OVER EXPRESION OF THE *Swo1* GENE IN *Trichoderma atroviride* and EVALUATION OF ITS MICOPARASITIC ACTIVITY.

[1]Karina Atriztán-Hernández, [1]Edgar Bálcazar-López, [2]Alfredo Herrera-Estrella, [1]Jorge Luis Folch-Mallol; [2]Laboratorio Nacional de Genómica para la Biodiversidad. Departamento de Ingeniería Genética de Plantas, CINVESTAV Irapuato. Apartado Postal 629, Irapuato 36821. [1]Universidad Autónoma del Estado de Morelos, Facultad de Ciencias Biológicas, Centro de Investigación en Biotecnología, Laboratorio de Biología Molecular de Hongos, Cuernavaca Morelos; C.P.62209; inatriztan@gmail.com

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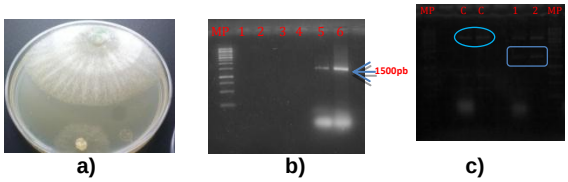
Introduction. Expansins are proteins of plants, which are known to be involved in the remodeling of cell wall structures during growth and other processes (1). Other proteins with expansin-like activity have been identified in fungi, which haven been named *Swollenins (Swo),* the first *Swo1*, was identified in *Trichoderma reesei* (2). Another *Trichoderma* species, *T. atroviride*, has been used as a model in phytopathogenic fungi control studies (3). A gene that encodes for a protein with similarity to *Swo1* was found to be highly expressed in the first stages in the process of mycoparasitism of *Trichoderma atroviride* with several phytopathogenic fungi (4).

Is of our interest to study the function of the *Swo1* gene of *T.atroviride* during mycoparasitism.

Methods.
The *Swo1* gene *was obtained* via RT-PCR from whole mycelium RNA of *T.atroviride* collected during direct confrontations with phytopathogens, later the gen was ligated to the TOPO-TA vector (Invitrogen) to transform to *Escherichia coli* DH5α, and subcloned in the expression vector *pUE10.* Transformation of *T. atroviride* was made through a protoplasts technique; at least three monosporics passes were performed to obtain stable transformants lines.

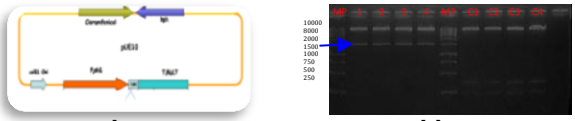
Results.



a) **b)** **c)**

Fig.1 a) Confrontation of *T. atroviride* against a phyitopathogenic fungus, b) *Swo1* gen amplified through RT-PCR, c) liberation of gen Swo1 from the cloning vector TOPO-TA using restriction enzymes *Not1* y *EcoR1.*

The Swo1 gene of *T. atroviride* was amplified and cloned (Fig1)



a) **b)**

Fig. 2 a) Expression vector pUE10, b) gen Swo1 liberation from expression vector with restriction enzymes *Not1* y *EcoR1*.

Figure 2(a) shows the expression vector *pUE10* used to subclone the *Swo1* gene in *E.coli* DH5α, Figure 2(b) shows the verification of the *pUE10::Swo1* construction for the subsequent transformation into *T. atroviride.*

Conclusions:
The *Swo1* gene of cDNA of *T. atroviride* was amplified and cloned.
Sequence analysis showed that there are no nucleotide changes in *Swo1* clone.
The *Swo1* cDNA was introduced into the expression vector *pUE10* and with this construction *T. atroviride* was transformed by the protoplasts method.
Currently the analysis of the transformants strains is being performed.

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