Transition levure-mycélium induite par l'acide linoléique chez des agents de la maladie hollandaise de l'orme

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- **MHO menace**

- **Agents de la MHO:**
  - ***Ophiostoma ulmi***
  - ***Ophiostoma novo-ulmi***
    subsp. *americana*
    subsp. *novo-ulmi*

Maja Jurc, University of Ljubljana, Bugwood.org

***Scolytus scolytus* F.**

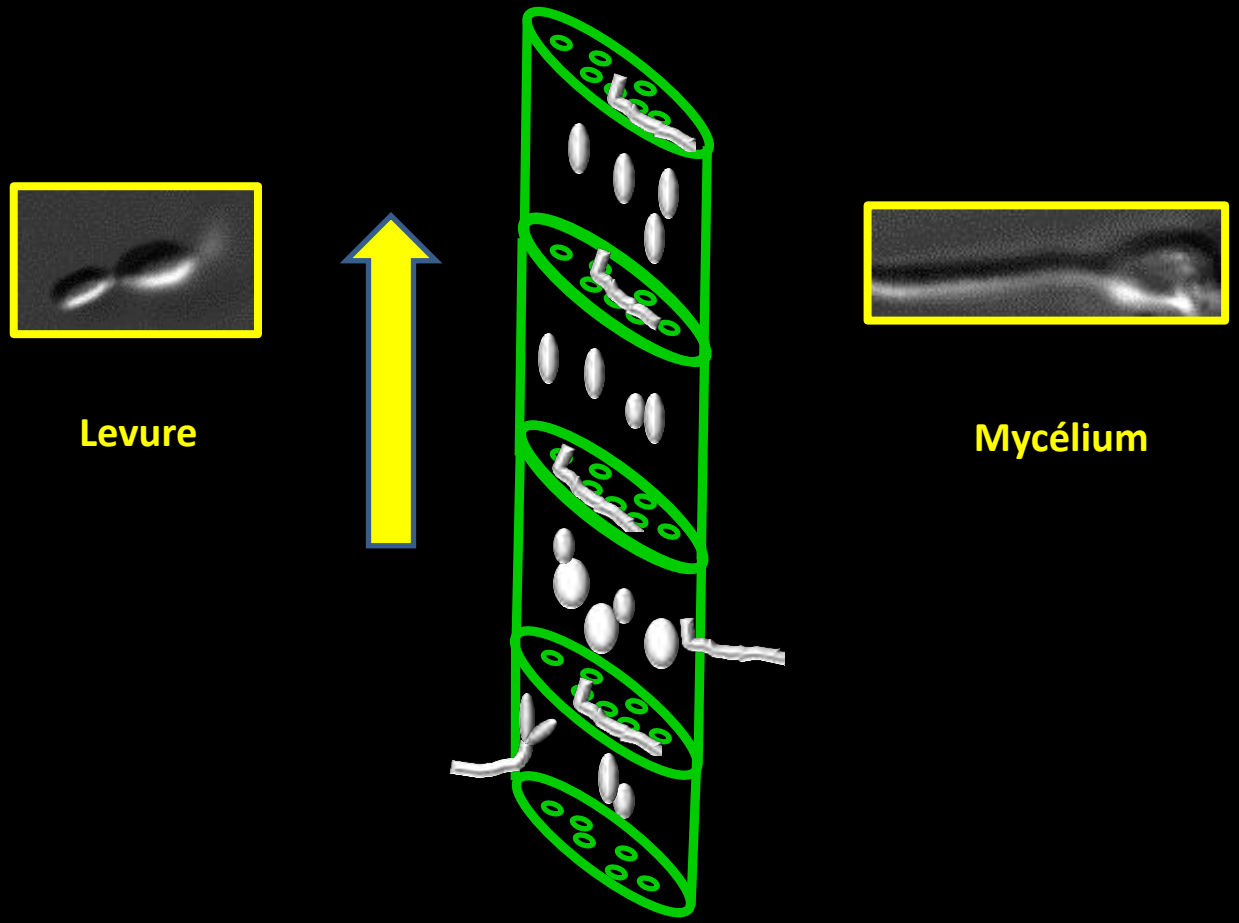
Maja Jurc, University of Ljubljana, Bugwood.org

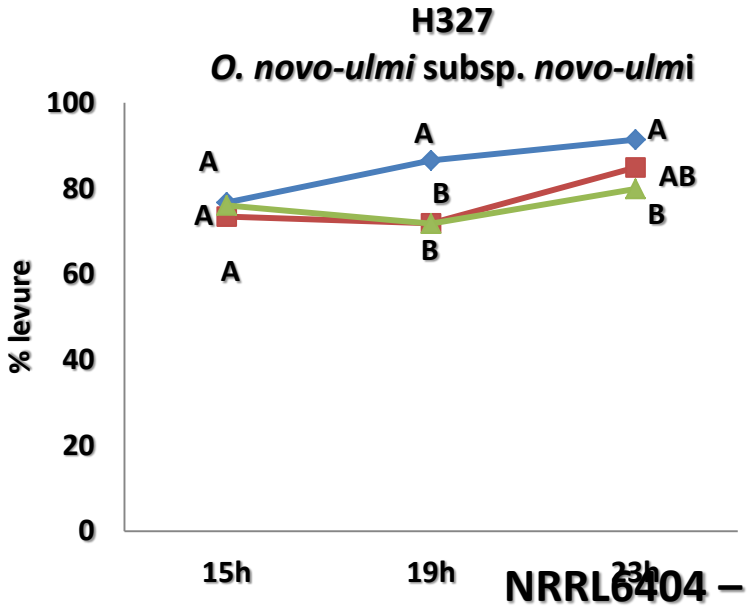
***Scolytus multistriatus* Marsh.**

***nus rufipes* Eich.**

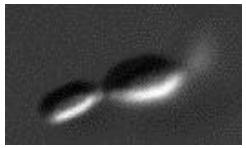
www.forestryimages.org

- **Dimorphisme levure-mycélium**

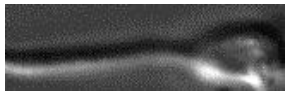




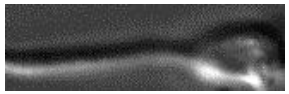
Proline - levure



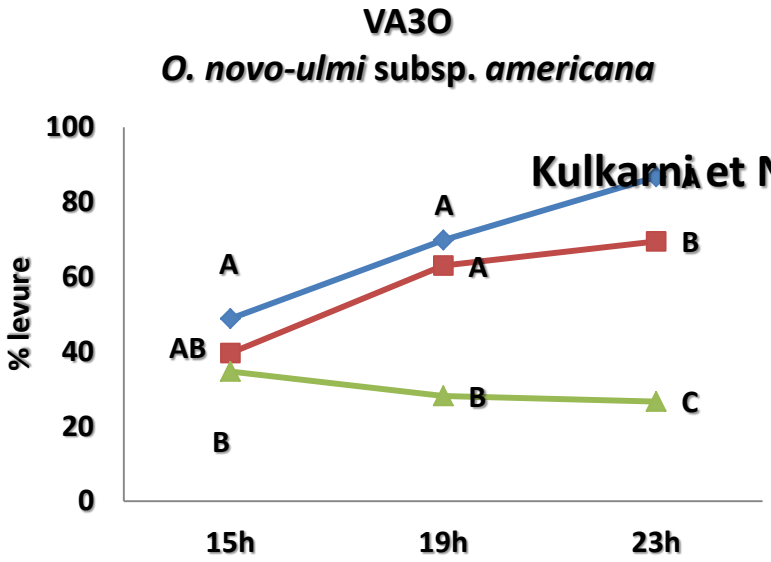
Arginine - mycélium



Sulfate d'ammonium - mycélium



NRRL6404 – *Ophiostoma novo-ulmi* subsp. *americana*

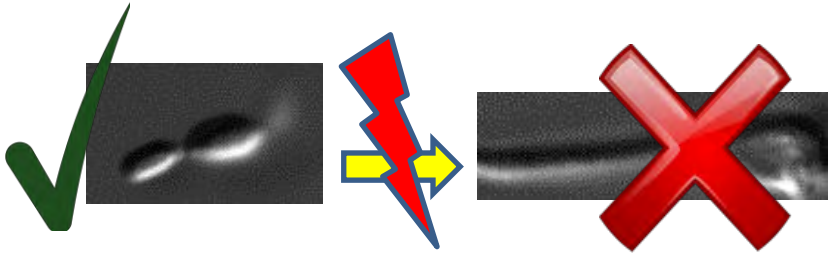


Proline

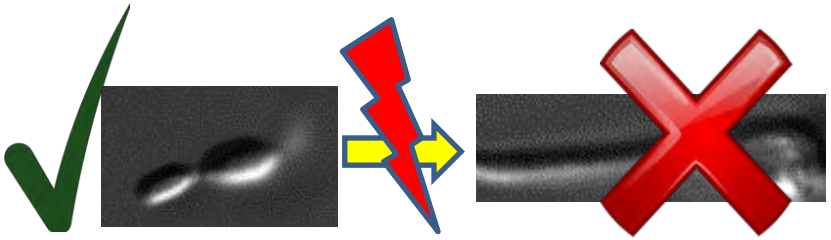
Kulkarni et Nickerson (1981)

Arginine

Sulfate d'ammonium



(Jensen et al. 1992)



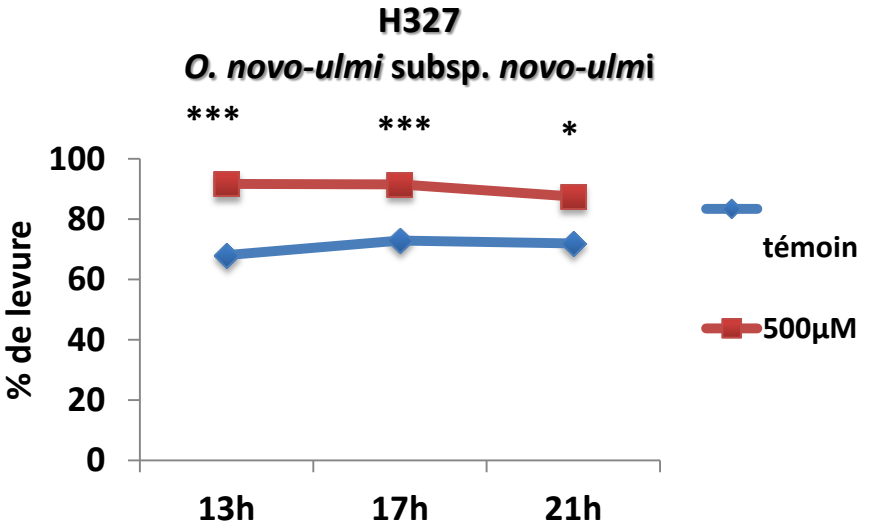
O_2

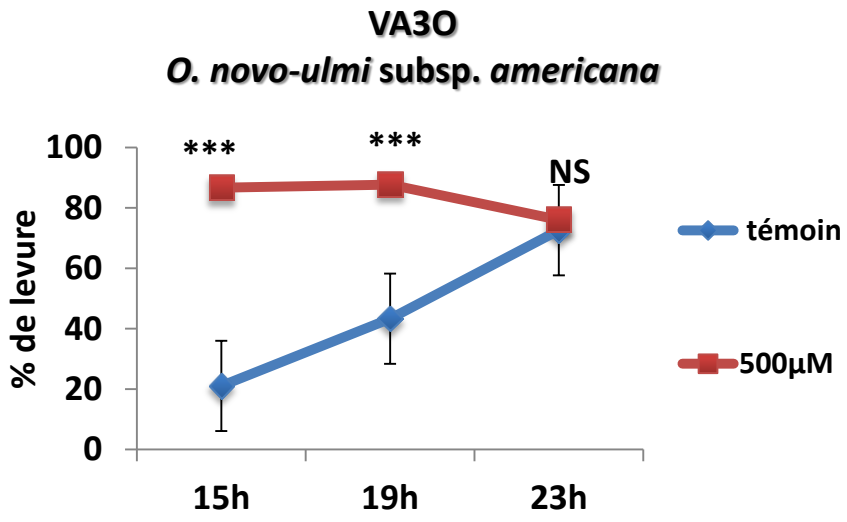
Oxylipines
eg. Prostaglandines et leukotrienes

Acide gras

Cyclooxygénases
eg. ppO

Acide salicylique





Oxylipines eg. Prostaglandines et leukotrienes

Hypothèse: L'acide linoléique induit la formation de mycélium.

Objectif: Vérifier si l'acide linoléique induit la formation de mycélium.

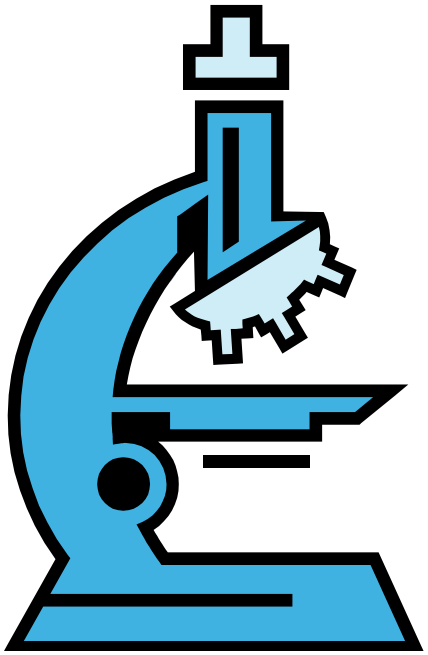
VA3O – *Ophiostoma novo-ulmi* subsp. *americana*
H327 - *Ophiostoma novo-ulmi* subsp. *novo-ulmi*
NRRL6404 - *Ophiostoma novo-ulmi* subsp. *americana*

ARGININE

PROLINE

Traitements:

- **Témoin (eau 0,6% vf)**
- **Acide linoléique (19mM)**



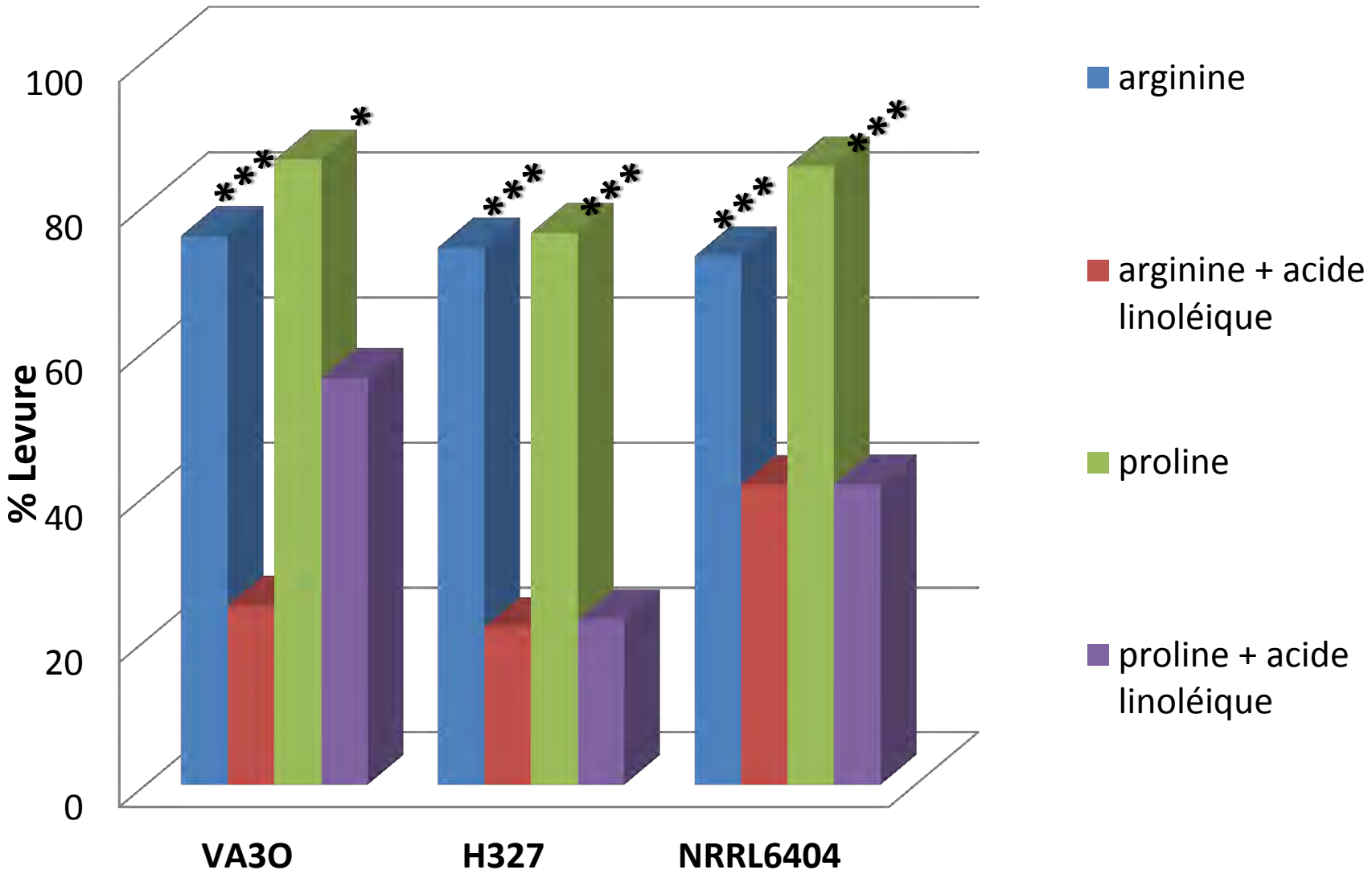
Heures Après Incubation (h.a.i.)

24 h. a. i.

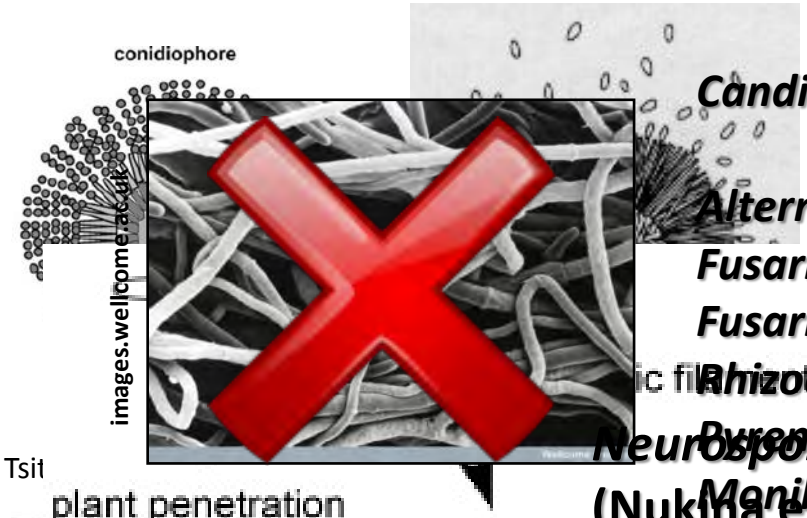
Témoin

Acide linoléique

24 h. a. i.


100
80
60
40
20
0
% Levure
***
*
***
***
***
***
VA3O
H327
NRRL6404
arginine
arginine + acide linoléique
proline
proline + acide linoléique

- Développement fongique



http://ars.els-cdn.com/content/image/1-s2.0-S0176161707002385-gr1.jpg

Aspergillus flavus
(Calvo et al. 1999 et Horowitz Brown et al. 2004)

Candida albicans **(Sharma et al. 2011)**

Ophiostoma ulmi **(Hubbes 1974)**

Alternaria solani
Fusarium oxysporum f. sp. lycopersici
Fusarium oxysporum f. sp. cucumerinum
Rhizoctonia solani
Pyrenophora avenae
Monilinia fructicola

Neurospora crassa
(Nukina et al. 1981)

Aspergillus nidulans **(Tsitsigiannis et al. 2004)**

Aspergillus parasiticus **(Calvo et al. 1999)**

Pythium ultimum **(Liu et al. 2008 et Walters et al. 2004)**

http://www.toxinology.c… …neric/MD-fig1H-asci.gif

Don Gardner

Ustilago maydis **(Klose et al. 2004)**

- Mycotoxines (Brodhagen et Keller 2006)

- Acides gras de l'hôte (Christensen et Kolomietz 2011; Rhome et del Poeta 2009)

Remerciements