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Supporting Information for

Cinnamaldehyde Characterization as an Antibacterial Agent towards *E.coli* Metabolic Profile Using 96-blade Solid Phase Microextraction Coupled to Liquid Chromatography-Mass Spectrometry

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Figure S1. Investigation of MIC of cinnamaldehyde on *E.coli* (10^5 CFU ml^{-1}) growth. E.coli growth stopped for the 10^5 CFU ml^{-1} via treating the system by cinnamaldehyde above 500 mg L^{-1}-biological replicates 3 times for each point.

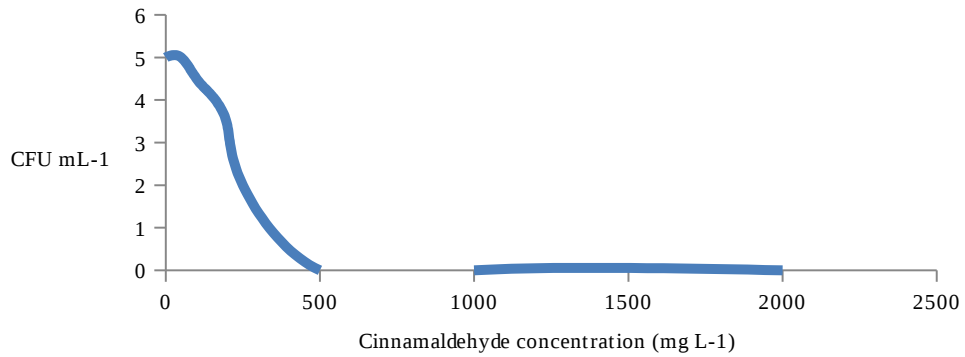
Figure S2. *E.coli* growth curves for control sample, and CA treated bacteria at sublethal concentration. Comparison between two curves demonstrates delay in lag phase and exponential phase of *E.coli* growth.

Figure S3. Statistically significant changed metabolites ($p<0.001$) during *E.coli* growth (control samples) as a ratio of peak area of interest time point and peak area of 0h. Error bars are related to biological replicates.

Figure S4. Statistically significant metabolite changes ($p<0.001$) during *E.coli* growth curve as a ratio of peak area of interest time point and peak area of 0h for cinnamaldehyde treated *E.coli* (under MIC). Error bars are related to biological replicates.

Figure S5. PLS score plot demonstrates discrimination between experimental groups (control (c) and treated samples above MIC (cc) at two different time points (6 and 12 hours after incubations which are defined as exponential phase and stationary phase, respectively)).

Figure S6. Hierarchical clustering analysis heatmap of bacteria data set each row corresponds to an ion detected in sample and each column to a study subject (B-B: indicates control bacteria sample and BC-CB indicates cinnamaldehyde treated sample, both at stationary phases; # are related to the number of biological replicates). Black and red tiles indicate ion intensity lower or higher than the mean of all samples, respectively.



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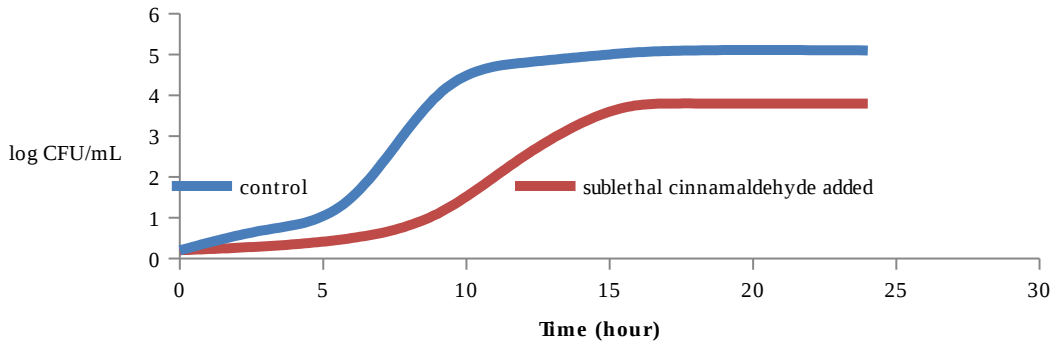

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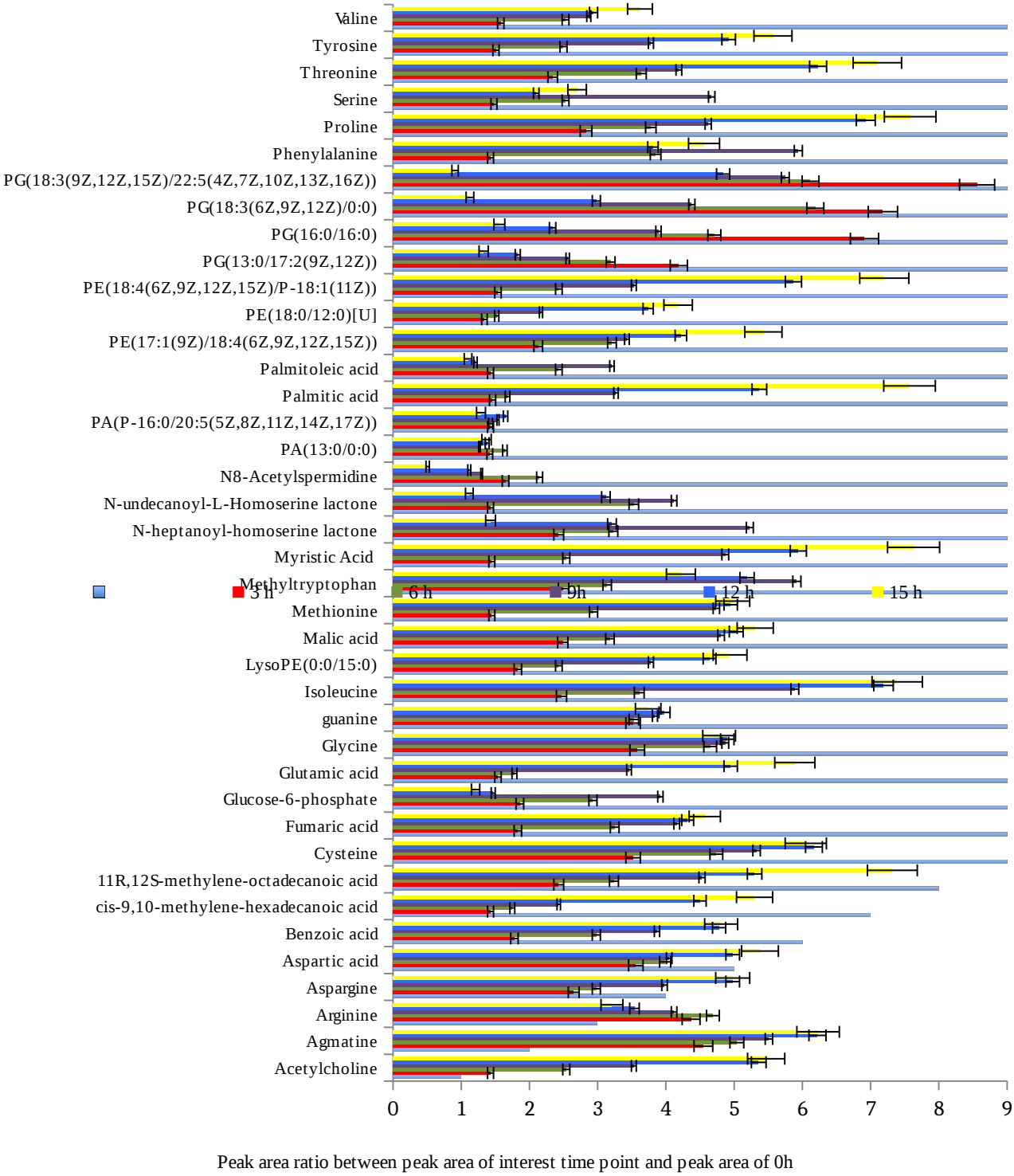

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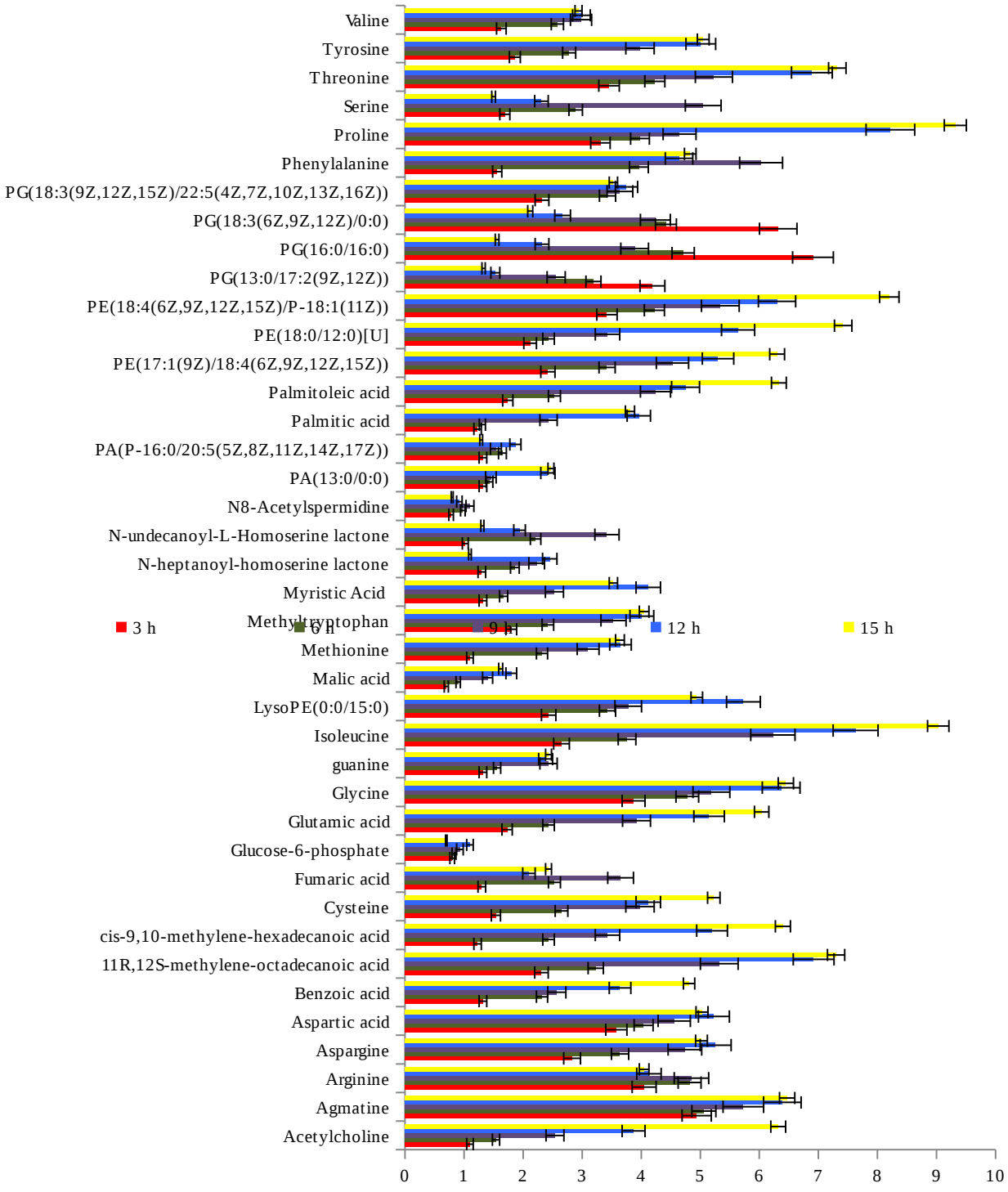

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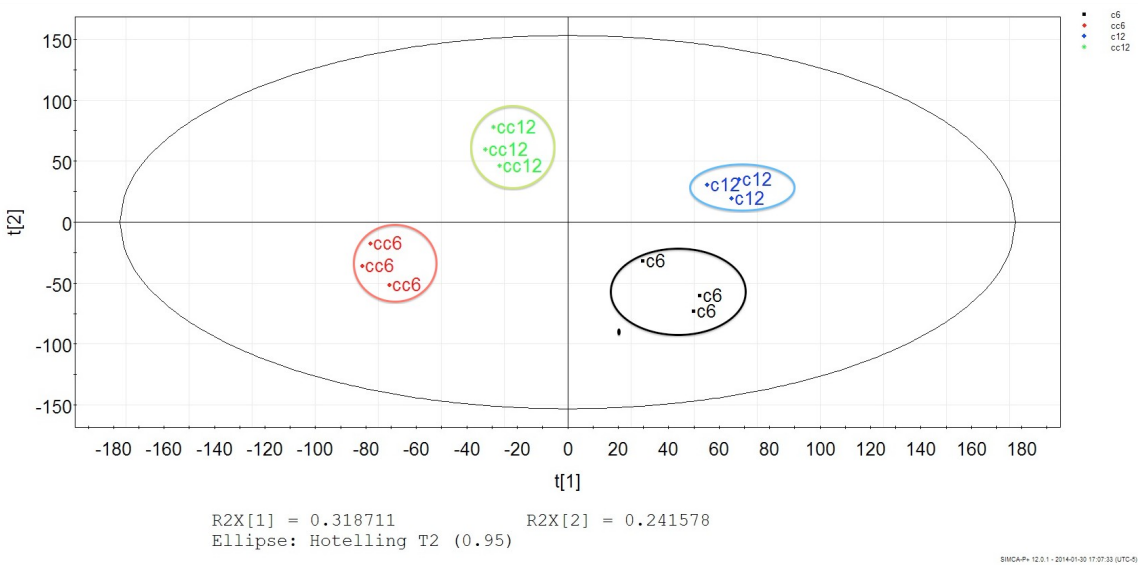

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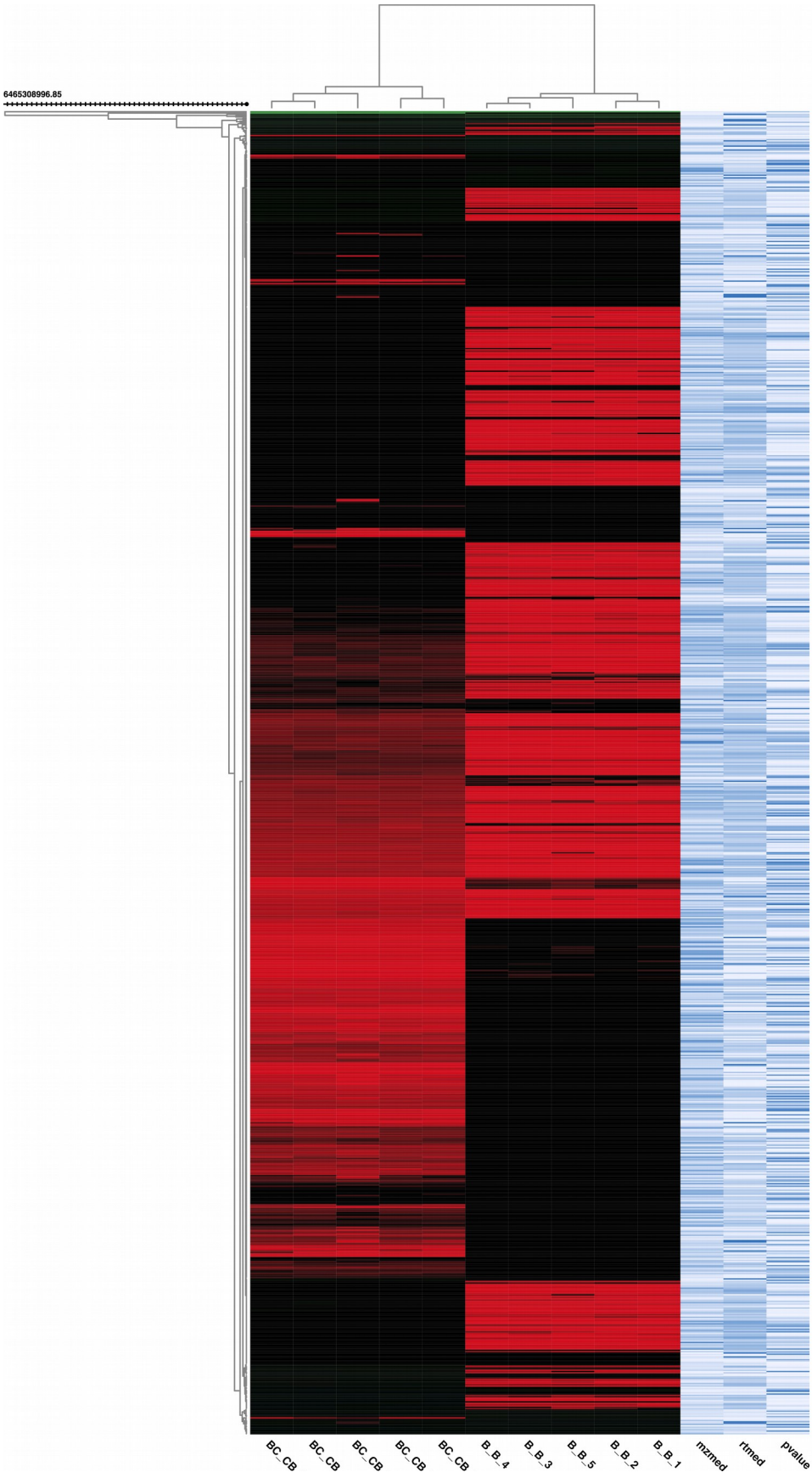
6465308996.85
BC_CB
BC_CB
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B_B_4
B_B_3
B_B_5
B_B_2
B_B_1
mzmed
rtmed
pvalue

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