CLAIMS

1. A device to couple a vascular access device to a medical device, the device comprising:

a housing; ~~and~~

a body partially disposed within the housing, wherein the body comprises a distal end, a proximal end, and a lumen extending through the distal end and the proximal end, wherein the proximal end comprises a connector,

wherein the housing and the body are configured to slide axially towards each other to move the device from a retracted position in which the connector is enclosed within the housing to a projected position in which the connector is exposed proximal to the housing; and

a spring, wherein the spring comprises a distal end and a proximal end, wherein the distal end of the spring is coupled to the body, wherein the proximal end of the spring urges the housing proximally.

2. The device of claim 1, wherein the housing comprises a flap, wherein when the device is in the retracted position, the flap covers the connector, wherein in response to the housing moving distally from the retracted position, the flap opens.

~~3. The device of claim 1, further comprising a spring, wherein the spring comprises a distal end and a proximal end, wherein the distal end of the spring is coupled to the body, wherein the proximal end of the spring urges the housing proximally.~~

~~4.~~3. The device of claim ~~1~~2, wherein the flap comprises an antimicrobial compound, wherein when the device is in the retracted position, the antimicrobial compound contacts the connector.

~~5.~~4. The device of claim 1, wherein the distal end of the body comprises a luer connector.

~~6.~~5. The device of claim 1, further comprising a support structure comprising an elongated guide, wherein the housing comprises a flange, wherein in response to movement of the housing

~~from~~ distally from the retracted position, the flange is configured to move along the elongated guide in a distal direction.

~~7.~~6. The device of claim ~~6~~5, wherein the elongated guide comprises a stop, wherein the flange is configured to move along the guide in the distal direction when the flange is proximal to and spaced apart from the stop, wherein in response to movement of the housing in the distal direction from the retracted position and the flange contacting the stop, the housing and the support structure are configured to move together in the distal direction.

~~8.~~7. The device of claim 1, wherein the device is configured to lock in the projected position.

~~9.~~8. The device of claim ~~8~~7, wherein in response movement of the body to a proximal position ~~proximally~~ beyond the projected position, the device is configured to unlock and return to the retracted position.

~~10. A housing to disinfect a vascular access device connector, comprising:~~

~~a body, comprising a distal end, a proximal end, and a lumen extending through the distal end and the proximal end, wherein the distal end is configured to receive a vascular access device connector, wherein the proximal end comprises an access opening configured to receive an infusion device; and~~

~~a cover coupled to the body and covering the access opening, wherein the cover comprises an antimicrobial compound, wherein in response to removal of the infusion device from the access opening, the cover is configured to automatically close and the antimicrobial compound is configured to automatically contact and scrub a proximal end of the vascular access device connector.~~

~~11. The housing of claim 10, wherein the cover is spring-loaded.~~

12. The housing of claim 10, wherein the cover is coupled to the body at a pivot, wherein the cover is configured to pivot about the pivot between an open position and a closed position, wherein the cover is configured to pivot about the pivot on an axis generally perpendicular to a central axis of the body.

13. The housing of claim 10, wherein the cover is coupled to the body at a pivot, wherein the cover is configured to pivot about the pivot between an open position and a closed position, wherein the cover is configured to pivot about the pivot on an axis generally parallel to a central axis of the body.

14. The housing of claim 13, wherein a movable portion of the body comprises a distal end, wherein the distal end comprises a first arm that extends from the pivot and a second arm that extends from another pivot aligned with the pivot.

15. The housing of claim 14, wherein the movable portion of the body comprises a proximal end and a semi-circular portion disposed between the distal end and the proximal end, wherein the distal end comprises the first arm and the second arm, wherein the proximal end comprises a contact portion configured to contact the proximal end of the vascular access device connector when the cover is in the closed position, wherein the semi-circular portion is configured to fit around the body when the cover is in the open position.

16. The housing of claim 13, wherein the cover comprises a distal tab and an L-shaped portion coupled to the distal tab, wherein in response to depression of the distal tab, the L-shaped portion is raised and the access opening is exposed.

17. A device to disinfect a vascular access device connector, comprising:

an inner housing, comprising a proximal opening and configured to receive a vascular access device connector;

an outer housing moveable with respect to the inner housing between a proximal position and a distal position, wherein the outer housing comprises a set of teeth;

a rachet wheel comprising an inner set of teeth and an outer set of teeth; and

a first mandrel extending through the rachet wheel and comprising a pawl;

a second mandrel disposed on an opposite side of the inner housing as the first mandrel;

antimicrobial strip wrapped around the second mandrel and coupled to the first mandrel, wherein the antimicrobial strip extends over the proximal opening of the inner housing;

wherein in response to movement of the outer housing between the proximal position and the distal position, the pawl catches against the inner set of teeth, the set of teeth of the inner surface successively engage the outer set of teeth, and the rachet wheel and the mandrel rotate such that the antimicrobial strip moves across the proximal opening of the inner housing.

18. The device of claim 17, wherein in response to movement of the outer housing between the proximal position and the distal position, the antimicrobial strip is wrapped around the first mandrel and unwrapped from the second mandrel.

19. The device of claim 17, wherein the outer housing comprises a flap, wherein in response to movement of the outer housing between the proximal position and the distal position, the flap is opened.

20. The device of claim 17, wherein the antimicrobial strip comprises a plurality of holes configured to allow a medical device to couple to the vascular access device connector for infusion or blood withdrawal.

21. The device of claim 17, wherein the outer housing is configured to enclose the vascular access device connector.

~~22. The device of claim 17, further comprising another rachet wheel, wherein the first mandrel extends through the other rachet wheel, wherein the antimicrobial strip is disposed between the rachet wheel and the other rachet wheel.~~

9. ~~The device of claim 17, further comprising an arm extending through the mandrel, wherein the mandrel is configured to rotate with respect to the arm, wherein the arm is coupled to the inner housing.~~ A device to couple a vascular access device to a medical device, the device comprising:

a housing;

a body partially disposed within the housing, wherein the body comprises a distal end, a proximal end, and a lumen extending through the distal end and the proximal end, wherein the proximal end comprises a connector,

wherein the housing and the body are configured to slide axially towards each other to move the device from a retracted position in which the connector is enclosed within the housing to a projected position in which the connector is exposed proximal to the housing; and

a support structure comprising an elongated guide, wherein the housing comprises a flange, wherein in response to movement of the housing from distally from the retracted position, the flange is configured to move along the elongated guide in a distal direction.

10. The device of claim 9, wherein the elongated guide comprises a stop, wherein the flange is configured to move along the guide in the distal direction when the flange is proximal to and spaced apart from the stop, wherein in response to movement of the housing in the distal direction from the retracted position and the flange contacting the stop, the housing and the support structure are configured to move together in the distal direction.

11. The device of claim 9, wherein the housing comprises a flap, wherein when the device is in the retracted position, the flap covers the connector, wherein in response to the housing moving distally from the retracted position, the flap opens.

12. The device of claim 9, further comprising a spring, wherein the spring comprises a distal end and a proximal end, wherein the distal end of the spring is coupled to the body, wherein the proximal end of the spring urges the housing proximally.

13. The device of claim 9, wherein the flap comprises an antimicrobial compound, wherein when the device is in the retracted position, the antimicrobial compound contacts the connector.

14. The device of claim 9, wherein the distal end of the body comprises a luer connector.

15. The device of claim 9, wherein the device is configured to lock in the projected position.

~~23.~~16. The device of claim 15, wherein in response movement of the body proximally beyond the projected position, the device is configured to unlock and return to the retracted position.