

# SEAB2021

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## The 5<sup>th</sup> Symposium on EuroAsian Biodiversity

the 5<sup>th</sup> international  
symposium on  
euroasian  
biodiversity



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## ***Aeromonas hydrophila* from Siberian sturgeon (*Acipenser baerii*)**

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**Abstract:** *Aeromonas hydrophila* is the most dangerous member of the *Aeromonas* genus, causing massive deaths of sturgeons. To isolate bacteria, washes were taken from ulcers and internal organs of diseased fish. The isolate was a typically Gram-negative bacterium with a length of 1.5 µm and grew at 0–4% NaCl concentration (w/v) at pH 7.0-9.0, but not at 5% NaCl. In terms of temperature, growth and bacterial cell numbers were maximized at 37°C. At 42°C growth was clearly inhibited. The isolate was motile and urea was hydrolyzed. It registered positive for the Voges-Proskauer test, the oxidase test, gelatinase, arginine dihydrolase and capable of ferment glucose, mannitol and sorbitol to produce acid, but negative for lysine and ornithine decarboxylase. Further, this isolate was identified as *Aeromonas hydrophila* based on PCR analysis by using the specific primers to conserved regions of *lip*, *asal* and 16S rRNA genes. Of the 10 virulent genes related to pathogenicity, seven virulence genes detected in this study (*aerA*, *hlyA*, *pla*, *ahpB*, *alt*, *ahe2*, and *gcaT*). These genes, code the aerolysin, hemolysin, phospholipase A1, elastase, cytotoxic enterotoxin, serine protease Ahe2, and phospholipid-cholesterol acyltransferase, respectively. In sum, *A. hydrophila* was isolated from diseased *Acipenser baerii*. Its characteristics indicate it had considerable virulence and can be associated with acute infection in fish.

**Keywords:** sturgeons, *Acipenser baerii*, *Aeromonas hydrophila*, 16S rRNA gene, virulence genes

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