



# Fish Health Section



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

## FHS NEWS

### ISAAH 2018 Update!

The Atlantic Veterinary College (AVC) at the University of Prince Edward Island is proud to partner with the Prince Edward Island BioAlliance and the Fish Health Section of the American Fisheries Society (FHS) to co-host the eighth International Symposium on Aquatic Animal Health ([www.isaah2018.com](http://www.isaah2018.com)). The 2018 event will be held at the Prince Edward Island Convention Centre from September 2 to 6 in beautiful Charlottetown, PEI, Canada.

Please sign up for meeting updates and news at the symposium website ([www.isaah2018.com](http://www.isaah2018.com)). Once at the website, on the right side of the page will be a place to enter your email address to receive important meeting notifications and news.

At this time the organizing committee is placing a call for special sessions and workshops. Please see the attached PDF entitled, "Call for special sessions and workshops ISAAH" for more information.

### Invitation from AVMA Aquatic Veterinary Medicine Committee

The AVMA Aquatic Veterinary Medicine Committee is happy to invite you to submit abstract(s) to be considered for the 2018 AVMA Convention (Denver, Colorado – July 13-17). AVMA is now accepting session (oral) and poster proposals for the general program at the AVMA Convention 2018. Abstracts for proposed presentations will need to be submitted online before Saturday, September 30, 2017.

For more information on how to submit an abstract, please see the PDF entitled, "Invitation for Abstract Submission AVMA Convention (August 20 2017)."

### Needing a Good Home: Historical Fish Parasite Reprint and Monograph Collection

Recently, Glenn Hoffman's extensive fish parasite collection of about 10,000 journal reprints, monographs, technical papers, etc. and another collection of about 10,000 papers on all aspects of fish culture including some parasite contributions were about to be discarded. Most unfortunately, the card files that went with these collections had already been tossed. I had about 15 hours to salvage what I could and was able to grab only the papers with the most obvious historical and scientific value and probably missed many gems. These two collections occupied more than 100 feet of shelf space.

Most of what I salvaged from Glenn's collection and from parasite papers found in the other collection were original monographs and journal reprints of early fish parasitologists (a few copies of papers are included). Most have author's name and date written by Glenn and several have Glenn's last name on the covers or first page of the reprints. Since Glenn received RV Bangham's collection a number of years earlier, several of the reprints also bear Bangham's name signed on the covers. I saw other signatures on the reprints including CB Wilson's and GW Hunter's and there are probably other signatures that I did not observe.

The following authors' works were salvaged; the authors below are listed by name and the number of papers for each is given in parentheses followed by year of first publication in collection. Collection also contains some letters to Glenn from the author (these are not part of the count).

RV Bangham – (22) 1925 (plus seven files of manuscript data—some of which may not have been published)

RM Cable – (26) 1931

WW Cort – (38) 1915

HS Davis – (18) 1916 (includes four photo plates from his early myxosporidian paper)

HE Essex – (4) 1926

EC Faust – (6) 1918

MS Ferguson – (4) 1940

JH Fishthal – (31) 1942

JE Guberlet – (3) 1926

RC Hughes – (12) 1927

GW Hunter – (31) 1927 (includes envelope of host record cards)

WS Hunter – (2) 1928

RR Kudo – (12) 1919 (includes the 1919 monograph of Myxosporidia)

GR LaRue – (18) 1914

E Linton – (6) 1893 (plus copy, not original, of 1891 150+ page publication)

HW Manter – (38) 1927

JD Mizelle – (44) 1936

JF Mueller – (21) 1930

RF Nigrelli – (20) 1929

HL Osborn – (6) 1903

AS Pearse – (7) 1939

EW Price – (38) 1927

W Schaperclaus (21) 1961 (most in German)

SF Snieszko – (about 50) 1941 (includes two file folders of letters)

HW Stunkard – (about 70) 1923

HJ VanCleave – (about 80) 1918 (coauthored several with Mueller)

HB Ward – (6) 1916

HL Ward – (15) 1937

CB Wilson – (7) 1904 (plus two papers of MS Wilson-1949 and photos from 1915 pub)

All the papers from the authors given above are contained in 14, 4-inch file containers. Each author's work is separated from other authors by a file folder with the name of author written on the tab. This whole collection should take 4.5 to 5.0 feet of shelf space (less than 1/20<sup>th</sup> of the original length of the two collections).

Additionally, There are some papers by OM Amin, GW Esch, LE Mawdesley-Thomas, CE Price, CJ Sindermann and several other less well known authors (those with the

earliest publications are E Vincent – 1910, WM Smallwood 1914, JW Mavor 1916, and O Nybelin 1918). Overall these would take another 6 inches of shelf space.

If you are interested in providing a good and stable home for this collection, willing to share the information by making an occasional copy for a requester, and willing to pay shipping please contact: Andrew (Drew) Mitchell, [grandrew@comcast.net](mailto:grandrew@comcast.net)

## **STUDENTS AND EARLY CAREER MEMBERS**

### **Funding Opportunity for Graduate Students and Post-Doctoral Fellows for Travel Support to Attend the 8<sup>th</sup> ISAAH**

The Canada Excellence Research Chair (CERC) in Aquatic Epidemiology is committed to world-leadership in aquatic epidemiology with a focus in ecosystem health. As part of its mandate, the CERC is building global capacity and supporting research in regions such as Asia, central and South America, and Africa where there have been limited opportunities for research in aquatic epidemiology and presentation of research findings at international meetings.

Applicants should be PhD students or post-doctoral fellows whose research focus is aquatic epidemiology or ecosystem health at the time of abstract submission. Masters students with outstanding records of scholarship and PhD students graduated less than 1 year and working in aquatic animal health will also be considered for funding. Preference will be given to applicants outside of Canada and the U.S.A, and especially those from the regions listed above.

For more information on the application process and deadlines, please view the PDF entitled, "CERC Student Travel Awards Announcement July 21".

## **MEETINGS, WORKSHOPS AND COURSES**

### **Fish Feed & Nutrition Workshop Brudenell, Prince Edward Island September 11-14<sup>th</sup>, 2017**

This workshop is an industry-focused event that takes place every other year in various locations across North America. The workshop is designed to provide a forum for discussion similar to the larger International Symposium on Fish Nutrition and Feeding but with a focus on fish feed and nutrition activities in Canada, Mexico and the USA. The schedule includes presentations on basic and applied topics while leaving plenty of time for interactions and healthy debates (conflicting viewpoints are recognized as passionate engagement!). The workshop is designed to provide a casual atmosphere with only one room and one talk at a time. The agenda covers current challenges that

the industry is facing, reviews key research focus areas and offer creative solutions and opportunities to the challenges ahead.

For more information, please visit the workshop website:

<https://ffnw17.com/>

## **JOBS/GRADUATE ASSISTANTSHIPS**

### **Aquatic Animal Health Program Manager Maryland Department of Natural Resources Oxford, MD**

The Department of Natural Resources, Fish Health and Hatcheries Program at the Cooperative Oxford Laboratory, is currently accepting applications for an Aquatic Animal Health Program Manager (Program Manager II). The purpose of this position is to lead all aquatic animal health initiatives for the unit.

For more information on this position, please visit the following website:

<https://www.jobaps.com/MD/sup/bulpreview.asp?R1=17&R2=005477&R3=0018>

### **Fish Pathologist Connecticut Department of Agriculture – Bureau of Aquaculture Milford, CT**

The Connecticut Department of Agriculture is seeking a Fish Pathologist. The individual in this role, performs specialized duties in development, design, implementation and maintenance of state fish and/or shellfish health management programs; serves as agency primary source of professional knowledge of fish and/or shellfish pathology; develops guidelines for prevention and/or minimization of spread of fish and/or shellfish disease; oversees all activities involved in fish and/or shellfish health including inspection of facilities and examination, diagnosis and treatment or disposal of diseased or parasitized fish and/or shellfish; implements fish and/or shellfish disease immunization programs; monitors environmental quality of water; performs activities necessary to certify fish, shellfish and fish eggs are disease free; prescribes corrective measures for water chemistry problems; prescribes changes in hatchery operations to improve fish health and utilization of materials and supplies; establishes disease status of state owned and commercial hatcheries; may oversee and/or conduct investigations of communicable fish and/or shellfish diseases and other fish and/or shellfish problems in natural and/or marine waters; may train hatchery staffs in use of guidelines for prevention, identification, treatment and control of fish and/or shellfish disease; performs related duties as required.

For more information on this position, please see the PDF entitled, "Fish Pathologist 011376".

**Associate Project Leader (Fish Animal Health)**  
**MSD**  
**Singapore**

MSD in Singapore is looking for motivational individuals who demonstrate the ability to manage high profile research programs. Candidates should be a Veterinarian with a proven track record in research or should possess a Ph.D from a recognized university in bacteriology, virology or immunology preferably involving the study of fish diseases. She/he will conduct, coordinate and lead research projects towards the development of vaccines for aquatic animal animals.

Candidate should have at least 2-3 years of post-doctoral or over 5 years of relevant experience in a research environment. Practical knowledge of bacteriology, virology, immunology, or vaccine development required. Thorough knowledge of fish, fish immunology and fish pathogens would be advantageous. Ability to take up multitask activities and to work in a multicultural team is essential for the role. Incumbent should be able to communicate freely in English and interact effectively with team.

For more information on this position, please see the PDF entitled, "Associate Project Leader - MSD, Singapore".

**Principal Executive/Manager D (Senior Fish Pathologist)**  
**Oregon Department of Fish and Wildlife, Fish Division**  
**Corvallis, OR**

Oregon Department of Fish and Wildlife is seeking applicants for a Senior Fish Pathologist position. Duties and roles include providing administrative, supervisory and technical leadership for the Department's Fish Health Services Program. The Senior Fish Pathologist will supervise fish health technicians, fish health specialists, and a fish virologist in planning and preparing budgets, providing fish health diagnostic and monitoring service to the fish hatcheries and districts. Recommendations regarding fish health concerns in importation, fish transfers and disease control are provided to Department administrators.

For more information on this position, please click the link below:

<https://www.governmentjobs.com/careers/oregon/jobs/947399/principal-executive-manager-d-senior-fish-pathologist>

**Microbiologist and Fish Farm Tech Position**  
**Pacific Seafood**  
**Nespelem, WA**

Pacific Seafood is seeking applicants for a Microbiologist position. The incumbent will be under the direction of the veterinarian and the site operations manager, perform projects and assist in research related to fish health and mortality. Work closely with site management to identify and remedy the challenges to fish health that are present. Duties support the maintenance and operation of the disease laboratory. For more information on this position, view the PDF document entitled, "Microbiologist \_REV082016".

Pacific Seafood is also seeking applicants for a Fish Farm Tech II position. The incumbent will be responsible for all operations of the farm including feeding, harvesting, and inventorying. Manage Tech I team members in carrying out operational duties. Maintain accurate site operation records and weekly site report. For more information on this position, view the PDF document entitled, "Fish Farm Technician II".

**Postdoctoral Fellow/Research Scientist (Fish Health/Immunology)**  
**University of Idaho**  
**Moscow, ID**

The Postdoc/Research Scientist will take the lead on one or more projects related to vaccine development/commercialization, immunology, or fish health/disease management. The ideal candidate will have completed Ph.D. studies in a relevant biological discipline or have previous postdoctoral experience. The individual must be a leader and possess excellent verbal, written and technical skills. A demonstrated record of accomplishment is required. The successful applicant will be expected to produce research reports as required and publish in appropriate high quality journals. It is expected that the candidate will work with the PI to pursue outside funding support for new and ongoing projects. This position industry supported and offered as a one-year contract contingent upon further funding.

For more information and how to apply, please see the word document entitled, "Postdoc Res Scientis job add".

**RESOURCES/NEWS**

**Journal of Aquatic Animal Health**  
**New Issue Contents**  
**Volume: 29, Issue: 3, 2017**

**Influence of Temperature on the Efficacy of Homologous and Heterologous DNA Vaccines against Viral Hemorrhagic Septicemia in Pacific Herring (p. 121-128)**

*Lucas M. Hart, Niels Lorenzen, Katja Einer-Jensen, Maureen K. Purcell & Paul K. Hershberger*

**Selection and Evaluation of Indexes Commonly Used to Determine Contamination with T-2 Toxin in Pacific White Shrimp *Litopenaeus vannamei* by the Grey Relational Method (p. 129-135)**

*Pengli Lu, Yaling Wang, Zhe Dai, Lijun Sun, Defeng Xu, Ying Liu, Riyong Ye, Ravi Gooneratne & Siyuan Bi*

**Potential Noncutaneous Sites of Chelonid Herpesvirus 5 Persistence and Shedding in Green Sea Turtles *Chelonia mydas* (p. 136-142)**

*Annie Page-Karjian, Nicole L. Gottdenker, Jordyn Whitfield, Lawrence Herbst, Terry M. Norton & Branson Ritchie*

**Primary Isolation and Characterization of *Tenacibaculum maritimum* from Chilean Atlantic Salmon Mortalities Associated with a *Pseudochattonella* spp. Algal Bloom (p. 143-149)**

*Patricia Apablaza, Kathleen Frisch, Øyvind Jakobsen Brevik, Sverre Bang Småge, Camilla Vallestad, Henrik Duesund, Julio Mendoza & Are Nylund*

**Phylogenetic Variation of Chelonid Alphaherpesvirus 5 (ChHV5) in Populations of Green Turtles *Chelonia mydas* along the Queensland Coast, Australia (p. 150-157)**

*E. Ariel, F. Nainu, K. Jones, K. Juntunen, I. Bell, J. Gaston, J. Scott, S. Trocini & G. W. Burgess*

**Renal Cystic Adenocarcinoma in a Flowerhorn Cichlid with Metastatic Involvement of the Spleen (p. 158-164)**

*Hooman Rahmati-Holasoo, Sara Shokrpoo, Majid Masoudifard, HosseinAli Ebrahimzadeh Mousavi, Ali Haddadi & Amir Tavakkoli*

**Subacute Toxicity Effects of Deltamethrin on Oxidative Stress Markers in Rainbow Trout (p. 165-172)**

*Antonia Concetta Elia, Federica Giorda, Nicole Pacini, Ambrosius Josef Martin Dörr, Tommaso Scanzio & Marino Prearo*

**Tracing Dietary Mercury Histochemically, with Autometallography, through the Liver to the Ovaries and Spawned Eggs of the Spot, a Temperate Coastal Marine Fish (p. 173-180)**

*John J. Govoni, James A. Morris Jr. & David W. Evans*

**FDA Clarifies Policy Guideline on Extralabel Use of Veterinary Feed Directive Drugs**



One of the highlights of the 23rd Annual Aquaculture Drug Approval Coordination Workshop held August 1-3, 2017 in Bozeman, MT, was the series of presentations and panel discussion of Veterinary Feed Directives (VFDs) led by Dr. Mike Murphy (CVM Office of the Director, Science Policy Team).

The VFD-themed session was organized because there has been considerable confusion over extra-label use of VFD drugs as described by the Compliance Policy Guideline (CPG) released in December 2016. Although such use is illegal, Dr. Murphy pointed to the sentence in the Guideline (CPG 615.115; page 5) that states "In general, the Agency [FDA] will not recommend or initiate enforcement action against the veterinarian, animal producer, feed mill, or other distributor when extralabel use is consistent with this document."

Compliance Policy Guideline 611.115 is for Minor Species only and can be viewed [on this web page](#).

The document contains useful information and veterinarians will probably be probably very familiar with what is described in the (1) General Considerations and (2) Veterinarian Considerations sections.

What may be of most interest in this document is the Veterinary Feed Directive (VFD) Medicated Feed subsection that covers what a veterinarian must do when authorizing the extralabel use of a VFD medicated feed for a minor species (i.e., fish).

It should also be pointed out that CPG 615.115 can be rescinded. Therefore, there needs to be a concerted effort to ensure compliance with extralabel use of VFD medicated feeds. In addition, it would be well advised, to let the sponsor, AADAP, and CVM know when extralabel use occurs so we can more strategically coordinate research to expand the approved label accordingly.

For more information on veterinarian responsibilities when authorizing extralabel use of a VFD medicated feed for fish visit [FDA Revises CPG on Extralabel Use of Medicated Feeds for Minor Species](#).