Table S5. Functional summary of TCP proteins in inflorescence development

TCP subclass	Species	Genes	Biological function	References
PCF	*Chrysanthemum morifolium*	*CmTCP20* (MH635418)	Promoting larger inflorescences, longer petals with elongated cells	Wang et al., 2019
CYC	*Actinodium cunninghamii*	*AcCYC-like*	Differential expression in pseudanthium correlates with the showiness and branching pattern of the ray structures	Claßen-Bockhoff et al., 2013
	Anacyclus clavatus	*AcCYC2a*	Expression in developing disc flowers, including stamens and ovules	Bello et al., 2017
		AcCYC2b	Expression in young capitula, highly in ray flowers	
		AcCYC2c	Expression in young and mature ray flowers highly	
		AcCYC2d	Expression in early stamen primordia of disc and ray flowers	
	Chrysanthemum lavandulifolium	*ClCYC2b* (KX161380)	Activating ClCYCLIN A2;1 to modulate cell division during petal growth	Zhang et al., 2024
		ClCYC2d (KX161382)	Repressing dorsal corolla lobes and stamens development	Chen et al., 2018
		ClCYC2e1 (MG593470)	Promoting ligule elongation by cell expansion, CYC2g can activate *CYC2e1*	Rong et al. 2024
		ClCYC2e2 (MG593471)	showing a weak inhibiting effect on the ray-floret development	Rong et al. 2024
		ClCYC2g (MT563254)	Weakening *ClCYC2g* expression caused ray flowers to gradually transition to a disc-like form	Shen et al., 2021
	Chrysanthemum morifolium	*CmCYC2c* (KU595428)	Increasing flower numbers and petal ligule length in ray florets, and involved in defining ray floret identity	Huang et al., 2016; Broholm et al., 2008
	Daucus carota	*DcCYC*（XP017241142）	Divergent expression in central and peripheral florets influencing the position of ray flower formation	Baczyński et al., 2022
	Gerbera hybrida	*GhCYC 2*,*4*,*5*,*9* (EU429303, EU429305, JN190059, JN190063)	Expression similarly in ray and trans flower primordia, but less in disc flower primordia, promoting transferring disc into ray-like florets and increasing flower density	Broholm et al., 2008; Juntheikki-Palovaara et al., 2014
		GhCYC3 (EU429304)	High level of expression in ray flower primordia only	Tahtiharju et al., 2012
		GhCYC7 (JN190061)	Promoting early ray and trans flower development with high expression	Tahtiharju et al., 2012

Helianthus annuus	*HaCYC2c* (EU088370)	Promoting floral zygomorphy, loss of its expression exhibiting actinomorphic ray florets	Chapman et al., 2012
Lotus japonicus	*LjCYC5* (DQ202478)	Controlling the symmetry of the inflorescence	Feng et al., 2006
Matricaria inodora	*MiRAY2* (KT59392)	Determining floret and phyllary identity, influencing ray floret conversion via up-regulation in auxin-treated capitula	Zoulias et al., 2018
Senecio vulgaris	*SvRAY1* (FJ356698-99)	Crucial control over ray versus disc floret identity, and repressing ray floret development	Kim et al., 2008
	SvRAY2 (FJ356701-3)	Promoting ventral identity in ray florets	Kim et al., 2008
	SvRAY3 (KT722935)	Promting petal growth, and expressed in the ventral petals of the ray florets	Garcês et al., 2016
Tagetes erecta	*TeCYC2c*	Affecting on the development of corollas and stamen	Zhu et al., 2023

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