

Unraveling the redox properties of the global regulator fura from anabaena sp. pc...

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External Funding Nomination Form for EARLY CAREER Funding Commencing in 2019 APPLICANT TO COMPLETE (Please use 12-point, Times New Roman font with single spacing)

Name and title of applicant

What is the title and/or category of funding are you nominating for?

Date PhD Awarded (date conferred).

Applicants Department/School

Applicant Email Address

Proposal Title - short descriptive title - (no more than 20 words)

Redox Properties of the Global Regulator FurA from Anabeana sp. PCC 7120

Project Summary - no more than 150 words and no more than 3 references

The role of global regulator FurA cyanobacteria is to link iron homeostasis to photosynthetic metabolism. FurA has another task as it is crucial in modulating a number of genes which are significant in in redox homeostasis and accomplishes the properties of a heme sensor protein which has an effect in the binding of deoxyribonucleic acid (DNA). This bacteria-FurA from Anabeana PCC 7120 sp. is crucial as it has five cysteine residues and among them, two are in an arrangement of two redox CXXC motifs. This is important as it will be the basis of the research and it will apply significantly in the later discussions. This research therefore will be used to show the contribution of the motifs (CXXC) in the redox properties of the bacteria. This will also help us in establishing the potential interacting partners of the regular in this context.

References

Laura, B., Teresa, B. S., Bogena, H., Angela, F., Luisa, P. M. & Maria, F. F.

<https://assignbuster.com/unraveling-the-redox-properties-of-the-global-regulator-fura-from-anabaena-sp-pcc-7120-disulfide-reductase-activity-based-on-its-cxxc-motifs/>

(2014). Unveiling the Redox Properties of the Global Regulator FurA from *Anabaena* sp. PCC 7120: Disulfide Reductase Activity Based on its CXXC Motifs, 20(9), 1396-1405. doi: 10. 1089/ars. 2013. 5376.

Botello-Morte, L. & Fillat, M. F. (2013). Thiol-based Redox Regulators in Prokaryotes: The Relevance of the CXXC Motifs. Available at.

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Gonzalez, A., Angarica, V. E., Sancho, J. & Fillat, F. M. (2014). The FurA Regulon in *Anabaena* sp. PCC 7120: in silico Prediction and Experimental Validation of Novel Target Genes. *Nucleic Acids Research*, 2014, 1-14. Doi: 10. 1093/nar/gku123.

Name of Proposed Mentor/Supervisor who is willing to host your research

NB: Mentors/Supervisor must be members of La Trobe Faculty and in your Department/School

Supplementary Information:

Will this research require animal or human ethics approval?

Yes No

Will this research involve a clinical trial?

Yes No

Will this research involve the use of genetically modified organisms (GMOs)

Yes No

Are there any significant facilities and/or resources required for the proposed research that are located outside of La Trobe University (if known).

Yes No (If yes, please list facilities or resources and their location)

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