



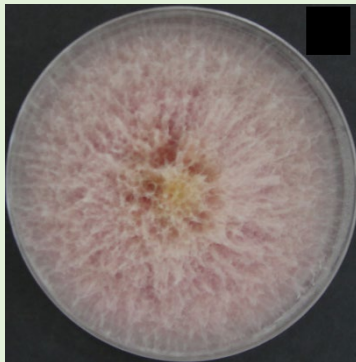
Analysis of Fg-AFP and Ltd-I effect over growth and toxigenesis of *Aspergillus* fungi with agrofood impact

J. Iribarren, J. Gil-Serna, A. Martínez del Pozo, B. Patiño



Introduction

Control of fungi:



Fg-AFP



Ltd-I





Objectives

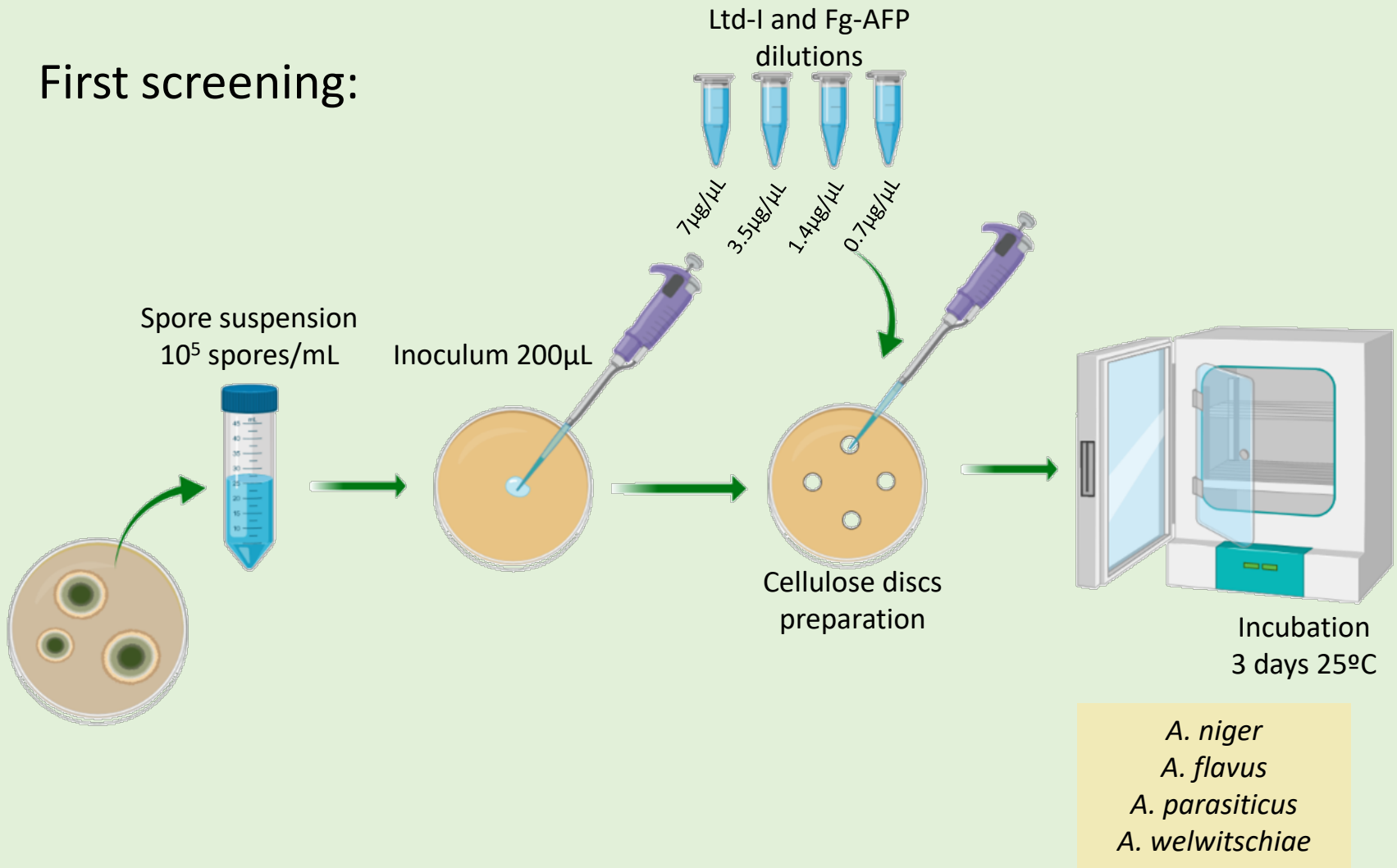
Determine the effect of the proteins Fg-AFP and Ltd-I over growth of toxigenic species among *Aspergillus* genus.

Asses the effect of Fg-AFP and Ltd-I over toxin production.



Materials and methods

First screening:





Results and discussion

Initial screening: *A. welwitschiae*

A. welwitschiae

Fg-AFP:

A. flavus

A. niger

A. welwitschiae

A. parasiticus

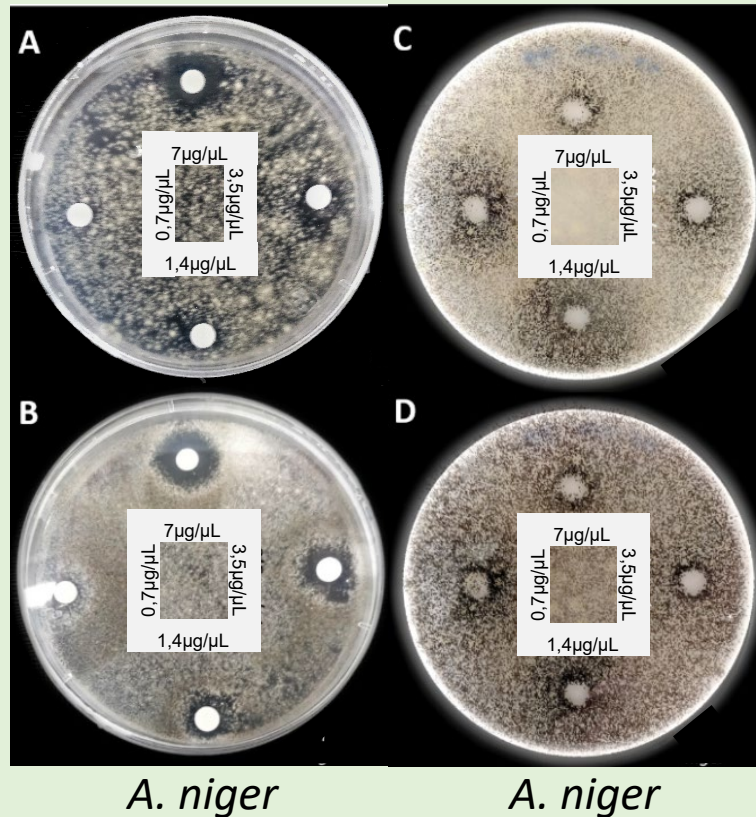
Ltd-I:

A. parasiticus

A. flavus

A. niger

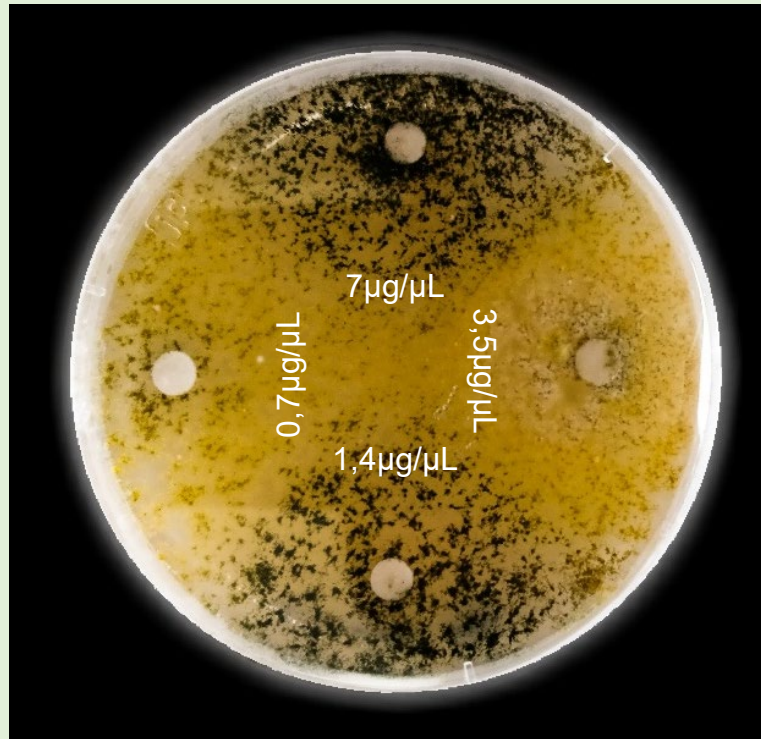
A. welwitschiae





Results and discussion

Initial screening:



Ltd-I:

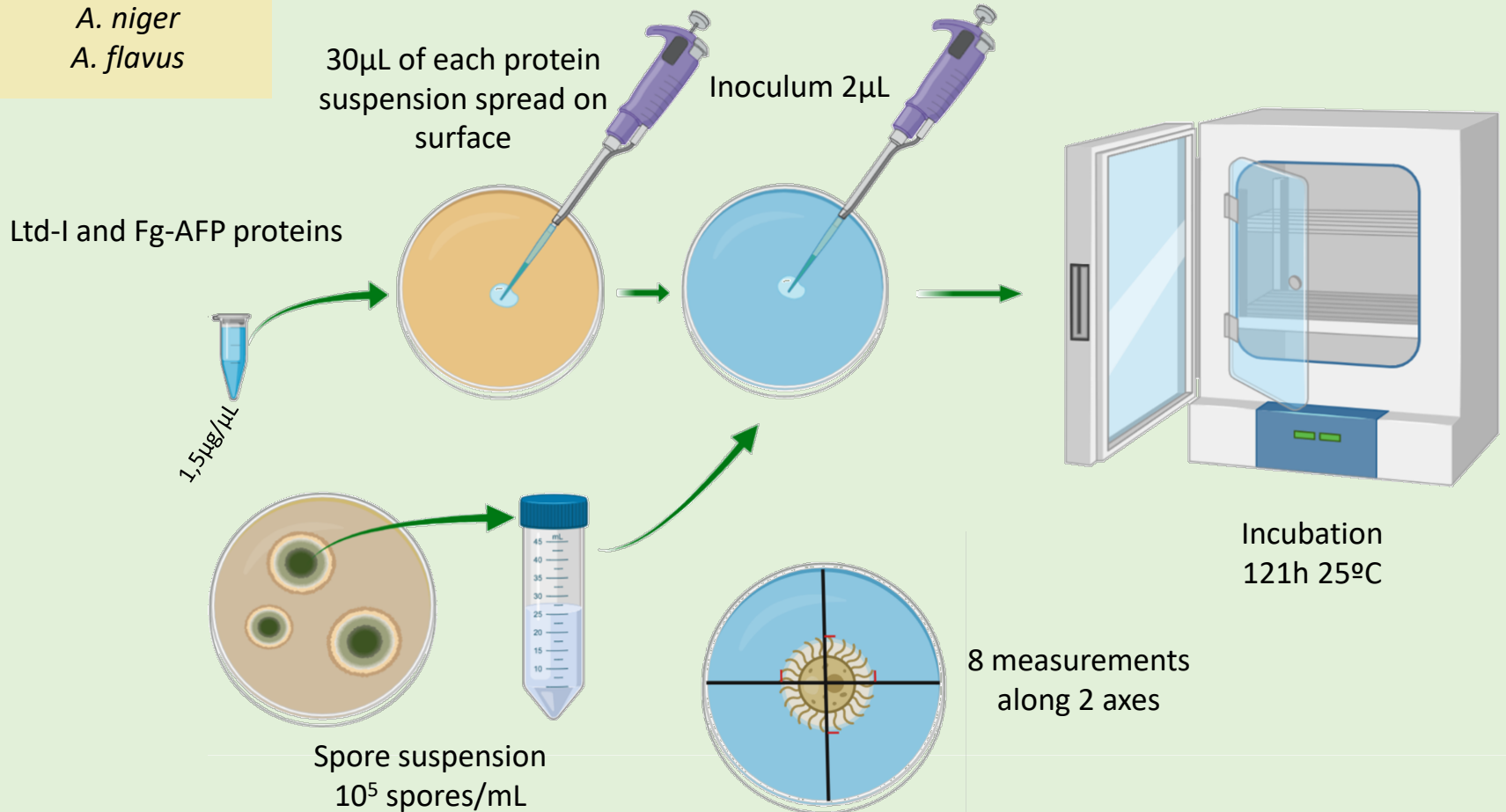
A. parasiticus



Materials and methods

Growth assesment with Ltd-I and Fg-AFP on surface:

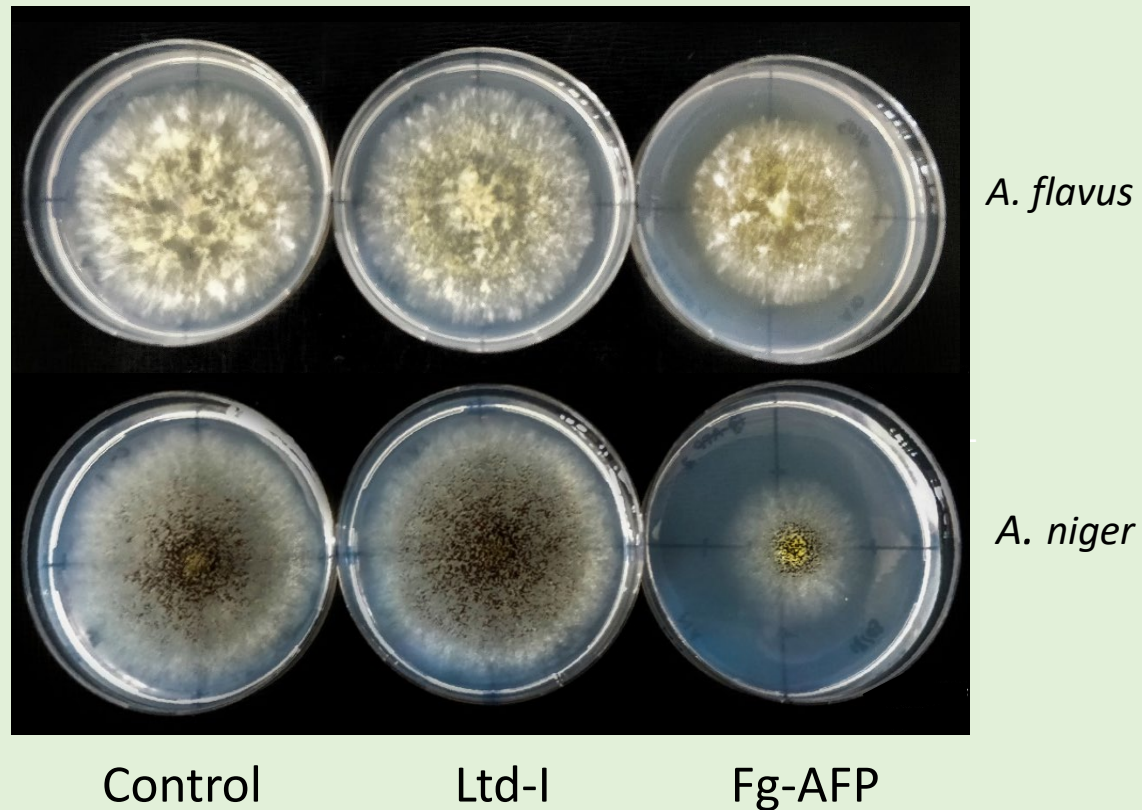
A. niger
A. flavus





Results and discussion

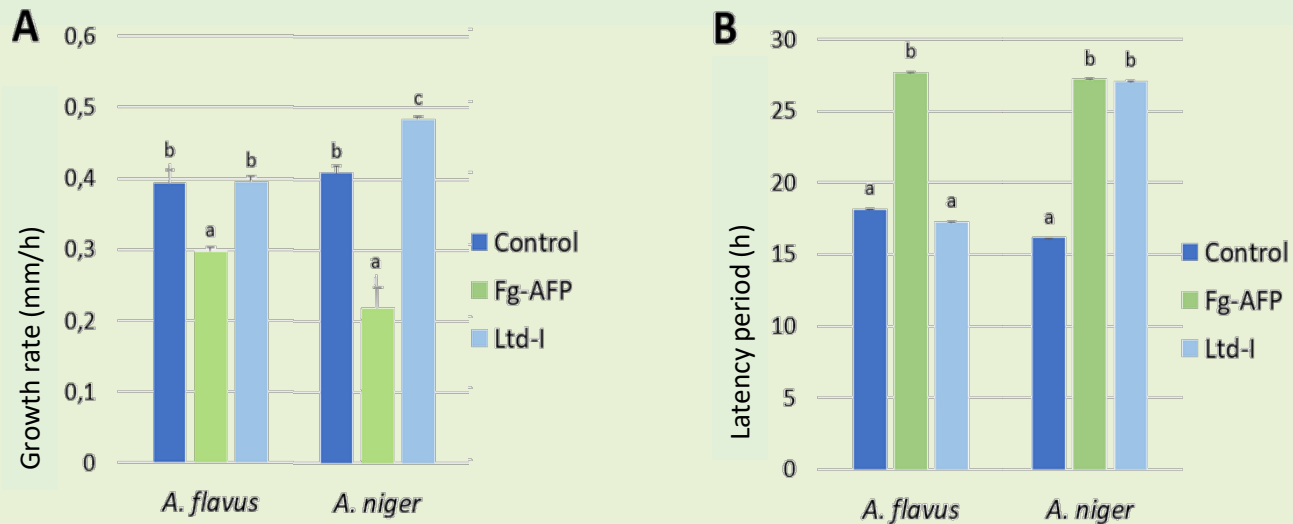
Growth assesment with Ltd-I and Fg-AFP on surface:





Results and discussion

Growth assesment with Ltd-I and Fg-AFP on surface:



Identical letters indicate a lack of statistically significant differences
($p > 0,05$)



Materials and methods

AFB₁ and OTA assesment:

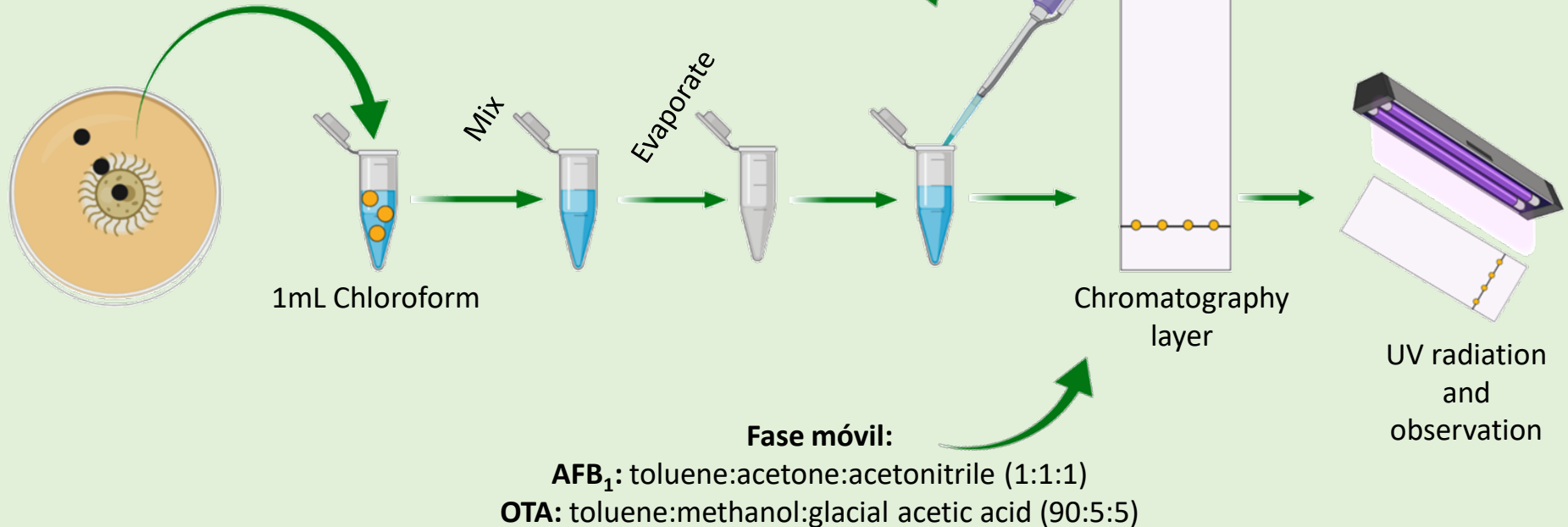
OTA:

A. niger

AFB₁

A. flavus

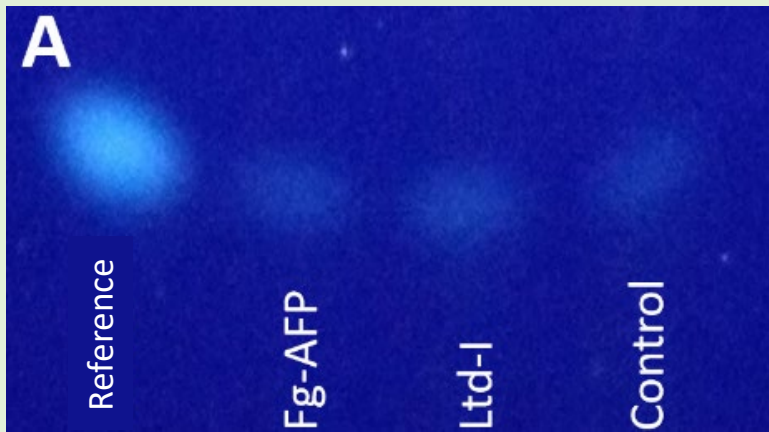
Extraction of 3 cilinders



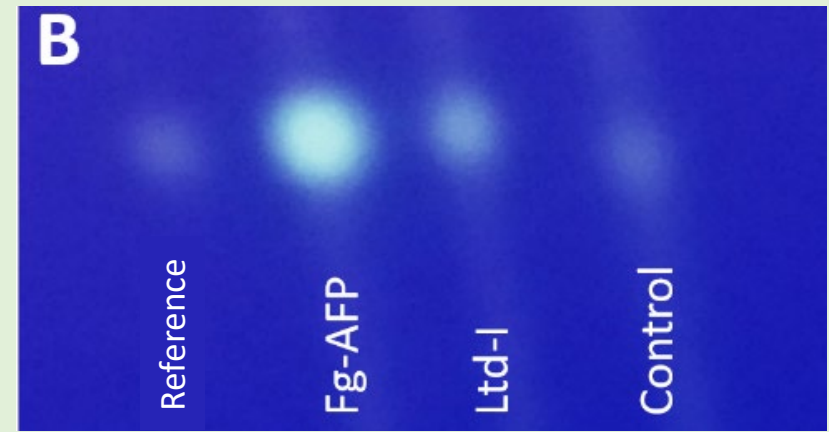


Results and discussion

AFB₁ and OTA assesment:



OTA (*A. niger*)



AFB₁ (*A. flavus*)



Conclusions

- 1) The protein Fg-AFP affects growth of *A. niger*, *A. welwitschiae* and *A. flavus*.
- 2) The protein Fg-AFP reduces growth rate of *A. flavus* and *A. niger*, also increasing the latency period in both species.
- 3) The protein Ltd-I does not reduce growth, causing an increase of sporulation instead, and also rising growth rate and latency period values.
- 4) Growth reduction is not synonym of toxigenesis reduction, being possible to observe considerable increases of toxin production in *A. flavus*.



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