Supporting Information for Publication

Table S1. Quantitation of Phenolics (mM) in Pools 2 and 3 During Incubations With Endogenous Oxidases from 3_m and 8_m Leaves.

no.	[M-H]$^-$	Compound	Pool 2 (mM)				Pool 3 (mM)			
			3_m t_0	3_m t_{20}	8_m t_0	8_m t_{20}	3_m t_0	3_m t_{20}	8_m t_0	8_m t_{20}
1	215	Caffeic acid derivative	0.03	0.02	0.02	0.03	0.01	0.064	0	0.02
2	341	Caffeic acid *O*-*β*-hexoside	0.10	0.12	0.11	0.11	0.03	0.08	0.05	0.08
4	773	Caffeoyl-spermine-hexosyl ester	0.12	0.09	0.12	0.10	0.05	0.10	0.04	0.04
6	383	Caffeic acid hexosyl-acetyl ester	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00
7	297	2 *O*-Caffeoyl threonic acid	0.94	0.38	1.01	0.42	0.11	0.04	0.54	0.18
11	261	Dihydrocaffeic acid sulfate-ester	0.01	0.00	0.04	0.01	0.00	0.00	0.03	0.00
18	487	Caffeoyl-feruolyltartaric acid	0.07	0.00	0.12	0.08	0.00	0.00	0.05	0.01
12	439	Unidentified sinapic acid derivative	0.15	0.07	0.14	0.00	0.00	0.00	0.00	0.05
21	651	Sinapic acid *O*-hexosyl derivative	0.85	0.50	0.92	0.7	0.26	0.19	0.33	0.25
24	445	Sinapic acid O-hexosyl ester	2.80	1.00	2.79	1.09	0.09	0.00	0.08	0.00
29	489	Sinapic acid derivative	0.67	0.23	0.78	0.33	0.53	0.06	0.64.	0.09
17	305	Dihydro-*p*-coumaric acid derivative	0.06	0.00	0.07	0.00	0.00	0.00	0.01	0.00
22	337	5-*p*-Coumaroylquinic acid	0.62	0.52	0.64	0.10	0.02	0.01	0.04	0.01
25	337	4-*p*-Coumaroylquinic acid	0.22	0.20	0.22	0.07	1.42	0.00	1.42	0.00
20	621	Ferulic acid *O*-hexosyl derivative	0.26	0.10	0.27	0.09	0.03	0.01	0.03	0.04
23	487	Ferulic acid *O*-pento-hexoside	0.50	0.36	0.51	0.36	0.02	0.01	0.03	0.01
26	445	Ferulic acid *O*-hexosyl derivative	0.94	0.38	1.01	0.42	0.11	0.04	0.54	0.18
27	355	Ferulic acid-hexosyl ester	0.60	0.59	0.67	0.66	0.14	0.03	0.20	0.05
28	517	Ferulic acid-hexosyl ester	1.52	0.99	1.56	1.13	0.79	0.62	0.83	0.83
30	443	Ferulic acid derivative	0.63	0.40	0.63	0.50	0.08	0.07	0.08	0.07
31	473	Ferulic acid derivative	0.38	0.30	0.44	0.32	0.03	0.03	0.10	0.01
32	625	Quercetin *O*-dihexoside	0.03	0.02	0.03	0.04	0.52	0.53	0.53	0.50
33	593	4″ *O*-Hexosylvitexin	0.03	0.00	0.03	0.00	0.35	0.00	0.35	0.00
34	563	Vitexin *O*-pentosyl derivative	0.02	0.01	0.03	0.01	0.65	0.35	0.65	0.24
35	431	Vitexin	0.02	0.01	0.02	0.01	0.79	0.45	0.78	0.52
36	635	Vitexin *O*-hexoside	0.04	0.01	0.07	0.02	1.24	1.10	1.27	1.28
38	679	Hexosyl-malonylvitexin	0.06	0.02	0.07	0.03	1.28	1.19	1.29	1.27
41	473	Vitexin acetyl derivative	0.00	0.04	0.12	0.02	1.62	1.21	1.73	1.24
37	639	Isorhamnetin *O*-dihexoside	0.00	0.00	0.01	0.01	0.03	0.02	0.03	0.03
39	609	Isorhamnetin derivative	0.12	0.03	0.07	0.00	0.48	0.00	0.43	0.35

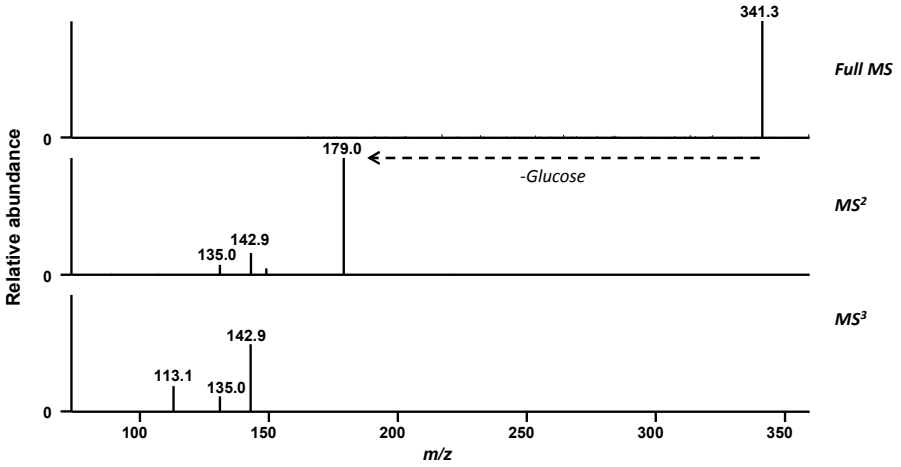

Figure S1 Mass fragmentation spectrum of caffeic acid *O*-β-hexoside (**2**)

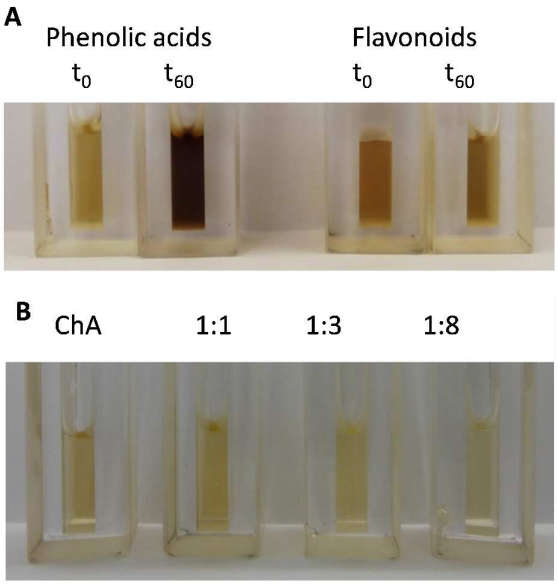

Figure S2. Colors of (A) pool 2 (phenolic acids) and 3 (flavonoids) before (t_0) and after 60 min (t_{60}) incubation with dialyzed enzyme extract. (B) Colors of chlorogenic acid (ChA) after 60 min incubation with mushroom tyrosinase at different molar ratios of ferulic acid:chlorogenic acid.

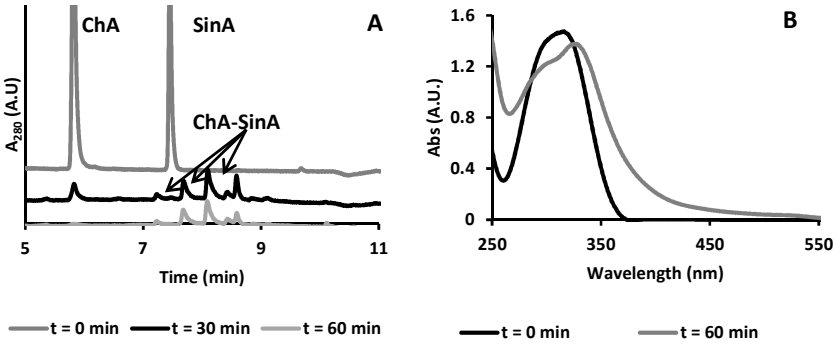

Figure S3. (A) RP-UHPLC-PDA traces of chlorogenic acid (ChA) (0.1 mM) and sinapic acid (SinA) (0.1 mM) incubated with mushroom tyrosinase at several time points and (B) absorbance spectra of the reaction mixtures before and after 60 min incubation.

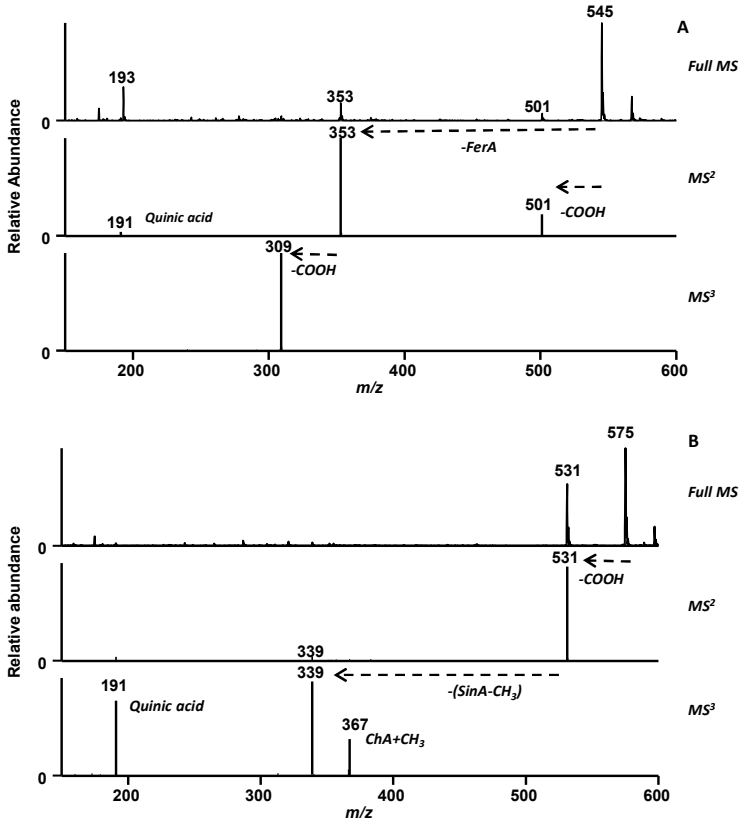

Figure S4. (A) Mass fragmentation spectra of chlorogenic acid-ferulic acid and (B) chlorogenic acid-sinapic acid.