RESEARCH NOTE

Presence of *Aeromonas trota* in Aquatic Environment

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In recent years, the interest in the *Aeromonas* genus has been growing, due to its involvement in human infections, mainly those of gastroenteric nature. It has been described 13 species for the genus, in which 11 have been isolated from clinical material associated with infectious processes (JM Janda 1991 *Clin Microbiol Reviews 4*: 397-410). Among these, we detach *Aeromonas trota* which according to A Carnahan et al. (1991 *J Clin Microbiol 29*: 1206-1210) seems to be an agent of gastroenteritis in human beings and has been isolated exclusively from human faecal material (Carnahan *loc. cit.*). In this communication we report its isolation from a water environment.

The strain of *A. trota* was isolated from a polluted estuary which surrounds "Ilha do Fundão" in Rio de Janeiro. The isolation was achieved after spreading the sediment obtained by centrifugation of 500 ml of water (Sorvall RC2-B at 10.000 x g for 30 min) in plates with desoxicolate-citrate agar (DCA-Merck) and, after the enrichment (24 hr - 37°C), in alkaline peptone water (APW - pH 8.4). Plates were read after incubation for 48 hr at 37°C. Lactose negative colonies were submitted to tests for presumptive identification of the genus (SL Abbott et al. 1992 *J Clin Microbiol 30:* 1262-66).

Oxidase positive strains, fermentative and resistant to the vibriostatic agent (2,4-diamino-6,7 diisopropilpteridine phosphate-SIGMA) 0/129 in a concentration of 150µg/ml were classified on the level of the species by the simplified biochemical scheme proposed by Abbott (*loc. cit.*). Among these strains, one presented biochemical characteristics which coincided with those of *Aeromonas trota* (Table).

Some of the factors associated with the virulence of *Aeromonas* genus, as described by Janda (*loc. cit.*), have been researched and the strain was shown to be hemolytic in trypticase soy agar (TSA-DIFCO) with 5% of rabbit blood and with hemolytic activity of 1:8 through the methodology described by N Cumberbatch et al. (1979 *Infect Immun 23*: 829-837). Enterotoxigenic activity investigated according to the technique of WA Dean et al. (1972 *J Infect Dis 125*: 407), and autoagglutination as described by JM Janda et al. (1987 *Infect Immun 55*: 3070-77) were both negative. The enzymatic profile was performed according to JM Janda and EJ Bottone (1981 *J Clin Microbiol 14*: 55-60), and shown negative regarding the production of lecitinase and elastase. Protease and DNase activity were present in the strain.

Genus *Aeromonas* is widely distributed in aquatic environments but, there are not reports of the isolation of the species *A. trota* in environment (Carnahan *loc. cit.*). This seems to be the first isolation and, considering the role of this bacteria as a possible agent of gastroenteritis, it is of great importance in the attempt to elucidate its epidemiologic cycle, since water may be an important vehicle in its transmission to man.

TABLE

Biochemical reactions of the *Aeromonas trota* strain

Test	Reaction for *A. trota*
Esculin hydrolysis	-
Voges-Proskauer	-
Fermentation of:	
Arabinose	-
Mannitol	+
Sucrose	-
Descarboxylase:	
Lysine	+
Arginine	+
Ornitine	-
Susceptibility to:	
Ampicilin	S
Carbenicillin	S
Cephalothin	R

-: negative; +: positive; S: sensitive; R: resistant

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