



HOKKAIDO UNIVERSITY

Title	STUDIES ON THE SEROLOGICAL CLASSIFICATION OF LISTERIA MONOCYTOGENES
Author(s)	MIYATA, Yasuhisa
Citation	Japanese Journal of Veterinary Research, 10(2), 78-79
Issue Date	1962-06
Doc URL	https://hdl.handle.net/2115/1765
Type	departmental bulletin paper
File Information	KJ00002373342.pdf



**STUDIES ON THE SEROLOGICAL CLASSIFICATION
OF *LISTERIA MONOCYTOGENES***

Yasuhisa MIYATA

*Department of Hygiene and Microbiology,
Faculty of Veterinary Medicine,
Hokkaido University, Sapporo, Japan*

(Summary of Master's thesis directed by Dr. K. HIRATO)

JULIANELLE and PONS stated that *Listeria monocytogenes* may be divided in two distinct serological groups, viz., one group predominantly comprising strains from rodents and the other group consisting of cultures isolated from ruminants.

From their observations, they concluded that serological types are connected with the sources of the strains; they called them by the terms "rodent group" and "ruminant group."

On the other hand, PATERSON reported that *Listeria monocytogenes* may be classified into 4 serological groups, and also that the serological types do not bear any relation to the zoological species of the host or to the geographical distribution of the places of isolation.

To make certain about these points, the author undertook to classify serologically by the method of SEELIGER a total of 71 strains which have been isolated in Japan, U. S. A., Canada and the Netherlands.

The results are briefly summarized as follows:

1. As indicated in a table, there is no relationship between serological types and zoological host species nor geographical distribution.
2. Types 2 and 3 are obtained in small number in comparison with types 1 and 4.

Almost all the strains except L 1 and L 1-2402 were strictly classified according

TYPE	GOAT AND SHEEP	CATTLE	MAN	SWINE	CHICKEN	CHINCHILLA	CANARY	FOX	LEMMING	OESTRAS OVIS	UNKNOWN	TOTAL
1	10	4	1	2	3	.	1	1	1	1	.	24
2	.	.	.	.	.	.	.	.	.	.	.	0
3	1	1	.	.	.	.	.	.	.	.	.	2
4	28	5	5	1	.	3	1	.	.	.	1	44

to the diagnostic scheme of SEELIGER and LINZENMEIER.

However, L 1 and L 1-2402, the same strains originally isolated by Dr. GRAY, have O-factors I, II, V and H-factors A, B, C, as is shown in the following table.

STRAIN	O-FACTOR				H-FACTOR			
	I, II	I	IV	V	A, B	A	D	C
L 1-2402	640	640	—	160	+	80	—	80
L 1	1280	640	—	80	+	80	—	80

This would suggest that some additional types may exist which needs further investigation.