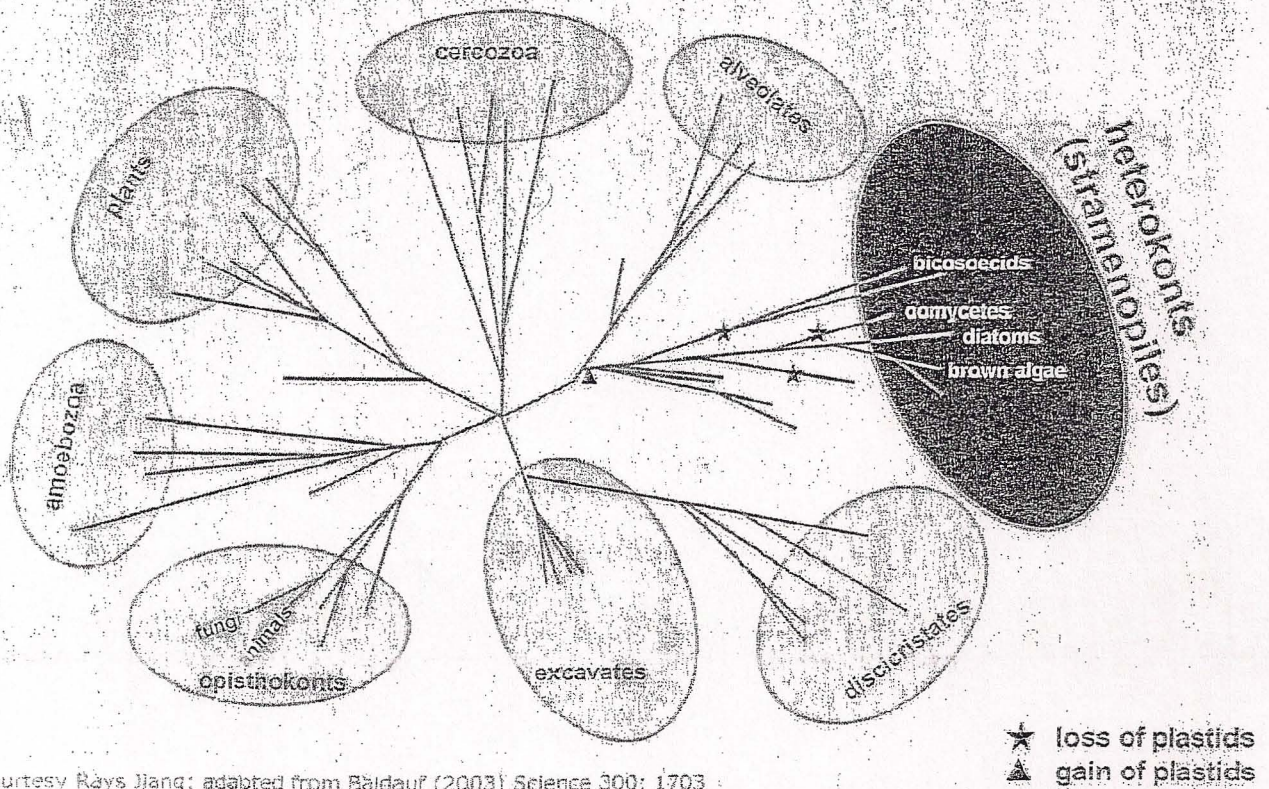


annual meeting

Oomycete

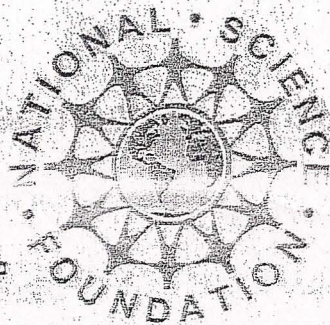
Molecular Genetics Network



Courtesy Rany Jang; adapted from Baldauf (2003) Science 300; 1703

De Wageningse Berg, Wageningen, The Netherlands

May 4-7, 2006



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10 Characterization of the *Phytophthora cinnamomi* lipase activity

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Phytophthora cinnamomi is soilborn pseudofungus, associated to the Oomycetes with ink disease of chestnut.

Lipases (triacylglycerols hydrolases) are important enzymes in fat metabolism, catalyzing the breakdown of triacylglycerols to free fatty acids and glycerol. Owing to the very low solubility of their natural substrates, this hydrolysis is catalyzed at the interface between an insoluble substrate and the aqueous phase in which the enzyme is solubilized. This feature distinguishes them from esterases, which preferentially catalyze the hydrolysis of soluble esters in water. Lipases constitute a ubiquitous group of enzymes able to catalyze a number of different reactions, many of them of industrial interest (stereoselective hydrolysis, transesterification, etc.). The objective of the present study was to evaluate the growth of *P. cinnamomi* in the lipids content medium. Additionally it was researched the presence or absence of lipases.

The analyse of the results, proved that the growth of the *P. cinnamomi* decreased exponentially and the lipids content increased in the extracelular medium, for concentrations upper the 1 and 2% (w/v), for tributyrin and for olive oil, respectively. The maximum concentration for the grown was 3% for the tributyrin and 10% for the olive oil.

The determination of the lipase activity was effectuated in the semi solid medium. The quantification was result for the quotient between the square of the diameter of the clear halo to the return of the colonial and the square of the diameter of the colonial.

In this study, was verified that to the contrary of the growth, the lipase activity was upper for the concentration of lipids of 2 and 3%. In this work, we will also study the lipase quantification by spectrophotometric methods.

11 Phylogenetic relationships of a new species of *Phytophthora* closely related to *Phytophthora infestans* in the Andean Highland or Ecuador

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Recent studies suggest that *Phytophthora infestans* sensu lato in the Andean Highlands of South America has higher genetic diversity than previously described. In Ecuador, three clonal lineages (US-1, EC-1, EC-3) were found on different host species in the genus *Solanum*. Another lineage, EC-2, has both A1 and A2 mating types and belongs to Ia and Ic mitochondrial DNA (mtDNA) haplotype, respectively. Moreover, the EC-2 lineage was found in association with different plant genera beside *Solanum*. Isolates of *P. infestans* sensu lato EC-2 and EC-3 lineages fit the morphological description of *P. infestans* but are quite different from any genotypes of *P. infestans* described to date, raising questions about their taxonomic status and relatedness to isolates of *P. infestans* associated with potato and tomato. Hence, the objective of this study was to