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Licensing Opportunity

UNIVERSITY OF GENEVA



562-A383

A method for controlling seed germination under any environmental conditions

Invention

Precocious or erratic seed germination, triggered by excessive rain or other environmental factors, can yield to major losses in crop quality and yield.

Prof. Luis Lopez-Molina and his colleagues at the University of Geneva set up a new method of preventing seed germination by genetically increasing the production of the seed germination repressor ABI5 while tightly controlling its activity. The accumulation of the active form of ABI5 in plants was shown to maintain seeds in a quiescent, embryonic-like and therefore protected state for over a month despite highly favorable germination conditions.

Applications

- Use of a transgenic plant to artificially delay seed germination under conditions which would otherwise favor breaking seed dormancy (temperature, light and humidity)
- ABI5 is highly conserved in plant species, meaning that control seed germination is potentially applicable to a large number of crop plants

Advantages

- Prevent precocious germination under sub-optimal environmental conditions
- Synchronize seed germination

Stage of Development

Discovery and in vivo studies in *Arabidopsis thaliana*

Patent Information

US patent application 61/100,292 is pending



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