CLAIMS

1. A drape, comprising:

a drape body~~, wherein the drape body is~~ configured to limit passage of ~~electromagnetic radiation~~ light through the drape body to an interior imaging environment defined by the drape body such that ~~electromagnetic radiation~~ light within the interior imaging environment does not exceed a predetermined threshold, the drape body being configured to move between an undeployed configuration and a deployed configuration, wherein the drape body is substantially planar in the undeployed configuration and, in the deployed configuration, the drape body is symmetrical about at least two axes and has a shape that is substantially cylindrical, substantially rectangular, a truncated cone, or a truncated pyramid; and

a connecting element ~~permanently~~ coupled to the drape body and defining a hole in the drape body, the connecting element being configured to attach the drape to an imaging device.

2. The drape of claim 1, wherein ~~an amount of electromagnetic radiation above~~ the predetermined threshold is about 402 mW/m2 of ambient light ~~an amount of electromagnetic radiation known to interfere with fluorescence and white light imaging~~.

3. The drape of claim 1 or claim 2, wherein the connecting element further comprises at least one support structure positioned on an interior or an exterior surface of the drape.

4. The drape of claim 3, wherein the at least one support structure is configured to support a portion of the drape body, surrounding the connecting element, when the drape is in ~~a~~the deployed configuration such that the portion of the drape extends in a planar fashion from the connecting element to a first shaping element of the drape.

5. The drape of claim 3 or claim 4, wherein the at least one support structure comprises a plurality of support structures extending radially outward or circumferentially from a frame of the connecting element.

6. The drape of any one of claims 3-5, wherein the at least one support structure is a finger element.

7. The drape of claim 6, wherein the at least one support structure includes a plurality of finger elements extending from a frame of the connecting element.

8. The drape of any one of claims 4-7, wherein the portion of the drape body extending to the first shaping element is substantially circular.

9. The drape of any one of claims 4-8, wherein the first shaping element is a flexible structure embedded in the drape body.

10. The drape of any one of claims 4-9, wherein the first shaping element is configured to maintain a shape of the drape body in the deployed configuration.

11. The drape of any one of claims 4-10, wherein the first shaping element is configured to cooperate with the at least one support structure to hold the drape body out of a field of view of the imaging device.

12. The drape of any one of claims 4-11, wherein the first shaping element is further configured to change a shape of the drape in response to user manipulation and to maintain the change of shape after release by a user.

13. The drape of any one of claims 1-12, further comprising at least one valve configured to permit air flow into the drape during deployment of the drape into the deployed configuration, the at least one valve being a one-way valve configured to prevent air from escaping from the interior imaging environment after deployment of the drape.

~~14. The drape of any one of claims 1-13, wherein the drape has a substantially circular shape in an undeployed configuration.~~

~~15. The drape of claim 14, wherein the drape has a substantially cylindrical shape or a truncated cone shape in a deployed configuration.~~

14 ~~16~~. The drape of any one of claims 4-15~~3~~, further comprising a second shaping element, the second shaping element having a substantially circular shape and being

positioned radially outward from the first shaping element when the drape is in ~~an~~the undeployed configuration.

15 ~~17~~. The drape of any one of claims 1-16~~4~~, wherein the connecting element comprises a frame, and wherein the hole in the drape body is formed in the frame of the connecting element.

16 ~~18~~. The drape of claim 17~~5~~, wherein the frame is substantially rectangular in shape.

17 ~~19~~. The drape of any one of claims 1-17~~5~~, wherein the hole in the drape body is shaped and sized to receive a portion of the imaging device containing a light source and a lens.

18 ~~20~~. The drape of claim 19~~7~~, wherein the hole is substantially kidney shaped.

19 ~~21~~. The drape of any one of claims 1-~~20~~18, wherein the connecting element further comprises clips configured to attach to the imaging device, the clips being movable between an open position and a closed position.

20 ~~22~~. The drape of claim ~~21~~19, further comprising a cover portion configured to sit between the hole in the drape body and the clips, wherein the clips are configured to move to the open position during removal of the cover portion.

21 ~~23~~. The drape of any one of claims 1-2~~2~~0, wherein, when in ~~a~~the deployed configuration, the drape includes a top portion that extends substantially radially around the connecting element and a skirt portion that extends vertically from a perimeter of the top portion of the drape.

22 ~~24~~. The drape of claim 2~~3~~1, wherein the skirt portion is flexible.

23 ~~25~~. The drape of claim 2~~3~~1, wherein the skirt portion is substantially rigid.

24 ~~26~~. The drape of any of claims 2~~3~~1-2~~5~~3, wherein a bottom of the skirt portion includes one or more fixing elements configured to fix the bottom of the skirt portion of the drape relative to an area to be imaged, such that the area to be imaged is positioned or contained within the interior imaging environment of the drape.

25 ~~27~~. The drape of claim 2~~6~~4, wherein the one or more fixing elements include at least one of a weighted element, a magnet, a draw string, tape, a wire, and a hook and loop closure.

26 ~~28~~. The drape of any one of claims 1-2~~7~~5, wherein the drape comprises at least one of a plastic material, a paper material, a vinyl material, and/or a cloth material.

27 ~~29~~. The drape of claim 2~~8~~6, wherein the drape further comprises a coating configured to limit passage of light ~~electromagnetic radiation~~, and wherein an interior

surface of the drape, which defines the interior imaging environment, is coated with a material to reduce reflection within the interior imaging environment.

28 ~~30~~. A system for fluorescence-based imaging of a target, comprising:

the drape of claim 1; and

a portable, handheld imaging device, wherein the imaging device includes a portion with a lens and at least one blue/violet light source, and wherein the connecting element is configured to encompass an area surrounding the lens and the at least one light source to position the light source within the interior imaging environment of the drape body.

29 ~~31~~. The system of claim ~~30~~28, further comprising a sterile shield configured to be disposed over a portion of the imaging device.

3~~2~~0. The drape of any one of claims 1-2~~9~~7 or system of any one of claims ~~30~~28 or ~~31~~29, wherein the drape is configured for single-use and is disposable.

3~~3~~1. A drape, comprising:

a drape body~~, wherein the drape body is~~ configured to limit passage of ambient light through the drape body to an interior imaging environment defined by the drape body, the drape body being configured to move between an undeployed configuration and a deployed configuration, wherein the drape body is substantially planar in the

undeployed configuration and, in the deployed configuration, the drape body is symmetrical about at least two axes; and

a connecting element coupled to the drape body and defining a hole in the drape body, ~~the connecting element including a planar surface and fingers that project outwardly from the planar surface, and~~ the connecting element being configured to attach the drape to an imaging device,

wherein a portion of the drape body extends in a planar fashion from the connecting element to a shaping element, the shaping element being configured to maintain the drape body in the undeployed configuration prior to deployment of the drape body into the deployed configuration.

3~~4~~2. The drape of claim ~~1~~31, wherein the drape body has a truncated pyramid shape in ~~a~~the deployed configuration.

33. The drape of claim 31, wherein the drape body has a substantially cylindrical shape, a substantially rectangular shape, or a truncated cone shape in the deployed configuration.

34. The drape of claim 31, wherein the connecting element includes a planar surface and fingers that project outwardly from the planar surface.

35. The drape of claim 4, wherein the first shaping element is configured to maintain the drape body in the undeployed configuration prior to deployment of the drape body into the deployed configuration.