



D\_parviflora 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA  
 D\_thapsi 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA  
 D\_lanatal 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA  
 D\_grandiflora 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA  
 D\_ferruginea 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA  
 D\_purpurea 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA  
 D\_mariana 1 ATGTCGTCAAAGCCAAGGTGATGCTTCTTTTAATTTTCATCTCCATTTAATAGATCTCA

D\_parviflora 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG  
 D\_thapsi 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG  
 D\_lanatal 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG  
 D\_grandiflora 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG  
 D\_ferruginea 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG  
 D\_purpurea 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG  
 D\_mariana 61 ATTCCCTAGACTAGATCTAATTAACAG-----TTTATATGTTATGAAAGGTTGGAG

D\_parviflora 115 GGTAAGTGGCAATCATCACCGGCGCCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG  
 D\_thapsi 115 GGTAAGTGGCAATCATCACCGGCGCCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG  
 D\_lanatal 115 GGTAAGTGGCAATCATCACCGGCGCCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG  
 D\_grandiflora 115 GGTAAGTGGCAATCATCACCGGCGCCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG  
 D\_ferruginea 121 GGTAAGTGGCAATCATCACCGGAGCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG  
 D\_purpurea 121 GGTAAGTGGCAATCATCACCGGAGCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG  
 D\_mariana 119 GGTAAGTGGCAATCATCACCGGAGCGCTAGCGGCATCGGCGAGGAGGCGGCAAGATTG

D\_parviflora 175 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG  
 D\_thapsi 175 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG  
 D\_lanatal 175 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG  
 D\_grandiflora 175 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG  
 D\_ferruginea 181 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG  
 D\_purpurea 181 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG  
 D\_mariana 179 TTCGTGGAGCATGGCGCCTCAGTGGTGGTGGCGGACGTCAGGACGAATTGGGGCGCCAG

D\_parviflora 235 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT  
 D\_thapsi 235 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT  
 D\_lanatal 235 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT  
 D\_grandiflora 235 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT  
 D\_ferruginea 241 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT  
 D\_purpurea 241 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT  
 D\_mariana 239 GTCGTCGCTTCCGTAAACTCTGACGACAAGATAAGTTACTTACCACCTGCGACGTCAGAGAT

D\_parviflora 295 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC  
 D\_thapsi 295 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC  
 D\_lanatal 295 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC  
 D\_grandiflora 295 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC  
 D\_ferruginea 301 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC  
 D\_purpurea 301 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC  
 D\_mariana 299 GAAAAACAAGTGGCGGCCACCGTCCGCTACGCGGTGGAGAAAACGGGGCCCTCGACGTC

D\_parviflora 355 ATGATGAGCAACGCCGGAGTCTTCGGCTGCCTTGATGACGAATGTAATCGATCTCGACATG  
 D\_thapsi 355 ATGATGAGCAACGCCGGAGTCTTCGGCTGCCTTGATGACGAATGTAATCGATCTCGACATG  
 D\_lanatal 355 ATGATGAGCAACGCCGGAGTCTTCGGGGCCTTGATGACGAACGTAATCGATCTCGACATG  
 D\_grandiflora 355 ATGATGAGCAACGCCGGAGTCTTCGGGGCCTTGATGACGAACGTAATCGATCTCGACATG  
 D\_ferruginea 361 ATGATGAGCAACGCCGGAGTCTTCGGGGCCTTGATGACGACCGTAATCGATCTCGACATG  
 D\_purpurea 361 ATGATGAGCAACGCCGGAGTCTTCGGGGCCTTGATGACGACCGTAATCGATCTCGACATG  
 D\_mariana 359 ATGATGAGCAACGCCGGAGTCTTCGGGGCCTTGATGACGACCGTAATCGATCTCGACATG

D\_parviflora 415 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGAGTTGCCAACACTATAAAGCAC  
 D\_thapsi 415 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGAGTTGCCAACACTATAAAGCAC  
 D\_lanatal 415 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGAGTTGCCAACACTATAAAGCAC  
 D\_grandiflora 415 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGAGTTGCCAACACTATAAAGCAC  
 D\_ferruginea 421 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGGTTTGCCAACTATAAAGCAC  
 D\_purpurea 421 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGGTTTGCCAACTATAAAGCAC  
 D\_mariana 419 GTTGACTTTGAAAATGTATTGGCGACTAACGTGCGGGGTTTGCCAACTATAAAGCAC  
 D\_parviflora 475 GCGGCACGAGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG  
 D\_thapsi 475 GCGGCACGAGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG  
 D\_lanatal 475 GCGGCACGAGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG  
 D\_grandiflora 475 GCGGCACGAGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG  
 D\_ferruginea 481 GCGGCACCGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG  
 D\_purpurea 481 GCGGCACCGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG  
 D\_mariana 479 GCGGCACCGCCATGGTGGAGGGGAAGGTCAAGGGGTCCATCATTGACACCGCCAGCGTG

D_parviflora	535	TCGGCGAGCCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_thapsi	535	TCGGCGAGCCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_lanatal	535	TCGGCGAGCCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_grandiflora	535	TCGGCGAGCCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_ferruginea	541	TCGGCGAGTCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_purpurea	541	TCGGCGAGTCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_mariana	539	TCGGCGAGTCTTGGAGGCATGGGCCCGCCCGCTTACACGGCTTCCAAACACGCCGTCCTG
D_parviflora	595	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_thapsi	595	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_lanatal	595	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_grandiflora	595	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_ferruginea	601	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_purpurea	601	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_mariana	599	GGCCTGGTCAAGCGGCTTGC GCCGAGTTGGGGTGCACGGGATCCGAGTCAACTCGGTG
D_parviflora	655	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_thapsi	655	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_lanatal	655	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_grandiflora	655	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_ferruginea	661	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_purpurea	661	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_mariana	659	GCGCCGTACGGTGTGGCGACCCCGATGCCGTGCAGTGCTTACGGAATGACACCGAGTCAG
D_parviflora	715	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_thapsi	715	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_lanatal	715	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_grandiflora	715	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_ferruginea	721	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_purpurea	721	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_mariana	719	ATGGAGGACGCCAATAACTCCAGGGCTAACTTGAAGGGGTGGTTTTGAAGGCTAAGCAT
D_parviflora	775	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_thapsi	775	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_lanatal	775	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_grandiflora	775	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_ferruginea	781	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_purpurea	781	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_mariana	779	GTAGCTGAGGCGGCTCTCTTCTTGGCTTCCGATGAGTCGGCTTATGTCAGTGGGCAAAAC
D_parviflora	835	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG
D_thapsi	835	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG
D_lanatal	835	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG
D_grandiflora	835	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG
D_ferruginea	841	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG
D_purpurea	841	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG
D_mariana	839	TTGGCTGTCGACGGCGGCTTCACCGTCGTGCGTTAG



Supplementary Fig. 1. Multiple alignment of  $\beta$ -HSD mRNA of seven *Digitalis* species obtained from the NCBI. The arrows indicate the position of primers sequences were used to isolate  $\beta$ -HSD cDNA in *Digitalis nervosa*. Accession numbers are: AY789451.1, AY844959.1, AY789449.1, AY789452.1, AY789453.1, AY789450.1 DQ466890.1