

Fish Health Inspections

Clinical signs of spring viraemia of carp can include:

EXTERNAL	INTERNAL
Darkening	
Haemorrhages in skin & gills	
Pale gills	Petechial haemorrhages on internal organs
Exophthalmia	
Abdominal Distension	Peritoneal exudate often blood tinged
Lepidorthosis	
Trailing faecal casts	Enlarged spleen
Protrusion of anus	

Depending on the clinical signs and the fish species involved the CEFAS fish health inspector will request a number of primary tests including virus culture on SVC virus (SVCV) susceptible cell lines. Tissue samples are generally taken in the field and forwarded to the CEFAS Weymouth laboratory.

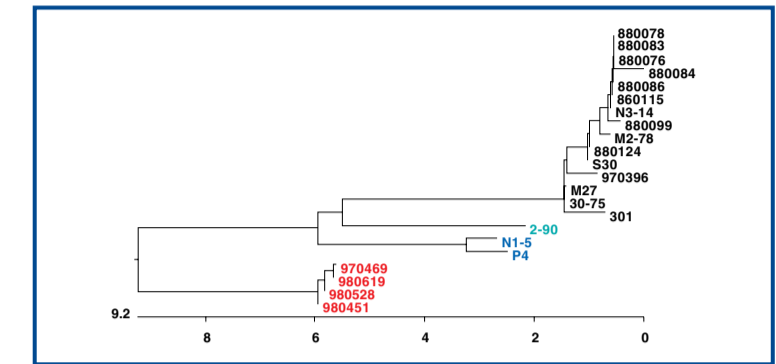


Disease Problem



Suspect cases of spring viraemia of carp

Epidemiological Investigations

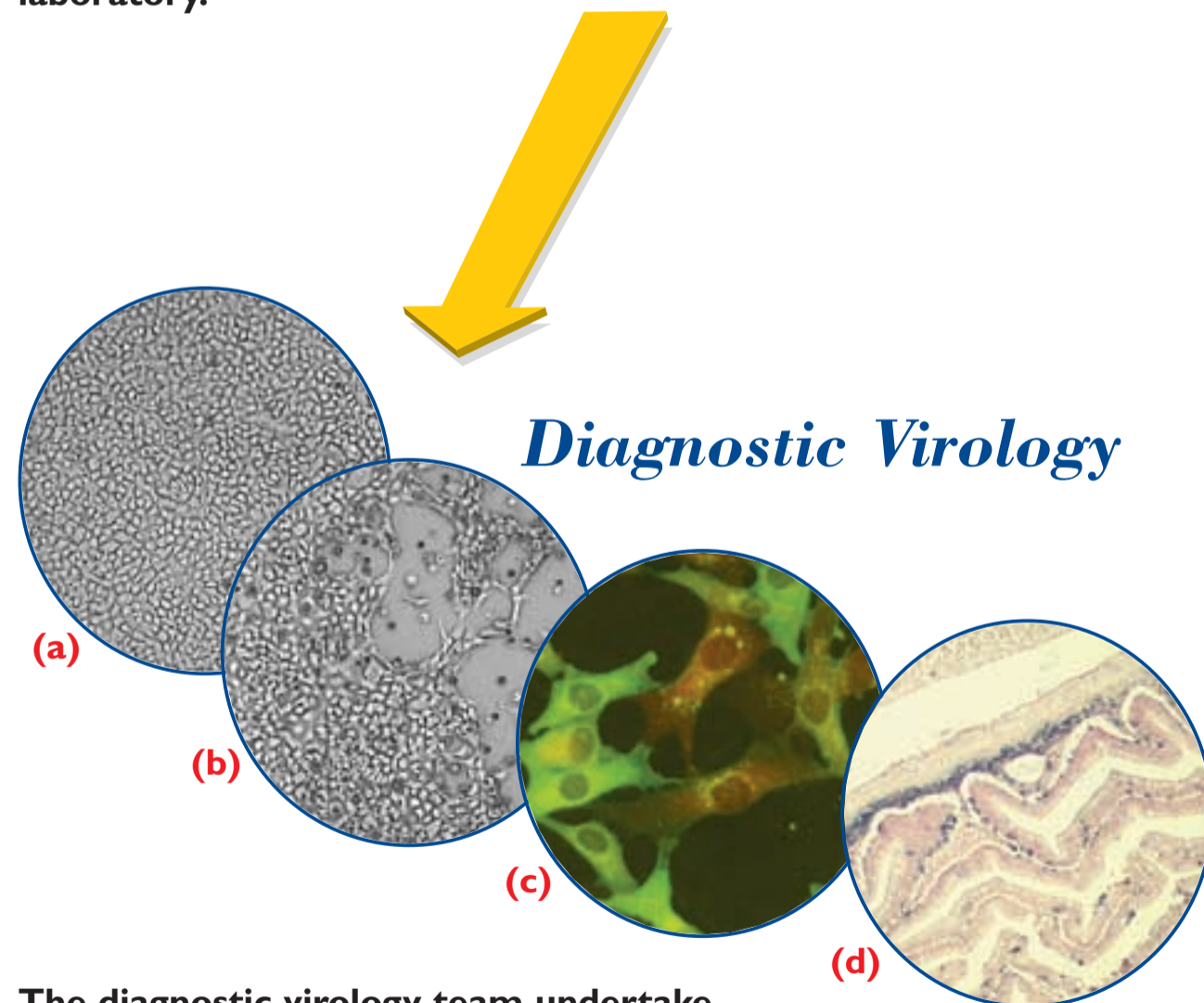


Potential source(s) of introductions of SVC viruses into Europe

The correlation between phylogenetic terminal taxa and the geographical origins of some SVC viruses, particularly those from the Republic of China (red), can be exploited in outbreak tracing and improved disease control. Viruses from Russia (blue), Moldova (blue) and the Ukraine (green) also have unique sequences when compared to the viruses traditionally found in the European Community.

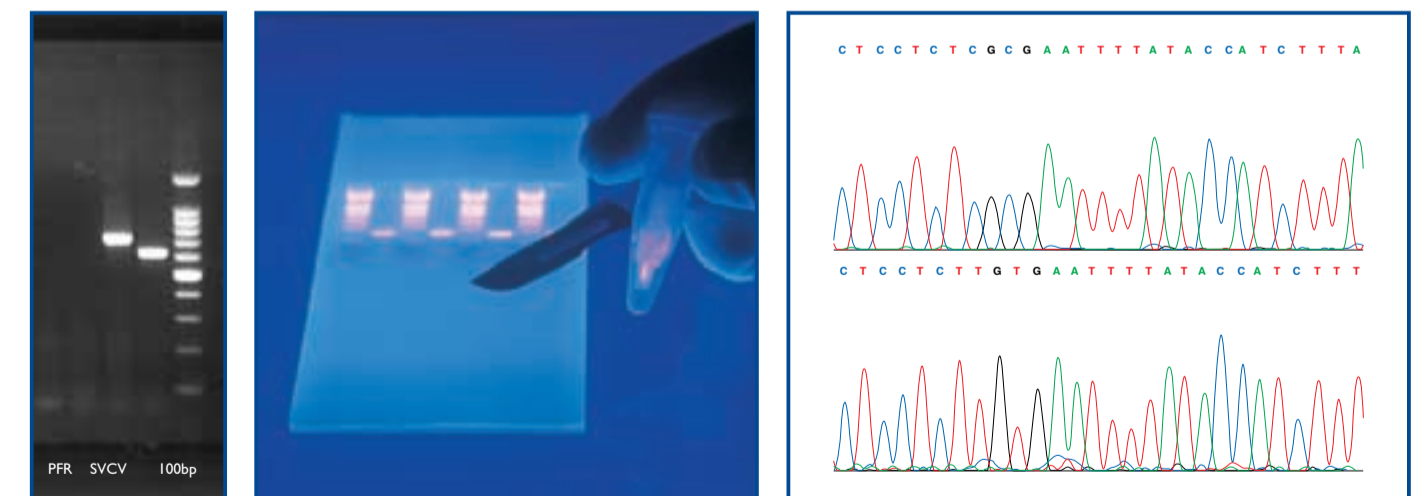


Molecular Genetics



Diagnostic Virology

The diagnostic virology team undertake virological examination using OIE approved protocols. SVCV tests are traditionally performed using EPC-cells (a) and the cytopathic effect (b) is confirmed as SVCV using a neutralisation assay and an immunofluorescent antibody test (c) or ELISA. Localisation of virus in the tissues can be visualised by *in-situ* hybridisation (d) or immunohistochemistry.



Molecular-based assays are generally more sensitive than the traditional culture and serological techniques and are capable of detecting viral RNA in asymptomatic carrier fish. Sequencing the products generated by the polymerase chain reaction (PCR) can provide additional information on the genetic relationships between viruses allowing discrimination between serologically related viruses.