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Amino acid compounds released by the giant freshwater prawn, *Macrobrachium rosenbergii* during ecdysis: a factor attracting cannibalistic behaviour

Key words: Amino acid compounds, Cannibalism, Chemical cue, Giant freshwater prawns, Moulting

Research Summary

This article mainly focused on the determination of the amino acid profile released by Giant Freshwater Prawn, *Macrobrachium rosenbergii* during the ecdysis process that promotes cannibalism. Key findings includes:





- **Amino acid compounds act as a chemical cue to promote cannibalism**
- **Future dietary manipulation to improve feeding efficiencies and feeding management can be carried based on the data collected**

Innovation points

A series of comprehensive tables were generated to summarize the latest knowledge about correlation between amino acids and cannibalism behavior:

Table 1 | The Total Amino Acid (TAA) concentrations in the muscles, exoskeleton and culture water from moulting and non-moulting prawn of *Macrobrachium rosenbergii*

Table 2 | The Free Amino Acid (FAA) concentrations in the muscles, exoskeleton and culture water from moulting and non-moulting prawn of *Macrobrachium rosenbergii*

Figure 1 | Summation of Total Amino Acid (TAA) in tissue muscle, exoskeleton and culture water sample released from moulting and non-moulting prawns

Figure 2 | Summation of Free Amino Acid (FAA) in tissue muscle, exoskeleton and culture water sample released from moulting and non-moulting prawns

Figure 3 | Scatter plot showing the comparisons make between the mean concentrations rate (mg/100 mL) for free amino acid exist in culture water released by (a) non-moulting and (b) moulting prawn with the different taste