6

Morganella morganii

(2003/9/6

2002/8/11

Morganella

19

20

morganit

% 5.3

%68.4

%95

A Study on Production and Sensitivity of Local Strains of M. morganii to Morganocins

Subhi H. Al-Jubouri

Sahar S. Al- Nakkar

Department of Biology College of Science Mosul Universitr

ABSTRACT

In the present study, 20 types of morganocins were prepared from 19 isolates of Morganella morganii isolated from infantile diarrhoea patients in addition to one standard strain (Cod No. A236).

The activity effects of morganocins showed variations on the isolates used. Some had a wide spectrum (inhibited 68.4% of the isolates) while the others had a narrow spectrum effect (inhibited 5.3% of the isolates).

Variations in the activity were also observed in the sensitivity of isolates to the different morganocins. One strain only showed resistance to all morganocins, therefore the percentage of the sensitivity of strains was 95%.

(Coetzee, 1967) (Stephen and Pietrowski, 1981) (Engene et al., 1978) Prescott et) (al., 1993 Colicins: (Nisengard and Newman, 1994) E. coli **Proteocins** Pseudomonas aeruginosa **Pyocins** M. morganii Morganocin Proteus Bacteriocins Factors 1987 M. morganii Senior (Jawets et al., 1991; Senior, 1987; Senior, 1977a) .(Pitt and Gaston, 1995) .1 418 M. morganii 19 MacConkey M. morganii COD No. A236 agar .2

:

183

 H_2S

-

Inositol Sorbitol Rhamnose Sucrose Mannose Glucose:

.(MacFaddin, 1985) Mannitol Arabinose Maltose

: .**.3**

(Proteose Peptone No.3) PP3 0.5

PP3 4 30 24

. 4 30

/ 1 .Mitomycin C PP3 0.5

4 $30 (g \times 8000)$

UV)

5 (LH-335 Gallenkamp

10

. (Senior, 1987)

: .4

4 . 24 37 2

2

Lab-Lemco Agar

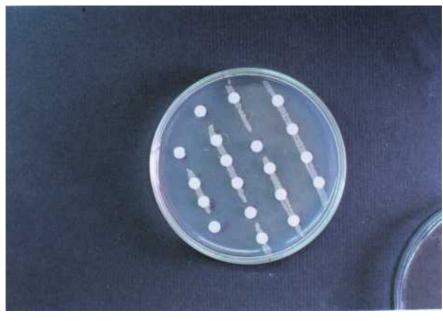
10

.(Senoir, 1987) 24 30

.

.(1)

.



/ :1

.

:

%5.3 %10.5 %15.8 %47.4 %63.2 %68.4 .(1)

160 (Senior, 1987)

%17.5 %82.5 8

(nonproducers of morganosin)

%87 (Senior and Voros, 1989)

. %13 *M. morganii*

64

.(Senior and Voros, 1989)

185

:1

%	%	
47.4	31.6	
15.8	15.8	1
15.8	15.8	2
36.8	10.5	3
36.8	42.1	4
26.3	63.2	5
26.3	36.8	6
42.1	5.3	7
36.8	5.3	8
10.5	10.5	9
5.3	47.4	10
15.8	36.8	11
31.6	31.6	12
0.0	5.3	13
68.4	10.5	14
10.5	31.6	15
42.1	68.4	16
15.8	31.6	17
21.8	15.8	18
36.8	26.3	19

(1)

%47.4

13

%10.5 %5.3

%42.1 %68.4

%15.8

(Senior, 1987)

%95

(Senior and Voros, 1989)

%97.05

.%89

(Local strains)

.(Senior and Voros, 1989)

(Coetzee, 1967)) M. morganii 94 12) (P. morganii (bacteriocin Lab-Lemco Agar PP3 30 Mitomycin C .(Senior, 1987) 20 19 M. morganii .COD No. A236

.(Senior, 1987)

- Coetzee, J.N., 1967. Bacteriocinogeny in strains of *Providencia* and *Proteus morganii*. Nature, Vol.213, pp.614-616.
- Engene, W.N., Roberts, C.E., Pearsall, N.N., Mc Caethy, B., 1978. Microbiology. 2nd. ed. Holt, Rinehart and Winstom, USA.
- Jawetz, E., Melnick, J.L., Adelberg, E.A., Brooks, G.F., Butel, J.S., Ornston, L.N., 1991.
 Jawetz, Melnick and Adelbery Medical Microbiology. 19th. ed. Printice-Hall
 International Inc. New Jersey, USA, pp.220-225.
- MacFaddin, J.F., 1985. Biochemical test for identification of medical bacteria. 2nd. ed. Waverly Press, Inc., Baltimore, USA.
- Nisengard, R.J., Newman, M.G., 1994. Oral Microbiology and immunology. 2nd. ed. W.B. sunders Comp. USA.
- Pitt, T.L. and Gaston, M.A., 1995. in: Methods in Molecular Biology in Diagnostic Bacteriology. Edited by J. Howard and D. White Onbell, Humana, press Inc; Totowa, N.J.
- Prescott, L.M., Harley. J.P., Klein. D.A., 1993. Microbiology. 2nd. ed., Wm C. Brown Communication, Inc., Iowa, USA, pp.262-263.
- Senior, B.W., 1977a. Typing of Proteus strains by proticine production and sensitivity. J. Med. Microbiol.. Vol.10, pp.7-17.

.....

- Senior, B.W., 1987. The typing of Morganella morganii by bacteriocin production and sensitivity. J. Med. Microbiol., Vol.23, pp.33-39.
- Senior, B.W., Voros, S., 1989. Discovery of new morganocin types of *Morganella morganii* strains of diverse serotype and the apparent independence of bacteriocin type from serotype of strains. J. Med. Microbiol., Vol.29, pp.89-93.
- Stephen, J., Pietrowski, R.A., 1981. Bacterial Toxins. Van Nostrand Reinhold (UK) Co.Ltd.