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| **geneSet** | **Ontology Description** | **FDR** | **Variant Genes in Retinoblastoma Tumors** |
| GO:0010390 | Histone monoubiquitination | 3.43E-12 | ***BCOR* (9)*;*** *DDB1; RNF20; PCGF3* |
| GO:0016569 | Covalent chromatin modification | 1.78E-05 | ***BCOR* (9)*; CREBBP* (2)*;*** *EHMT1; EYA1; HIST1H1E; KAT6A; KDM8; NSD1; PADI4; PRKCA; RNF20; DDB1; PCGF3* |
| GO:0033962 | Cytoplasmic mRNA processing body assembly | 4.37E-05 | ***PAN2* (2)***; CNOT1; CNOT2; DYNC1H1* |
| GO:0022618 | Ribonucleoprotein complex assembly | 5.19E-05 | ***PAN2*(2)*; NAF1*(2)*;*** *CNOT1; CNOT2; EIF3E; EIF4B; G3BP1; GEMIN4; DYNC1H1; GEMIN8; RPF2; USP4* |
| GO:0022613 | Ribonucleoprotein complex biogenesis | 4.39E-04 | ***PAN2*(2)*; NAF1*(2)*;*** *CEBPZ; CNOT1; CNOT2; EIF3E; EIF4B; FCF1; G3BP1; GEMIN4; NOB1; DYNC1H1; GEMIN8; RPF2; USP4; WBP11; YBEY* |
| GO:0000070 | Mitotic sister chromatid segregation | 0.105 | *BOD1; BUB1B; DYNC1LI1; HIRA; INCENP; NUP62; PIBF1; PRC1; CDC14B; RAB11A* |

Table 2. Biological process ontologies over-represented among somatically altered genes in 97 sequenced retinoblastoma tumors. **Bold**, recurrently altered (number of recurrences). Red, non-protein-altering variant. Underlined, genes included in UCSF500. Double underlined, genes included in UCSF500 and MSK-IMPACT.

Recurrent in WGS/WES:

In panels:

BCOR

MYCN

CREBBP

Not in panels:

PAN2

NAF1

SAMD9

HRG

CLIP2