Accepted Manuscript

Title: Controlled release and anti-proliferative effect of imatinib mesylate loaded sporopollenin microcapsules extracted from pollens of *Betula pendula*

Authors: Idris Sargin, Lalehan Akyuz, Murat Kaya, Gamze Tan, Talip Ceter, Kevser Yildirim, Seymanur Ertosun, Gozde Hatun Aydin, Muge Topal

PII: S0141-8130(16)31960-2

DOI: http://dx.doi.org/doi:10.1016/j.ijbiomac.2017.07.093

Reference: BIOMAC 7901

To appear in: International Journal of Biological Macromolecules

Received date: 12-10-2016 Revised date: 14-2-2017 Accepted date: 14-7-2017

Please cite this article as: Idris Sargin, Lalehan Akyuz, Murat Kaya, Gamze Tan, Talip Ceter, Kevser Yildirim, Seymanur Ertosun, Gozde Hatun Aydin, Muge Topal, Controlled release and anti-proliferative microcapsules effect of imatinib mesylate loaded sporopollenin extracted pollens Betula pendula, International Journal of Biological Macromoleculeshttp://dx.doi.org/10.1016/j.ijbiomac.2017.07.093

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.



Controlled release and anti-proliferative effect of imatinib mesylate loaded sporopollenin

microcapsules extracted from pollens of Betula pendula

Idris Sargin^{a,*}, Lalehan Akyuz^b, Murat Kaya^a, Gamze Tan^c, Talip Ceter^d, Kevser Yildirim^a,

Seymanur Ertosun^a, Gozde Hatun Aydin^a, Muge Topal^a

^a Aksaray University, Faculty of Science and Letters, Department of Biotechnology and

Molecular Biology, 68100 Aksaray, Turkey.

^b Aksaray University, Technical Vocational School, Department of Chemistry Technology,

68100, Aksaray, Turkey.

^c Aksaray University, Faculty of Science and Letters, Department of Biology, 68100 Aksaray,

Turkey.

^d Kastamonu University, Faculty of Arts and Sciences, Department of Biology, 37100

Kastamonu, Turkey.

*Corresponding author,

Address: Aksaray University, Faculty of Science and Letters, Department of Biotechnology

and Molecular Biology, 68100, Aksaray, Turkey

e-mail: idrissargin@hotmail.com,

Tel.: +90-382-288-2184

Fax: +90-382-288-2125

Abstract

Sporopollenin is a promising material for drug encapsulation due to its excellent properties;

uniformity in size, non-toxicity, chemically and thermally resilient nature. Herein,

morphologically intact sporopollenin microcapsules were extracted from Betula pendula

pollens. Cancer therapeutic agent (imatinib mesylate) was loaded into the microcapsules. The

encapsulation efficiency by passive loading technique was found to be 21.46%. Release

1

Download English Version:

https://daneshyari.com/en/article/8329596

Download Persian Version:

https://daneshyari.com/article/8329596

<u>Daneshyari.com</u>