

### Supplementary Information

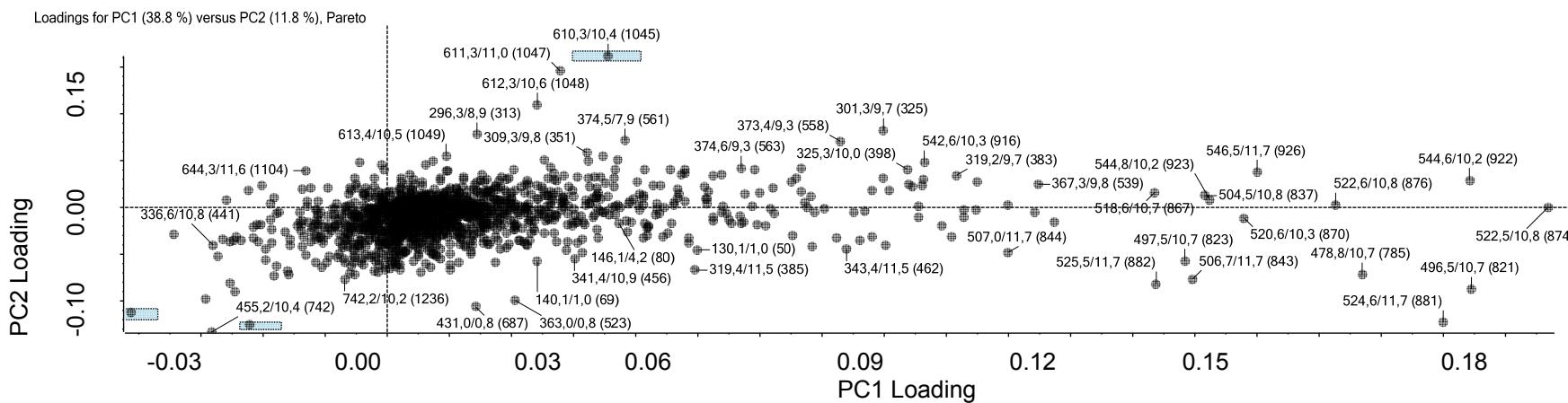
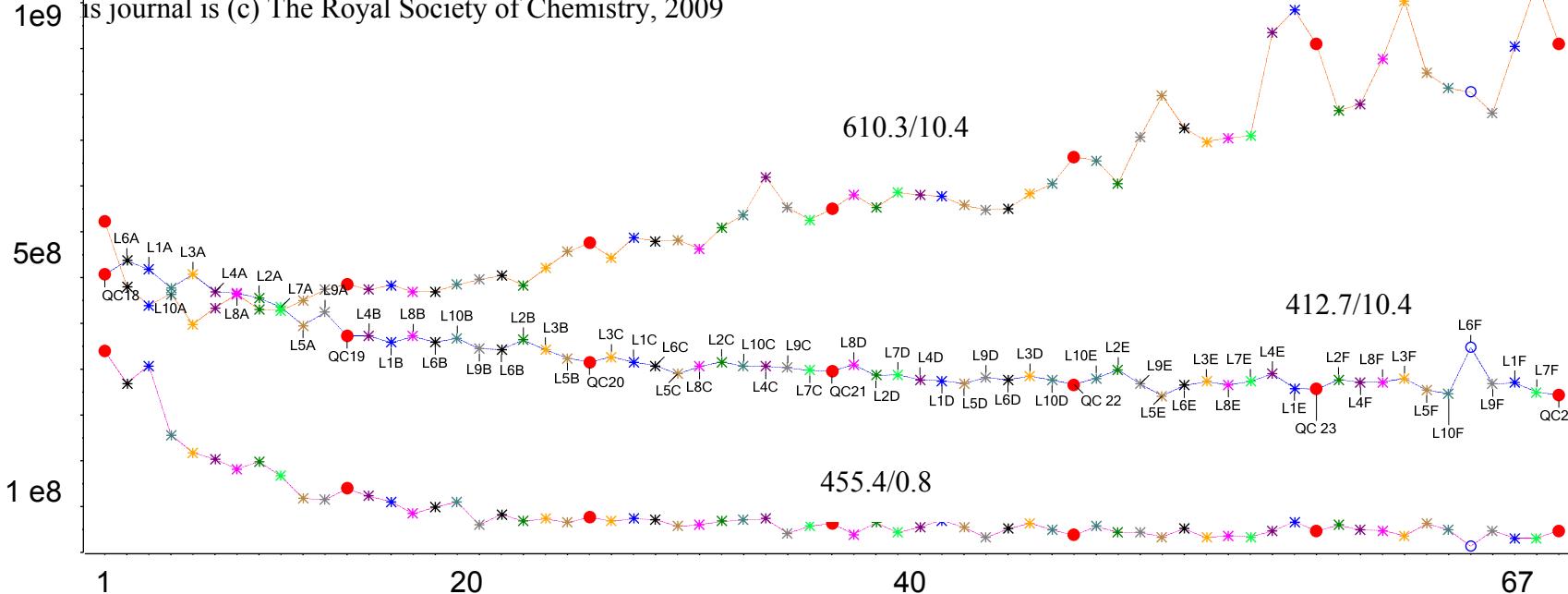


Figure SI 1A. PC1vs PC2 Loadings plot for the normal (-/-) Zucker wild type rat.

- 412.7/10.4 (656)
- 455.4/0.8 (743)
- 610.3/10.4 (1045)

Supplementary Material (ESI) for Molecular BioSystems  
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Response



455.4/0.8

412.7/10.4

610.3/10.4

832.3/10/7

Response

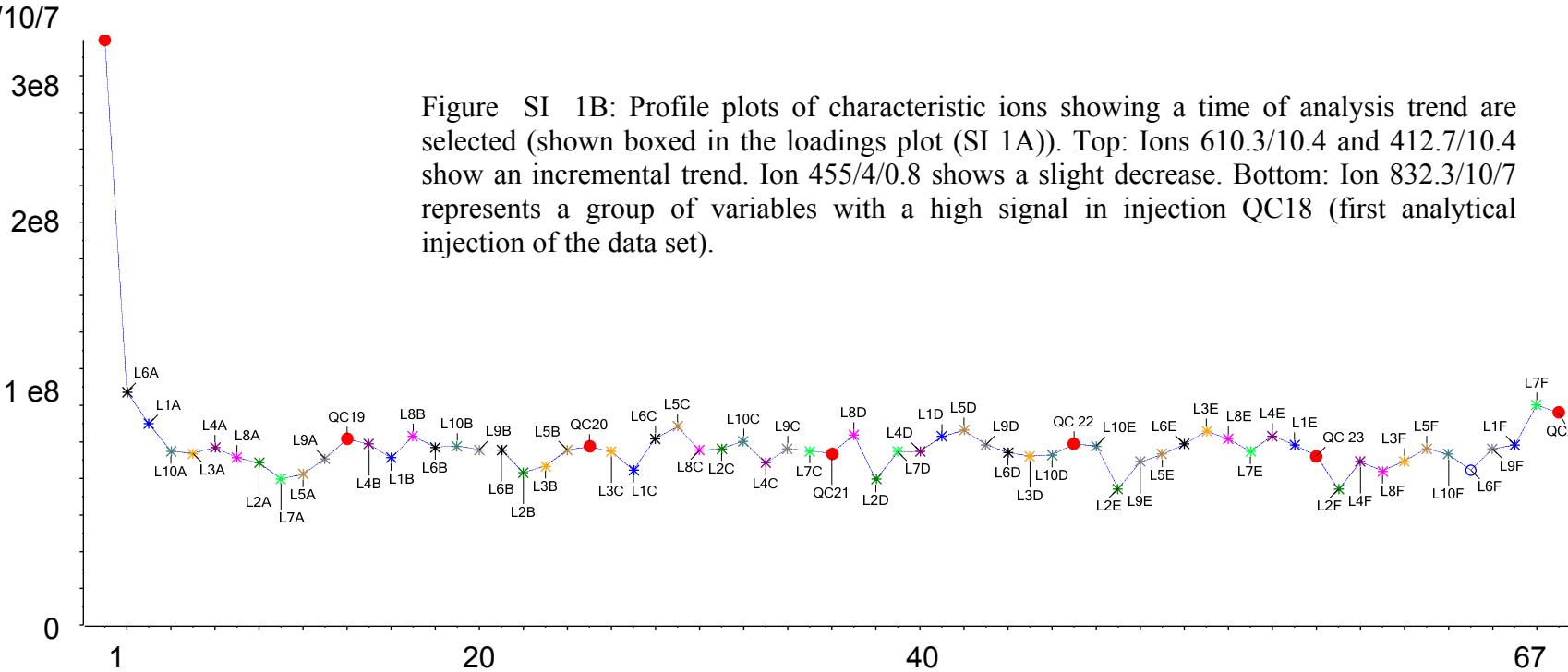


Figure SI 1B: Profile plots of characteristic ions showing a time of analysis trend are selected (shown boxed in the loadings plot (SI 1A)). Top: Ions 610.3/10.4 and 412.7/10.4 show an incremental trend. Ion 455.4/0.8 shows a slight decrease. Bottom: Ion 832.3/10/7 represents a group of variables with a high signal in injection QC18 (first analytical injection of the data set).

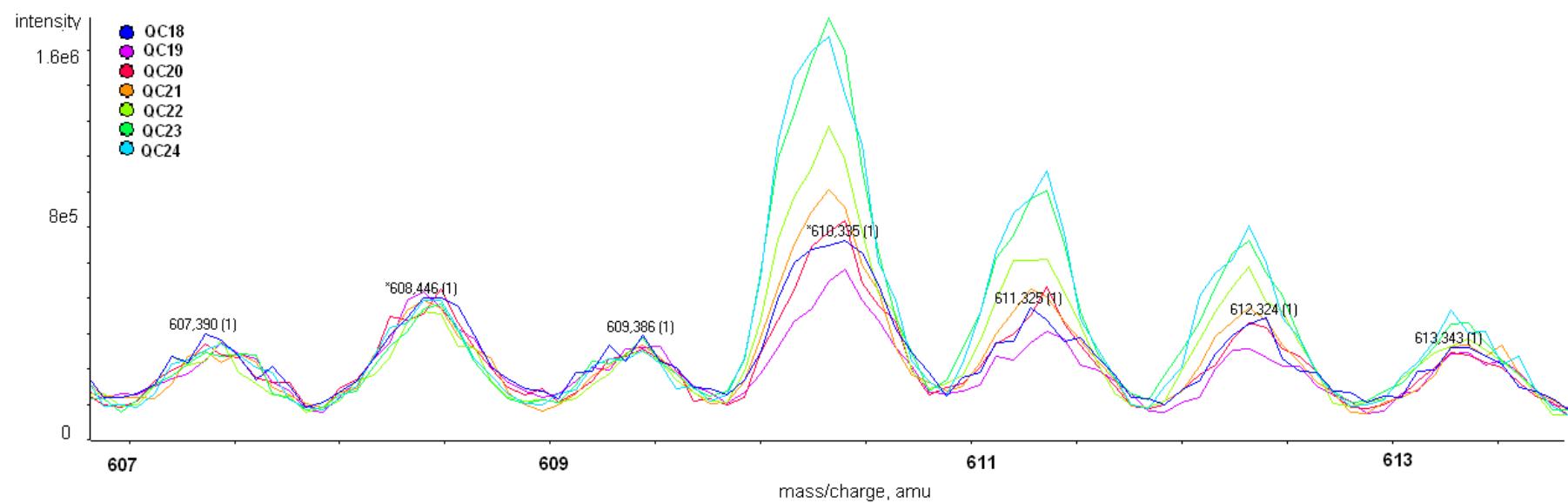
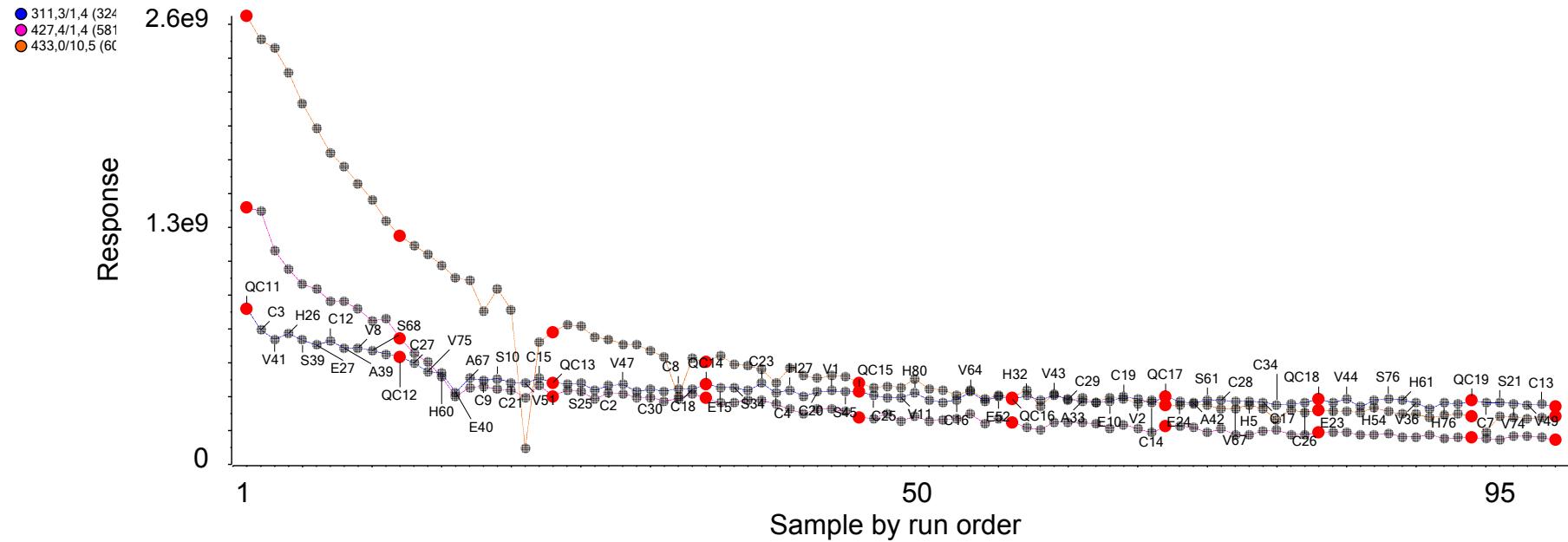


Figure S1 C. Spectrum plot of the ion 610.3/10.4 (shown in Figure S1B) for the samples QC18-QC24. Much higher signals are observed in late QCs in accordance to the increasing trend seen in Figure S1B.



**Figure S2** Response of certain selected ions that exhibit a clear run-order trend in the LC-MS analysis of mouse plasma. Using the variable grouping utility (PCVG) we select a group of 75 variables and plot the response of three selected ions (mass/rt pairs: 311.3/1.4, 427.4/1.4 and 433.0/10.5). A decline in the detected signal is evident.