

Développement de bioréacteurs végétaux et de technologies amplicon/VIGS dans les monocotylédones (riz et maïs)

OBJECTIFS

The proposed project is directed towards the development of original viral-based biotechnological tools to be applied in crop plant. A major interest will be done to rice and maize monocot hosts for which such tools are not available until now. We will first focus on the production of proteins with high insecticide properties towards economic-important pest worldwide. This work should lead to the development of original viral based bio-system of a particular interest for our South partners due to their low cost, easy and secured use.

ACTIONS

The proposed program will focus on the development of viral based bio-systems allowing an efficient production of proteins which have previously demonstrated high insecticide activity. Two strategies will be considerate. First, the model plant *Nicotiana benthamiana*, a species related to tobacco, will be used for an optimal expression of insecticide proteins.

The second strategy will utilize original amplicon vectors in rice and maize for which such tools are not available until now.

RESULTATS

This project will lead to the development of efficient plant based bio-system for the production of insecticide proteins, the development of original viral amplicon tools to be used in rice and maize, and the exploitation of these viral based tools for VIGS technology allowing for fundamental gene function studies in monocots.

PERSPECTIVES

This work will serve as a basis for further exploitation in other proteins of interest and other monocot species. Additionally, this project will serve to reinforce the implementation of the biotechnology platform that African and French partners will start to develop in Ouagadougou (Burkina Faso) from September 2013.

Responsable :

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