Accepted Manuscript

Title: Biomedical potential of actinobacterially synthesised selenium nanoparticles with special reference to anti-biofilm, anti-oxidant, wound healing, cytotoxic and anti-viral activities

Author: Suseenthar Ramya Thangavel Shanmugasundaram Ramasamy Balagurunathan

PII: S0946-672X(15)30002-X

DOI: http://dx.doi.org/doi:10.1016/j.jtemb.2015.05.005

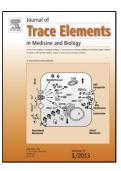
Reference: JTEMB 25684

To appear in:

Received date: 25-1-2015 Revised date: 10-5-2015 Accepted date: 25-5-2015

Please cite this article as: Ramya Suseenthar, Shanmugasundaram Thangavel, Balagurunathan Ramasamy.Biomedical potential of actinobacterially synthesised selenium nanoparticles with special reference to anti-biofilm, anti-oxidant, wound healing, cytotoxic and anti-viral activities. *Journal of Trace Elements in Medicine and Biology* http://dx.doi.org/10.1016/j.jtemb.2015.05.005

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 proof before it is published in its final 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.



Biomedical potential of actinobacterially synthesised selenium nanoparticles

with special reference to anti-biofilm, anti-oxidant, wound healing, cytotoxic

and anti-viral activities

Suseenthar Ramya^{a,b}, Thangavel Shanmugasundaram^a and Ramasamy Balagurunathan^{a,b,*}

^aActinobacterial Research Laboratory, Department of Microbiology, School of Biosciences, Periyar University,

Periyar Palkalai Nagar, Salem - 636011, Tamil Nadu, India

 b Centre for Nanoscience and Nanotechnology, Periyar University, Periyar Palkalai Nagar, Salem - 636011, Tamil

Nadu, India

*Corresponding author: Ramasamy Balagurunathan, Actinobacterial Research Laboratory,

Department of Microbiology, School of Biosciences, Periyar University, Periyar Palkalai Nagar,

Salem -636 011, Tamil Nadu, India.

Tel.: +91 427 2345227; E-mail: actinobalaguru@gmail.com; Fax: +91 427 2345124

Abstract

Currently, there is an ever-increasing need to develop environmentally benign processes

in place of synthetic protocols. As a result, researchers in the field of nanoparticle synthesis are

focusing their attention on microbes from rare biological ecosystems. One potential

actinobacterium, Streptomyces minutiscleroticus M10A62 isolated from a magnesite mine had

the ability to synthesize selenium nanoparticles (SeNPs), extracellularly. Actinobacteria mediated

SeNP synthesis were characterized by UV-visible, fourier transform infrared (FT-IR), X-ray

diffraction (XRD), energy dispersive X-ray spectroscopy (EDX) and high resolution transmission

Download English Version:

https://daneshyari.com/en/article/7639555

Download Persian Version:

https://daneshyari.com/article/7639555

Daneshyari.com