Article

Corrosion Study of Implanted TiN Electrodes using Excessive Electrical Stimulation in Minipigs

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Figure S1. (a) Tissue around the tip of an electrode stimulated at 20 mA-200 Hz after 1 week of implantation. The tissue was stained using hematoxylin and eosin (H&E), which is the most commonly applied stain in medical diagnostics. Some inflammatory cells can still be observed, but capsule formation has begun to take place. (b) Cells around the silicone part of the electrode appear very similar to those around the electrode tip, indicating no signs of stimulation-induced tissue damage.



Figure S2. (a) The tissue around electrodes in group 1 showed no signs of tissue damage upon sacrifice. (b) The tissue around electrodes in group 2 showed some redness around the electrode tip, which likely is due to tissue damage. (c) The tissue around the electrode tips of electrodes in group 3 showed obvious tissue damage, but the tissue around the insulated parts was unaffected. (d) The tissue around the electrode tips of electrode tips of electrodes in group 4 showed even more extensive tissue damage and bleeding. Nevertheless the tissue around the insulated parts was unaffected.