Draft genome sequence of the Chilean isolate Aeromonas salmonicida strain CBA100

Valdes N.

Espinoza C.

Sanhueza L.

Gonzalez A.

Corsini G.

Tello M.

We report the draft genome sequence from Aeromonas salmonicida sp. strain CBA100, which was characterized as an antibiotic-resistant bacterium isolated from infected rainbow trout. The total size of the genome is 4 788 109 bp, with a G + C content of 60.55%. Comparison of its open reading frames shows that the closest homologue to one third of the genes of strain CBA100 are found in A. hydrophila. The strain contains several efflux pumps and putative genes that confer resistance to multiclass antibiotics, including macrolide, ?-lactamics, florfenicol and quinolones. The antibiogram profile suggests that efflux pumps are the main mechanism of resistance to non-?-lactamic antibiotics. This is the first genome of a Chilean isolate of A. salmonicida, which should shed light on the design of strain-specific vaccines against this pathogen and reduce the use of antibiotics for preventive treatment in Chilean aquaculture. © FEMS 2014.

Fish pathogen

Multiresistance

Vaccine

Aeromonas salmonicida

antibiotic resistance

Article

bacterial genome

bacterial strain

bacterium isolate

DNA base composition

gene sequence

genome size

nonhuman

open reading frame

priority journal

Aeromonas salmonicida

animal

aquaculture

bacterial genome

Chile

chromosome map

DNA sequence

drug effects

fish disease

gene

genetics

Gram negative infection

isolation and purification

microbial sensitivity test

microbiology

nucleotide sequence

Oncorhynchus mykiss

phylogeny

veterinary

Aeromonas salmonicida

Animals

Aquaculture

Base Composition

Base Sequence

Chile

Chromosome Mapping

Drug Resistance, Bacterial

Fish Diseases

Genes, MDR

Genome, Bacterial

Gram-Negative Bacterial Infections

Microbial Sensitivity Tests

Oncorhynchus mykiss

Open Reading Frames

Phylogeny

Sequence Analysis, DNA