SUPPLEMENTAL INFORMATION
Figure S.1. PCA scores plot, before intensity drop correction and pertinent transformation obtained with IPO and manual parameters selection criteria for the all data sets (Liver ESI+, Liver ESI-, Plasma ESI+, Plasma ESI- B.S., and Plasma ESI- A.S.). Piglets groups: newborns (A), neonates (B) and infants (C).
Figure S.2. Correlation graph between two features obtained by IPO and Manual selection criteria for Liver ESI+. The left graph a good correlation and same features are shown (IPO_ID4031 = Manual_ ID1470), whereas the right graph shows the opposite situation (IPO_ID902 ≠ Manual_ID544).

Figure S.3. Comparison between the significant feature obtained in Plasma ESI+ data set with manual approach (ID 1405) and the same feature found in the related IPO matrix (ID 1340) that were not significant. **A.** Correlation graph of IPO_ID 1340 and Manual_ID 1405 and **B.** Post-hoc Tukey HSD test. Left: difference between the three groups of piglets were not observed (IPO_ID 1340). Right: The three group of piglets are perfectly differentiated (Manual_ID 1405). Piglets groups: newborns (A), neonates (B) and infants (C).