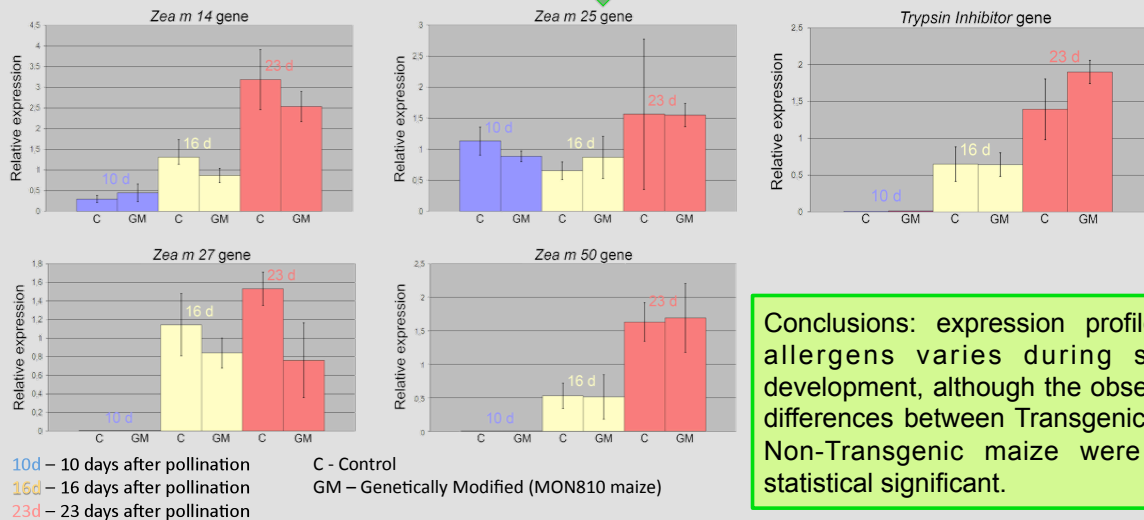


Maize Allergens during seed development: transgenic versus non-transgenic

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Objective A : The expression of allergens varies during maize seed development? Is there any difference between transgenic and non-transgenic seed allergen expression?

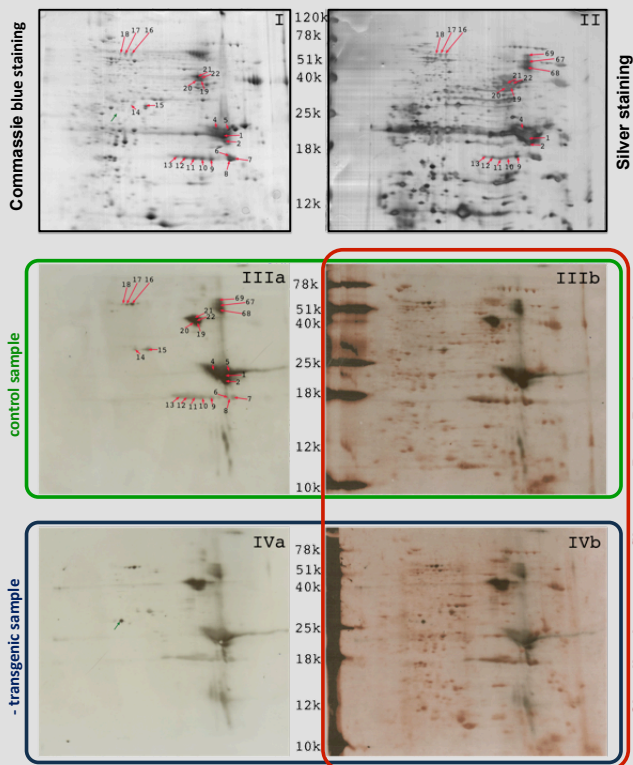
Strategy : Real time quantitative RT-PCR



Conclusions: expression profile of allergens varies during seed development, although the observed differences between Transgenic and Non-Transgenic maize were not statistical significant.

Objective B : Characterize the immunologic response of maize allergic individuals to transgenic (MON810) versus non-transgenic maize seed samples.

Western Blot with plasma from a maize allergic individual



- Several allergens are present in both transgenic and non-transgenic samples.
- One spot observed only in the transgenic chemiluminescence film (but could not be associated with any visible spot in the membrane).

Spot number	Significant identification (NCBI VP)	BLAST
1	Prolamin PPROL 17 precursor (Zea mays) Globulin-1 S allele precursor (Zea mays)	
2	Prolamin PPROL 17 precursor (Zea mays)	
5	Globulin-1 S allele precursor (Zea mays) Prolamin PPROL 17 precursor (Zea mays)	
6,8	Late embryogenesis abundant protein, group 3 (Zea mays)	Retrotransposon protein, putative, Ty1-copia subclass (Oryza sativa)
9	Ethylene-responsive protein [Zea mays] Dehydrin DHN1 Late embryogenesis abundant protein, group 3 [Zea mays]	
10-13	Dehydrin [Zea mays]	
15	Hypothetical protein LOC100272498 [Zea mays]	Glucose and ribitol dehydrogenase homolog
16-18	Hypothetical protein LOC100382989 [Zea mays]	ketol-acid reductoisomerase [Arabidopsis thaliana]
22	LOC541920 [Zea mays]	50kD gamma zein [Zea mays]

Preliminary MS results

- ➔ Spots present in both control a transgenic sample chemiluminescence film
- ➔ Spot present only in transgenic sample chemiluminescence film