

## **VERSATILE INNOVATIVE ADHESIVES FOR MEDICAL IMPLANTS**

### **ABSTRACT**

The neuroengineering field is defined by the coupling of engineering and neuroscience; bringing together two different, but complimentary entities. Similarly, to create a successful neuroengineering device, it is necessary to couple the strengths of various, and sometimes distinctly different materials.

Three hurdles that exist in selecting materials are creating a bond between substrates, developing a simple and feasible manufacturing process, and selecting materials that meet not only current regulatory guidelines, but follow regulatory trends for the future. New adhesive technologies are an option to help

overcome these hurdles by widening the range of material options to pursue new therapies.

During the present lecture, we would like to draw attention to the technical challenges in covalent adhesion with substrates used for long term implantation applications and present Elkem Silicone's expertise in the field of Silicone adhesives.

More precisely, we will explore the performance of novel adhesives designed to meet evolving regulatory requirements, optimize production processes, and overcome the barriers of material selection by bonding with a variety of substrates.