1. Record Nr. UNINA9910220041203321 Autore Giovanni Blandino Titolo Human Tumor-Derived p53 Mutants: A Growing Family of Oncoproteins Pubbl/distr/stampa Frontiers Media SA, 2016 Descrizione fisica 1 online resource (97 p.) Collana Frontiers Research Topics Medicine Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto TP53 gene mutations are present in more than half of all human cancers. The resulting proteins are mostly full-length with a single amino acid change and are abundantly expressed in cancer cells. Some of the mutant p53 proteins gain oncogenic functions (GOF) through which it actively contribute to the aberrant cell proliferation, increased resistance to apoptotic stimuli and ability to metastasize. Gain of function mutant p53 proteins can transcriptionally regulate the expression of a large plethora of target genes. This mainly occurs through the formation of oncogenic transcriptional competent complexes that include mutant p53 protein, known transcription factors, posttranslational modifiers and scaffold proteins. Mutant p53 protein can also transcriptionally regulate the expression of microRNAs, small non-coding RNAs that regulate gene expression at the posttranscriptional level. Each microRNA can putatively target the expression of hundred mRNAs and consequently impact on many cellular functions. Thus, gain of function mutant p53 proteins can exert

> their oncogenic activities through the modulation of both non-coding and coding regions of human genome. Over the past 3 decades, the

regulation of mutant p53 remained largely unexplored. This snapshot focuses on recent discovery of mutant p53 GOF and regulation.

regulation of p53 has been extensively studied. However, the