CLAIMS

1) An electroporation device comprising:

a handset (18), the handset (18) including:

a housing (26) defining a mounting point, and

a signal generator (28) positioned within the housing (26); and

a needle array (22) removably couplable to the mounting point and in electrical communication with the signal generator (28) when the needle array (22) is coupled to the mounting point, the needle array (22) including:

a body (346) having a locking surface (506),

a shroud (350) movable with respect to the body (346) between a rest position and one or more actuated positions, and

an auto-lock (494) including a resilient body (512) that is coupled to and moveable with the shroud (350), the auto-lock (494) being adjustable between a locked configuration, where the shroud (350) is not movable with respect to the body (346), and an unlocked configuration, where the shroud (350) is movable with respect to the body (346), and wherein biasing the shroud (350) from the rest position to the one or more actuated positions and back to the rest position adjusts the auto-lock (494) from the unlocked configuration to the locked configuration wherein the resilient body (512) engages the locking surface (506) in the locked configuration.

2) The electroporation device of claim 1, wherein the body (346) includes one or more electrodes (142) coupled thereto.

3) The electroporation device of claim 1, wherein the body (346) includes one or more hypodermic needles (418) coupled thereto.

4) The electroporation device of claim 2, wherein at least a portion of the one or more electrodes (142) extend outside the shroud (350) when the shroud (350) is in the one or more actuated positions, optionally wherein the one or more electrodes (142) are positioned within the shroud (350) when the shroud (350) is in the rest position.

5) The electroporation device of claim 1, further comprising a receiver (478) movable with respect to the body (346) between an injection position and a retracted position, the receiver having a hypodermic needle (418) extending therefrom.

6) The electroporation device of claim 5, wherein at least a portion of the hypodermic needle (418) is positioned outside the shroud (350) when the receiver (478) is in the injection position outside the shroud (350) is in the one or more actuated positions.

7) The electroporation device of claim 5, wherein the hypodermic needle (418) is positioned within the shroud (350) regardless of the position of the shroud (350) when the receiver (478) is in the retracted position.

8) The electroporation device of claim 5, wherein the handset (18) includes a drive assembly (34) or wherein the receiver (478) is sized to at least partially receive a drug cartridge (498) therein.

9) An electroporation device comprising:

a handset (18) including:

a housing (26) defining a mounting point,

a power source (24), and

a signal generator (28) in electrical communication with the power source (24); and

a needle array (22) releasably couplable to the mounting point of the housing (26), the needle array (22) including:

a body (346),

one or more electrodes (142) coupled to the body (346),

a shroud (350) movable with respect to the body (346) between a rest position and one or more actuated positions, and wherein at least a portion of the one or more electrodes (142) are positioned outside the shroud (350) when the shroud (350) is in each of the one or more actuated positions,

a receiver (478) for receiving a drug cartridge, the receiver (478) being moveable with respect to the body (346) between an injection position and a retracted position, the receiver (478) having a hypodermic needle (418) extending therefrom, and

a locking pin (492) coupled to one of the body (346) and the receiver (478) and moveable with respect thereto between a locked position, where the receiver (478) is fixed with respect to the body (346) and the hypodermic needle (418) is locked in the retracted position, and an unlocked position, where the receiver (478) is movable with respect to the body (346), and wherein the locking pin (492) is biased toward the locking position such that when receiver (478) is positioned in a predetermined location with respect to the body (346), the locking pin (492) moves into the locked position.

10) The electroporation device of claim 9, wherein the locking pin (492) is coupled to one of the body (346) and the receiver (478), and wherein the other of the body (346) and the receiver (478) defines a locking aperture, optionally wherein the locking pin (492) moves from the unlocked position to the locked position when the locking pin (492) is axially aligned with the locking aperture.

11) The electroporation device of claim 9, further comprising an auto-lock (494) adjustable between a locked configuration, where the shroud (350) is not movable with respect to the body (346), and an unlocked configuration, where the shroud (350) is movable with respect to the body (346), and wherein biasing the shroud (350) from the rest position to the one or more actuated positions and back to the rest position adjusts the auto-lock (494) from the unlocked configuration to the locked configuration.

12) The electroporation device of claim 9, wherein the needle array (22) is in electrical communication with the signal generator (28) when the needle array (22) is coupled to the mounting point of the housing (26).

13) The electroporation device of claim 9, wherein the receiver (478) is sized to receive at least a portion of a drug cartridge (498) therein, and wherein the drug cartridge (498) is in fluid communication with the hypodermic needle (418) when inserted into the

receiver (478), optionally further comprising a cartridge lock (500), and wherein the cartridge lock (500) permits the drug cartridge (498) to be inserted into the receiver (478) but does not permit the drug cartridge (498) to be removed from the receiver (478).

14) The electroporation device of claim 9, wherein the body (346) includes a locking pawl (182) configured to selectively retain the receiver (478) in the injection position, optionally wherein the handset (18) includes a drive assembly (34), and wherein the drive assembly (34) includes a release member (174) configured to engage the locking pawl (182) and permit the receiver (478) to move from the injection position towards the retracted position.

15) An electroporation system (10) for performing electroporation treatment, the system comprising:

a base station (12);

the electroporation device according to claim 1; wherein the handset (18) is removably couplable to the base station (12), the handset (18) further comprising:

a power source (24) positioned within the housing (26) and in electronic communication with the signal generator (28),

an injection assembly (442) having a release member (174) thereon; and

wherein one or more electrodes (142) are coupled to the body (346),

and at least a portion of the one or more electrodes (142) are exposed when the shroud (350) is in the one or more actuated positions.