

Title Bacteriophage lambda genomic library construction of *Hylocereus polyrhizus* and *Hylocereus undatus*

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Abstract

Genomic libraries of *Hylocereus undatus* and *Hylocereus polyrhizus* were constructed in bacteriophage Lambda Fix II with 20kb inserts. Plaques were formed in the petri dishes and stored in -80°C for further studies. DNA of the *Hylocereus* species that was used to construct the genomic library was obtained from young germinated seeds' leaves. Seed germination was also carried out to select the best time to harvest leaves for DNA extraction. The method used for DNA extraction was adopted and modified from Lodhi et al., 1994 and Doyle and Doyle (1988) in order to obtain pure and high yield DNA for genomic library construction. The quality of the DNA was determined spectrophotometrically. Restriction enzyme (BamH I) was then used to digest the selected fragment from the total DNA and analysed on a gel electrophoresis. The insert DNA was purified with phenol-chloroform method to obtain high concentration insert DNA which is important in constructing genomic library. Plaques formed indicated that the bacteriophage has successfully lysed the cells.