

## Plan Overview

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*A Data Management Plan created using DMPTool-Stage*

**DMP ID:** <https://doi.org/10.48321/D11882>

**Title:** Development of novel magnetic nanocomposites based on hydrogel for evaluation as carrier vehicle of drugs and agricultural inputs

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**Funder:** São Paulo Research Foundation (fapesp.br)

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**Template:** Digital Curation Centre (português)

### **Project abstract:**

With the advances of the world technology, the use of conventional methods in agribusiness is decreasing due to the increase of the use of precision agriculture that appears as a modern mechanism, reflecting a new model of productivity together with environment qualification. Linked to precision agriculture, it can be highlighted in the development of biodegradable hydrogels and their nanocomposites as carrier vehicles for controlled release. In parallel, the economy suffers with high cost of inputs used in the medical area. In this way, biomaterials with less cost have been developed. In addition, by the fact of the drugs need of continuous administration, the conventional methods are no most appropriated for application to patients, whereas that these methods have many collateral effects. In this way, the substitution of these methods by controlled release technology opens new perspectives because when the drugs are applied from conventional methods, their release presents a maximum dosage peak losing this effect, reaching an inefficient level. In this sense, the key innovation of this project is to obtain and characterize of hybrid nanocomposites with iron oxide nanoparticles, and to modify nanostructures, such as nanoclay. Aiming their magnetic properties for application in controlled release of agricultural inputs with reuse possibility and in the medical area as carrier vehicle for the drug controlled release with remote activation. The project has as global objective continue the research, partially funded by this agency, related to the synthesis, characterization, and development of nanocomposites based on polysaccharide and inorganic materials as nanoclay and zeolite for agriculture application.

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## **Development of novel magnetic nanocomposites based on hydrogel for evaluation as carrier vehicle of drugs and agricultural inputs**

Serão construídos gráficos e tabelas oriundos das medidas experimentais inerentes ao projeto.

Serão criados a partir de softwares livres ou por meio de licenças compradas, como origin, excel, word, etc...

Acompanharam planilhas, gráficos e outros.

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Só será permitido o acesso de pessoas vinculadas ao Auxílio ou da Agência de Fomento.

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Planeja-se compartilhar em nuvens e em back-up em máquinas do proponente.

Isto dependerá de quem solicitar o compartilhamento dos dados.

Também dependerá dos resultados obtidos e são passíveis de patenteamento.

O gerenciamento dos dados será inicialmente feita pelo responsável deste plano.

Não sei explicitar neste momento.

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