



Company Materials

Micro-Leads is a medical device company who designs custom conformal electrode arrays, *STIM-GRID* High-Density active electrode technology, and multi-contact cuff electrodes.

STIM-GRID High Density Arrays for Spinal Cord Stimulation (or other conformal applications). High-density active electrode technology provides 48+ electrodes sites using only 16 implanted conductor wires, overcoming the one-to-one wire to contact limitation of passive high-channel count electrode technologies. High-resolution current-steering can provide finer focal points of electrical stimulation on the spinal cord which could improve motor control, bladder control, and sexual dysfunction after spinal cord injury. Ultra-soft fusion electrode technology conforms to the spinal cord for improved coupling.

Precision Electrodes. Micro-Leads fusion electrode array technology is flexible in 3D (in contrast to thin-film materials), ultra-soft (1000 times softer than thin-films), ultra-thin (less than 300 um), robust to mechanical stretch (nano-fiber technology), and uses only ISO-10993 biocompatible materials. Electrical contacts are comprised of platinum-iridium with feature sizes smaller than 100 microns in size which are embedded within the conformal silicone substrate and can be exposes on two sides of the electrode. Our ultra-soft substrate uses medical-grade nanofiber technology to provide a robust implanted mechanical lifetime as well as a substrate which can be sutured without tearing. Custom electrodes for use in GLP studies can be rapidly created within weeks using our laser fabrication process, while IDE studies require biocompatibility, cleaning, and sterilization validation to be performed. Implanted lead wires and percutaneous helical coiled wires which have been validated by others for long-term human percutaneous use can also be integrated with custom precision electrodes.

Micro-cuff electrodes. Micro-cuffs for GLP studies can be manufactured for nerve diameters 300 to 2000 microns in diameter. Many sizes are available as a standard item for pre-clinical work, while custom sizes or contacts may require additional development. Several geometries are available with different closure mechanisms.





Exhibit D

Micro-Leads will make *STIM-GRID* High-Resolution **Active-Lead technology** available for preclinical and select IDE studies as part of a custom technology development or validation project plans in collaboration with interested parties. Micro-Leads may provide design or customization of Active-Leads for clinical indications, along with biocompatibility, cleaning validation, and sterilization validation tests remaining which may be required by FDA for use as a human implant.

Micro-Leads will provide **Precision Electrode** and **Micro-cuff** design services custom electrode development as part of a work plan for custom conformal electrode or configurations. Micro-Leads staff will provide electrode design services, manufacturing, and work with partners for cleaning and sterilization validation.