



# Fish Health Section



The official link to the FHS website is: <https://units.fisheries.org/fhs/>

## FHS NEWS

**REMINDER!! - please bookmark the new FHS website!** We still have not been able to take down the old FHS website which is outdated and inaccurate.

**AFS Positions – Call for Nominations** - Nominations are still needed for the Professional Standards committee, and the Nominating and Balloting committee!!!!

Please send all nominations to Hossam Abdelhamed, [abdelhamed@cvm.msstate.edu](mailto:abdelhamed@cvm.msstate.edu).

See the flyer attached to the email for this newsletter.

## MEETINGS, WORKSHOPS AND COURSES

**2019 FHS Meeting and Western Fish Disease Workshop**  
**June 17-20, 2019**  
**Ogden, Utah, USA**

The 2019 joint AFS Fish Health Section Annual Meeting and the 60th Western Fish Disease Workshop will be held at the Hampton Inn and Eccles Conference Center located in Ogden, Utah. A welcoming social with light appetizers and cash bar will be held on the evening of Monday June 17<sup>th</sup>. This gathering will also kick off the meeting with a fun and casual session of interesting case studies. The first day's general session will begin on Tuesday morning and will end with an afternoon poster session. Following this event, participants will be given the opportunity to explore restaurants, brew pubs, hiking trails and fishing opportunities in and around the Ogden area. The general session will continue through Wednesday afternoon and will end that evening with the meeting banquet. A full day of Continuing Education designed around the complexity of flavobacteria and the importance of integrated fish health management will be held on Thursday June 20<sup>th</sup>.

### Meeting Registration:

General Registration, until <b>May 20<sup>th</sup></b>	\$285
Late Registration, after <b>May 20<sup>th</sup></b>	\$320
Continuing Education Session	\$70
Additional Banquet Ticket	\$45
Additional Shirt (one is included in general registration cost)	\$20

Register online using TicketBud.

<https://ticketbud.com/events/7c11cd78-44de-11e9-a513-42010a717005>

Alternatively, you may fill out a registration form (see flyer) and send it with a check, made out to AFS Fish Health Section, to Cathryn Smith, 1465 West 200 North, Logan UT 84321.

**Continuing Education:** A full day of Continuing Education will be held on Thursday June 20<sup>th</sup>. This session has been designed to provide a broad overview of flavobacteria and the overall benefits associated with implementing an integrated fish health management program for many fish pathogens. The program will begin with an overview of the genus *Flavobacterium* and will narrow its focus to cold water (*Flavobacterium psychrophilum*) and cool/warm water (*Flavobacterium columnare*) fish pathogens. The morning's session will end with a summary of the development and use of resistant fish strains to manage flavobacterial diseases. The afternoon session will then transition into case examples of integrated fish health management programs across the United States. The day will end with a discussion of bridging the gap between fish health professionals, hatchery employees, administrative personnel, research teams and other partners to build a better collaborative fish health program. Pending final CE committee approval, this session will provide 6 RACE CE credits.

**Call for Papers:** Individuals interested in presenting an oral presentation or poster can submit a complete abstract using the guidelines and submission form provided below. If you are interested in presenting a case study during the first evening's social, please submit a simple title using the abstract/title submission form below. ***The deadline for submitting abstracts and/or case titles is May 20, 2019.***

**Lodging:** A block of rooms is being held at the Hampton Inn and Suites and includes an early bird special of \$94/room for the first 25 rooms reserved. All additional rooms are available for \$154/night. ***The hotel room deadline is May 31, 2019.***

**Student Travel Awards:** The AFS-FHS is pleased to announce that the Snieszko Student Travel Awards will be available to help students with the cost of attending the 2019 AFS Fish Health Section Annual Meeting and 60<sup>th</sup> Annual Western Fish Disease Workshop. We anticipate 5 separate awards of up to \$1000 to allow students (undergraduates, graduates, or veterinary) post-docs or residents to give an oral or poster presentation at the conference. For more details, including application requirements, please refer to <https://units.fisheries.org/fhs/about/awards/>. Please direct all inquiries and submissions to the Chair of the FHS Awards Committee at fhsstine@gmail.com. ***Application deadline April 29, 2019***

For additional information please contact: Wade Cavender (435-720-2784) or Cristi Swan (435-760-4300), and see the flyer attached to the email for this newsletter.

**2019 SALMON DISEASE WORKSHOP**  
**July 8-19, 2019**  
**Corvallis, Oregon**

This workshop is designed for professionals working in the fish health field and will emphasize recent advances and developments in our understanding of salmonid diseases. The workshop is limited to 20 participants on a first come, first serve basis.

Topics:

- Current immunological and molecular techniques
- Sampling for pathogens in wild populations
- New and emerging fish pathogens
- Cell culture techniques, including maintenance of cultures and viral identification
- Histopathology associated with salmonid diseases
- Current status of important viral, bacterial, and parasitic pathogens
- Salmonid disease treatment practices in Pacific Northwest hatcheries
- Epidemiology

Information and links to registration are posted on this website:

<http://microbiology.science.oregonstate.edu/salmon-disease-workshop>

For more information see the attached flyer or contact Dr. Jerri Bartholomew at [bartholj@science.oregonstate.edu](mailto:bartholj@science.oregonstate.edu)

### **Health and Colony Management of Laboratory Fish**

**August 11-16, 2019**

**MDI Biological Laboratory**

**Bar Harbor, Maine**

This is a short course for veterinarians, technicians, trainees, principal investigators, and core managers who utilize or plan to utilize fish models in laboratory research. The course is directed by Michael Kent, Ph.D., College of Veterinary Medicine, Oregon State University. Course faculty include: Rodman G. Getchell, Ph.D., Cornell College of Veterinary Medicine; Christian Lawrence, M.S., Children's Hospital Boston; and Jan Spitsbergen, DVM, Ph.D., DACVP, Department of Microbiology, Oregon State University.

The course is offered at the MDI Biological Laboratory, located in Bar Harbor, Maine on Mount Desert Island, the home of Acadia National Park. It is intended to help laboratory technicians, researchers, and veterinarians monitor and maintain the health of a colony of aquatic organisms, focusing on zebrafish. This course is appropriate for veterinarians and veterinary trainees, as well as technical staff, students, postdocs, and investigators.

The course consists of lectures, laboratory exercises with a high faculty to student ratio, and discussion. During the course, there are ample opportunities for students to discuss unusual and/or unsolved diagnostic case experiences from their home laboratories as

problem-solving exercises.

This course is now approved by the AAVSB RACE (American Association of Veterinary State Boards Registry of Approved Continuing Education) to offer a total of \*33 CE\* (Continuing Education) Credits to veterinarians and veterinary technicians. RACE approval is for the subject matter categories of both category 1 (Scientific) and 3 (Non-Scientific-Practice Management/Professional Development).

For more information see the course webpage: <https://mdibl.org/course/health-and-colony-management-of-laboratory-fish-2019/>, or the flyer attached to the email for this newsletter.

Or visit the MDI Biological Laboratory course page <<https://mdibl.org/education/courses/>> or email the Education Office at [education@mdibl.org](mailto:education@mdibl.org).

## **JOBS/GRADUATE ASSISTANTSHIPS**

### **Senior Research Support Specialist**

Department of Environmental Forest and Biology  
State University of New York College of Environmental Science and Forestry  
Syracuse, New York

**Salary:** \$38,750 per year (Full time)

**Duration:** May 22, 2019 - March 31, 2020 (possible one year extension pending funding and performance)

The Fish and Wildlife Disease lab at The Research Foundation for the State University of New York for the College of Environmental Science and Forestry (ESF) is seeking to fill a full-time appointment for a Senior Research Support Specialist (molecular biologist) to work on 2 projects: 1) Care and maintenance of laboratory zebrafish, and evaluating diseases in aquatic species, and developing models for diseases (50%), and 2) Development and running PCR-based assays for genotyping, species identification, sex determination, and parasite diagnostics in wildlife species from tissues and non-invasive samples (50%), and The Senior Research Support specialist will work on molecular biology projects led by Dr. Christopher Whipps working with a team of faculty and graduate students (Whipps lab <http://whippslab.weebly.com>; Cohen lab <http://jcohenlab.weebly.com/>; Farrell lab <https://sfarrellesf.weebly.com/>). This position requires strong organization, communication, and math skills; also must be able to handle high volume testing accurately and effectively and work with biological tissues and infectious agents safely.

**Brief Description of Duties:** DNA extraction from tissues, cultures, and scats; running and modifying PCR assays for genotyping microsatellites from cottontail rabbits and other wildlife species; qPCR assays for pathogen detection, PCR-RFLP assays for species identification of mammals and bacteria; preparation for DNA sequencing and sequence analysis; troubleshooting microsatellite genotyping data; ordering supplies; assisting graduate and undergraduate students with research; general laboratory management.

**Required Qualifications:** A Bachelor's degree in Genetics, Microbiology or related fields; experience in DNA extraction techniques and PCR.

**Preferred Qualifications:** A strong background in laboratory management, molecular techniques, and microbiology. Experience with animal husbandry; particularly zebrafish. Experience handling zebrafish embryos. Genetics techniques including optimizing and troubleshooting PCR, and genetic analysis. Experience with isolation of bacteria from animal tissues, bacterial culture media preparation, growth and preservation of cultures, bacteriological staining and biochemical techniques.

**Additional Information:** SUNY-ESF provides an intimate small-college atmosphere with over 400 faculty and staff dedicated to solving environmental problems through research, teaching and service. The Department of Environmental and Forest Biology ([www.esf.edu/efb](http://www.esf.edu/efb)) has over 30 faculty focused on a variety of biological disciplines. The ESF campus is contiguous with that of Syracuse University and in close proximity to SUNY Upstate Medical University, giving students and faculty the added resources of a larger institution of higher education.

Located in central New York State, Syracuse is a lively city (<http://www.syr.gov.net/>) within a day drive of major urban centers (New York, Boston, Washington DC, Philadelphia, Toronto, Ottawa, Montreal), as well as abundant natural beauty (Adirondacks, Thousand Islands, Niagara Falls).

In accordance with the "Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act" institutions of higher education are required to prepare an annual report containing information on campus security policies and campus statistics. This report includes statistics for the previous three years concerning reported crimes that occurred on-campus; in certain off-campus buildings or property owned or controlled by SUNY-ESF; and on property within, or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security, such as policies concerning sexual assault, and other matters. You can obtain a printed copy of this report by contacting SUNY-ESF University Police at 315-470-6667 or by accessing the following web site:

<http://www.esf.edu/univpolice/crimereports/>

**The Research Foundation is an equal opportunity/affirmative action employer. All qualified applicants will receive consideration for employment without regard to sex, gender identity, sexual orientation, race, color, religion, national origin, disability, protected veteran status, age, or any other characteristic protected by law.**

**Application Deadline:** Although applications will be accepted until the position is filled, candidates should submit their application by May 8, 2019 to assure optimal consideration. The position will remain open until filled.

**Application Procedure:** Employment application is required to be submitted on-line. Attach cover letter, resume (or curriculum vitae), and contact information for three employment references.

For more information see position announcement at:

<https://esf.interviewexchange.com/jobofferdetails.jsp;jsessionid=50A6A8A23DABC77D340D85CACEFF5098?JOBID=109736>.

### **Student Trainee (Fish Biology)**

US Fish and Wildlife Service  
Department of Interior  
Anderson, California

**Open & closing dates:** 04/24/2019 to 05/07/2019

**Service:** Competitive

**Pay scale & grade:** GS 5

**Salary:** \$33,949 to \$44,130 per year

**Appointment type:** Temporary - 1 Year

**Work schedule:** Full-Time - Full-Time during summer period, variable hours during other times

As a Student Trainee (Fish Biology) you will be responsible for performing a variety of duties in support of professional biologists located at the California-Nevada Fish Health Center in Anderson, California. Assignments are designed to orient and expose the student to the mission and work of the U.S. Fish and Wildlife Service and to the benefits and conditions of Federal employment.

**Responsibilities:** The employee serves as a Student Trainee under the Career Pathways Intern Program. The employee receives on-the-job training in the biological sciences from the U.S. Fish and Wildlife Service and pertinent education leading to a degree from an accredited college or university. Typical, but not all inclusive, duties include the following:

- Receives on- the-job instruction, work assignments, and reading assignments which supplement academic training in the major area of study.
- Assists in the collection, dissection, and preparation of fish tissue or other biological samples for laboratory examinations. Follows standard operating procedures for laboratory work.
- Assists in laboratory assays (polymerase chain reaction and DNA extraction) and equipment validation.

- Travel to remote locations for field collections while operating government vehicle.
- Ability to record laboratory results accurately in both written and electronic formats.
- Assists staff in a wide variety of duties in the operation of a fish health laboratory, such as fish health inspections.
- Maintains utensils, glassware, and laboratory area for proper cleanness, sterility, and working environment for laboratory use.

**Travel Required:** Occasional travel - You may be expected to travel occasionally for this position.

**Conditions of Employment:**

- Must be a U.S. Citizen or National
- Males born after 12-31-59 must be registered for Selective Service
- Resume and supporting documents (See How To Apply)
- Suitability for employment, as determined by background investigation
- May be required to wear the U.S. Fish and Wildlife Service uniform.
- Government housing is not available
- Must reside within a 200 mile commuting distance of duty station
- Must meet Pathways eligibility requirements
- Position does not confer non-competitive appointment eligibility
- Must possess and maintain a valid State driver's license

**Qualifications:** Only experience and education obtained by closing date will be considered.

This is a Pathways Internship Program position not to exceed 1 year. This position may be terminated at any time or may be extended at management's discretion without further competition if the employee remains eligible for employment in the Pathways Intern Program.

This appointment does not confer eligibility to be noncompetitively converted to a term, career or career-conditional appointment in the competitive service.

To be eligible for a Pathways Program internship program, you must meet the following requirements:

- You must be a student accepted for enrollment or enrolled in a degree or certificate program on at least a half-time basis and in good standing who will be continuing my education into the next semester have received a notice of acceptance for enrollment. (You are required to submit a copy of your transcript or notice of acceptance.)
- Enrollment must be with an accredited educational institution or state-approved home school. These may include high schools, colleges, universities, technical,

trade, vocational, or business schools, and state approved home school secondary and post-secondary programs.

- Qualifying certificate programs are post-high school programs equivalent to at least one academic year of full-time study that is part of an accredited college-level, technical, trade, vocational, or business school curriculum.
- Educational institutions must be accredited by organizations recognized by the U.S. Department of Education. To see if your school is accredited, please visit: <http://www.ope.ed.gov/accreditation/>

**In addition to the Pathways Program requirements, you must possess one of the following to qualify for this position:**

A. I have completed 4 years above high school with a major in a field related to fish biology. This education was obtained in an accredited college or university. Such education must demonstrate the knowledge, skills, and abilities necessary to do the work.

B. I have at least one year of experience (equivalent to at least the GS-4 grade level) which prepared you to do the work in this job. Specialized experience is defined as: assisting in collection and dissection of biological samples, recording laboratory results accurately, performing DNA extraction and molecular assays such as PCR or quantitative PCR, and use of laboratory equipment such as pipettes, microscopes, and centrifuges.

C. I possess a combination of post-high school education and specialized experience, as described above, which when combined meets 100% of the qualification requirements.

**Education: All applicants who are using education or a combination of education and experience to qualify must submit copies of official or unofficial transcripts which include grades, credit hours earned, major(s), grade point average or class ranking, institution name, and student name.** If any required coursework is not easily recognizable on transcripts, or if you believe a portion of a particular course can be credited toward meeting an educational requirement, you must also provide a memorandum on letterhead from the institution's registrar, dean, or other appropriate official stating the percentage of the course that should be considered to meet the requirement and the equivalent number of units. Unofficial transcripts are acceptable; however, if you are selected for the position, you will be required to produce the original official transcripts.

For more information see position announcement at:

<https://www.usajobs.gov/GetJob/ViewDetails/531346800>

## **Aquatic Epidemiologist, Professor Tenure-Track**

University of Minnesota

College of Veterinary Medicine

Veterinary Population Medicine Department

The University of Minnesota, Veterinary Population Medicine Department (VPM), College of Veterinary Medicine (CVM), is seeking to hire a 100% Assistant/Associate/Full Professor (tenure-track) position as part of the University of Minnesota Global Food Ventures (GFV) initiative. The GFV is a public-private partnership committed to answering the global imperative of safe, nutritious and affordable food, through the application of innovative discovery and next generation workforce development. Minnesota commodities and citizens expect 21st century interdisciplinary teams of scientists, engineers, veterinarians and public health communicators to protect the safety and to preserve quality nutrition of foodstuffs. These positions will contribute to the GFV research program related to Food Safety Innovations and will leverage existing and proposed GFV investments in informatics. This CVM position will focus **on Aquatic Epidemiology**.

Collectively, this position as well as the other MN-Drive positions will directly leverage internationally recognized programs at the CVM and School of Public Health (SPH) and bolster research opportunities related to the Center for Animal Health and Food Safety (CAHFS), the Food Protection and Defense Institute (FPDI), and the Center for Infectious Disease Research and Policy (CIDRAP). See the attached flyer for a specific description of the proposed faculty position in Aquatic Epidemiology.

**RESPONSIBILITIES:** The person in this position would have a research, teaching, and outreach focus. He/she is expected to interact with faculty from College of Food, Agricultural and Natural Resource Sciences (Horticulture, Animal Science, Fisheries and Wildlife, Minnesota Aquatic Invasive Species Research Center), School of Public Health, other departments in College of Veterinary Medicine, Minnesota Veterinary Diagnostic Laboratory, and the Center for Animal Health and Food Safety. It is expected that this position will develop nationally recognized, independent sustained research programs in sustainable aquaculture and ecosystem health that complement our existing infectious disease and food safety programs, and can provide expert advice to industry related to aquatic animal health. This position will also have major teaching responsibilities in the DVM curriculum including teaching in epidemiology, advanced epidemiology and veterinary public health rotations. They will also teach in undergraduate and graduate (PhD, MPH, and MS) courses.

**REQUIRED QUALIFICATIONS:** Candidates must have a doctoral level degree (e.g., DVM, MD or PhD) and publication record demonstrating experience in epidemiology and infectious diseases. The candidate is expected to have advanced knowledge of the biology of agents, hosts, vectors, and reservoir systems of aquatic animal population health and/or advanced knowledge of food safety related to seafood. The ability to develop an independent and sustainable scholarly research program, teach in the classroom and mentor graduate students, and participate in outreach and service is

required. Successful applicants will also contribute collaboratively to multidisciplinary efforts as part of their scholarly work. Demonstrated experience in preparing research grants, publishing in quality peer-reviewed journals, and presentations at national, professional meetings is necessary. Candidates at the associate professor or professor level are expected to demonstrate sustained success in funded scholarly activities and candidates at the full professor level will be expected to also have a substantial, currently funded research portfolio.

**PREFERRED QUALIFICATIONS:** While a doctoral level degree and commensurate track record of peer reviewed research output is required, a DVM degree plus graduate (MS, PhD) level research degree is preferred since this combination is likely to support the development of both aquatic animal health and epidemiological research tracks within the College. Thus, candidates with a record of funded programmatic research, teaching and outreach in aquatic animal health and epidemiology will be given preference. In addition, candidates with applied data science skills (Big Data) related to population fish production and public health are encouraged to apply.

**SALARY AND START-UP PACKAGE:** Highly competitive and commensurate with experience and qualifications. The University offers an excellent benefits package. For example, the University pays 100% of the premium for Faculty Basic Life Insurance as well as 100% of the premium for Faculty Group Income Disability Insurance. Faculty contributes 5.5% of their annual salary and the University contributes 10% toward the Faculty Retirement Plan. There are also two Optional Retirement Plans available. For more benefits information see <https://humanresources.umn.edu/benefits>.

**START DATE:** Negotiable, after July 2019.

**APPLICATIONS:** Applications will be accepted and reviewed upon receipt until the position is filled. Qualified applicants should apply online <https://z.umn.edu/aquaticepidemiologist> Job ID: 328738. Required documents include a curriculum vitae, a statement of research, outreach and teaching interests, a letter of intent outlining professional record and academic career goals, and names and contact information of three professional references. Inquiries about the application process and the position should be directed to the chair of the search committee, Dr. Sagar Goyal (goyal001@umn.edu; 612-625-2714).

For more information see the flyer attached to the email for this newsletter.

## RESOURCES/NEWS

### Funding Opportunity – Feed the Future

The Feed the Future Innovation Lab for Fish has issued a request for applications to support research for development in Feed the Future target and aligned countries in west Africa, east Africa, and Asia.

The lab intends to fund approximately 10 proposals for up to three years and with budgets \$200,000-\$800,000 USD; the expected average size will be \$500,000 USD. Current lab activities are in Bangladesh, Nigeria, Kenya, and Zambia. Other Feed the Future target and aligned countries may be considered if sound justification is provided. Areas of inquiry include advancing the productivity frontier, reducing and mitigating risk to fish production systems, and improving human outcomes. Successful proposals also will integrate four crosscutting themes: gender mainstreaming and youth engagement, improving human nutrition, resilience of fish value chains and households, and capacity building.

This competition is open to any qualified research, educational, governmental, private sector, or non-profit institution globally that has a Data Universal Numbering System (DUNS) and is registered in the System for Award Management (<https://www.sam.gov/SAM/>). The lab strongly encourages qualified U.S. minority-serving institutions to respond to this competitive request for applications.

Concept papers are due May 24, 2019, and final proposals by July 24, 2019. For more information about the funding opportunity and for application instructions, please visit <https://rfx.piestar.com/opportunities/fish>.

### **Aquatic Animal Drug Approval Partnership (AADAP) Update: April 2019**

**The Unmet Fish Drug Needs Survey Summary Report:** Together with the Association of Fish and Wildlife Agencies' Drug Approval Working Group (AFWA/DAWG) and the National Aquaculture Association (NAA), AADAP conducted a survey to assess the current and future unmet drug needs of the aquaculture community in the U.S. For a summary report of the survey, please see the link below:

[Unmet Fish Drug Needs Survey Summary Report](#)

**Approved Aquaculture Drug Fact of the Month:** Did you know Formalin is approved for the control of external protozoa and monogenetic trematodes in finfish, as well as the control of fungi from the Saprolegniaceae family in finfish eggs? It's also approved for controlling protozoan parasites in Penaeid shrimp. For more information on dosing and limitations, please see AADAP's [Quick Desk Reference Guide](#) to Approved Drugs for Use in Aquaculture

**2019 Aquaculture Drug Approval Coordination Workshop:** The 25<sup>th</sup> Annual Drug Approval Coordination Workshop will be held in Bozeman, MT on July 29<sup>th</sup>-August 1<sup>st</sup>, 2019. Please see the link below for a tentative workshop schedule, as well as lodging, registration, and presentation details. Make sure to visit our [workshop webpage](#) to register and make your lodging reservations as soon as possible!

We hope to see you at the workshop this summer!

### **John E. Skinner Memorial Fund Award**

The John E. Skinner Memorial Fund was established in memory of John Skinner, former California-Nevada Chapter and Western Division AFS President. The fund provides monetary travel awards for deserving graduate students or exceptional undergraduate students to attend the AFS annual meeting. **The 2019 meeting will be held in Reno, Nevada September 29 to October 3.**

Any student who is active in fisheries or related aquatic disciplines, and has not previously won a full Skinner award, is eligible to apply. Awardees are chosen by a committee of the AFS Education Section. Selection is based on academic qualifications, professional service, and reasons for attending the meeting. **Travel support up to US\$800 will be made available to successful applicants.** Award winners also receive a one-year paid membership to AFS.

For more information and to begin the application process go to:

<https://fisheries.org/about/awards-recognition/call-for-award-nominations-section-awards/john-e-skinner-memorial-fund-award/>

You can also contact:

**Julianne Harris**

U.S. Fish and Wildlife Service  
Columbia River Fish and Wildlife Conservation Office  
1211 SE Cardinal Court, Suite 100  
Vancouver, WA 98683  
Phone: 360-604-2551  
julianne\_harris@fws.gov (preferred)