US Society for Neuroscience: Microvitae presents results on brain polymer electrodes

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Understanding of neuronal networks can be helped by the development of new flexible probes. The conventional neuronal probes, with multiple recording sites, allow recording of neuronal activities on freely moving animals. However, the rigid nature of those probes, implantable or designed for surface Electrocorticogram (ECoG) recordings (E-probe), increases the decline of the recorded signal quality with time.

We developed new flexible implantable and E-probe microelectrodes to minimize the lesions

and maximize the recording interface with the tissue. Furthermore, the conducting polymer used

as electrode site increases the signal to noise ratio by comparison to gold.

Those conducting polymer and insulator layers provide good biocompatibility and a high

mechanical flexibility.

These new probes increase the quality and duration of neuronal signals for long-term

experiments.