



**11**  
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## SÉMINAIRE

# A quantitative genetic signature of senescence in plants

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The evolution of senescence (the physiological decline of organisms with age) poses an apparent paradox because it represents a failure of natural selection to increase the survival and reproductive performance of organisms. The paradox can be resolved if natural selection becomes less effective with age, because the death of postreproductive individuals should have diminished effects on Darwinian fitness. A substantial body of empirical work is consistent with this prediction for animals. However, such evidence is still scarce in plants. I will discuss the plausible reasons why the genetic basis of senescence in plants was not studied from an evolutionary perspective in the past. I will also present our experimental results on the quantitative genetic basis of senescence in the short-lived perennial plant *Silene latifolia* and their contribution to our understanding of the evolution of senescence in plants.