

# 24<sup>TH</sup> BIOTECHNOLOGY CONGRESS: RESEARCH & INNOVATIONS

## Annual Congress on & CRISPR CAS9 TECHNOLOGY AND GENETIC ENGINEERING

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### **Plant biotechnology applied in pharmacological research and in problems of the agricultural sector in Mexico**

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Some problems are described in the areas of agriculture, health and social of Mexico and their solution through plant biotechnology. The State of Morelos is a producer of "Morelos" rice; It enjoys national and international prestige for its industrial and culinary characteristics, however, it has a high cost of cultivation and few profits for the producer. Because of this, it was developed by cultivating anthers, a variety with high grain quality, to be placed at a better price in specific market niches. Mexico ranks first as an exporter of papaya. This culture presents virosis problems, for this reason, the technique of cultivating anthers to generate resistant varieties is being applied. In the Municipality of Tlayacapan Edo. De Morelos venerate each year the "child God", for it adorns the altars with the species *Agave dasyliroides* Jacobi & Bouche, which grow literally in the rocks. It is currently overexploited, so the Municipal President requested its *in vitro* propagation to repopulate the natural habitat. 5000 plants were generated with which the species continued to be multiplied. The low percentage of survival during the acclimatization of plants propagated *in vitro* motivated to develop a prototype to reduce mortality; this was reduced to 0.0.e. Taxol is a highly demanded anti-carcinogen; hence the importance of increasing its yield in *in vitro* cultures; a process was patented to increase the production of this substance in cell cultures of *Taxus globosa* Schtdl. Bioprospecting projects are currently being developed in order to take advantage of wild resources for food and medicinal purposes. Methods of micropropagation and hydroponic cultivation of different plants of Silvestre origin have been established.

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