



Fish Health Section



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

MEETINGS, WORKSHOPS AND COURSES

Gill Health Symposium for Marine Fish
Zhongshan Park, Singapore

November 21-23, 2018

We are proud to announce the first international **Gill Health Symposium for Marine Fish** hosted by the Universities of Sydney, Auckland and Bergen. This 3-day symposium will focus on the function and form of fish gills in the face of a changing ocean environment with emphasis on ocean warming and acidification. The symposium will bring together scientists with expertise in a variety of disciplines such as marine biology, ecology, ecophysiology, environmental chemistry, aquaculture and fisheries.

The target audience for the symposium are scientists from university, government and private sectors and managers from aquaculture and fisheries industries.

Applications will be reviewed from **1 May 2018**. Priority will be given to early and mid career researchers (<10 years from PhD award) and those residing in developing countries. Maximum capacity is 30 people.

The **goal** of the symposium is to create small teams of discipline experts to co-author topic reviews to be submitted as part of a special research topic in ***Frontiers of Marine Science***.

Applications open 1 April 2018. To apply, go to: <http://sydney.edu.au/science/life-environment/research/gill-health-symposium.shtml>

Applications should include:

- short cv (4 pages max.)
- letter of support from your Department Head, Director or relevant supervisor
- statement addressing (1 page max.) current research program and career interests
- statement addressing (1 page max.) your willingness to contribute and support the goals of the Gill Health Symposium

For more information, please see the attached flyer and/or email: Associate Professor Joy Becker, joy.becker@sydney.edu.au

American Veterinary Medical Association Convention
Washington DC

August 2-6, 2018



CALL FOR ABSTRACTS! – see the attached flyer

JOBS/GRADUATE ASSISTANTSHIPS

Fish Veterinarian
Pacific Seafood
Nespelem, Washington

Summary

Work in conjunction with site Operation Managers and Fish Health Team to manage, maintain and execute all aspects of the Fish Health Plan at our Aquaculture hatcheries and farm.

Essential Duties and Responsibilities

Duties include but not limited to:

- Be a role model in projecting and applying The Pacific Group Diamond Philosophy (Productivity, Quality, Excellence and Teamwork) and promote teamwork at all times.
- Oversee the administration of antibiotics in large net pen facility and hatcheries with a herd management mentality.
- Be up to date on all USDA VFD regulations and policies needed for aquaculture farm management.
- Assist with research projects in conjunction with National Center for Cool & Cold Water Aquaculture (NCCCWA), Western Fisheries Research Center (WFRC) and others. Has to keep accurate records as results will be published.
- Assist in developing a database or other effective record keeping system.
- Assist with data collection and recording.
- Assist with vaccine research and perform bacterial culture when necessary.
- Categorize mortality to identify diseases based upon external clinical symptoms. This is imperative to develop vaccines that work.
- Possess basic microscopic skills to make and stain slides and identify bacterial and parasite agents.
- Collaborate with partners on research projects.

- Perform regular cleaning and standardization of all lab equipment and lab facilities.
- Maintain a presence in fish health related meetings by continuing to develop outside partnerships and contacts with groups and agencies.
- Assist in establishing a feed monitoring program and ensure that feeds meet established standards.
- Assist in establishing a flesh quality monitoring program.
- Become a point of contact for hatchery related fish health questions regarding treatments and questions that may arise.
- Manage good aquaculture practices as part of the effort to prevent aquaculture related fish disease.
- Be observant of problems that may contribute to fish mortality, of rough handling density, and feeding practices to avoid contribution to fish mortality.
- Assist in creating a biosecurity plan for the farm including a check-in and check-out procedures for guests visiting the farm, and once created adherence to the policy must be audited to effectively evaluate compliance.
- Track and monitor the health of eggs, fingerlings and adult steelhead with the Fish Health Plan.
- Observe fish behavior as an indicator of stressors and pre-empt disease outbreaks.
- Maintain precise records on fish production, and educate other team members on fish health biology.
- Play a key role in reviewing and improving fish husbandry and production with a key focus on survival of stocks. Reduce stresses present not only from biological elements but also environmental conditions.
- Perform other duties, as assigned.

See this link for more details:

<https://recruiting2.ultipro.com/PAC1001/JobBoard/3d1f315c-b302-5e3c-ab32-f9b155cb2fba/OpportunityDetail?opportunityId=16d0c4fd-8486-4cc2-ad8b-a6bba8a666d8>

Microbiologist

Pacific Seafood

Nespelem, Washington

Summary

Under the direction of the veterinarian and the site operations manager, perform projects and assist in research related to fish health and mortality. Work closely with site management to identify and remedy the challenges to fish health that are present. Duties support the maintenance and operation of the disease laboratory.

Essential Duties and Responsibilities

Duties include but not limited to:

- Be a role model in projecting and applying The Pacific Group Diamond Philosophy (Productivity, Quality, Excellence and Teamwork) and promote teamwork at all times.
- Assist in developing an effective record keeping system.
- Collaborate in the team structure as well as work independently.
- Assist with vaccine research and perform bacterial culture.
- Appropriately categorize mortality to evaluate what is causing loss.
- Evaluate what percentage of pathogens contribute to the total loss.
- Identify diseases based upon external clinical symptoms.
- Track and monitor the health of steelhead fingerlings in accordance with the Fish Health Plan.
- Classify mortality, health sampling for disease identification, monitoring mortality levels, causes and factors affecting fish health.
- Observe fish behavior as an indicator of stressors and pre-empt disease outbreaks, including a degree of water quality e.g. O2 and TDG levels.
- Maintain a presence in fish health related meetings by continuing to develop outside partnerships and contacts with groups and agencies.
- Manage good aquaculture practices as part of the effort to prevent aquaculture related fish disease.
- Be the point of contact for hatchery related fish health questions regarding treatments and questions that may arise.
- Make and stain slides and identify bacterial and parasite agents.
- Regularly test for antimicrobial resistance.
- Assist in establishing a flesh quality monitoring program.
- Assist with various aspects of vaccine research by performing a variety of technical duties, including daily monitoring of challenge experiments, recording data, and performing microbiological analysis of infected tissue.
- Maintain, calibrate and modify complex/specialized equipment and automated systems used for test and evaluation procedures to achieve desired results.
- Maintain inventory of chemicals, prepares solutions and reagents for use in the laboratory, and safely disposes of chemical and biological waste material.
- Perform regular cleaning and standardization of all lab equipment.
- Assist in establishing a feed monitoring program.
- Ensure that feeds meet established standards.
- Be observant of problems that may contribute to fish mortality, of rough handling density, and feeding practices to avoid contribution to fish mortality.
- Assist in creating a biosecurity, and audit plan for the farm including a check-in and check-out procedures for farm visitors and effectively evaluate compliance.
- Keep precise records on fish production, and educate other team members on fish health biology.
- Perform other duties, as assigned.

See this link for more details:

<https://recruiting2.ultipro.com/PAC1001/JobBoard/3d1f315c-b302-5e3c-ab32->

f9b155cb2fba/OpportunityDetail?opportunityId=0380d5ae-e3aa-4ee3-b4b4-795f6bf63b78

Extension Specialist – Fish Health

Auburn University

School of Fisheries, Aquaculture and Aquatic Sciences

Greensboro, Alabama

The School of Aquaculture, Fisheries and Aquatic Sciences (SFAAS) at Auburn University invites applications for a position at our Alabama Fish Farming Center (AFFC) in Greensboro. It is a non-tenure-track, 12-month faculty position with the title Extension Specialist; however, responsibilities are 50% extension and 50% research. The position is supported by the Alabama Cooperative Extension System (ACES) and the Alabama Agricultural Experiment Station (AAES). The incumbent will be a member of the ACES Aquatic Resources Program Priority Team and must maintain a current AAES Hatch project.

Responsibilities: The primary extension responsibility will be disease diagnostic services for catfish farmers. The primary research responsibilities will be fish health questions of importance to the Alabama catfish industry. The successful candidate will interact with AFFC staff, members of the Southeastern Cooperative Fish Parasite and Disease Project (located in SFAAS), and other fish health and aquaculture specialists to develop a vibrant diagnostic program and relevant, extramurally funded, research program.

Qualifications: A PhD in an appropriate field or a DVM is required. Research experience with aquatic animals and two years of experience (staff, postdoctoral, or faculty) in diagnosis of fish diseases are also required. Experience in extension or outreach with fish farmers, a publication record in extension, and a publication record in aquatic animal research are desirable. The successful candidate must possess excellent interpersonal skills, communication skills, and organizational skills. They must also meet eligibility requirements for work in the United States at the time the appointment is scheduled to begin and continue working legally for the term of employment.

Application: Applicants must apply for the position electronically through: <https://aufacultypositions.peopleadmin.com/postings/search> and submit the following: 1) cover letter addressing the candidate's experience pertinent to the responsibilities of the position, 2) Curriculum vitae, 3) Reprints of up to three research publications and 4) Reprints of up to three extension publications. When prompted during the on-line application process, please provide names, phone numbers and email addresses of three professional references. Only complete application materials will be considered. Active review of applications will begin October 1, 2018 and the search will continue until the position is filled. Questions about the position should be directed to:

Dr. Cova Arias
Search Committee Chair
School of Fisheries, Aquaculture and Aquatic Sciences
203 Swingle Hall
Auburn University
Email: ariascr@auburn.edu
Auburn University is an EEO/Vet/Disability Employer

Aquatic Animal Health Postdoctoral Research Scholar
University of California Davis
School of Veterinary Medicine
Davis, California

Location: UC Davis School of Veterinary Medicine

Description:

A post-doctoral research scholar position is available at the University of California at Davis, Aquatic Animal Health Laboratory based at the UC Davis School of Veterinary Medicine.

The successful candidate will have access to state-of-the-art facilities that investigates fish health focusing on infectious diseases. Self-motivated, scholars that demonstrate passion for research and a comprehensive working knowledge of common *in vivo* and *in vitro* laboratory techniques in the field of fish virology, fish immunology and fish bacteriology are encouraged to apply. A PhD in a relevant field and a strong publication record is required. Fluency in English is essential.

Successful candidates will benefit from a dynamic and highly collaborative environment and the opportunity to interact with the extended scientific community at UC Davis, which ranks among the top 10 public research universities in the US, and will be encouraged to present their research at national and international meetings.

Qualifications:

Applicants must be capable of designing and conducting experiments independently, writing manuscripts and fellowship grant applications, and presenting their research at scientific meetings. The ideal applicant should be highly motivated, be able to interact with other scientists and have expertise in infectious diseases and immunology.

Experience in cell culture, molecular biology, vaccine generation and gene expression is highly desirable. Prior work should demonstrate a comprehensive working knowledge of common laboratory techniques. A PhD in a relevant field is required. Position level and salary are commensurate with experience and qualifications.

SALARY:

Salary and benefits are consistent with UC Davis policy and are commensurate with

applicant experience. As reference, salary for a 1st year Postdoc is \$49,188 with full benefits.

How To Apply:

To receive fullest consideration, applications must be received by October 31, 2018. Candidates should submit the following items as a single PDF directly to Dr. Soto at sotomartinez@ucdavis.edu

1. NIH format Biosketch
(fellowship version: <https://grants.nih.gov/grants/forms/biosketch.htm>)
2. Concise statement of past and future research interests (1pg)
3. At least two letters of support (or names and contact information for requesting the letters, one reference should be from the Ph.D. advisor).

See the announcement attached to the FHS newsletter email.

Technical Secretariat – Aquatic Animals Commission The World Organization for Animal Health (OIE) Paris, France

Positioning and reporting:

Under the authority of the Deputy Director General in charge of International Standards and Science and the direct supervision of the Head of the Standards Department and/or Deputy.

Job purpose:

As part of a small team the Chargé de Mission will contribute to the scientific excellence and integrity of the OIE standard-setting process through the provision of Secretariat support to the OIE Specialist Commissions and relevant ad/hoc groups to ensure the delivery of high-quality, scientifically-based and up-to-date international standards. He/she contributes to the increased understanding and implementation of the OIE standards by Member Countries through support to the transparency and inclusiveness of the standard-setting process.

Missions and activities:

Contribute to the provision of technical secretariat support to the Aquatic Animals Commission

- Prepare background and working documents based on the collation and analysis of Member Country
- comments, and other relevant sources of information;
- Provide Secretariat support to the meeting and provide support to the President ensuring respect of
- relevant OIE procedures;
- Provide historical analysis of past decisions;
- Draft meeting reports;

- Ensure communication and alignment with other relevant Specialist Commissions;
- Act as the interface between the Aquatic Animals Commission and internal departments and relevant stakeholders;
- Coordinate the follow-up actions arising from meetings.

Provide Secretariat support to *ad hoc* Groups in the area of aquatic animal health insuring compliance with OIE procedures

- Prepare TORs and working documents, including retrospective analysis;
- Prepare the report in collaboration with the members;
- Follow-up on any required actions;
- Liaise with relevant actors to ensure good coordination of cross-cutting issues.

Provide technical advice and support on the work of the Standards Department primarily in the area of aquatic animal health

- Contribute to the preparation of responses to enquiries from and provide support to Member Countries on the standard setting process;
- Contribute to the update and management of a network of contacts and experts on relevant topics;
- Prepare concept-notes, factsheets, working documents, background papers and other analytical documents;
- Provide data to respond to enquiries from diverse sources, including colleagues, Member Countries, other organisations and external parties;
- Supporting the development of an online commenting system;
- Contribute to the preparation and planning of training related to the implementation of standards.
- In addition, the Head of the Standards Department may, when necessary, assign to the incumbent any other duties, responsibilities and activities within his or her area of competence.

Qualifications and Experience:

Required qualifications

- A degree in veterinary science, biological sciences, or equivalent with a specific focus on aquatic animal health management;
- At least 8 years of professional experience, particularly in a national regulatory environment, or other international organisation with a specific focus on aquatic animal health policy and management;
- Experience in provision of high level secretariat functions at the national or international level.

Additional experience

- Professional experience in a National Veterinary or Aquatic Animal Health Authority or equivalent would be an advantage.

Requirements:

Technical skills:

- Good working knowledge of Microsoft Office, in particular Word;
- Excellent writing skills and ability to summarise complex technical discussions into clear and concise reports;
- Ability to work in English at a high level including excellent oral and written communication skills.

Additional competencies

- Knowledge and understanding of the international standards setting environment and the WTO
- Agreements in relation to international trade (desirable);
- Good knowledge of French or Spanish (desirable).
- Interpersonal skills: Excellent communication skills;
- Ability to establish and maintain good working relationships in a multinational and multicultural environment;
- Ability to work as a member of a small team;
- Capacity to learn and a self-motivated worker;
- Excellent organisation skills and ability to meet specific deadlines;
- Demonstrated initiative, including ability to think strategically and achieve results.
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Working conditions:

This position may require flexible hours at times to complete specific projects, including around Specialist Commission meetings and the General Session of the World Assembly of Delegates.

General information:

The OIE places high value on a multicultural and positive work environment. The OIE is an equal opportunity employer and welcomes applications of all qualified candidates, irrespective of their your application online by **28 September 2018** ethnic origin, gender, opinions or beliefs. This is a full-time position as an international civil servant based at the OIE Headquarters in Paris (France). Expected starting date **as soon as possible**.

If you are interested in the position, please complete **at noon (Paris local time) at the latest** by clicking on the link (see flyer attached to FHS newsletter email).

Veterinary Medical Officer – two positions

US Department of Interior

US Fish and Wildlife Service

Lacey, Washington; Willard, Washington

Open & closing dates: 09/21/2018 to 10/04/2018

Service: Competitive

Pay scale & grade: GS 11 – 12

Salary: \$61,218 to \$103,441 per year

Appointment type: Permanent

Work schedule: Full-Time

Summary

This position is part of the Pacific Region Fish Health Program. As a Veterinary Medical Officer, you will be responsible for maintaining the health of fish on national and tribal fish hatcheries. You will also address health concerns in wild aquatic animals that may sometimes include species other than fish. For more information about the Pacific Region Fish Health Centers, visit their website at <http://www.fws.gov/pacific/fisheries/fishhealth/>.

Responsibilities

- Improve husbandry methods and biosecurity in order to prevent disease outbreaks affecting aquatic species; inspect and monitor fish health; determine cause of disease outbreaks on federal and partner hatcheries; develop strategies to mitigate disease impact.
- Oversee disease treatments in aquatic animals, recommend and monitor treatment; conduct fish necropsies, and identify microscopic fish parasites.
- Contribute to the development of regional fish health policies; provide technical advice to field managers and partners; prepare reports and detailed case histories.

Travel Required

25% or less - You may be expected to travel for this position.

See these links for more information:

R1-18-10314631-BP-DE <https://www.usajobs.gov/GetJob/ViewDetails/511555400/>

R1-18-10308625-BP-MP <https://www.usajobs.gov/GetJob/ViewDetails/511555800/>

Research Associate III

**The Center for Aquaculture Technologies Canada
Souris, Prince Edward Island**

The Center for Aquaculture Technologies Canada, a private aquaculture innovation and research company, is seeking an experienced Research Associate for its R&D Facility

in Souris, Prince Edward Island. This is a full-time position and will begin immediately with the successful candidate reporting to the VP Research. Our research team focuses on providing high quality contract R&D support and professional services to the aquaculture industry.

The successful candidate will be a key member of CATC team with the following responsibilities:

- Ensures operational efficiency of the laboratory.
- Applies expertise to laboratory set-up, assay design, method development, and purchasing.
- Care and maintenance of the laboratory including calibration and qualification of equipment as well as completion of records.
- Manages laboratory schedule and assignment of resources; ensures timely completion of all projects with a high degree of quality.
- Carries out analytical procedures required in the laboratory including reduction of new assays to practice. These may include but are not limited to PCR-based, antibody-based and cell-culture based assays.
- Carries out data acquisition, analysis, interpretation and reporting/verification of results.
- Develops and revises Standard Operating Procedures (SOPs).
- Provides training for staff in use of laboratory specific SOPs.
- Management of staff including interns and junior research associates.

Desired skills/experience/competencies:

- A minimum of a BSc. in a relevant field plus 5-7 years experience. A postgraduate degree with applicable laboratory research experience would be considered an asset.
- Eligible to work in Canada.
- Experience with development, execution and reporting results of molecular assays including PCR and qPCR.
- Ability to manage and execute multiple projects concurrently.
- Physically able to handle routine and repetitive laboratory tasks including pipetting with accuracy, bending, and lifting.
- Experience working in a laboratory setting including responsibility for thorough documentation of tasks in compliance with standard operating procedures.
- Ability to work as part of a team.
- Service oriented with a commitment to ensuring client satisfaction.
- Fosters a positive work environment congruent with the company values and philosophy.

info@aquatechcenter.com with 'Research Associate III' as the subject line.

Applications will be accepted until October 11; only candidates selected for interview will be contacted.

CATC offers a competitive salary and benefits including group health care and retirement savings plans.

Please send CV/Resume and provide the contact information for three references to: info@aquatechcenter.com with 'Research Associate III' as the subject line. Applications will be accepted until October 11; only candidates selected for interview will be contacted.

See the flyer attached to the FHS newsletter.

Research Scientist- Fish & Crustacean Health
The Center for Aquaculture Technologies Canada
Souris, Prince Edward Island

The Center for Aquaculture Technologies Canada is seeking an experienced and motivated scientist for a research position in conducting fish and crustacean health research. We are expanding our research team in Prince Edward Island, Canada with a focus on providing R&D support and professional services to the aquaculture industry. To be successful in this position it is necessary for candidates to have a background in applied animal health research. Candidates must demonstrate a good understanding of the key concepts of fish health and have experience in and be prepared to carry out research using live fish of multiple species. They must be independent, creative thinkers with the ability to multi-task in a fast-paced environment. Excellent communication skills along with problem-solving expertise are essential.

As part of their research experience, the candidate will be expected to have:

- Participated in the development of project rationale including the use of literature and research databases to build a project proposal.
- Demonstrated proficiency with study design to test a hypothesis using appropriate and defensible scientific methodology.
- Undertaken training and demonstrate an understanding of the policies and regulations associated with the use of animals in research.
- Worked both independently and as part of a team to achieve a research objective. The successful candidate may be responsible for supervision of research associates and aquaculture technicians.
- Shown a strong work ethic with the ability to set objectives and deliver results in a timely manner.
- Exhibited an ability to trouble shoot and propose creative solutions to technical problems encountered during the conduct of scientific research.
- Demonstrated an aptitude for communication of scientific results through the publication of articles in peer-reviewed journals and presentation of abstracts at scientific meetings.
- Proven themselves to be good team players with the ability to both supervise and respond well to supervision.

The successful candidate must at minimum have received a thesis-based doctoral degree in a relevant scientific field from an internationally recognized institution. An undergraduate degree/research experience, a MSc. degree, or a post-doctoral fellowship in a complimentary field including cell biology, molecular biology or biochemistry would also be considered an asset.

Experience that would be considered an advantage to a candidate for this position would be research experience in support of development of commercial products and research experience in a GLP or other strictly controlled regulatory environment. CATC offers a competitive salary and benefits including group health care and retirement savings plans.

Please send CV/Resume and provide the contact information for three references to: info@aquatechcenter.com with Research Scientist-Fish Health in the subject line. Applications will be accepted until October 11, 2018; only candidates selected for interview will be contacted.

See the flyer attached to the FHS newsletter.

NATURAL RESOURCES BIOLOGIST IV - Aquatic Animal Health Laboratory Manager

**Sarbanes Oxford Cooperative Laboratory
Maryland Department of Natural Resources
Oxford, Maryland**

This is a position specific recruitment for the Department of Natural Resources, Fishing and Boating Services. This recruitment will be used to fill current vacancies for the position and may be used to fill future vacancies in the same classification/function. Future vacancies may also be filled via other recruitments. The resulting eligible list will be maintained for one year.

GRADE

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LOCATION OF POSITION

Oxford, Maryland (Talbot County)

MAIN PURPOSE OF JOB

The Department of Natural Resources, Fishing and Boating Services in Oxford, Maryland, is currently accepting applications for a Natural Resources Biologist IV - Laboratory Manager in the Aquatic Animal Health Laboratory. This position will perform laboratory analyses to detect and identify diseases and disease agents in shellfish and finfish and in environmental samples, in order to investigate, monitor, and report the health status and disease threats to Maryland shellfish and other aquatic resources. The position uses skills in shellfish and fish anatomy to secure analytical tissue samples

by dissections of live and dead animals, and uses microbiological, histological, DNA-based, and antibody-based assays to detect and identify pathogens and diseases. The position manages, maintains, and operates sophisticated laboratory equipment and reagents for in vitro microbe isolation, propagation, and cryopreservation, for DNA isolation and analytical PCR-amplifications, for in situ histological assays with antibodies and DNA probes, for preparation of histological samples, and for performance and analyses of microbiological assays. The position supervises 3 lower level Natural Resources Biologists, prepares budgets and develops short, mid and long term project plans. The position writes and illustrates technical reports on methods and results of laboratory research and analytical efforts.

MINIMUM QUALIFICATIONS

Education: A Bachelor's degree in biology, biochemistry, environmental science, aquaculture, natural science, natural resources management, botany, marine biology, marine ecology or physical oceanography, ichthyology, fisheries management, wildlife management, zoology or a natural resources management related field of study.

Experience: Five years of experience in performing professional biological work in the field of natural resources management.

DESIRED OR PREFERRED QUALIFICATIONS

Strong preference will be given to applicants that possess the following preferred qualifications; please include clear and specific information on your application regarding the qualifications.

- Experience with PCR assays for qualitative and quantitative detection of pathogen DNAs in shellfish and finfish tissues, cultured cells, and/or environmental samples.
- Experience with in situ assays of histological sections with DNA and antibody probes specific for pathogenic microbes, disease conditions, or expressed genes.
- Experience with axenic in vitro propagation and manipulation of tissue culture cell lines or microbial isolate cultures.

See the link below and the flyer attached to the FHS newsletter for more information.

<https://www.jobapscloud.com/MD/sup/bulpreview.asp?R1=18&R2=001001&R3=0003>

RESOURCES/NEWS

Western Fisheries Science News: June 2018 - Issue 6.6

Fish Health Highlights....

WFRC Scientists at Western Fish Disease Workshop: On June 20-22, 2018, four scientists from the WFRC- Maureen Purcell, Bill Batts, Doug McKenney and Diane Elliott -attended and presented at the Western Fish Disease Workshop held in Bozeman, MT. The workshop provided a forum for dissemination of current information on important topics concerning health and disease of wild and cultured fishes, and featured technical presentations, a round table discussion, and a continuing education session. In the technical session, Bill Batts, Maureen Purcell and Doug McKenney gave presentations on genetic surveillance, virus persistence, and genetic subgroup virulence of infectious hematopoietic necrosis virus (IHNV) of salmonids. In the continuing education session for fish health professionals, emeritus scientist Diane Elliott gave a presentation on diagnostic tools for *Renibacterium salmoninarum*, the causative agent of salmonid bacterial kidney disease. For more information, contact Diane Elliott, dgelliott@usgs.gov, Seattle, WA.

Read the whole newsletter online at: <http://wfrc.usgs.gov/newsletter/>

To subscribe (or unsubscribe) to the “Western Fisheries Science News” mailing list, please do so at <http://wfrc.usgs.gov/newsletter/maillist.html>