

Supplementary Data

Do Curdlan Hydrogels Improved With Bioactive Compounds From Hop Exhibit Beneficial Properties In The Context Of Skin Wound Healing?

Aleksandra Nurzynska ^{1,*}, Katarzyna Klimek ¹, Agnieszka Michalak ², Katarzyna Dos Santos Szewczyk ³, Marta Arczewska ^{4,5}, Urszula Szalaj ^{6,7}, Mariusz Gagos ^{8,9} and Grazyna Ginalska ¹

¹ Medical University of Lublin, Chair and Department of Biochemistry and Biotechnology, Chodzki 1 Street, 20-093 Lublin, Poland

² Medical University of Lublin, Independent Laboratory of Behavioral Studies, Chodzki 4 a Street, 20-093 Lublin, Poland

³ Medical University of Lublin, Department of Pharmaceutical Botany, Chodzki 1 Street, 20-093 Lublin, Poland

⁴ University of Life Sciences, Department of Biophysics, Akademicka 13 Street, 20-033 Lublin, Poland;

⁵ Medical University of Lublin, Department of Biophysics, Jaczewskiego 4 Street, 20-090 Lublin, Poland

⁶ Polish Academy of Science, Laboratory of Nanostructures, Sokolowska 29/37 Street, 01-142 Warsaw, Poland

⁷ Faculty of Materials Engineering, Warsaw University of Technology, Warsaw, Poland

⁸ Maria Curie-Skłodowska University, Department of Cell Biology, Akademicka 19, 20-033 Lublin, Poland

⁹ Medical University of Lublin, Department of Biochemistry and Molecular Biology, Chodzki Street 1, 20-093 Lublin;

* Correspondence: aleksandra.nurzynska@umlub.pl

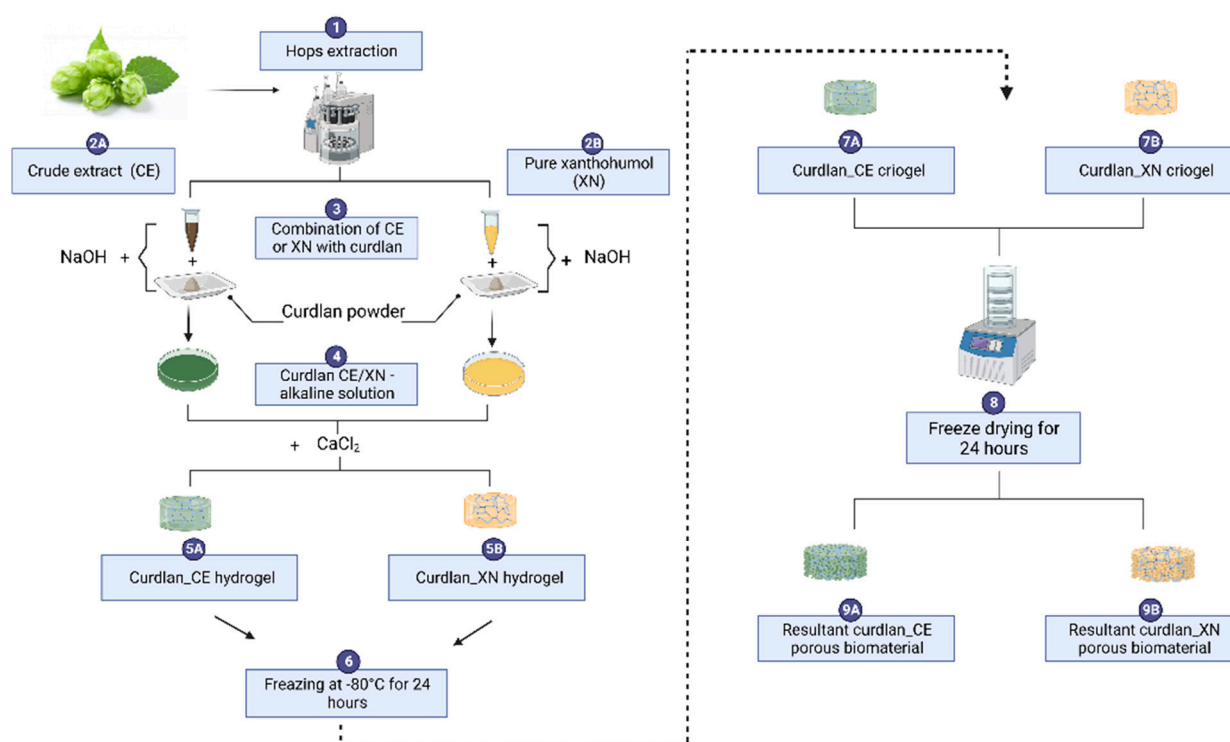


Figure S1. Schematic illustration showing the fabrication method of curdlan-based biomaterials modified with bioactive hop compounds.

Table S1. *In vitro* antioxidant properties of the crude extract (CE) and xanthohumol (XN) evaluated using DPPH and ABTS^{•+} assays. Ascorbic acid (AA) was used as positive control (standard).

IC ₅₀ ± SD [mg/mL]		
Sample	DPPH assay	ABTS ^{•+} assay
CE	0.606 ± 0.011	0.486 ± 0.001
XN	5.467 ± 0.065	0.638 ± 0.023
AA	0.478 ± 0.02	1.988 ± 0.092

Table S2. *In vitro* anti-inflammatory properties of the crude extract (CE) and xanthohumol (XN) evaluated using cyclooxygenase-1 (COX-1), cyclooxygenase-2 (COX-2), and lipoxygenase (LOX) inhibitory assays. Indomethacin (IND) and nordihydroguaiaretic acid (NDGA) were used as positive controls (standards).

IC ₅₀ ± SD [µg/mL]			
Sample	COX-1 Inhibition	COX-2 Inhibition	LOX Inhibition
CE	67.89 ± 0.78	56.92 ± 0.43	36.80 ± 0.54
XN	20.54 ± 1.18	17.15 ± 0.28	11.13 ± 0.18
IND	4.09 ± 0.04	3.57 ± 0.03	-
NDGA	-	-	5.47 ± 0.11