Patent claims

1. A device (1), comprising a unit (2) for generating and emitting electric pulses, and a treatment unit (3) having an inlet (3a) and an outlet (3b), wherein a treatment space (4) is formed inside the treatment unit (3), the treatment space (4) being able to be penetrated by the emitted electric pulses and an electric field resulting therefrom, **characterized in that** the treatment unit has a geometric shape which allows a non-contact passage of a cell material entering through the inlet (3a) into the treatment space (4) can be moved without contact through the treatment space (4) so that there are no interactions of the cell material with boundary walls of the treatment space (3) during the movement, and the electric field penetrating the treatment space (4) to the outlet (3b) , and a receiving device is provided (5) in the treatment unit (3), with which receiving device (5) the cell material moved through the treatment space (4) can be supplied to the outlet (3b), wherein said receiving device (5) is funnel-shaped, and wherein the diameter of the treatment space (4) is wider than the diameter of the inlet (3a), outlet (3b) and the receiving device (5), and wherein the outlet (3b) is arranged below the inlet (3a), so that the outlet (3b) is located in the fall line of the inlet (3a).

2. The device according to claim 1, **characterized in that** the inlet (3a) comprises a nozzle.

3. The device according to any one of claims 1 to 2, **characterized in that** the treatment space (4) is filled with a dielectric material.

4. The device according to claim 3, **characterized in that** the dielectric material is a gas, preferably air.

5. The device according to any one of claims 1 to 4, **characterized in that** the device (1) is a single-flow system.

6. The device according to any one of claims 1 to 5, **characterized in that** the device (1) further has a unit for generating a magnetic field in the treatment space (4).

7. The device according to any one of claims 1 to 6, **characterized in that** the unit (2) for generating and emitting electric pulses comprises two or more electrodes (2a, 2b) or plates of a capacitor and can generate electric pulses, so that a voltage increase take place between the two or more electrodes (2a, 2b) of 10% to 90% of a target voltage of the electric pulses within a period of 0.1 to 1000 ns, the electric pulses have a pulse duration of 5 ns to 50000 ns, and the electric pulses, upon reaching the target voltage, have an electric field strength of 0.5 kV/cm to 100 kV/cm.

8. A method for treating cells for targeted inactivation, the extraction of bioactive compounds, and the stimulation of cell growth and/or cellular compounds, performed in a device (1) according to any one of claims 1 to 7, comprising the steps

a) applying an electric field to a treatment space (4) in a treatment unit (3) that has a geometric shape which allows a non-contact passage of cell material,

b) introducing cell material through an inlet (3a) of the treatment unit (3) into the treatment space (4),

c) passing of the cell material without contact through the treatment space (4) so that there are no interactions of the cell material with boundary walls of the treatment space (4) during the movement, and the electric field penetrating the treatment space (4) to an outlet (3b) of the treatment unit (3), and supplying the cell material moved through the treatment space (4) to the outlet (3b) by means of a receiving device (5) that is provided in the treatment unit (3), wherein said receiving device (5) is funnel-shaped, and wherein the diameter of the treatment space (4) is wider than the diameter of the inlet (3a), outlet (3b) and the receiving device (5), and wherein the outlet (3b) is arranged below the inlet (3a), so that the outlet (3b) is located in the fall line of the inlet (3a).

9. The method according to claim 8, **characterized in that** the cell material is provided as a suspension in a dielectric material.

10. The method according to claim 8 or 9, **characterized in that** the step c) takes place due to gravitational force.

11. The method according to claim 8 or 9, **characterized in that** the step c) takes place by deflecting the cell material in a magnetic field.

12. The method according to any one of claims 8 to 11, **characterized in that** an electric field is applied with such electric pulses, so that a voltage increase takes place between the two electrodes (2a, 2b) or plates of a capacitor of 10% to 90% of a target voltage of the electric pulses within a period of 0.1 to 1000 ns, the electric pulses have

a pulse duration of 5 ns to 50000 ns, and the electric pulses, upon reaching the target voltage, have an electric field strength of 0.5 kV/cm to 100 kV/cm.

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