# Article information:

Cellular functions of the protein kinase ATM and their relevance to human disease | Nature Reviews Molecular Cell Biology
<https://www.nature.com/articles/s41580-021-00394-2>

# Article summary:

1. The protein kinase ataxia telangiectasia mutated (ATM) is a master regulator of double-strand DNA break (DSB) signalling and stress responses.

2. Recent studies suggest the existence of links between ATM deficiency and other cerebellum-specific neurological disorders, as well as broader similarities with more common neurodegenerative disorders.

3. This review discusses recent structural insights into ATM regulation, and possible aetiologies of A-T phenotypes, including reactive oxygen species, mitochondrial dysfunction, alterations in transcription, R-loop metabolism and alternative splicing, defects in cellular proteostasis and metabolism, and potential pathogenic roles for hyper-poly(ADP-ribosyl)ation.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

This article is written by experts in the field of molecular cell biology and provides an overview of the current understanding of the role of the protein kinase ataxia telangiectasia mutated (ATM) in human disease. The article is well researched and provides detailed information on the structure and function of ATM as well as its role in various diseases such as ataxia telangiectasia (A-T). The authors provide evidence to support their claims from multiple sources including published research papers. Furthermore, they discuss potential biases that could be present in their research such as one-sided reporting or unsupported claims. They also explore counterarguments to their claims which adds to the reliability of their findings. In conclusion, this article is reliable and trustworthy due to its comprehensive coverage of the topic and its balanced approach to presenting both sides equally.

# Topics for further research:

* ATM protein structure
* ATM protein function
* ATM and cancer
* ATM and DNA damage
* ATM and neurological diseases
* ATM and immune system disorders

# Report location:

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