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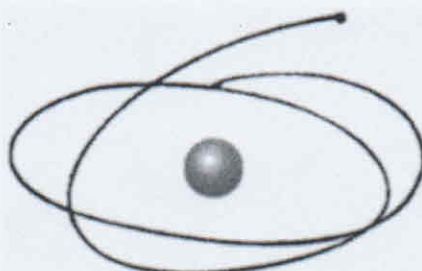
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## **RESUMOS**

**I ENCONTRO NACIONAL DA**

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**C A P E S**



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## DEVELOPMENT OF A NOVEL SELECTIVE TRANSPORT SYSTEM OF ANTI-INFLAMMATORY DRUGS INDICATING TO ARTICULATIONS DISEASES BASED IN BIONANODEVICES USING MAGNETIC GRAPHITE/CARBON

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The following proposed doctor degree project is based on the utilization of magnetic carbon/graphite conjugated with Naproxen anti-inflammatory, within the scope of ReN<sup>2</sup>AMeD/CAPES activities. Considering the expected biocompatibility for the magnetic carbon/graphite, we propose in this work its use as a drug carrier, particularly, the Naproxen anti-inflammatory, indicated for articular diseases treatment. The traditional drugs are not ideal for the controlling or the modifications of the inflammation signs and symptoms. However, they present severe adverse reactions such as ulcers and bleedings. Furthermore, some chronic inflammatory diseases, namely, Rheumatoid Arthritis, Chron's disease and Osteoarthritis demand a diary administration of such drugs, which increases even more the risk of ulcer formation, cutaneous injuries, acute renal failure, renal papillary necrosis, hepatics and bone marrow disturbs. Moreover, the drug presents difficulty in the articulation access, due to the low water distribution in the bones and cartilages. The development of a drug delivery selective transport system turns the anti-inflammatory use possible, with higher efficiency and duration, without the inherent adverse effects of this drug group. As the graphite is inert, and in this in case, has magnetism, the restriction of the conjugated (graphite/ drug) in articulations using external magnetic field is possible. With the standardization of this drug delivery system, the incorporation of many other drug groups for several other diseases will be possible.

**Keywords:** *Naproxen, drug delivery, articulations diseases, magnetic graphite.*