

POSTER PRESENTATION

Open Access

Cellular metabolic response to DNA damage

Seung Min Jeong*, Marcia C Haigis

From Metabolism, diet and disease
Washington, DC, USA. 29-31 May 2012

DNA damage elicits a cellular signaling response that initiates cell cycle arrest and DNA repair. The metabolic response to DNA damage is largely unknown. Here we report a novel metabolic response to genotoxic stress. DNA damage triggers a critical block in the uptake of glutamine, a mitochondrial substrate essential for cellular proliferation. Sirtuins regulate both cellular metabolism and stress responses. We found mitochondrial SIRT4 is involved in the metabolic response to DNA damage. These results suggest that the metabolic adaptation is important for cellular DNA damage response.

Published: 1 June 2012

doi:10.1186/1753-6561-6-S3-P24

Cite this article as: Jeong and Haigis: Cellular metabolic response to DNA damage. *BMC Proceedings* 2012, **6**(Suppl 3):P24.

Submit your next manuscript to BioMed Central
and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit

BioMed Central

Department of Cell Biology, The Paul F. Glenn Labs for the Biological Mechanisms of Aging, Harvard Medical School, Boston, MA USA

BioMed Central

© 2012 Jeong and Haigis; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.