**Supplementary Data 1:**

**A. Cyclotide precursor sequences from *Clitoria ternatea***

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>TaPDIL4-1\_CBG91898.1

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>TaPDIL5-1\_CBG91899.1

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EDEFSLEELMADSSAPNDEL

>OsPDIL1-1\_Os11g09280.1

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>OsPDIL1-2\_Os04g35600.1

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>OsPDIL1-3\_Os02g34940.1

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>OsPDIL2-1\_Os02g01010.1

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>OsPDIL3-1\_Os06g06790.1

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>OsPDIL4-1\_Os05g06430.1

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>OsPDIL4-2\_Os01g23740.1

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>OsPDIL5-1\_Os09g27830.1

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>HvPDIL1-1\_BAJ89205

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>HvPDIL1-2\_BAJ99269

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>HvPDIL2-1\_BAK01309

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>HvPDIL3-1\_BAJ98166

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>HvPDIL5-1\_BAJ84858

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>HvPDIL5-2\_BAJ90795

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>SbPDIL1-1\_Sb05g006150.1

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>SbPDIL1-2\_Sb06g017160.1

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>SbPDIL2-1\_Sb04g000230.1

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>SbPDIL3-1\_Sb10g004440.1

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>SbPDIL4-1\_Sb09g004370.1

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>SbPDIL4-2\_Sb03g013630.1

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>SbPDIL5-1\_Sb02g026300.1

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>AtPDIL1-1\_AT1G21750.1

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>AtPDIL1-2\_AT1G77510.1

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>AtPDIL2-1\_AT3G54960.1

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>AtPDIL2-2\_AT5G60640.1

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>AtPDIL3-1\_AT1G52260.1

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>AtPDIL3-2\_AT3G16110.1

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>AtPDIL4-1\_AT2G47470.1

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>AtPDIL5-1\_AT1G04980.1

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>AtPDIL5-2\_AT2G32920.1

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>GmPDIL2-1\_Glyma12g29550.1

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