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## ACCEPTED MANUSCRIPT

### **Graphical Abstract**

Synthesis and insecticidal activities of 1,8-naphthyridine derivatives

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NMI 
$$H_2$$
  $CN$   $CN$   $NH_2$   $CN$   $NH_2$   $CN$   $NH_2$   $NMI$   $NMI$   $NH_2$   $NMI$   $NM$ 

1,8-Naphthyridines (NAP) are biological important scaffolds in bioactive molecules design. By hybrid of NAP with neonicotinoid core structure, nine novel NAP derivatives were synthesized and subjected to insecticidal activities evaluation. Some of the compounds showed excellent insecticidal activity against cowpea aphids (*Aphis craccivora*) with LC<sub>50</sub> values ranging from 0.011 mmol/L to 0.067 mmol/L. The results indicated that NAP can be used as insecticidal structure for further modification.

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