

## **Exploring ABA receptors for water use-efficient plants**

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Water deficit induces reduction of transpiration. Plants experiencing water deficit are able to improve carbon for water exchange leading to higher water use efficiency (WUE). Whether increased WUE can be achieved without trade-offs in plant growth is debated. The signals mediating the WUE response under water deficit are not fully elucidated but involve the phytohormone abscisic acid (ABA). ABA is perceived by a family of related receptors which are known to mediate acclimation responses and to reduce transpiration. We found that enhanced stimulation of ABA signalling via distinct ABA receptors can result in *Arabidopsis* plants constitutively growing at high WUE. Water productivity was associated with maintenance of net carbon assimilation, thereby sustaining biomass formation. The study shows that ABA receptors can be explored to generate more plant biomass per water transpired.