of Claim 1, wherein the tubular neck extends along a longitudinal axis, the longitudinal axis being disposed at an angle relative to a plane defined by the base of the first shelf, the angle being in the range of about 0 degrees - 90 degrees.

12. The vessel of Claim 11, wherein the angle is about 0 degrees.

13. The vessel of Claim 11, wherein the angle is about 90 degrees.

14. The vessel of Claim 11, wherein the angle is an acute angle.

15. The vessel of Claim 1, wherein a gas-transmission aperture is formed in each of the shelves, the gas-transmission apertures of the shelves being in linear registration to define a gas flow channel.

16. The vessel of Channel 15, wherein the gas flow channel extends into proximity to the opening defined in the tubular neck.

17. The vessel of Claim 15, wherein the flow aperture for each of the shelves being spaced from the gas-transmission aperture of the respective shelf.

18. The vessel of Claim 1, wherein each shelf includes a containment wall extending upwardly from the base, the containment wall defined along at least a portion of an aperture.

19. The vessel of Claim 18, wherein the containment wall is bowed along an arcuate longitudinal axis.

20. The vessel of Claim 18, wherein the containment wall is angularly disposed relative to the base of the respective shelf.

21. The vessel of Claim 18, wherein the containment wall has an arcuate cross-section.

22. The vessel of Claim 18, wherein the containment wall includes a non-smooth surface facing away from the respective aperture.

23. The vessel of Claim 18, wherein the containment wall terminates at a free edge, the containment wall being hydrophobic along at least the free edge.

24. The vessel of Claim 23, wherein the base of the respective shelf having hydrophilic portions spaced from the containment wall.

25. An assembly comprising:
a vessel formed in accordance with Claim 1; and,
a cap formed to mount onto the tubular neck.

26. The assembly of Claim 25, wherein the cap is vented.

27. The assembly of Claim 25, wherein the cap is not vented.

28. The assembly of Claim 25, wherein the cap includes a valve for permitting selective access to the enclosed volume.

29. The assembly of Claim 25, wherein the cap includes means for connecting one or more tubes.