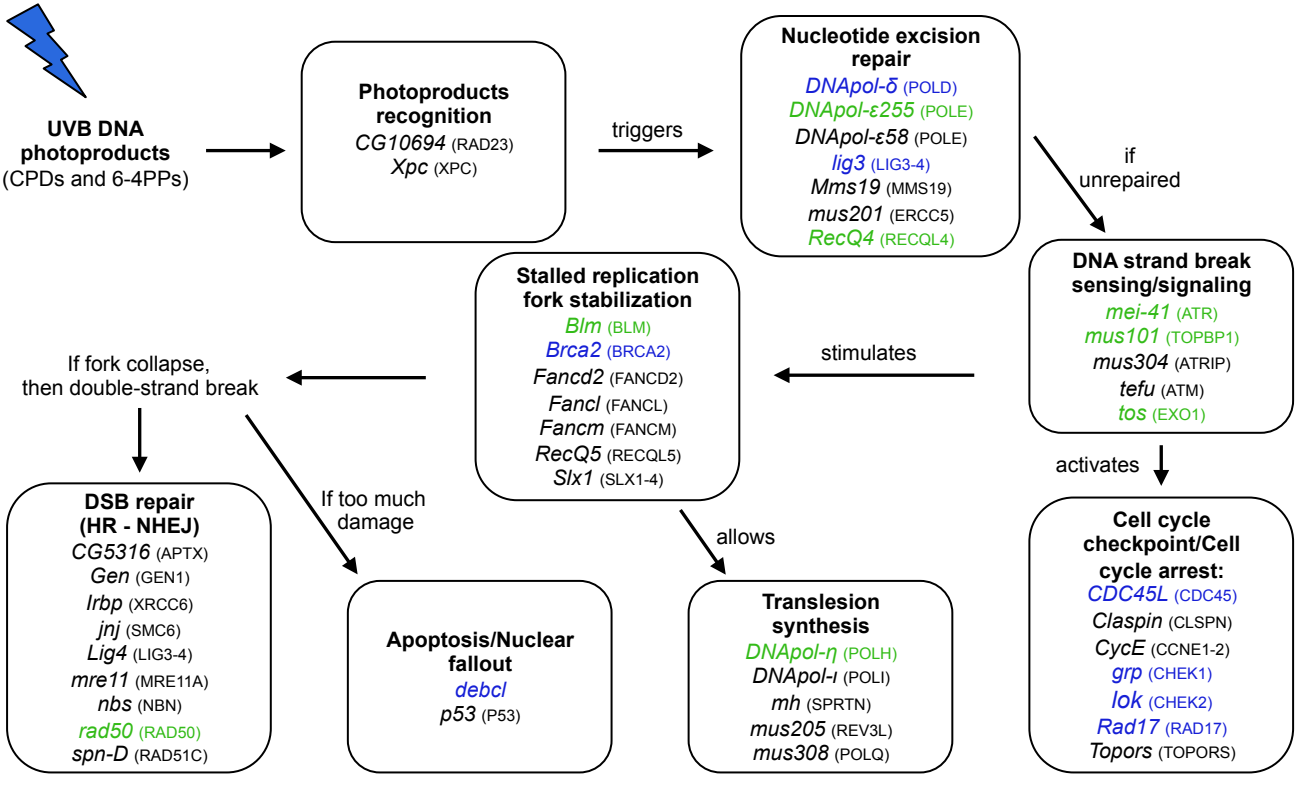
UVB DNA photoproducts (CPDs and 6-4PPs)
Photoproducts recognition
CG10694 (RAD23)
Xpc (XPC)
triggers
Nucleotide excision repair
DNApol-δ (POLD)
DNApol-ε255 (POLE)
DNApol-ε58 (POLE)
lig3 (LIG3-4)
Mms19 (MMS19)
mus201 (ERCC5)
RecQ4 (RECQL4)
if unrepaired
DNA strand break sensing/signaling
mei-41 (ATR)
mus101 (TOPBP1)
mus304 (ATRIP)
tefu (ATM)
tos (EXO1)
activates
Cell cycle checkpoint/Cell cycle arrest:
CDC45L (CDC45)
Claspin (CLSPN)
CycE (CCNE1-2)
grp (CHEK1)
lok (CHEK2)
Rad17 (RAD17)
Topors (TOPORS)
stimulates
Stalled replication fork stabilization
Blm (BLM)
Brca2 (BRCA2)
Fancd2 (FANCD2)
Fancl (FANCL)
Fancm (FANCM)
RecQ5 (RECQL5)
Slx1 (SLX1-4)
allows
Translesion synthesis
DNApol-η (POLH)
DNApol-ι (POLI)
mh (SPRTN)
mus205 (REV3L)
mus308 (POLQ)
If fork collapse, then double-strand break
DSB repair (HR - NHEJ)
CG5316 (APTX)
Gen (GEN1)
Irbp (XRCC6)
jnj (SMC6)
Lig4 (LIG3-4)
mre11 (MRE11A)
nbs (NBN)
rad50 (RAD50)
spn-D (RAD51C)
If too much damage
Apoptosis/Nuclear fallout
debcl
p53 (P53)