

CLAIMS

WHAT IS CLAIMED IS:

1. A processing assembly configured for use in an electroporation system, the processing assembly comprising:
 - a housing;
 - a lid connected to the housing;
 - an opening in a top surface of the housing;
 - an electroporation chamber below the opening in the housing, the electroporation chamber comprising:
 - (i) a gasket forming the shape of the electroporation chamber and defining the volume of one or more wells within the electroporation chamber; and
 - (ii) two or more electrodes comprising an electrically conductive, non-cytotoxic metal, wherein the two or more electrodes are positioned on opposing sides of the electroporation chamber; and
 - wherein the processing assembly comprises two or more electrode buses, each connected to a single electrode to form an electrode-bus subassembly.
2. The processing assembly of claim 1, wherein each bus is configured to form an electrical connection between the electroporation chamber and an electroporation system.
3. The processing assembly of claim 1, wherein the electroporation chamber further comprises a spacer that maintains a distance between the two or more electrodes and arranges the two or more electrodes parallel to each other.

4. The processing assembly of claim 1, comprising two electrodes.
5. The processing assembly of claim 1, wherein the electrically conductive, non-cytotoxic metal is gold.
6. The processing assembly of claim 1, wherein the each of the two or more electrodes comprises gold that is vacuum deposited onto a plastic film.
7. The processing assembly of claim 1, wherein the gasket comprises a non-cytotoxic material.
8. A multi-well processing assembly configured for use in an electroporation system, the multi-well processing assembly comprising:
 - a housing;
 - a lid rotationally connectable to the housing;
 - an opening in a top surface of the housing;
 - an internal chamber below the opening the housing;
 - an electroporation chamber below the opening in the housing, the electroporation chamber comprising:
 - a gasket forming the shape of the electroporation chamber and defining the volume of one or more wells within the electroporation chamber; and

two or more electrodes comprising an electrically conductive, non-cytotoxic metal, wherein the two or more electrodes are positioned on opposing sides of the electroporation chamber; and

two or more electrode buses, each connected to a single electrode to form an electrode-bus subassembly.

9. The processing assembly of claim 8, wherein the bus is configured to form an electrical connection between the processing assembly and an electroporation system.

10. The processing assembly of claim 8, wherein the electroporation chamber further comprises a spacer that maintains a distance between the two or more electrodes and arranges the two or more electrodes parallel to each other.

11. The processing assembly of claim 8, comprising two electrodes.

12. The processing assembly of claim 8, wherein the electrically conductive, non-cytotoxic metal is gold.

13. The processing assembly of claim 8, wherein the each of the two or more electrodes comprises gold that is vacuum deposited onto a plastic film.

14. The processing assembly of claim 8, wherein the gasket comprises a non-cytotoxic material.

15. A docking station configured for use in an electroporation system, the docking station comprising:

a housing;

a port in the housing configured to receive one or more processing assemblies;

a lid connected to the housing;

one or more contacts configured to connect the docking station to an electroporation system.

16. An electroporation system comprising:

a processing assembly configured for use in an electroporation system, the processing assembly comprising:

a housing;

a lid rotationally connectable to the housing;

an opening in a top surface of the housing;

an electroporation chamber below the opening in the housing, wherein the electroporation chamber comprises;

(i) two or more electrodes comprising an electrically conductive, non-cytotoxic metal, wherein the two or more electrodes are positioned on opposing sides of the electroporation chamber; and

(ii) a gasket forming the shape of the electroporation chamber and defining the volume of one or more wells within the electroporation chamber;

a docking station, the docking station comprising:

a housing;

a port in the housing configured to receive the processing assembly;

a lid connected to the housing;

one or more contacts configured to connect the docking station to an electroporation system housing.