CONSTITUTIVE AND INDUCIBLE RESISTANCE TO THRIPS DO NOT CORRELATE WITH DIFFERENCES IN TRICHOME DENSITY OR ENZYMATIC-RELATED DEFENSES IN CHRYSANTHEMUM

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Supplementary materials

 $\textbf{Table S1} \ \text{Breeding IDs of the 95 chrysanthemum cultivars used in this study}$

| Cultiva | Breeding ID | Cultivar | Breeding ID | Cultivar | Breeding ID | Cultivar | Breeding ID |
|---------|--------------|----------|--------------|----------|-------------|----------|---------------|
| r | Di ceuing 1D | Cuiuvai | Di ccuing ID | Cuitival | Di comig ID | Cuitival | Di ceuilig ID |
| 1 | DC-1 | 25 | DC-25 | 49 | 48837 | 73 | 56072 |
| 2 | DC-2 | 26 | DC-26 | 50 | 48639 | 74 | 56168 |
| 3 | DC-3 | 27 | DC-27 | 51 | 9403 | 75 | 56701 |
| 4 | DC-4 | 28 | DC-28 | 52 | 41475 | 76 | 56703 |
| 5 | DC-5 | 29 | 26741 | 53 | 45644 | 77 | 56713 |
| 6 | DC-6 | 30 | 31563 | 54 | 45785 | 78 | 56817 |
| 7 | DC-7 | 31 | 8713 | 55 | 48286 | 79 | 57352 |
| 8 | DC-8 | 32 | 7688 | 56 | 40931 | 80 | 57709 |
| 9 | DC-9 | 33 | 30600 | 57 | 43339 | 81 | 57773 |
| 10 | DC-10 | 34 | 21697 | 58 | 90753 | 82 | 57993 |
| 11 | DC-11 | 35 | 13185 | 59 | 36318 | 83 | 58498 |
| 12 | DC-12 | 36 | 8578 | 60 | 43110 | 84 | 59209 |
| 13 | DC-13 | 37 | 8393 | 61 | 44339 | 85 | 64952 |
| 14 | DC-14 | 38 | 4875 | 62 | 48942 | 86 | 65001 |
| 15 | DC-15 | 39 | 48864 | 63 | 9361 | 87 | 37511 |
| 16 | DC-16 | 40 | 47287 | 64 | 42215 | 88 | 37577 |
| 17 | DC-17 | 41 | 57067 | 65 | 42377 | 89 | 37630 |
| 18 | DC-18 | 42 | 55229 | 66 | 42629 | 90 | 42415 |
| 19 | DC-19 | 43 | 55238 | 67 | 42909 | 91 | 25533 |
| 20 | DC-20 | 44 | 46885 | 68 | 50223 | 92 | 22898 |
| 21 | DC-21 | 45 | 55223 | 69 | 50858 | 93 | 48015 |
| 22 | DC-22 | 46 | 55115 | 70 | 51643 | 94 | 20880 |
| 23 | DC-23 | 47 | 45728 | 71 | 56068 | 95 | 49230 |
| 24 | DC-24 | 48 | 90633 | 72 | 56069 | | |

Table S2 Detailed statistical analysis performed for data displayed in each figure

| Figure | Panel | Statistical test | Factor and statistic value | Degree of freedom | Significance |
|---------|-------|-----------------------------------------|--------------------------------------------|---------------------|--------------|
| Fig. 2 | a | ANOVA | Genotype; $F = 6.59$ | df1 = 94, df2 = 190 | P < 0.001 |
| | b | Kruskal-Wallis | Genotype; $\chi^2 = 250.1$ | df = 94 | P < 0.001 |
| | С | Spearman correlation | r = 0.269; N = 95 | - | P = 0.008 |
| Fig. 3 | a | Pearson correlation | r = 0.186, N = 12 | - | P = 0.564 |
| | b | Pearson $r = 0.118; N = 12$ correlation | | - | P = 0.715 |
| | С | Pearson correlation | r = 0.293; N = 12 | - | P = 0.355 |
| | a | GLM - | Genotype; $Wald \chi^2 = 70.979$ | df = 5 | P < 0.001 |
| | | | JA or Mock; Wald $\chi^2 = 111.912$ | df = 1 | P < 0.001 |
| | | | Interaction; <i>Wald</i> $\chi^2 = 33.160$ | df = 5 | P < 0.001 |
| | b | GLM - | Genotype; $Wald \chi^2 = 58.106$ | df = 5 | P < 0.001 |
| | | | JA or Mock; Wald $\chi^2 = 195.343$ | df = 1 | P < 0.001 |
| | | | Interaction; Wald $\chi^2 = 25.740$ | df = 5 | P < 0.001 |
| Fig. 4 | c | GLM - | Genotype; $Wald \chi^2 = 261.895$ | df = 5 | P < 0.001 |
| | | | JA or Mock; $Wald \chi^2 = 5.034$ | df = 1 | P = 0.025 |
| | | | Interaction; <i>Wald</i> $\chi^2 = 12.661$ | df = 5 | P = 0.027 |
| | d | GLM - | Genotype; $Wald \chi^2 = 1036.121$ | df = 5 | P < 0.001 |
| | | | JA or Mock; $Wald \chi^2 = 0.010$ | df = 1 | P = 0.922 |
| | | | Interaction; <i>Wald</i> $\chi^2 = 4.057$ | df = 5 | P = 541 |
| Fig. 5 | a | Pearson correlation | r = -0.619; N = 6 | - | P = 0.190 |
| | b | Pearson correlation | r = -0.118; N = 6 | - | P = 0.824 |
| | С | Pearson correlation | r = -0.037; N = 6 | - | P = 0.944 |
| Fig. S1 | a | Kruskal-Wallis | Genotype; $\chi^2 = 48.8$ | df = 11 | P < 0.001 |
| | b | ANOVA | Genotype; $F = 3.32$ | df1 = 11, df2 = 48 | P = 0.002 |
| Fig. S2 | a | Pearson correlation | r = -0.376; N = 12 | - | P = 0.228 |
| | b | Pearson correlation | r = -0.567; N = 12 | - | P = 0.055 |

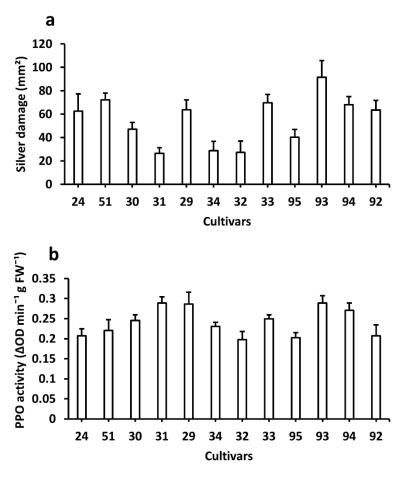


Fig. S1 Phenotypic variation in Western flower thrips resistance and polyphenol oxidase activity among chrysanthemum cultivars. (a) Silver damage symptoms (mean \pm SEM, n=10) and (b) polyphenol oxidase (PPO) activity (mean \pm SEM, n=5) were determined in 12 different chrysanthemum cultivars. Plants were sampled for PPO activity measurement or used for non-choice whole plant bioassays at 35 days after planting. Western flower thrips (WFT) leaf damage ('silver damage') was determined at 7 days after WFT infestation

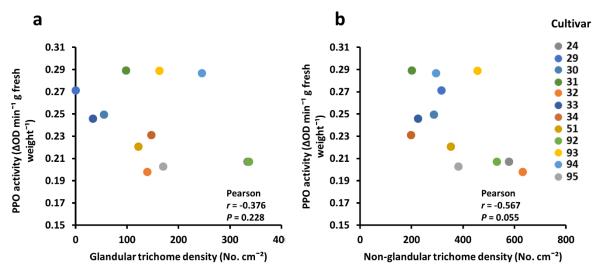


Fig. S2 Relationship between polyphenol oxidase activity and glandular/non-glandular trichome density in chrysanthemum. Scatter plots depicting the relationship between (a) polyphenol oxidase (PPO) activity and glandular trichome density, and (b) PPO activity and non-glandular trichome density. Plants were sampled for PPO activity and trichome density at 35 days after planting. The plots display data obtained from 12 chrysanthemum cultivars. Each dot corresponds to the mean of five plant replicates per cultivar for PPO and trichome density, and of ten plant replicates per cultivar for silver damage symptoms