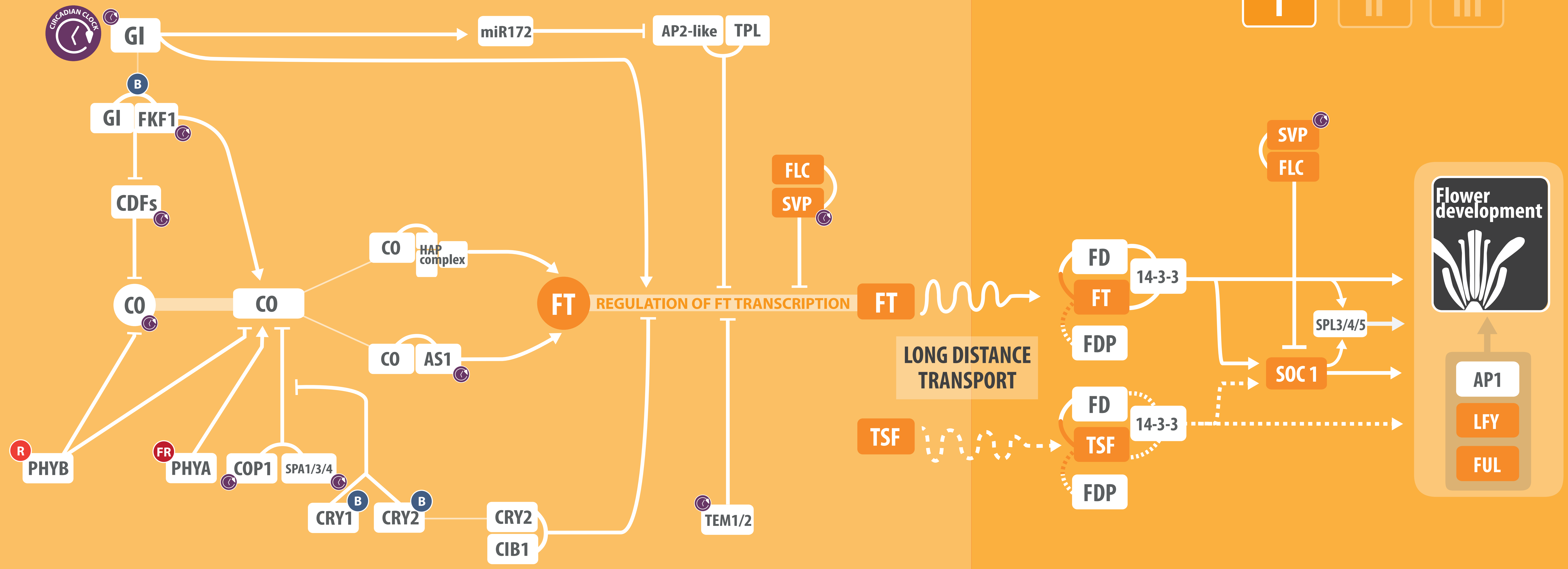


Level of complexity



Chromatin regulation at FT locus & Time-course of CO and FT regulation

More about FT gene family

SHOOT APICAL MERISTEM

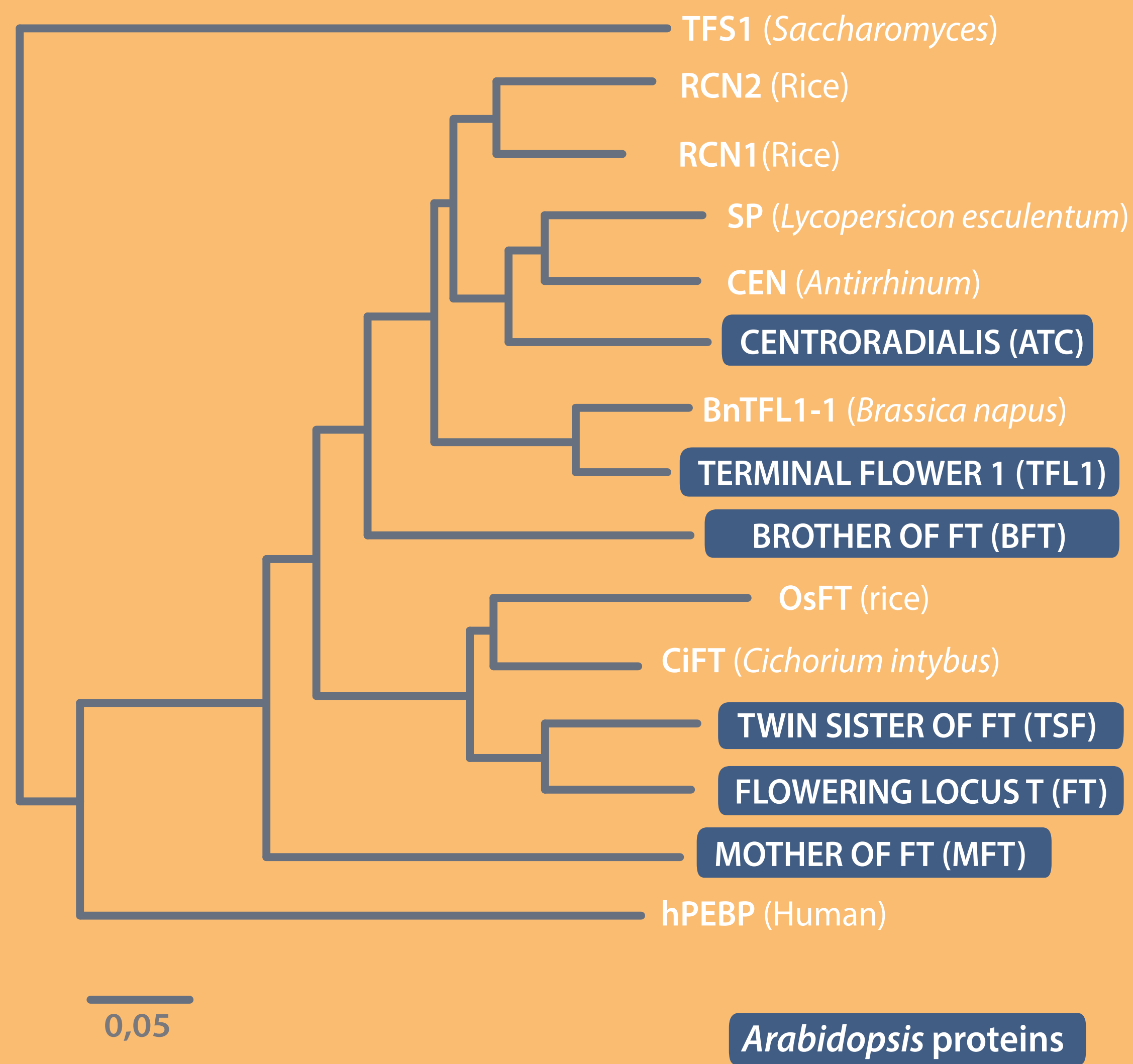
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KEYS

- FR Induced by Far-Red light
- R Induced by Red light
- B Induced by Blue light
- Circadian-clok regulated
- Sugar or hormones
- Protein-protein interactions
- Genes/proteins
- Flowering-time integrator genes/proteins
- Positive regulation
- Negative regulation
- Transport
- Putative mechanisms

PEBP GENE FAMILY (PHOSPHATIDYL ETHANOLAMINE-BINDING PROTEINS)

Phylogenetic tree of PEBP proteins



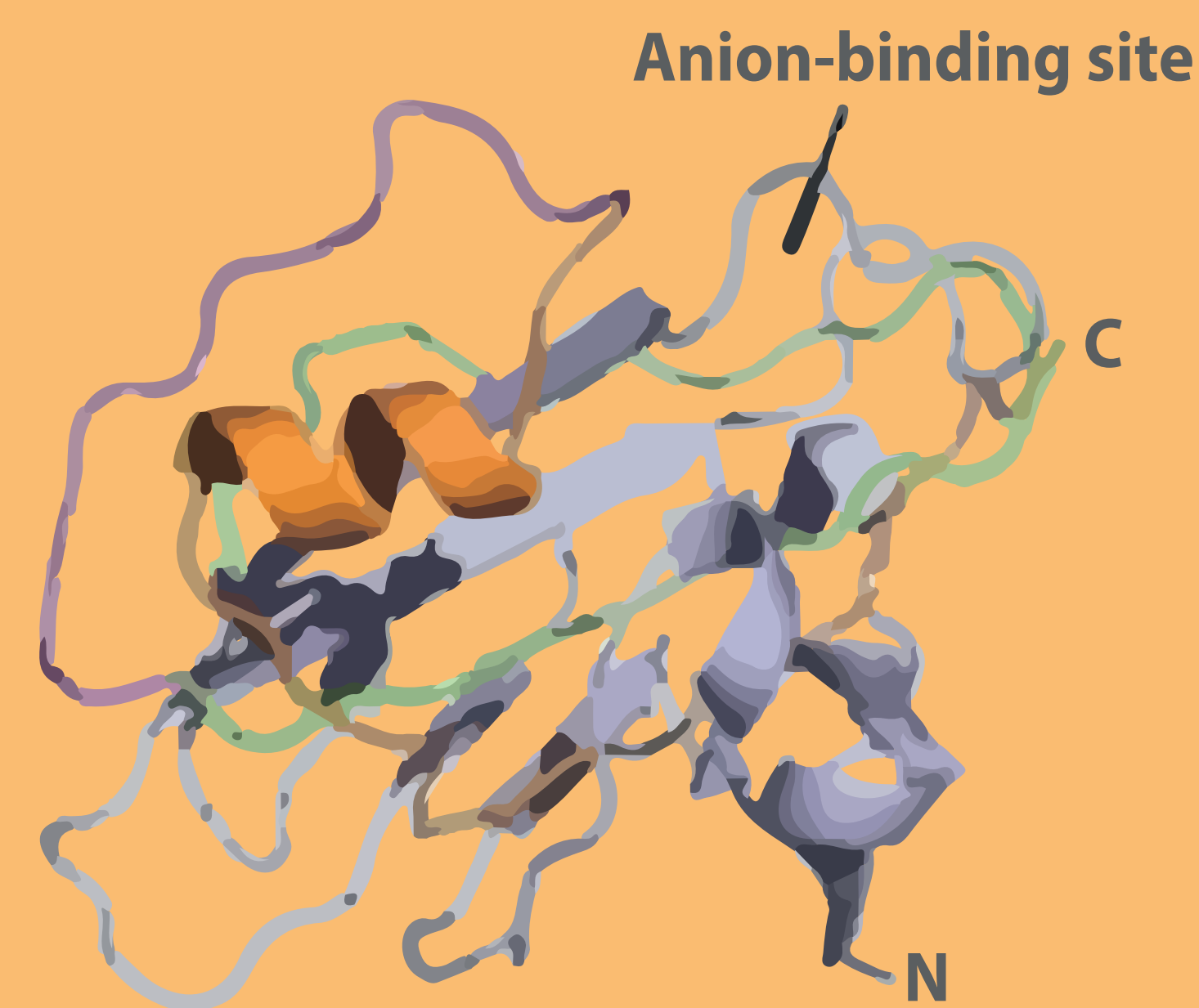
Adapted from Kobayashi et al., 1999

FT protein sequence



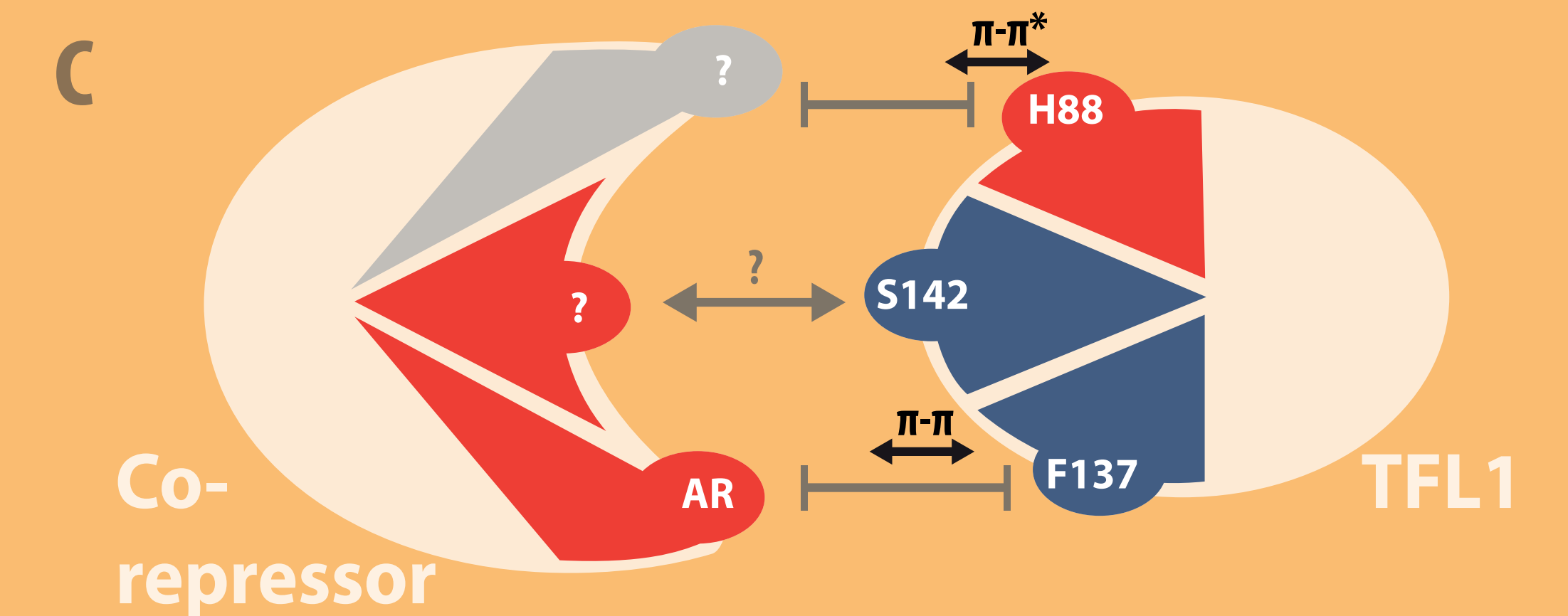
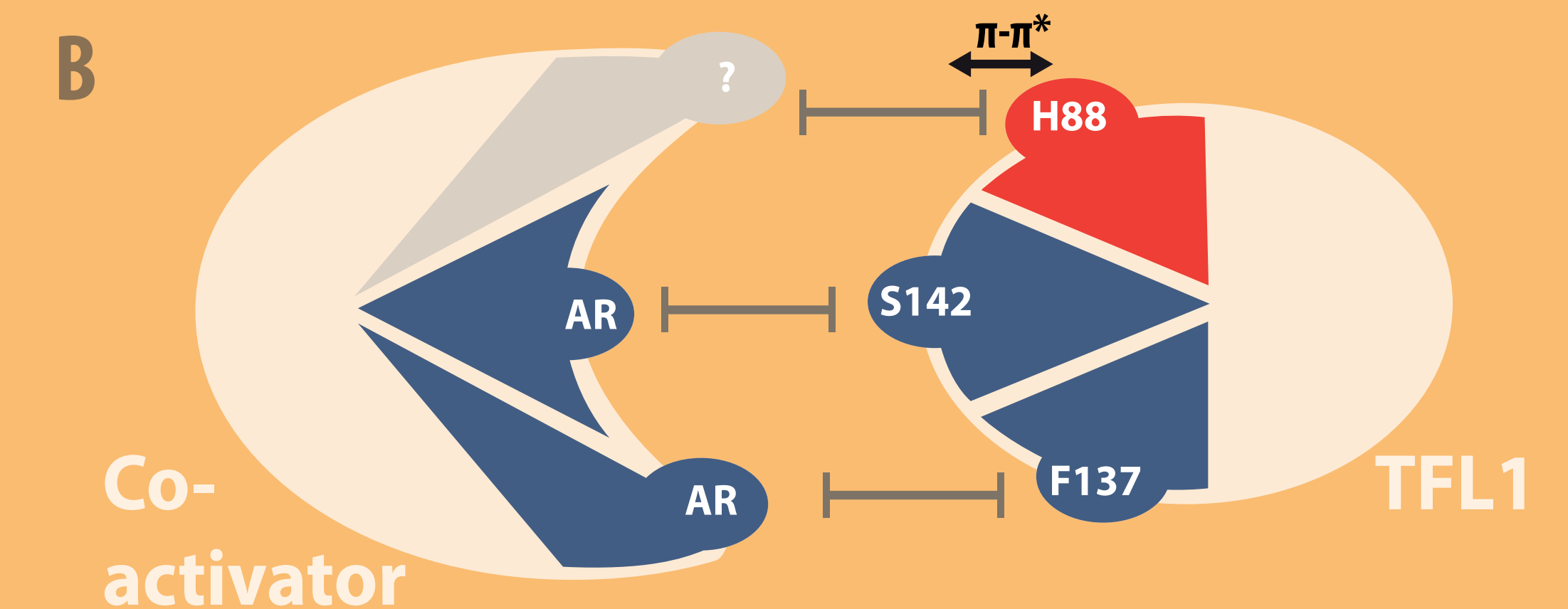
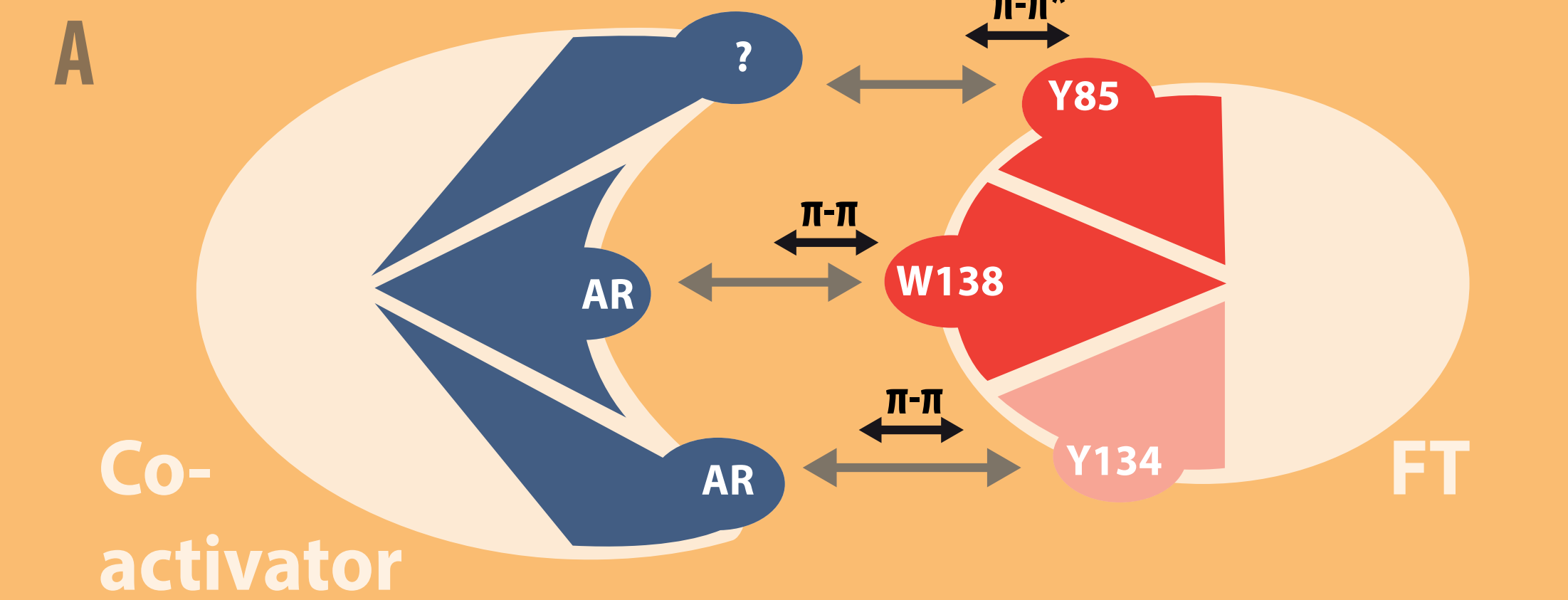
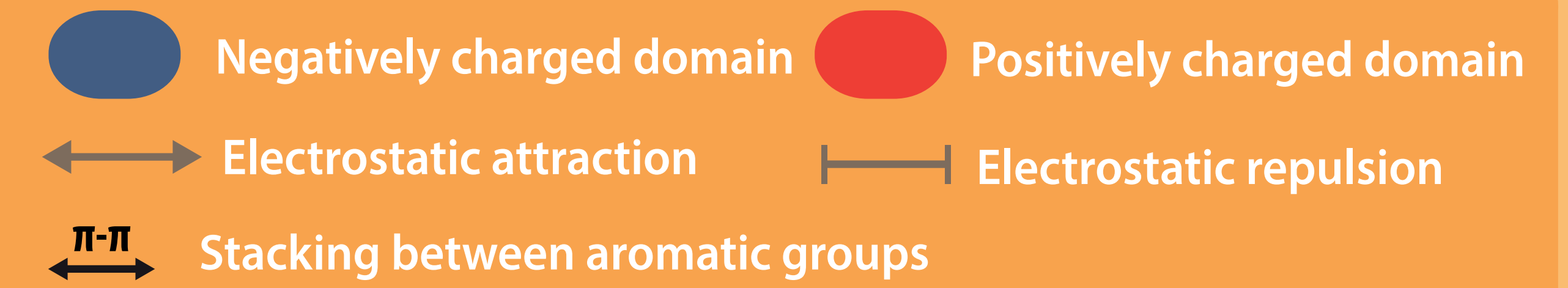
- Small protein of 175 amino acids (4 exons, 22 kD);
- No DNA binding domain.

FT protein structure



Adapted from Ahn et al., 2006

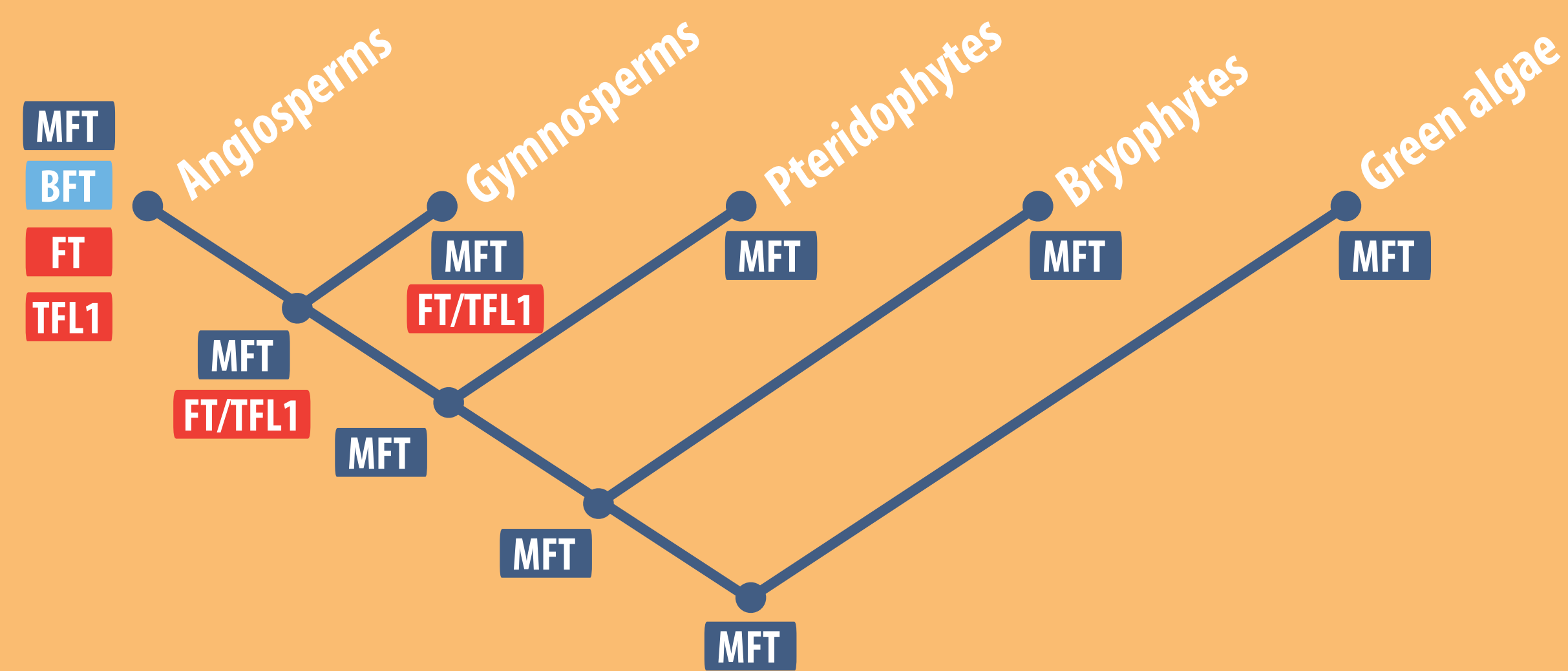
Mechanistic model for FT and TFL1 antagonistic function



FT binds a coactivator (A), while TFL1 may either exclude a coactivator (B) or interact positively with a corepressor (C) (Ho and Weigel, 2014).

Adapted from Ho and Weigel, 2014
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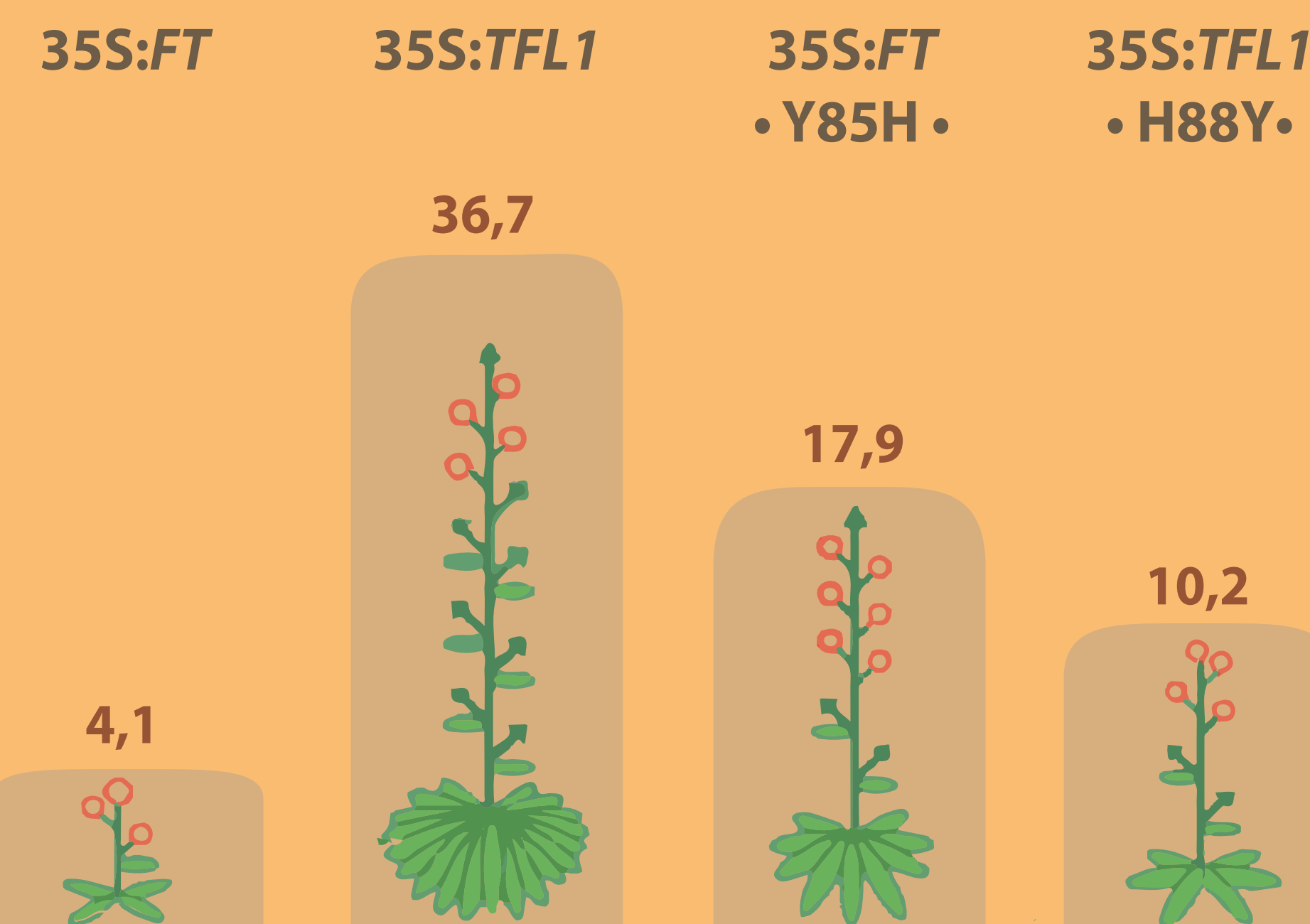
PEBP family in plant evolution



Adapted from Pin and Nilsson, 2012

FT and TFL1 antagonistic functions depend on few amino acids

Number of leaves at flowering under 16 hours-long days



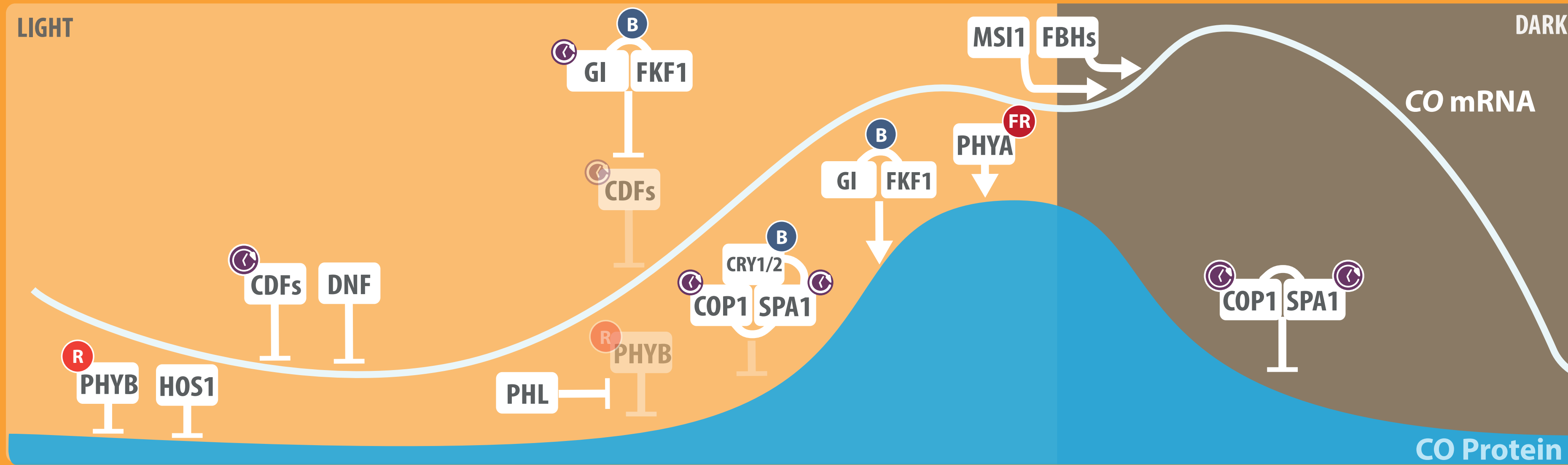
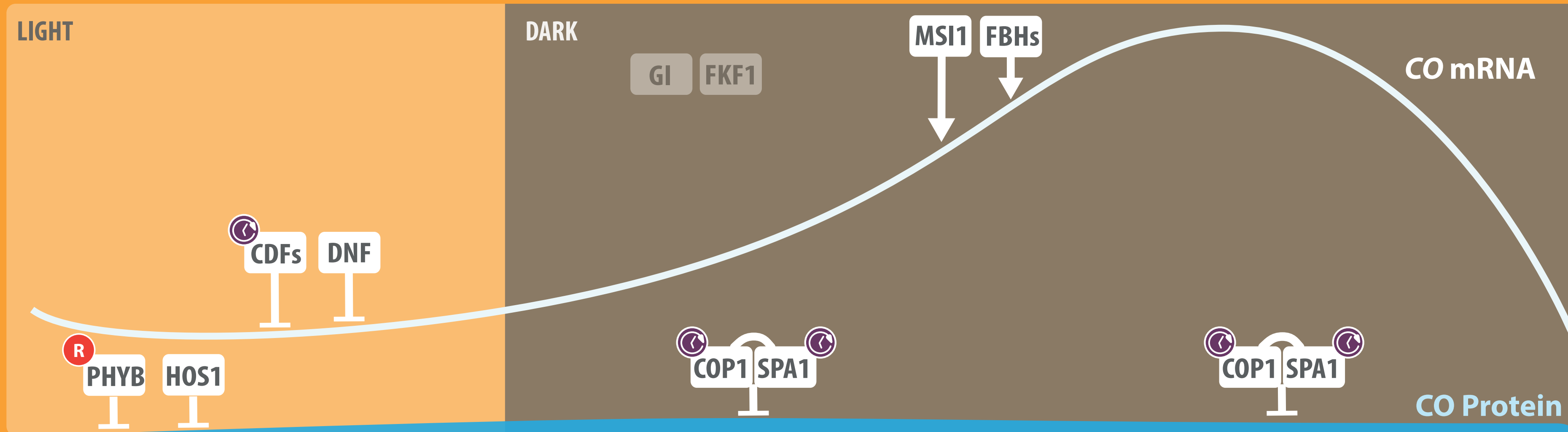
Adapted from Hanzawa et al., 2005

TIME-COURSE OF CONSTANS AND *FLOWERING LOCUS T* TRANSCRIPTIONAL AND POST-TRANSLATIONAL REGULATION

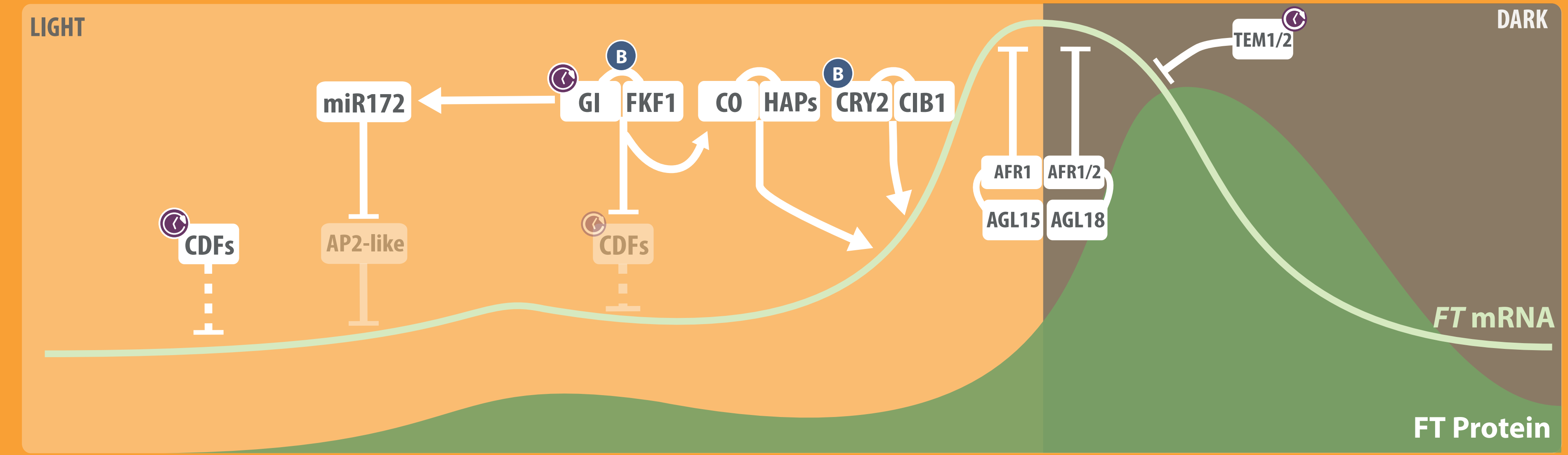
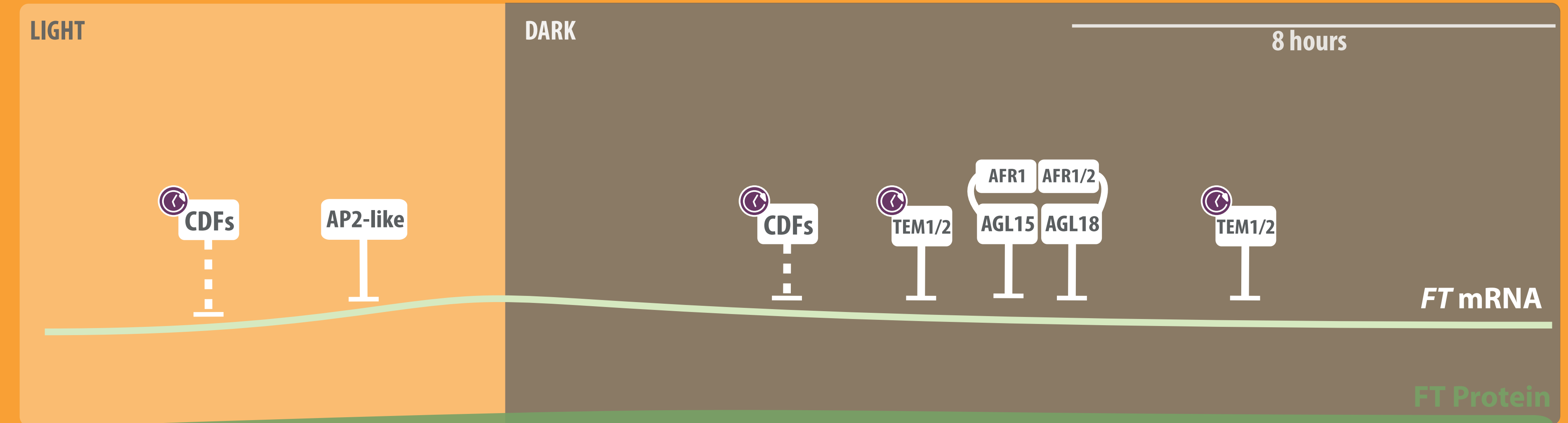
SHORT DAYS

LONG DAYS

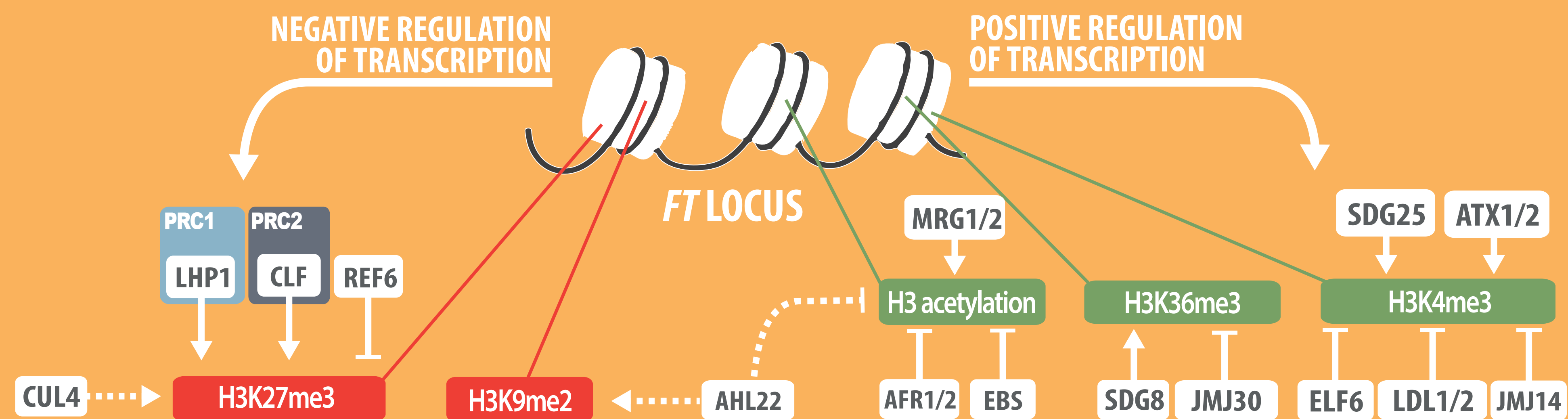
CONSTANS



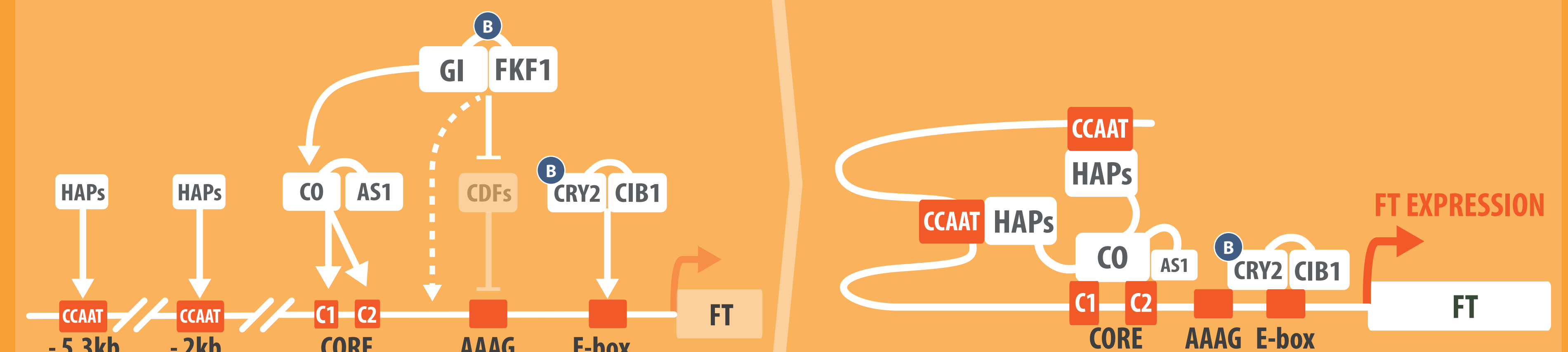
FLOWERING LOCUS T



CHROMATIN REMODELING AT *FT* LOCUS

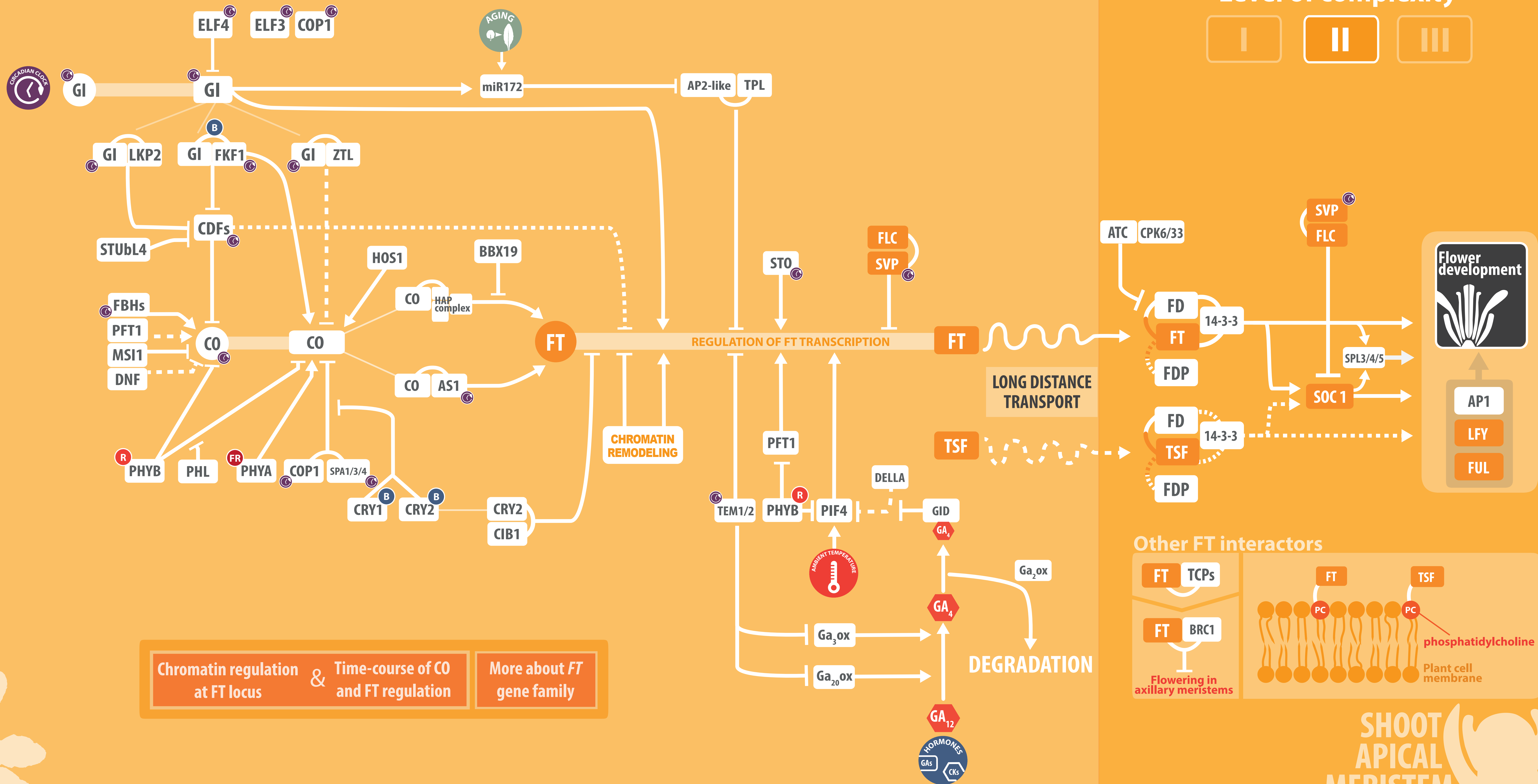


MODEL OF *FT* PROMOTER BENDING



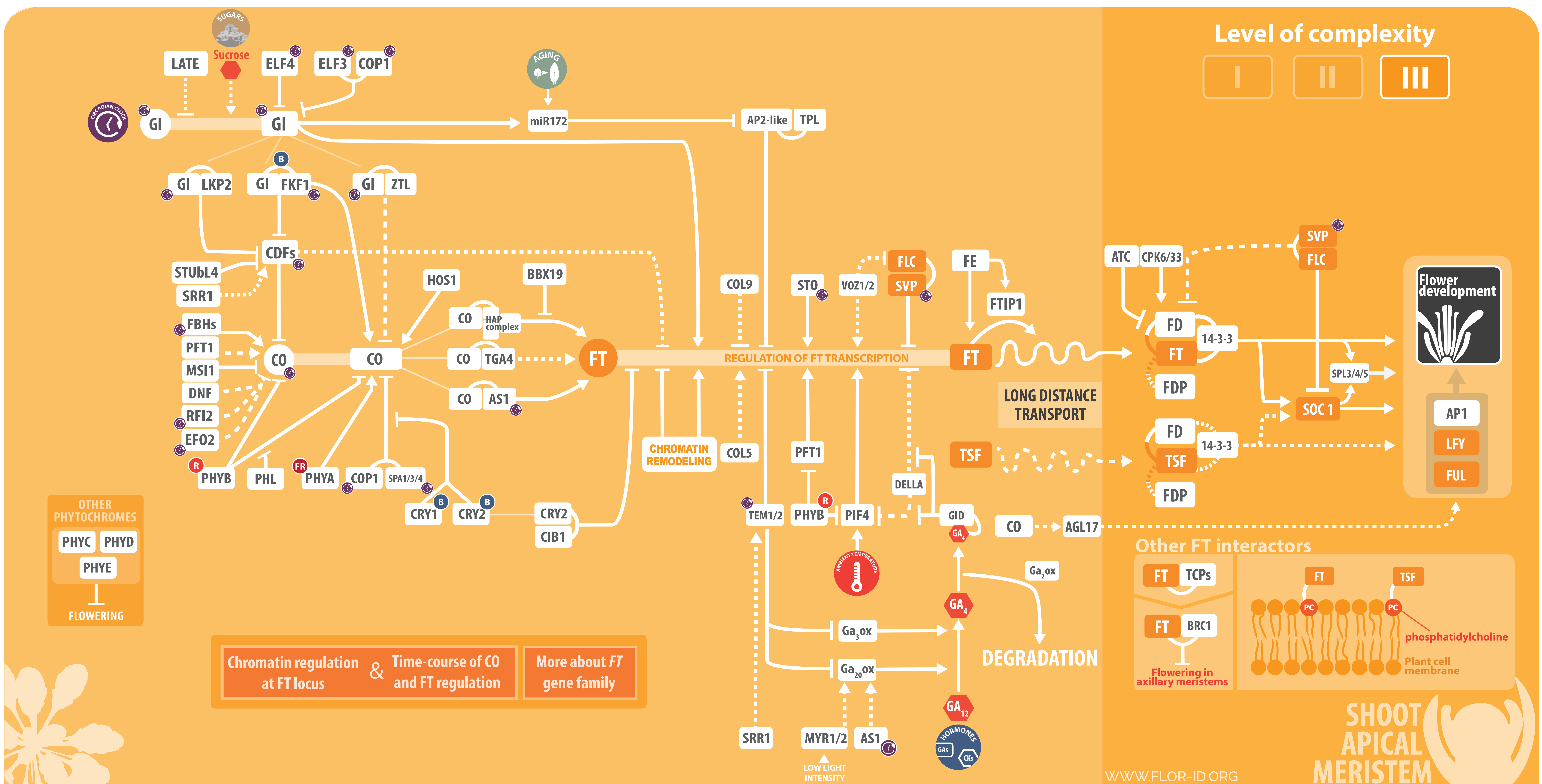
Adapted from Cao et al., 2014

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KEYS

(FR) Induced by Far-Red light (R) Induced by Red light (B) Induced by Blue light (C) Circadian-clock regulated (S) Sugar or hormones (P) Protein-protein interactions
 [White box] Genes/proteins [Orange box] Flowering-time integrator genes/proteins → Positive regulation —| Negative regulation ~ Transport - - - - Putative mechanisms



Chromatin regulation at FT locus & Time-course of CO and FT regulation

More about FT gene family

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