

ABSENCE OF NUCLEOTIDE SEQUENCE HOMOLOGY BETWEEN GENES  
FOR *Vibrio cholerae* TOXIN AND *Vibrio fluvialis*

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OBJECTIVE : *Vibrio fluvialis* have been isolated from patients with diarrhea and from a variety of environmental sources in various parts of Asia. The enteropathogenicity of this organism has not, however, been clearly defined.

BACKGROUND : *V. fluvialis* from different sources in Asia were examined in the DNA hybridization assay (1) to determine whether these organisms shared DNA sequence homology with cloned genes for *V. cholerae* toxin (2).

METHOD : Ninety-two isolates of *V. fluvialis* isolated in Asia (Legend) were examined. None hybridized with radiolabelled genes coding for cholera toxin under stringent or more relaxed hybridization conditions (50% formamide at 65°C, or 25% formamide at 54.5°C) (3). The enteropathogenicity of this organism does not appear to be due to an enterotoxin whose structural genes show nucleotide sequence homology with *V. cholerae* toxin.

REFERENCES :

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2. Pearson, G.D.N., Mekalanos, J.S. Molecular cloning of *Vibrio cholerae* enterotoxin genes in *Escherichia coli* K12. Proc. Natl. Acad. Sci. USA 79:2976-2980, 1982.
3. Moseley, S.L., Falkow, S. Nucleotide sequence homology between the heat-labile enterotoxin gene of *Escherichia coli* and *Vibrio cholerae* deoxyribonucleic acid. J. Bacteriol. 144:444-446, 1980.

Legend : Source of 92 *Vibrio fluvialis* examined for DNA homology with cloned *Vibrio cholerae* toxin genes

<u>Source of isolates</u>	<u>Country of origin</u>	<u>No. of isolates</u>
Patients with diarrhea	Japan+	17+
	Thailand	14
	Bangladesh	6
	Singapore	3
	India	2
Patients without diarrhea	Japan	6
	Thailand	4
Water	Thailand	12
Pigs	Thailand	7
Food	Thailand	6
Flies	Thailand	5
Fish	Thailand	3
Shellfish	Thailand	3
	Japan	1
Cows	Thailand	<u>3</u>
Total		92

+ Isolated from travelers from Southeast Asia on arrival at Osaka International airport. Isolates from Thailand were isolated during longitudinal studies of enteric disease in Soongnern, Thailand.