



SDI Review Form 1.6

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	Ms_IJBCRR_22157
Title of the Manuscript:	Characterization and structural studies of a small chito-specific lectin from Datura innoxia seeds possessing anti-microbial properties
Type of the Article	Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments		
Minor REVISION comments	Reviewer's comment <i>Research Article Ms_IJBCRR_22157, under the title “Characterization and structural studies of a small chito-specific lectin from <i>Datura innoxia</i> seeds possessing antimicrobial properties”</i> General appreciation Please, it is important to revise the English language in order to correct mistakes and improve comprehension. In my opinion, the manuscript is acceptable to publish in the important <i>International Journal of Biochemistry Research & Review.</i> The general subjects approached are adequate and well discussed. However, references should be actual.	



SDI Review Form 1.6

	TITLE: Characterization and structural studies of a small chito-specific lectin from <i>Datura innoxia</i> seeds possessing antimicrobial properties Comment: “Characterization and structural studies” are ambiguous. Suggested title: Purification and Characterization of a small chito-specific lectin from <i>Datura innoxia</i> seeds possessing antimicrobial properties Comment: The phrase below of INTRODUCTION supports the proposal: “In the present study, a small chito-specific agglutinin from the seeds of <i>Datura innoxia</i> (DiL9) has been purified and well characterized.” ABSTRACT Conclusion: The present study revealed that the lectin purified from <i>D. innoxia</i> is a glycoprotein and agglutinates pronase treated rabbit erythrocytes. The lectin is highly thermostable with respect to its structure and activity at all denaturing conditions, also showed significant	
--	---	--



SDI Review Form 1.6

	antibacterial activity. This data also supports the fact of its traditional use in Ayurvedic medicines for treatment of bacterial infections. Comment: in my opinion the term Ayurvedic should be excluded and substituted for folk or alternative Medicines... 1. INTRODUCTION 19 narcotic effects and are considered traditional medicines around the world. In Ayurveda, An Indian traditional medical practice, despite toxicity the medicinal effects of <i>Datura</i> are recognized to depend on... 30 tools. Lectin through its interaction with bacterial cell wall components like techoic teichoic acids, peptidoglycans 37 ...agent is of utmost importance. In the present work we have purified and characterized <i>Datura innoxia</i> lectin and...	
--	--	--



SDI Review Form 1.6

	2. MATERIAL AND METHODS 2.3. Isolation and purification of lectin from <i>Datura innoxia</i> seeds 66 Twenty grams of dried seeds of 71 activity were pooled, dialysed dialyzed against TBS 73 280 nm (A280) and detectable hemagglutinating activity the fractions were pooled, dialysed dialyzed 77 The amount of protein was monitored by measuring the absorbance at 280 nm of the column elutes eluate. 87 A 2-fold serial dilutions of purified <i>Datura</i> lectin in 10 mM phosphate buffered saline (PBS, pH 7.4, 50µl) were mixed with 50 µl of 3% rabbit... Comment: Please do not start phrases with numbers. 3. RESULTS AND DISCUSSION Please, improve photographs of Fig. 7. Inhibitory effect of purified <i>D. innoxia</i> seed lectin on the <i>in vitro</i> growth on nutrient agar plates of (A) <i>S. aureus</i>, (B) <i>E. coli</i>, (C) <i>B. cereus</i> and (D) <i>E. faecalis</i>.	
--	--	--



SDI Review Form 1.6

	4. CONCLUSION Comment: in my opinion its not CONCLUSION the text following, which should be transferred somehow to item 3. RESULTS AND DISCUSSION, “implying its immense application potential in 503 clinical microbiology and plausible therapeutic potential. The present study also gave useful insights into 504 structure-function relationship of this small lectin and its high stability in denaturing conditions. Further 505 studies might be required to explore more of its antibacterial action and design lectin preparation for 506 potential application to control pathogens. With the advancement in protein engineering and 507 nanotechnology, the protein bioavailability can be increased to optimize for target delivery strategies with 508 more efficacies.” Comment: the term immense should be excluded. 509 Abbreviations 510 DiL9, <i>Datura innoxia</i> lectin 9 kDa;	
--	---	--



SDI Review Form 1.6

	REFERENCES The 37 mentioned references included just 7 from 2010 to 2014; also, a general review is necessary, as below. 5. GOMES FS, PROCOPIO TF, NAPOLEAO TH, COELHO LCBB, PAIVA PMG. 529 ANTIMICROBIAL LECTIN FROM SCHINUS TEREBINTHIFOLIUS LEAF. J APPL MICROBIOL. 530 2013;114(3):672-9. EPUB 2012/11/30. DOI: 10.1111/JAM.12086 [DOI]. PUBMED PMID:531 23190078.	
<u>Optional/General</u> comments		

Reviewer Details:

Name:	Luana Cassandra Breitenbach Barroso Coelho
Department, University & Country	Department of Biochemistry, Federal University of Pernambuco, Brazil