Accepted Manuscript

Title: Antioxidant activities of chitosans and its derivatives in *in vitro* and *in vivo* studies

Authors: Makoto Anraku, Janusz M. Gebicki, Daisuke Iohara, Hisao Tomida, Kaneto Uekama, Toru Maruyama, Fumitoshi Hirayama, Masaki Otagiri

PII: S0144-8617(18)30807-5

DOI: https://doi.org/10.1016/j.carbpol.2018.07.016

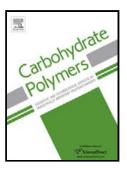
Reference: CARP 13816

To appear in:

Received date: 13-3-2018 Revised date: 26-6-2018 Accepted date: 6-7-2018

Please cite this article as: Anraku M, Gebicki JM, Iohara D, Tomida H, Uekama K, Maruyama T, Hirayama F, Otagiri M, Antioxidant activities of chitosans and its derivatives in *in vitro* and *in vivo* studies, *Carbohydrate Polymers* (2018), https://doi.org/10.1016/j.carbpol.2018.07.016

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.



ACCEPTED MANUSCRIPT

Title page

Antioxidant activities of chitosans and its derivatives in *in vitro* and *in vivo* studies

Makoto Anraku^{a,b,*}, Janusz M. Gebicki ^c, Daisuke Iohara^{a,b}, Hisao Tomida^e, Kaneto Uekama^a, Toru Maruyama^d, Fumitoshi Hirayama^{a,b}, Masaki Otagiri^{a,b,}

*Makoto Anraku, Ph.D. Faculty of Pharmaceutical Sciences, Sojo University 4-22-1 Ikeda, Kumamoto 860-0082, Japan

Phone: +81-96-326-5095 Fax: +81-96-326-5098

E-mail: anraku@ph.sojo-u.ac.jp

Highlights

- Chitosan and its derivatives is useful for oxidative stress related diseases.
 - Chitosan and its derivatives resulted in reduction of hypocholesteremia and uremia.
 - The low-dose SDACNFs decreased the levels of uremic toxins as prooxidants.
- • The low-dose SDACNFs might result in reduction of cardiovascular disease.
- The change of oxidative stress was correlated with serum indoxyl sulfate levels.

^{a)} Faculty of Pharmaceutical Sciences, Sojo University, 4-22-1 Ikeda, Nishi-ku, Kumamoto 860-0082, Japan

b) DDS Research Institute, Sojo University, 4-22-1 Ikeda, Nishi-ku,Kumamoto 860-0082, Japan

c) Department of Biological Sciences, Macquarie University, Sydney 2109, Australia.

d) Graduate School of Pharmaceutical Sciences, Kumamoto University, 5–1 Oe-honmachi, Kumamoto 862-0973, Japan

^{e)} Faculty of Pharmacy and Pharmaceutical Sciences, Fukuyama University, Sanzo 1, Gakuen-cho, Fukuyama 729-0292, Japan.

Download English Version:

https://daneshyari.com/en/article/7781250

Download Persian Version:

https://daneshyari.com/article/7781250

<u>Daneshyari.com</u>