Table S3. Gene Ontology (GO) enrichment analysis of DEGs that were up and down expressed in the comparison of GOIAS control vs GOIAS aged-seeds.

GOIAS control vs GOIAS aged-seeds up-regulated genes				
Enrichment FDR	nGenes	Pathway Genes	Fold Enrichment	Pathway
0.000317	3	9	88.55128	Negative regulation of gene silencing
6.70E-05	6	70	22.77033	Trichome morphogenesis
0.000292	5	60	22.13782	Negative regulation of gene expression, epigenetic
0.000158	6	90	17.71026	Trichome differentiation
0.000222	6	100	15.93923	Plant epidermis morphogenesis
0.000367	7	183	10.16162	Gene silencing
0.000367	8	258	8.237329	Cell morphogenesis involved in differentiation
0.000116	10	342	7.767656	Negative regulation of gene expression
0.000317	9	329	7.267126	Chromatin organization
0.000116	11	423	6.908256	Cell morphogenesis
0.000397	9	349	6.850672	Cell development
4.30E-05	16	841	5.054057	Cellular developmental process
0.000418	12	665	4.793754	Transcription by RNA polymerase II
0.000317	13	737	4.685889	Negative regulation of macromolecule metabolic proc.
0.000367	13	759	4.550066	Cell differentiation
0.000158	16	1015	4.187647	Anatomical structure morphogenesis
4.30E-05	19	1217	4.147431	Negative regulation of biological proc.
4.30E-05	24	1845	3.45566	Organelle organization
0.000222	20	1606	3.308267	Post-embryonic development
GOIAS control vs GOIAS aged-seeds down-regulated genes				
Enrichment FDR	nGenes	Pathway Genes	Fold Enrichment	Pathway
0.02139	4	86	15.2979	Regulation of gene expression, epigenetic
0.019264	5	143	11.50017	RNA catabolic process
0.036112	4	119	11.05562	mRNA catabolic process
0.026204	5	185	8.889318	Nucleobase-containing compound catabolic proc.
0.019264	6	229	8.617592	Vegetative to reproductive phase transition of meristem
0.021436	6	266	7.418904	Aromatic compound catabolic proc.
0.022452	6	275	7.176104	Organic cyclic compound catabolic proc.
0.045518	5	235	6.997974	Heterocycle catabolic proc.
0.045518	5	237	6.938919	Cellular nitrogen compound catabolic proc.
0.019264	7	342	6.731969	Negative regulation of gene expression
0.036112	6	329	5.998263	Chromatin organization
0.036112	8	605	4.349154	mRNA metabolic process
0.036112	9	737	4.016476	Negative regulation of macromolecule metabolic proc.
0.019264	13	1217	3.513362	Negative regulation of biological proc.
0.020374	13	1265	3.380049	Cellular response to stress