S1 Table. List of P450 families with majority of its members grouped in physical clusters.

Family	Family size (total sequences)	Number of clustered members	Examples of functions in other organisms
CYP82	69	66	Biosynthesis of homoterpenes in *A. thaliana* [1], opioids in *Papaver somniferum* [2–4].
CYP71	51	45	Biosynthesis of monoterpenoids in mint species *Mentha x piperita* and *Mentha x spicata* [5], cyanogenic glucosides in cassava (*Manihot esculenta*) [6], furanocoumarins in several species [7], artemisinin in *Artemisia annua* [8], flavonoids in soybean (*Glycine max*) [9].
CYP81	50	42	Biosynthesis of indole glucosinolates in *A. thaliana* [10], isoflavonoid phytoalexins in *Medicago truncatula, G. echinata* and*, Lotus japonicus* [9], sesamin in *Sesamum spp.* [11]
CYP76	42	42	Biosynthesis of monoterpene volatiles in *A. thaliana* [12], monoterpene indole alkaloids in *Catharanthus roseus* [13,14], sesquiterpene volatiles in sandalwood (*Santalum album*) [15], phytoalexins in rice (*Oryza sativa*) [16,17], tanshinones in Chinese sage (*Salvia miltiorrhiza*)[18], pigment betalain in beetroot (*Beta vulgaris*) [19].Metabolism of xenobiotics in *A. thaliana* [20].
CYP72	36	33	Biosynthesis of monoterpene indole alkaloids in *C. roseus* [14,21], glycyrrhizin in licorice (*Glycyrrhiza*) [22], saponins in *M. trucantula* [23].
CYP79	26	25	Biosynthesis of cyanogenic glucosides in sorghum [24], cassava (*M. esculenta*) [25] and other plant species, glucosinolates in brassicaceae [26–28].
CYP89	25	21	Chlorophyll degradation in *A. thaliana* [29].
CYP75	24	23	Biosynthesis of flavonoids in *Petunia x hybrida*, *A. thaliana, Gentiana triflora, C. roseus, etc*. [9]
CYP716	23	12	Biosynthesis of saponins in *M. trucantula* [30] and *Maesa lanceolata* [31,32].
CYP706	21	19	Biosyntheis of sesquiterpenoids in cotton (*Gossypium arboreum*) [33].
CYP87	20	15	Biosynthesis of saponins in *Maesa lanceolata* [31].
CYP714	16	13	Degradation or biosynthesis of hormones (gibberelins) in rice (*O. sativa*) [34].
CYP736	13	11	Unknown. Pathogen response in grapevine *V. vinifera* [35].
CYP728	11	9	Unknown.
CYP80	10	9	Alkaloid biosynthesis in barberry *(Berberis stolonifera)* [36] and California poppy (*Eschscholzia californica*) [37].
CYP96	9	9	Biosynthesis of cuticular wax in *A. thaliana* [38].
CYP721	8	8	Unknown.
CYP74	7	7	Biosynthesis of jasmonates and C6 volatiles in *A. thaliana* and other plants [39–41].
CYP92	7	5	Unknown.
CYP93	7	6	Biosynthesis of flavonoids in soybean (*G. max*), *Glycyrrhiza echinata*, *Gerbera hybrid*, *Antirrhinum majus*, *Torrenia hybrid*, etc. [9,42]
CYP712	6	5	Unknown.

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