Short Paper

Three New O-serotypes of
*Vibrio anguillarum**1

Vibriosis caused by *Vibrio anguillarum* is the most serious bacterial diseases of cultured ayu, *Plecoglossus altivelis*, in Japan. Muroga surveyed wild seedling ayu carrying *V. anguillarum*, which had been captured in the coast of Hiwasa, Tokushima Prefecture in 1980. Fifteen isolates were identified as *V. anguillarum* from their morphological and biochemical characteristics. Ten strains out of the fifteen strains of *V. anguillarum* were grouped into the O-serotypes established by Kitao *et al.*¹⁾ by using the slide agglutinating test; however, five strains could not be classified into O-serotype groups (Table 1).

After preliminary serological test, immune serum was prepared from three of these strains, PT-80-187, PT-80-641, and PT-80-818, according to the method described into previous paper¹⁾.

Table 2 shows the cross-quantitative agglutinating titers of the five strains against the antiserum of PT-80-187, PT-80-641, and PT-80-818 and also the antiserum of six established O-serotypes: PT-80-187 and PT-80-625 were designated as serotype G, PT-80-641 as serotype H, and PT-80-644 and PT-80-818 as serotype I, respectively. In addition, the strains of serotypes from A to F differed from the antigenically distinct serotype group G, H, and I.

O-serotypes G, H, and I are proposed as new antigenic types of *V. anguillarum* isolated from ayu in Japan.

Table 1. Results of slide agglutinating test of *V. anguillarum* isolated from seedling ayu against standard O-antigen serotypes in rabbit serum

Strains	Serotypes					
	A	B	C	D	E	F
PT-80-187	—	—	—	—	—	—
PT-80-625	—	—	—	—	—	—
PT-80-641	—	—	—	—	—	—
PT-80-644	—	—	—	—	—	—
PT-80-664	—	+	—	—	—	—
PT-80-801	—	—	+	—	—	—
PT-80-818	—	—	—	—	—	—
PT-80-834	—	+	—	—	—	—
PT-80-864	—	—	+	—	—	—
PT-80-871	—	—	+	—	—	—
PT-80-879	—	—	+	—	—	—
PT-80-900	—	—	+	—	—	—
PT-80-913	—	+	—	—	—	—
PT-80-928	—	—	+	—	—	—
PT-80-1000	—	—	+	—	—	—

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Reference

- 1) T. KITAO, T. AOKI, M. FUKUDOME, K. KAWANO, Y. WADA, and Y. MIZUNO: *J. Fish Diseases*, **6**, 175-181 (1983).

Table 2. Results of cross-agglutinating test

Anti-sera(O)	Type A	Type B	Type C	Type D	Type E	Type F			
Antigens(O)	(PT 24)	(PT 493)	(PT 213)	(PB 15)	(PB 28)	(ET 1)	PT-80-187	PT-80-641	PT-80-818
PT 24 (Type A)	5120*1	80	80	40	40	40	<40	<40	<40
PT 493 (Type B)	80	2560	80	80	80	80	<40	<40	<40
PT 213 (Type C)	80	80	640	40	40	80	<40	<40	<40
PB 15 (Type D)	80	<40	<40	5120	40	40	<40	<40	<40
PB 28 (Type E)	40	40	40	40	2560	40	<40	<40	<40
ET 1 (Type F)	40	40	40	<40	<40	5120	<40	<40	<40
PT-80-187	<40	<40	<40	<40	<40	<40	1280	<40	<40
PT-80-625	<40	<40	<40	<40	<40	<40	<40	640	<40
PT-80-641	<40	<40	<40	<40	<40	<40	<40	2560	<40
PT-80-644	<40	<40	<40	<40	<40	<40	<40	<40	1280
PT-80-818	<40	<40	<40	40	<40	<40	<40	<40	1280

*1 Agglutinating titers expressed as reciprocal of serum dilution.

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*1 *Vibrio anguillarum* の新しい 3 種の O-血清型の追加

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