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PII: S0891-5849(18)30150-3  
DOI: <https://doi.org/10.1016/j.freeradbiomed.2018.03.047>  
Reference: FRB13694

To appear in: *Free Radical Biology and Medicine*

Received date: 25 January 2018  
Revised date: 16 March 2018  
Accepted date: 27 March 2018

Cite this article as: Christine H. Foyer, Michael Wilson and Megan Wright, Redox regulation of cell proliferation: Bioinformatics and redox proteomics approaches to identify redox-sensitive cell cycle regulators, *Free Radical Biology and Medicine*, <https://doi.org/10.1016/j.freeradbiomed.2018.03.047>

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## **Redox regulation of cell proliferation: Bioinformatics and redox proteomics approaches to identify redox-sensitive cell cycle regulators**

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### **Abstract**

Plant stem cells are the foundation of plant growth and development. The balance of quiescence and division is highly regulated, while ensuring that proliferating cells are protected from the adverse effects of environment fluctuations that may damage the genome. Redox regulation is important in both the activation of proliferation and arrest of the cell cycle upon perception of environmental stress. Within this context, reactive oxygen species serve as '*pro-life*' signals with positive roles in the regulation of the cell cycle and survival. However, very little is known about the metabolic mechanisms and redox-sensitive proteins that influence cell cycle progression. We have identified cysteine residues on known cell cycle regulators in Arabidopsis that are potentially accessible, and could play a role in redox regulation, based on secondary structure and solvent

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