

## ADAPTING CEREAL DEVELOPMENT TO CHANGING CLIMATES

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Cereal crops provide the basis for calories, protein and micronutrients for the human population. My group focusses on understanding how the widely cultivated hexaploid bread wheat (*Triticum aestivum*) uses environmental signals to regulate development to optimise reproductive success. We are interested in using the molecular signalling triggered by these environmental cues as a method to drive adaptation in response to changing climates and therefore be able to pre-adapt germplasm to improve crop robustness. I will present our work on characterising a temperature and photoperiod-sensitive flowering pathway which regulates early reproductive vigour. This pathway regulates a *FLOWERING LOCUS T*-like (*FT*) gene in wheat, which is part of an expanded family of *FT* genes. I will go on to discuss how the *FT* gene family could be used for wider crop adaptation.