



Role of the USDA Reference Laboratory in Regulatory Medicine

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THE WEST WING "THE WOMEN OF QUMAR"
LAURA GLASSER & JULIA DAHL

TELEPLAY BY: AARON SORKIN
DIRECTED BY: ALEX GRAVES

STORY BY: FELICIA WILSON &

CUT TO: INT. THE ROOSEVELT ROOM - DAY Leo enters. A number of men are waiting.

LEO Thanks for waiting.

MAN Leo, you know everybody. These are Doctors Bedrosien and Califf. This is Leo McGarry.

LEO How you doing?

DOCTORS Fine.

LEO And why are we here?

BEDROSIEN A herd of cattle in Ogalala, Nebraska, was accidentally given banned feed and quarantined 18 months ago.

CALIFF One of the cattle showed neurological damage. It was unable to stand - it's called a Downer Cow.

BEDROSIEN Tissue was sent to the NVSL in Ames, Iowa for the first round of tests. Another sample was sent to the UK's Central Veterinary Laboratory.

LEO And?

BEDROSIEN The first round of Iowa tissue showed a presumptive positive.

LEO Mad cow?

BEDROSIEN We don't know that.

LEO But we think?

CALIFF We have to wait for the UK tests.

LEO Worst case scenario?

CALIFF We declare a national emergency and a class one recall. Mr. McGarry, we've tested over twelve thousand samples and none of them have come up positive.

LEO Twelve thousand out of how many?

CALIFF Forty million adult cattle.

LEO Somebody needs to teach me about this.

LEO Sir, at this moment we're waiting to hear from the UK on confirmation of a test for mad cow.

BARTLET Oh man, they got it again? [Leo and C.J. share a look.](#)

LEO No, sir. I mean a US case.

BARTLET [\[pause\]](#) A US case?

LEO Yeah. Right now it's what's called a presumptive positive. England will come back with definitive answers.

BARTLET How long?

LEO 72 hours.

BARTLET Do we say anything in the meantime?

LEO That's my question. [\[to C.J.\]](#) That's why you're here.

C.J. I think we have to. I put the Secretary in the briefing room with experts from the University of Maryland, the National Cattlemen's Beef Association, they lay out the facts, soften up the ground.

LEO No, in three days we have our facts straight, we can make a full disclosure.

C.J. In the meanwhile...

LEO In the meanwhile, the USDA takes the time for tracing, checking feed logs, herd movements. We don't know how many herds are going to need to be quarantined.

C.J. We also don't know how many people know about this already.

LEO Nobody knows.

C.J. There's at least a rancher who knows, the labs in Iowa and England, whoever the USDA...

LEO They're our labs in Iowa, and the rancher doesn't have any interest in telling the world his cattle are sick.

BARTLET Yeah, we got to wait.

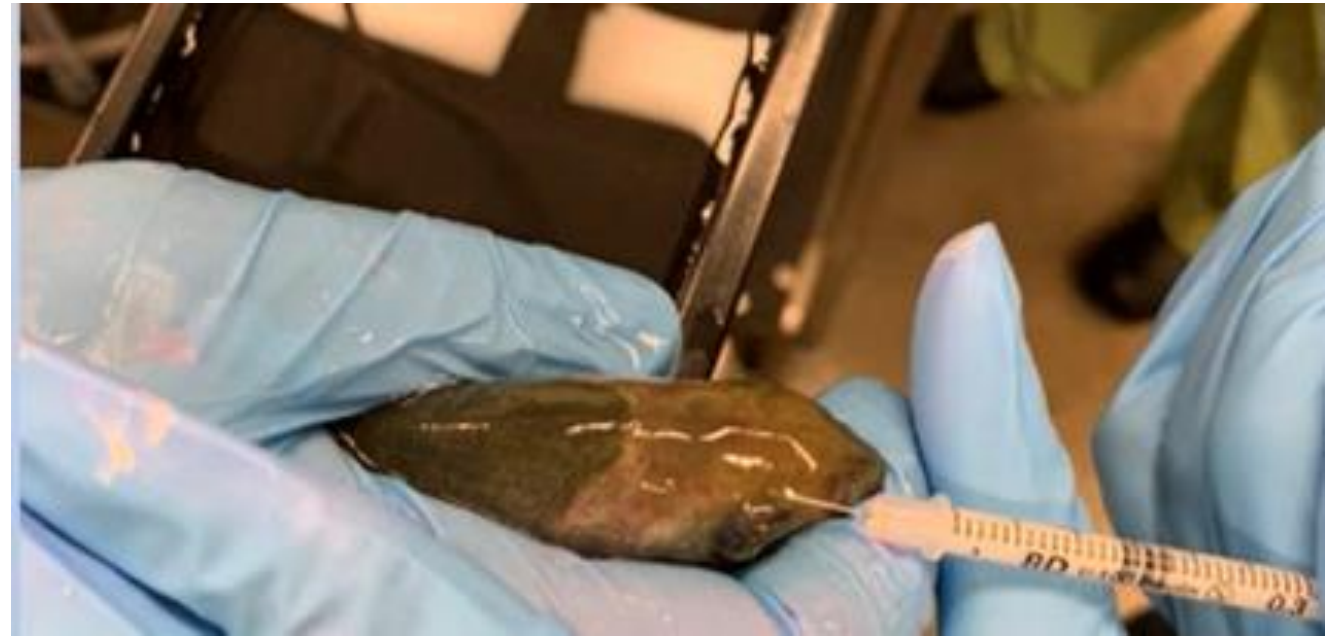
Veterinary Diagnostic Reference Roles

- Support diagnostics for select WOAHA listed disease.
- Approve Laboratories to conduct official testing.
- Provide protocols, reagents, control standards, proficiency tests.
- Develop and validate methods, advance aquaculture diagnostics.
- Provide training.



Support diagnostics for select WOAAH listed disease

- Maintain reagents and competency of NVSL staff.
 - Update internal NVSL protocols for WOAAH listed diseases.
 - Confirm or characterize disease events.
- Monitor the scientific literature for listed diseases.



Roles

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NVSL has been given the regulatory oversight over laboratory approval for testing of animal diseases as outlined in the 9 CFR 71.22.

§ 71.22 Approval of laboratories to conduct official testing.

- (a) **Approvals.** State, university, and private laboratories must obtain APHIS approval to conduct official testing for those diseases covered by subchapters B, C, and D of this chapter. Laboratories seeking approval must meet the requirements of this section.



▼ Title 9 Animals and Animal Products	Part / Section
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▶ Subchapter B Cooperative Control and Eradication of Livestock or Poultry Diseases	49 – 56
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▶ Subchapter E Viruses, Serums, Toxins, and Analogous Products; Organisms and Vectors	101 – 124

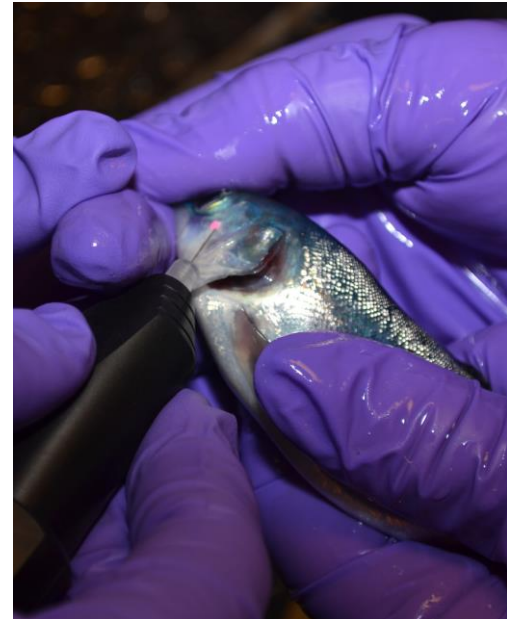
Update on the Laboratory Approval Rule

- Finalized and submitted the work plan to amend 9 CFR 71.22 to improve the disciplinary process, allow for the approval of individuals and conduct testing at treatment points.
- TiLV SOP completed, deviation process has been drafted, a proficiency test has been prepared.
 - Currently working on the agreement – goal is to use TiLV as a pilot.
- APHIS portal is undergoing enhancements to support lab approval.



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- Generated positive and negative samples
- Validated and characterized challenge stocks.
 - Pathogens in FY24 included epizootic haematopoietic necrosis virus (EHNV), salmonid alphavirus (SAV), white spot syndrome virus (WSSV), spring viremia of carp virus (SVCV)
- Maintain a specific pathogen free fathead minnow breeding colony.
 - Closed colony with multiple families
 - Utilized for isolate characterization work
 - Provide to collaborating researchers



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Bioassays to assess pathogenicity in species of interest/concern

TiLV- like Isolates

Completed separate bioassays to assess pathogenicity of two different isolates (three different challenge doses) of fancy-tailed guppy virus (FTGV) in commercial acquired tilapia.; TiLV is a VS reportable aquatic animal disease and of concern to tilapia producers. Subsequent phylogenetic analysis revealed that FTGV is related but distinct from TLV.

- No clinical signs in any fish
- Virus was recovered from single injected fish at 2 dpi
- Single mortality at 11 dpi
- Viral genome was detected in fish harvested at 9, 11, 12 dpi






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RESEARCH ARTICLE

Diagnosis, isolation and description of a novel amnoonvirus recovered from diseased fancy guppies, *Poecilia reticulata*

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 | [Virology](#) | Announcement

Genome sequence of *Novirhabdovirus* isolated from white bass (*Morone chrysops*), Ohio/North Carolina, USA

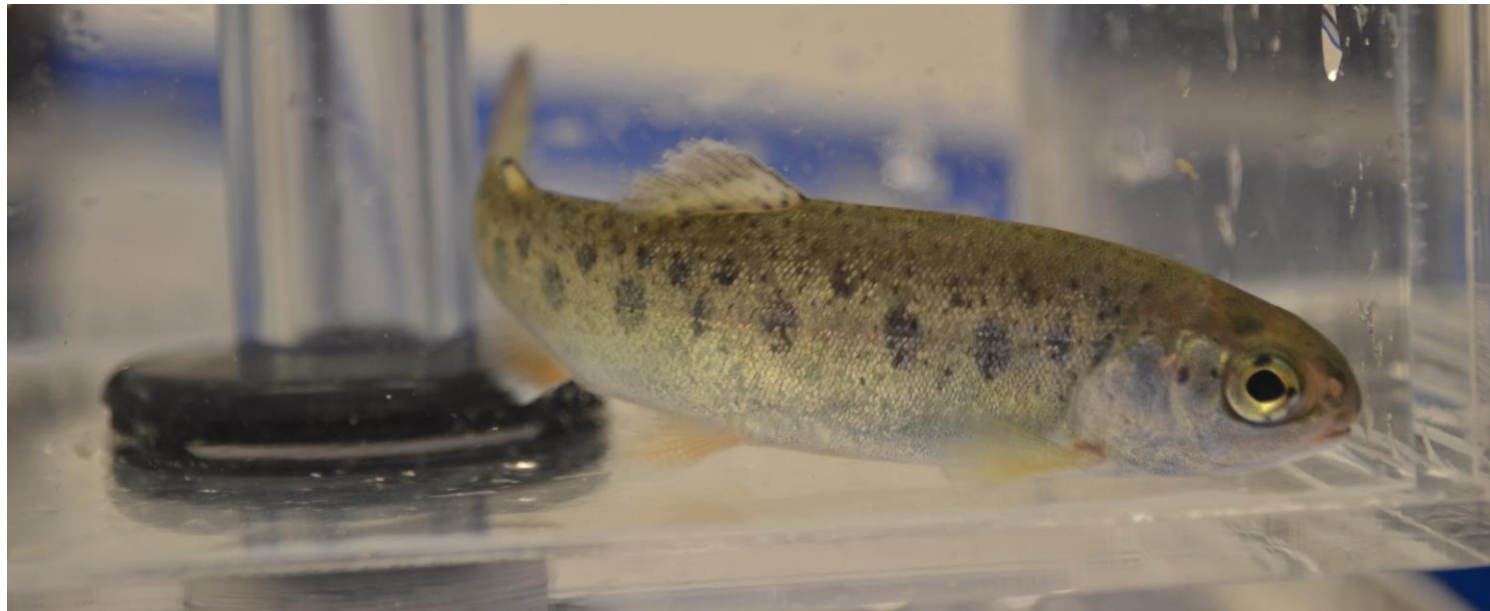
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AUTHOR AFFILIATION See affiliation list on p. 2.

ABSTRACT We sequenced the genome of a hirame novirhabdovirus isolate recovered from a white bass (*Morone chrysops*). Hirame novirhabdoviruses are in the genus *Novirhabdovirus*, along with infectious hematopoietic necrosis virus and viral hemorrhagic septicemia virus. This detection highlights that the full host range of rhabdoviruses in fish is not fully understood.

Roles

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Provide training

- NVSL is at no cost to the laboratory, is conducting laboratory inspections with VS Field Operations staff.
- NVSL offers on demand training for most laboratory procedures by request.



Thank you!



The mission of the National Veterinary Services Laboratories (NVSL) is to safe-guard U.S. animal health and contribute to public health by providing timely and accurate diagnostic laboratory support directly or through a national laboratory system that includes the National Animal Health Laboratory Network (NAHLN).