Figure 1

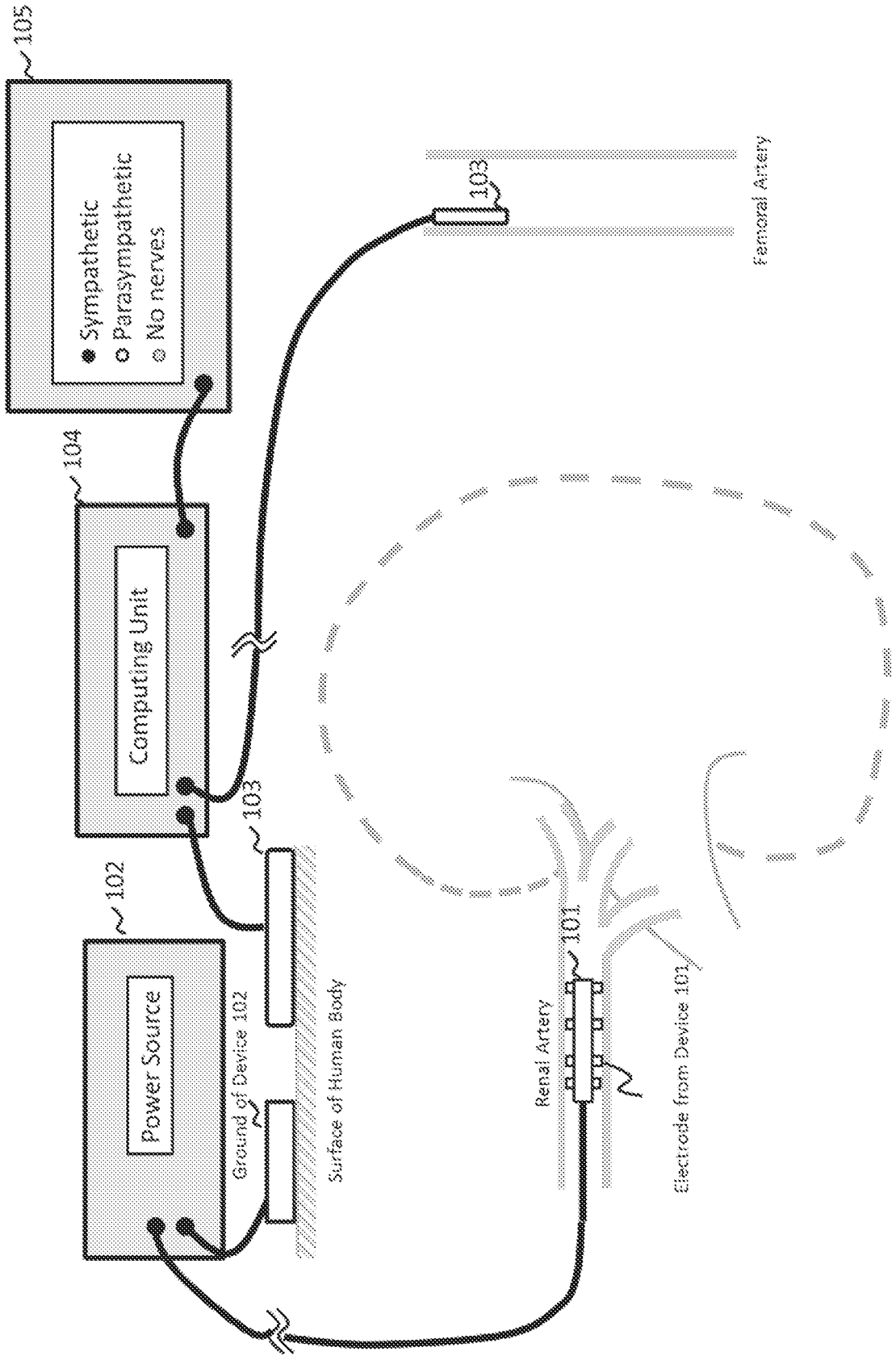
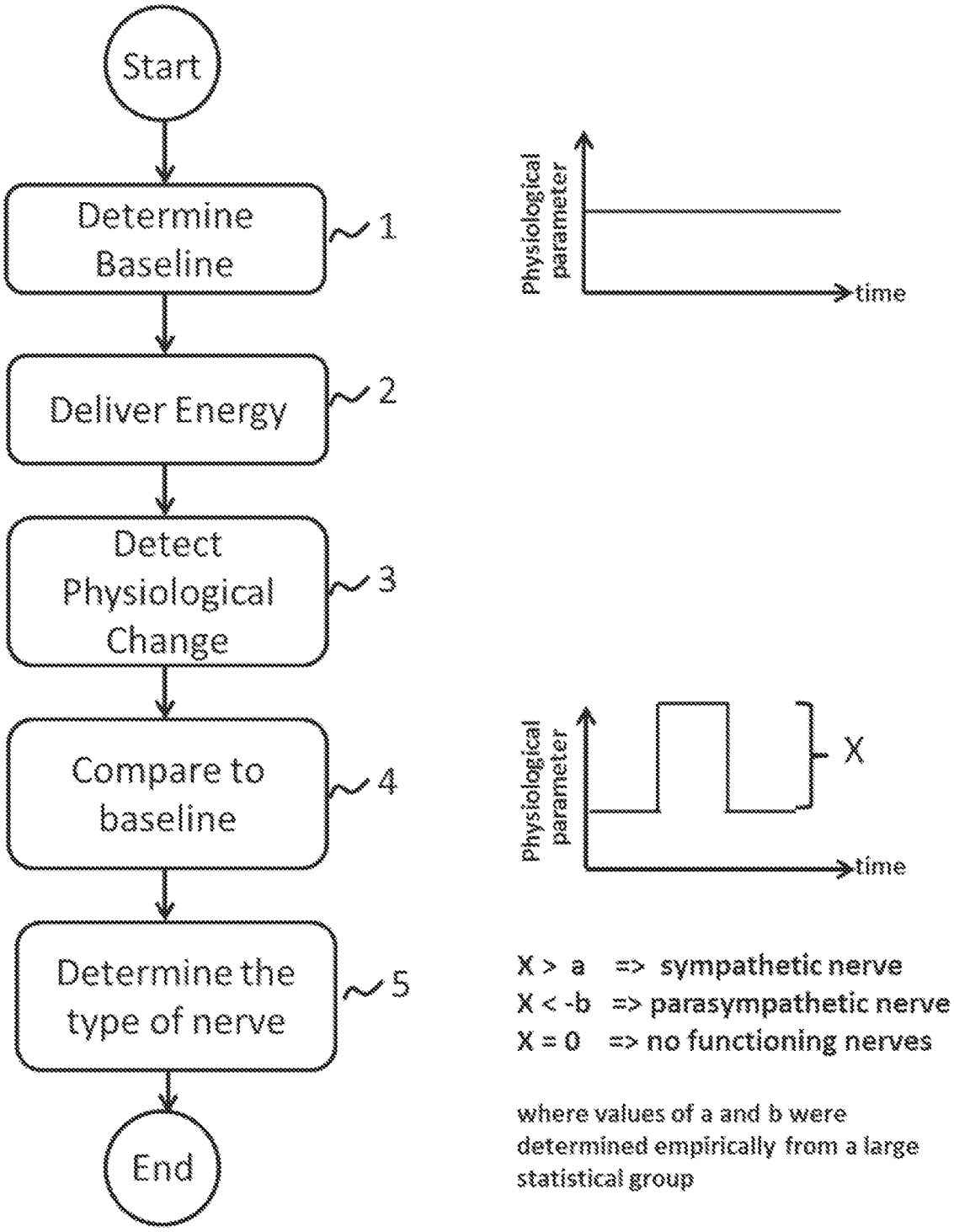
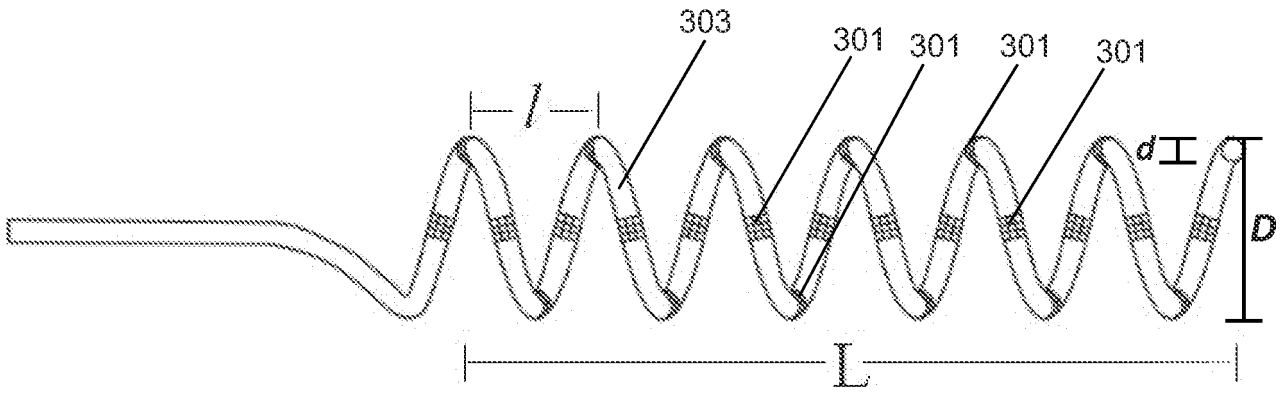

105
Sympathetic
Parasympathetic
No nerves
104
Computing Unit
103
Femoral Artery
102
Power Source
Ground of Device 102
Surface of Human Body
103
Renal Artery
101
Electrode from Device 101

Figure 2

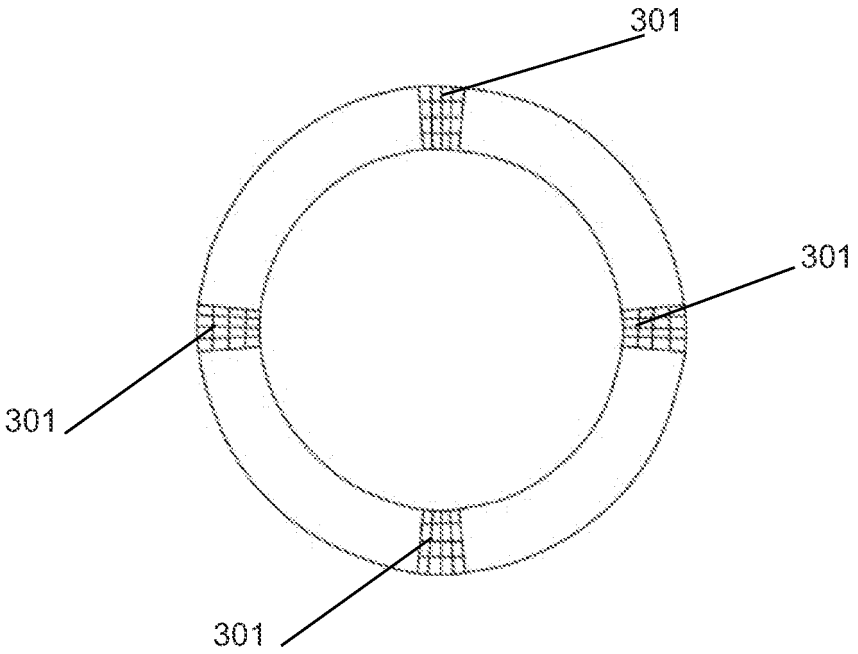

Start
Determine Baseline
1
Deliver Energy
2
Detect Physiological Change
3
Compare to baseline
4
Determine the type of nerve
5
End
Physiological parameter
time
Physiological parameter
X
time
X > a => sympathetic nerve
X < -b => parasympathetic nerve
X = 0 => no functioning nerves
where values of a and b were determined empirically from a large statistical group

Figures 3A-3B

3A

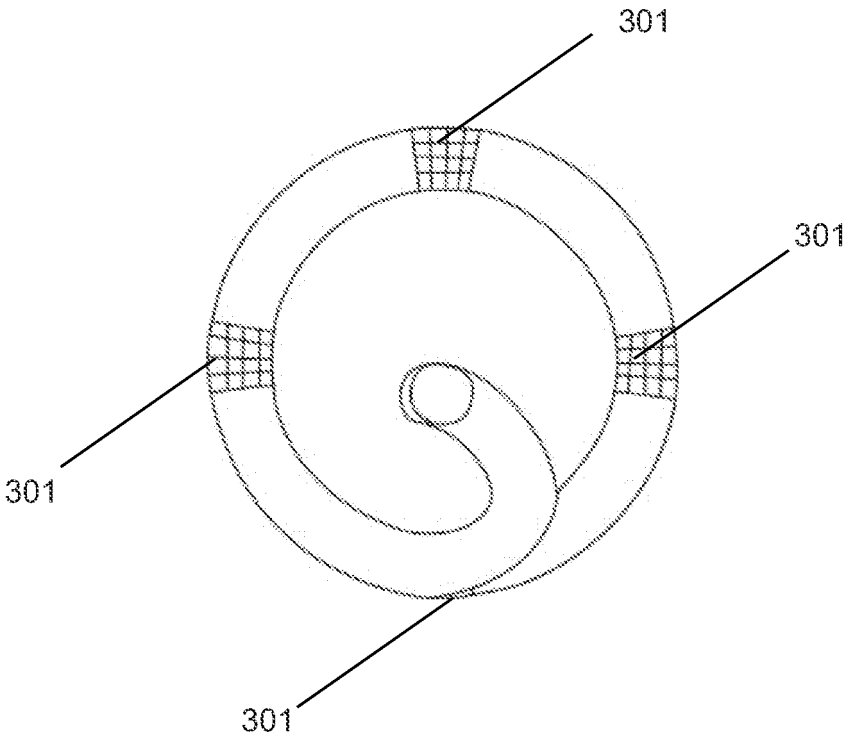


3B

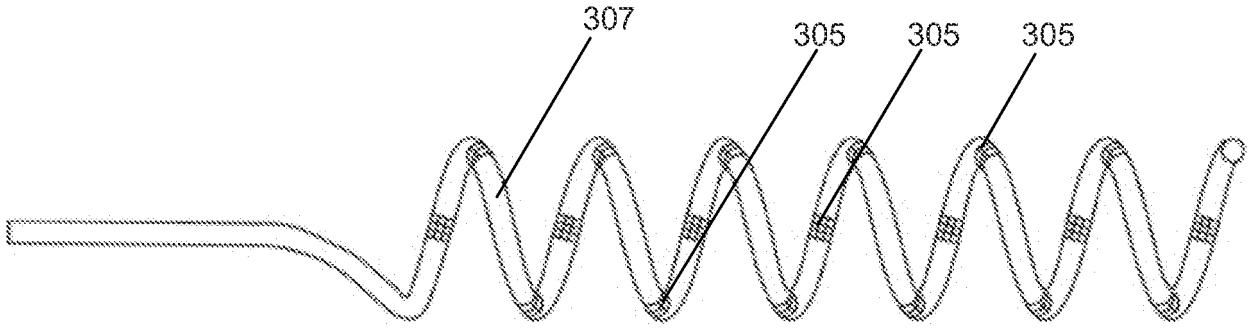


Figures 3C-3D

3C

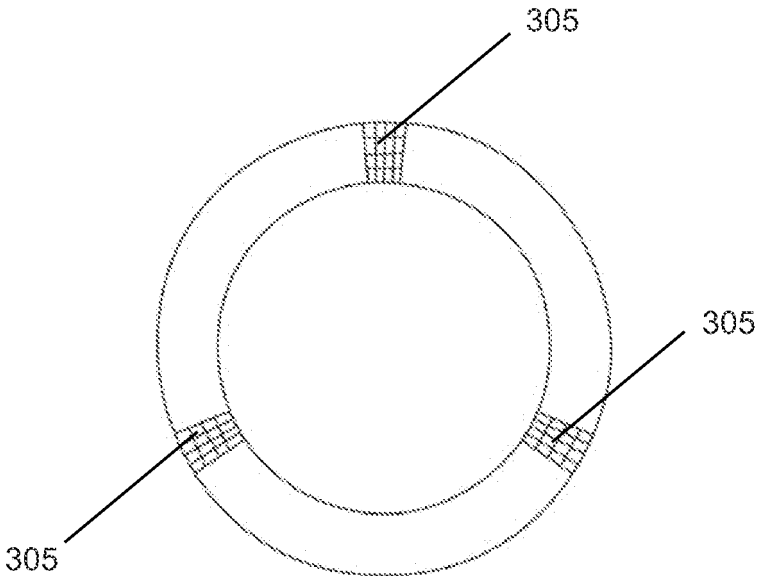


3D

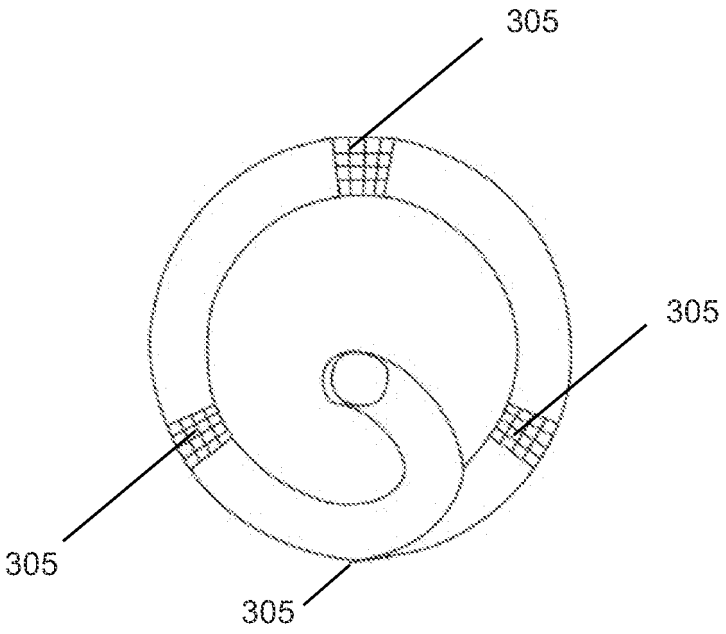


Figures 3E-3F

3E

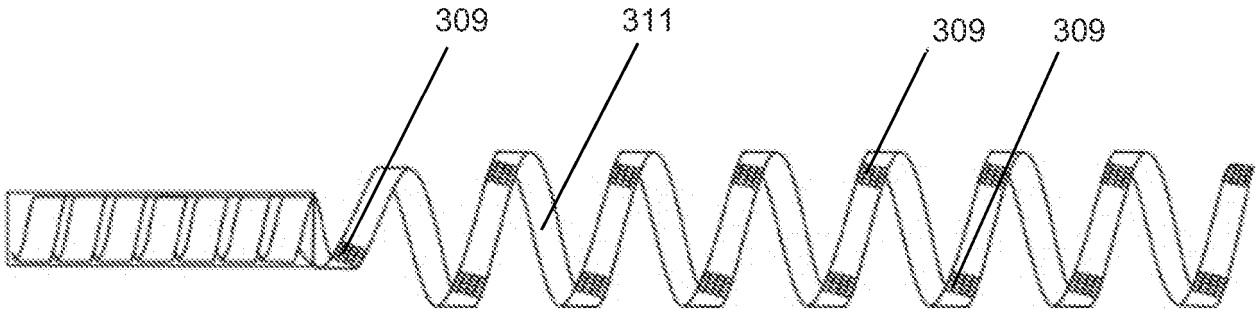


3F

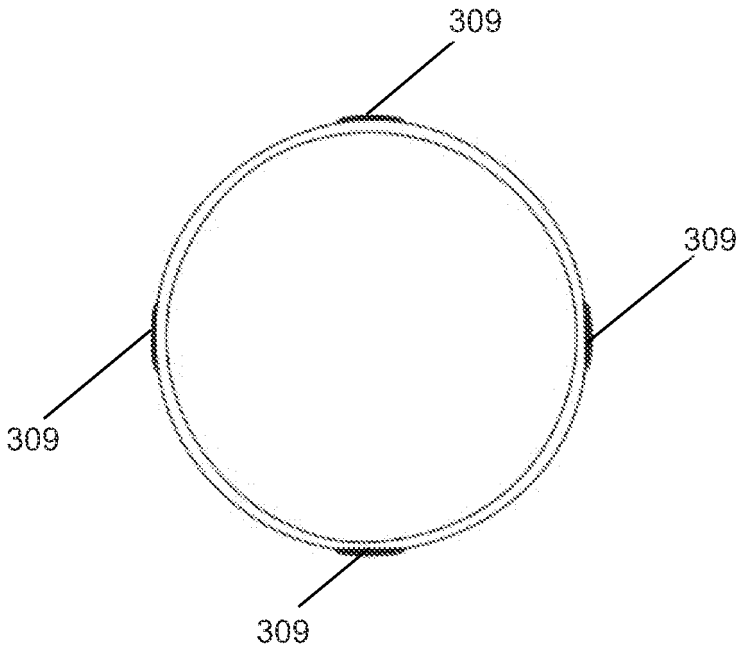


Figures 3G-3H

3G

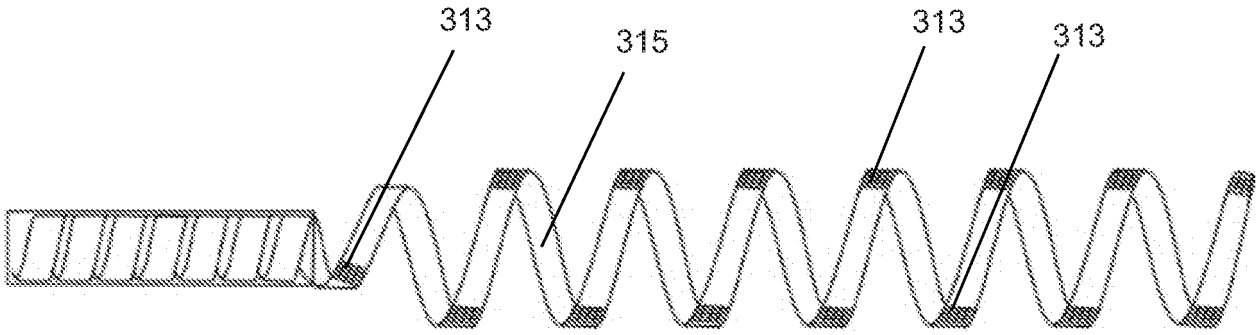


3H

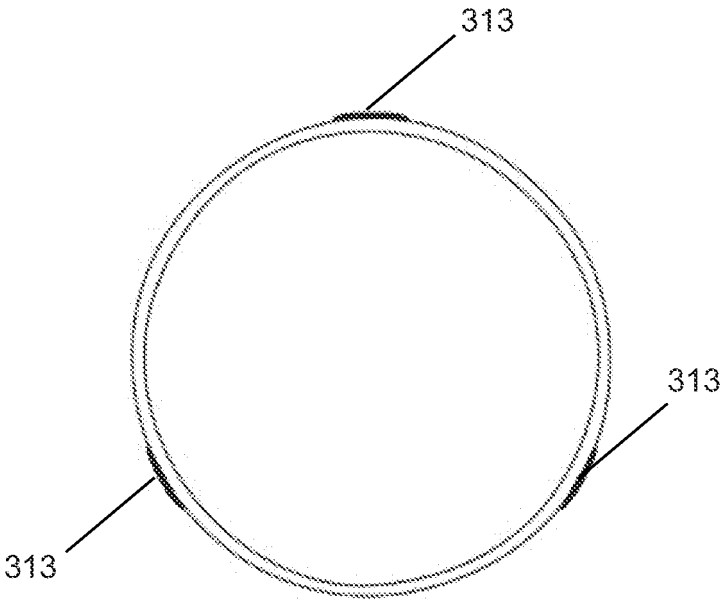


Figures 3I-3J

3I

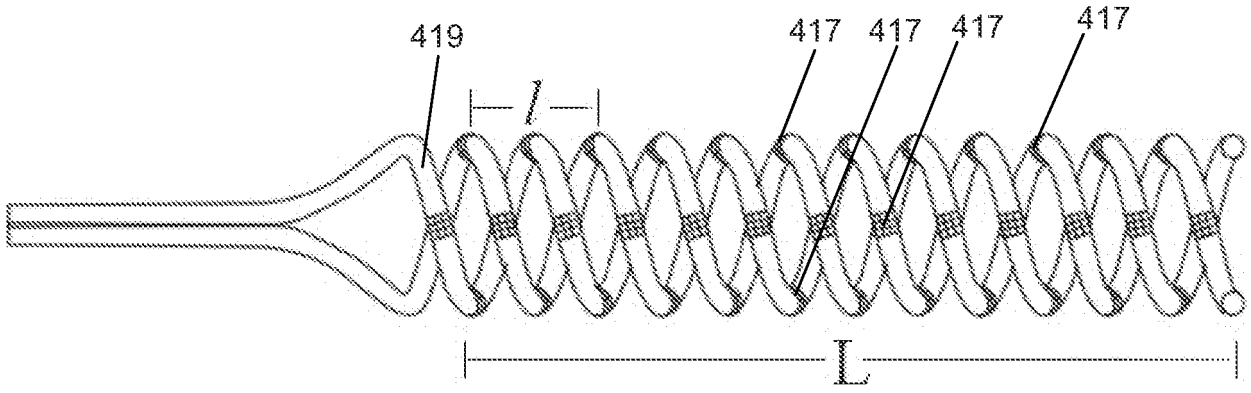


3J

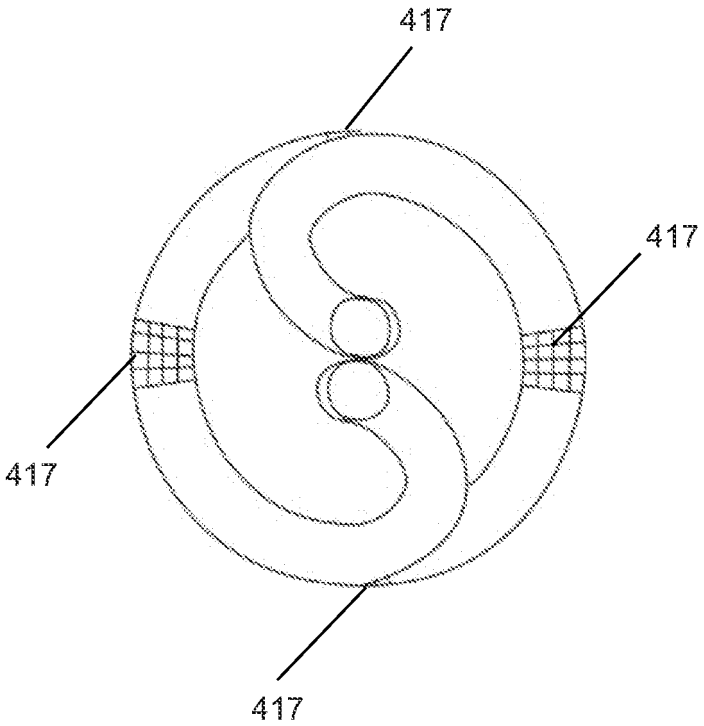


Figures 4A-4B

4A

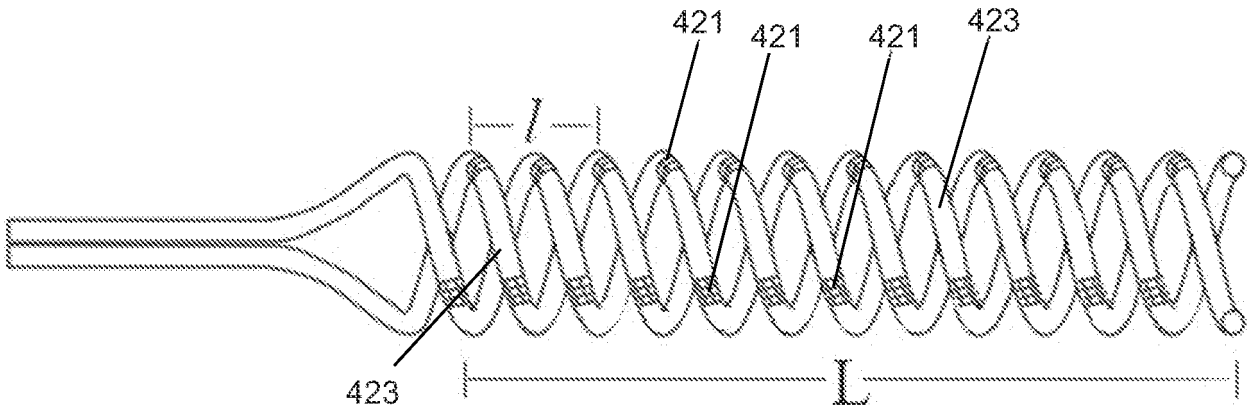


4B

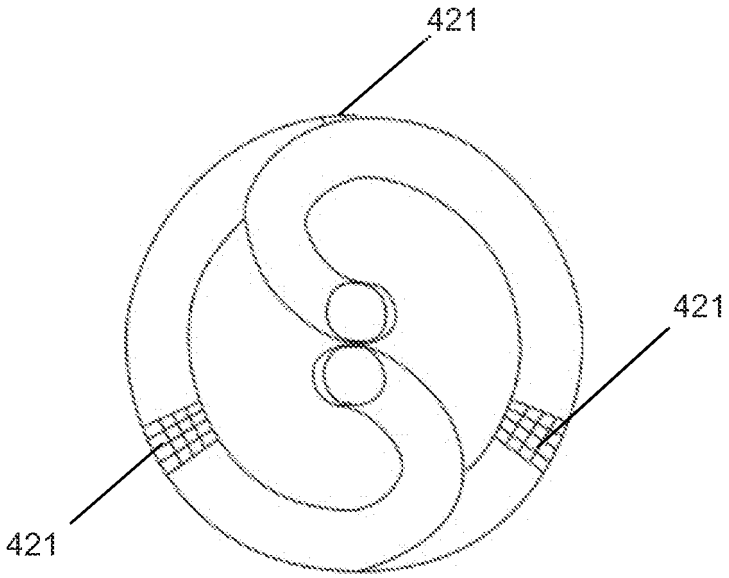


Figures 4C-4D

4C

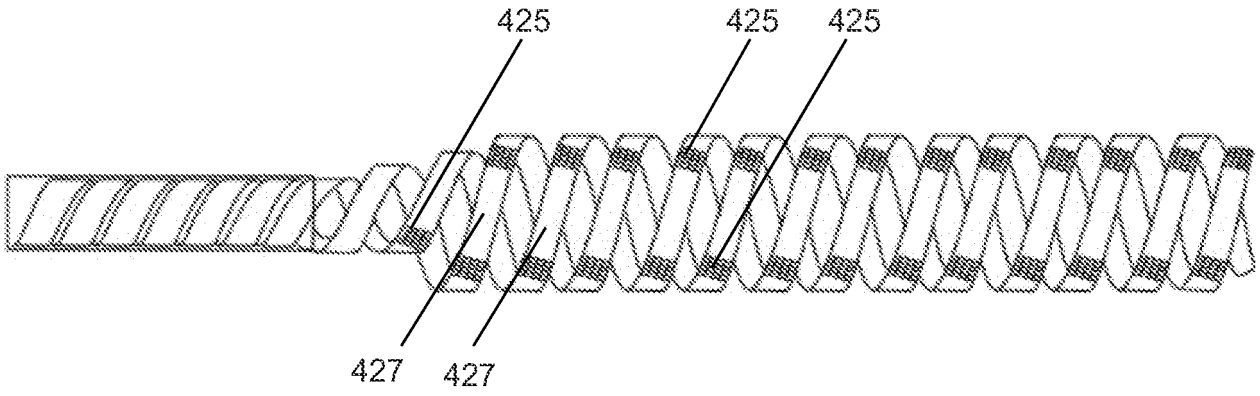


4D

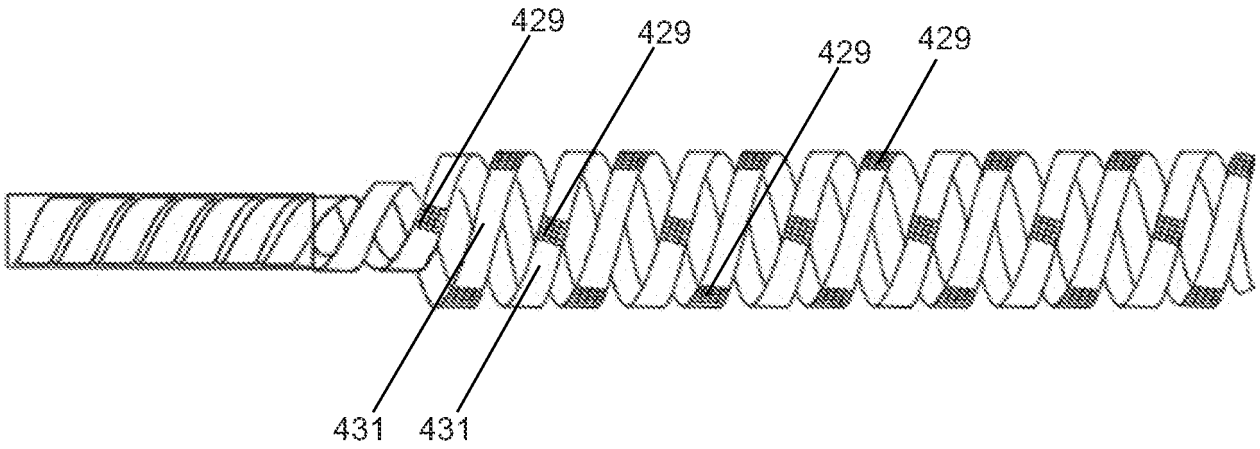


Figures 4E-4F

4E

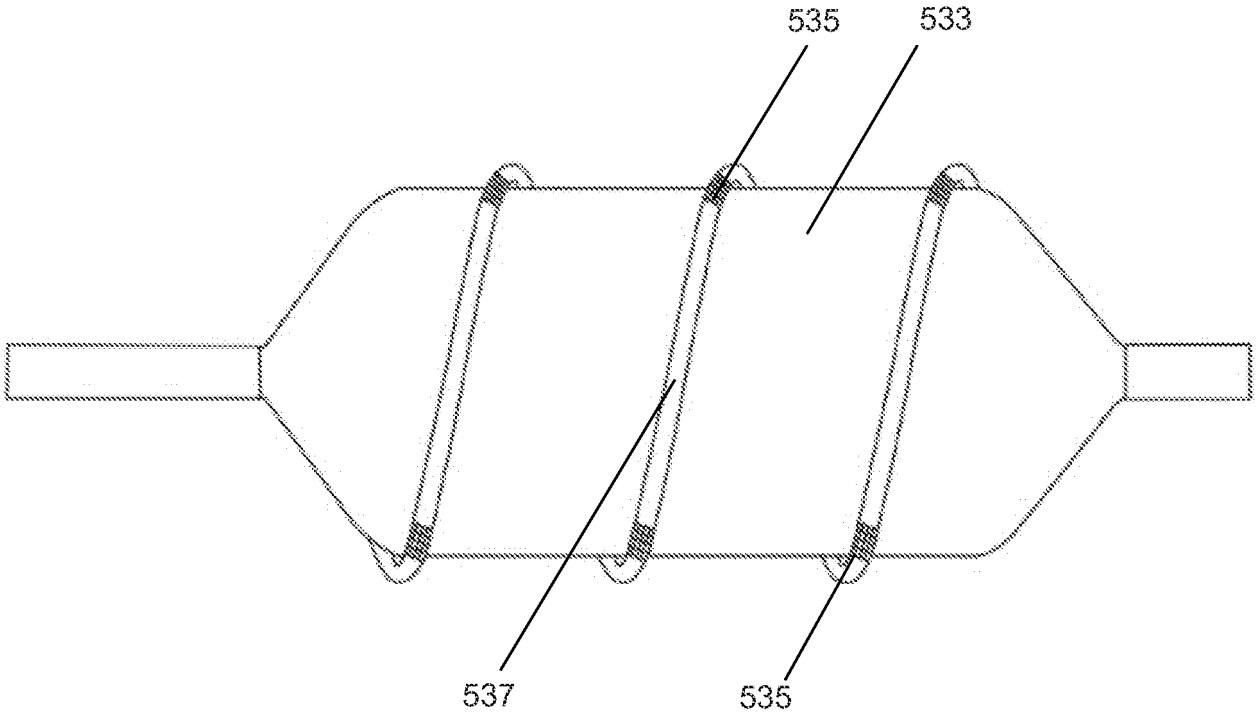


4F

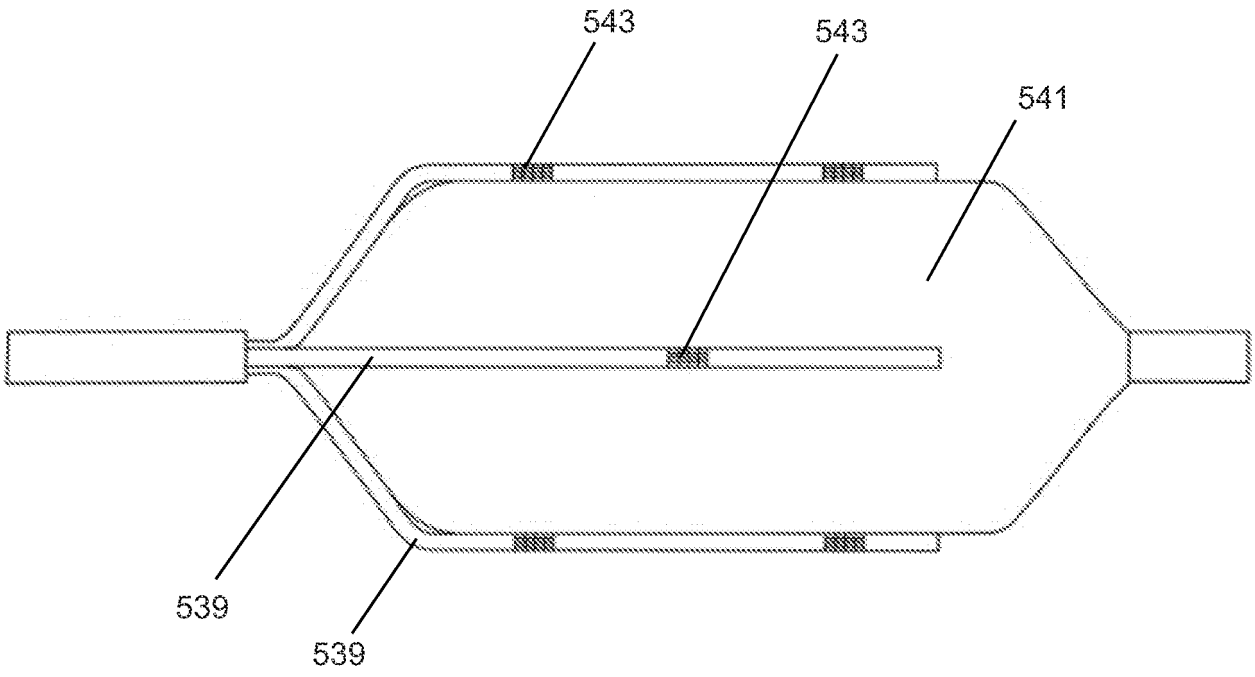


Figures 5A-5B

5A

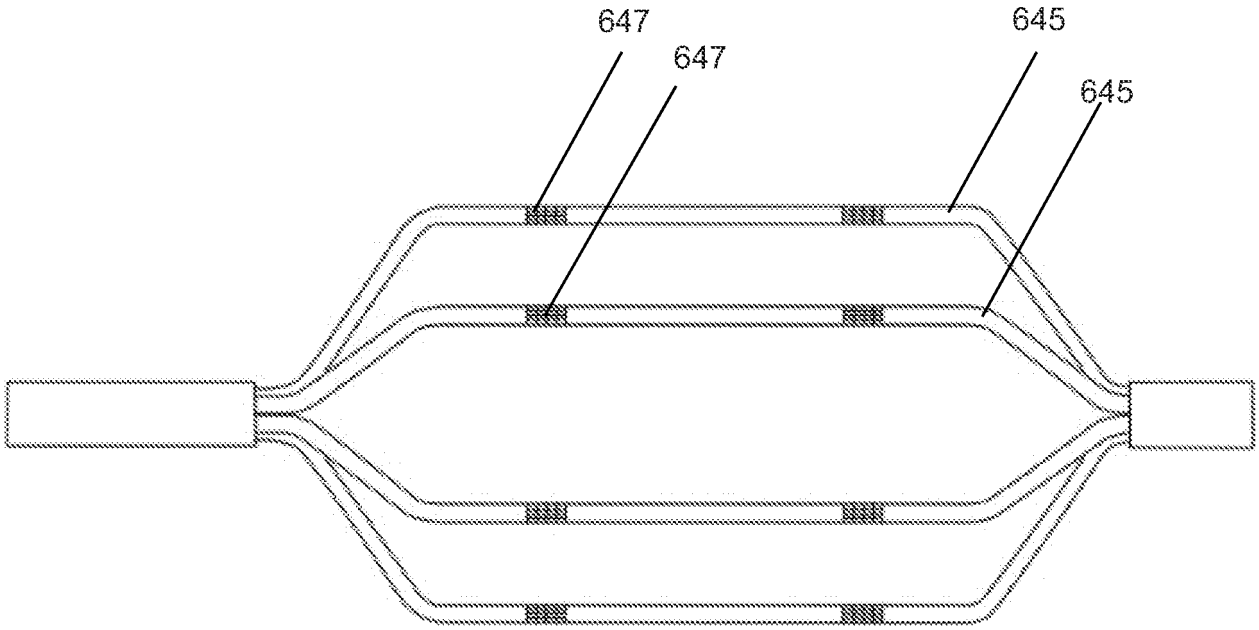


5B

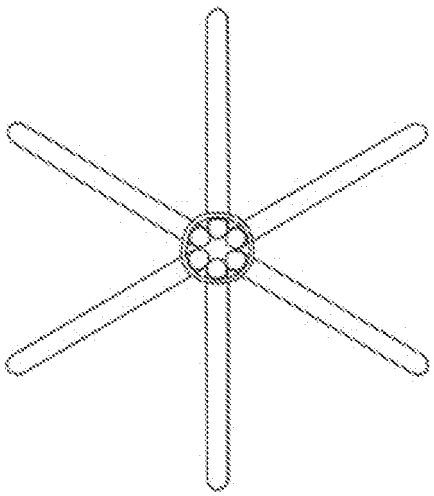


Figures 6A-6B

6A

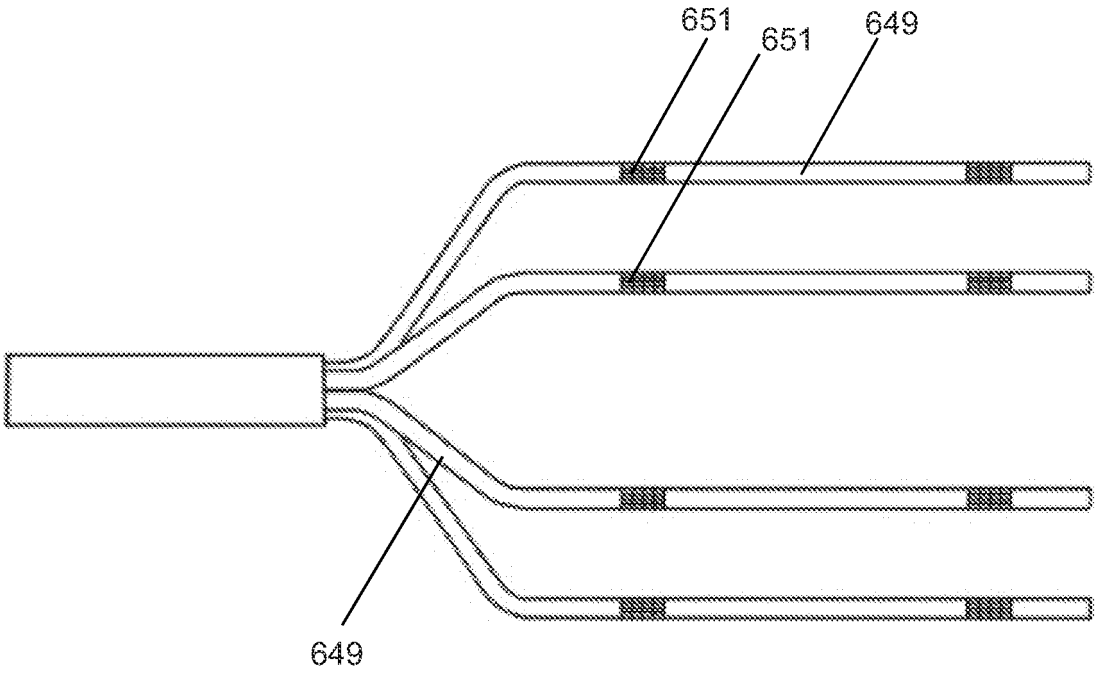


6B

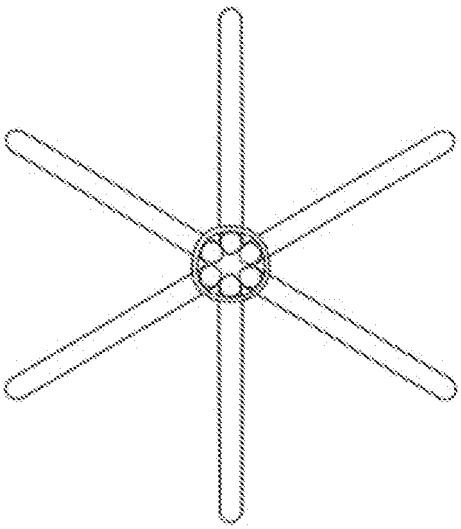


Figures 6C-6D

6C



6D



Figures 7A-7B

7A



7B

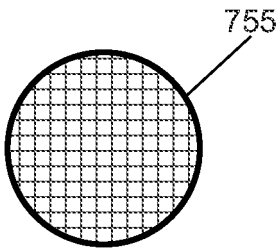


Figure 8

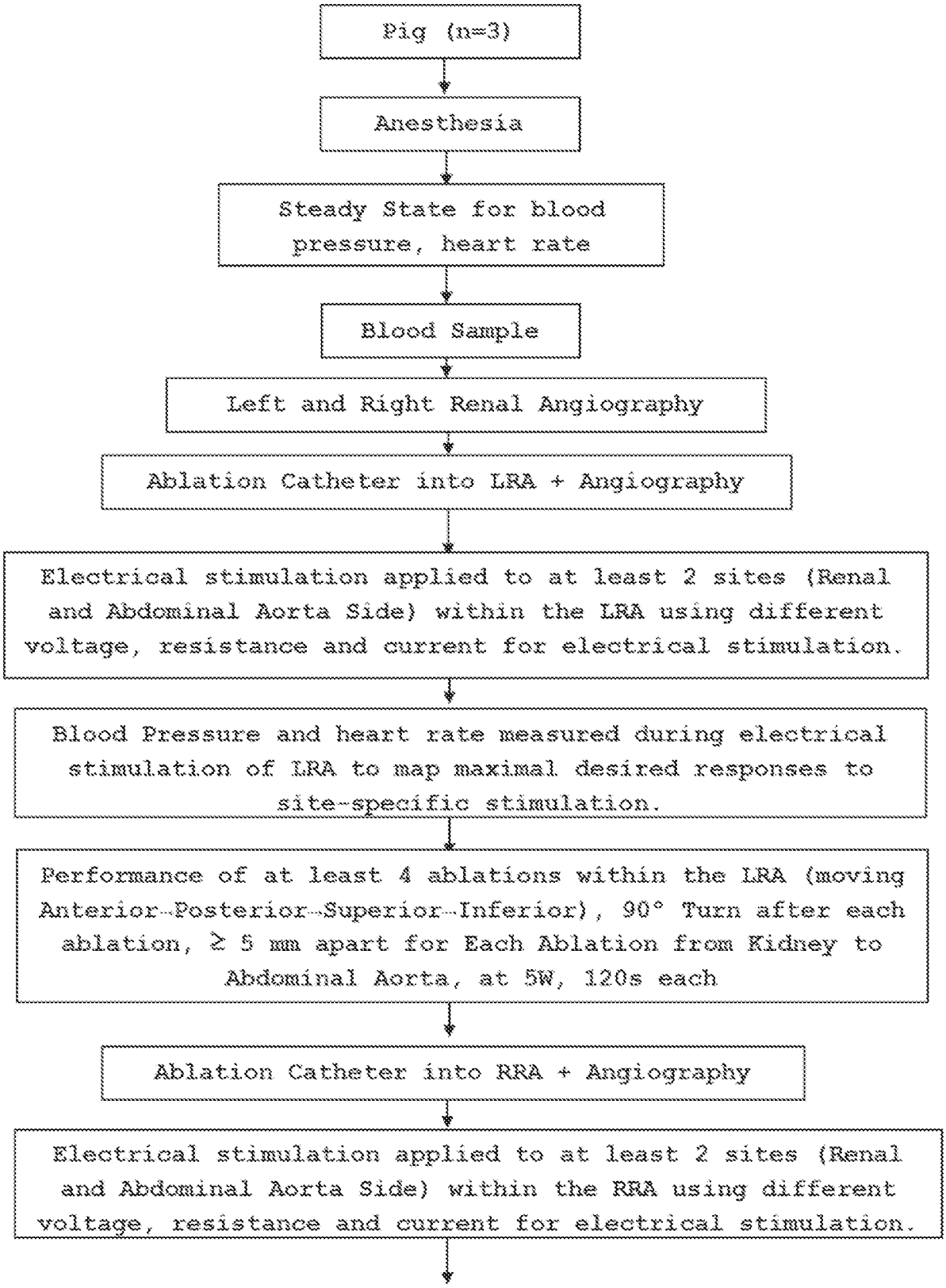
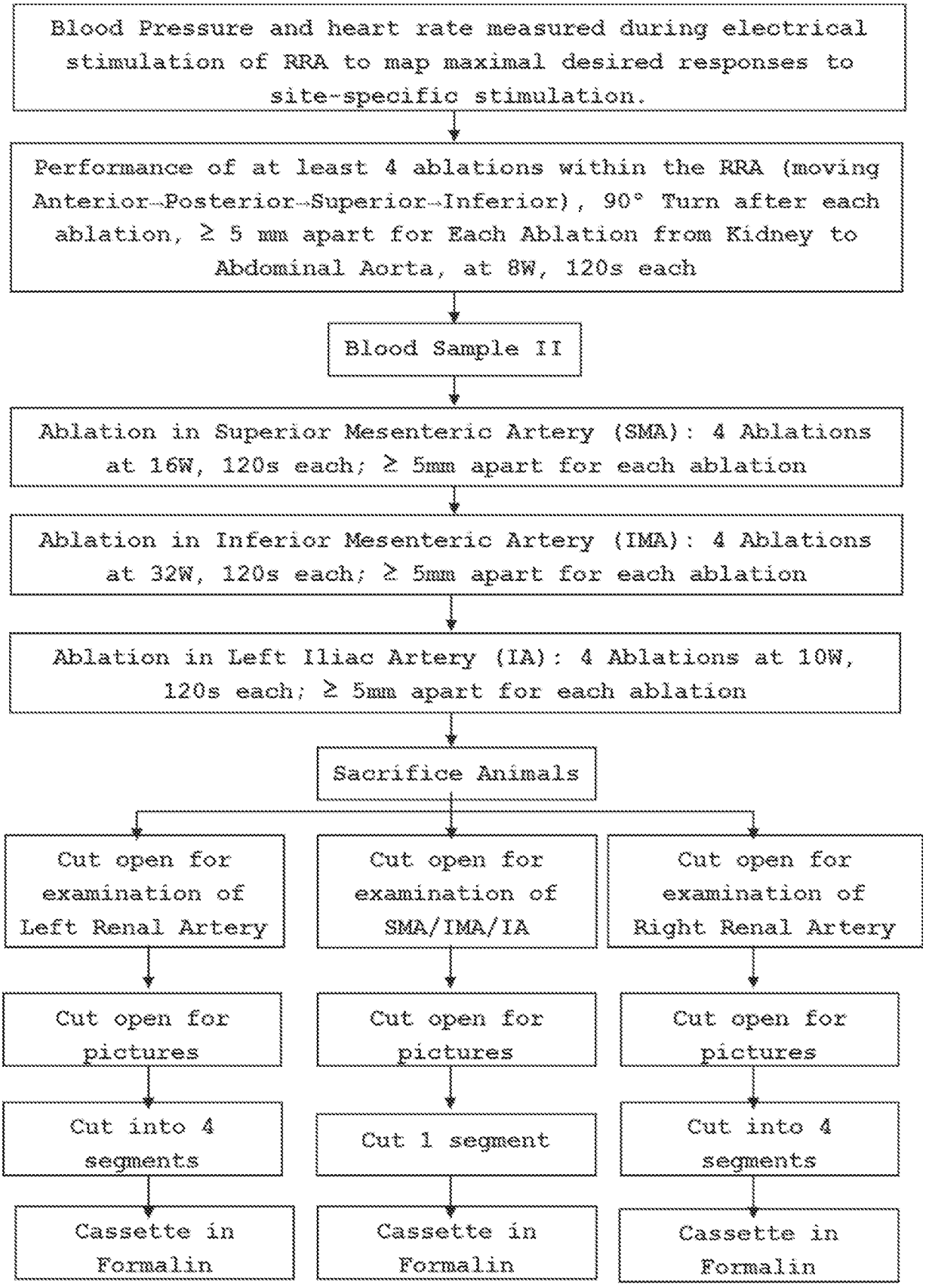
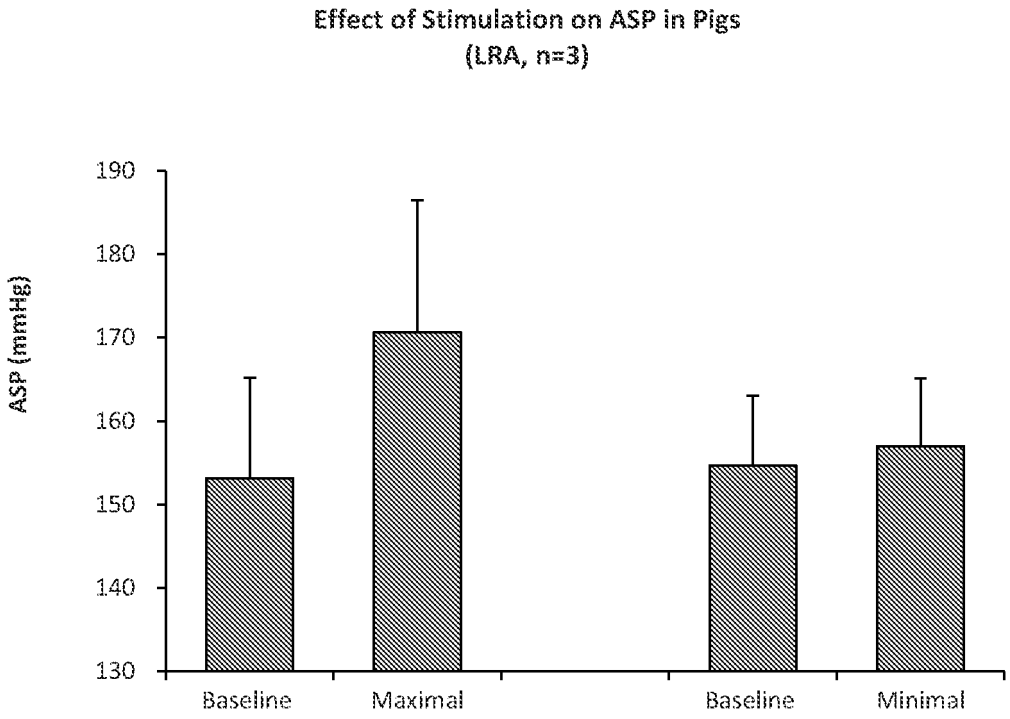

Pig (n=3)
Anesthesia
Steady State for blood pressure, heart rate
Blood Sample
Left and Right Renal Angiography
Ablation Catheter into LRA + Angiography
Electrical stimulation applied to at least 2 sites (Renal and Abdominal Aorta Side) within the LRA using different voltage, resistance and current for electrical stimulation.
Blood Pressure and heart rate measured during electrical stimulation of LRA to map maximal desired responses to site-specific stimulation.
Performance of at least 4 ablations within the LRA (moving Anterior→Posterior→Superior→Inferior), 90° Turn after each ablation, ≥ 5 mm apart for Each Ablation from Kidney to Abdominal Aorta, at 5W, 120s each
Ablation Catheter into RRA + Angiography
Electrical stimulation applied to at least 2 sites (Renal and Abdominal Aorta Side) within the RRA using different voltage, resistance and current for electrical stimulation.

Figure 8 (Cont'd)

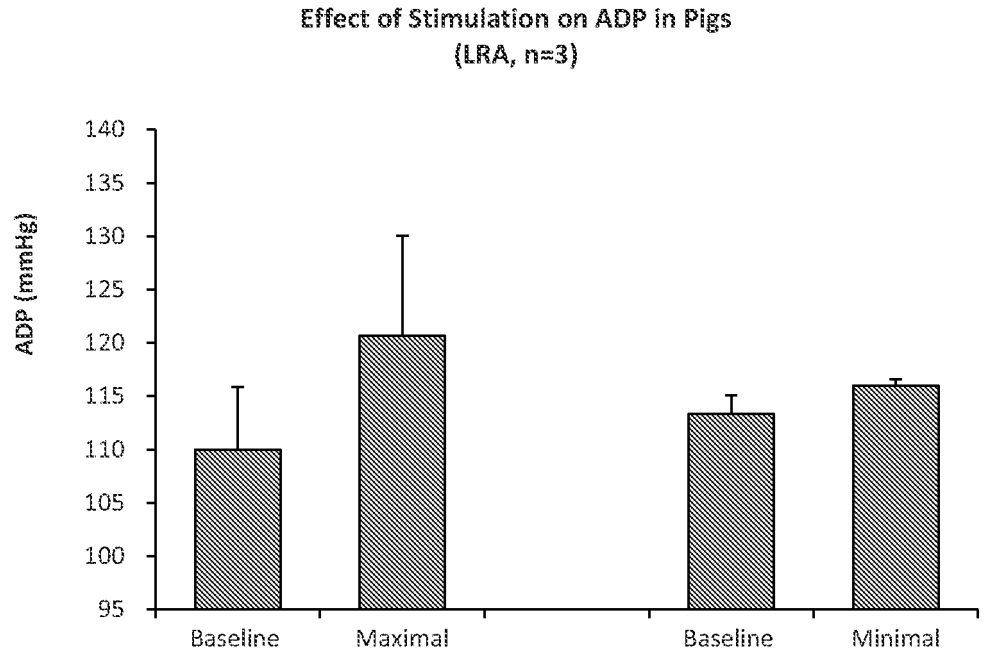


Figures 9A-9B

9A

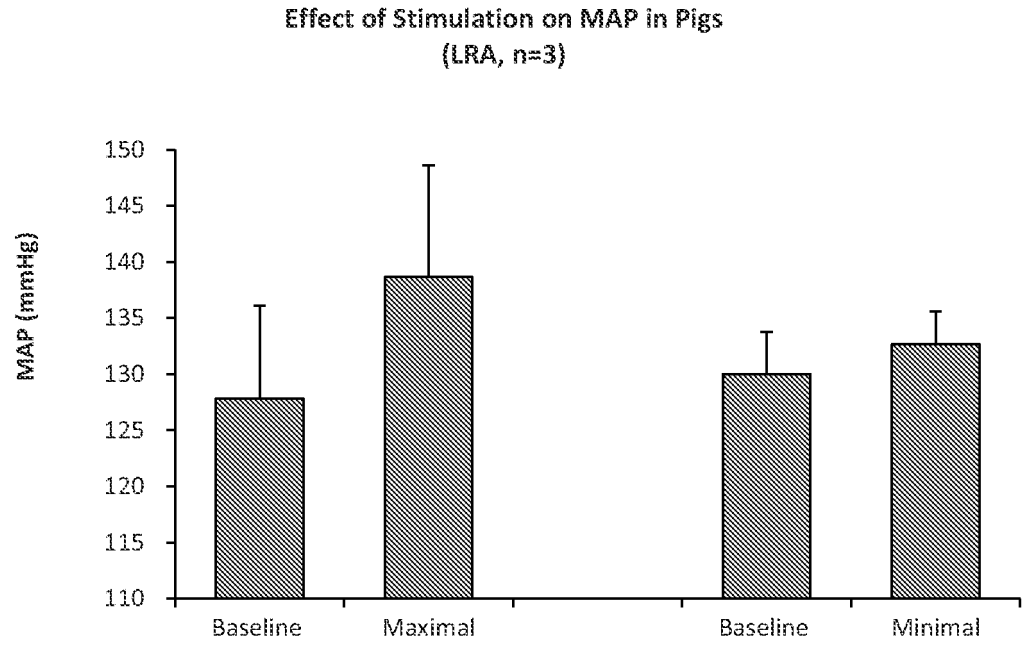


9B



Figures 9C-9D

9C

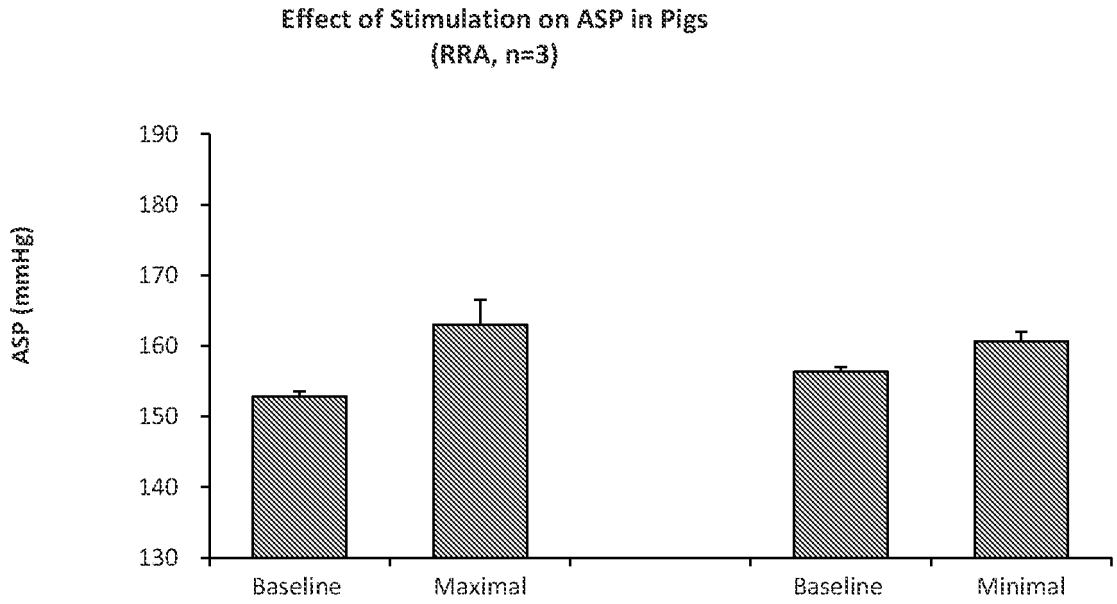


9D

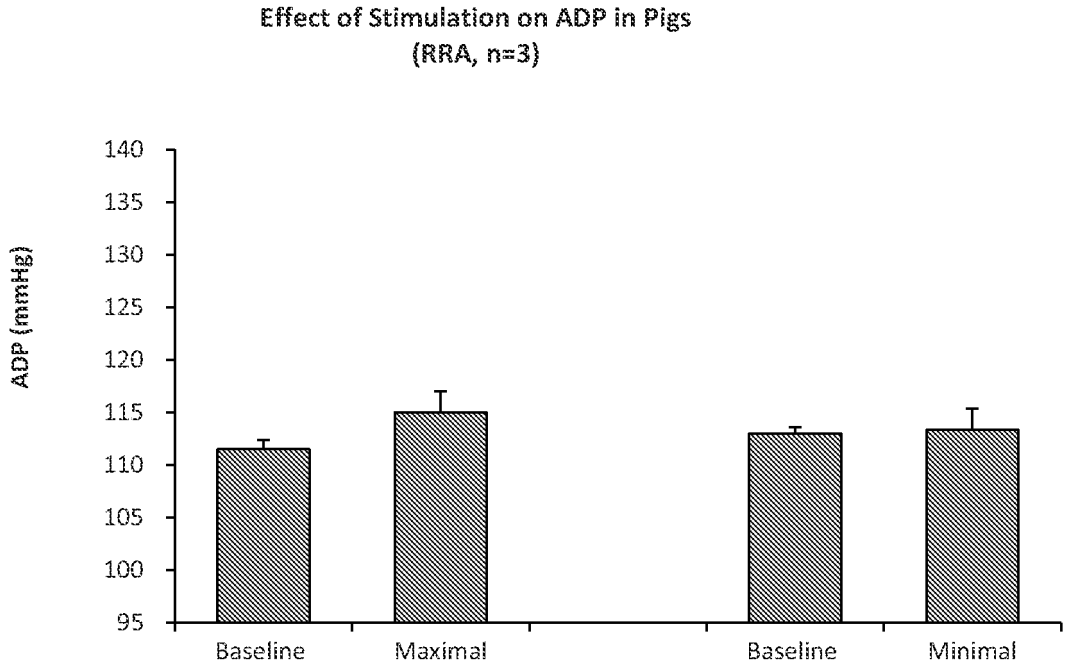


Figures 10A-10B

10A

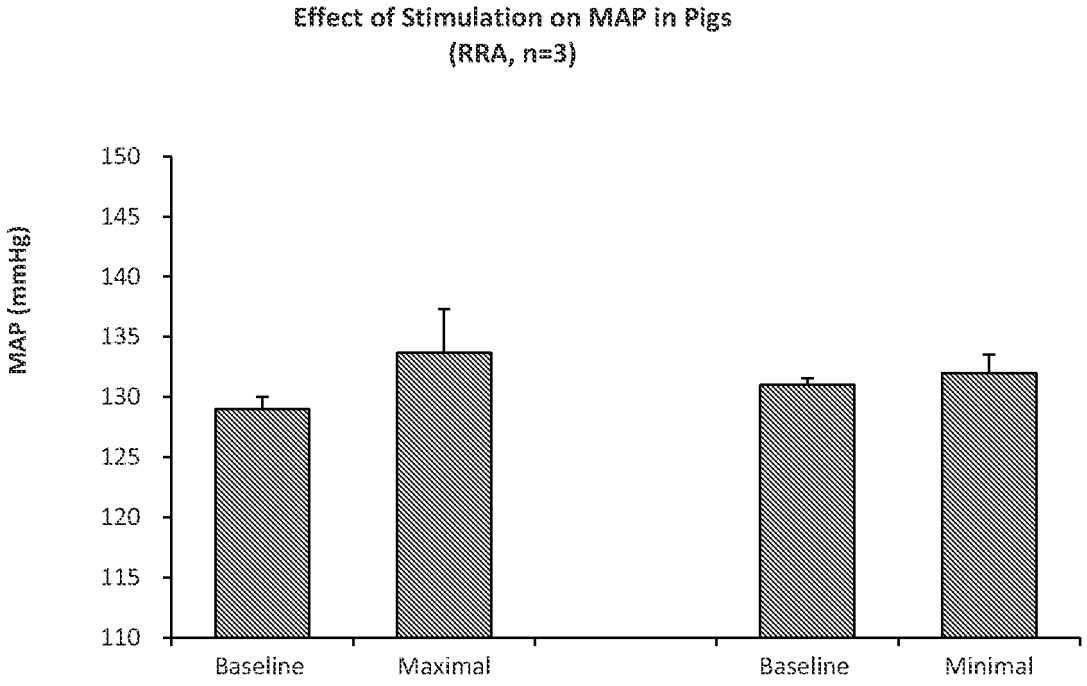


10B



Figures 10C-10D

10C



10D

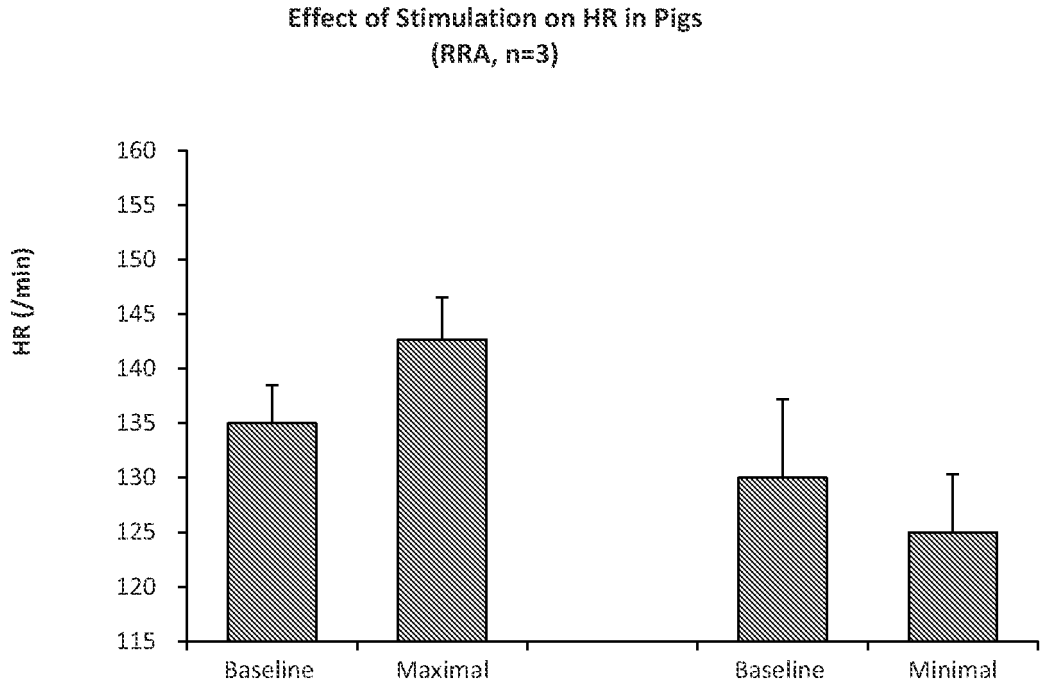


Figure 11

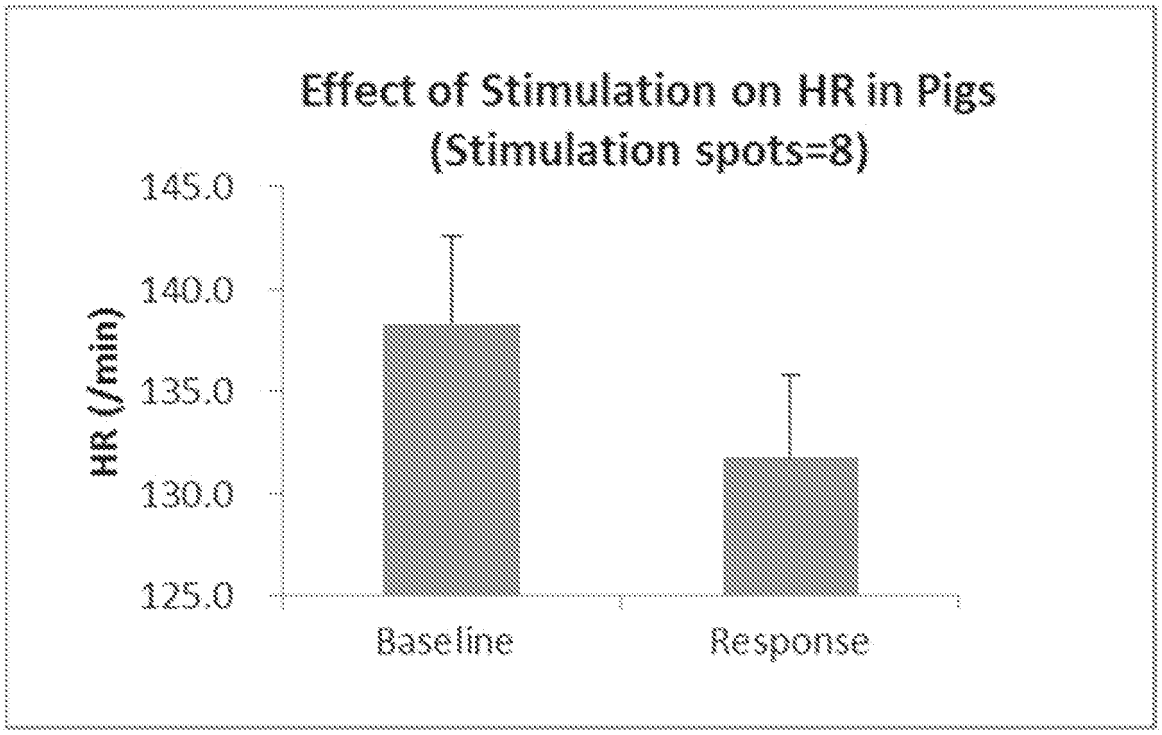
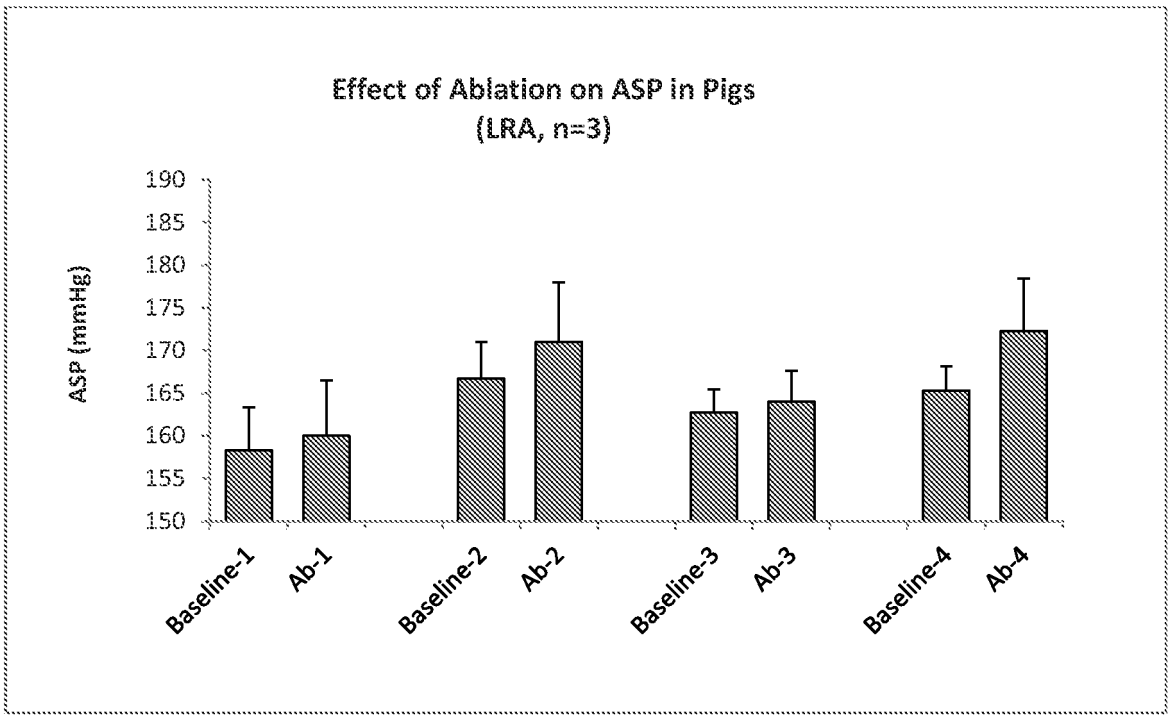

Effect of Stimulation on HR in Pigs
(Stimulation spots=8)
HR (/min)
145.0
140.0
135.0
130.0
125.0
Baseline
Response

Figure 12A-12B

12A



12B

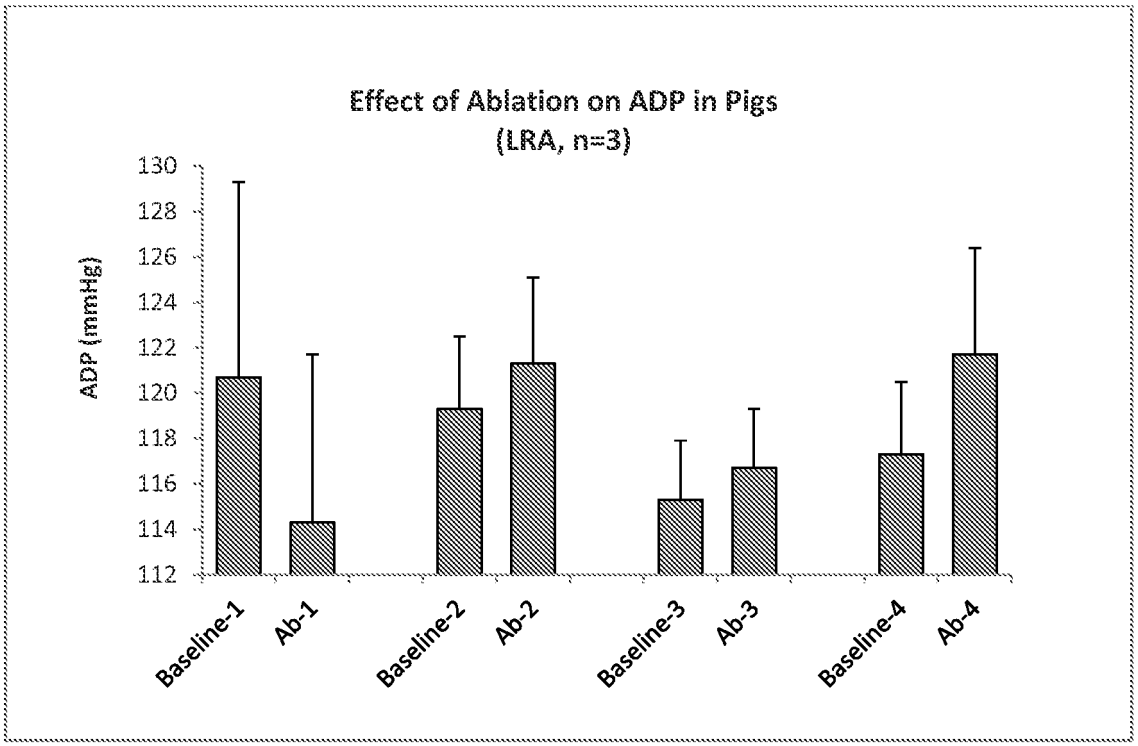
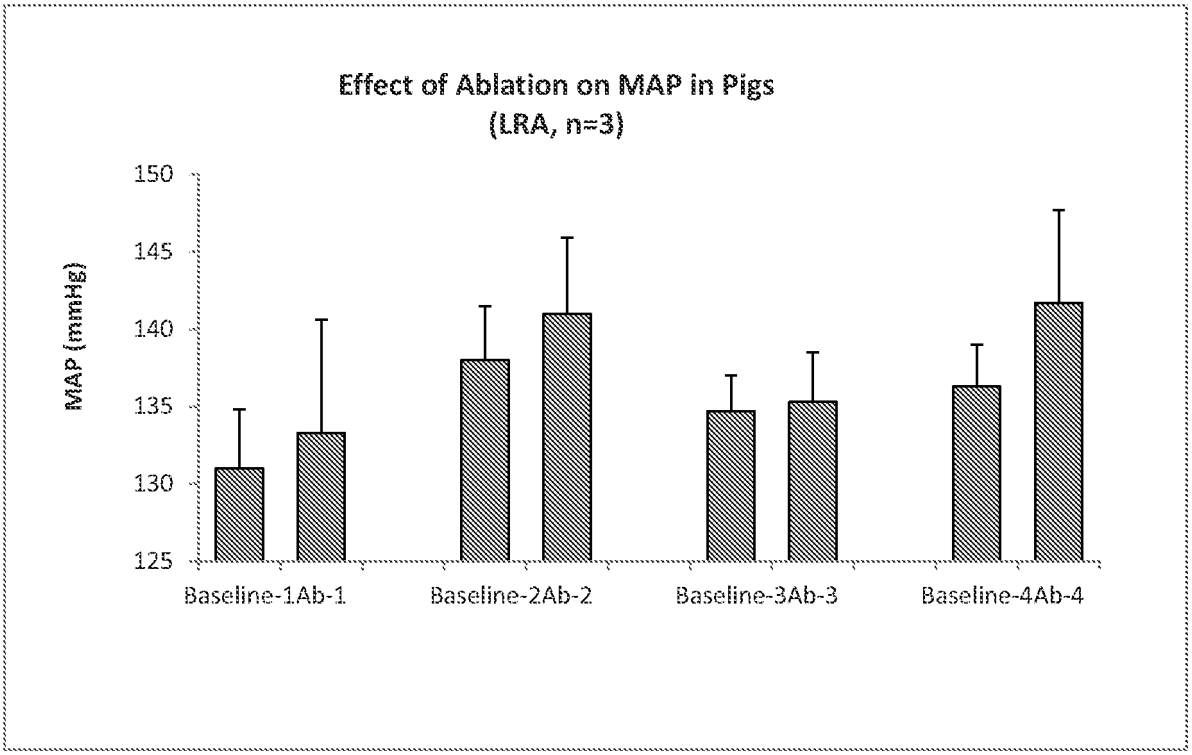


Figure 12C-12D

12C



12D

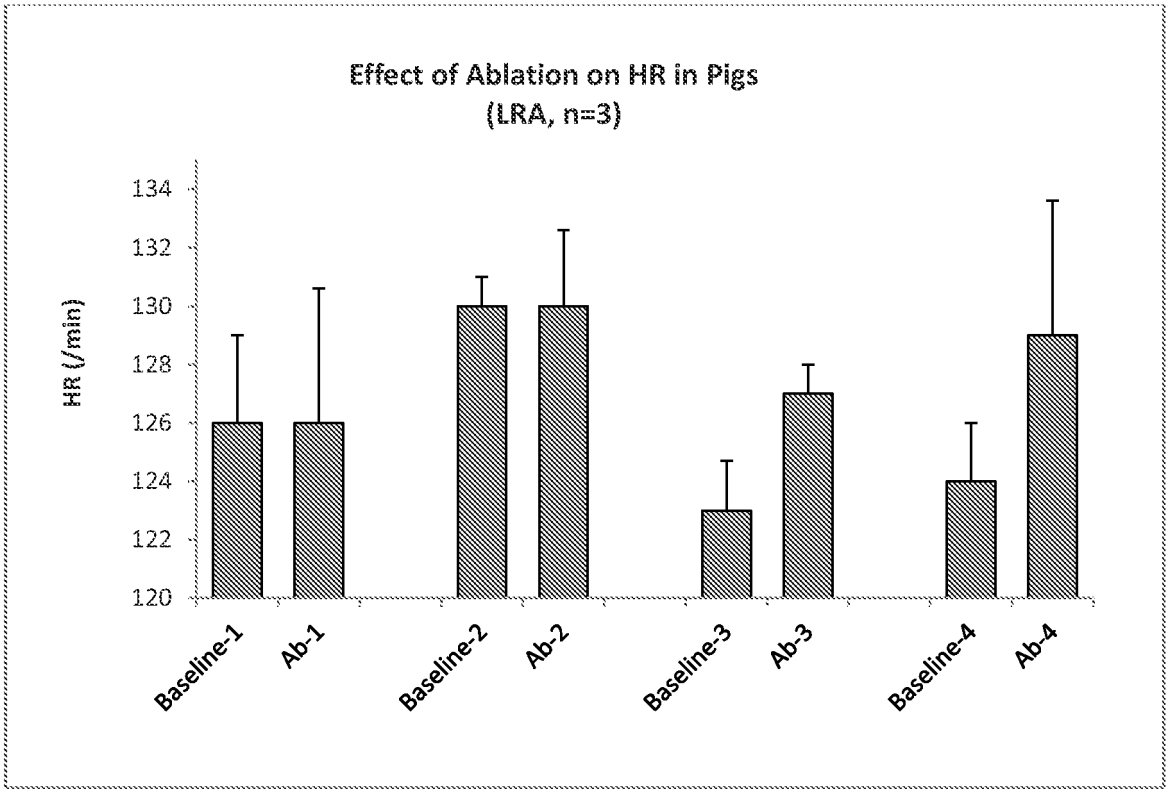
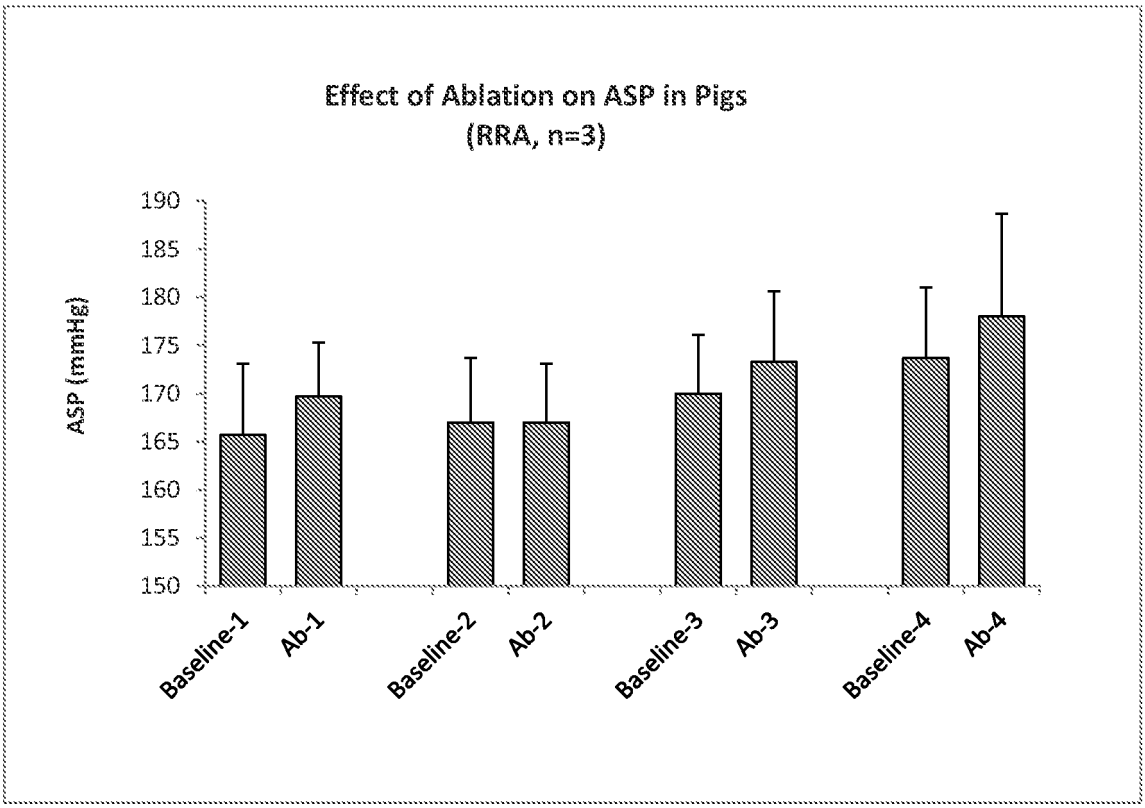


Figure 13A-13B

13A



13B

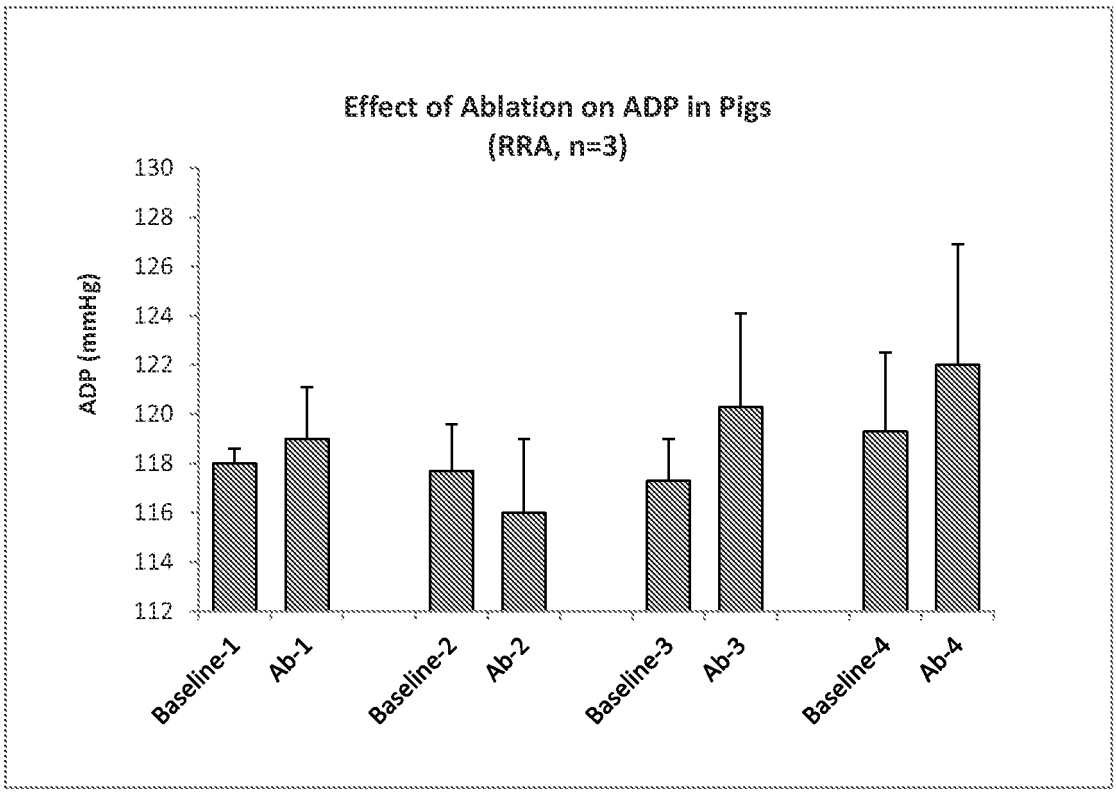
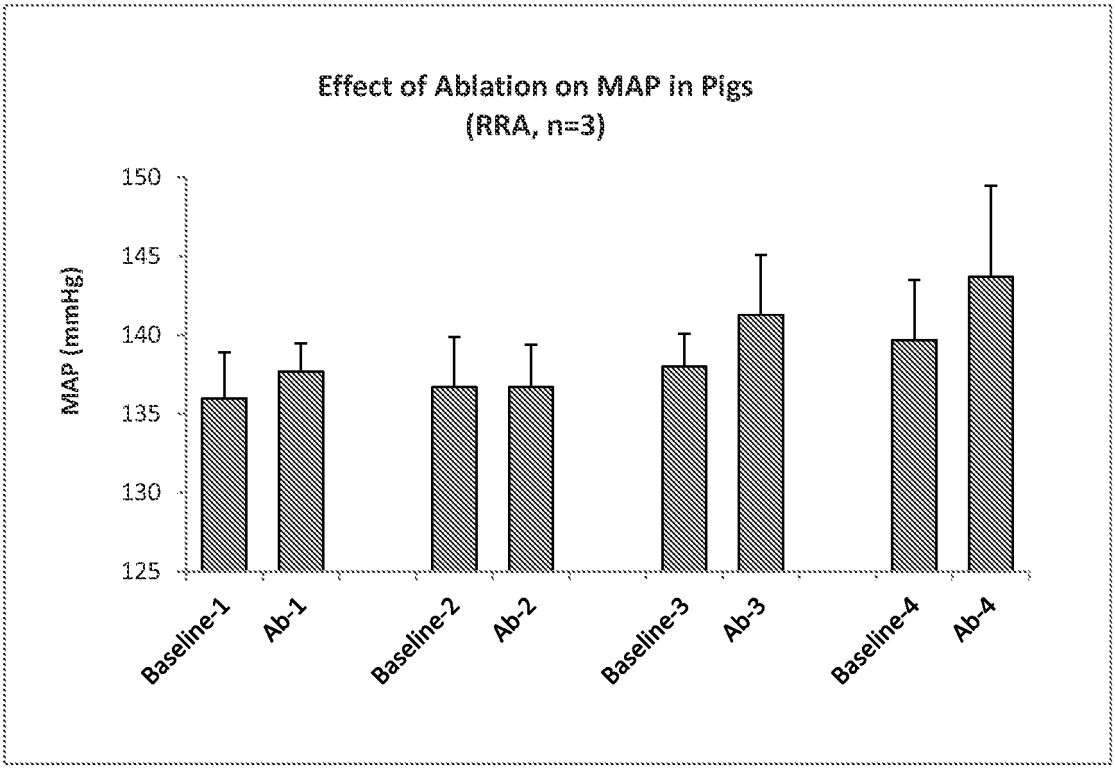


Figure 13C-13D

13C



13D

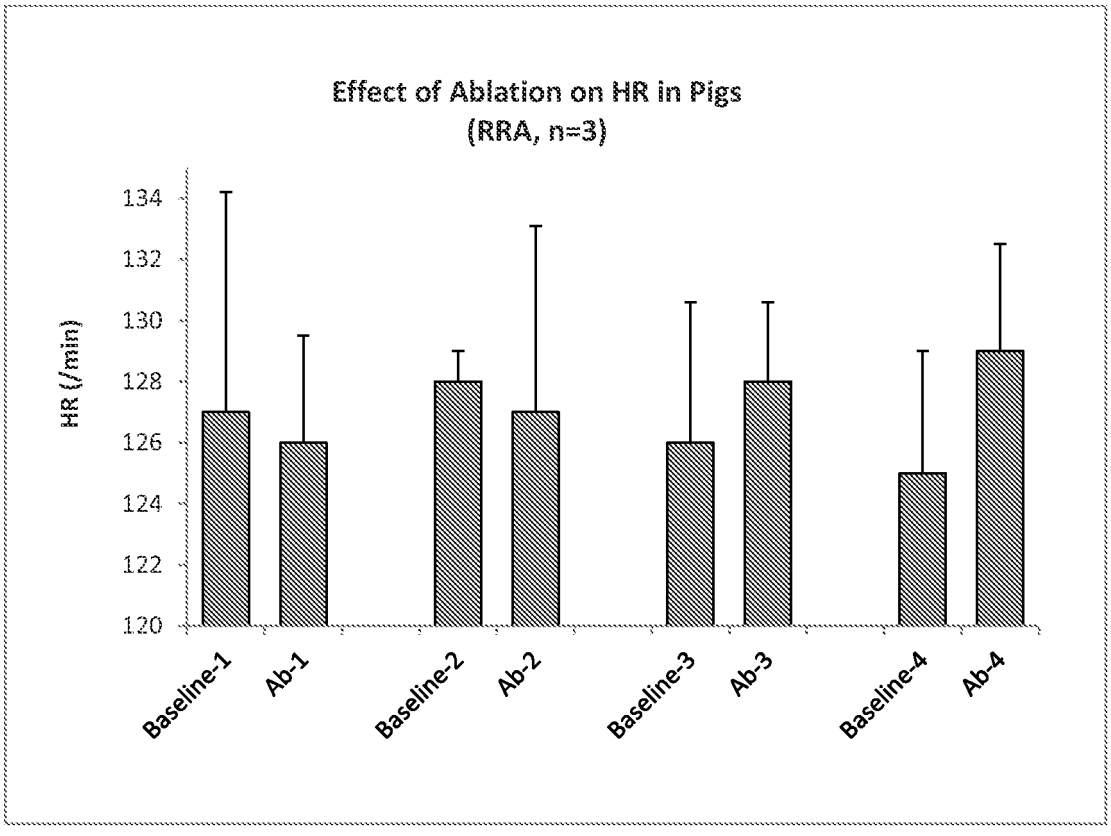


Figure 14

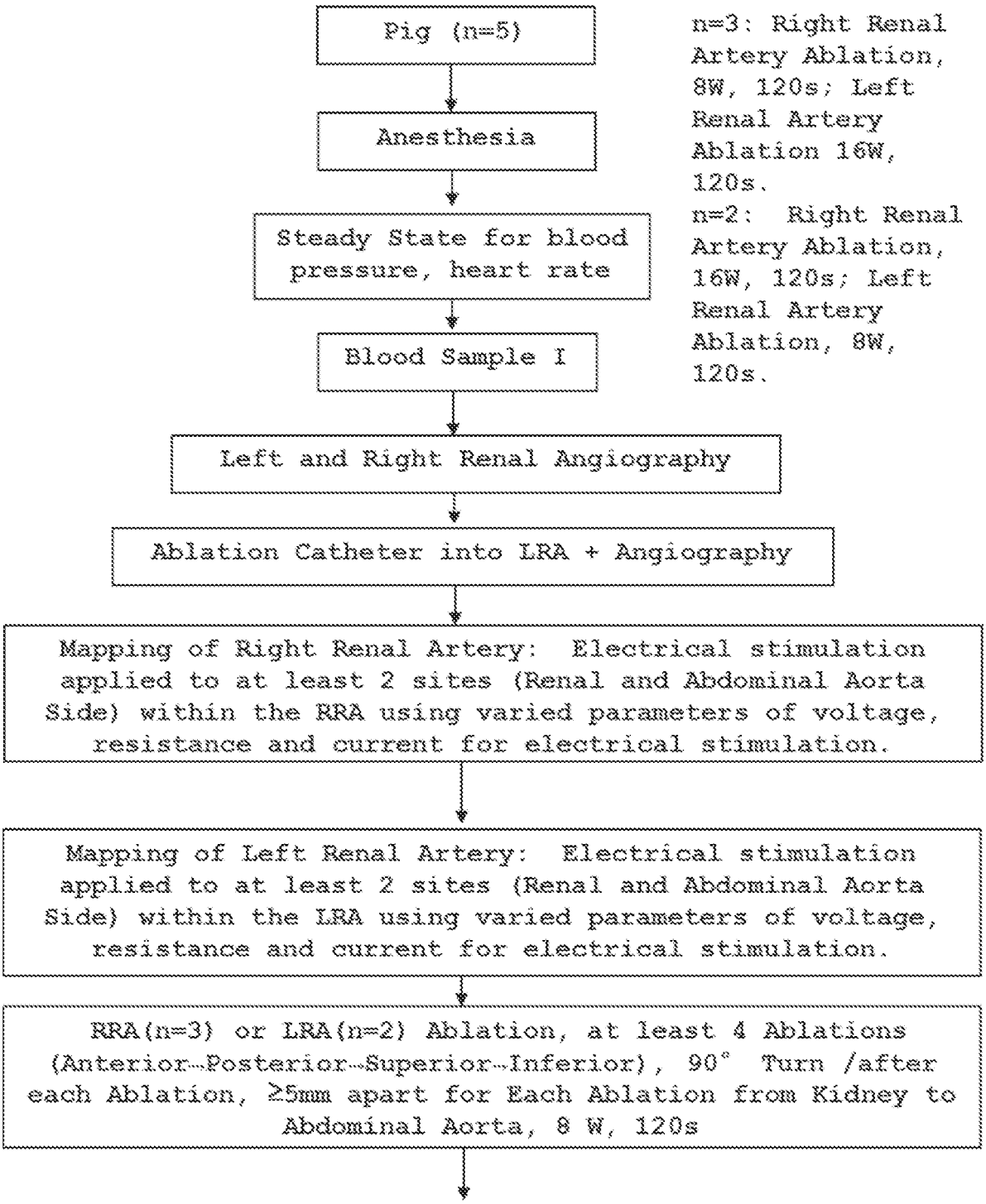

Pig (n=5)
Anesthesia
Steady State for blood pressure, heart rate
Blood Sample I
Left and Right Renal Angiography
Ablation Catheter into LRA + Angiography
Mapping of Right Renal Artery: Electrical stimulation applied to at least 2 sites (Renal and Abdominal Aorta Side) within the RRA using varied parameters of voltage, resistance and current for electrical stimulation.
Mapping of Left Renal Artery: Electrical stimulation applied to at least 2 sites (Renal and Abdominal Aorta Side) within the LRA using varied parameters of voltage, resistance and current for electrical stimulation.
RRA(n=3) or LRA(n=2) Ablation, at least 4 Ablations (Anterior→Posterior→Superior→Inferior), 90° Turn /after each Ablation, ≥5mm apart for Each Ablation from Kidney to Abdominal Aorta, 8 W, 120s
n=3: Right Renal Artery Ablation, 8W, 120s; Left Renal Artery Ablation 16W, 120s.
n=2: Right Renal Artery Ablation, 16W, 120s; Left Renal Artery Ablation, 8W, 120s.

Figure 14 (Cont'd)

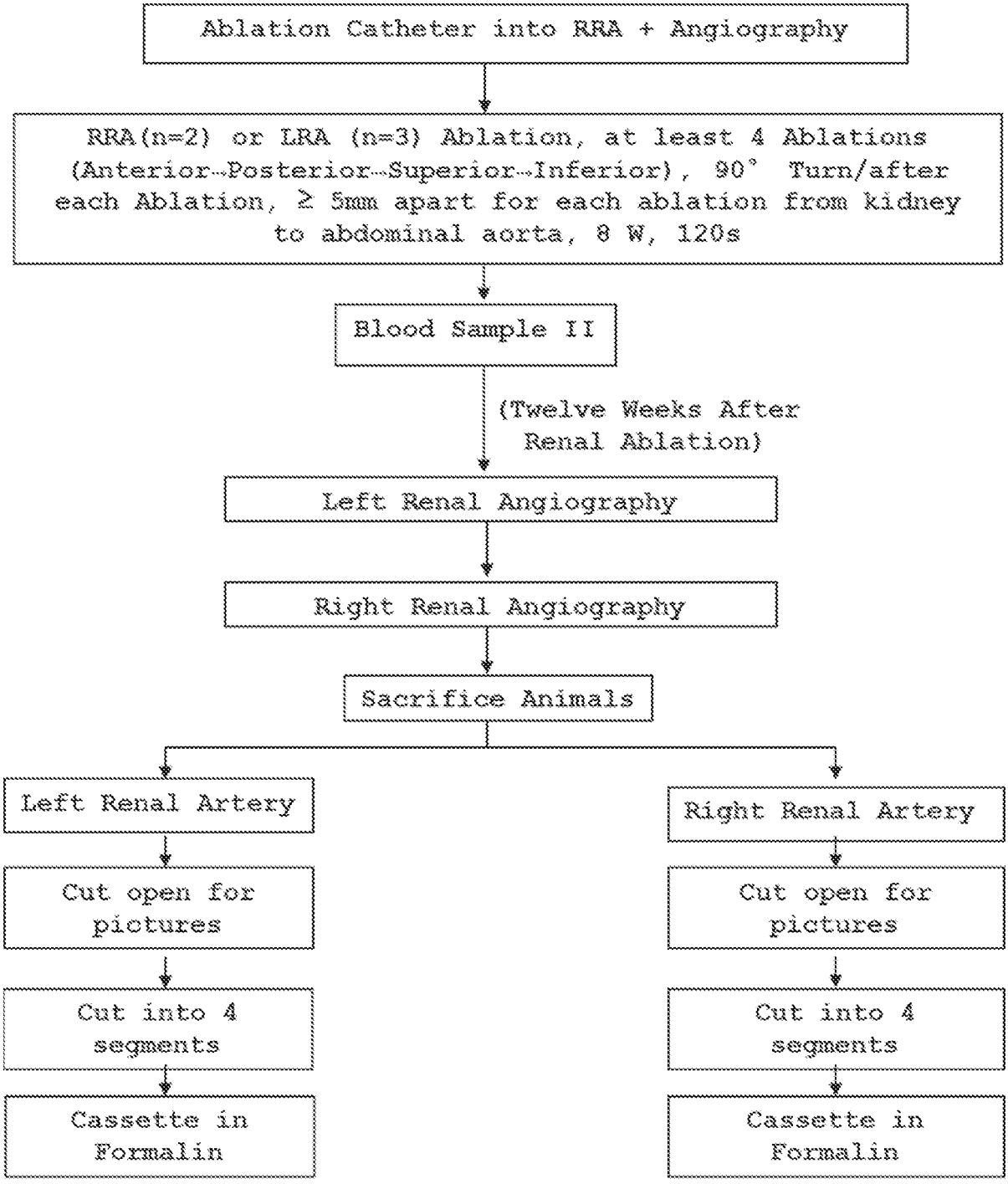


Figure 15



Histology Cassette Labeling:

LK1, LK2, LK3, LK4; RK1, RK2, RK3, RK4