


**Scuola Superiore Sant'Anna**  
 di Studi Universitari e di Perfezionamento

Pierdomenico Perata

**PIANTE  
E  
ALIMENTAZIONE**

**AMBIENTE**

**SISTEMA  
ENDOCRINO  
e NERVOSO**




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**IODINE & VEGETABLES**

**IODINE: 243 mg/100 g**

**USA UN  
PIZZICO DI  
INTELLIGENZA**

*CHIEDILO  
DOVE FAI  
LA SPESA*

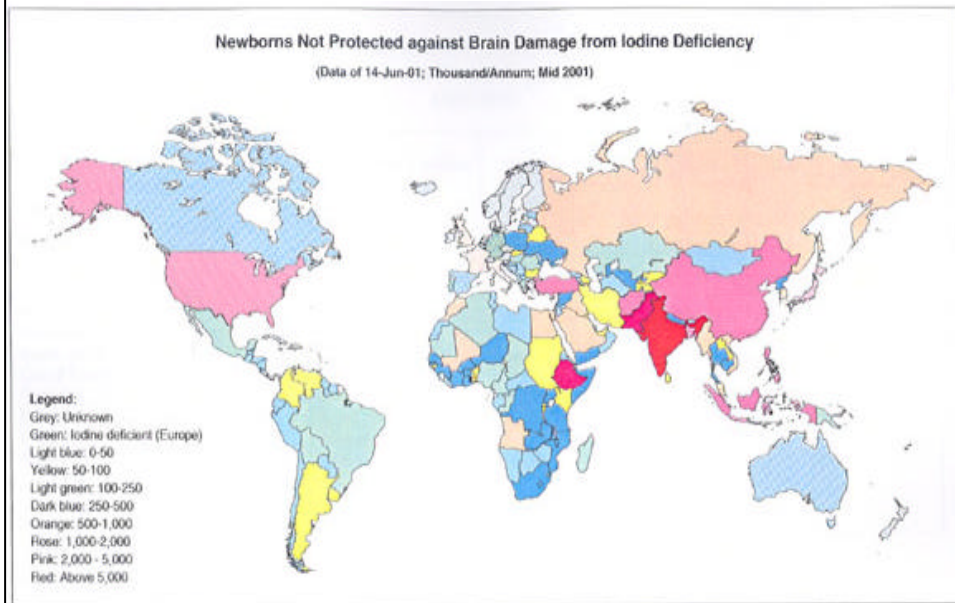
*In cucina  
e a tavola,  
sale arricchito  
con iodio*

**IODINE: 1,5 mg/100 g**



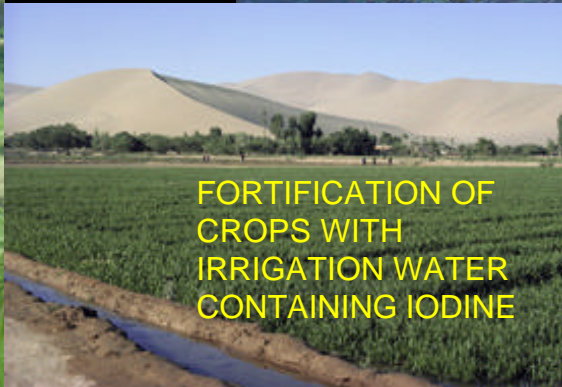


## IODINE AND BRAIN DAMAGE



**USA UN  
PIZZICO DI  
INTELLIGENZA**

*In cucina  
e a tavola,  
sale arricchito  
con iodio*

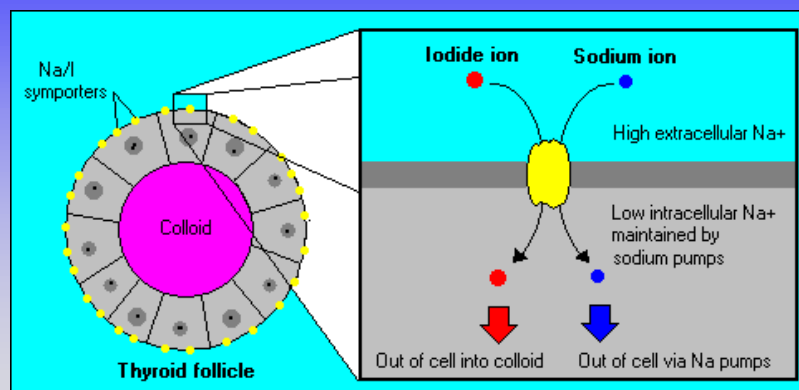


## IODINE IS TOXIC TO PLANTS

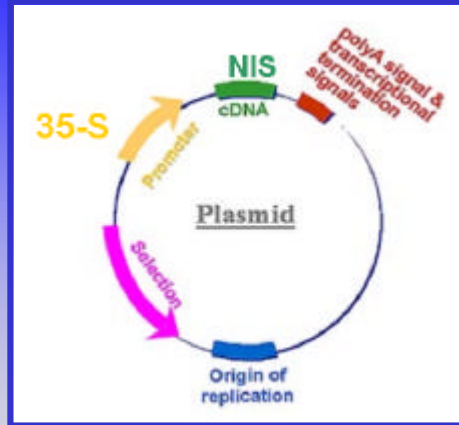
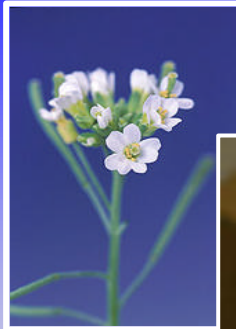
PLANTS ARE UNABLE TO ACCUMULATE HIGH LEVELS OF IODINE



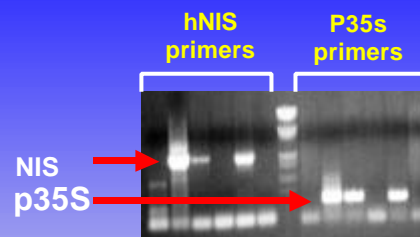
## IODINE UPTAKE IN HUMANS IS MEDIATED BY NIS



## PLANT TRASFORMATION WITH hNIS

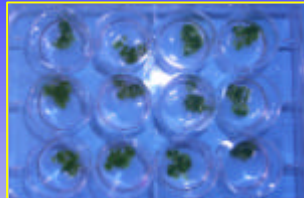


## TRANSGENIC PLANTS WERE OBTAINED

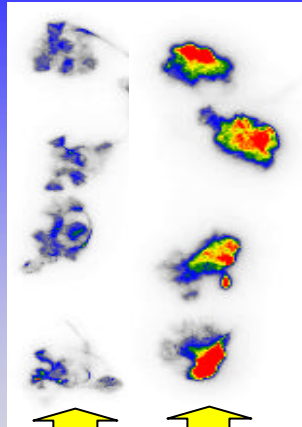


**TRANSGENIC PLANTS EXPRESS STRONGLY THE hNIS GENE**

## INCREASED IODINE UPTAKE IN hNIS TRANSGENIC PLANTS

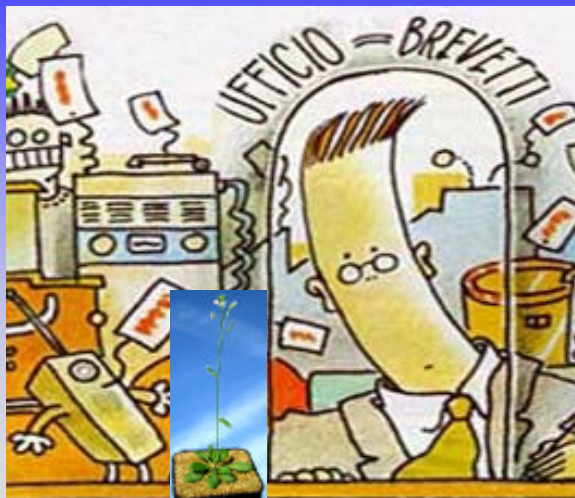


**hNIS TRANSGENIC  
PLANTS WERE FED  
WITH <sup>125</sup>I IODINE**



CONTROL  
PLANTS      hNIS  
PLANTS

## THE *hNIS* PLANTS ARE BEING PATENTED



**PIERDOMENICO PERATA**



**AMEDEO ALPI  
SILVIA GONZALI  
GIACOMO NOVI**

**ELENA LORETI** 



**ALDO PINCHERA  
MASSIMO TONACCHERA  
PATRIZIA AGRETTI**