



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 We still have not been able to take down the old FHS website which is outdated and inaccurate.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

AFS Fish Health Section Facebook Site

The FHS now has a Facebook Page (<https://facebook.com/FishHealthSectionAFS>). Please 'Like' and follow us! Social media is expanding in the scientific arena, and we hope to expand our use for promoting meetings, sharing information, etc. If you have any questions, please feel free to contact Ben LaFrentz (benjamin.lafrentz@usda.gov).

FHS Elections

Reminder to cast your ballot for the following positions. Voting ends on Friday, June 12th. Go to the FHS website to view the candidate biosketches:

<https://units.fisheries.org/fhs/2020/05/07/2020-nominee-biosketches/>.

There has been some confusion about the ballot email sent. It will appear from afsfhs00@gmail.com via SurveyMonkey and you just need to click on the first candidate name to be directed to the full SurveyMonkey ballot.

Vice President:

Anita Kelly
Brandon Taro

Professional Standards Committee:

Anna Forest
Joe Marcino
Megan Shavalier

Policy/Position Development Committee:

David Gauthier
Jesse Trushenski

Technical Standards Committee:

Stephen Reichley

Nilima Renukdas

Nominating and Balloting Committee:

Tim Bruce

Attila Karsi

Nick Phelps

Mark Polinski

Isaac Standish

Policy/Position Development Committee Update

Did you know that the AFS-FHS Policy/Position Development Committee (PPDC) provides a mechanism for generating official policy/position statements by the AFS-FHS? In brief, **any member** of the AFS-FHS can bring a proposed issue, policy, or position statement forward to the PPDC for review and discussion, after which a process outlined in the AFS-FHS procedurals manual (https://1fjduf35czd41a05pqltrtej-wpengine.netdna-ssl.com/fhs/wp-content/uploads/sites/30/2019/09/FHS_Procedures_Manual_2019_revised_final.pdf) will be completed. Importantly, this is a primary mechanism by which any individual member can galvanize the AFS-FHS around a current, emerging, or future issue of importance.

Objectives, Process and Procedures for AFS-FHS Opinions, Positions & Policies

The AFS-FHS PPDC will be embarking on an endeavor to develop new opinions, positions and/or policies on issues that might impact AFS-FHS members and/or provide guidance on important issues. In addition to the usual mechanism described above, we will also be actively seeking input and comments from members on issues that should be addressed and what, if any, related positions/policies might say.

The PPDC envisions that issues to be addressed will fall into three primary categories that can be supported by scientific facts and published information:

1. an **opinion** (what the AFS-FHS thinks about an issue);
2. a **position** (what the AFS-FHS believes **should be** done about an issue); or,
3. a **policy** (what the AFS-FHS believes **must be** done about an issue).

Our hope is that once approved, such outputs will provide guidance to members that may also form the basis for the AFS-FHS to provide comments to other entities and/or advocate for action on an issue.

We also hope to identify any AFS positions and policies (and perhaps those of other organizations) that might be relevant to AFS members on aquatic animal health issues for listing on a future AFS-FHS webpage.

Please stay tuned for further information and as always, we encourage you to bring any issues you feel are important for the AFS-FHS to address to the PPDC.

Wishing you all the best,
Gael Kurath, Carl Smith, David Scarfe, Gary Marty, and Thomas Loch

FHS QA/QC Applications

The application period for the FHS Quality Assurance program for aquatic animal laboratories has opened for the calendar year 2020.

The application period for Tier 1 (prequalification) will be open until May 31, and Tier 2 (Recognition) will be open until June 30.

Currently twelve laboratories have completed the requirements for Tier 1 and the first application for Tier 2 is underway.

Additional details and support documents can be found on the Fish Health Section [website](#), or you can contact QA Committee chair Chris Wilson at 435-757-7493 or at <mailto:wetvet53@gmail.com>.

MEETINGS, WORKSHOPS AND COURSES

Educational Opportunities – Phibro Academy

Phibro Academy is a complimentary educational platform for producers, veterinarians, nutritionists and other industry professionals on business and animal health and nutrition related topics, crossing multiple species. Given today's COVID-19 challenges, professionals around the globe have had to restrict their movement and have lost access to vital training activities. Phibro Academy helps fill the educational void and provides industry engagement by using current technologies and virtual connections. Content includes training resources, e-learning, videos, live and on-demand webinars, as well as materials the Phibro technical teams have presented in recent scientific conferences.

For more information, please see the attached flyer.

Grad Student and Post-doc Virtual Presentation Opportunity

Hello FHS members and friends!

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: <http://z.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 into June.

Everyone, please go [here](#) to sign up. You will notice two tabs...

Presenters (first tab): If you want to present, pick a timeslot and enter your info.

Everyone (second tab): If you want to receive a weekly reminder email from me, please enter your contact info.

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

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

Fish Welfare Symposium

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 in Columbus, Ohio August 29 - September 03, 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

Please consider yourself cordially invited to submit an abstract to participate in our organized symposia. The deadline for abstract submission: Friday, March 20, 2020. Please reach out to the symposium organizers via email if you have any questions or to confirm that you plan to be a part of the session. In addition, please reach out if you have any suggestions on folks we should reach out to who you think would be great additions to the above symposia – particularly those speakers based in Ohio.

The Fish Culture Section is also organizing two other symposia listed below that may be of interest:

- 9380 - *Getting It Right: A Guide To Successful Supplementation For Recreation, Restoration, and Recovery*
- 9391 - *Marking, Tagging, and Tracking* (with the Fisheries Management, Marine Fisheries, and FITS Fisheries Information & Technology Section/American Fisheries Society sections as well as the AIFRB - American Institute of Fishery Research Biologists)

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)

CALL FOR PROPOSALS TO HOST THE 9th INTERNATIONAL SYMPOSIUM ON AQUATIC ANIMAL HEALTH SEPTEMBER 4 - 8, 2022

The American Fisheries Society's Fish Health Section is soliciting proposals to host the 9th International Symposium on Aquatic Animal Health (ISAAH-9), September 4 - 8, 2022. This stimulating gathering of international aquatic animal health professionals occurs every four years, most recently in Charlottetown, Prince Edward Island (Canada) with over 500 attendees representing 34 countries. Past participating professional societies have included the American Association of Fish Veterinarians, the World Aquatic Veterinary Medical Association, the European Association of Fish Pathologists, the Japanese Society of Fish Pathology, and the International Association for Aquatic Animal Medicine, and sponsors have encompassed industry supporters, academic institutions, and government agencies.

Organizations and individuals interested in submitting a bid to host ISAAH-9 are welcome to contact Gary Marty at <mailto:Gary.Marty@gov.bc.ca> before June 1, 2020. For more details, please see attached announcement.

Health and Colony Management of Laboratory Fish

August 9-14, 2020

MDI Biological Laboratory

Bar Harbor, Maine

Link: <https://mdibl.org/course/health-and-colony-management-of-laboratory-fish-2020/>

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, visit the MDI Biological Laboratory course page <https://mdibl.org/education/courses/> or email the Education Office at education@mdibl.org.

JOBS/GRADUATE ASSISTANTSHIPS

PhD Student – Aquaculture Microbiology

Wageningen University & Research

Droevendaalsesteeg, Netherlands

Closes May 30

Link: <https://www.academictransfer.com/en/291598/phd-student-aquaculture-microbiology/>

We are looking for an enthusiastic PhD candidate with a clear interest in one or more of the following research fields: microbial ecology/microbiology, genomics, host-microbe interactions, bioinformatics. A background in aquaculture is strongly desirable.

The aim of the PhD project will be to understand the impact of the aquaculture environment on the host and its associated microbiome, including effects on fish performance. You will use growth parameters in combination with genomic/molecular approaches to assess fish performance (i.e. stress-related gene expression), as well as next generation sequencing and bioinformatic tools to characterize compositional and functional changes within the fish microbiome (i.e. skin, gut, gills) and aquaculture microbiome (i.e. environmental microbes in recirculating system water).

PhD Scholarship

**National Institute of Aquatic Resources, Technical University of Denmark
Kgs. Lyngby, Denmark**

Closes June 1, 2020

Link: <http://www.phd-positions.dk/?p=199642>

The National Institute of Aquatic Resources (DTU Aqua) at the Technical University of Denmark (DTU) invites applications for a 3-year PhD position in the project "Prevalence and consequences of hydrogen sulphide in land-based Atlantic salmon Production (H2Salar)", supported by the Norwegian Research Council. The successful candidate will be employed in the Section for Aquaculture located in Hirtshals in the Northern part of Denmark. Here, we research farming technology, water quality, environmental footprint, as well as the nutrition, welfare and physiology of fish.

Research within farming technology covers recirculation systems, biofiltration, water quality issues, waste treatment and reduced environmental impact. We aim at contributing to the continued development of rearing systems and methods that ensure cost-efficient production with minimum environmental impact. The research focus is on recirculation, biofilter kinetics, water quality, waste treatment and environmental efficiency in both freshwater and saltwater systems. Research within fish feed bridges water quality and fish nutrition. We study amino acid and protein requirements, digestion, and utilization, including the effects of transitioning to plant-based raw materials. Research in metabolism and stress physiology in fish involves nutrition, water quality and general husbandry conditions.

Aquaculture production of Atlantic salmon is increasingly relying on recirculating aquaculture systems (RAS), either for smolt production or for on growing. Operating

RAS under saline conditions carries an increased risk of the formation of hydrogen sulphide. Hydrogen sulphide is toxic at very low concentrations and can result in incidents of mass mortality. Some degree of hydrogen sulphide formation is expected to occur continuously, with the end concentration depending on the formation, as well as the oxidation, rates. The project aims to improve our knowledge of occurring H₂S levels and kinetics in saline RAS for Atlantic salmon and to determine lethal and sub-lethal threshold concentrations. Assessing a combination of physiological and behavioural indicators during acute and chronic exposure should ultimately allow for an assessment of what can be considered safe concentrations and how this may affect the bioenergetics, growth performance and welfare of exposed fish.

Aquaculture Scientist – Genetics and Data Analysis

Cawthron

Nelson – Glenhaven, NZ

Closes June 7, 2020

Link: <https://cawthron.careercentre.net.nz/job/aquaculture-scientist-genetics-and-data-analysis-/nelson-glenhaven/6317>

Cawthron's aquaculture research is transforming the way New Zealand farms seafood.

We work closely with the aquaculture industry, combining a practical multidisciplinary approach with science excellence to realise aquaculture's potential. We lead research in a range of areas including selective breeding of multiple species, shellfish hatchery production, shellfish and finfish physiology, algae production, aquatic health and new species development.

We are seeking an experienced researcher to grow our genetics and breeding team, with the skills and initiative to integrate modern and traditional breeding methods. Suitable candidates will have PhD level expertise in quantitative genetics and/or data analysis. Previous experience in applying genomics tools is also highly desirable. The ideal candidate will have at least 3 years' experience in genetic improvement related research and/or industry breeding programmes. Experience in aquaculture is an advantage but not essential. Remuneration will reflect skills and experience offered.

Postgraduate Research Opportunity in Aquatic Animal Diseases

Oak Ridge Institute for Science and Education

Ames, IA

Closes 6/11/2020

Link: <https://www.zintellect.com/Opportunity/Details/USDA-APHIS-2020-0102>

The U.S. Department of Agriculture's (USDA) National Veterinary Services Laboratories (NVSL) serves as the Animal and Plant Health Inspection Service (APHIS), VS national veterinary diagnostic reference and confirmatory laboratory for

aquatic animal program pathogens, World Organization for Animal Health (OIE) listed diseases, as well as assisting in the identification of emerging unknown etiologic agents causing significant disease problems. This opportunity will focus on next generation sequencing (NGS) and analysis methods for the identification and characterization of OIE listed aquatic pathogens. One overarching objective will be to develop whole genome data sets for OIE listed aquatic animal pathogens that can be used to evaluate and support trace investigations necessary in the event of detection of a high consequence animal pathogen in order to protect domestic and wild aquatic animals and trade opportunities.

The selected participant will have the opportunity to conduct research in a high performance diagnostic laboratory alongside biologists and microbiologists focusing on next generation sequencing (NGS), data pipeline, and analysis methods for the identification and characterization of OIE listed aquatic pathogens, as well as molecular diagnostics where feasible. The participant will collaborate with international subject matter experts (i.e. European Reference Laboratory crustacean and OIE pathogen specific reference laboratories) on aquatic animal diseases important to live animal and commodity trade and will be involved in efforts to obtain specimens for characterization. It is expected that the participant will engage in collaborations with on-site computational biologists and develop collaborations with experts at various national and international research facilities.

Assistant Unit Leader – USGS Cooperative Research Unit Wildlife and/or Fisheries Management

**USGS/Mississippi State University
Starkville, MS**

Closes 6/13/20

The Mississippi Cooperative Fish and Wildlife Research unit is seeking a research scientist with the ability and/or experience to develop a research program on ecological and evolutionary drivers of invasion biology. Importantly, science-based products of this research should provide applied solutions for managers and cooperators of the Unit. The incumbent research program should address aspects such as: (1) species, habitat, and ecosystem impacts of invasive species and responses to directed management; (2) mechanisms of invasion; (3) invasion dynamics; (4) understanding the causes and consequences of large-scale environmental changes (past, present or projected) on species invasions and management, and (5) restoration solutions for postinvasion resilience in communities and ecosystems. Preference will be given to candidates able to address invasion biology of both aquatic and terrestrial systems. The candidate will teach graduate level classes in their area of expertise, supervise graduate students and/or post-doctoral fellows and may pursue additional research relevant to applied fish and wildlife management.

See attached pdf for more information.

Postdoc in Molecular Microbiology of Aquaculture Systems

Aalborg University

Aalborg, Denmark

Closes 16 June 2020

Link: <http://www.phd-positions.dk/?p=200069>

The postdoc position will focus on microbiomes related to aquaculture and is part of a joint EU project on studying the effect of microalgae microbiomes in land-based aquaculture systems.

In this particular project, we want to assemble and apply an advanced omics toolbox on the natural synergy of microalgae and microbial consortia to discover and validate novel bioactive and prebiotic compounds for sustainable use in preventing and treating diseases and promote health in aquaculture.

You will be applying metagenomics and mass spectrometry to study biological composition of microbial communities and the effect of secreted bioactive compounds. Targeted classes include biofilm and microbial pathogens inhibiting enzymes, peptides and small molecules, as well as antiviral natural products.

We expect you to run controlled experiments for functional screening of the microbiomes, isolates and constructed libraries. Samples will be screened for e.g. antibiofilm, antiviral and antibacterial activities.

Postdoc – Wisconsin Sea Grant Keillor Fellowship in Aquaculture

University of Wisconsin – Madison

Bayfield, WI

Closes June 14, 2020

The University of Wisconsin Sea Grant Institute, in partnership with the University of Wisconsin-Stevens Point (UWSP), seeks postdoctoral candidates interested in addressing scientific challenges to advance aquaculture in Wisconsin. This Fellowship will provide a unique educational and career opportunity for a postdoctoral Fellow by placing them at the UWSP-Northern Aquaculture Demonstration Facility (UWSP-NADF) for two years, with the Fellow bringing technical skills to address aquaculture issues and challenges and receiving valuable real-world applied science experience from aquaculture professionals who will serve as mentors. This mutually beneficial partnership will advance the science to support aquaculture in Wisconsin as well as provide a valuable training opportunity for a new aquaculture professional. This position offers a unique opportunity for analyzing data and publishing manuscripts on a variety of species and systems from past projects as well as future research to be conducted at this internationally recognized, state-of-the-art research facility for applied aquaculture research. It is expected that approximately 50% of the position will be focused on past projects and 50% of the position will be focused on new projects.

See attached pdf for more information.

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

Closes June 22, 2020

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 investigate 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.

See attached pdf for more information.

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.

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

AFS Book(s) on Aquatic Animal Health – Solicitation from Parent Society

We would like to offer your Section the opportunity to help steer the development of new books in your field. At the February 2020 mid-year Governing Board meeting in Little Rock, a report from the AFS Special Committee on Books was presented. One of the recommendations of the Special Committee was to request each AFS section to engage in an assessment of book subject needs and opportunities, including identification of possible authors/organizers. This recommendation was put forward as a proposed motion, and was passed by the Governing Board.

Please suggest possible topics to be considered as future AFS books, along with names of possible authors. Topics should be limited to the disciplines represented by your Section. Suggestions for future book subjects and authors can be submitted at: <https://fisheries.org/section-book-ideas/> (password is: books).

Deadline for submitting suggestions is September 16, 2020.

Thanks for your help!

Scott Bonar
President

Aaron Lerner
Director of Publications

Doug Austen
Executive Director



ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8739

Aquatic Animal Health Postdoctoral Research Scholar at UC Davis

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 \$53,460 with full benefits.

How To Apply:

To receive fullest consideration, applications must be received by June 22, 2020. 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)



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).



Seeking postdoctoral applicants for the Wisconsin Sea Grant Keillor Fellowship in Aquaculture

Application Deadline: **June 14, 2020**

Description

The University of Wisconsin Sea Grant Institute, in partnership with the University of Wisconsin-Stevens Point (UWSP), seeks postdoctoral candidates interested in addressing scientific challenges to advance aquaculture in Wisconsin. This Fellowship will provide a unique educational and career opportunity for a postdoctoral Fellow by placing them at the UWSP-Northern Aquaculture Demonstration Facility (UWSP-NADF) for two years, with the Fellow bringing technical skills to address aquaculture issues and challenges and receiving valuable real-world applied science experience from aquaculture professionals who will serve as mentors. This mutually beneficial partnership will advance the science to support aquaculture in Wisconsin as well as provide a valuable training opportunity for a new aquaculture professional. This position offers a unique opportunity for analyzing data and publishing manuscripts on a variety of species and systems from past projects as well as future research to be conducted at this internationally recognized, state-of-the-art research facility for applied aquaculture research. It is expected that approximately 50% of the position will be focused on past projects and 50% of the position will be focused on new projects.

Technical mentors for this fellowship will include: Gregory Fischer and Dr. Christopher Hartleb (UWSP-NADF Directors) with additional general fellowship support from Emma Wiermaa (UWSP-NADF and Sea Grant outreach and education specialist), Dr. Titus Seilheimer, Wisconsin Sea Grant Fisheries Outreach Specialist, and Dr. Jennifer Hauxwell, Wisconsin Sea Grant Associate Director. More information about NADF is here - <https://aquaculture.uwsp.edu>. Additional support from the UWSP NADF team will also be provided.

Below, we list the priority areas in which we seek scientific support and leadership:

- Synthesize existing data on a variety of past fish culture research projects and develop peer-reviewed publications to improve science-based knowledge for fish production. Some examples include:
 - Review project results about the impact of starter microdiets for raising walleye fry for Great Lakes aquaculture and synthesize into manuscripts for publication.
 - Evaluate project results for optimizing walleye stocking density and nutrient recycling in traditional and integrated aquaculture systems including review of project results, compile and analyze data, and prepare manuscripts for publication.
 - Review project results for yellow perch research work and synthesize into manuscripts for publication
 - Review project results for recirculation systems and fish health treatment regimes with the USGS and prepare manuscripts for publication
- Assist with new research projects at NADF:
 - Evaluate approaches for overcoming barriers to support growth of land-based Atlantic salmon production in the Great Lakes Region. This includes working with private-industry partners and agencies. Assist with reviewing data and publication of manuscripts.
 - Assist with a Sea Grant-funded project examining nanobubble oxygenation of recirculating aquaculture systems to increase fish production including design modifications, data collection, analysis, and report preparation.
 - Continue efforts on walleye food-fish production including the commercial application of out-of-season spawning of walleye. This involves developing a culture manual and video series. Publication of white papers related to this effort. Prepare and present project findings to a variety

of audiences, including regulators, scientists, and interested stakeholders. Work cooperatively with Sea Grant, the Wisconsin Aquaculture Association, and other businesses & individuals from Wisconsin's aquaculture community.

Eligibility

Any student or postgraduate who will have graduated between fall 2018 and summer 2020 with a degree in aquaculture, fish biology, or a related field is eligible to apply. Fellows must have completed all degree requirements before starting the fellowship.

Stipend and Expenses

Postdoctoral Fellows earn \$55,000, with additional benefits (see - <http://www.ohr.wisc.edu/benefits/new-emp/grad.aspx>). Fellows will be allotted up to \$4,000 annually to cover fellowship-related travel that can include conferences.

Application Requirements

Application packages should be sent to jennifer.hauxwell@aqua.wisc.edu at the University of Wisconsin Sea Grant Institute and should include:

1. A cover letter that describes your background and abilities, your expectations from the fellowship experience and how this experience fits with your career goals. (2 pages or fewer)
2. Curriculum vitae with relevant educational, professional and volunteer experience. (no length limit)
3. Copies of undergraduate and graduate student transcripts. Scanned copies are acceptable.
4. Two letters of recommendation, including one from the applicant's major professor; if no major professor exists, another faculty member at the same institution, familiar with your academic record, may be substituted. References should email letters directly to jennifer.hauxwell@aqua.wisc.edu.
5. Up to 4 writing samples, both formal and informal (e.g., journal articles or other technical documents, popular articles, web resources, etc.)

Please use the naming convention "Last name – description of file" for all files associated with the application (e.g. "Smith – cover letter", "Smith – cv", "Smith – transcripts", etc.).

Selection Process

Sea Grant and UWSP-NADF staff will identify a short list of candidates for interviews. Interviews will be conducted by a panel of Sea Grant and UWSP-NADF staff members to determine the best fit for the position. It is expected that applicants will possess a strong background in aquaculture and fish biology, strong analytical skills, an ability to manage projects and work independently, and excellent written and verbal communication skills, with the ability to publish peer reviewed scientific journal articles.

Length of Assignment

The length of assignment is for two years with an anticipated start of fall 2020. This timeline may be adjusted to accommodate academic semester needs or the needs of the candidates or funding institutions. This position will generally be located at the NADF facility near Bayfield, WI but may spend time at other campuses (Stevens Point, Madison) or working remotely when possible.

Timeline

June 14, 2020 – Deadline for submission of applications

July 2020 – Interviews

September 1, 2020 (approx.) – Fellowship begins

Additional Information

If you have any questions, please contact:

Jennifer Hauxwell at jennifer.hauxwell@aqua.wisc.edu or (608) 263-4756.



MISSISSIPPI STATE UNIVERSITY™
DEPARTMENT OF WILDLIFE,
FISHERIES AND AQUACULTURE



Position Announcement

Assistant Unit Leader – USGS Cooperative Research Unit Wildlife and/or Fisheries Management

Assistant, Associate, or Full Professor - Wildlife, Fisheries and
Aquaculture Dept., Mississippi State University

This is a federal position (U.S. Geological Survey) that includes a faculty appointment with Mississippi State University. Academic rank will be determined commensurate with qualifications.

Official Job Announcement and Application Process:

DEU - <https://www.usajobs.gov/GetJob/ViewDetails/568256400>

Merit - <https://www.usajobs.gov/GetJob/ViewDetails/568256200>

Salary: GS 12-13, \$76,721-\$118,603 per year, plus a quality benefits package.

The Mississippi Cooperative Fish and Wildlife Research unit is seeking a research scientist with the ability and/or experience to develop a research program on ecological and evolutionary drivers of invasion biology. Importantly, science-based products of this research should provide applied solutions for managers and cooperators of the Unit. The incumbent research program should address aspects such as: (1) species, habitat, and ecosystem impacts of invasive species and responses to directed management; (2) mechanisms of invasion; (3) invasion dynamics; (4) understanding the causes and consequences of large-scale environmental changes (past, present or projected) on species invasions and management, and (5) restoration solutions for post-invasion resilience in communities and ecosystems. Preference will be given to candidates able to address invasion biology of both aquatic and terrestrial systems. The candidate will teach graduate level classes in their area of expertise, supervise graduate students and/or post-doctoral fellows and may pursue additional research relevant to applied fish and wildlife management.

The Mississippi Cooperative Fish and Wildlife Research Unit works closely with state and federal cooperators to conduct research that supports management of fish and wildlife populations in Mississippi and throughout North America. Unit scientists also train graduate students at Mississippi State University (MSU) for careers in state and federal agencies and in academia. The Unit offers a unique partnership among the Mississippi Department of Wildlife, Fisheries and Parks, Mississippi State University, U.S. Geological Survey (USGS), Wildlife Management Institute, and U.S. Fish and Wildlife Service whereby partners work together to design and conduct research that helps solve complex environmental issues.

The Assistant Unit Leader (AUL) will serve in a dual capacity, employed and paid by the USGS, yet holding a separate MSU faculty appointment, without tenure, commensurate with experience and starting at the Assistant, Associate or Full Professor level. The academic appointment will be made in the Department of Wildlife, Fisheries, and Aquaculture. All MSU faculty engage in teaching, research, and service, with research programs supplemented or supported by extramural funding.

Requirements: A Ph.D. in fish or wildlife science or management, natural resources, conservation biology, ecology, or related fields. This is a federal position with USGS. Application procedures follow federal regulations on the USA jobs website as described in the vacancy announcement and will be posted for 30 days from 5/14/20 to 6/13/20.

DEU - <https://www.usajobs.gov/GetJob/ViewDetails/568256400>

Merit - <https://www.usajobs.gov/GetJob/ViewDetails/568256200>

About Mississippi State: Mississippi State University is ranked as one of the top research institutions in the United States. The Carnegie Institute has designated MSU as a "higher research activity" doctoral granting institution. We are also ranked among the nation's top 100 research institutions based on the most recent National Science Foundation survey. The 35-member faculty within the Department of Wildlife, Fisheries and Aquaculture leads one of the most productive research programs in the Division of Agriculture, Forestry and Veterinary Medicine at Mississippi State University. The department has a highly collegial and interdisciplinary group of faculty, post-doctoral fellows, research and extension associates that help make the department one of the premier institutions for applied wildlife and fisheries science in the nation. As one of the fastest growing undergraduate programs in the region, our 320+ undergraduate students concentrate in wildlife agriculture science, human-wildlife interactions, conservation biology, wildlife veterinary medicine, conservation law enforcement, and wildlife, fisheries and aquaculture science. The department also houses over 70 graduate students across a variety of programs, with nearly 100% job placement rate following receipt of a graduate degree. Located in Starkville, MS, Mississippi State is the centerpiece of a growing college town with a vibrant and diverse community and economy, a low cost-of-living, main street family atmosphere and connections to over a hundred thousand acres of national forests, national wildlife refuges, state recreational lands, and coastal ecosystems. For more information on the Starkville community visit: <https://www.starkville.org/>



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.



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