

CLAIMS

1. An apparatus, comprising:
 - (a) an injector, wherein the injector comprises:
 - (i) a body,
 - (ii) a flexible cannula extending distally from the body,
 - (iii) a flexible needle, wherein the needle is configured to translate relative to the cannula, and
 - (iv) a sensor, wherein the sensor is operable to detect a position of the needle relative to the cannula;
 - (b) a first fluid conduit coupled with the needle;
 - (c) a second fluid conduit coupled with the needle; and
 - (d) a control module, wherein the control module is in communication with the sensor, wherein the control module is in communication with the first fluid conduit, wherein the control module is in communication with the second fluid conduit,
wherein the control module is configured to provide automated delivery of a first fluid through the first fluid conduit to the needle based on a signal from the sensor,
wherein the control module is further configured to provide automated delivery of a second fluid through the second fluid conduit to the needle.
2. The apparatus of claim 1, wherein the sensor comprises a linear potentiometer.
3. The apparatus of claim 1, further comprising a needle actuator, wherein the needle actuator is operable to drive the needle longitudinally relative to the cannula, wherein the sensor is coupled with the needle actuator.
4. The apparatus of claim 1, wherein the first fluid conduit and the second fluid

conduit form a tube set extending between the injector and the control module.

5. The apparatus of claim 1, wherein the cannula is sized and configured to fit through a sclerotomy formed in a patient's eye.

6. The apparatus of claim 1, wherein the injector further comprises:

- (i) an injector subassembly, wherein the body, the cannula, and the needle are part of the injector subassembly,
- (ii) an injector driver subassembly, wherein the injector driver subassembly comprises a needle driver, and
- (iii) a flexible driver extending between the injector subassembly and the injector driver subassembly, wherein the flexible driver is configured to communicate motion from the needle driver to the needle to thereby translate the needle relative to the cannula.

7. The apparatus of claim 6, wherein the sensor is contained in the injector driver subassembly.

8. The apparatus of claim 1, wherein the injector further comprises:

- (i) a needle driver contained within the body, and
- (ii) a first user input feature extending from the body, wherein the first user input feature is operable to actuate the needle driver to thereby translate the needle relative to the cannula.

9. The apparatus of claim 8, wherein the first user input feature comprises a rotary knob rotatably coupled with the body.

10. The apparatus of claim 8, wherein the injector further comprises a second user input feature, wherein the control module is further configured to provide automated delivery of the second fluid through the second fluid conduit to the needle in response to actuation of the

second user input feature.

11. The apparatus of claim 10, wherein the second user input feature comprises a button.

12. The apparatus of claim 10, wherein the injector further comprises a third user input feature, wherein the control module is further configured to provide automated delivery of the first fluid through the first fluid conduit to the needle in response to actuation of the third user input feature.

13. The apparatus of claim 1, further comprising the first fluid, wherein the first fluid comprises a liquid.

14. The apparatus of claim 1, further comprising the first fluid, wherein the first fluid comprises a gas.

15. The apparatus of claim 1, further comprising the first fluid, wherein the first fluid comprises a combination of a liquid and a gas.

16. The apparatus of claim 15, wherein the control module is configured to provide automated delivery of the liquid, followed by delivery of the gas, based on a signal from the sensor.

17. The apparatus of claim 15, wherein the control module is configured to provide automated delivery of the liquid, followed by alternating pulses of the gas and the liquid, based on a signal from the sensor.

18. The apparatus of claim 1, wherein the control module is configured to provide automated delivery of the first fluid through the first fluid conduit to the needle based on a signal from the sensor indicating that the needle is moving distally relative to the cannula.

19. An apparatus, comprising:

- (a) an injector, wherein the injector comprises:
 - (i) a body,
 - (ii) a flexible cannula extending distally from the body,
 - (iii) a flexible needle, wherein the needle is configured to translate relative to the cannula, and
 - (iv) a sensor, wherein the sensor is operable to detect a position of the needle relative to the cannula; and
- (b) a control module, wherein the control module is in communication with the sensor,

wherein the control module is configured to provide automated delivery of a combination of a first liquid and a gas through a first fluid conduit to the needle based on a signal from the sensor,

wherein the control module is further configured to provide automated delivery of a second fluid through a second fluid conduit to the needle after delivering the combination of the first liquid and a gas to the needle.