

# New patent will allow for the relief of chronic neuropathic pain

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University of Seville and GB Sciences Inc. members meet to license the patent.  
Credit: University of Seville

The researchers Lucía Martín Banderas and Mercedes Fernández

Arévalo, from the I+DNanomed research group at the University of Seville, have patented an innovative formulation based on nanotechnology, which is designed to relieve chronic neuropathic pain. The company GB Sciences, Inc. has obtained the exclusive global intellectual property licence for the use of this patent.

This research group, in collaboration with the researchers J.A. Micó and E. Berrocoso, of the University of Cadiz and the Mental Health Networking Biomedical Research Centre (CIBERSAM), has shown that its formulation of controlled liberation of a derived cannabinoid provides neuropathic pain relief in rats for a period of eleven days after the oral administration of a single dose. Part of the results of this project have recently been published in the review *Nanomedicine: Nanotechnology, Biology and Medicine*.

Within the framework of this global licensing agreement, the University of Seville research group I+DNanomed, led by Dr Mercedes Fernández Arévalo, has signed an agreement to work on research projects with the company for the development of innovative formulations based on polymer nanoparticles with active ingredients developed by GB Sciences for the treatment of chronic pain.

The University of Seville researchers' creation makes it possible, via the use of nanotechnology, to encapsulate the main active ingredients in a polymer matrix composite. In this way, it is possible to extend the therapeutic effect while reducing the dose of medicine it is necessary to administer. In addition, the [active ingredients](#) cannot cross the blood-brain barrier, which removes any potential psychoactive effect.

GB Sciences has highlighted the advance that the development of this technique signifies. The contribution of the University of Seville researchers Mercedes Fernández Arévalo and Lucía Martín Banderas to the development of new more effective systems for the development of

type of molecule, based on nanotechnology, is going to mean a very important advance in the treatment of chronic pain. According to one of the company's managers, "Their system has proven to be more effective than other methods, such as inhalation or ingestion, for administering these composites".

**More information:** Esther Berrocoso et al, Single oral dose of cannabinoid derivate loaded PLGA nanocarriers relieves neuropathic pain for eleven days, *Nanomedicine: Nanotechnology, Biology and Medicine* (2017). [DOI: 10.1016/j.nano.2017.07.010](https://doi.org/10.1016/j.nano.2017.07.010)

Provided by University of Seville

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