# Special Issue

# Neural Electrodes in Bioelectronic Medicine

## Message from the Guest Editors

Bioelectronic medicine (BM) is an upcoming field aiming to substitute pharmaceutical treatments by interfering with bioelectrical activity from the nervous system. BM has the advantage of acting immediately, whereas pharmaceuticals have to be metabolized by the body to take effect. Additionally, BM is very target-specific, and may therefore help to reduce drug side effects. Neural electrodes are an essential interface in BM. They allow us to stimulate and record, and therefore interfere with neural tissue activity. Among others, neural stimulation was used to restore sensory feedback in amputees and motoric functions in SCI patients. Other groups demonstrated the potential to stimulate or record from the autonomic nervous system, restoring heart rate or digestive disorders and bladder or sexual dysfunction. Despite recent advancements, the application of neural electrodes in long-term and clinical applications remains very challenging. Issues such as material failure, tissue inflammation, and low charge injection or SNR limit the application of neural electrodes in clinical applications.

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## Deadline for manuscript submissions

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