

TABLE OF CONTENTS

INTRODUCTION	1
DELLA regulate transcriptional programs through the interaction with multiple transcription factors	3
The Prefoldin complex.....	5
Prefoldin localizes in the nucleus.....	7
Nuclear roles of prefoldin	8
Chromatin dynamics and the histone variant H2A.Z	9
H2A.Z deposition. The SWR1 complex	11
Molecular functions of H2A.Z	15
OBJECTIVES	19
MATERIALS AND	22
METHODS	22
In silico analysis.....	24
Plant material and growth conditions	24
Flowering time analysis	24
Yeast two-hybrid assays	25
Protein co-immunoprecipitation assays.....	25
Size exclusion chromatography assays	26
Subcellular fractionation assays.....	26
Western blot	27
RNA-seq and RNA-seq data analysis.....	27
ChIP experiments	28
ChIP-seq data analysis.....	28
Supplementary data	29

RESULTS	31
Cross-kingdom conservation of interactions between PFD subunits and nuclear proteins	33
PFD interacts physically with SWR1c in <i>Arabidopsis</i>	40
Prefoldin contribute to the flowering time by affecting H2A.Z levels in the FLC	41
Transcriptomic analysis of PFDc and SWR1c loss-of-function mutants underscores overlapping functions	44
PFD affects H2A.Z deposition in a subset of genes	48
Network analysis identifies candidate TFs acting downstream of PFD-SWR1c	51
Possible molecular mechanisms of PFD effect on SWR1c.....	55
 DISCUSSION	 59
 CONCLUSIONS.....	 65
 REFERENCES.....	 69