

Poster presentation

## Estrategic aspects by technology transfer from the academic and business development of the bioinformatics in Costa Rica and the central American region

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The biological languages (nucleotides and amino acids) are important to design advanced biotechnological and pharmaceutical products with Bioinformatics. Actually, in Universities all over the world there are operating academic programs dedicated to prepare experts in this field to an undergraduate and graduate level as an authentic science (even in its own objects of study as complex systems) with recognized specialized divisions (Biocomputer, Computer Molecular Biology and Digital Biology, between others). The regional biological resources of Latin America (plants, animals and other biodiversity) is not taken advantage of in a totally technological way because of the lack of collaboration between those who have the technology and those who have the specific resources for its development and investigation; limiting even opportunities in the growing of the world technology derived from the bioinformatics. Costa Rica, is seen as a leader in the software development in Central America. The success has been obtained through the existent quality in our technological environment. The knowledge with a high creativity can generate innovative products in different fields. As it is demonstrated today by many Costa Rican software companies that have created unique applications worldwide. On the other hand, bioinformatics projects propose a vision of integration in multiple scientific and technological areas related with the molecular investigation and our biodiversity genetics. The innovation and practical form of its functionality is key for the

preferences of possible buyers. Besides, it represents an effective opportunity in the time and costs decrease in relation with the traditional methods that are not always effective.

The genetic algorithmics developed are based in the extraction of interesting regions and constitute a huge help when there is a necessity of extraction of knowledge versus processing time. The creation of automatic bio-systems of identification under statistic models are very important and of excellent support for scientists and researchers of the region. The improvement of an adequate model of technological transfer in bioinformatics in the Central American region, will allow us to discover key elements in the drug development of great importance, mainly when we have available a spectacular scenery from the research of our unique biological diversity and the structural models, processes and biological systems that the nature offers us as starting points in the process for the development of software products in bioinformatics. It will look for the participation of different professionals interested in the development of technological ideas with business purposes, mainly oriented to the software production field.

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