

## CRISPR mediated ATR activity on Oncological Cells

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### Abstract:

ATR mediates several functions during the DNA damage and as a result of replication fork gets stalled up. This will not allow the replication fork to transit through other phases of the cell cycle. Consequently, DNA synthesis will not carry out further. This ubiquitous kinase has known to exhibit anti-cancer effects found in a recent study. The most powerful and unique technique CRISPR- Cas9 has been utilized to analyse the effect of ATR on cancerous cells. Inhibition of ATR leads the hampering of DNA repair pathways of cancer cells thus showing anti-cancer effects. AZD6738, a potent ATR inhibitor applied to single guide RNA screens to check the activity on cancer cells. Probably, this was conjugated with CRISPR technique which gave significant results. Another unique molecule RNASEH2 when reduces in absence ATR kinase induces DNA damage, apoptosis and senescence. This review juxtaposed the anticancer effects in mammalian and mouse cells and indicated ATR to be important molecule in diagnosis of cancer.

### Biography:

I am 22 year old student in the field of Biotechnology. I am studying in final year of Masters of Biotechnology. I've worked previously on review paper that talks about prestin protein interaction in outer hair cells that is verge of publication in Advances of Bioresearch journal. I working as a project trainee in National Environmental Engineering Research institute and working on my master thesis.



### Publication of speakers:

- Akanksha Singh; Cytological diagnosis of juvenile xanthogranuloma: A rare histiocytic disorder., 2019 Aug 20.
- Akanksha Singh; Gaming disorder among medical college students from India: Exploring the pattern and correlates., 2019 Dec 11.
- Akanksha Singh; Effectiveness of clozapine for the treatment of psychosis and disruptive behaviour in a child with Atypical Autism: A case report and a brief review of the evidence., 2017 Jul 4
- Akanksha Singh; Psychosis in a Child with Atypical Autism: A Case Report and a Brief Review of the Association of Psychosis and Autism., 2018 Apr 1.
- Akanksha Singh; Lichen Planus in Silicosis Patient with Unusually High Antinuclear Antibody Titer., 2017 Sep-Oct.

2nd Annual Congress on Cellular Therapies, Cancer, Stem Cell and Bio Medical Engineering, July 18, 2020, Vienna, Austria

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