



INFLORESCENCE DEVELOPMENT IN TOMATO: LINKING GENE FUNCTION WITH A ZIGZAG MODEL

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Genetic Variation of Flowering Time Genes and Applications
for Crop Improvement

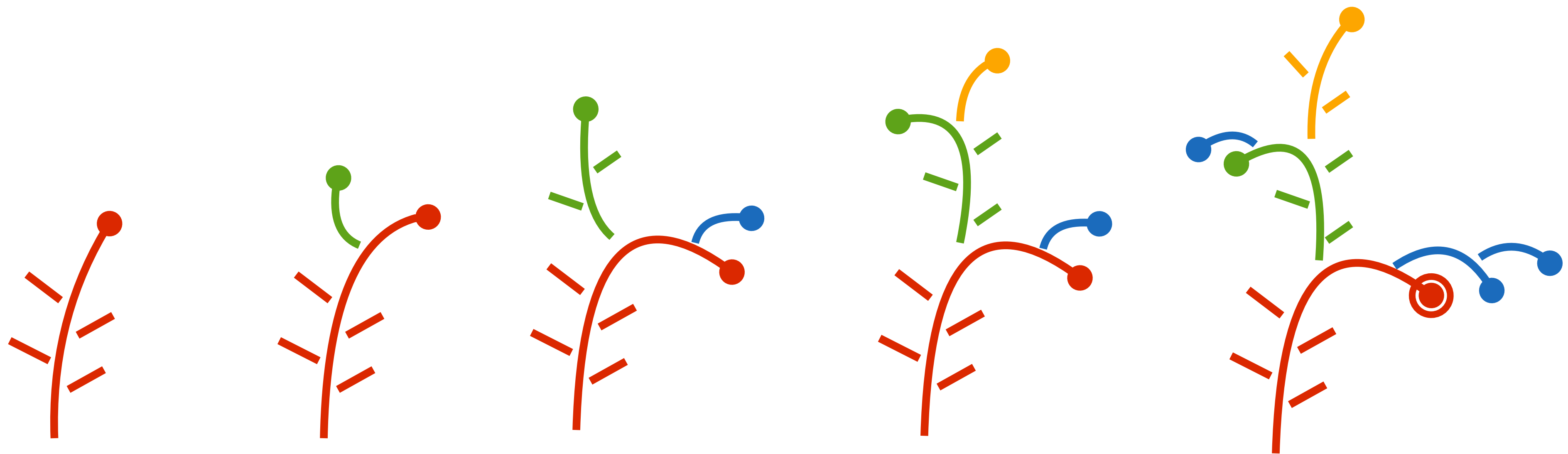
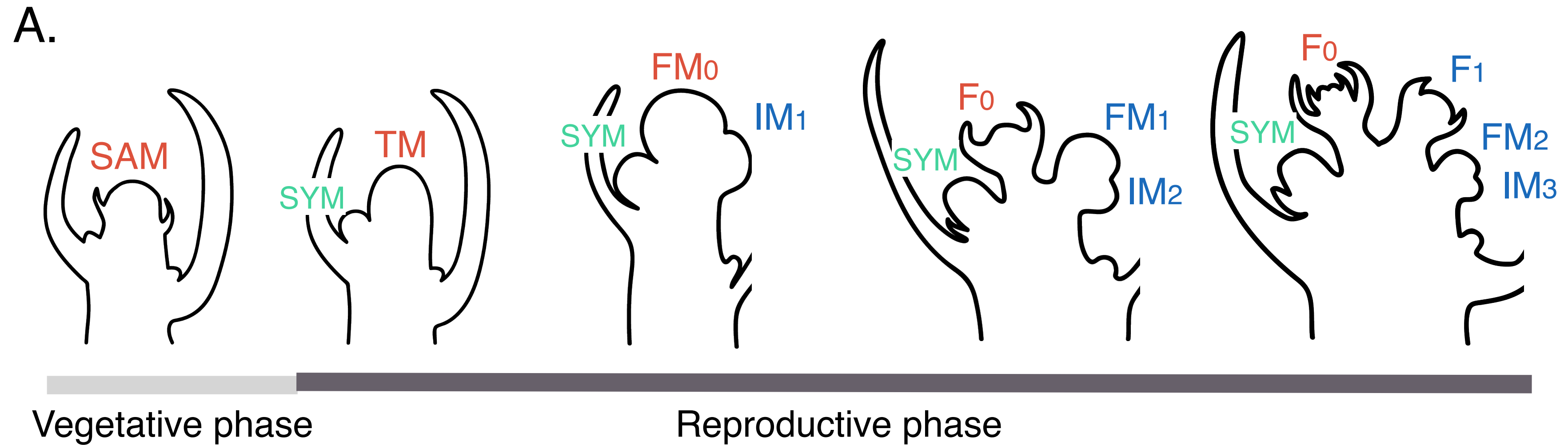
Bielefeld - 25 March 2014



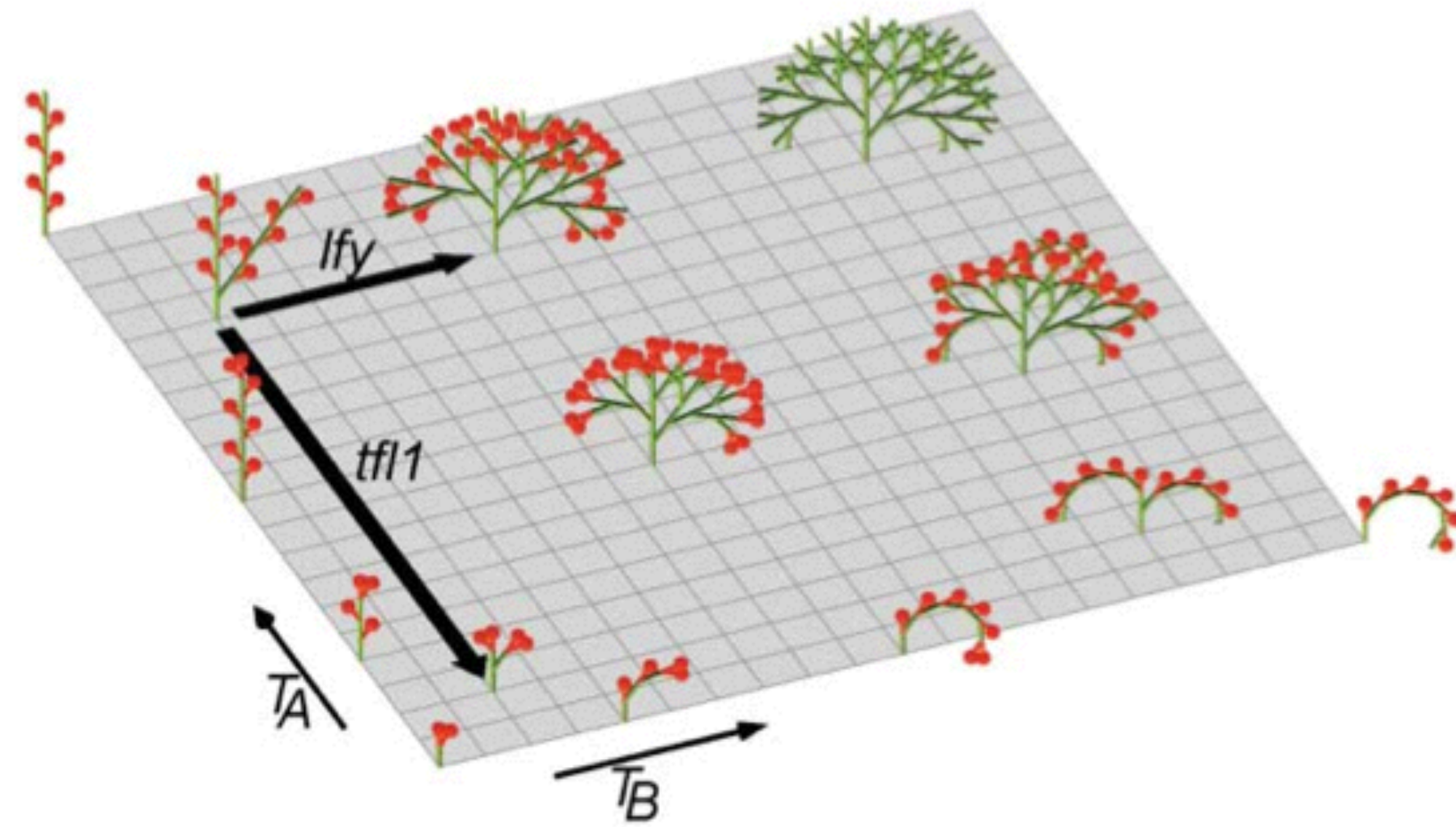
**PHYTO
SYSTEMS**



INFLORESCENCE DEVELOPMENT IN TOMATO

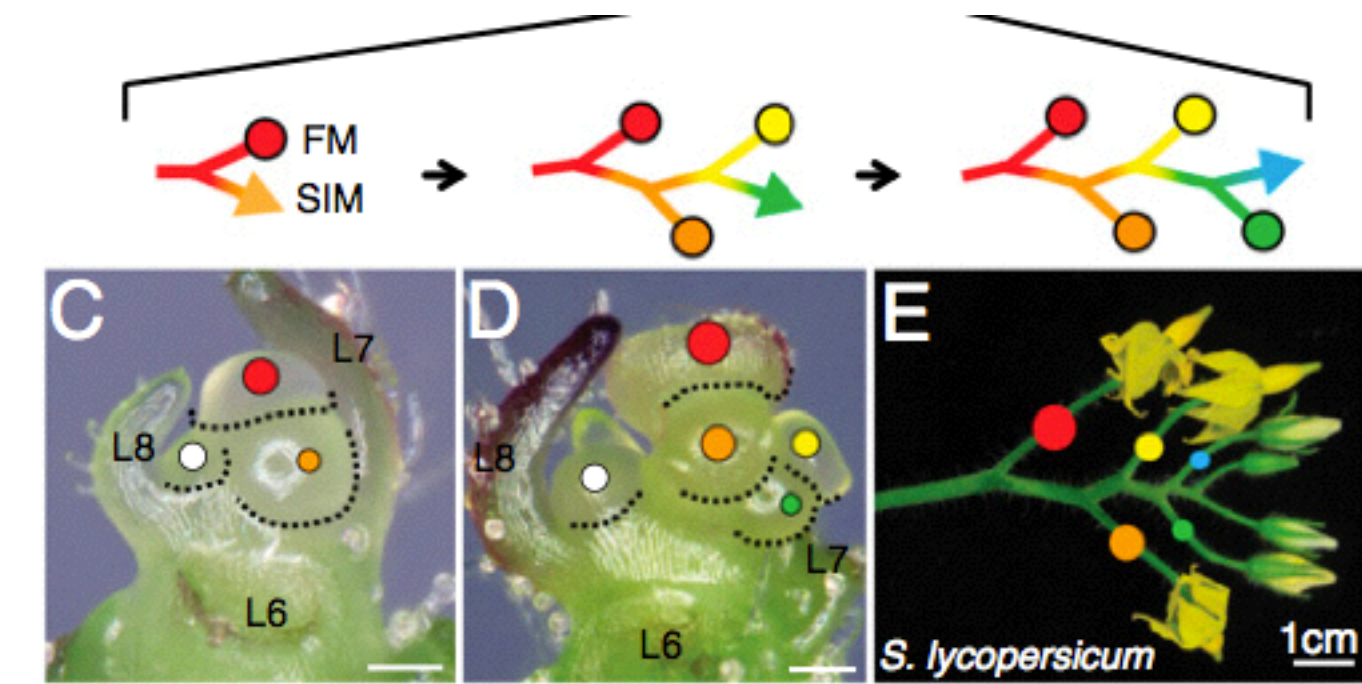


EXISTING MODELS OF INFLORESCENCE DEVELOPMENT



PRUSINKIEWICZ ET AL. 2007

VEGETATIVENESS OF MERISTEMS DECREASE WITH AGE AND DEFINE THE INFLORESCENCE ARCHITECTURE



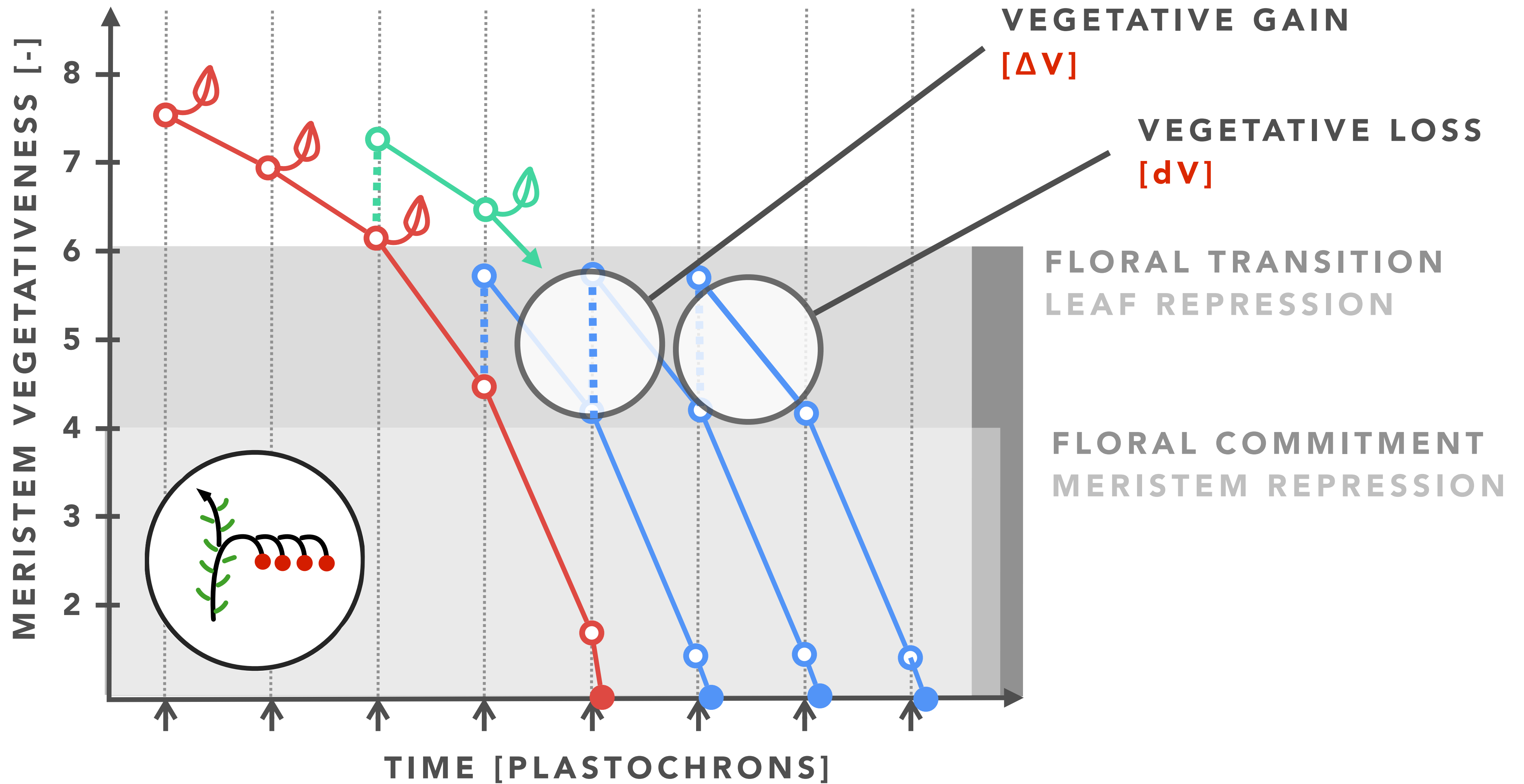
PARK ET AL. 2012

MATURATION RATE OF MERISTEMS DEFINES THE OVERALL INFLORESCENCE ARCHITECTURE

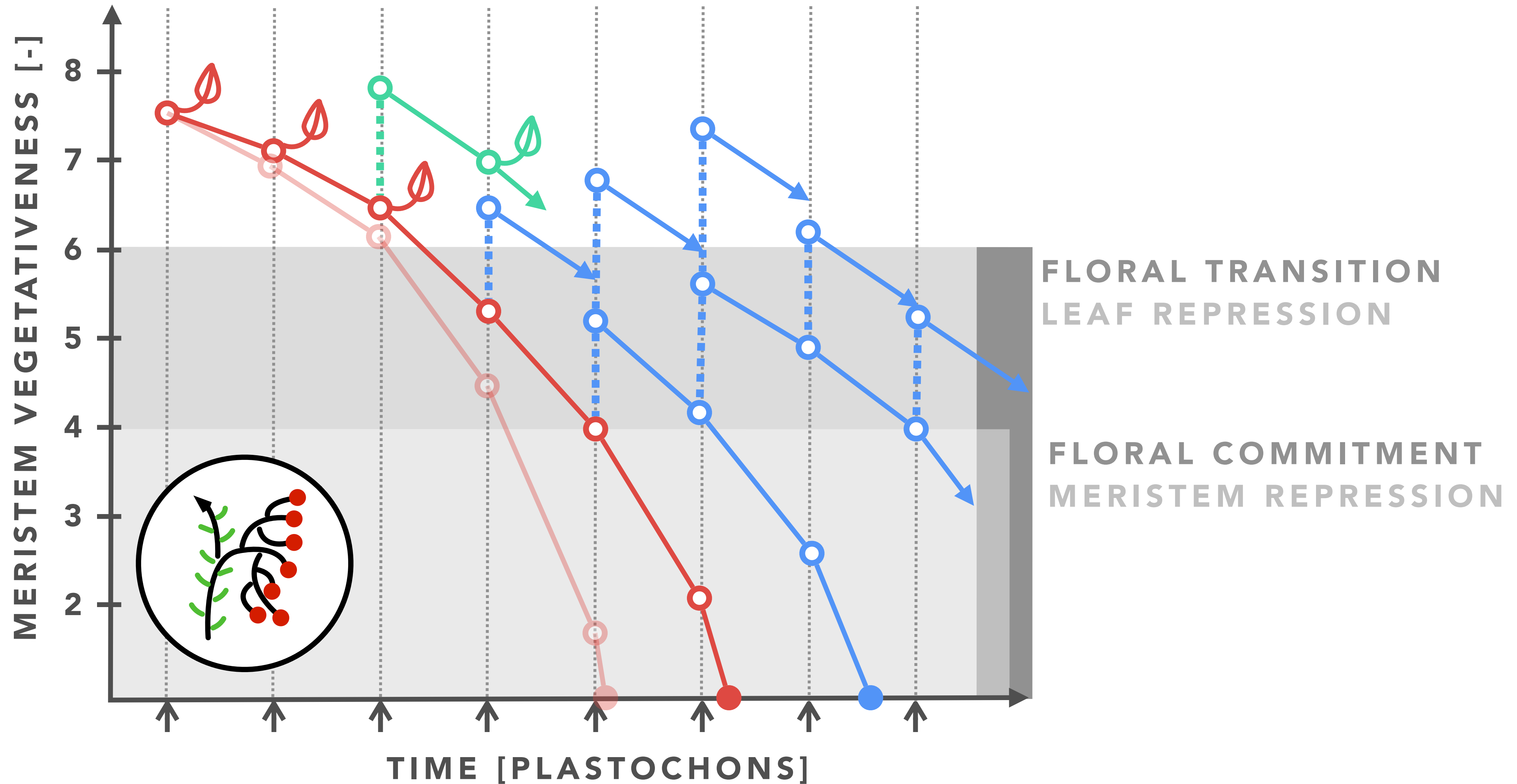
AIM OF THE PROJECT

CREATE A SIMPLE MODEL OF
INFLORESCENCE DEVELOPMENT
THAT CAN ACCOUNT FOR ALL
EXISTING PHENOTYPES OBSERVED IN
TOMATO

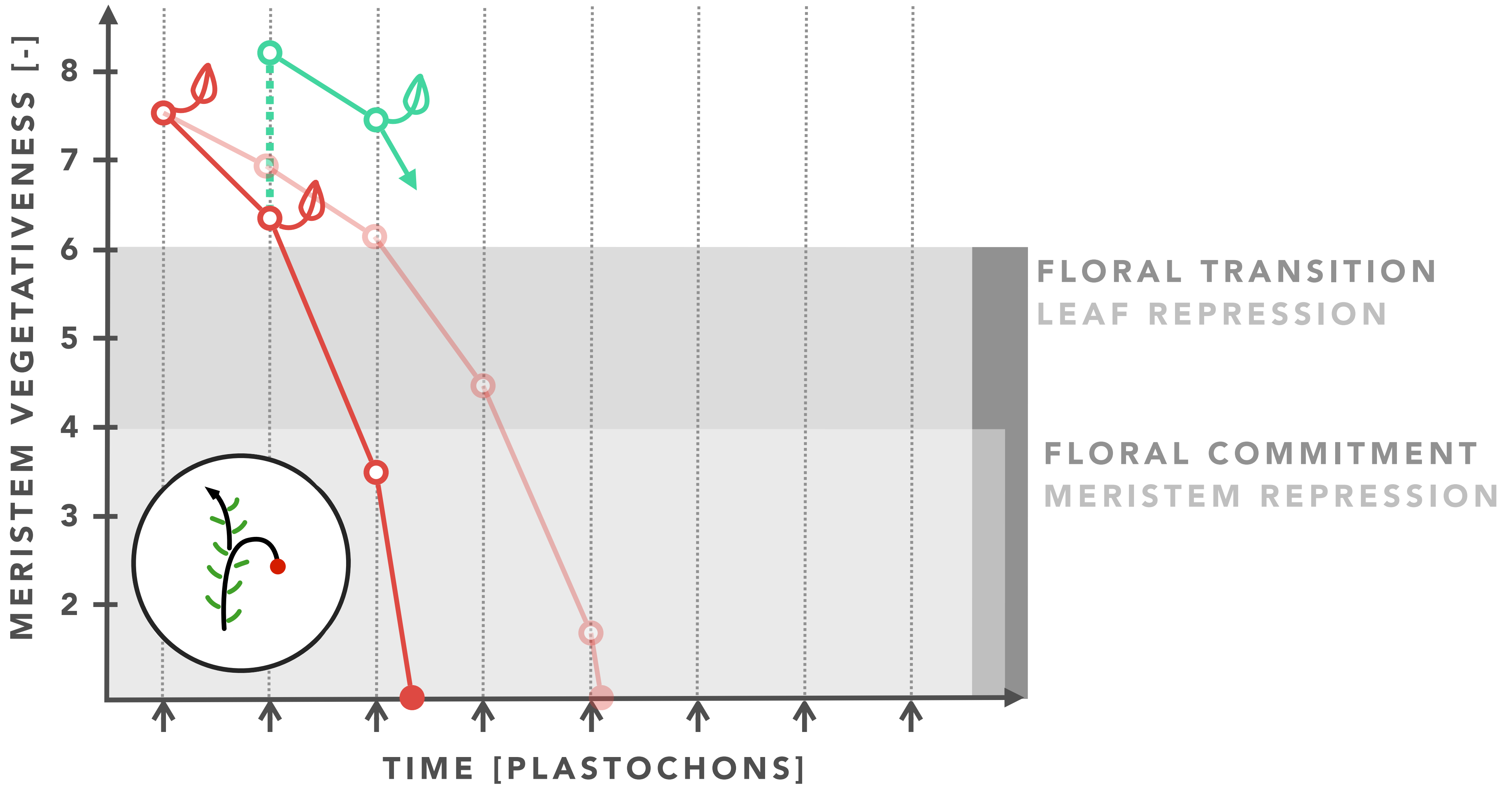
VEGETATIVE GAIN AND LOSS GENERATES A ZIGZAG MODEL



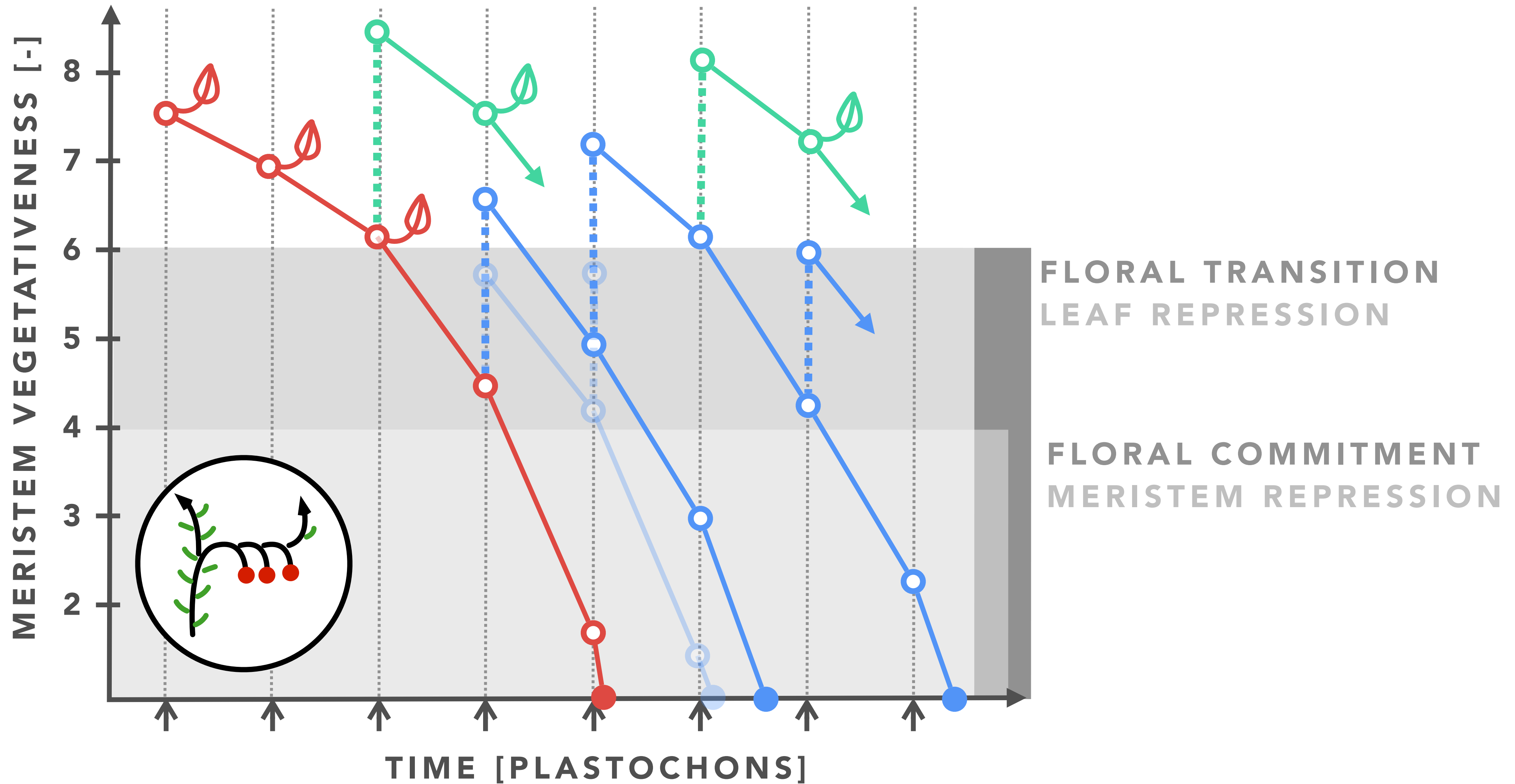
ZIGZAG MODEL: DECREASING VEGETATIVE LOSS [dV]



ZIGZAG MODEL: INCREASING VEGETATIVE LOSS [dV]



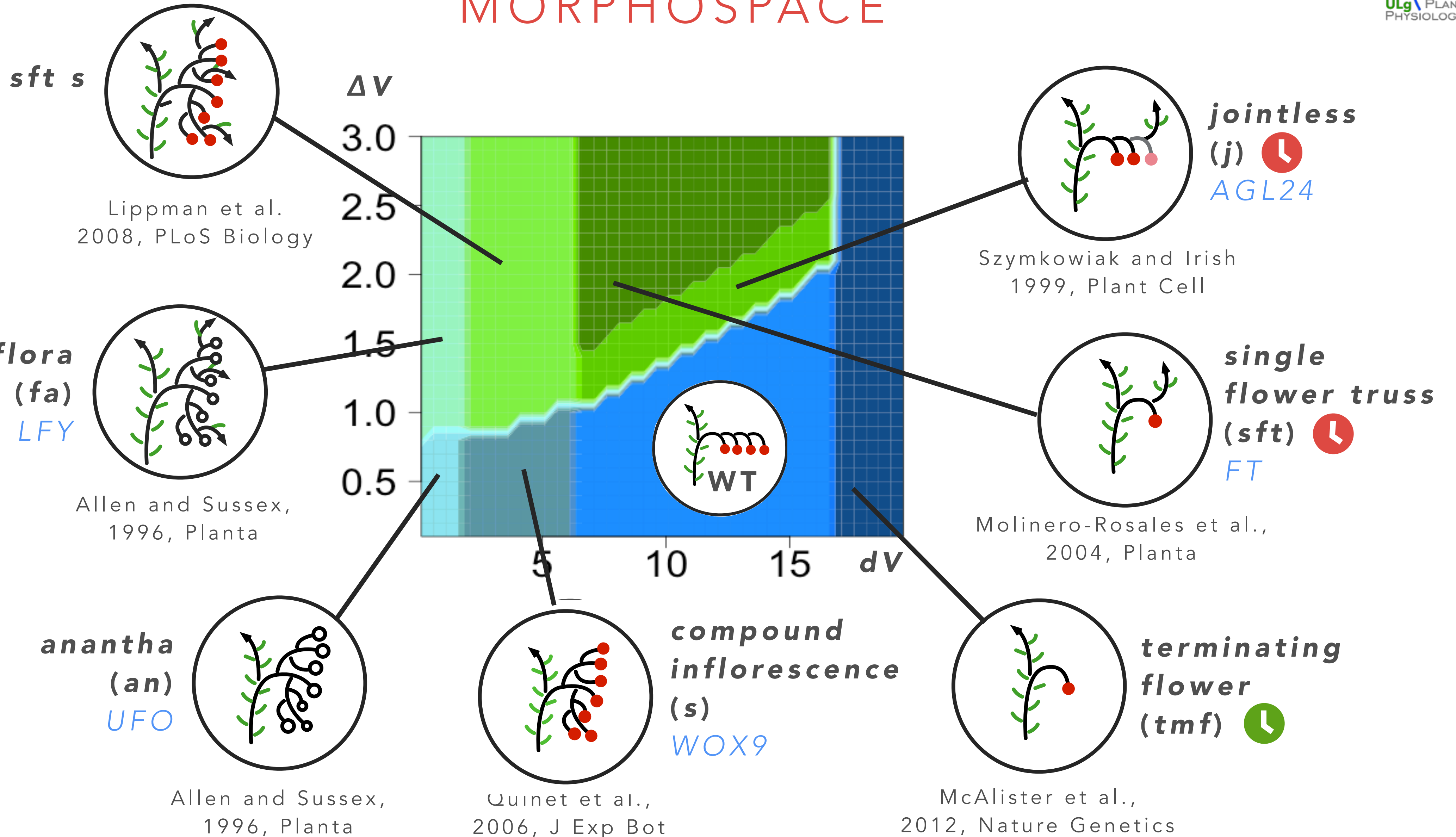
ZIGZAG MODEL: INCREASING VEGETATIVE GAIN [ΔV]



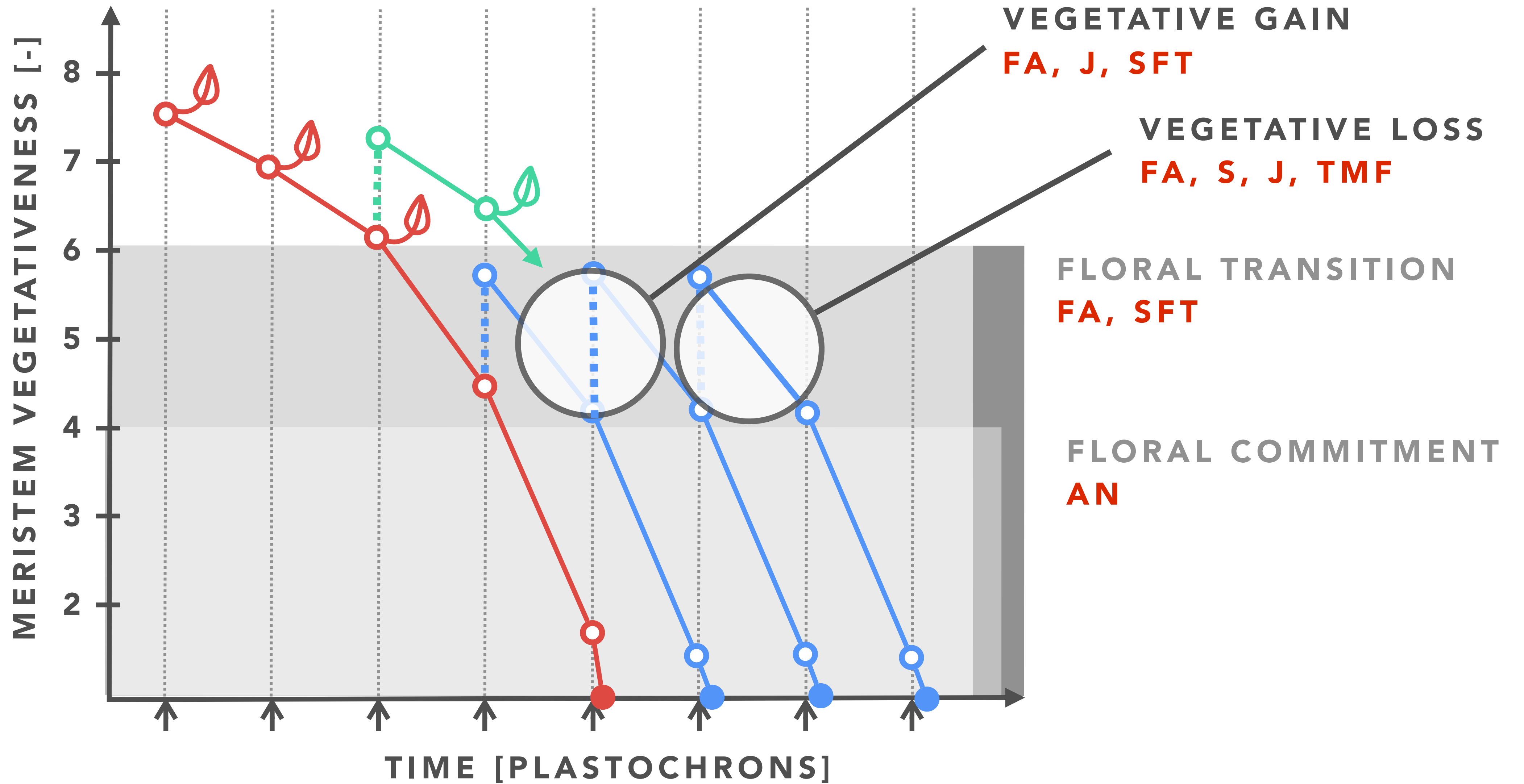
THE ZIGZAG MODEL IS USED TO GENERATE A MORPHOSPACE



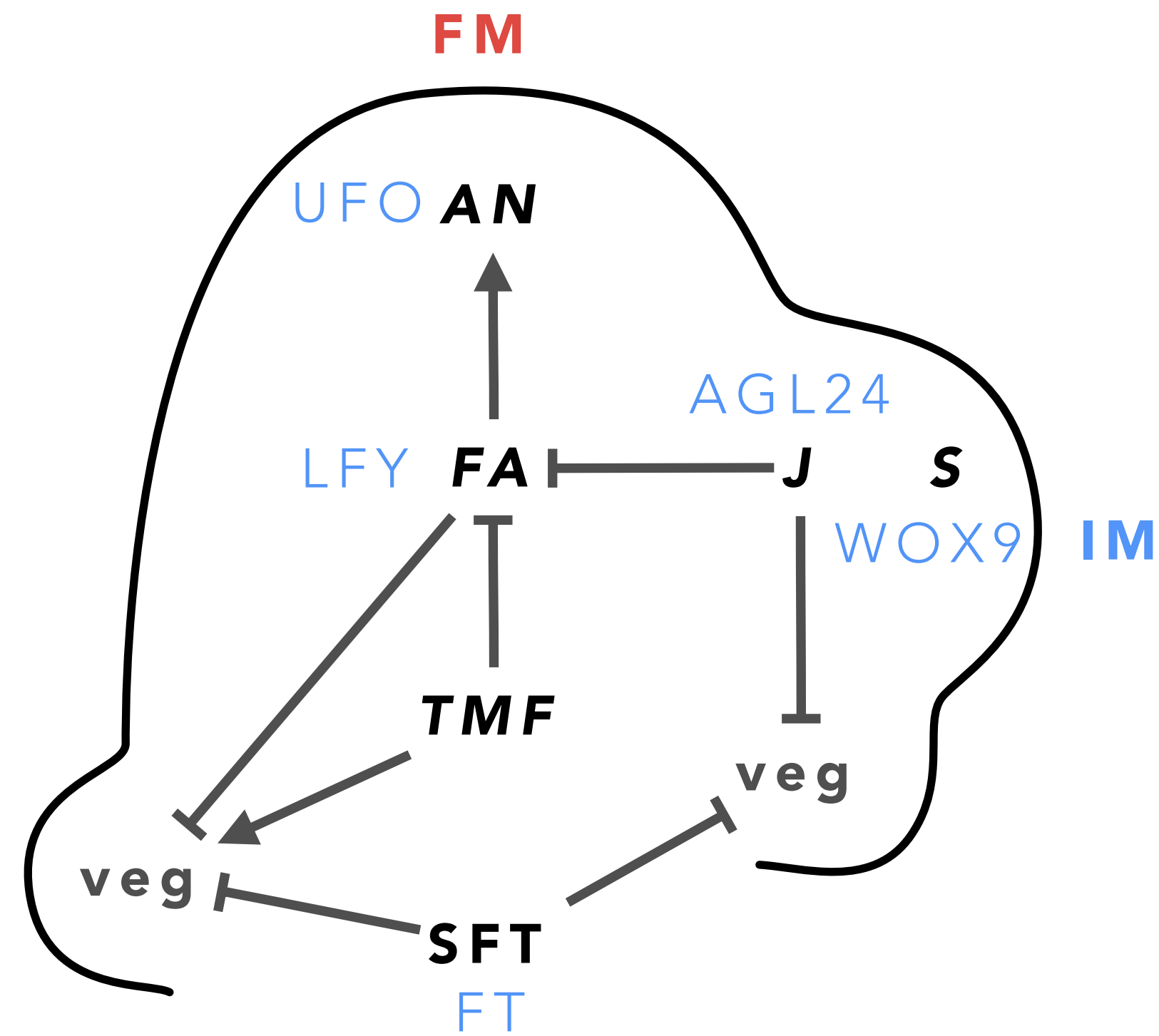
THE ZIGZAG MODEL IS USED TO GENERATE A MORPHOSPACE



GENE FUNCTIONS WITHIN THE ZIGZAG MODEL



GENE FUNCTIONS WITHIN THE ZIGZAG MODEL



C. Périlleux, G. Lobet, and P. Tocquin, 2014, Inflorescence architecture in tomato: gene functions within a zigzag model, *Frontiers in Plant Genetics and Genomics*.



THANK YOU FOR YOUR
ATTENTION

ANY QUESTIONS?



