



Fish Health Section



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 We still have not been able to take down the old FHS website which is outdated and inaccurate.

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

2020 FHS Business Meeting Minutes

The 2020 AFS-FHS business meeting was held June 25th online and attended by 65 people. Topics included: 2021 dues increase, Blue Book Ad-hoc report, Goede Index, committee reports, Blue Book Revision Project manager, 2021 meetings, FHS election results, and presentation of the S.F. Snieszko awards. Please see attached pdf for complete minutes or click here to watch the recorded meeting: <https://vimeo.com/442393153>.

Policy/Position Development Committee Update

How to request the FHS to develop a policy or position

The AFS-FHS Policy/Position Development Committee (PPDC) provides a mechanism for generating official policy/position statements by the AFS-FHS. Any member can bring a proposed issue, policy, or position statement forward to the PPDC for review. See the May 2020 FHS Newsletter for details (available on the FHS website). If you have an idea for a policy or position, please contact PPDC Chair Gary Marty (Gary.Marty@gov.bc.ca) or any of the Committee members listed on the FHS web site.

MEETINGS, WORKSHOPS AND COURSES

Grad Student and Post-doc Virtual Presentation Opportunity

Only 2 weeks of presentations left!

Thank you all for participating in the AFS-FHS Student Summer Seminar Series! Graduate students and post-docs do not get many chances to network or share their research. With the cancellation of the EFHW, AFS-FHS, WFDW and other scientific meetings these opportunities have become even more limited. This summer seminar series provides an avenue for young scientists to get their names out there, but also give the rest of us a chance to stay connected.

This is a low-stakes forum for students and post-docs to introduce themselves to a mix of lab groups from across the country and show off the fruits of their labors. Please feel free to forward these announcements to anyone you feel should be looped in. You can find the Seminar Schedule and archived presentations/abstracts here:

<https://sites.google.com/umn.edu/fishhealthseminar>

Presentations consist of 20 minute talks followed by 10 minute Q&A and take place on Friday afternoons from 12-1 pm CST through August 7th.

If you have any questions, please do not hesitate to reach out.

Have a good day,
Nick Phelps
phelp083@umn.edu

Fish Welfare Symposium - UPDATED

The Fish Health Section will be co-organizing a symposium, entitled “[Fish Welfare](#) (ID number: 9479)”, with the Fish Culture Section at the American Fisheries Society 150th Anniversary Meeting online in September, 2020.

Fish Welfare

Fish welfare is an aspect of fish husbandry that is often overlooked. Fish can sense and react to noxious stimuli, often displaying similar aversive responses to the ones we observe in mammals, including stress. Chronic and acute stress can cause anorexia, weaken the immune system, and induce other physiological abnormalities. Stressed fish may display abnormal behaviors or show abnormal swimming patterns. In the aquaculture of food fishes, pre-slaughter stress can cause changes in the texture and quality of fish fillets. In the ornamental fish industry and for fishes cultured and/or transported for stocking, shipping stress may be an important cause of mortality. Thus, fish welfare is not only a matter of ethical debates but a relevant issue for anyone that works with fish from fishermen and fish growers to researchers using fish as animal models. This symposium will aim to explore a variety of aspects of fish welfare, including: how welfare can be assessed, the use of naturally derived compounds to reduce shipping and handling stress, and the effects of fish welfare in the overall health of fish.

Organizers:

Jose Reyes-Tomassini (<mailto:jreyes-tomassini@francis.edu>), Jeff Heindel, Michelle L. “Mick” Walsh and Benjamin R. LaFrentz

Time and date TBA.

All symposia for the conference can be viewed here:

<https://afs.confex.com/afs/2020/webprogrampreliminary/SYMP.html?fbclid=IwAR30YFqABXMRn5x1uKJoj8xQvmyyOyIEqMgAbkGdv9-N2exS-u-vbpOiUQ>

Ben LaFrentz (benjamin.lafrentz@usda.gov)

Health and Colony Management of Laboratory Fish - UPDATED

August 11-12, 2020

MDI Biological Laboratory

Location: Online

The MDI Biological Laboratory announces HCMLF Symposium 2020: Managing Fish Health, Husbandry, and Welfare in the Time of COVID19.

This two-day online symposium aims to be a platform for the research community to discuss aquatic animal facility challenges that have arisen during the coronavirus pandemic, and provide an opportunity for participants to share and learn about potential solutions. Topics covered will include health and welfare, sanitation, facility design, and other pertinent updates.

Click here for more details: <https://mdibl.org/course/hcmlf-symposium-2020/>

Tuition: Registration Fee is \$125.00 USD. Some scholarship support may be available.

JOBS/GRADUATE ASSISTANTSHIPS

Postdoctoral Scholar - Department of Food Science & Technology

University of California Davis, College of Agricultural and Environmental Sciences

Davis, CA

Closes August 1, 2020

A postdoctoral research scholar position is available in Dr. Luxin Wang's microbial food safety lab in the Department of Food Science and Technology at the University of California Davis. The primary responsibility of this position will be to conduct studies that will increase our knowledge on the effects of antibiotic treatments on the microbiota present in aquaculture systems and the stress responses of common foodborne pathogens using next generation sequencing technologies. The responsibility of the candidate will be to perform and participate in all aspects of research projects: ordering equipment and supplies, designing sampling protocols, conducting field sampling and data collection, performing DNA extraction and library preparation, delivering data analysis using novel bioinformatics tools, writing reports, and preparing manuscripts for refereed journal publication. Projects will incorporate a range of experimental (cellular and molecular), informatics, and theoretical/computational approaches. Supervision and interaction with graduate and undergraduate students working on the project is also expected.

See attached pdf for more information.

Scientific Coordinator – Aquatic Animal Health

OIE – International Standard and Science

Paris, France

Closes: 15 August 2020

Link: https://www.oie.int/fileadmin/Home/eng/Carrer/docs/pdf/Scientific-Coordinator-Aqua_STD_July2020.pdf

The Scientific Coordinator contributes to the development of policy advice on scientific developments, research priorities and international scientific networks in the field of aquatic animal health. He/she contributes to the scientific excellence and integrity of the OIE standard-setting process by supporting the work of the Specialist Commissions and relevant ad hoc Groups to ensure the delivery of high-quality, scientifically-based and up-to-date international standards. He/she also supports OIE activities addressing aquatic animal health and welfare by coordinating activities with the relevant work of other international partners and contributing to capacity building activities of Members such as national focal point trainings.

See attached pdf for more information.

Research – Fish Virology

Institute of Marine Research, Disease and Pathogen Transmission Research Group

Bergen, Norway

Closes: 23 August 2020

Link: <https://www.jobbnorge.no/en/available-jobs/job/190417/permanent-position-as-researcher-in-fish-virology>

The candidate will be expected to actively participate in a wide range of research projects. We are looking for a motivated and ambitious candidate with approximately 2-6 years research experience after completing a PhD. The candidate will be part of the research effort to widen our understanding of how viruses and viral diseases affect individual fish, populations and ecosystems in farmed and wild fish. This will involve research on how basic (biophysical) properties of viruses influence their ability to spread, infect and cause disease, including how viruses adapt to their environment (viral evolution). The candidate will also participate in developing the team, acquiring new research projects and in the institute's knowledge-based support and advisory tasks.

Post-Doctoral Research Scholar

University of Prince Edward Island, Atlantic Veterinary College

Closes: 31 August 2020

The Atlantic Veterinary College (AVC) at the University of Prince Edward Island (UPEI) is seeking a highly qualified applicant for a post-doctoral research scholar position to work on a funded research project. The focus of the work revolves around a very topical

research area of antibiotic use (AMU) and antibiotic resistance (AMR). The area of focus will be in finfish aquaculture and on defining issues and finding solutions. The successful individual will join a multi-disciplinary team of epidemiologists, data science modelers, statisticians, microbiologists and ecosystem health specialists, whose work focuses on holistic approaches to assist the Canadian and international aquaculture and fishery sector to improve the productivity, sustainability and the health of aquatic food animal stocks. The candidate will have opportunities to collaborate with researchers and veterinarians in academia, industry and government, increasing their network, and will be encouraged to present their research at national and international meetings. This post-doctoral position is subject to final budgetary approval.

Self-motivated, scholars that demonstrate passion for research and a comprehensive working knowledge of epidemiology, aquatic animal health, pharmacology and bacteriology are encouraged to apply. A PhD in a relevant field and a strong publication record is required. Fluency in English (both verbal and written) is essential.

See attached pdf for more information.

Veterinarian – Fish Health

Cermaq Canada, Ltd.

Campbell River, B.C.

You will be a member of the Fish Health department in Campbell River, BC. Your team includes a Fish Health Director, a Fish Health Manager, and freshwater and saltwater Fish Health Technicians.

Your goal is to ensure that our operations remain in compliance in the areas of food safety and quality. This requires working with external bodies to ensure timely, accurate and effective information is provided to external bodies. You will be focused on ensuring that a quality product is consistently provided to our customers. Along with those duties you could be involved in all aspects of reporting, data analysis (fish health and production), and fish health management in order to supply information that will optimize fish health for maximum biological performance. You would have a team of fish health technicians to assist you with meeting these objectives when required.

As the Veterinarian, you will receive a competitive salary, a corporate bonus program, company paid benefits and a matching retirement fund.

See attached pdf for more information.

Aquatic Pathology Residency and PhD

University of Georgia, College of Veterinary Medicine, Department of Pathology

Athens, GA

Closes: 9 October 2020

The Department of Pathology, College of Veterinary Medicine, The University of Georgia (<https://vet.uga.edu/education/academic-departments/pathology/>) in conjunction with the Georgia Aquarium has an opening for combined residency in anatomic pathology and PhD training with aquatic animal emphasis beginning July 1, 2021.

The incoming resident will join a team of 10 residents and a diverse faculty, including 1 certified fish pathologist and 20 ACVP diplomates, with expertise in domestic, aquatic, avian, exotic, wildlife, toxicologic and laboratory animal pathology. This intensive, comprehensive, 5-year training program is designed to meet the eligibility requirements for board certification by the American College of Veterinary Pathologists and meets most requirements for Fish Pathologist certification by the American Fisheries Society. Aquatic pathology experience is focused on the extensive collection of freshwater and marine fishes at the Georgia Aquarium and includes work conducted both at UGA and on-site in Atlanta. Exposure to invertebrates, amphibians, turtles, aquatic birds, and marine mammals occurs periodically. Residency training is augmented by necropsy experience in conjunction with the AAVLD-accredited Athens Veterinary Diagnostic Laboratory, surgical biopsy service to the teaching hospital and private veterinary practices, and a large Zoo, Exotic and Avian Pathology Service. Case-based learning is supplemented with several courses in histopathology, general pathology, and specialty areas (e.g., fish pathology). Additional fisheries related coursework is strongly encouraged.

See attached pdf for more information

Aquaculture Veterinarian

Department of Fisheries and Land Resources – Aquatic Animal Health Division

St. John's, Newfoundland and Labrador, Canada

Closes: 31 March 2021

Reporting to the Chief Aquaculture Veterinarian, this is a highly professional position in aquatic animal health management within the Province. Work involves responsibility for veterinary service to fin (shell) fish producers and researchers in the province including the operation of diagnostic laboratories in St. John's, St. Alban's and Grand Falls-Windsor, the supervision of technical personnel, and participation in the aquatic animal health regulatory program. Key responsibilities include the provision of aquatic animal health service for cultured aquatic animals, response to emergency service needs, conducting active and passive surveillance programs, conducting biosecurity audits and providing evidence-based decision making leading to sound health policy. Preparation and delivery of public presentations will also be required.

See attached pdf for more information.

Senior Research Scientist / Study Director - Fish Health

The Center for Aquaculture Technologies Canada

Souris, Prince Edward Island

Open until filled

The Center for Aquaculture Technologies Canada, a private aquaculture innovation and research company, is seeking a Senior Research Scientist / Study Director to assist in the daily operations of its R&D Facility in Souris, Prince Edward Island. This is a full-time, permanent, position and will begin immediately with the successful candidate reporting to the Director of Fish Health. Our research team focuses on providing high quality contract R&D support and professional services to the global aquaculture industry.

- Study Director/ Principal Investigator for in vitro and/ or in vivo clinical and research trials
- Writing of protocols and reports
- Analyses of data and production of study reports
- Designing and ensuring scientific integrity of experiments
- Care and maintenance of research animals including husbandry and animal welfare checks.
- Propagation and maintenance of pathogen isolates including use of standard cell culture and microbiological techniques.
- Development and revision of standard operating procedures.
- Timely completion of all projects with a high degree of quality and excellence.

See attached pdf for more information.

Zebrafish Related Job Announcements

<https://wiki.zfin.org/display/jobs/Zebrafish-Related+Job+Announcements>

RESOURCES/NEWS

2020 S. F. Snieszko Distinguished Service Awardees

Dr. Gael Kurath of the USGS Western Fisheries Research Center in Seattle WA is one of two 2020 S. F. Snieszko Distinguished Service Award recipients. Gael has spent a lifetime in fish disease research, published well over a hundred scientific papers, provided technical assistance to management agencies and colleagues, mentored a cadre of students, post-doctoral researchers and technical staff and served the FHS in

several capacities including as President. As an Affiliate Professor at the University of Washington in the School of Aquatic and Fisheries Sciences and the Department of Global Health, Gael has supervised graduate students and post-doctoral researchers who have established significant careers in fish health themselves. She is considered by her peers as a world authority in her field of specialization, the molecular biology of fish viruses. In addition to Infectious hematopoietic necrosis virus, Gael has conducted research on other fish rhabdoviruses including Spring viremia of carp virus and Viral hemorrhagic septicemia virus, as well as fish and snake paramyxoviruses. More recently, her research on the evolution of virulence and host specificity of viruses in salmonid fish provides one of the very few animal model systems with which to investigate these important theoretical concepts in virology. Please join in congratulating her at gkurath@usgs.gov.



Bruce Stewart was awarded the 2020 S.F. Snieszko Distinguished Service Award for creating and then dedicating his career to administering the first fish health program solely devoted to serving Native American Tribes. The Tribal Fish Health Program at the Northwest Indian Fisheries Commission, a natural resources management organization in western Washington, provides fish health services to the twenty member tribes. Bruce played an integral role in developing and implementing The Salmonid Disease Control Policy of the Fisheries Co-Managers of Washington State, which brings sound fish health principles together with the practical demands of real-world applications. He also served as an active participant in the Pacific Northwest Fish Health Protection Committee, as well as serving on Fish Health Section committees, hosting regional and national conferences, and mentoring those interested in fish health. Bruce is widely known among his



peers as an important scientific collaborator on a broad range of fish health projects. His work with, and in support of fish health research projects (including several with Gael Kurath!) led to advances in our understanding of diseases that impact salmonids in the Pacific Northwest. Bruce is now enjoying his retirement- if you would like to get in touch with him, his email is bstewartc@gmail.com.

AFS Position on Aquaculture

Published July 21, 2020

Link: <https://fisheries.org/2020/07/american-fisheries-society-position-on-aquaculture/>

The American Fisheries Society (AFS) supports sustainable growth of aquaculture. The demand for fish is expected to grow significantly in the next decade, but it is unlikely that capture fisheries can sustainably accommodate increased harvest pressure to meet this demand. Domestic freshwater and marine aquaculture present existing and emerging opportunities to sustainably address America's ongoing dependence on imported seafood, while relieving local pressures on wild stocks and impacts on aquatic ecosystems and waterfront communities. AFS calls for a clear, predictable, regulatory framework that will enable industry growth in a conscientious, environmentally sustainable manner. Further, we call for continued, consistent investments in research to understand effects of aquaculture development on fisheries and aquatic resources, and innovation to minimize negative environmental and social impacts of fish cultivation.

U.S. policymakers must address the future of our seafood supply and food insecurity. Seafood demand in the U.S. has grown steadily, driven by increases in both population and per capita seafood consumption [1]. Yet, capture fisheries landings have not increased appreciably for 30 years. The anticipated impacts on wild fish populations from climate change make it less likely that wild stocks will be able to withstand additional harvest pressure.

Worldwide, fish farming has overtaken wild harvest of fish as the leading source of seafood, producing nearly 80 million metric tons in 2016[2]. Today, the majority of seafood consumed in the U.S. is imported and more than half is farm-raised. Enabling expansion of the marine aquaculture industry in the USA would increase domestic seafood supplies in accordance with strong environmental, food safety, and labor standards and protections.

While finfish and shellfish culture has supported traditional communities and working waterfronts in state waters for more than a century in the U.S., offshore finfish aquaculture has not kept pace. By establishing a clear and predictable legal and regulatory structure for marine aquaculture in the U.S., we can reduce the overreliance on seafood imports and improve seafood security with wholesome, domestically farmed seafood that minimizes the environmental and social footprint of the industry on our marine habitat and resources. Implementation of best practices and improvements has already reduced environmental impacts substantially (e.g., reduced use of fish meal and oil in feeds, siting tools to minimize user conflicts and effects of discharge, improved biosecurity practices and strict veterinary oversight of therapeutant use), and ongoing

innovation will continue to reduce the environmental footprint of fish farming. Furthermore, existing law and regulatory frameworks in the U.S. ensure aquaculture operations are held to high standards with respect to environmental impacts. Healthy wild fisheries and responsible marine aquaculture can and must coexist if we are to feed ourselves and still fulfill our commitment to wild fish and wild places.

[1] FAOSTAT. 2020. Food Supply – Livestock and Fish Primary Equivalent. Database. Available: <http://www.fao.org/faostat/en/#data/CL> (4 May 2020).

[2] FAO (Food and Agriculture Organization). 2018. State of World Fisheries and Aquaculture. Food and Agriculture Organization of the United Nations, Rome. Available: <http://www.fao.org/state-of-fisheries-aquaculture> (4 May 2020).

Agenda item: Committee Reports – Technical Standards Committee **Presenter:** Mohamed Faisal

Discussion:

Several chapters in the Diagnostic Section of the Blue Book have been updated (and uploaded to the website) and several more are currently going through revisions. However, this is not enough, as many other chapters have not been updated in over 20 years. There is still a lot of work to bring the Blue Book up-to-date with the methods that are currently available.

Agenda item: Committee Reports – Professional Standards Committee **Presenter:** Mark Lawrence

Discussion:

The Committee has started using Google Docs to streamline their application review process and has been working on updating the Aquatic Animal Health Inspector (AAHI) and Certified Fish Pathologist (CFP) exam content. The AAHI exam review has been completed and updated and the CFP exam review is still ongoing but is expected to be completed in the next year. The committee reviewed 15 AAHI applications this past year (4 of which were re-certifications and 11 were new applications) and 4 re-certifications for CFPs. The list of current AAHIs and CFPs on the website has been brought up-to-date (currently 34 AAHIs and 17 CFPs) and will be updated every 6 months.

Agenda item: Committee Reports – Policy/Position Development Committee **Presenter:** Tom Loch

Discussion:

The purpose of this Committee is to assist members with raising awareness on important issues, potentially leading to official positions on behalf of the Section and prompting action on official policies. If there is an issue that any member thinks is worthy or important, please reach out to any PPDC member. Most recently, the PPDC reached out to the World Veterinary Association (WVA) in regard to a factsheet on animal welfare that they had produced that contained some erroneous facts and anti-aquaculture statements. The WVA has responded that they are taking the PPDC's suggestions into consideration and requested that the Section provide them with new photos to include.

Agenda item: Committee Reports – Handbook Revision and Oversight Committee **Presenter:** Mohamed Faisal/Gavin Glenney

Discussion:

The Committee worked towards including new molecular assays for *Renibacterium salmoninarum*, Viral Hemorrhagic Septicemia Virus (VHSV), and *Myxobolus cerebralis* into the Blue Book. As *M. cerebralis* still needs to go through extensive ring testing, it was unable to be included in the Blue Book revisions this year. However, real time PCR assays were added to the Blue Book for *R. salmoninarum* and VHSV.

Agenda item: Committee Reports – International Meeting Oversight Committee **Presenter:** Dave Groman

Discussion:

The location for the 2022 ISAAC is not finalized yet; there has been one proposal to host the meeting at a university in Santiago, Chile. The proposal is being reviewed but as the Committee is waiting for a budget to be submitted, no official decision has been made yet.

Agenda item: Committee Reports – Recruitment and Student Involvement Committee **Presenter:** Amy Long

Discussion:

The Committee recently sent out a survey to members and non-members to gauge why people are members, what they hope to get out of membership, and what can be done to encourage others to join the Section. The Committee has also

been adding profiles of students and early career members on the website (<http://afs-fhs-students.blogspot.com/>) and are always recruiting others to be profiled. Due to the widespread cancelation of workshops and conferences this year, one of the committee members (Nick Phelps) came up with the idea for a showcase for students and post-docs to share their research via the AFS FHS Summer Seminar Series (<https://sites.google.com/umn.edu/fishhealthseminar>). Average attendance to these virtual presentations has been 40-50 people and has been a success.

Agenda item: Committee Reports – Fish Health Laboratory QA/QC Committee **Presenter:** Chris Wilson

Discussion:

The Committee has been very active with 12 Tier 1 laboratories and are in the process of reviewing the first application for Tier 2 status. There may be a slow down on labs attempting to achieve Tier 2 status, as required USDA in-person training may be canceled due to the pandemic. The Committee will continue to work with the USDA and NAHLN on Tier 3 status.

Agenda item: New Business – Blue Book Revision Project Manager **Presenter:** Ben LaFrentz

Discussion:

As mentioned previously, a request for the Inspection Section of the Blue Book to be evaluated was thoroughly reviewed and a report of the findings was produced, serving as a guiding document for revising the Blue Book. In order to achieve this, the Section and Parent Society sought funds to facilitate making the necessary updates and changes to the Blue Book. These funds were secured and support hiring a Project Manager (PM) to oversee the process, using the recommendations of the ad hoc committee. The PM will provide administrative support and assistance with telecommunications; a steering committee and work groups will be created to make the actual revisions. This project was set to get started in 2020, but due to the pandemic, it has been delayed until 2021.

Discussion by several members stressed the importance of this project, that it is no small undertaking, and that it will likely not be completed in one year. It was acknowledged that the ad hoc committee did recognize that the Blue Book is currently very salmonid-centric and one of the goals of these revisions is to bring pathogens of other species into the Blue Book. It is important that representation on the steering committee and work groups include representatives from all relevant organizations and agencies (Federal, state, tribal, private, research, etc.). Discussion also centered on the issue of the Inspection Section being used as a regulatory document and the potential legal ramifications; the Parent Society is soliciting legal advice to ensure that the Section is protected against any possible future litigation. Additionally, the role of the Inspection Section in guiding regulations is something that needs to be reviewed and re-considered in this project.

Agenda item: New Business – 2020 AFS Annual Meeting **Presenter:** Ben LaFrentz

Discussion:

The in-person portion of the 2020 AFS Annual Meeting in Ohio has been canceled and will be entirely virtual. There will also be a workshop on Fish Welfare co-sponsored with the Fish Culture Section at the virtual meeting. There may be a specific Fish Health session at the virtual conference if enough relevant presentations are submitted.

Agenda item: New Business – 2021 Joint NEFHC/FHS Annual Meeting **Presenter:** Ben LaFrentz

Discussion:

The 2021 Section Annual Meeting will be held jointly with the Northeast Fish Health Committee (NEFHC) Meeting July 12-15, 2021 in Burlington, Vermont. It will be held at the same venue that was planned for 2020, with a tentative agenda described below and more details to follow in future months.

July 12: NEFHC Meeting

July 13: Continuing Education course (Molecular tools) and opening reception

July 14-15: FHS Meeting

Agenda item: New Business – 2021 WFDW **Presenter:** Sascha Hallett

Discussion:

The 2021 WFDW will be held in Hood River, Oregon from June 14-17. It is being organized by the Oregon Department of Fish and Wildlife (Aimee Reed and Sarah Bjork) and Oregon State University (Jerri Bartholomew and Sascha Hallett). The Continuing Education course will be related to applied nutrition for disease management.

Agenda item: New Business – Election Results **Presenter:** Derek Gibbs

Discussion:

The 2020 election results are as follows:

Position	Elected member
Vice President	Anita Kelly
Technical Standards Committee	Stephen Reichley
Professional Standards Committee	Joe Marcino
Policy/Position Development Committee	Jesse Trushenski
Nominating and Balloting Committee	Nicholas Phelps

Agenda item: Awards – Achievement Awards for Committee Chairs **Presenter:** Ben LaFrentz

Discussion:

At the beginning of the year, each committee chair was asked to come up with 3-5 goals to accomplish throughout the year and the following chairs were recognized for their achievements: **Mohamed Faisal** (Technical Standards Committee Chair and Handbook Revision and Oversight Committee Co-Chair), **Derek Gibbs** (Nominating and Balloting Committee Chair), **Tom Loch** (Policy/Position Development Committee Chair), **Gavin Glenney** (Handbook Revision and Oversight Committee Co-Chair), **Stacy Strickland** (Section Communications Committee Chair), and **Chris Wilson** (Fish Health Laboratory QA/QC Committee Chair).

Agenda item: Awards – SDS Award **Presenter:** Luke Iwanowicz

Discussion:

The S.F. Snieszko Distinguished Service Award is the most prestigious award in the Section and recognizes outstanding accomplishments in the field of aquatic animal health. This year, the award was presented to two deserving awardees: Bruce Stewart and Dr. Gael Kurath.

Agenda item: Passing of the Presidency **Presenter:** Tom Loch

Discussion:

The Past-President Award was presented to Ben LaFrentz, who went above and beyond and did a tremendous job as president, shepherding the Section through unprecedented times (the first virtual meeting!).



COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES
DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY
TELEPHONE: (530) 752-1465
FAX: (530) 752-4759

ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-5270

Postdoctoral Scholar
Department of Food Science & Technology
College of Agricultural and Environmental Sciences
University of California Davis

Job description & qualification:

A postdoctoral research scholar position is available in Dr. Luxin Wang's microbial food safety lab in the Department of Food Science and Technology at the University of California Davis. The primary responsibility of this position will be to conduct studies that will increase our knowledge on the effects of antibiotic treatments on the microbiota present in aquaculture systems and the stress responses of common foodborne pathogens using next generation sequencing technologies. The responsibility of the candidate will be to perform and participate in all aspects of research projects: ordering equipment and supplies, designing sampling protocols, conducting field sampling and data collection, performing DNA extraction and library preparation, delivering data analysis using novel bioinformatics tools, writing reports, and preparing manuscripts for refereed journal publication. Projects will incorporate a range of experimental (cellular and molecular), informatics, and theoretical/computational approaches. Supervision and interaction with graduate and undergraduate students working on the project is also expected.

Applicants should have a strong publication record and knowledge and skills related to one or more of the following: genomics, microbiology, bioinformatics, molecular biology, food microbiology, and/or bacteriology. Candidates with a keen interest in computer algorithm development are particularly encouraged to apply. This position requires proficiency in programming skills, and experience applying computational methods to genomic data is highly desirable. Applicants with a Ph.D. degree in Biotechnology, Bioinformatics, Microbiology, or a related field will be considered. Candidates with a proven work ethic, publication record, leadership, and team building skills will be given preference.

Application information & required materials:

Candidates should provide a C.V., which includes a list of three professional references, to Luxin Wang at lxwang@ucdavis.edu. The position will remain open until filled, but to ensure consideration applications should be received by August 1, 2020.

Salary and benefit:

The annual salary of a postdoctoral scholar at the Department of Food Science and Technology at UC Davis follows the NIH postdoc scholar salary scale guidelines. For detailed information, please visit: <https://grad.ucdavis.edu/resources/student-employment/salary-scales> and <https://www.ucop.edu/academic-personnel-programs/files/1920/2020-postdoc-scales/t23.pdf>.

College of Agricultural and Environmental Sciences at UC Davis:

The College of Agricultural and Environmental Sciences at UC Davis ranks #1 in the U.S. and #2 in the world for agricultural sciences and forestry (Based on QS World University Rankings). The college ranks #1 in the world in plant and animal sciences based on the U.S. News and World Report. The University of California Davis ranks 10th among all U.S. public national universities and 38th among all national universities.

Questions:

Please direct questions to Luxin Wang (lxwang@ucdavis.edu).



POSTED JULY 27, 2020

UNIVERSITY OF PRINCE EDWARD ISLAND
ATLANTIC VETERINARY COLLEGE
DEPARTMENT OF HEALTH MANAGEMENT
POSTDOCTORAL RESEARCH SCHOLAR
TWO (2) YEAR TERM
COMPETITION # 12A20

The Atlantic Veterinary College (AVC) at the University of Prince Edward Island (UPEI) is seeking a highly qualified applicant for a post-doctoral research scholar position to work on a funded research project. The focus of the work revolves around a very topical research area of antibiotic use (AMU) and antibiotic resistance (AMR). The area of focus will be in finfish aquaculture and on defining issues and finding solutions. The successful individual will join a multi-disciplinary team of epidemiologists, data science modelers, statisticians, microbiologists and ecosystem health specialists, whose work focuses on holistic approaches to assist the Canadian and international aquaculture and fishery sector to improve the productivity, sustainability and the health of aquatic food animal stocks. The candidate will have opportunities to collaborate with researchers and veterinarians in academia, industry and government, increasing their network, and will be encouraged to present their research at national and international meetings. This post-doctoral position is subject to final budgetary approval.

Self-motivated, scholars that demonstrate passion for research and a comprehensive working knowledge of epidemiology, aquatic animal health, pharmacology and bacteriology are encouraged to apply. A PhD in a relevant field and a strong publication record is required. Fluency in English (both verbal and written) is essential.

QUALIFICATIONS: Applicants must be capable of designing and conducting field studies 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 epidemiology and aquatic animal infectious disease management or pharmacology.

A PhD in a relevant field is required. A competitive post-doctoral stipend will be funded on a per annum basis commensurate with experience and qualifications.

Application Instructions:

Please submit electronically a cover letter, a resume, copy of transcripts and reference list to be received no later than the closing date to:

Dr. Vince Repaci
Department of Health Management, AVC
Email: vrepaci@upe.ca

In accordance with Canadian immigration requirements, all qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. UPEI is committed to the principle of equity in employment.

Closing date is August 31, 2020 or until a suitable candidate is identified.

Terms of Reference

Job title: Scientific Coordinator – Aquatic animal health

Duration of contract: 2 years, renewable

Salary: Base salary € 3 100 net / month, depending on profile, qualifications and experience
+ benefits (tax-free salary, yearly bonus)

Positioning and reporting

Under the authority of the Deputy Director General (International Standards and Science), and the supervision of the Head of the Standards Department.

Job purpose

The Scientific Coordinator contributes to the development of policy advice on scientific developments, research priorities and international scientific networks in the field of aquatic animal health. He/she contributes to the scientific excellence and integrity of the OIE standard-setting process by supporting the work of the Specialist Commissions and relevant *ad hoc* Groups to ensure the delivery of high-quality, scientifically-based and up-to-date international standards. He/she also supports OIE activities addressing aquatic animal health and welfare by coordinating activities with the relevant work of other international partners and contributing to capacity building activities of Members such as national focal point trainings.

Missions and activities

Provide technical advice and support on aquatic animal health

- Maintain current knowledge on the topic in order to support the definition of the scope and context for OIE involvement in the topic
- Contribute to development of policy statements and/or strategic thinking for the implementation of the OIE aquatic animal health strategy
- Prepare relevant documents and undertake analysis as required
- Contribute to the preparation of responses to enquiries from Members
- Liaise with relevant stakeholders, including colleagues globally, Members, other organisations and external parties
- Provide communication content and technical advice to other relevant teams

Contribute to the provision of scientific secretariat support to the Aquatic Animal Health Standards Commission and relevant *ad hoc* Groups

- Provide secretariat support to the Aquatic Animals Commission and relevant *ad hoc* Groups respecting relevant OIE procedures
- Prepare background and working documents for meetings of the Aquatic Animals Commission and relevant *ad hoc* Groups respecting relevant OIE procedures
- Contribute to the collation and analysis of Member comments, and other relevant sources of information
- Provide historical analysis of past decisions
- Contribute to the drafting of meeting reports
- Ensure communication and alignment with internal teams regarding the work of the Aquatic Animals Commission
- Contribute to the preparation of responses to enquiries from Members and other stakeholders
- Follow up actions arising from meetings

Ensure coordination with partner organisations on the implementation of activities

- Maintain a network of contacts and good communication with subject matter experts
- Represent the OIE and its position within relevant networks and international forums
- Coordinate relevant meetings and provide Secretariat functions
- As required, support the organisation of events on the topic

Support capacity-building activities for Members

- Develop a training programme and oversee its production
- Design comprehensive training materials
- Identify and liaise with relevant speakers
- Coordinate and/or facilitate the seminars
- Evaluate and improve the training content and structure

Terms of Reference

Qualifications and Experience

Required qualifications

- A degree in veterinary science, aquatic animal health, biological sciences or equivalent
- At least 8 years of professional experience including at least 5 years of experience particularly in a national regulatory environment, or other international organisation
- Experience in the provision of Secretariat functions at the national or international level

Additional experience

- Professional experience in a National Veterinary Authority or equivalent.

Requirements:

Technical skills:

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

Additional skills

- Knowledge and understanding of the international standards setting environment
- Knowledge and understanding of the WTO Agreements in relation to international trade
- Good knowledge of French or Spanish

Interpersonal skills:

- Excellent communication skills
- Ability to establish and maintain good working relationships in a multinational and multicultural environment
- Strong analytical and research skills
- Capacity to learn and a self-motivated worker
- Excellent organisation skills and ability to meet specific deadlines

Working conditions

The post is a full-time position based at the OIE Headquarters in Paris. It requires long hours in a seated position at a computer. The position entails regular missions abroad.

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 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) that is available **immediately**.

If you are interested in the position, please complete your application online **by 15 August at noon (Paris local time) at the latest** by clicking on the link below.

[**APPLY HERE**](#)

Veterinarian- Fish Health

At Cermaq Canada Ltd. we strive to be the customer's choice by producing quality salmon in our sustainable aquaculture operations on Vancouver Island. We are ranked #2 globally for sustainability. To prove this, we maintain several international certification standards along with an award winning safety culture.

You will be a member of the Fish Health department in Campbell River, BC. Your team includes a Fish Health Director, a Fish Health Manager, and freshwater and saltwater Fish Health Technicians.

Your goal is to ensure that our operations remain in compliance in the areas of food safety and quality. This requires working with external bodies to ensure timely, accurate and effective information is provided to external bodies. You will be focused on ensuring that a quality product is consistently provided to our customers. Along with those duties you could be involved in all aspects of reporting, data analysis (fish health and production), and fish health management in order to supply information that will optimize fish health for maximum biological performance. You would have a team of fish health technicians to assist you with meeting these objectives when required.

As the Veterinarian, you will receive a competitive salary, a corporate bonus program, company paid benefits and a matching retirement fund.

Primary Accountabilities

- Assist the other veterinarian(s) in managing therapeutants and medicated feed, as well as coordinate imports of drugs and vaccines.
- Participate in the Cermaq Canada's Food Safety & Quality Management Systems to ensure continuous improvement and product safety that ensures we deliver the final product to the highest standards to our customers.
- Conduct fish health and production data analysis then report out the information to the external bodies and internally to the management team and other departments to ensure effective decision making that minimizes risk and expenditures.
- Review fish health protocols to ensure they are up to date and being complied with so that every effort is made to produce optimal stock conditions.
- Participate in internal fish health projects as necessary to continually improve the health and welfare of the fish.
- Participate and provide support to industry fish health and research initiatives that speaks to the sustainability of the operations.
- Participate in regular Fish Health Meetings by contributing expertise and suggesting improvement.

Frequent regional and provincial travel is required. Some international travel may occur.

Cermaq Canada Ltd.

203-919 Island Highway, Campbell
River, BC
V9W 2C2 Canada

+1 250 286-0022

www.cermaq.ca

Your Education and Experience:

- Doctor of Veterinary Medicine (DVM) – licensed in BC or qualified to become licensed in BC
- Experience with salmon production preferred, consideration will be given to those with herd production experience with other species
- Experience with advanced statistical tools and analyzing data is an asset
- Experience coordinating projects, research activities and leading teams is also an asset
- Strong understanding of animal health principles





THE CENTER FOR AQUACULTURE TECHNOLOGIES CANADA

Senior Research Scientist / Study Director - Fish Health

The Center for Aquaculture Technologies Canada, a private aquaculture innovation and research company, is seeking a **Senior Research Scientist / Study Director** to assist in the daily operations of its R&D Facility in Souris, Prince Edward Island. This is a full-time, permanent, position and will begin immediately with the successful candidate reporting to the Director of Fish Health. Our research team focuses on providing high quality contract R&D support and professional services to the global aquaculture industry.

- Study Director/ Principal Investigator for *in vitro* and/ or *in vivo* clinical and research trials
- Writing of protocols and reports
- Analyses of data and production of study reports
- Designing and ensuring scientific integrity of experiments
- Care and maintenance of research animals including husbandry and animal welfare checks.
- Propagation and maintenance of pathogen isolates including use of standard cell culture and microbiological techniques.
- Development and revision of standard operating procedures.
- Timely completion of all projects with a high degree of quality and excellence.

Desired skills/experience/competencies:

- A minimum University degree including Aquaculture; Animal Biology; Microbiology; Parasitology; Virology; Biochemistry; Immunology; Cell Biology/Physiology. Masters or PhD seen as an advantage, but not essential
- Virology and/ or bacteriology experience
- Experience working in a laboratory setting including responsibility for documenting tasks.
- Ability to work as part of a team in compliance with facility standard operating procedures.
- Research experience in a strictly controlled regulatory environment will be considered an asset.
- Willingness to learn new skills and to perform routine tasks.
- Demonstrable organizational skills with the ability to multi-task.
- Self-motivated with a demonstrated ability to think creatively and solve problems.
- Fosters a positive work environment congruent with the company values and philosophy.

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 'Senior Research Scientist/ Study Director' as the subject line.

Applications are accepted until the position is filled; only candidates selected for interview will be contacted.

Combined Anatomic Pathology Residency and PhD with an Aquatic Animal Emphasis – University of Georgia

The Department of Pathology, College of Veterinary Medicine, The University of Georgia (<https://vet.uga.edu/education/academic-departments/pathology/>) in conjunction with the Georgia Aquarium has an opening for combined residency in anatomic pathology and PhD training with aquatic animal emphasis beginning July 1, 2021.

The incoming resident will join a team of 10 residents and a diverse faculty, including 1 certified fish pathologist and 20 ACVP diplomates, with expertise in domestic, aquatic, avian, exotic, wildlife, toxicologic and laboratory animal pathology. This intensive, comprehensive, 5-year training program is designed to meet the eligibility requirements for board certification by the American College of Veterinary Pathologists and meets most requirements for Fish Pathologist certification by the American Fisheries Society. Aquatic pathology experience is focused on the extensive collection of freshwater and marine fishes at the Georgia Aquarium and includes work conducted both at UGA and on-site in Atlanta. Exposure to invertebrates, amphibians, turtles, aquatic birds, and marine mammals occurs periodically. Residency training is augmented by necropsy experience in conjunction with the AAVLD-accredited Athens Veterinary Diagnostic Laboratory, surgical biopsy service to the teaching hospital and private veterinary practices, and a large Zoo, Exotic and Avian Pathology Service. Case-based learning is supplemented with several courses in histopathology, general pathology, and specialty areas (e.g., fish pathology). Additional fisheries related coursework is strongly encouraged.

Graduate training utilizes modern scientific methodology and encourages independent thought, with an emphasis on hypothesis-driven applied or basic research in an area of aquatic animal disease, as well as the development of oral and written communication skills. Teaching in the professional curriculum, participation in seminars, presentations at national meetings, and manuscript publication are also expected of the resident. The starting salary is \$32,631 per year plus tuition support and travel support to regional and national meetings, including training courses.

Applicants must possess a DVM or equivalent degree, must be United States citizens or be eligible for lawful admission to the United States, and must provide evidence of academic strength and interest in anatomic and aquatic animal pathology and research. Top candidates may be asked to participate in phone and/or in-person interviews, although any interested applicant is welcome to visit. Applications submitted by October 9, 2020 are assured full consideration.

For further information regarding the aquatic portion of the training, contact Dr. Al Camus, Department of Pathology, College of Veterinary Medicine, The University of Georgia, Athens, GA 30602-7388, phone: (706) 542-5848, FAX: (706) 542-

5828, or E-mail: camus@uga.edu. For further information regarding the residency program, contact Dr. Elizabeth Howerth (706-542-5833, howerth@uga.edu) or Dr. James Stanton (706-542-2853, jbs@uga.edu).

The following residency application materials must be sent electronically to Ms. Amanda Wages at awages@uga.edu: curriculum vitae, statement of professional goals, and unofficial veterinary school transcripts. Each file should be labeled with the applicant's last name and file contents (e.g., Stanton_CV.pdf). Three letters of reference are also required, but they may be emailed separately.

For the application to be considered, concurrent application to the UGA Graduate school (including official veterinary school transcripts) for the PhD in Comparative Biomedical Sciences program must also be submitted through the Graduate school website

(<https://grad.uga.edu/index.php/prospective-students/domestic-application-information/requirements/>).

The University of Georgia is located in Athens, a vibrant community of 100,000 located in the wooded Piedmont hills of northeast Georgia. Offering the amenities of a cosmopolitan city, the surrounding area also offers a wide variety of lifestyle choices. Athens is located 1½ hours from Atlanta, two hours from the Appalachian Trail, and four hours from the Atlantic coast. The University of Georgia is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status.

Career Opportunity – Job Posting

Opportunity for Appointment - Public

Aquaculture Veterinarian



Competition Details

Referral Number	FLR.19.20.R0865
Employment Type	1 permanent position; 1 temporary position
End Date	March 31, 2021
Division	Aquatic Animal Health Division
Department	Department of Fisheries and Land Resources
Locations	St. John's
Closing Date	open until filled
Salary (scale)	\$45.01 - \$53.19 per hour (CG-46)
Allowances	Click here to enter allowances.

Position Details

Context

<https://www.fishaq.gov.nl.ca/aquaculture/index.html> [Help!](#)

Duties

Reporting to the Chief Aquaculture Veterinarian, this is a highly professional position in aquatic animal health management within the Province. Work involves responsibility for veterinary service to fin (shell) fish producers and researchers in the province including the operation of diagnostic laboratories in St. John's, St. Alban's and Grand Falls-Windsor, the supervision of technical personnel, and participation in the aquatic animal health regulatory program. Key responsibilities include the provision of aquatic animal health service for cultured aquatic animals, response to emergency service needs, conducting active and passive surveillance programs, conducting biosecurity audits and providing evidence-based decision making leading to sound health policy. Preparation and delivery of public presentations will also be required. [Help!](#)

Merit Criteria

Screening Criteria *Use numbered lists only.* [Help!](#)

1. Doctor of Veterinary Medicine
2. Experience with aquatic veterinary medicine
3. Experience conducting biosecurity audits
4. Supervisory experience (asset)

Assessment Criteria *Use numbered lists only.* [Help!](#)

1. Knowledge of aquatic veterinary medicine
2. Knowledge of conducting biosecurity audits
3. Knowledge of disease outbreaks

Human Resources Secretariat – Strategic Staffing Division

Form Revised: December 16, 2019

4. Knowledge of aquatic laboratory practices
5. Knowledge of the aquaculture industry
6. Ability to supervise others
7. Ability to make decisions
8. Ability to manage time and tasks
9. Ability to communicate effectively (verbal)
10. Professionalism

Conditions of Employment

Conditions of Offer *Use numbered lists only.* [Help!](#)

1. Demonstration of Doctor of Veterinary Medicine degree
2. National Veterinary Board Examination Certificate of Completion
3. Eligible for full licensure with the Newfoundland and Labrador College of Veterinarians
4. Proof of Class 5 Drivers License

Conditions of Acceptance *Use numbered lists only.* [Help!](#)

1. Acknowledges requirement for travel by vehicle, vessel, snowmobile and UTV
2. Acknowledges requirement for continuous education and training
3. Acknowledges requirement for performing work in variable weather conditions (on-land and marine)
4. Willing to accept emergency and stand-by on call availability
5. Willing to accept overtime

Applicant Information *Use numbered bullets only.*

For more information about this opportunity please contact: Dr. Daryl Whelan at (709) 729-0387.

1.
 - The Government of Newfoundland and Labrador values diversity in the work place and is an equal opportunity employer.
 - Disability related accommodations and alternate formats are available upon request at any stage of the recruitment process by contacting recruitment@gov.nl.ca, 709-729-0130 or toll free at 1-888-729-7690.
 - Preference will be given to applicants who are legally entitled to work in Canada.
 - Applications must be received on or before the closing date stated for this job posting.
 - It is the responsibility of the applicant to submit an application that demonstrates the required merit criteria.
 - Applications that do not clearly demonstrate the required criteria will be screened-out.
 - All applications must contain accurate contact information, including current mailing address, email address and phone number.
 - All information submitted as part of this application must be factual, complete and current to date of submission.
 - This competition may be used to fill future similar vacancies with the Government of Newfoundland and Labrador.

Stacy A Strickland

From: US Fish and Wildlife Service Fisheries <USFWSFisheries@public.govdelivery.com>
Sent: Tuesday, June 30, 2020 6:01 PM
To: stacy.a.strickland@state.or.us
Subject: New Update Available: New Version of Desk Reference Guide!



U.S. Fish & Wildlife Service

Aquatic Animal Drug Approval Partnership, AADAP Update A Branch of the Fish and Aquatic Conservation Program



The AADAP Update provides recent news and updates from the Aquatic Animal Drug Approval Partnership program and its partners. For questions or to offer feedback, email [Julie Schroeter](mailto:Julie.Schroeter). For more about the AADAP Program, please [visit our web page](#). (Photo/NPS)

NOW AVAILABLE: Newly-updated version of AADAP's Quick Desk Reference Guide!

AADAP's Quick Desk Reference Guide to Approved Drugs for Use in Aquaculture has been updated with the newest indications! This guide is an easy to use resource that outlines which aquaculture drugs are approved by FDA and what they can be used for. Additionally, it contains examples for calculating the amount of each drug to use for a particular situation. You can download the latest version of AADAP's Quick Desk Reference Guide to Approved Drugs for Use in Aquaculture (updated

July 2020) from the [Resources page](#) on AADAP's website. Hard copies of the updated Quick Desk Reference Guide will be available once all AADAP staff have returned to the the office.

The U.S. Fish and Wildlife Service is committed to providing access for everyone. If you need alternative formats or services because of a disability or have any questions concerning a reasonable accommodation, please contact Julie Schroeter at (406) 994-9910 or julie_schroeter@fws.gov.

[Fish and Aquatic Conservation](#)
Contact us: fisheries@fws.gov



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