



Enterobacter cloacae 020

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ABSTRACT

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1. Introduction

Enterobacter cloacae is a Gram-negative bacterium belonging to the Enterobacteriaceae family (1). It is one of the most common isolates from various clinical sources (2). *E. cloacae* has been reported to be a major causative agent of hospital and community-acquired infections (3). *E. cloacae* is an environmental species and is found in soil, water, food and animal reservoirs (4). *E. cloacae* has been isolated from human cases such as septicemia, pneumonia, urinary tract infection, endocarditis, meningitis, and bacteraemia (5). It has also been found to be associated with nosocomial infections (6). *E. cloacae* can produce a variety of virulence factors including haemolysins, proteases, lipases, lipopolysaccharides, and siderophores (7). *E. cloacae* is a facultative anaerobe and can grow on a wide range of media (8). *E. cloacae* is a heterotrophic bacterium and requires organic carbon for growth (9).

Enterobacter cloacae 020 is a strain isolated from a clinical sample of a patient with septicemia. This strain was characterized by its ability to grow on various media and its ability to produce a variety of virulence factors. The aim of this study was to characterize the virulence factors produced by *Enterobacter cloacae* 020 and to determine its susceptibility to various antibiotics.

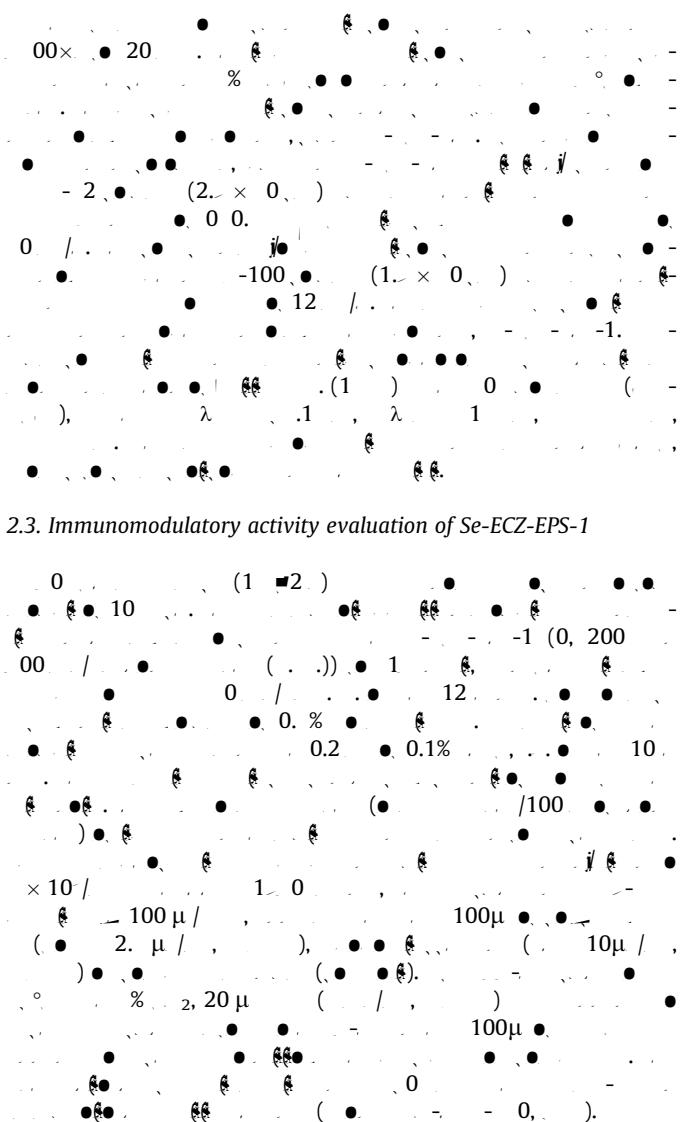
2. Methods

2.1. Microorganism culture

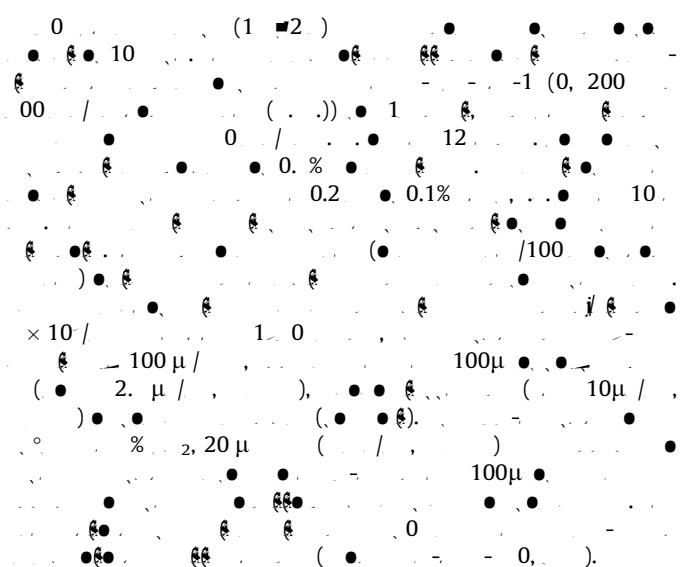
Enterobacter cloacae 020 was grown on Mueller-Hinton agar (Becton Dickinson) at 37 °C for 24 h. The bacterial suspension was then used for the production of virulence factors. The bacterial suspension was centrifuged at 10,000 × g for 10 min. The supernatant was collected and stored at -20 °C until further use.

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2.2. Isolation and purification of the selenium exopolysaccharide



2.3. Immunomodulatory activity evaluation of Se-ECZ-EPS-1

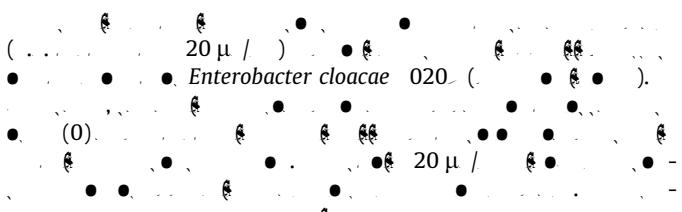


2.4. Statistical analysis

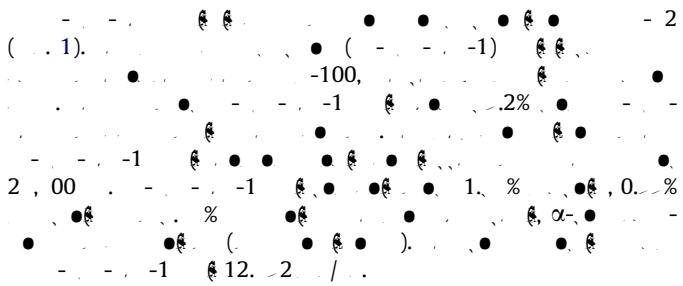


3. Results

3.1. Biotransformation of selenite and red-Se phenomenon



3.2. Isolation, purification and general properties of Se-ECZ-EPS-1



3.3. Immune activity of Se-ECZ-EPS-1

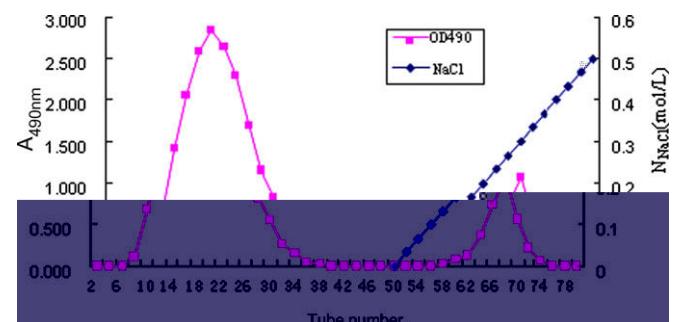
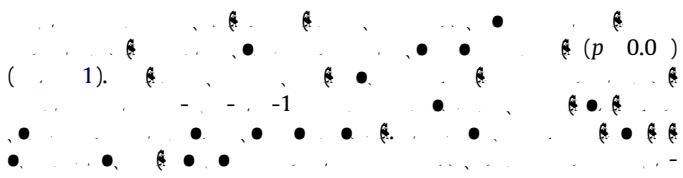


Fig. 1. Lymphocyte proliferation assay. $t = 48 \text{ h}$, $\text{OD}490 \text{ nm}$, $(p < 0.05)$.

Table 1

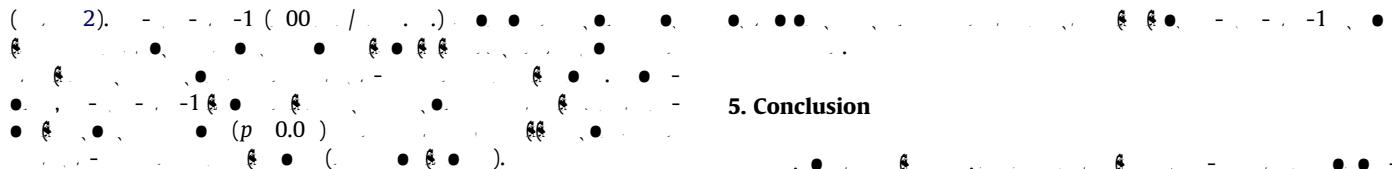
	$A_{490\text{nm}}$	$\text{NaCl}(\text{mol/L})$
0	0.2 ± 0.0	0.0 ± 0.01
200	0.2 ± 0.00	0.1 ± 0.010
100	0.0 ± 0.012	0.11 ± 0.011
0	0.2 ± 0.022	0.222 ± 0.010

Fig. 2. Lymphocyte proliferation assay. $t = 48 \text{ h}$, $\text{OD}490 \text{ nm}$, $(p < 0.05)$.

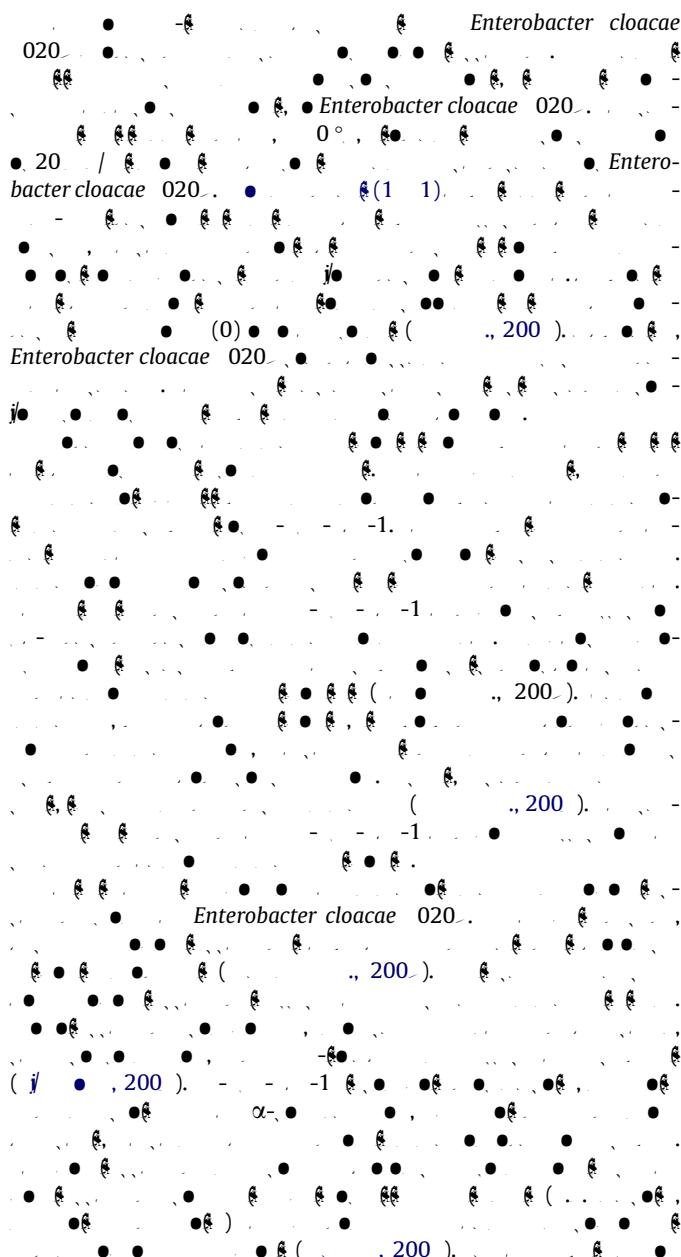
Table 2

	$A_{490\text{nm}}$
0	0.01 ± 0.0
200	0.0 ± 0.02
100	0.12 ± 0.01

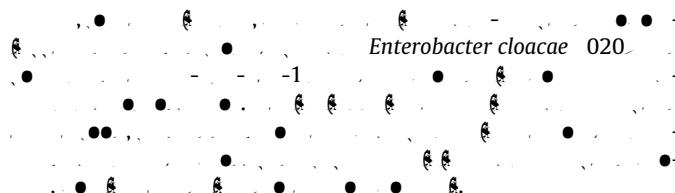
Fig. 3. Lymphocyte proliferation assay. $t = 48 \text{ h}$, $\text{OD}490 \text{ nm}$, $(p < 0.05)$.



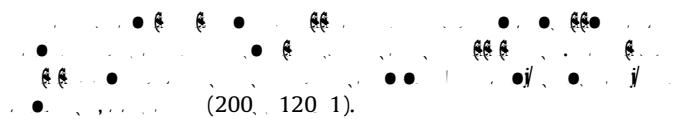
4. Discussion



5. Conclusion



Acknowledgements



References

- Bacillus licheniformis. 200. 1.
- Fomes foementarius. 200. 1. 1.
- Lycium barbarum. 200.
- Spirulina platensis. 200. 1. 1. 1. 2.
- P. Agglomerans. 200.
- Chondrus ocellatus. 200. 0.