

Título del Proyecto	<b>NEUROGRAPHENE</b>
Nº de expediente asignado	GA: 604391 (GRAPHENE)
Abstract	<p>THE NEUROGRAPHENE PROJECT focuses on the fabrication of a graphene-based multielectrode array (MEA) prototype for local stimulation and recording of brain activity. It is our hypothesis that characteristics of graphene such as flexibility, high biocompatibility and conductivity can be exploited into engineering an optimal brain interface. While the optimization of implanted MEAs is still a challenge in the neuroscience/surgical fields, the properties of graphene suggest that it could overcome problems that the materials currently used have, while providing additional benefits. The devices that we propose here have the advantages of being formed by a large number of microelectrodes arrayed on flexible substrates with small geometrical size, will adapt well to the brain, induce minimum reactions, and provide recordings with high signal to noise ratio.</p> <p>THE OBJECTIVES of this project are to validate graphene as a brain interface material, to develop devices for both recording neural activity and for brain stimulation, to test these expected advantages/properties in the brain of experimental animals, and to take the first steps towards approval for use in humans. To achieve the objectives of the project, a multidisciplinary consortium that covers the most important research areas has been formed, including technological, biological/medical and the industrial aspects.</p>
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Enlaces:

<http://www.neurographene.eu/>

<http://www.nanbiosis.es/tag/neurographene-project/>