What is claimed is:

1. A fluid delivery device, comprising:

a housing, a fluid vaporizer disposed within the housing and configured to receive fluid and to produce an aerosol mist of liquid particles from the fluid, and a pump configured to accelerate the aerosol mist produced by the fluid vaporizer, wherein the pump has an inlet port positioned to disrupt a flow path of the aerosol mist produced by the fluid vaporizer such that the aerosol mist can be drawn into the pump through the inlet port, and the pump has an outlet port for expelling the aerosol mist therefrom.

2. The device of claim 1, wherein the fluid vaporizer comprises a piezoelectric transducer.

3. The device of claim 1, wherein the pump is configured to reduce a size of the liquid particles produced by the fluid vaporizer.

4. The device of claim 1, wherein the pump is configured to reduce a size on average of the liquid particles produced by the fluid vaporizer by a factor of about 10.

5. The device of claim 1, wherein the housing has a fluid-retaining reservoir and the fluid vaporizer is configured to receive fluid from the reservoir.

6. The device of claim 1, wherein the fluid vaporizer and the pump are configured to generate an aerosol mist that can pass into up to 1 cm of tissue when an outlet on the housing through which the aerosol mist passes is positioned about 1 cm away from the tissue.

7. The device of claim 6, wherein the aerosol mist is configured to pass into the tissue on a timescale of between 1 microsecond and 600 seconds.

8. The device of claim 1, wherein the housing has an outlet formed therein and positioned such that the fluid vaporizer can eject the aerosol mist from the housing through the outlet.

9. The device of claim 8, wherein the pump is configured to draw in and accelerate the aerosol mist after the aerosol mist passes through the outlet in the housing.

10. The device of claim 8, wherein the pump includes a fluid inlet port and a fluid outlet port, the fluid inlet and outlet ports being positioned adjacent to the outlet in the housing.

11. The device of claim 10, wherein the fluid inlet and outlet ports of the pump extend substantially parallel to one another and extend transverse to a central longitudinal axis of the outlet in the housing.

12. The device of claim 1, wherein the pump comprises a diaphragm pump.

13. The device of claim 1, wherein the pump includes an axial fan.

14. The device of claim 1, wherein the housing includes an activation switch electronically coupled to the fluid vaporizer and the pump.

15. The device of claim 14, wherein the housing includes a power source for providing power to the fluid vaporizer and the pump.

16. The device of claim 1, further comprising a cartridge removably matable to the housing and configured to deliver fluid to the housing.

17. The device of claim 16, wherein the cartridge is configured to provide at least one of a dosage instruction or timing instructions to the device including a selected pump-speed of the pump and a selected frequency of vibration of the fluid vaporizer for the fluid.

18. The device of claim 16, wherein the device is configured to be inoperable unless the cartridge is mated to the housing.

19. The device of claim 17, wherein the housing includes an activation switch that is electronically coupled to the fluid vaporizer and the pump and that is configured to simultaneously activate the fluid vaporizer and the pump according to the dosage instruction of the cartridge.

20. The device of claim 1, further comprising a controller disposed on the housing and configured to alter a frequency of the fluid vaporizer and at least one of a pump-speed of the pump and a duration of device operation.

21. The device of claim 1, further comprising a sensor disposed on the housing and configured to determine a distance from the device to a skin of a patient.

22. The device of claim 1, further comprising a fluid that includes at least one of a DNA, protein, virus, phage, bacteria, RNA, mRNA, miRNA, aptamer, stabilized RNA, iRNA, siRNA, chemicals, small molecules, and a plasmid.

23. The device of claim 1, further comprising a vaporized fluid configured for at least one of inhalation, ocular delivery, intra-aural delivery, rectal delivery, oral delivery, and vaginal delivery.

24. The device of claim 1, further comprising a vaporized fluid configured for at least one of intra-cellular, intra-nuclear, intra-tissue delivery, intra-plant delivery, polymeric delivery, and protein- structure delivery.

25. A fluid delivery device, comprising:

a housing;

a fluid-retaining reservoir in the housing;

a piezoelectric transducer disposed within the housing and configured to receive fluid from the reservoir and to produce an aerosol mist of liquid particles from the fluid, the housing having an outlet formed therein and positioned such that the piezoelectric transducer can eject the aerosol mist from the housing through the outlet; and

a pump having an inlet and an outlet positioned adjacent to the outlet of the housing, the inlet port configured to draw into the pump the aerosol mist ejected from the outlet in the housing, and the outlet port configured to expel the aerosol mist therefrom into a path of the aerosol mist ejected from the housing by the piezoelectric transducer.