I. Causative Agent and Disease
Chinook salmon paramyxovirus is a large enveloped single-stranded RNA virus in the family Paramyxoviridae. The virus is of low virulence and, in most cases, not associated with disease or mortality. The viral agent is most often isolated from asymptomatic carrier fish during routine screening examinations.

II. Host Species
In North America this virus has been exclusively isolated from adult Chinook salmon from Alaska, Oregon and Washington. Elsewhere, a paramyxovirus has been isolated from seawater reared Atlantic salmon in Norway.

III. Clinical Signs
No gross clinical or histopathological signs of disease are associated with fish infected by this virus except for a paramyxovirus in Norway reportedly associated with the disease syndrome, proliferative gill inflammation (PGL).

IV. Transmission
The mode of transmission is horizontal by water or fish to fish. A marine reservoir for the virus is suspected.

V. Diagnosis
Detection of paramyxoviruses is done by isolating the virus in cultures of susceptible fish cell lines that have been inoculated with infected tissue. The virus causes a cytopathic effect (CPE) characterized by retracted and rounded cells after an extensive incubation period. Presumptive identifications are made by observing the typical CPE. This virus exhibits the unique characteristic of being the only fish virus known to hemagglutinate erythrocytes from fish, some mammals (human, rabbit, horse, guinea pig and swine), and birds. This ability to hemagglutinate is consistent with its placement in the Paramyxoviridae and is used to confirm viral isolates as paramyxoviruses. Confirmatory identification of the viral agent is also done by electron microscopy, fluorescent antibody test (FAT) and PCR.

VI. Prognosis for Host
The prognosis for the host is good regarding the nonpathogenic nature of the North American isolates of this virus. The Norwegian isolate is implicated as causing PGL resulting in fish mortality. In this case there are no corrective therapies for viral infections in fish except avoidance.

VII. Human Health Significance
There are no human health concerns associated with paramyxoviruses in fish.
Ultrastructural section of cultured fish cell showing paramyxovirus particle (arrow) budding from cell membrane, TEM