



BIOINFORMATICS AND PHYSIC NUT

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Fossil derived fuels, a finite resource, supply around 86% of the world's energy. In order to reduce this dependency, alternative renewable sources of energy have been pursued in late years. In that context, biodiesel has got special attention, and the physic nut (*Jatropha curcas*) presents one of the best potentials for this purpose as it shows high quality oil, good productivity, easy conversion of its oil into biodiesel, and a wide adaptability. However, it's a quasi-undomesticated species and has several challenges in order to become a wide alternative as fuel crop. This summary presents part of the BRJATROPHA project effort in the physic nut breeding program: the use of bioinformatics structure to support and to optimize the application of genomics and biotechnology into breeding program. The action plan includes: to develop a website for the project; to adapt and make available bioinformatics tools for project and external relevant data, in particular configuring a genome browser (like GBROWSE or JBROWSE), putting together public and local information, such as mapping DArT sequences into public genome of *Jatropha curcas*. These kind of tools will be both used directly by breeders and other researchers, and by bioinformaticians for analysis by demand, such as the evaluation of DArTs sequences distribution into the genome (and a SNPs calling) in order to complement the genetic diversity study. The undergraduates work is at initial stage (understanding the problem, evaluating tools and planning), and must be completed by 2013.

Keywords: BIOINFORMATICS; BRJATROPHA; PHYSIC NUT

Concentration area: Genomics Evolution



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