Supplementary Figure 1. Trait-wise association Q-Q plots for GLM. AR- Aroma; AST- Astringency; BRK- Briskness; BRT- Brightness
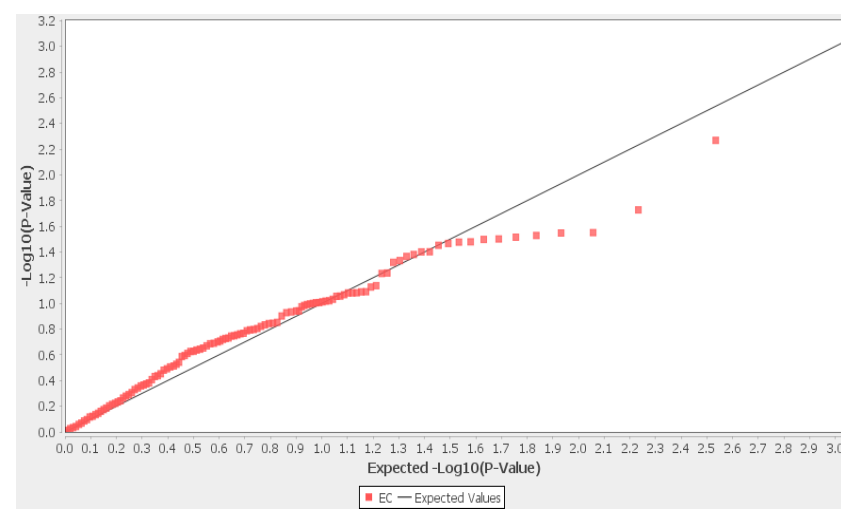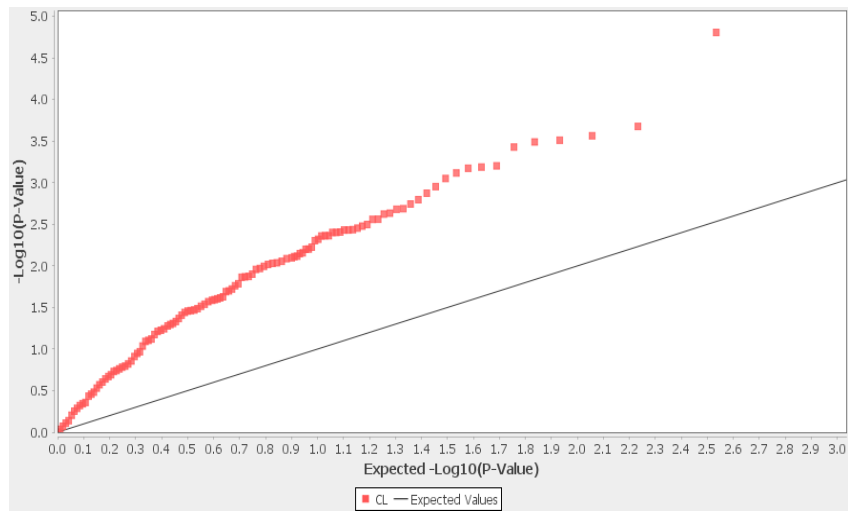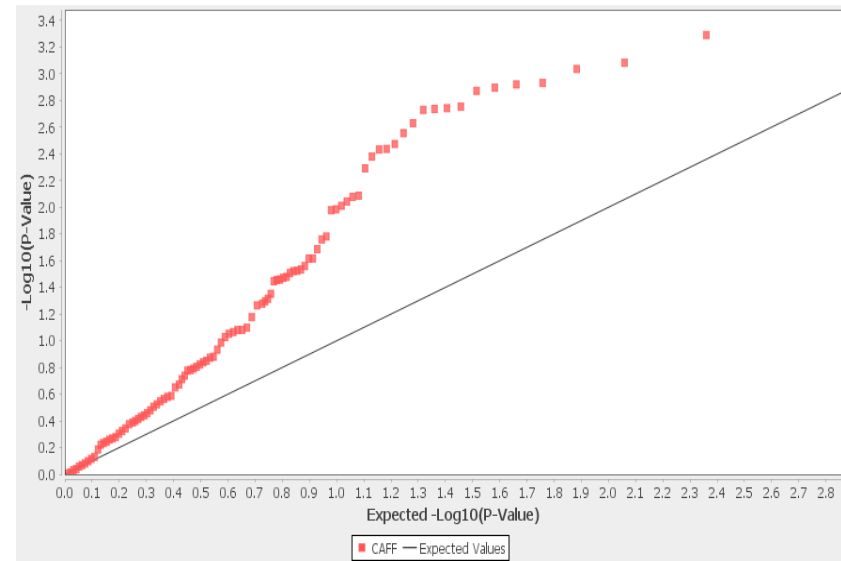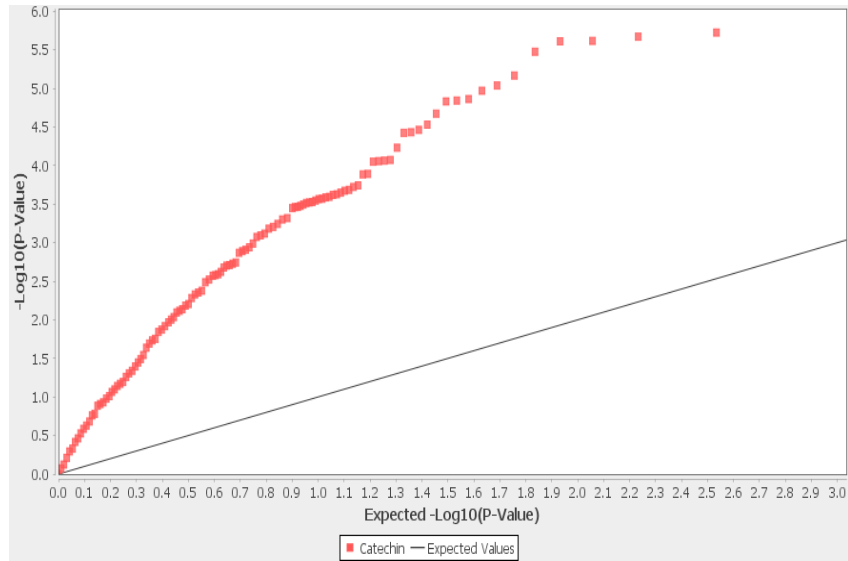
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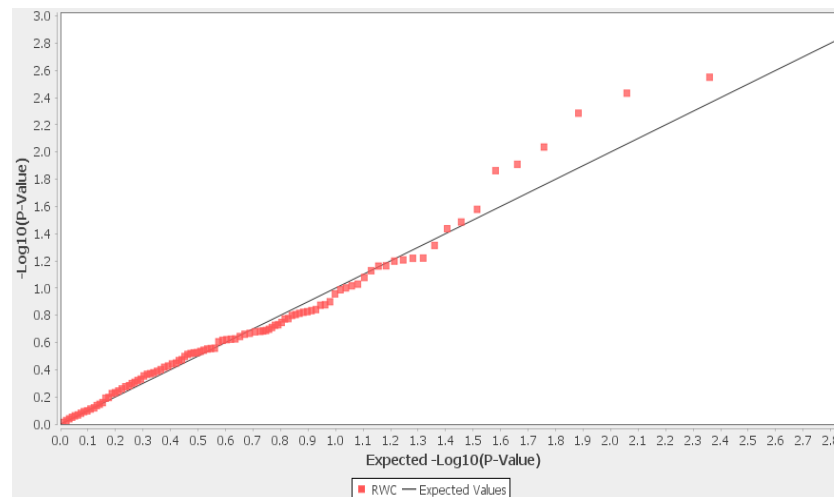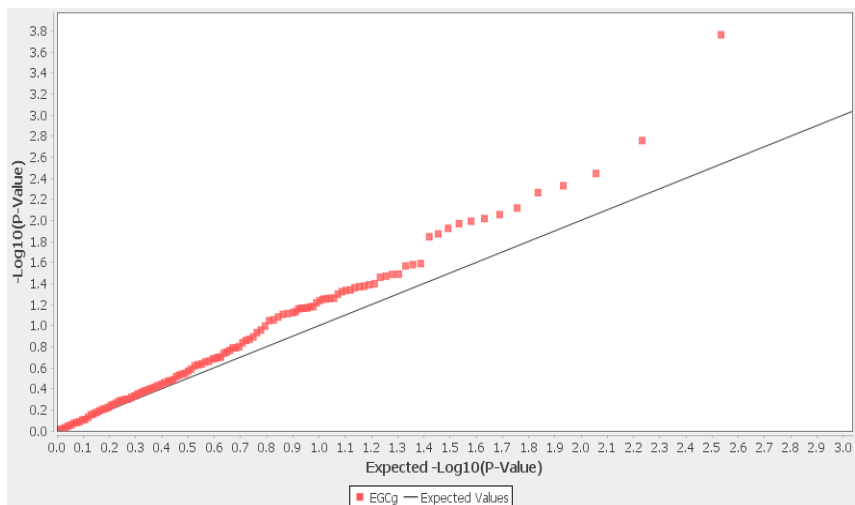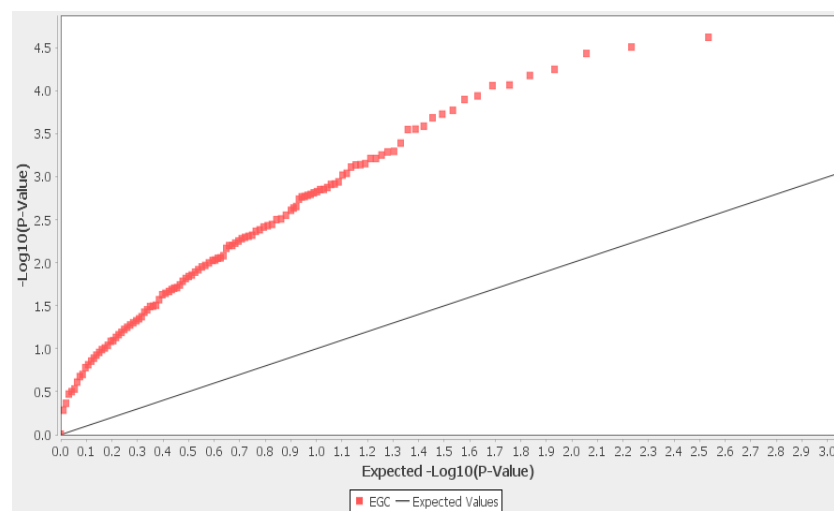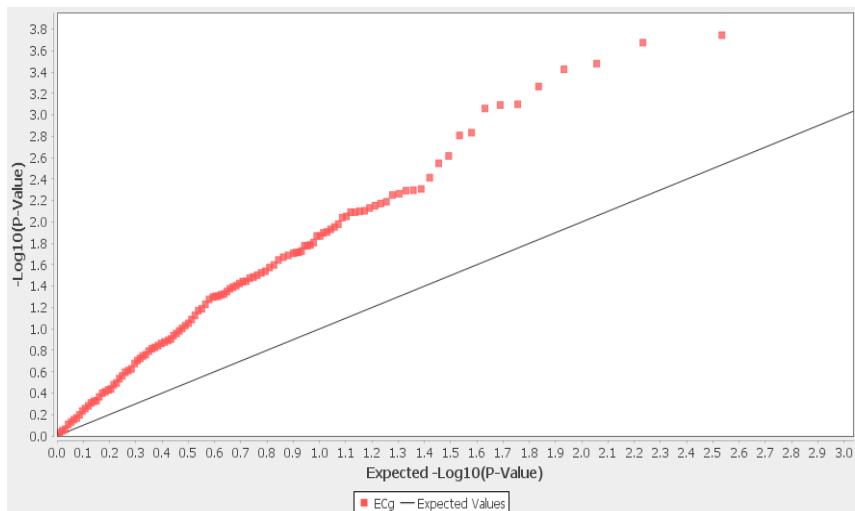
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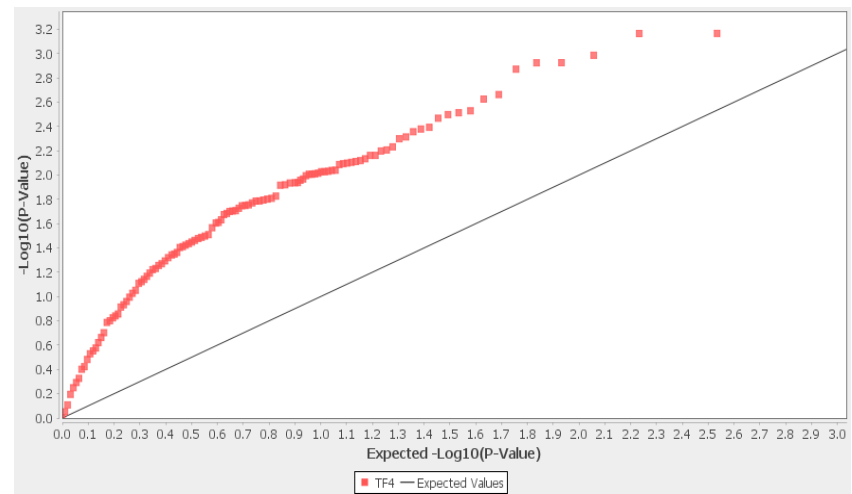**Continued** Supplementary Figure 1. Trait-wise association Q-Q plots for GLM. TF1- Theaflavin; TF2- Theaflavin-3-gallate; TF3- Theaflavin-3'-gallate; TF4- Theaflavin-3,3'-digallate
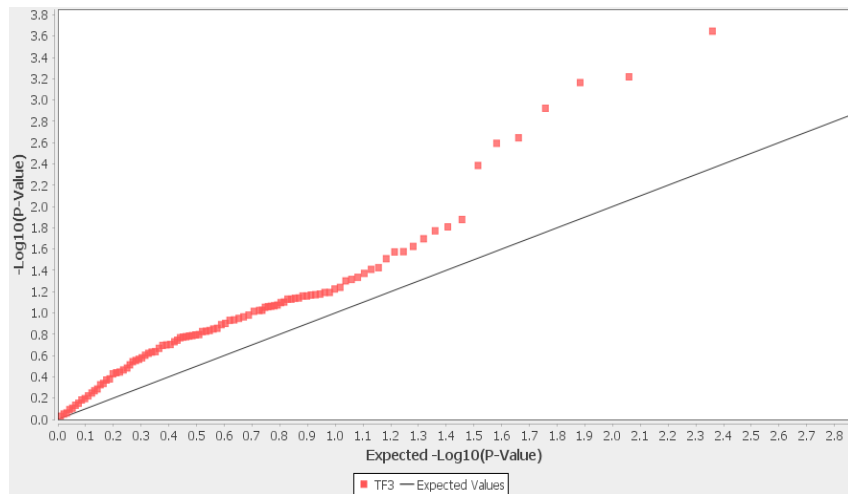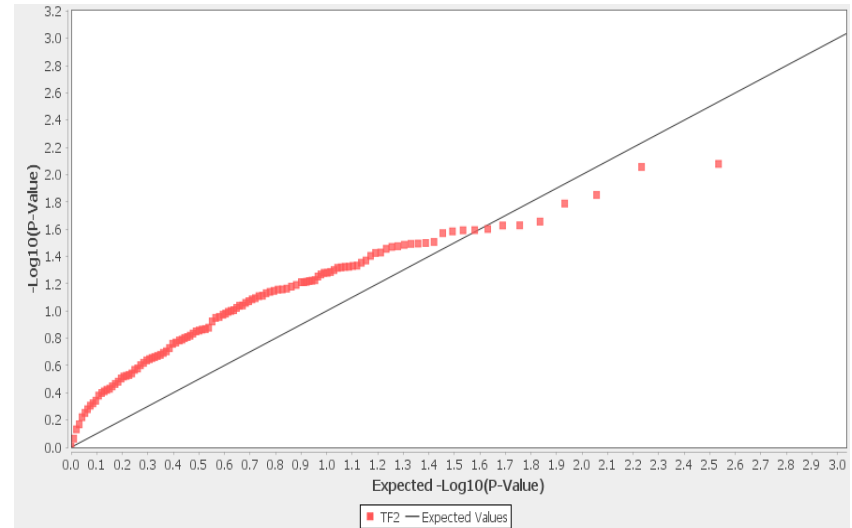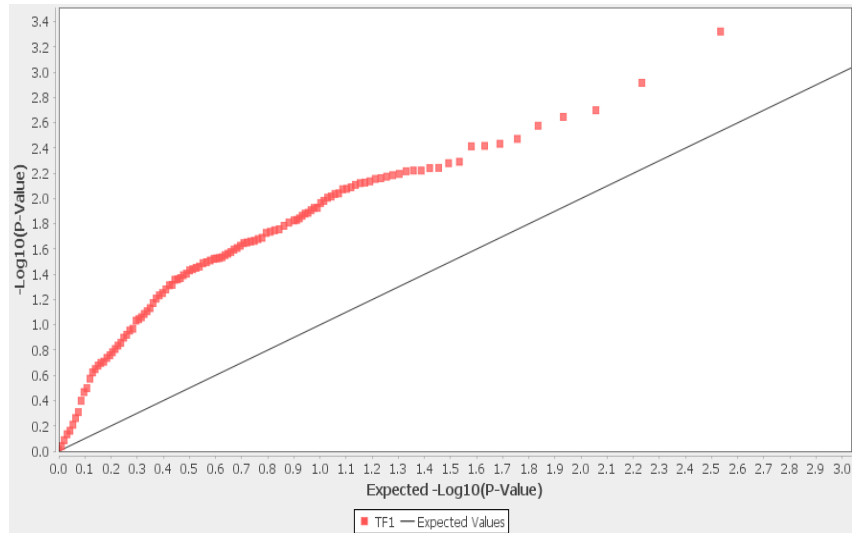
Supplementary Figure 2. Trait-wise association Q-Q plots for GLM (Q). AR- Aroma; AST- Astringency; BRK- Briskness; BRT- Brightness
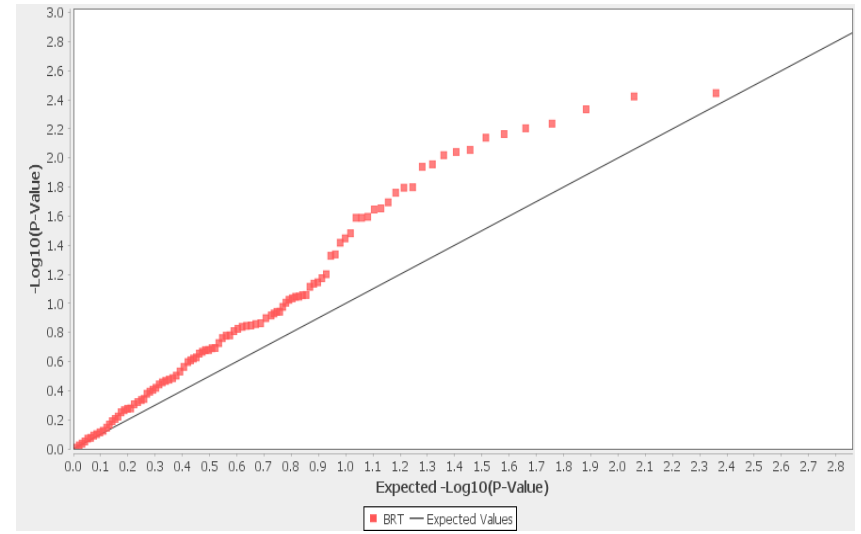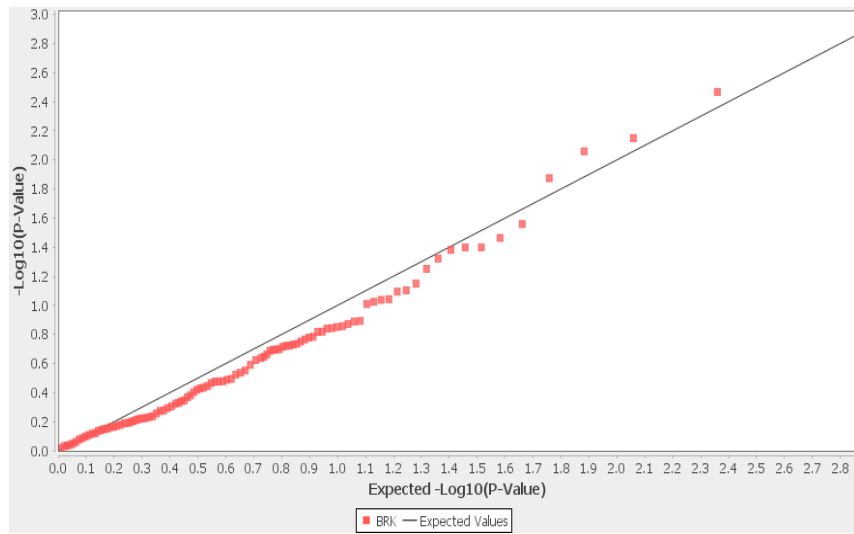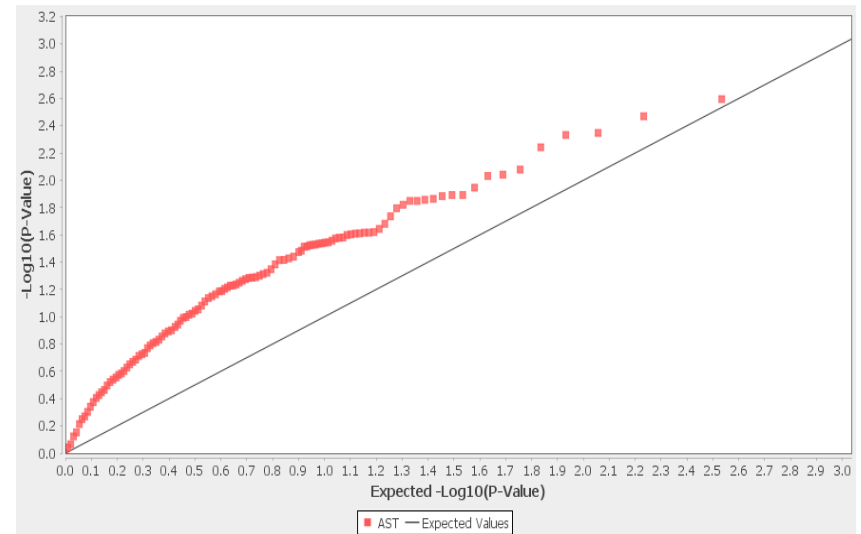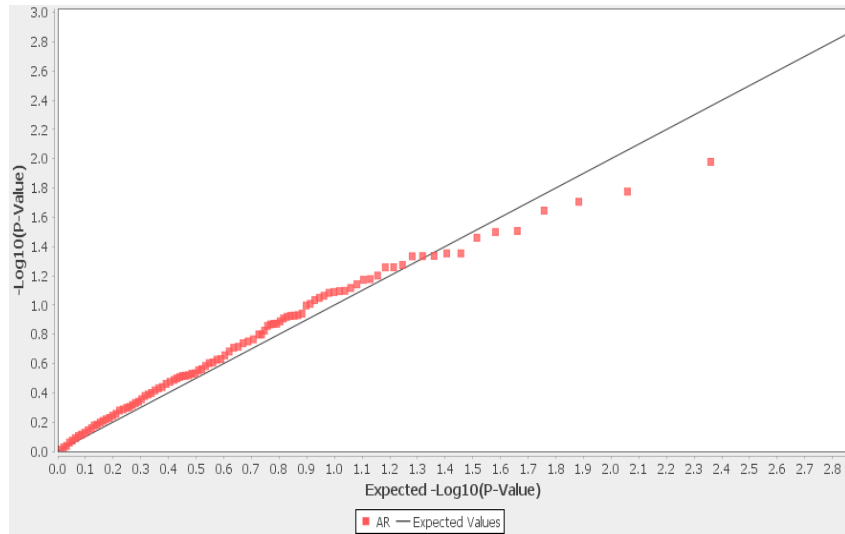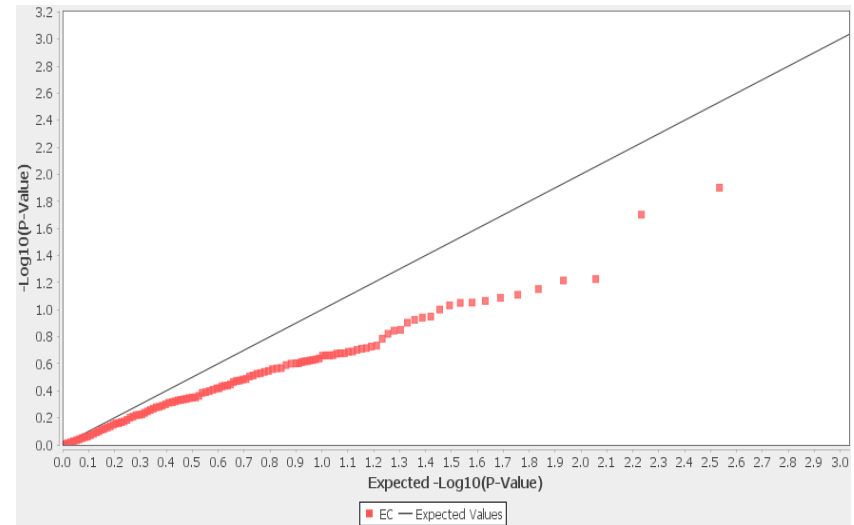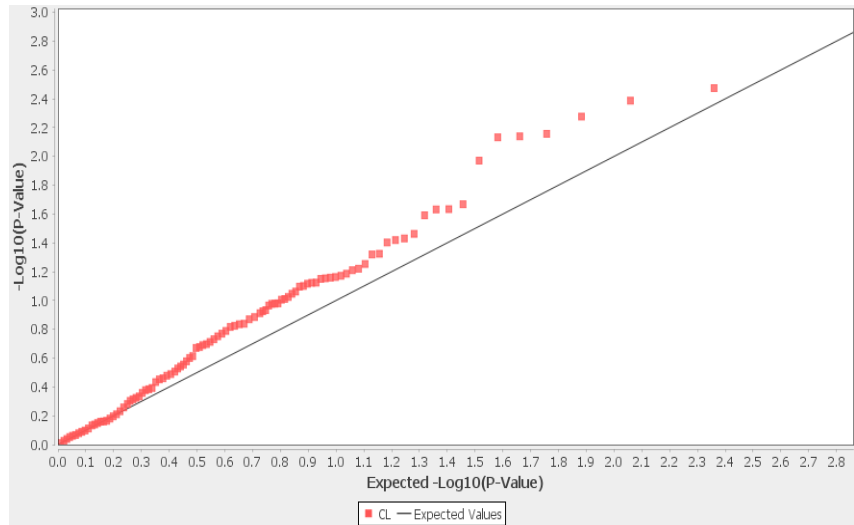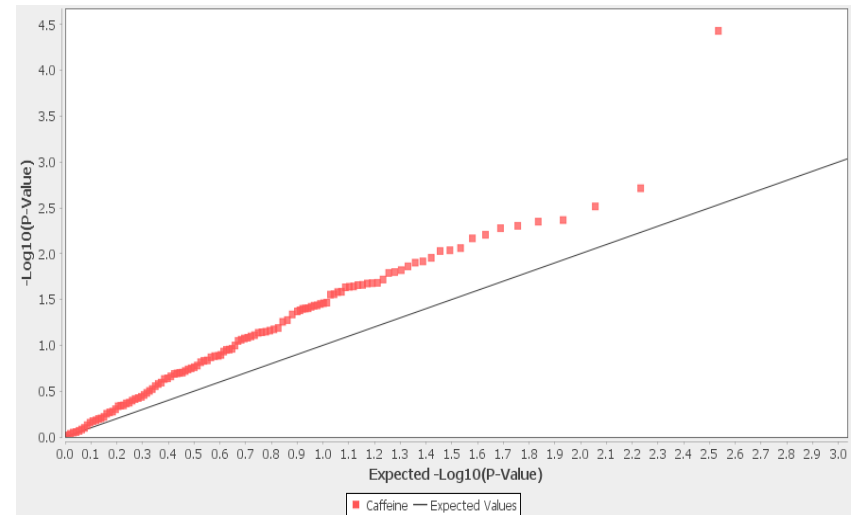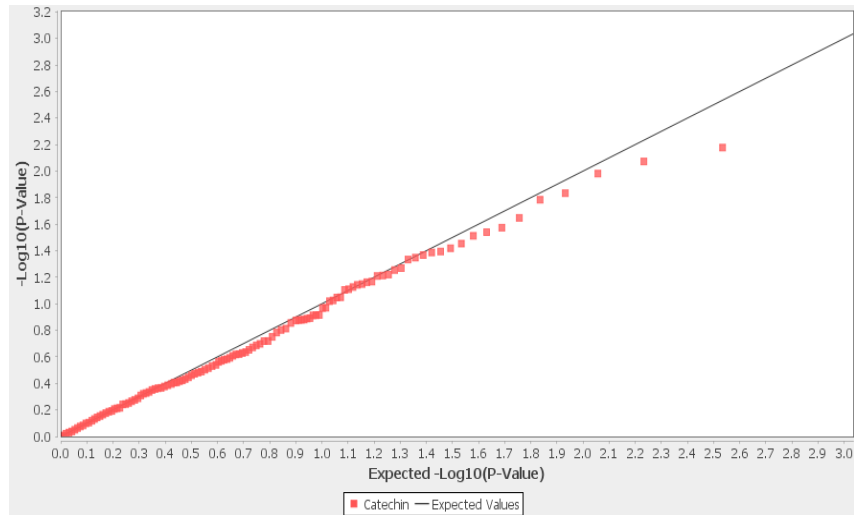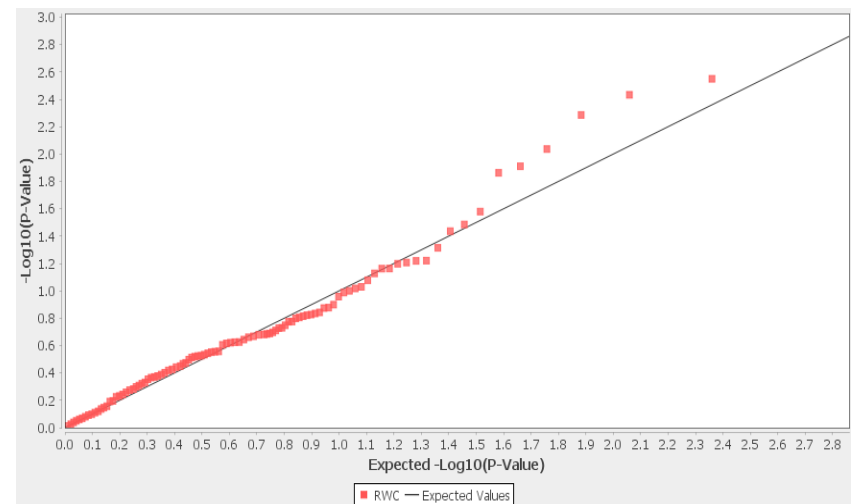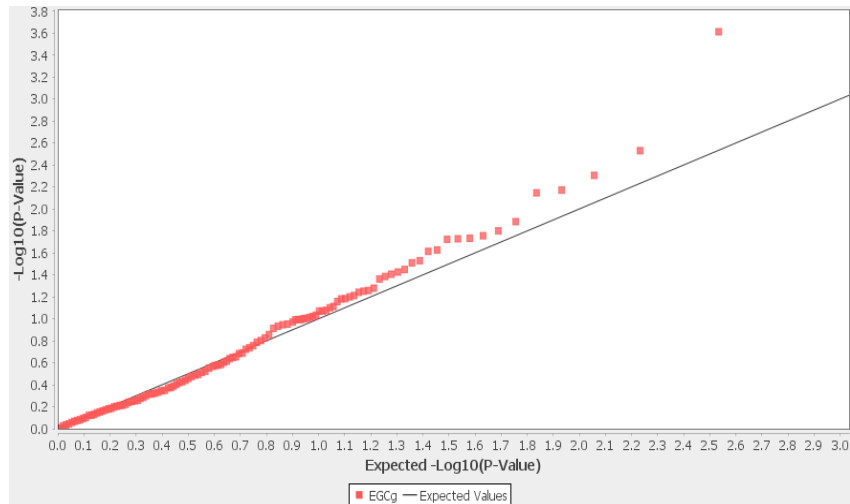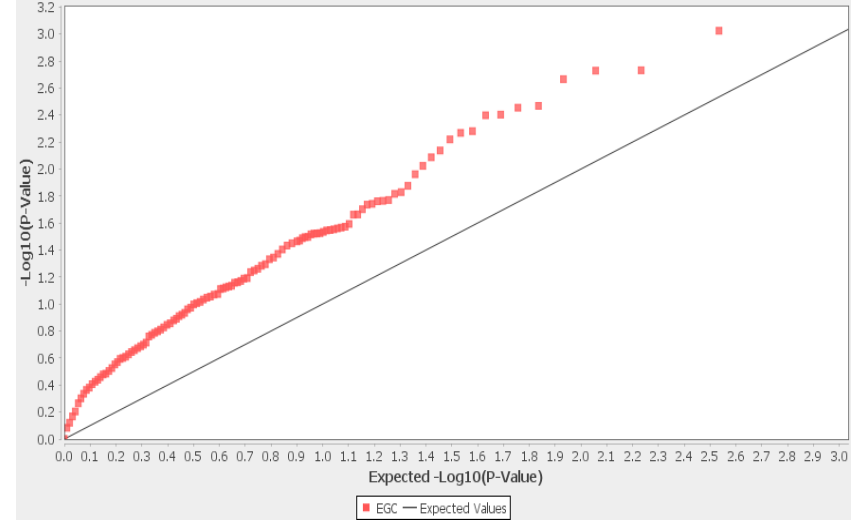
Continued Supplementary Figure 2. Trait-wise Q-Q association plots for GLM (Q). C- Catechin; CAFF- Caffeine; CL- Colour; EC- Epicatechin

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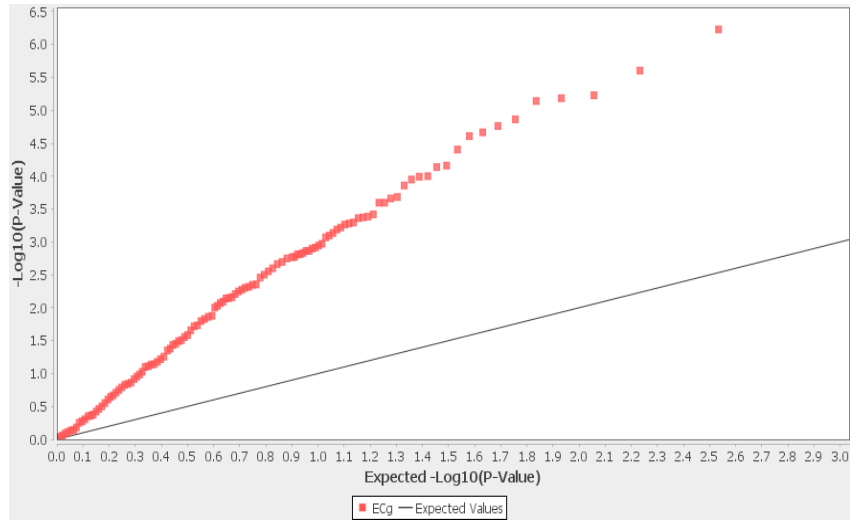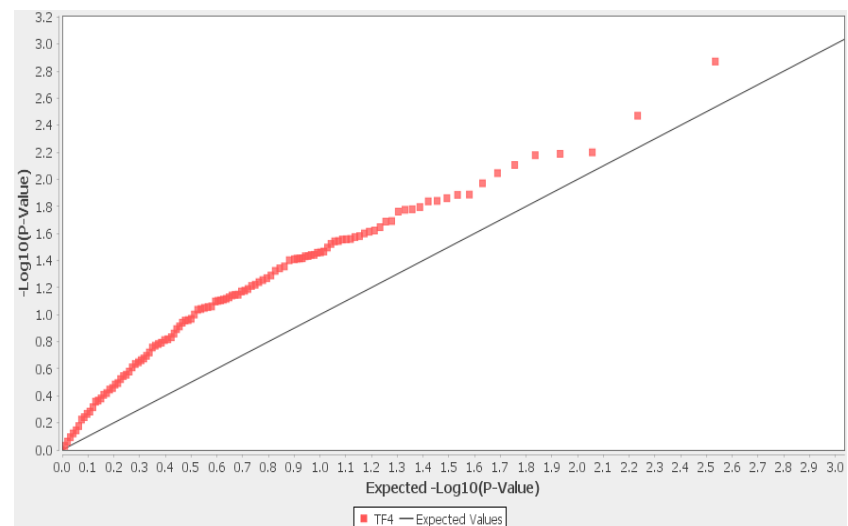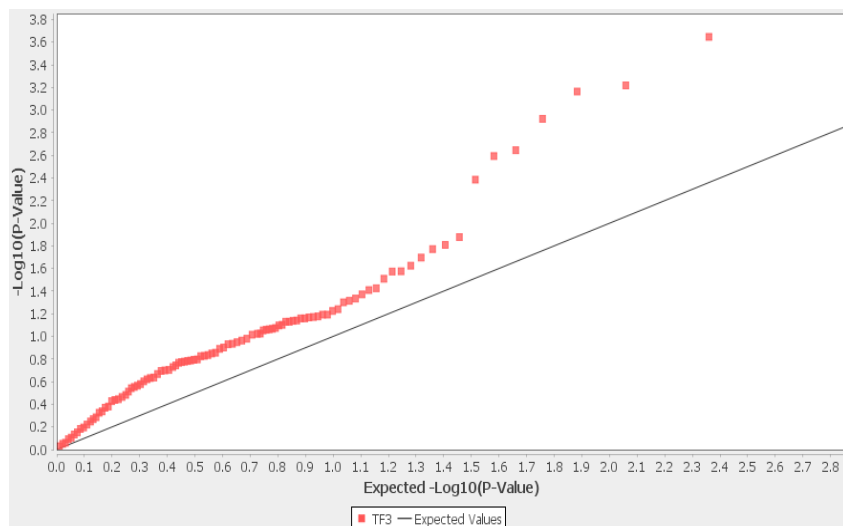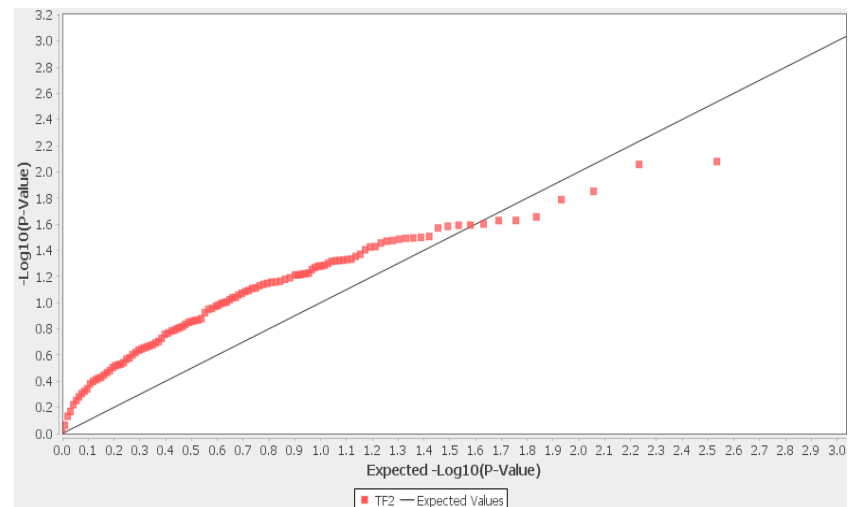
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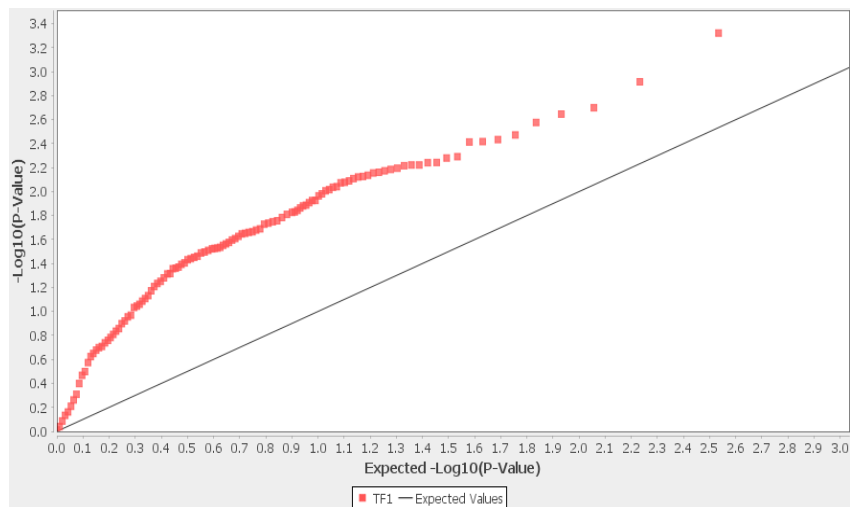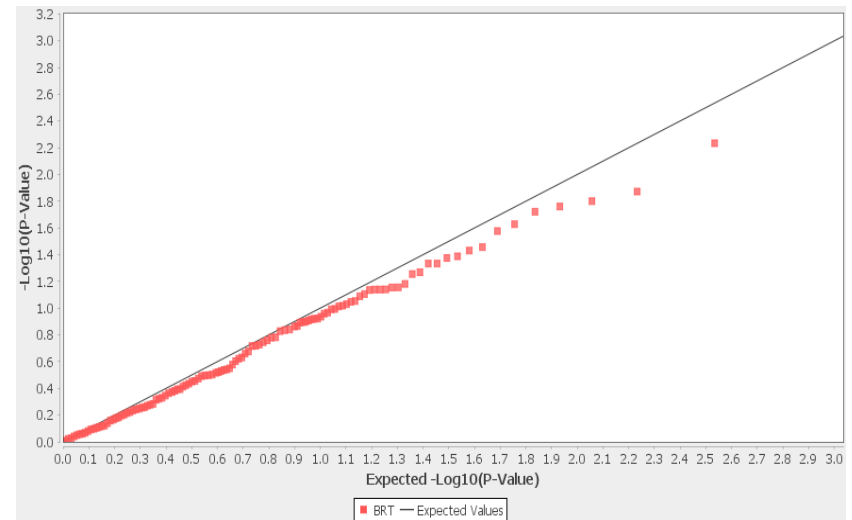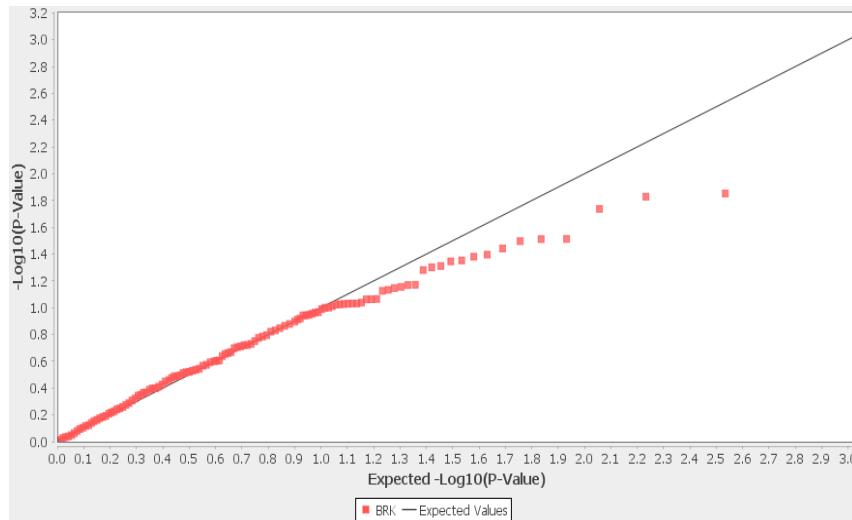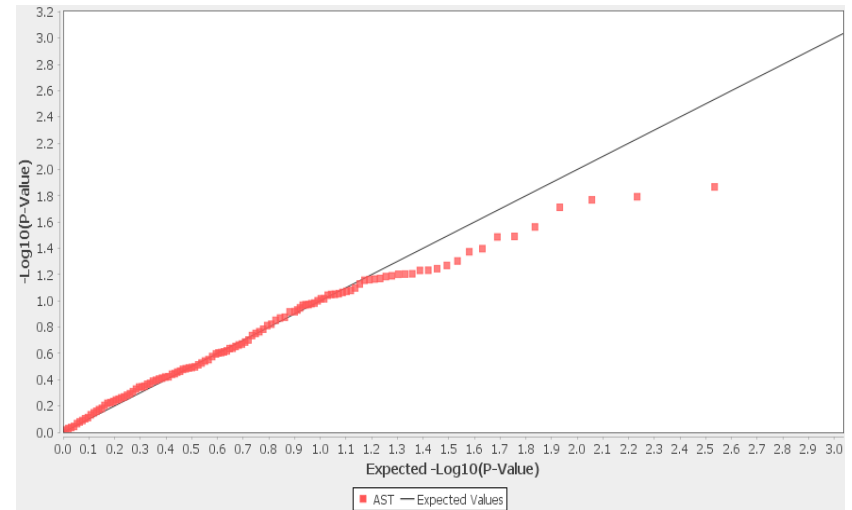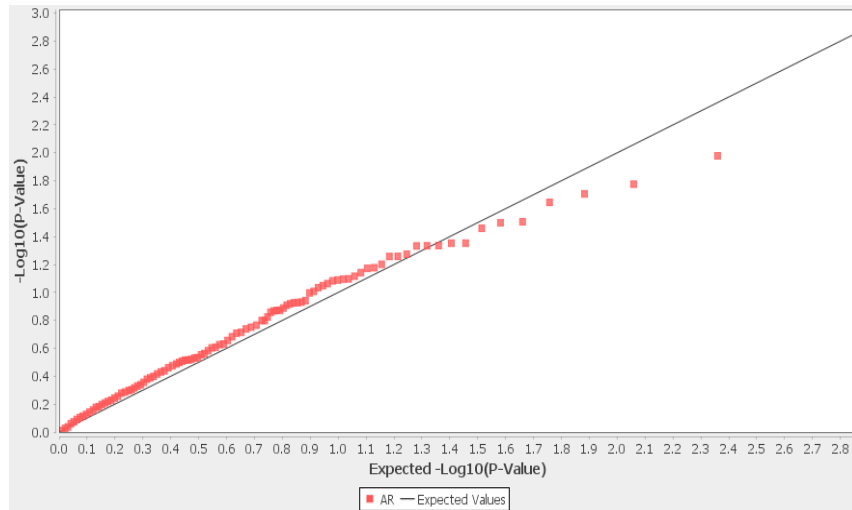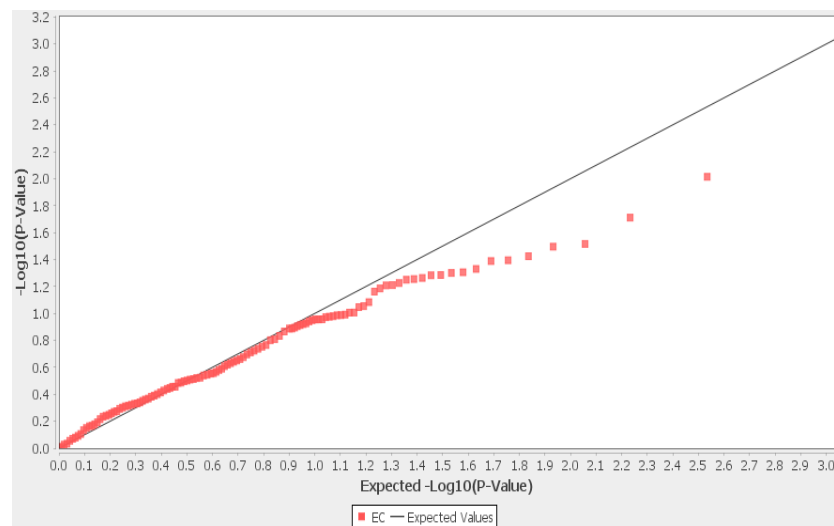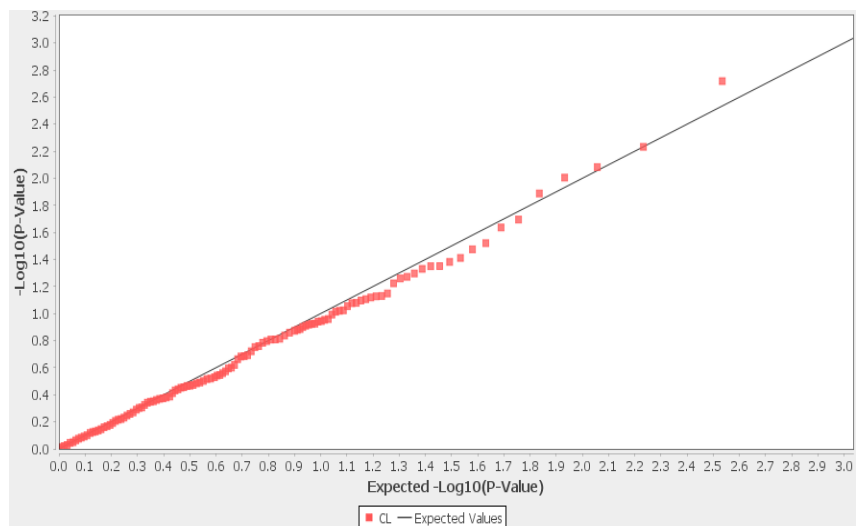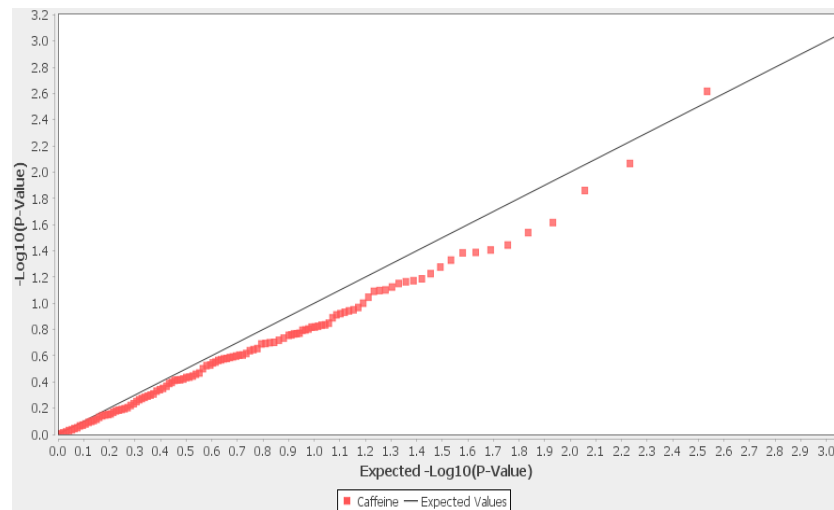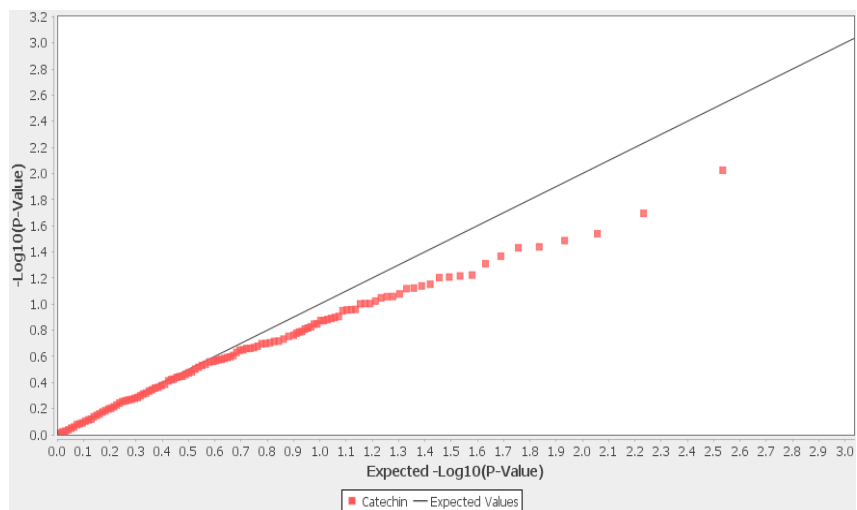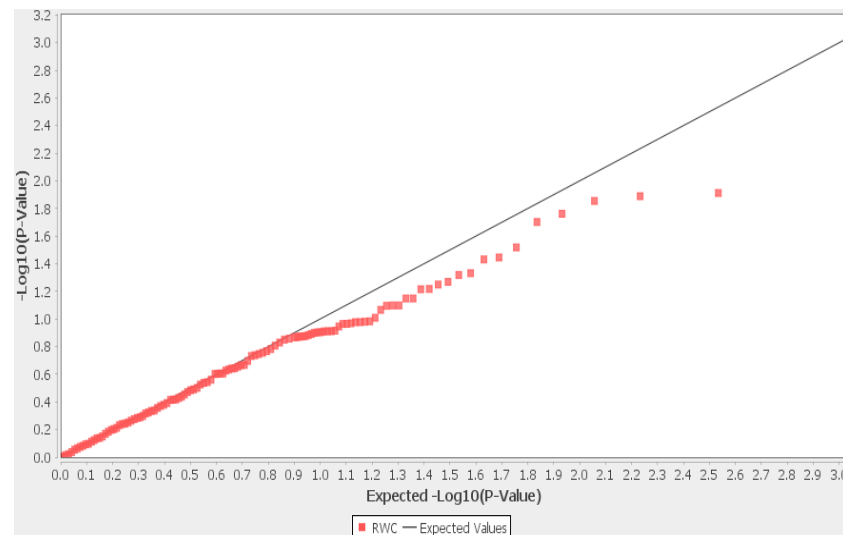
Supplementary Figure 3. Trait-wise Q-Q association plots for mixed linear model MLM (K). AR- Aroma; AST- Astringency; BRK- Briskness; BRT-Brightness

Continued Supplementary Figure 3. Trait-wise Q-Q association plots for mixed linear model MLM (K). C- Catechin; CAFF- Caffeine; CL- Colour; EC- Epicatechin

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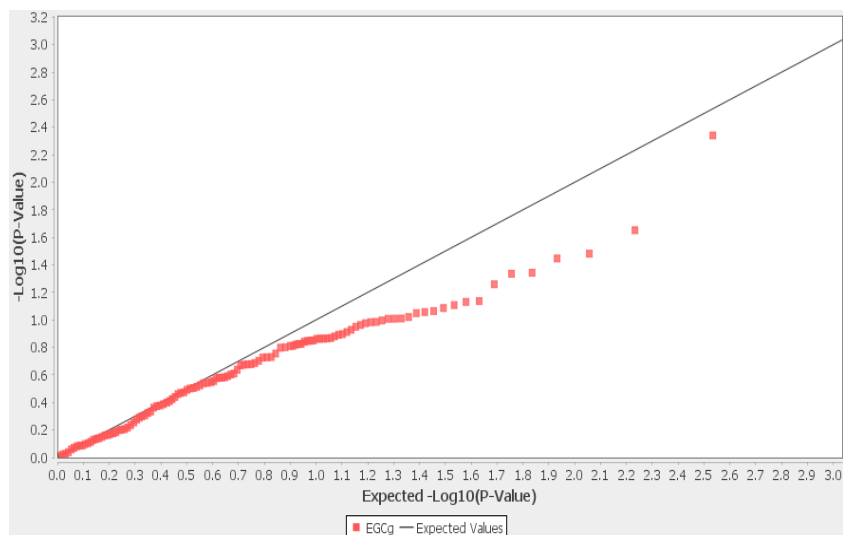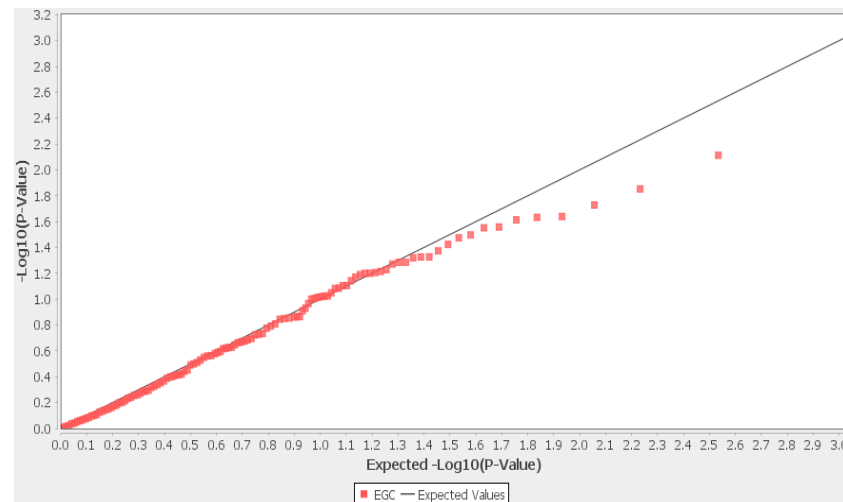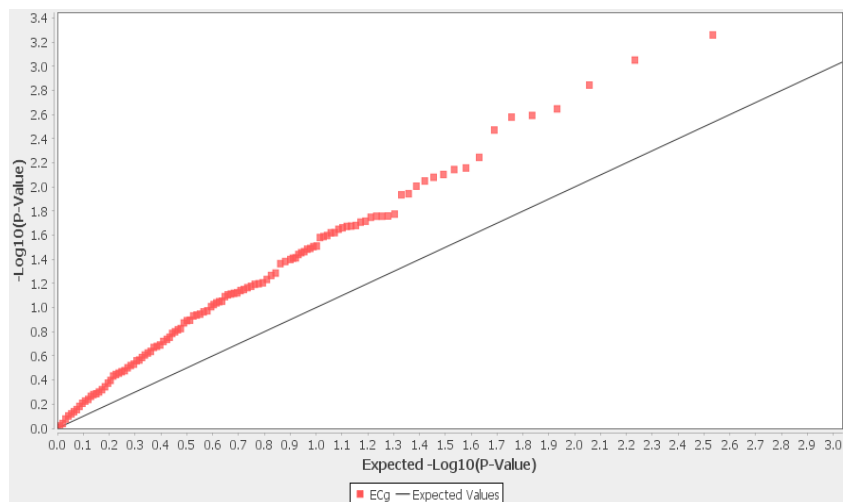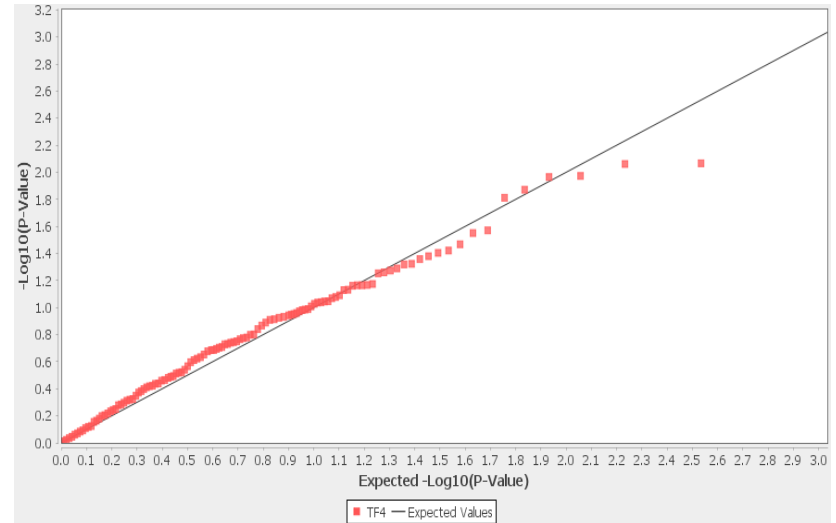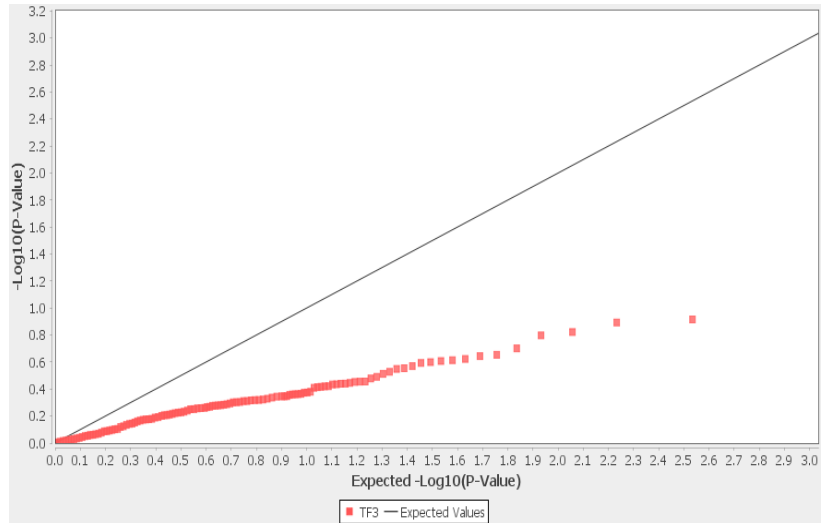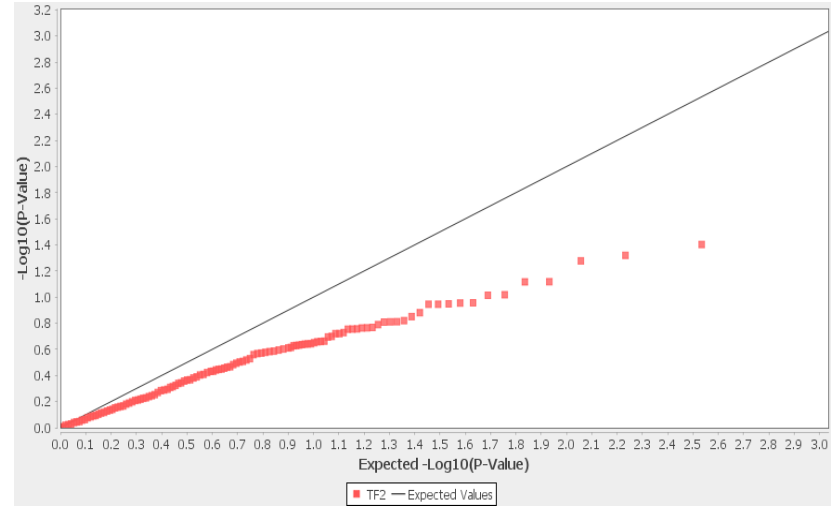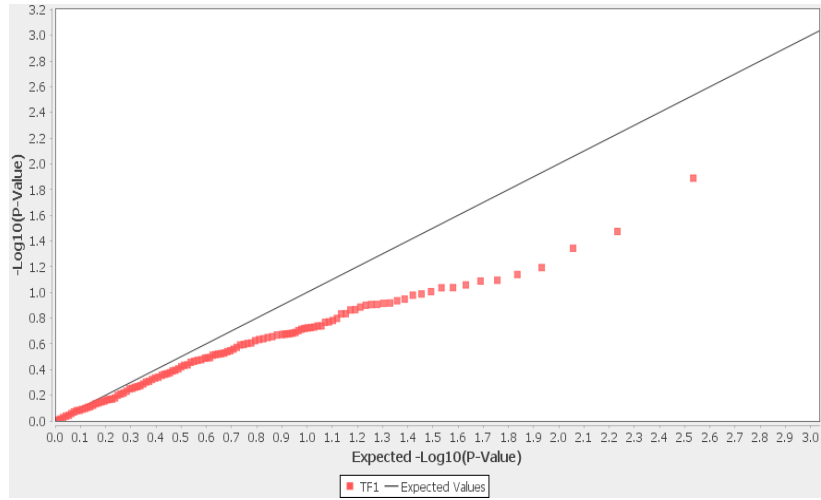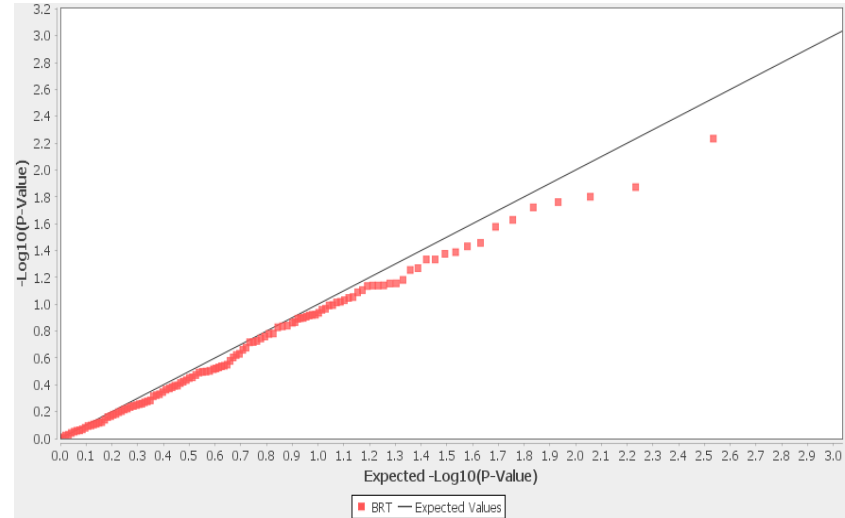
Supplementary Figure 4. Trait-wise Q-Q association plots for mixed linear model MLM (Q+K). AR- Aroma; AST- Astringency; BRK- Briskness; BRT- Brightness
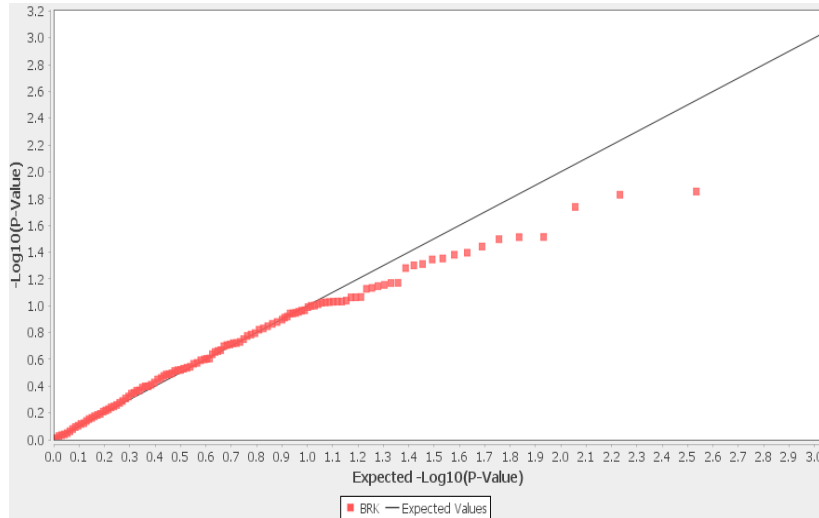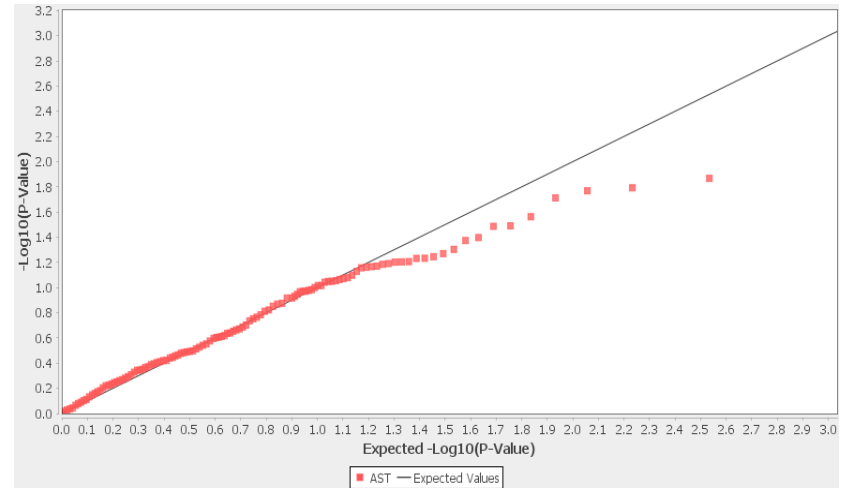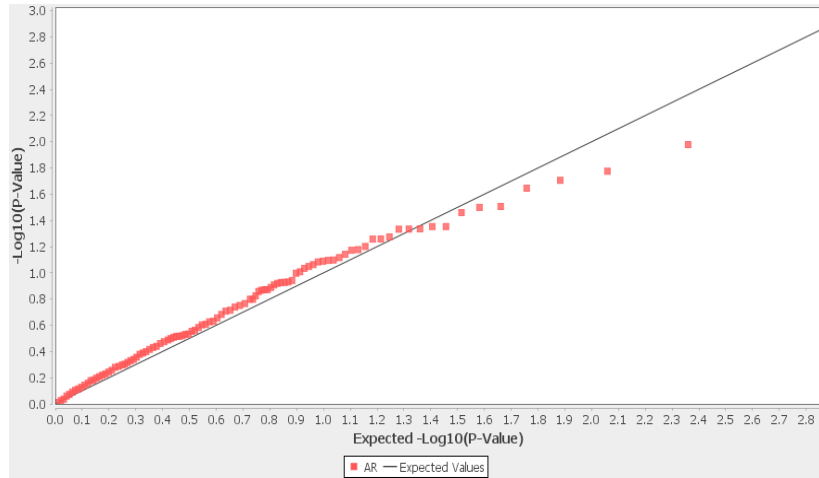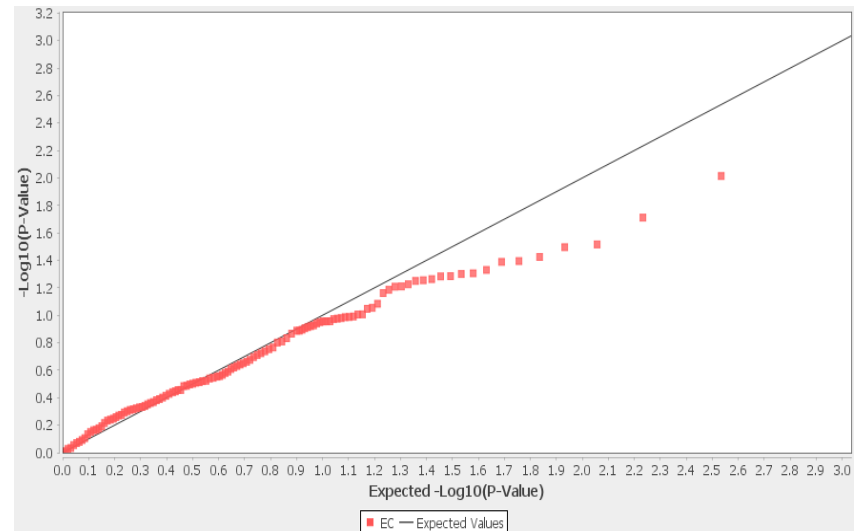
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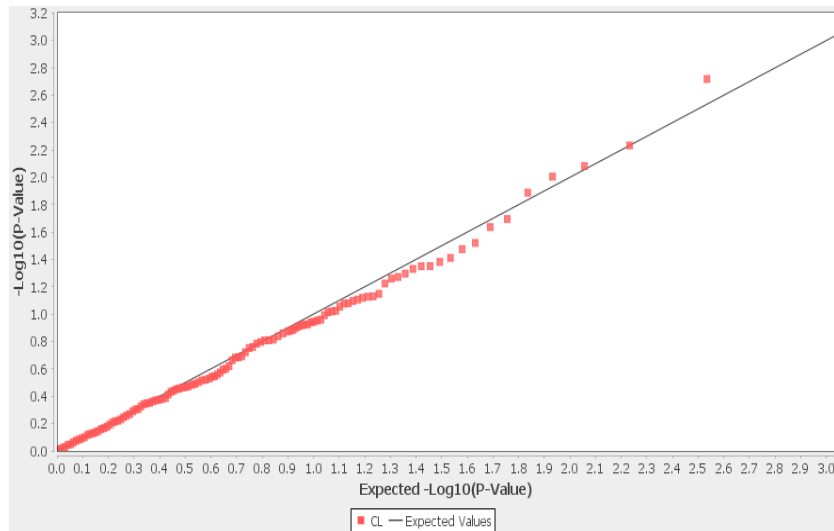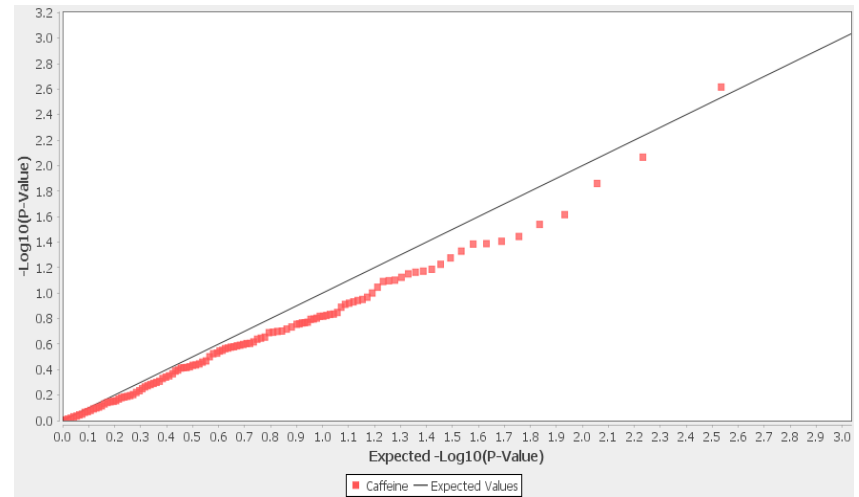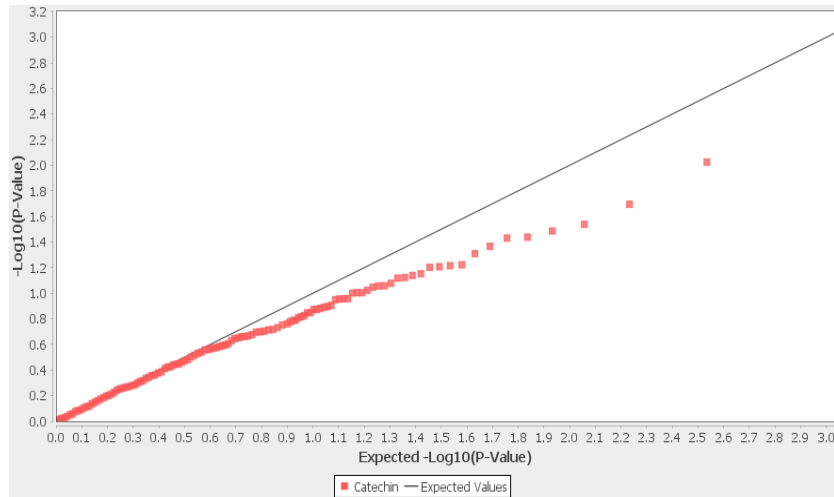
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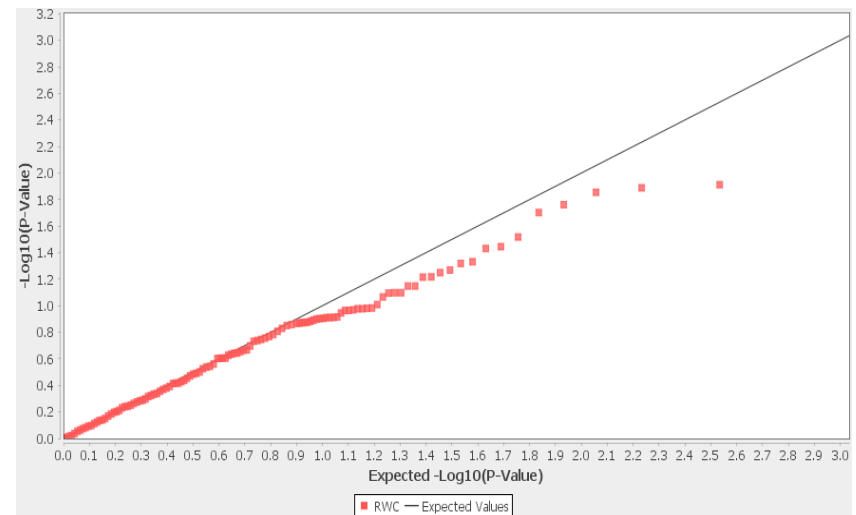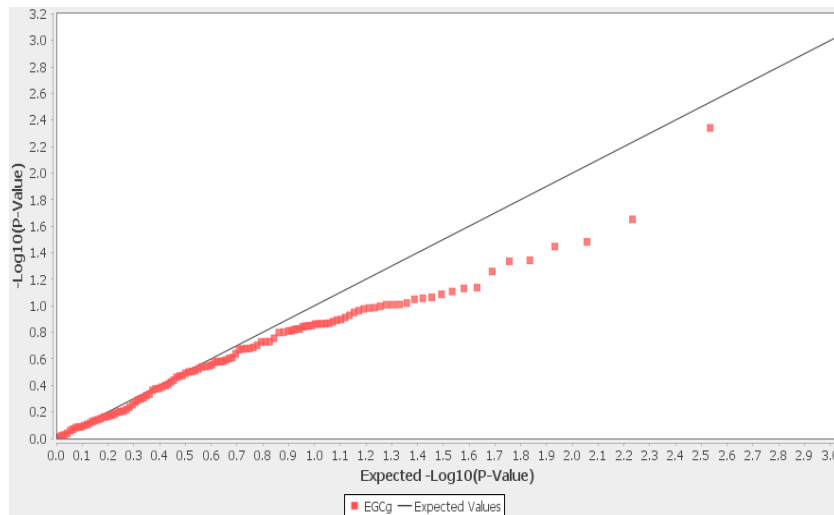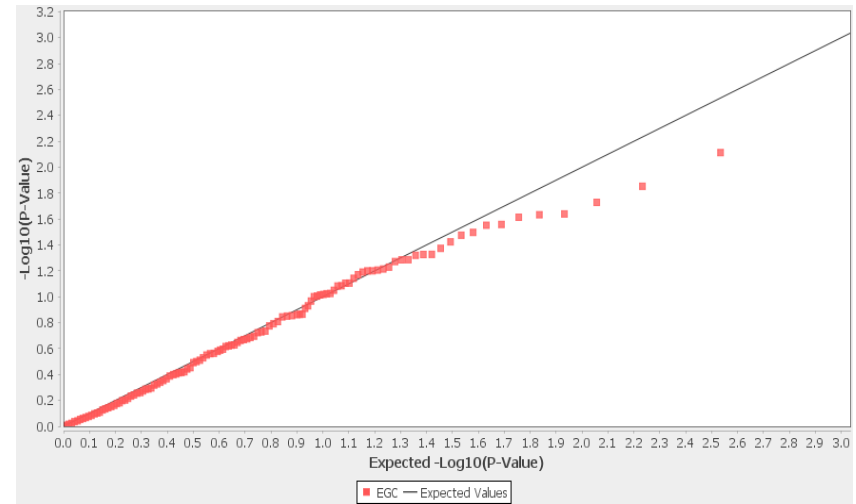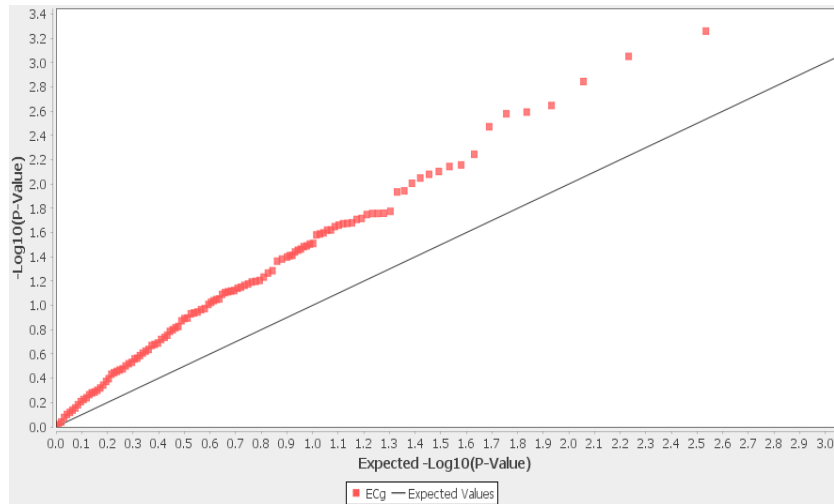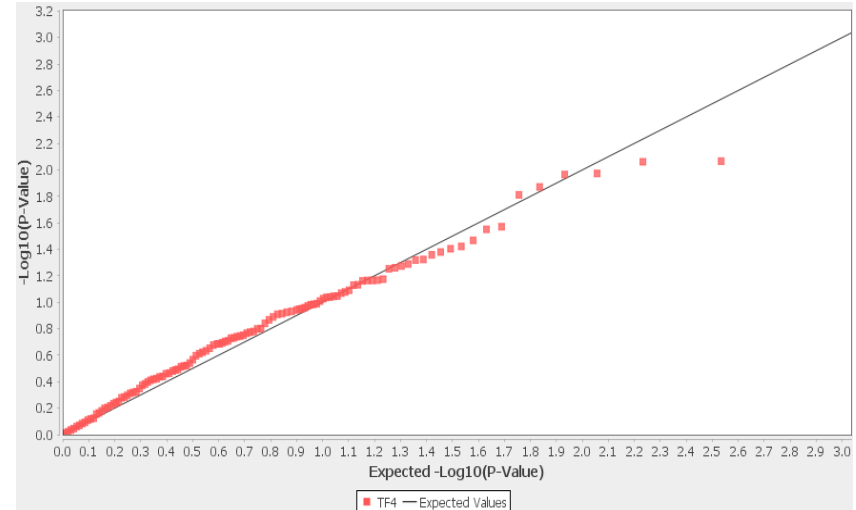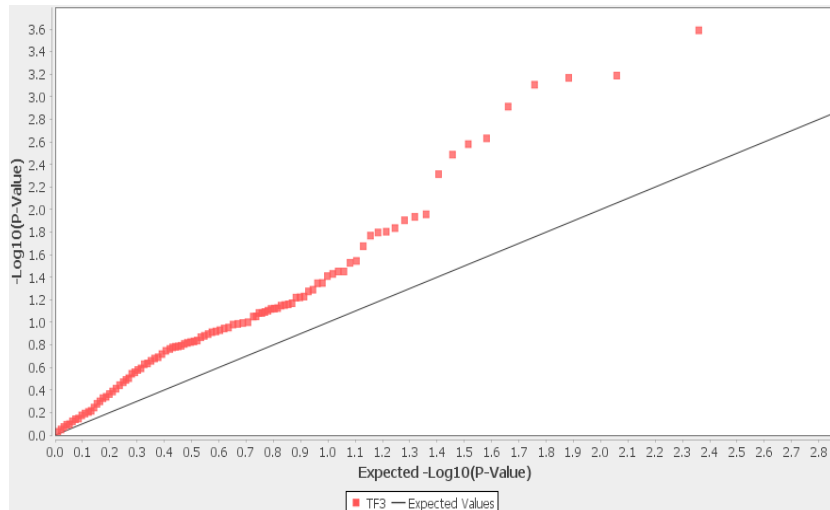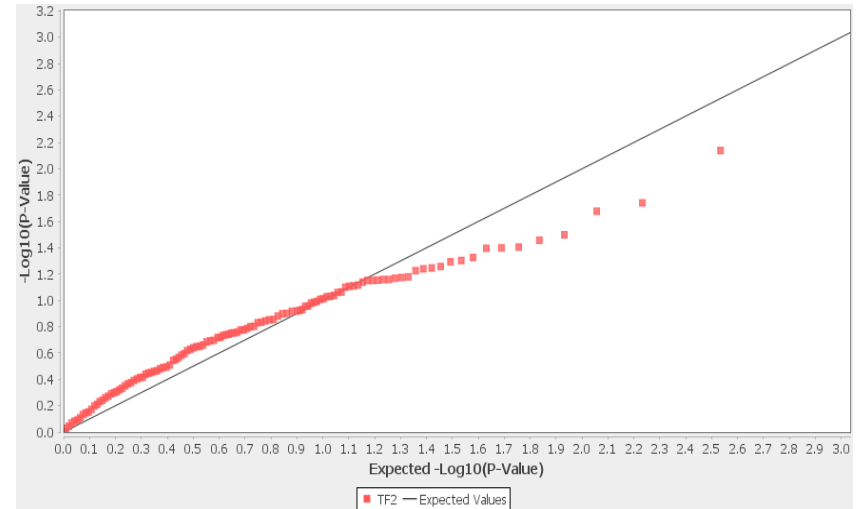
Continued Supplementary Figure 4. Trait-wise Q-Q association plots for mixed linear model MLM (Q+K). TF1- Theaflavin; TF2- Theaflavin-3-gallate;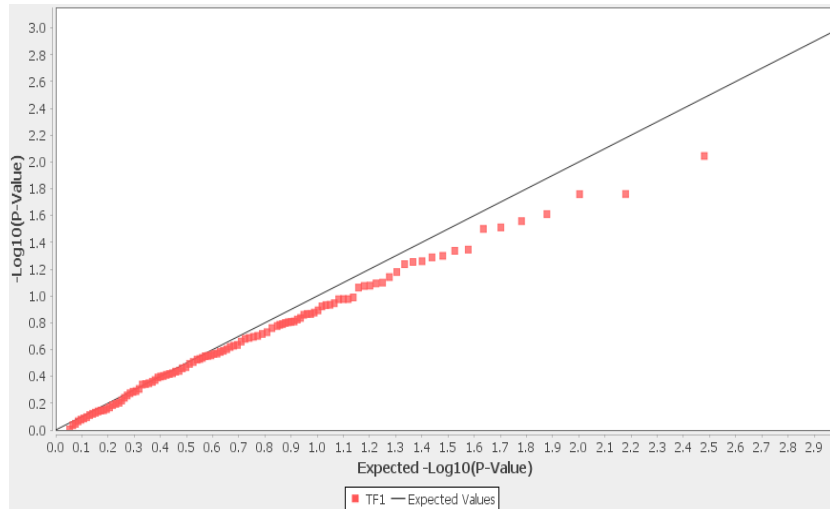 TF3-Theaflavin-3'-gallate; TF4- Theaflavin-3,3'-digallate