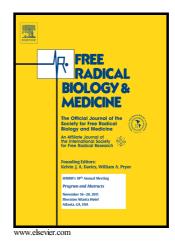
Author's Accepted Manuscript

Improved measurements of scant hydrogen peroxide enable experiments that define its threshold of toxicity for *Escherichia coli*

Xin Li, James A. Imlay



 PII:
 S0891-5849(18)30128-X

 DOI:
 https://doi.org/10.1016/j.freeradbiomed.2018.03.025

 Reference:
 FRB13672

To appear in: Free Radical Biology and Medicine

Received date: 3 November 2017 Revised date: 12 March 2018 Accepted date: 13 March 2018

Cite this article as: Xin Li and James A. Imlay, Improved measurements of scant hydrogen peroxide enable experiments that define its threshold of toxicity for *Escherichia coli*, *Free Radical Biology and Medicine*, https://doi.org/10.1016/j.freeradbiomed.2018.03.025

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Improved measurements of scant hydrogen peroxide enable experiments that define its threshold of toxicity for *Escherichia coli*

Xin Li^a and James A. Imlay^{b*}

^aCollege of Food and Bioengineering, Henan University of Science and Technology,

No. 263, Kaiyuan Ave., Luoyang, Henan 471023, China; lixinpxy@hotmail.com

^bDepartment of Microbiology, University of Illinois, 601 S. Goodwin Ave., Urbana, IL

61801; jimlay@illinois.edu

*Corresponding author: (217)-333-5812; fax 217-244-6697; jimlay@illinois.edu

Keywords: oxidative stress, hydrogen peroxide, horseradish peroxidase, OxyR,

Amplex Red.

Abstract.

ccel

Escherichia coli is a model organism that has been exploited to reveal key details of hydrogen peroxide stress: the biomolecules that H_2O_2 most rapidly damages and the defensive tactics that organisms use to fend it off. Much less clear is the amount of exogenous H_2O_2 that is sufficient to injure the bacterium and/or to trigger its stress response. To fill this gap, we need to study the behavior of cells

Download English Version:

https://daneshyari.com/en/article/8265585

Download Persian Version:

https://daneshyari.com/article/8265585

Daneshyari.com