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**LC-MS-based metabolomics study on the different growth stages of *Hermetia illucens* L.****Chen-Wei Su and Ching-Kuo Lee**  
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*Hermetia Illucens* L. (HI), the species of Stratiomyidae insects, which lives by livestock manure and kitchen waste. Due to abundance of protein they can be used to produce high-value animal protein feed. In addition, there are many advantages, i.e., reproduce rapidly, euryphagous except human food, raise easily and low cost. Based on the above, HI is a good media for resource transformation. In this study, we applied LC-MS technique combined with statistical analysis (PCA, OPLS-DA) to explore the different growth stages of HI. The growth stages of the larvae are five; the freshly hatched larvae were sacrificed and freeze-dried as the blank of zero stage. The rest of larvae were reared and fed on *Sesamum Indium* (SI) and they would enter the next stage by each peeling. We took the second, fourth and fifth stages by each peeling a week for analysis. According to the LC-MS data, we run the database software-Compound discoverer 2.0 to get predicted compounds information like retention time, chemical formula and area under the curve. After obtaining the information, we had run statistical software-SIMCAP to analyze the difference among SI and HI, HI with fed SI. In summary, the results from LC-MS technique combined with statistical analysis can be speculated that the use of energy insects *Hermetia illucens* L. is not only amino acids but also free fatty acids.

**Biography**

Chen-Wei Su had completed his Bachelor's degree from Pharmacy and Science of Chia Nan University and joined Taipei Medical University for Master's degree.

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