CLAIMS

We claim:

1. An adapter, comprising:

a distal end, comprising a distal luer connector configured to couple to a catheter assembly;

a proximal end, comprising a proximal luer connector configured to couple to a blood collection device;

a middle portion disposed between the distal end and the proximal end and joining the distal luer connector to the proximal luer connector, the middle portion being integrally formed with the distal luer connector and the proximal luer connector to provide a singular, unitary adapter body, with a lumen extending through the distal end, the middle portion, and the proximal end; and

a tube positioned within the lumen, in the middle portion, the tube defining a fluid pathway disposed between the distal end and the proximal end, wherein the fluid pathway includes a non-linear portion configured such that no fluid flowing through the non-linear portion may flow in a straight line, with the non-linear portion increasing a length of the fluid pathway between the distal end and the proximal end as compared to a linear fluid pathway.

2. The adapter of claim 1, wherein the non-linear portion forms a coil shape.

3. The adapter of claim 1, wherein the non-linear portion forms an S-shape.

4. The adapter of claim 1, wherein the distal luer connector comprises a male luer threaded connector.

5. The adapter of claim 1, wherein the distal luer connector comprises a male luer slip connector.

6. The adapter of claim 1, wherein the distal luer connector comprises a blunt cannula.

7. The adapter of claim 1, wherein the proximal luer connector comprises a female luer connector.

8. A blood collection set, comprising:

a blood collection device; and

an adapter, comprising:

a distal end, comprising a distal luer connector configured to couple to a catheter assembly;

a proximal end, comprising a proximal luer connector coupled to the blood collection device;

a middle portion disposed between the distal end and the proximal end and joining the distal luer connector to the proximal luer connector, the middle portion being integrally formed with the distal luer connector and the proximal luer connector to provide a singular, unitary adapter body, with a lumen extending through the distal end, the middle portion, and the proximal end; and

a tube positioned within the lumen, in the middle portion, the tube defining a fluid pathway disposed between the distal end and the proximal end, wherein the fluid pathway includes a non-linear portion configured such that no fluid flowing through the non-linear portion may flow in a straight line, with the non-linear portion increasing a length between the distal end and the proximal end as compared to a linear fluid pathway.

9. The blood collection set of claim 8, wherein the blood collection device comprises a syringe.

10. The blood collection set of claim 8, wherein the blood collection device comprises a needle configured to pierce a seal of an evacuated blood collection tube.

11. The blood collection set of claim 10, wherein the blood collection device further comprises a cylindrical holder extending around the needle.

12. The blood collection set of claim 8, wherein the non-linear portion forms a coil shape.

13. The blood collection set of claim 8, wherein the non-linear portion forms an S-shape.

14. The blood collection set of claim 8, wherein the distal luer connector comprises a male luer threaded connector.

15. The blood collection set of claim 8, wherein the distal luer connector comprises a male luer slip connector.

16. The blood collection set of claim 8, wherein the distal luer connector comprises a blunt cannula.

17. The blood collection set of claim 8, wherein the proximal luer connector comprises a female luer connector.