

**Supplementary data**

**Table 1.** List of known *Arabidopsis thaliana* DDR-related genes

No.	Gene ID	Gene names in <i>Arabidopsis thaliana</i>	Gene description/notes	References
1	AT5G02190	PCS1, ATASP38, EMB24	Promotion of cell survival-1. Embryo-specific aspartic protease that limits programmed cell death during reproductive development. Possesses peptidase activity toward casein in vitro	Ge & al. 2005
2	At5g42050	NRP1	ER stress tolerance in <i>Arabidopsis</i> , repression of cell death. Nodulin-related protein 1; Prevents accumulation of abscisic acid (ABA) after heat treatment, thus reducing thermotolerance. May be a negative regulator of the ABA signaling/synthesis pathway. Required for defense responses against avirulent bacteria such as <i>P.syringae</i> pv. tomato DC3000 (avrRpt2). DCD (Development and Cell Death) domain protein.	Yang & al. 2021
3	At3g27090	NRP2	ER stress tolerance in <i>Arabidopsis</i> , repression of cell death. DCD (Development and Cell Death) domain protein.	Yang & al. 2021
4	AT5G47120	BI-1	Bax inhibitor 1; Suppressor of apoptosis. Modulator of endoplasmic reticulum stress-mediated programmed cell death. Involved in methyl jasmonate- induced leaf senescence through regulating cytoplasmic calcium level.	Yoshiyama, 2015; Watanabe and Lam, 2006
5	AT4G14730	GAAP1, AtLFG1, LFG1	Golgi antiapoptotic protein 1. Suppression of salicylic acid pathway under ER stress, cell death inhibition	Wang et. al., 2019
6	At4G02690	GAAP3, AtLFG3, LFG3	Golgi antiapoptotic protein 3. Suppression of salicylic acid pathway under ER stress, cell death inhibition	Wang et. al., 2019
7	At4g02390	PARP2		Song et. al., 2015; Yoshiyama, 2015

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8	AT2G31320	PARP1		Song et. al., 2015; Yoshiyama, 2015
9	AT4G21070	BRCA1		Yin & al. 2023; Yoshiyama, 2015
10	AT5G20850	RAD51		Yoshiyama, 2015
11	AT4G18470	SNI1	Suppressor of NPR1-1 Inducible-1	Yin & al. 2023
12	AT1G67230	CRWN1		Yin & al. 2023
13	AT1G13220	CRWN2		Yin & al. 2023
14	AT1G25580	SOG1	Master regulator, suppressor of gamma response 1	Yoshiyama, 2015
15	AT5G13190	GILP	Negative cell death regulator	Burke & al. 2023; He & al. 2011
16	AT1G08860	Copine BON3	Negative cell death regulator	Burke & al. 2023; Yang & al. 2006
17	AT1G76650	CML38		Burke & al. 2023; Lokdarshi & al. 2016
18	AT1G19020		Direct effect on stress tolerance and promotes survival	Burke & al. 2023; Dutta & al. 2020
19	AT2G30250	WRKY25	Transcription factor	Burke & al. 2023; Doll & al. 2020
20	AT1G27730	ZAT10	Transcription factor	Burke & al. 2023; Mittler & al. 2006
21	AT5G59820	ZAT12	Transcription factor	Burke & al. 2023; Davletova & al. 2005
22	AT3G28210	SAP12	Transcription factor	Burke & al. 2023; Stroher & al. 2009
23	AT5G63790	NAC102	Transcription factor	Burke & al. 2023; Christianson & al. 2009
24	AT3G23250	MYB15	Transcription factor	Burke & al. 2023; Ding & al. 2009
25	AT1G42990	bZIP60	Transcription factor	Burke & al. 2023; Iwata & al. 2008
26	AT3G48425	APE1L	Base-excision repair	Zhao & al. 2020
27	AT4G05420	DDB1A	nucleotide-excision repair	Zhao & al. 2020
28	AT4G09140	MLH1	mismatch repair	Zhao & al. 2020
29	AT1G66740	ASF1A	double-strand break repair via homologous recombination	Zhao & al. 2020
30	AT5G40820	ATRAD3	double-stand break repair via nonhomologous end joining	Zhao & al. 2020

**Table 2.** Potential DDR-related genes in *Arabidopsis thaliana* identified through computational screening and ranked by priority

Gene Priority	Gene ID	Gene Associated With	Data Base
1	AT2G31320	At4g02390 (PARP2), AT2G31320 (PARP1), AT3G48425 (APE1L)	STRING, BioGRID, BAR
1	AT3G18690	AT2G30250 (WRKY25), AT1G27730 (ZAT10), AT5G63790 (NAC102)	STRING, BioGRID, BAR
1	AT3G45640	AT1G27730 (ZAT10), At5g42050 (NRP1), AT2G30250 (WRKY25)	STRING, BioGRID, BAR
1	AT4G35580	AT4G14730 (GAAP1), AT4G18470 (SNI1), AT1G67230 (CRWN1), AT1G13220 (CRWN2), AT4G05420 (DDB1A)	BioGRID, STRING, BAR
2	AT2G40140	At5g42050 (NRP1), AT5G59820 (ZAT12), AT1G27730 (ZAT10)	BAR, STRING
2	AT3G55980	At5g42050 (NRP1), AT1G27730 (ZAT10)	BAR, STRING
2	AT4G34390	At5g42050 (NRP1), AT5G13190 (GILP)	BAR, STRING
2	AT2G32720	AT5G47120 (BI-1)	STRING, BioGRID
2	AT2G31870	At4g02390 (PARP2), AT2G31320 (PARP1)	STRING, BioGRID
2	AT2G31865	At4g02390 (PARP2), AT2G31320 (PARP1)	STRING, BioGRID
2	AT4G02390	AT2G31320 (PARP1)	STRING, BioGRID
2	AT1G04020	AT4G21070 (BRCA1)	STRING, BioGRID
2	AT3G27120	AT5G20850 (RAD51)	BAR, BioGRID
2	AT4G00020	AT5G20850 (RAD51)	STRING, BioGRID
2	AT5G01630	AT5G20850 (RAD51), AT4G21070 (BRCA1)	STRING, BioGRID
2	AT3G19210	AT5G20850 (RAD51), AT1G25580 (SOG1)	STRING, BioGRID
2	AT3G22880	AT5G20850 (RAD51)	STRING, BioGRID
2	AT5G04990	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING, BioGRID
2	AT3G10730	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING, BioGRID
2	AT4G20380	AT5G13190 (GILP)	STRING, BioGRID
2	AT5G49480	AT1G76650 (CML380), AT1G19020 (F14D16.17), AT3G28210 (SAP12)	BAR, STRING
2	AT1G80840	AT1G76650 (CML380), AT1G27730 (ZAT10), AT5G59820 (ZAT12)	BAR, STRING
2	AT1G25400	AT1G76650 (CML380)	BAR, STRING
2	AT2G43790	AT1G27730 (ZAT10), AT1G76650 (CML380), AT3G23250 (MYB15)	STRING, BioGRID
2	AT5G05410	AT5G59820 (ZAT12), AT5G63790 (NAC102), AT1G27730 (ZAT10)	BAR, STRING
2	AT2G38470	AT5G59820 (ZAT12), At5g42050 (NRP1), AT5G13190 (GILP), AT1G27730 (ZAT10), AT3G23250 (MYB15), AT2G30250 (WRKY25)	BAR, STRING
2	AT4G01870	AT5G63790 (NAC102), AT3G28210 (SAP12)	BAR, STRING
2	AT3G26744	AT3G23250 (MYB15), AT5G59820 (ZAT12)	STRING, BioGRID

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2	AT1G27840	AT4G05420 (DDB1A)	STRING, BioGRID
2	AT5G46210	AT4G05420 (DDB1A)	STRING, BioGRID
2	AT5G41560	AT4G05420 (DDB1A)	STRING, BioGRID
2	AT5G58760	AT4G05420 (DDB1A)	STRING, BioGRID
2	AT4G10180	AT4G05420 (DDB1A)	STRING, BioGRID
2	AT1G19750	AT4G05420 (DDB1A)	STRING, BioGRID
2	AT3G44530	AT1G66740 (ASF1A)	STRING, BioGRID
2	AT5G04720	At5g42050 (NRP1), AT1G08860 (Copine B0N3)	BAR, STRING
2	AT3G49530	At5g42050 (NRP1), AT5G59820 (ZAT12), AT1G42990 (bZIP60)	BAR, STRING
2	AT1G19020	At5g42050 (NRP1), AT1G19020 (F14D16.17)	STRING, BAR
2	AT3G10800	AT5G47120 (BI-1), AT1G42990 (bZIP60)	STRING, BioGRID
2	AT5G47120	AT4G14730 (GAAP1), At4G02690 (GAAP3), AT1G42990 (bZIP60)	STRING, BAR
2	AT5G22290	AT4G14730 (GAAP1), AT1G42990 (bZIP60)	BioGRID, STRING
2	AT5G58230	AT2G31320 (PARP1), AT3G48425 (APE1L), AT4G05420 (DDB1A)	BAR, BioGRID
2	AT3G18524	AT2G31320 (PARP1), AT4G21070 (BRCA1), AT5G20850 (RAD51), AT4G18470 (SNI1), AT4G09140 (MLH1)	BAR, STRING
2	AT1G08130	AT2G31320 (PARP1), AT3G48425 (APE1L), AT1G66740 (ASF1A)	STRING, BAR
2	AT2G31970	AT4G21070 (BRCA1), AT4G18470 (SNI1), AT5G40820 (ATRAD3)	STRING, BAR
2	AT5G20850	AT4G21070 (BRCA1), AT4G18470 (SNI1), AT1G25580 (SOG1)	STRING, BAR
2	AT5G64060	AT5G20850 (RAD51), AT1G42990 (bZIP60)	BAR, STRING
2	AT2G19520	AT5G20850 (RAD51), AT4G05420 (DDB1A)	BAR, BioGRID
2	AT3G27640	AT4G18470 (SNI1), AT4G05420 (DDB1A)	BAR, STRING
2	AT1G76660	AT1G67230 (CRWN1), AT1G25580 (SOG1), AT1G76650 (CML380)	BAR, STRING
2	AT1G02970	AT1G25580 (SOG1), AT1G08860 (Copine B0N3)	STRING, BAR
2	AT1G28380	AT5G13190 (GILP), AT1G08860 (Copine B0N3)	BAR, STRING
2	AT5G42050	AT5G13190 (GILP), AT1G19020 (F14D16.17)	BAR,STRING
2	AT4G27654	AT5G13190 (GILP), AT3G23250 (MYB15)	STRING, BAR
2	AT4G27652	AT5G13190 (GILP), AT3G23250 (MYB15)	STRING, BAR
2	AT4G18880	AT2G30250 (WRKY25), AT5G59820 (ZAT12)	BAR, STRING
2	AT1G01720	AT1G27730 (ZAT10), AT5G63790 (NAC102)	BAR, STRING
2	AT5G47230	AT1G27730 (ZAT10), AT5G59820 (ZAT12)	STRING, BAR
3	AT5G42230	AT5G02190 (PCS1)	BAR

3	AT5G09730	AT5G02190 (PCS1)	BAR
3	AT3G46770	AT5G02190 (PCS1)	BAR
3	AT1G72260	AT5G02190 (PCS1)	BAR
3	AT1G72290	AT5G02190 (PCS1)	BAR
3	AT4G15440	AT5G02190 (PCS1)	BAR
3	AT1G27360	AT5G02190 (PCS1)	BAR
3	AT5G24420	AT5G02190 (PCS1)	BAR
3	AT3G50280	AT5G02190 (PCS1)	BAR
3	AT2G28470	AT5G02190 (PCS1)	BAR
3	AT4G09960	AT5G02190 (PCS1)	BAR
3	AT5G21150	AT5G02190 (PCS1)	BAR
3	AT4G21480	AT5G02190 (PCS1)	BAR
3	AT4G16447	AT5G02190 (PCS1)	BAR
3	AT4G21590	AT5G02190 (PCS1)	BAR
3	AT5G15800	AT5G02190 (PCS1)	BAR
3	AT3G04960	AT5G02190 (PCS1)	BAR
3	AT5G12270	AT5G02190 (PCS1)	BAR
3	AT1G30795	AT5G02190 (PCS1)	BAR
3	AT3G20520	AT5G02190 (PCS1)	BAR
3	AT5G18000	AT5G02190 (PCS1)	BAR
3	AT3G14395	AT5G02190 (PCS1)	BAR
3	AT4G36770	AT5G02190 (PCS1)	BAR
3	AT4G00870	AT5G02190 (PCS1)	BAR
3	AT4G04460	AT5G02190 (PCS1)	STRING
3	AT2G03500	AT5G02190 (PCS1)	STRING
3	AT1G30610	AT5G02190 (PCS1)	STRING
3	AT1G24340	AT5G02190 (PCS1)	STRING
3	AT5G40160	AT5G02190 (PCS1)	STRING
3	AT5G22800	AT5G02190 (PCS1)	STRING
3	AT2G41500	AT5G02190 (PCS1)	STRING
3	AT5G47510	AT5G02190 (PCS1)	STRING
3	AT5G19100	AT5G02190 (PCS1)	STRING
3	AT5G53860	AT5G02190 (PCS1)	STRING
3	AT2G06530	At5g42050 (NRP1), AT5G13190 (GILP)	BAR
3	AT1G31130	At5g42050 (NRP1)	BAR
3	AT2G23810	At5g42050 (NRP1), AT5G13190 (GILP)	BAR

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3	AT4G01090	At5g42050 (NRP1)	BAR
3	AT1G19770	At5g42050 (NRP1), AT5G13190 (GILP), AT1G27730 (ZAT10), AT5G59820 (ZAT12)	BAR
3	AT1G27100	At5g42050 (NRP1)	BAR
3	AT5G66210	At5g42050 (NRP1)	BAR
3	AT4G33940	At5g42050 (NRP1)	BAR
3	AT5G24590	At5g42050 (NRP1), AT5G59820 (ZAT12)	BAR
3	AT5G61900	At5g42050 (NRP1)	BAR
3	AT3G46620	At5g42050 (NRP1), AT5G59820 (ZAT12)	BAR
3	AT1G08720	At5g42050 (NRP1)	BAR
3	AT4G17230	At5g42050 (NRP1)	BAR
3	AT2G21120	At5g42050 (NRP1), AT5G13190 (GILP)	BAR
3	AT1G27770	At5g42050 (NRP1)	BAR
3	AT4G29900	At5g42050 (NRP1)	BAR
3	AT5G16910	At5g42050 (NRP1), AT5G59820 (ZAT12)	BAR
3	AT1G72900	At5g42050 (NRP1)	STRING
3	AT1G69840	At5g42050 (NRP1)	STRING
3	AT3G01290	At5g42050 (NRP1)	STRING
3	AT3G23605	At5g42050 (NRP1), At3g27090 (NRP2)	STRING
3	AT2G17040	At5g42050 (NRP1)	STRING
3	AT2G03440	At5g42050 (NRP1), At3g27090 (NRP2)	STRING
3	AT1G31880	At5g42050 (NRP1)	BioGRID
3	AT2G17870	At5g42050 (NRP1)	BioGRID
3	AT3G54840	At3g27090 (NRP2)	BAR
3	AT4G32850	At3g27090 (NRP2)	BAR
3	AT3G43220	At3g27090 (NRP2)	BAR
3	AT3G16940	At3g27090 (NRP2)	BAR
3	AT5G02810	At3g27090 (NRP2)	BAR
3	AT4G35780	At3g27090 (NRP2)	BAR
3	AT3G52880	At3g27090 (NRP2)	BAR
3	AT4G13270	At3g27090 (NRP2)	BAR
3	AT5G37500	At3g27090 (NRP2)	BAR
3	AT4G32530	At3g27090 (NRP2)	BAR
3	AT3G19290	At3g27090 (NRP2)	BAR
3	AT5G61500	At3g27090 (NRP2)	BAR
3	AT5G65050	At3g27090 (NRP2)	BAR
3	AT5G02840	At3g27090 (NRP2)	BAR

3	AT4G33950	At3g27090 (NRP2)	BAR
3	AT1G17550	At3g27090 (NRP2)	BAR
3	AT3G59660	At3g27090 (NRP2)	BAR
3	AT1G08200	At3g27090 (NRP2)	BAR
3	AT1G07990	At3g27090 (NRP2)	BAR
3	AT5G55310	At3g27090 (NRP2)	BAR
3	AT3G50860	At3g27090 (NRP2)	BAR
3	AT4G29220	At3g27090 (NRP2)	BAR
3	AT3G54500	At3g27090 (NRP2)	BAR
3	AT2G25940	At3g27090 (NRP2)	STRING
3	AT5G39820	At3g27090 (NRP2), AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT2G17520	At3g27090 (NRP2), AT1G42990 (bZIP60)	STRING
3	AT4G27080	At3g27090 (NRP2)	STRING
3	AT1G59550	At3g27090 (NRP2)	STRING
3	AT3G21660	At3g27090 (NRP2)	STRING
3	AT2G41020	At3g27090 (NRP2)	STRING
3	AT3G58560	At3g27090 (NRP2)	BioGRID
3	AT1G28200	AT5G47120 (BI-1)	BAR
3	AT1G69640	AT5G47120 (BI-1)	BAR
3	AT1G21760	AT5G47120 (BI-1), AT1G42990 (bZIP60)	BAR
3	AT1G27760	AT5G47120 (BI-1), AT1G42990 (bZIP60)	BAR
3	AT5G47730	AT5G47120 (BI-1)	BAR
3	AT3G57090	AT5G47120 (BI-1)	BAR
3	AT2G38000	AT5G47120 (BI-1)	BAR
3	AT4G18140	AT5G47120 (BI-1)	BAR
3	AT4G26080	AT5G47120 (BI-1)	BAR
3	AT2G02220	AT5G47120 (BI-1), AT5G63790 (NAC102), AT1G42990 (bZIP60)	BAR
3	AT4G14350	AT5G47120 (BI-1)	BAR
3	AT5G40930	AT5G47120 (BI-1)	BAR
3	AT5G35680	AT5G47120 (BI-1)	BAR
3	AT5G04170	AT5G47120 (BI-1)	BAR
3	AT4G25670	AT5G47120 (BI-1)	BAR
3	AT3G17410	AT5G47120 (BI-1)	BAR
3	AT4G35860	AT5G47120 (BI-1)	BAR
3	AT1G09920	AT5G47120 (BI-1)	BAR

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3	AT3G22950	AT5G47120 (BI-1)	BAR
3	AT5G45130	AT5G47120 (BI-1)	BAR
3	AT3G09570	AT5G47120 (BI-1)	BAR
3	AT5G17380	AT5G47120 (BI-1)	BAR
3	AT2G02230	AT5G47120 (BI-1), AT1G42990 (bZIP60)	BAR
3	AT5G53330	AT5G47120 (BI-1)	BAR
3	AT1G42990	AT5G47120 (BI-1)	STRING
3	AT1G26340	AT5G47120 (BI-1)	STRING
3	AT2G46650	AT5G47120 (BI-1)	STRING
3	AT5G48810	AT5G47120 (BI-1)	STRING
3	AT5G53560	AT5G47120 (BI-1)	STRING
3	AT2G34770	AT5G47120 (BI-1)	STRING
3	AT4G20870	AT5G47120 (BI-1)	STRING
3	AT4G15470	AT5G47120 (BI-1)	STRING
3	AT3G43810	AT5G47120 (BI-1)	BioGRID
3	AT4G13770	AT5G47120 (BI-1)	BioGRID
3	AT2G18960	AT5G47120 (BI-1)	BioGRID
3	AT4G30190	AT5G47120 (BI-1)	BioGRID
3	AT4G21150	AT5G47120 (BI-1)	BioGRID
3	AT1G03860	AT5G47120 (BI-1)	BioGRID
3	AT2G45960	AT5G47120 (BI-1)	BioGRID
3	AT1G78900	AT5G47120 (BI-1)	BioGRID
3	AT5G40010	AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT4G14710	AT4G14730 (GAAP1)	STRING
3	AT3G11110	AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT4G23030	AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT4G16660	AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT4G24190	AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT5G24360	AT4G14730 (GAAP1), At4G02690 (GAAP3), AT1G42990 (bZIP60)	STRING
3	AT4G14730	AT4G14730 (GAAP1)	STRING
3	AT5G67090	AT4G14730 (GAAP1), At4G02690 (GAAP3)	STRING
3	AT1G01010	AT4G14730 (GAAP1)	BioGRID
3	AT4G19030	AT4G14730 (GAAP1)	BioGRID
3	AT5G65550	At4G02690 (GAAP3)	BAR
3	AT5G51760	At4G02690 (GAAP3)	BAR
3	AT1G66770	At4G02690 (GAAP3)	BAR



3	AT1G16770	At4G02690 (GAAP3)	BAR
3	AT2G23240	At4G02690 (GAAP3)	BAR
3	AT1G15330	At4G02690 (GAAP3)	BAR
3	AT1G70840	At4G02690 (GAAP3)	BAR
3	AT3G22490	At4G02690 (GAAP3)	BAR
3	AT2G29300	At4G02690 (GAAP3)	BAR
3	AT4G25580	At4G02690 (GAAP3)	BAR
3	AT2G25340	At4G02690 (GAAP3)	BAR
3	AT5G04500	At4G02690 (GAAP3)	BAR
3	AT1G03990	At4G02690 (GAAP3)	BAR
3	AT3G21380	At4G02690 (GAAP3)	BAR
3	AT2G36270	At4G02690 (GAAP3)	BAR
3	AT5G04000	At4G02690 (GAAP3)	BAR
3	AT5G39720	At4G02690 (GAAP3)	BAR
3	AT1G30860	At4G02690 (GAAP3)	BAR
3	AT1G08170	At4G02690 (GAAP3)	BAR
3	AT5G25180	At4G02690 (GAAP3)	BAR
3	AT1G23070	At4G02690 (GAAP3)	BAR
3	AT5G16460	At4G02690 (GAAP3)	BAR
3	AT5G18450	At4G02690 (GAAP3)	BAR
3	AT5G54000	At4G02690 (GAAP3)	BAR
3	AT1G09080	At4G02690 (GAAP3), AT1G42990 (bZIP60)	STRING
3	AT3G49180	At4g02390 (PARP2)	BAR
3	AT3G28700	At4g02390 (PARP2)	BAR
3	AT4G39630	At4g02390 (PARP2)	BAR
3	AT3G60860	At4g02390 (PARP2)	BAR
3	AT2G24440	At4g02390 (PARP2)	BAR
3	AT1G51720	At4g02390 (PARP2)	BAR
3	AT2G31190	At4g02390 (PARP2)	BAR
3	AT2G28620	At4g02390 (PARP2)	BAR
3	AT4G27660	At4g02390 (PARP2)	BAR
3	AT2G15860	At4g02390 (PARP2)	BAR
3	AT5G17930	At4g02390 (PARP2)	BAR
3	AT4G15840	At4g02390 (PARP2)	BAR
3	AT5G17210	At4g02390 (PARP2)	BAR
3	AT1G25380	At4g02390 (PARP2)	BAR

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3	AT5G10910	At4g02390 (PARP2)	BAR
3	AT1G58050	At4g02390 (PARP2)	BAR
3	AT2G37020	At4g02390 (PARP2)	BAR
3	AT1G63650	At4g02390 (PARP2)	BAR
3	AT5G56730	At4g02390 (PARP2)	BAR
3	AT2G37080	At4g02390 (PARP2)	BAR
3	AT3G56820	At4g02390 (PARP2)	BAR
3	AT5G25070	At4g02390 (PARP2)	BAR
3	AT1G15440	At4g02390 (PARP2)	BAR
3	AT3G18860	At4g02390 (PARP2)	BAR
3	AT3G05210	At4g02390 (PARP2)	STRING
3	AT1G16970	At4g02390 (PARP2), AT2G31320 (PARP1)	STRING
3	AT1G48050	At4g02390 (PARP2), AT2G31320 (PARP1)	STRING
3	AT5G22470	At4g02390 (PARP2), AT2G31320 (PARP1)	STRING
3	AT2G35510	At4g02390 (PARP2)	STRING
3	AT1G27720	At4g02390 (PARP2)	STRING
3	AT1G80420	At4g02390 (PARP2), AT2G31320 (PARP1), AT3G48425 (APE1L)	STRING
3	AT1G06760	At4g02390 (PARP2)	BioGRID
3	AT2G18050	At4g02390 (PARP2)	BioGRID
3	AT3G48425	AT2G31320 (PARP1)	BAR
3	AT2G18520	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT1G72550	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT5G23430	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT3G57060	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT3G18090	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT1G13560	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT5G60690	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT2G27040	AT2G31320 (PARP1)	BAR
3	AT5G44320	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT4G03090	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT5G03740	AT2G31320 (PARP1)	BAR
3	AT1G13220	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT1G14710	AT2G31320 (PARP1)	BAR
3	AT4G16340	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT3G42170	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT1G67630	AT2G31320 (PARP1), AT5G20850 (RAD51)	BAR

3	AT1G50240	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT5G44200	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT3G55010	AT2G31320 (PARP1), AT3G48425 (APE1L)	BAR
3	AT2G46230	AT2G31320 (PARP1)	BAR
3	AT1G77470	AT2G31320 (PARP1), AT5G20850 (RAD51)	BAR
3	AT4G21070	AT2G31320 (PARP1), AT5G20850 (RAD51)	STRING
3	AT5G57160	AT2G31320 (PARP1)	STRING
3	AT5G37720	AT2G31320 (PARP1)	BioGRID
3	AT1G66260	AT2G31320 (PARP1)	BioGRID
3	AT5G51600	AT4G21070 (BRCA1)	BAR
3	AT5G41880	AT4G21070 (BRCA1), AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT1G57820	AT4G21070 (BRCA1)	BAR
3	AT1G04050	AT4G21070 (BRCA1), AT4G18470 (SNI1)	BAR
3	AT1G09190	AT4G21070 (BRCA1)	BAR
3	AT4G37110	AT4G21070 (BRCA1), AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT4G31610	AT4G21070 (BRCA1)	BAR
3	AT1G26540	AT4G21070 (BRCA1)	BAR
3	AT1G11950	AT4G21070 (BRCA1)	BAR
3	AT1G64760	AT4G21070 (BRCA1)	BAR
3	AT3G19184	AT4G21070 (BRCA1)	BAR
3	AT2G32770	AT4G21070 (BRCA1)	BAR
3	AT1G78650	AT4G21070 (BRCA1), AT5G20850 (RAD51)	BAR
3	AT5G23910	AT4G21070 (BRCA1)	BAR
3	AT2G21800	AT4G21070 (BRCA1), AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT5G08020	AT4G21070 (BRCA1), AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT5G46280	AT4G21070 (BRCA1), AT1G13220 (CRWN2)	BAR
3	AT1G09450	AT4G21070 (BRCA1), AT4G18470 (SNI1)	BAR
3	AT4G21170	AT4G21070 (BRCA1)	BAR
3	AT1G33940	AT4G21070 (BRCA1)	BAR
3	AT5G63700	AT4G21070 (BRCA1), AT5G20850 (RAD51)	BAR
3	AT5G67260	AT4G21070 (BRCA1), AT1G13220 (CRWN2)	BAR
3	AT2G16780	AT4G21070 (BRCA1), AT5G20850 (RAD51)	BAR
3	AT3G48190	AT4G21070 (BRCA1), AT5G40820 (ATRAD3)	STRING
3	AT5G40820	AT4G21070 (BRCA1), AT1G25580 (SOG1)	STRING

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT1G67180	AT4G21070 (BRCA1)	STRING
3	AT5G54260	AT4G21070 (BRCA1), AT5G20850 (RAD51), AT5G40820 (ATRAD3)	STRING
3	AT3G02680	AT4G21070 (BRCA1), AT5G40820 (ATRAD3)	STRING
3	AT4G18470	AT5G20850 (RAD51)	BAR
3	AT1G71310	AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT5G46740	AT5G20850 (RAD51)	BAR
3	AT5G49010	AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT2G27990	AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT2G40030	AT5G20850 (RAD51), AT4G18470 (SNI1)	BAR
3	AT3G13690	AT5G20850 (RAD51)	BAR
3	AT4G33400	AT5G20850 (RAD51)	BAR
3	AT1G10270	AT5G20850 (RAD51)	BAR
3	AT3G17360	AT5G20850 (RAD51)	BAR
3	AT5G61460	AT5G20850 (RAD51)	BAR
3	AT2G18760	AT5G20850 (RAD51)	STRING
3	AT4G29170	AT5G20850 (RAD51)	STRING
3	AT4G30870	AT5G20850 (RAD51)	STRING
3	AT5G64520	AT5G20850 (RAD51)	STRING
3	AT1G04650	AT5G20850 (RAD51)	BioGRID
3	AT5G62230	AT4G18470 (SNI1)	BAR
3	AT5G11780	AT4G18470 (SNI1)	BAR
3	AT4G27510	AT4G18470 (SNI1)	BAR
3	AT5G43990	AT4G18470 (SNI1)	BAR
3	AT3G12380	AT4G18470 (SNI1)	BAR
3	AT5G27240	AT4G18470 (SNI1)	BAR
3	AT5G04840	AT4G18470 (SNI1)	BAR
3	AT1G74390	AT4G18470 (SNI1)	BAR
3	AT1G79490	AT4G18470 (SNI1)	BAR
3	AT2G39880	AT4G18470 (SNI1)	BAR
3	AT3G48090	AT4G18470 (SNI1)	STRING
3	AT4G24680	AT4G18470 (SNI1)	STRING
3	AT1G64280	AT4G18470 (SNI1)	STRING
3	AT1G51130	AT4G18470 (SNI1)	STRING
3	AT3G20760	AT4G18470 (SNI1)	STRING
3	AT5G15920	AT4G18470 (SNI1)	STRING
3	AT5G07660	AT4G18470 (SNI1)	STRING

3	AT4G16890	AT4G18470 (SNI1), AT1G08860 (Copine BON3)	STRING
3	AT4G33925	AT4G18470 (SNI1)	STRING
3	AT5G28640	AT4G18470 (SNI1), AT1G67230 (CRWN1)	BioGRID
3	AT1G63820	AT4G18470 (SNI1)	BioGRID
3	AT5G56900	AT4G18470 (SNI1)	BioGRID
3	AT1G32540	AT4G18470 (SNI1)	BioGRID
3	AT1G54330	AT4G18470 (SNI1)	BioGRID
3	AT3G61910	AT4G18470 (SNI1)	BioGRID
3	AT1G20960	AT1G67230 (CRWN1), AT1G13220 (CRWN2), AT1G25580 (SOG1)	BAR
3	AT3G22990	AT1G67230 (CRWN1)	BAR
3	AT5G16505	AT1G67230 (CRWN1)	BAR
3	AT1G18950	AT1G67230 (CRWN1), AT1G25580 (SOG1)	BAR
3	AT2G47900	AT1G67230 (CRWN1), AT1G13220 (CRWN2), AT1G25580 (SOG1)	BAR
3	AT4G10710	AT1G67230 (CRWN1)	BAR
3	AT4G25210	AT1G67230 (CRWN1)	BAR
3	AT1G15200	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	BAR
3	AT3G22220	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	BAR
3	AT5G41770	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	BAR
3	AT4G32551	AT1G67230 (CRWN1), AT1G13220 (CRWN2), AT1G25580 (SOG1)	BAR
3	AT3G15790	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	BAR
3	AT3G54670	AT1G67230 (CRWN1), AT1G25580 (SOG1), AT4G09140 (MLH1)	BAR
3	AT4G02720	AT1G67230 (CRWN1), AT1G25580 (SOG1), AT4G09140 (MLH1)	BAR
3	AT1G68790	AT1G67230 (CRWN1)	BAR
3	AT1G18450	AT1G67230 (CRWN1), AT1G25580 (SOG1)	BAR
3	AT3G48710	AT1G67230 (CRWN1)	BAR
3	AT5G04280	AT1G67230 (CRWN1)	BAR
3	AT3G54350	AT1G67230 (CRWN1)	BAR
3	AT5G64610	AT1G67230 (CRWN1), AT4G09140 (MLH1)	BAR
3	AT3G12990	AT1G67230 (CRWN1)	BAR
3	AT5G53620	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	BAR
3	AT3G11910	AT1G67230 (CRWN1), AT1G25580 (SOG1)	BAR
3	AT4G31430	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING
3	AT3G05830	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT3G10650	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING
3	AT1G22882	AT1G67230 (CRWN1)	STRING
3	AT1G71360	AT1G67230 (CRWN1)	STRING
3	AT5G11390	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING
3	AT1G68910	AT1G67230 (CRWN1), AT1G13220 (CRWN2)	STRING
3	AT1G79730	AT1G13220 (CRWN2)	BAR
3	AT5G11170	AT1G13220 (CRWN2)	BAR
3	AT4G24940	AT1G13220 (CRWN2)	BAR
3	AT3G14800	AT1G13220 (CRWN2)	BAR
3	AT5G26850	AT1G13220 (CRWN2)	BAR
3	AT4G31880	AT1G13220 (CRWN2)	BAR
3	AT1G67230	AT1G13220 (CRWN2), AT1G25580 (SOG1)	BAR
3	AT5G16260	AT1G13220 (CRWN2)	BAR
3	AT5G19320	AT1G13220 (CRWN2)	BAR
3	AT3G56120	AT1G13220 (CRWN2), AT4G09140 (MLH1)	BAR
3	AT1G48560	AT1G13220 (CRWN2), AT1G25580 (SOG1)	BAR
3	AT5G45140	AT1G13220 (CRWN2)	BAR
3	AT3G57000	AT1G13220 (CRWN2)	BAR
3	AT1G48410	AT1G13220 (CRWN2)	BAR
3	AT1G24560	AT1G13220 (CRWN2)	STRING
3	AT4G01540	AT1G13220 (CRWN2)	STRING
3	AT5G61060	AT1G25580 (SOG1)	BAR
3	AT1G26170	AT1G25580 (SOG1)	BAR
3	AT5G65770	AT1G25580 (SOG1)	BAR
3	AT4G25880	AT1G25580 (SOG1)	BAR
3	AT5G46920	AT1G25580 (SOG1), AT4G09140 (MLH1)	BAR
3	AT2G14120	AT1G25580 (SOG1)	BAR
3	AT5G49880	AT1G25580 (SOG1)	BAR
3	AT5G12290	AT1G25580 (SOG1)	BAR
3	AT3G23910	AT1G25580 (SOG1)	BAR
3	AT5G50320	AT1G25580 (SOG1)	BAR
3	AT5G42920	AT1G25580 (SOG1)	BAR
3	AT3G50670	AT1G25580 (SOG1)	BAR
3	AT5G63950	AT1G25580 (SOG1)	BAR
3	AT3G09370	AT1G25580 (SOG1)	STRING
3	AT5G02320	AT1G25580 (SOG1)	STRING

3	AT5G06720	AT1G25580 (SOG1)	STRING
3	AT5G02220	AT1G25580 (SOG1)	STRING
3	AT3G27630	AT1G25580 (SOG1)	STRING
3	AT5G13190	AT5G13190 (GILP)	BAR
3	AT5G06320	AT5G13190 (GILP), AT1G76650 (CML380)	BAR
3	AT2G01180	AT5G13190 (GILP)	BAR
3	AT1G09070	AT5G13190 (GILP), AT1G27730 (ZAT10)	BAR
3	AT1G29690	AT5G13190 (GILP), AT5G63790 (NAC102)	BAR
3	AT1G59910	AT5G13190 (GILP), AT1G76650 (CML380)	BAR
3	AT2G41430	AT5G13190 (GILP)	BAR
3	AT2G41100	AT5G13190 (GILP)	BAR
3	AT4G30210	AT5G13190 (GILP)	BAR
3	AT3G10640	AT5G13190 (GILP)	BAR
3	AT2G40000	AT5G13190 (GILP), AT1G76650 (CML380), AT1G27730 (ZAT10)	BAR
3	AT5G26030	AT5G13190 (GILP), AT5G63790 (NAC102)	BAR
3	AT3G11820	AT5G13190 (GILP)	BAR
3	AT5G44070	AT5G13190 (GILP)	BAR
3	AT5G47220	AT5G13190 (GILP)	BAR
3	AT5G61210	AT5G13190 (GILP)	BAR
3	AT4G31800	AT5G13190 (GILP)	BAR
3	AT4G37250	AT5G13190 (GILP)	STRING
3	AT3G25600	AT5G13190 (GILP)	STRING
3	AT1G66080	AT5G13190 (GILP)	STRING
3	AT1G50740	AT5G13190 (GILP), AT1G19020 (F14D16.17)	STRING
3	AT5G23340	AT5G13190 (GILP)	STRING
3	AT2G18690	AT5G13190 (GILP)	STRING
3	AT5G57910	AT5G13190 (GILP)	STRING
3	AT4G17730	AT5G13190 (GILP)	BioGRID
3	AT4G00550	AT1G08860 (Copine BON3)	BAR
3	AT5G13960	AT1G08860 (Copine BON3)	BAR
3	AT4G17620	AT1G08860 (Copine BON3)	BAR
3	AT3G14980	AT1G08860 (Copine BON3)	BAR
3	AT3G56900	AT1G08860 (Copine BON3)	BAR
3	AT4G29380	AT1G08860 (Copine BON3)	BAR
3	AT1G18190	AT1G08860 (Copine BON3)	BAR
3	AT2G18330	AT1G08860 (Copine BON3)	BAR

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT1G17680	AT1G08860 (Copine BON3)	BAR
3	AT1G52160	AT1G08860 (Copine BON3)	BAR
3	AT4G37490	AT1G08860 (Copine BON3)	BAR
3	AT2G16500	AT1G08860 (Copine BON3)	BAR
3	AT3G28730	AT1G08860 (Copine BON3)	BAR
3	AT2G23740	AT1G08860 (Copine BON3)	BAR
3	AT4G29590	AT1G08860 (Copine BON3)	BAR
3	AT5G16780	AT1G08860 (Copine BON3)	BAR
3	AT4G28910	AT1G08860 (Copine BON3)	BAR
3	AT1G73930	AT1G08860 (Copine BON3)	BAR
3	AT2G30105	AT1G08860 (Copine BON3)	BAR
3	AT2G33640	AT1G08860 (Copine BON3)	BAR
3	AT5G40280	AT1G08860 (Copine BON3)	BAR
3	AT1G30370	AT1G08860 (Copine BON3)	STRING
3	AT4G38360	AT1G08860 (Copine BON3)	STRING
3	AT5G44870	AT1G08860 (Copine BON3)	STRING
3	AT5G41730	AT1G08860 (Copine BON3)	STRING
3	AT3G52430	AT1G08860 (Copine BON3)	STRING
3	AT4G39670	AT1G08860 (Copine BON3)	STRING
3	AT1G72930	AT1G08860 (Copine BON3)	STRING
3	AT5G48380	AT1G08860 (Copine BON3)	BioGRID
3	AT1G76650	AT1G76650 (CML380)	BAR
3	AT3G25780	AT1G76650 (CML380)	BAR
3	AT1G23710	AT1G76650 (CML380), AT1G27730 (ZAT10), AT5G63790 (NAC102)	BAR
3	AT2G22880	AT1G76650 (CML380), AT1G19020 (F14D16.17), AT3G28210 (SAP12)	BAR
3	AT1G76600	AT1G76650 (CML380), AT1G27730 (ZAT10), AT5G63790 (NAC102)	BAR
3	AT4G17615	AT1G76650 (CML380), AT1G19020 (F14D16.17)	BAR
3	AT5G54490	AT1G76650 (CML380)	BAR
3	AT5G10695	AT1G76650 (CML380), AT1G19020 (F14D16.17), AT3G28210 (SAP12)	BAR
3	AT5G35735	AT1G76650 (CML380)	BAR
3	AT1G05575	AT1G76650 (CML380), AT1G19020 (F14D16.17)	BAR
3	AT1G32920	AT1G76650 (CML380)	BAR
3	AT5G49520	AT1G76650 (CML380)	BAR



3	AT1G66500	AT1G76650 (CML380), AT5G59820 (ZAT12)	BAR
3	AT1G15010	AT1G76650 (CML380)	BAR
3	AT3G01830	AT1G76650 (CML380), AT1G19020 (F14D16.17), AT3G28210 (SAP12)	BAR
3	AT1G19180	AT1G76650 (CML380), AT1G27730 (ZAT10)	BAR
3	AT1G76680	AT1G76650 (CML380), AT5G63790 (NAC102)	BAR
3	AT3G02840	AT1G76650 (CML380)	BAR
3	AT4G36500	AT1G76650 (CML380), AT1G19020 (F14D16.17)	BAR
3	AT5G44460	AT1G76650 (CML380)	STRING
3	AT3G59450	AT1G76650 (CML380)	STRING
3	AT3G47480	AT1G76650 (CML380)	STRING
3	AT1G02900	AT1G76650 (CML380)	STRING
3	AT1G73440	AT1G76650 (CML380)	STRING
3	AT1G59870	AT1G76650 (CML380)	BioGRID
3	AT2G20630	AT1G19020 (F14D16.17)	BAR
3	AT1G66160	AT1G19020 (F14D16.17), AT3G28210 (SAP12)	BAR
3	AT2G29450	AT1G19020 (F14D16.17), AT3G28210 (SAP12)	BAR
3	AT1G67920	AT1G19020 (F14D16.17)	BAR
3	AT5G16010	AT1G19020 (F14D16.17), AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT3G52450	AT1G19020 (F14D16.17)	BAR
3	AT3G13430	AT1G19020 (F14D16.17), AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT2G25735	AT1G19020 (F14D16.17)	BAR
3	AT3G04010	AT1G19020 (F14D16.17), AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT4G30530	AT1G19020 (F14D16.17)	BAR
3	AT1G62840	AT1G19020 (F14D16.17), AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT1G14540	AT1G19020 (F14D16.17)	BAR
3	AT5G05600	AT1G19020 (F14D16.17)	BAR
3	AT2G39360	AT1G19020 (F14D16.17), AT2G30250 (WRKY25)	BAR
3	AT1G14000	AT1G19020 (F14D16.17)	BAR
3	AT1G52200	AT1G19020 (F14D16.17)	BAR
3	AT5G48540	AT1G19020 (F14D16.17)	BAR
3	AT5G20230	AT1G19020 (F14D16.17)	STRING
3	AT2G21640	AT1G19020 (F14D16.17)	STRING
3	AT3G49350	AT1G19020 (F14D16.17)	STRING

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT3G51450	AT1G19020 (F14D16.17)	STRING
3	AT2G41730	AT1G19020 (F14D16.17)	STRING
3	AT1G57630	AT1G19020 (F14D16.17)	STRING
3	AT1G05340	AT1G19020 (F14D16.17)	STRING
3	AT4G02410	AT2G30250 (WRKY25)	BAR
3	AT5G26340	AT2G30250 (WRKY25)	BAR
3	AT5G05190	AT2G30250 (WRKY25), AT1G42990 (bZIP60)	BAR
3	AT4G20830	AT2G30250 (WRKY25)	BAR
3	AT5G61560	AT2G30250 (WRKY25)	BAR
3	AT1G76070	AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT5G43190	AT2G30250 (WRKY25)	BAR
3	AT4G33930	AT2G30250 (WRKY25)	BAR
3	AT5G13200	AT2G30250 (WRKY25)	BAR
3	AT1G21010	AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT2G39660	AT2G30250 (WRKY25)	BAR
3	AT1G22400	AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT1G79410	AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT3G10300	AT2G30250 (WRKY25), AT3G28210 (SAP12)	BAR
3	AT4G22530	AT2G30250 (WRKY25)	BAR
3	AT1G07160	AT2G30250 (WRKY25)	BAR
3	AT2G27500	AT2G30250 (WRKY25)	BAR
3	AT4G37370	AT2G30250 (WRKY25), AT1G42990 (bZIP60)	BAR
3	AT4G08500	AT2G30250 (WRKY25)	STRING
3	AT4G26070	AT2G30250 (WRKY25)	STRING
3	AT4G01370	AT2G30250 (WRKY25)	STRING
3	AT3G56710	AT2G30250 (WRKY25)	STRING
3	AT2G41180	AT2G30250 (WRKY25)	STRING
3	AT5G59820	AT2G30250 (WRKY25), AT3G23250 (MYB15)	STRING
3	AT3G46090	AT2G30250 (WRKY25)	STRING
3	AT1G21320	AT2G30250 (WRKY25)	BioGRID
3	AT1G21326	AT2G30250 (WRKY25)	BioGRID
3	AT1G28280	AT2G30250 (WRKY25)	BioGRID
3	AT1G32585	AT2G30250 (WRKY25)	BioGRID
3	AT1G35830	AT2G30250 (WRKY25)	BioGRID
3	AT1G78410	AT2G30250 (WRKY25)	BioGRID
3	AT1G80450	AT2G30250 (WRKY25)	BioGRID

3	AT2G33780	AT2G30250 (WRKY25)	BioGRID
3	AT2G44340	AT2G30250 (WRKY25)	BioGRID
3	AT3G15300	AT2G30250 (WRKY25)	BioGRID
3	AT3G58000	AT2G30250 (WRKY25)	BioGRID
3	AT3G60090	AT2G30250 (WRKY25)	BioGRID
3	AT4G20000	AT2G30250 (WRKY25)	BioGRID
3	AT4G37710	AT2G30250 (WRKY25)	BioGRID
3	AT4G39720	AT2G30250 (WRKY25)	BioGRID
3	AT5G53830	AT2G30250 (WRKY25)	BioGRID
3	AT2G41010	AT2G30250 (WRKY25)	BioGRID
3	AT5G38480	AT2G30250 (WRKY25)	BioGRID
3	AT4G33985	AT1G27730 (ZAT10)	BAR
3	AT4G17500	AT1G27730 (ZAT10), AT5G63790 (NAC102)	BAR
3	AT3G19580	AT1G27730 (ZAT10)	BAR
3	AT4G35480	AT1G27730 (ZAT10), AT3G23250 (MYB15)	BAR
3	AT3G62260	AT1G27730 (ZAT10)	BAR
3	AT3G61980	AT1G27730 (ZAT10)	BAR
3	AT3G62420	AT1G27730 (ZAT10)	BAR
3	AT5G04340	AT1G27730 (ZAT10)	BAR
3	AT1G50600	AT1G27730 (ZAT10)	BAR
3	AT1G76970	AT1G27730 (ZAT10), AT1G42990 (bZIP60)	BAR
3	AT1G01550	AT1G27730 (ZAT10)	BAR
3	AT3G12400	AT1G27730 (ZAT10)	BAR
3	AT3G16720	AT1G27730 (ZAT10), AT3G23250 (MYB15)	BAR
3	AT5G04760	AT1G27730 (ZAT10), AT1G42990 (bZIP60)	BAR
3	AT5G62620	AT1G27730 (ZAT10)	BAR
3	AT3G05200	AT1G27730 (ZAT10)	BAR
3	AT4G17490	AT1G27730 (ZAT10)	STRING
3	AT3G23250	AT1G27730 (ZAT10), AT5G59820 (ZAT12)	STRING
3	AT1G15750	AT1G27730 (ZAT10)	BioGRID
3	AT1G80490	AT1G27730 (ZAT10)	BioGRID
3	AT5G27030	AT1G27730 (ZAT10), AT3G23250 (MYB15)	BioGRID
3	AT3G15880	AT1G27730 (ZAT10)	BioGRID
3	AT4G11280	AT5G59820 (ZAT12)	BAR
3	AT4G29780	AT5G59820 (ZAT12)	BAR
3	AT2G30020	AT5G59820 (ZAT12)	BAR

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT5G59550	AT5G59820 (ZAT12)	BAR
3	AT5G64660	AT5G59820 (ZAT12)	BAR
3	AT4G34410	AT5G59820 (ZAT12)	BAR
3	AT1G61340	AT5G59820 (ZAT12)	BAR
3	AT1G56660	AT5G59820 (ZAT12)	BAR
3	AT5G59730	AT5G59820 (ZAT12)	BAR
3	AT1G18740	AT5G59820 (ZAT12)	BAR
3	AT5G58430	AT5G59820 (ZAT12)	BAR
3	AT5G15870	AT5G59820 (ZAT12)	BAR
3	AT1G12610	AT5G59820 (ZAT12)	BAR
3	AT3G61190	AT5G59820 (ZAT12)	STRING
3	AT4G25490	AT5G59820 (ZAT12), AT3G23250 (MYB15)	STRING
3	AT4G25470	AT5G59820 (ZAT12), AT3G23250 (MYB15)	STRING
3	AT2G30250	AT5G59820 (ZAT12)	STRING
3	AT5G18037	AT5G59820 (ZAT12)	BioGRID
3	AT1G18080	AT5G59820 (ZAT12)	BioGRID
3	AT4G05100	AT3G28210 (SAP12)	BAR
3	AT3G51660	AT3G28210 (SAP12)	BAR
3	AT4G37990	AT3G28210 (SAP12)	BAR
3	AT2G38240	AT3G28210 (SAP12)	BAR
3	AT1G02400	AT3G28210 (SAP12)	BAR
3	AT5G01380	AT3G28210 (SAP12)	BAR
3	AT1G09940	AT3G28210 (SAP12)	BAR
3	AT4G21390	AT3G28210 (SAP12)	BAR
3	AT1G10585	AT3G28210 (SAP12)	BAR
3	AT3G61700	AT3G28210 (SAP12)	STRING
3	AT3G53230	AT3G28210 (SAP12)	STRING
3	AT2G41380	AT3G28210 (SAP12)	STRING
3	AT1G03230	AT3G28210 (SAP12)	STRING
3	AT3G50930	AT3G28210 (SAP12)	STRING
3	AT2G31945	AT3G28210 (SAP12)	STRING
3	AT4G25380	AT3G28210 (SAP12)	STRING
3	AT3G12630	AT3G28210 (SAP12)	STRING
3	AT3G61420	AT3G28210 (SAP12)	STRING
3	AT4G24160	AT5G63790 (NAC102)	BAR
3	AT5G25930	AT5G63790 (NAC102)	BAR

3	AT3G44190	AT5G63790 (NAC102)	BAR
3	AT2G29420	AT5G63790 (NAC102)	BAR
3	AT5G62520	AT5G63790 (NAC102)	BAR
3	AT3G19240	AT5G63790 (NAC102)	BAR
3	AT4G36010	AT5G63790 (NAC102)	BAR
3	AT3G25250	AT5G63790 (NAC102)	BAR
3	AT5G18400	AT5G63790 (NAC102), AT1G42990 (bZIP60)	BAR
3	AT5G45110	AT5G63790 (NAC102)	BAR
3	AT3G26910	AT5G63790 (NAC102)	BAR
3	AT3G57760	AT5G63790 (NAC102)	BAR
3	AT1G78380	AT5G63790 (NAC102)	BAR
3	AT5G13160	AT5G63790 (NAC102)	BAR
3	AT5G03280	AT5G63790 (NAC102)	STRING
3	AT3G20770	AT5G63790 (NAC102)	STRING
3	AT4G34400	AT5G63790 (NAC102)	STRING
3	AT5G61820	AT5G63790 (NAC102)	STRING
3	AT1G07530	AT5G63790 (NAC102)	STRING
3	AT2G37810	AT5G63790 (NAC102)	STRING
3	AT1G27730	AT5G63790 (NAC102), AT3G23250 (MYB15)	STRING
3	AT3G19070	AT5G63790 (NAC102)	BioGRID
3	AT5G35750	AT5G63790 (NAC102)	BioGRID
3	AT5G13180	AT5G63790 (NAC102)	BioGRID
3	AT5G50820	AT5G63790 (NAC102)	BioGRID
3	AT5G11270	AT5G63790 (NAC102)	BioGRID
3	AT5G17350	AT3G23250 (MYB15)	BAR
3	AT5G58680	AT3G23250 (MYB15)	BAR
3	AT1G28370	AT3G23250 (MYB15)	BAR
3	AT5G22250	AT3G23250 (MYB15)	BAR
3	AT5G51190	AT3G23250 (MYB15)	BAR
3	AT2G41640	AT3G23250 (MYB15)	BAR
3	AT1G58420	AT3G23250 (MYB15)	BAR
3	AT3G44260	AT3G23250 (MYB15)	BAR
3	AT2G05940	AT3G23250 (MYB15)	BAR
3	AT3G44720	AT3G23250 (MYB15)	BAR
3	AT3G27210	AT3G23250 (MYB15)	BAR
3	AT2G42760	AT3G23250 (MYB15)	BAR

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT3G52400	AT3G23250 (MYB15)	BAR
3	AT5G61600	AT3G23250 (MYB15)	BAR
3	AT5G62770	AT3G23250 (MYB15)	BAR
3	AT2G45680	AT3G23250 (MYB15)	BAR
3	AT5G28610	AT3G23250 (MYB15)	BAR
3	AT1G30135	AT3G23250 (MYB15)	BAR
3	AT1G14370	AT3G23250 (MYB15)	BAR
3	AT5G44350	AT3G23250 (MYB15)	BAR
3	AT2G22300	AT3G23250 (MYB15)	STRING
3	AT4G25480	AT3G23250 (MYB15)	STRING
3	AT2G39810	AT3G23250 (MYB15)	STRING
3	AT5G60410	AT3G23250 (MYB15)	STRING
3	AT1G04250	AT3G23250 (MYB15)	BioGRID
3	AT2G46020	AT3G23250 (MYB15)	BioGRID
3	AT3G04730	AT3G23250 (MYB15)	BioGRID
3	AT3G15540	AT3G23250 (MYB15)	BioGRID
3	AT2G46990	AT3G23250 (MYB15)	BioGRID
3	AT1G15050	AT3G23250 (MYB15)	BioGRID
3	AT3G59790	AT3G23250 (MYB15)	BioGRID
3	AT3G16500	AT3G23250 (MYB15)	BioGRID
3	AT1G21700	AT3G23250 (MYB15)	BioGRID
3	AT1G22985	AT1G42990 (bZIP60)	BAR
3	AT4G30390	AT1G42990 (bZIP60)	BAR
3	AT1G10050	AT1G42990 (bZIP60)	BAR
3	AT2G23320	AT1G42990 (bZIP60)	BAR
3	AT1G70530	AT1G42990 (bZIP60)	BAR
3	AT3G51890	AT1G42990 (bZIP60)	BAR
3	AT2G15480	AT1G42990 (bZIP60)	BAR
3	AT3G09010	AT1G42990 (bZIP60)	BAR
3	AT4G23190	AT1G42990 (bZIP60)	BAR
3	AT3G12740	AT1G42990 (bZIP60)	BAR
3	AT1G66590	AT1G42990 (bZIP60)	BAR
3	AT5G44290	AT1G42990 (bZIP60)	BAR
3	AT2G31200	AT1G42990 (bZIP60)	BAR
3	AT4G37290	AT1G42990 (bZIP60)	BAR
3	AT5G28540	AT1G42990 (bZIP60)	STRING

3	AT1G68880	AT1G42990 (bZIP60)	STRING
3	AT4G20310	AT1G42990 (bZIP60)	STRING
3	AT5G19660	AT1G42990 (bZIP60)	STRING
3	AT2G41835	AT1G42990 (bZIP60)	BioGRID
3	AT3G49660	AT1G42990 (bZIP60)	BioGRID
3	AT5G05120	AT1G42990 (bZIP60)	BioGRID
3	AT2G40950	AT1G42990 (bZIP60)	BioGRID
3	AT5G19280	AT1G42990 (bZIP60)	BioGRID
3	AT4G17785	AT1G42990 (bZIP60)	BioGRID
3	AT5G11590	AT1G42990 (bZIP60)	BioGRID
3	AT1G51450	AT1G42990 (bZIP60)	BioGRID
3	AT2G34650	AT3G48425 (APE1L)	BAR
3	AT5G13840	AT3G48425 (APE1L)	BAR
3	AT5G40480	AT3G48425 (APE1L)	BAR
3	AT3G54970	AT3G48425 (APE1L)	BAR
3	AT3G19630	AT3G48425 (APE1L)	BAR
3	AT4G32840	AT3G48425 (APE1L)	BAR
3	AT5G48450	AT3G48425 (APE1L)	BAR
3	AT5G38660	AT3G48425 (APE1L)	STRING
3	AT5G26680	AT3G48425 (APE1L)	STRING
3	AT4G12740	AT3G48425 (APE1L)	STRING
3	AT2G31450	AT3G48425 (APE1L)	STRING
3	AT1G21710	AT3G48425 (APE1L)	STRING
3	AT1G10520	AT3G48425 (APE1L)	STRING
3	AT3G18630	AT3G48425 (APE1L)	STRING
3	AT3G14890	AT3G48425 (APE1L)	STRING
3	AT2G36490	AT3G48425 (APE1L)	BioGRID
3	AT5G62000	AT4G05420 (DDB1A)	BAR
3	AT2G45620	AT4G05420 (DDB1A)	BAR
3	AT1G43700	AT4G05420 (DDB1A)	BAR
3	AT3G45190	AT4G05420 (DDB1A)	BAR
3	AT1G03040	AT4G05420 (DDB1A)	BAR
3	AT5G13530	AT4G05420 (DDB1A)	BAR
3	AT3G11540	AT4G05420 (DDB1A)	BAR
3	AT4G00335	AT4G05420 (DDB1A)	BAR
3	AT3G22440	AT4G05420 (DDB1A)	BAR

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT1G05890	AT4G05420 (DDB1A)	BAR
3	AT2G04880	AT4G05420 (DDB1A)	BAR
3	AT4G39520	AT4G05420 (DDB1A)	BAR
3	AT5G64270	AT4G05420 (DDB1A)	BAR
3	AT3G05120	AT4G05420 (DDB1A)	BAR
3	AT2G29140	AT4G05420 (DDB1A)	BAR
3	AT3G13460	AT4G05420 (DDB1A)	BAR
3	AT2G04940	AT4G05420 (DDB1A)	BAR
3	AT4G24560	AT4G05420 (DDB1A)	BAR
3	AT1G53910	AT4G05420 (DDB1A)	BAR
3	AT5G51340	AT4G05420 (DDB1A)	BAR
3	AT3G63500	AT4G05420 (DDB1A)	BAR
3	AT2G37410	AT4G05420 (DDB1A)	BAR
3	AT2G44270	AT4G05420 (DDB1A)	BAR
3	AT5G10940	AT4G05420 (DDB1A)	STRING
3	AT4G12100	AT4G05420 (DDB1A)	STRING
3	AT3G46910	AT4G05420 (DDB1A)	STRING
3	AT3G13550	AT4G05420 (DDB1A)	BioGRID
3	AT2G19540	AT4G05420 (DDB1A)	BioGRID
3	AT2G34260	AT4G05420 (DDB1A)	BioGRID
3	AT4G31160	AT4G05420 (DDB1A)	BioGRID
3	AT2G19430	AT4G05420 (DDB1A)	BioGRID
3	AT4G34460	AT4G05420 (DDB1A)	BioGRID
3	AT3G60830	AT4G05420 (DDB1A)	BioGRID
3	AT1G32880	AT4G05420 (DDB1A)	BioGRID
3	AT1G50370	AT4G05420 (DDB1A)	BioGRID
3	AT1G60080	AT4G05420 (DDB1A)	BioGRID
3	AT1G61210	AT4G05420 (DDB1A)	BioGRID
3	AT1G65030	AT4G05420 (DDB1A)	BioGRID
3	AT1G80670	AT4G05420 (DDB1A)	BioGRID
3	AT2G07110	AT4G05420 (DDB1A)	BioGRID
3	AT2G25355	AT4G05420 (DDB1A)	BioGRID
3	AT2G34590	AT4G05420 (DDB1A)	BioGRID
3	AT3G07750	AT4G05420 (DDB1A)	BioGRID
3	AT2G39795	AT4G09140 (MLH1)	BAR
3	AT3G54980	AT4G09140 (MLH1)	BAR



3	AT1G60560	AT4G09140 (MLH1)	BAR
3	AT3G24010	AT4G09140 (MLH1)	BAR
3	AT5G36210	AT4G09140 (MLH1)	BAR
3	AT5G35430	AT4G09140 (MLH1)	BAR
3	AT5G06910	AT4G09140 (MLH1)	BAR
3	AT5G20930	AT4G09140 (MLH1), AT1G66740 (ASF1A)	BAR, STRING
3	AT1G25580	AT4G09140 (MLH1)	BAR
3	AT1G04510	AT4G09140 (MLH1)	BAR
3	AT1G16780	AT4G09140 (MLH1)	BAR
3	AT3G22110	AT4G09140 (MLH1)	BAR
3	AT5G63840	AT4G09140 (MLH1)	BAR
3	AT2G33410	AT4G09140 (MLH1)	BAR
3	AT2G36720	AT4G09140 (MLH1)	BAR
3	AT4G20280	AT4G09140 (MLH1)	BAR
3	AT5G16310	AT4G09140 (MLH1)	BAR
3	AT5G55900	AT4G09140 (MLH1)	BAR
3	AT1G26640	AT4G09140 (MLH1)	BAR
3	AT1G29630	AT4G09140 (MLH1)	STRING
3	AT4G35520	AT4G09140 (MLH1)	STRING
3	AT3G24320	AT4G09140 (MLH1)	STRING
3	AT4G25540	AT4G09140 (MLH1)	STRING
3	AT4G17380	AT4G09140 (MLH1)	STRING
3	AT3G20475	AT4G09140 (MLH1)	STRING
3	AT4G02070	AT4G09140 (MLH1)	STRING
3	AT3G24495	AT4G09140 (MLH1)	STRING
3	AT4G02460	AT4G09140 (MLH1)	STRING
3	AT5G03450	AT1G66740 (ASF1A)	BAR
3	AT5G19180	AT1G66740 (ASF1A)	BAR
3	AT5G14850	AT1G66740 (ASF1A)	BAR
3	AT2G24960	AT1G66740 (ASF1A)	BAR
3	AT1G04730	AT1G66740 (ASF1A)	BAR
3	AT4G12640	AT1G66740 (ASF1A)	BAR
3	AT2G44530	AT1G66740 (ASF1A)	BAR
3	AT5G62540	AT1G66740 (ASF1A)	BAR
3	AT4G36650	AT1G66740 (ASF1A)	BAR
3	AT1G16470	AT1G66740 (ASF1A)	BAR

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

3	AT5G63260	AT1G66740 (ASF1A)	BAR
3	AT1G17110	AT1G66740 (ASF1A)	BAR
3	AT1G13120	AT1G66740 (ASF1A)	BAR
3	AT5G14250	AT1G66740 (ASF1A)	BAR
3	AT5G03220	AT1G66740 (ASF1A)	BAR
3	AT5G45760	AT1G66740 (ASF1A)	BAR
3	AT3G09090	AT1G66740 (ASF1A)	BAR
3	AT5G66880	AT1G66740 (ASF1A)	BAR
3	AT3G02950	AT1G66740 (ASF1A)	BAR
3	AT1G80850	AT1G66740 (ASF1A)	BAR
3	AT1G09815	AT1G66740 (ASF1A)	BAR
3	AT5G06830	AT1G66740 (ASF1A)	BAR
3	AT5G56580	AT1G66740 (ASF1A)	BAR
3	AT4G37210	AT1G66740 (ASF1A)	STRING
3	AT1G07660	AT1G66740 (ASF1A)	STRING
3	AT1G65470	AT1G66740 (ASF1A)	STRING
3	AT5G64630	AT1G66740 (ASF1A)	STRING
3	AT1G01370	AT1G66740 (ASF1A)	STRING
3	AT1G09200	AT1G66740 (ASF1A)	STRING
3	AT4G40030	AT1G66740 (ASF1A)	STRING
3	AT5G12910	AT1G66740 (ASF1A)	STRING
3	AT1G07270	AT5G40820 (ATRAD3)	BAR
3	AT2G28050	AT5G40820 (ATRAD3)	BAR
3	AT2G27320	AT5G40820 (ATRAD3)	BAR
3	AT3G42260	AT5G40820 (ATRAD3)	BAR
3	AT4G03830	AT5G40820 (ATRAD3)	BAR
3	AT2G05030	AT5G40820 (ATRAD3)	BAR
3	AT5G40050	AT5G40820 (ATRAD3)	BAR
3	AT4G24860	AT5G40820 (ATRAD3)	BAR
3	AT3G14030	AT5G40820 (ATRAD3)	BAR
3	AT5G42910	AT5G40820 (ATRAD3)	BAR
3	AT1G35617	AT5G40820 (ATRAD3)	BAR
3	AT1G31840	AT5G40820 (ATRAD3)	BAR
3	AT5G05310	AT5G40820 (ATRAD3)	BAR
3	AT5G35130	AT5G40820 (ATRAD3)	BAR
3	AT4G20060	AT5G40820 (ATRAD3)	BAR

3	AT4G33710	AT5G40820 (ATRAD3)	BAR
3	AT1G60530	AT5G40820 (ATRAD3)	BAR
3	AT3G49770	AT5G40820 (ATRAD3)	BAR
3	AT3G42820	AT5G40820 (ATRAD3)	BAR
3	AT1G18350	AT5G40820 (ATRAD3)	BAR
3	AT3G05430	AT5G40820 (ATRAD3)	BAR
3	AT2G29780	AT5G40820 (ATRAD3)	BAR
3	AT3G63340	AT5G40820 (ATRAD3)	STRING
3	AT1G77320	AT5G40820 (ATRAD3)	STRING
3	AT5G66130	AT5G40820 (ATRAD3)	STRING
3	AT4G02110	AT5G40820 (ATRAD3)	STRING
3	AT3G54760	AT5G40820 (ATRAD3)	STRING
3	AT1G52530	AT5G40820 (ATRAD3)	STRING

**COMPUTATIONAL SCREENING TO IDENTIFY GENES INVOLVED IN DNA REPAIR IN ...**

**Table 3.** Identified *Arabidopsis thaliana* DDR-related genes of interest for future study

Gene Priority	Gene ID	Gene Alias	Gene Description
1	AT3G18690	MKS1	MAP kinase substrate 1
1	AT3G45640	MPK3	mitogen-activated protein kinase 3
1	AT4G35580	NTL9	NAC transcription factor-like 9
2	AT2G31970	RAD50	DNA repair-recombination protein (RAD50)
2	AT3G19210	RAD54	DNA repair/recombination protein
2	AT3G22880	DMC1	DNA repair (Rad51) family protein
2	AT4G00020	BRCA2(IV)	BREAST CANCER 2 like 2A
2	AT5G01630	BRCA2B	BRCA2-like B
2	AT3G27120	AT3G27120	P-loop containing nucleoside triphosphate hydrolases superfamily protein
2	AT3G10730	SUN2	SAD1/UNC-84 domain protein 2
2	AT3G18524	MSH2	MUTS homolog 2
2	AT5G04990	SUN1	SAD1/UNC-84 domain protein 1
2	AT1G02970	WEE1	WEE1-like kinase
2	AT5G46210	CUL4	cullin4
2	AT1G08130	LIG1	DNA ligase 1
2	AT5G41560	AT5G41560	DET1 complexing ubiquitin ligase
2	AT5G58230	MSI1	Transducin/WD40 repeat-like superfamily protein
2	AT3G26744	ICE1	basic helix-loop-helix (bHLH) DNA-binding superfamily protein
2	AT2G38470	WRKY33	WRKY DNA-binding protein 33
2	AT4G20380	LSD1	LSD1 zinc finger family protein