

**Table S5.** Simple sequence repeats conserved in plastomes of *Catharanthus roseus* and *Asclepias syriaca*.

Repeat unit	Length (bp) in <i>C. roseus</i>	Length (bp) in <i>A. syriaca</i>	Start position in <i>C. roseus</i> (SSR-containing region)
A	12	10	4,778 ( <i>trnK-UUU-rps16</i> )
	14	14	79,485 ( <i>petD-rpoA</i> )
	15	10	45,392 ( <i>ycf3</i> intron 1)
T	10	12	36,431 ( <i>psbC-trnS-UGA</i> )
	10	10	53,103 ( <i>trnV-UAC</i> intron)
	11	11	18,495 ( <i>rpoC2</i> )
	11	10	44,882 ( <i>ycf3</i> intron 1)
	11	10	61,293 ( <i>psaI-ycf4</i> )
	12	14	12,282 ( <i>atpF</i> intron)
	12	11	54,032 ( <i>trnM-CAU-atpE</i> )
	12	12	127,365 ( <i>ycf1</i> )
	15	12	113,910 ( <i>ndhF-rpl32</i> )
ATTA	12	12	30,236 ( <i>petN-psbM</i> )
TTTA	12	12	47,152 ( <i>rps4-trnT-UGU</i> )
CATT	12	12	126,800 ( <i>ycf1</i> )