



# Aquatic Veterinary News

Volume 3, Number 2

World Aquatic Veterinary Medical Association

2nd Quarter 2009

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## Call for 2010 Officers & Director-at-Large

### Call for Nominations

It's the time of the year to think about nominations for WAVMA's leadership to serve in office for January 1 – December 31, 2010. If you are interested in supporting WAVMA in a leadership position, or know suitable candidates who would like to participate in a leadership role in WAVMA, please contact Secretary Chris Walster for a nomination form (Email: [chris.walster@onlinevets.co.uk](mailto:chris.walster@onlinevets.co.uk)) or download it from the WAVMA website: <http://www.wavma.org/index.cfm/id/37>. You must be a full member of WAVMA, and it is acceptable for WAVMA Members to self-nominate.

Positions open for election:

- President-Elect (will serve as President in 2011)
- Secretary
- Treasurer
- Director-at-Large (2 positions)

### **Nominations close on June 18, 2009.**

Background information of all nominees, along with absentee ballots will be uploaded to [www.WAVMA.org](http://www.WAVMA.org) on June 20. The deadline for submitting absentee ballots will be July 3, 2009. These will be counted along with ballots cast at the WAVMA 2009 Annual General Meeting on July 14, that will be held in conjunction

with the 146<sup>th</sup> AVMA Annual Convention, July 11-14, 2009 in Seattle, WA.

Everyone is encouraged to attend the WAVMA Annual General Meeting – see <http://avmaconvention.org> for registration, accommodation and other Convention related activities including details of the aquatic veterinary continuing education sessions at the AVMA Convention.

In addition, WAVMA will have a booth at the AVMA Convention Tradeshow and you all are invited to visit. If you have time, come and help promote the opportunities in aquatic veterinary medicine to your veterinarian colleagues.

Moreover, WAVMA is planning evening programs on July 12 and 13.

**Roundtable Discussions on Aquatic Diseases Symptomatology, and Diagnostics & Therapeutics** – (see page 17 in this issue for more information about the evening programs at AVMA).

**Come join us for an entertaining time, good company, and lots of great Continuing Education and Professional Development. Attend the WAVMA AGM and the Aquatic Diseases Program at the AVMA Convention.**



*One Profession; One Discipline; One Voice – Cohesive & Inclusive!*

**EDITOR'S NOTE**

Communications! That is what the WAVMA is all about. Getting you—the Aquatic Veterinary Practitioner—the information you need, when you need it. Use the tools that WAVMA provides: submit articles or comments for the newsletter (this AVN that you are - hopefully completely - now reading), send comments to all members or ask questions using the email Members Listserv, and check out what's happening on the [WAVMA.org](http://WAVMA.org) website.

These communication tools will help you as a practitioner find answers to questions about cases you are having, or keep you up to date on important legislation or disease outbreaks. But the value of these tools depends on the contributions of all WAVMA members. The more you use them, the more useful they become!

When I first started practicing Aquatic Veterinary Medicine in 1984, there were few textbooks available, and not many places to turn for help.

Many times I would be stumped with a case I was working on, and often my only resource was an outdated aquarium hobbyist book. Well, times have changed and not only do we have several excellent veterinarian-written textbooks on fish diseases and treatments, but we have access to hundreds of other veterinarians who are practicing fish medicine on a daily basis!

One thing we can do as an organization is to get to know these other fish vets who are WAVMA members! In this issue, we are profiling a private practitioner who treats pet fish: Dr. Brian Palmeiro. See the article about our colleague on page 8. If you would like to be profiled in a future issue, please send me your information.

Don't live in the past! Make sure you are a member of WAVMA and actively participate - not only for the benefit of the other members, but for the benefit of you and your aquatic patients.

**Nick Saint-Erne, DVM**

AVN Editor

[saint-erne@q.com](mailto:saint-erne@q.com)

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\$110 per issue for ½ page,

\$60 per issue for ¼ page,

\$40 per issue for 1/8 page.

**Sponsors** get a **free** listing in our sponsor section and ½ price on any display ads they place in the AVN Newsletter.

**WAVMA MEMBERS:**

Share your contact information - Email me a digital image of your veterinary business card for a **free** insertion into the next AVN newsletter!

E-mail your advertising copy to [saint-erne@q.com](mailto:saint-erne@q.com)

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## EXECUTIVE REPORTS

### President's Report

**Fish vets unite!** As a WAVMA call to action, this is viewed by some as a little too narrow of focus on one aquatic species group, with the implied exclusion of others. As with any society, or the veterinarian profession as a whole, this Association is comprised of a diverse group of individuals with imbedded philosophies and very strong points of view. Of course, all members are invited to hear the discourse at our weekly **Tuesday conference calls** which are free through Skype. Just obtain a Skype account, let me know your name, and I will add you to the list and dial you in. We are trying to make these regular (4 pm GMT, 11 am EDT, 8 am PDT, etc.) and, respecting everyone's valuable time, are kept strictly to one hour. There are some interesting and passionate discussions on WAVMA and aquatic veterinary medicine. As the Association struggles in its adolescence, and in talking to "fish vets" around the world (both WAVMA members and non-members), there certainly are many ideas on how things should be run and done.

In an effort to try and come to grips with how best to proceed, last fall much of the WAVMA board plus some interested members took a weekend out of their busy schedules to meet in Chicago for a "Strategy Planning Summit". Notes will be posted on the website in a members-only section, once the website gets revamped (a major priority, however funds are lacking). In short, we tried to map out the direction of your Association over 2009 and for the next few years. Of course a whole day proved to be too short, but we made some significant progress. The meeting started with everyone giving the facilitator their desired outcomes for the day. This ranged from: how we would be inclusive throughout the world; to defining member benefits; to arriving at consensus; to having clear timelines and deliverables; to facilitating interface with regulatory agencies; to defining our target member (which most agreed was the private clinical practitioner). We tried to define our target audience (both individuals and other associations). We inventoried the competition (other fish health organizations), and we listed the products, programs and services that WAVMA should offer. There was considerable discussion on the issues most affecting aquatic veterinari-

ans and aquatic veterinary medicine. These included: regulations; lack of client awareness; non-vets traditionally filling vets' roles; economics of practice; lack of clinical research; lack of approved drugs and biologics; drug accessibility to clients; scarcity of aquatic curriculum; definition of an "aquatic animal"; lack of credentialing; difficulty in extracting our particular patients from their ecosystem; client diversity range; and the branding message: "fish is a veterinary animal".

Yes, as you can imagine, the discussions were very interesting and went on over many beers late into the nights. The session ended with an inventory of strengths, weaknesses, accomplishments, and value of WAVMA. Noteworthy strengths of aquatic practitioners are their clinical and economic/business foci. Noteworthy weaknesses are the view that vets are not traditionally recognized as caretakers of aquatic animals, and that operating a global organization such as WAVMA, which has a relatively small base, is a considerable challenge.

So, since Chicago, the majority of the WAVMA Board believes the future success of WAVMA, and a strong international aquatic veterinarian presence, is contingent on two key elements: 1) a good website, and 2) aquatic animal medicine certification/accreditation. The essentials to the website deemed necessary are: a) a communication tool between veterinarians across the globe (upscaled listserver) and: b) an educational tool which concentrates on something that is missing from the aquatic health field: clinical case studies. On the former, WAVMA needs to continually monitor and inventory the issues important to aquatic veterinarians around the world, communicate these to its membership, and act on those issues where there is a large enough or broad enough consensus. A properly designed and run website is an invaluable tool to help coordinate opinion and action. On the latter, I can envision a "grand rounds" type of section to the website which will expose practitioners to interesting cases around the world. Eventually, this would become a searchable database where cases and individuals involved could be inventoried and tapped into for their expertise on their respective fish health issues, creating a global web of unprecedented expertise and collegiality.

On the accreditation issue, many believe that the time has come to move on

aquatic animal medicine accreditation and make this a WAVMA initiative, with corresponding benefits to WAVMA members.

As per my own personal opinions on where WAVMA should go, I have always believed that this organization should first and foremost focus on making the private practice of fish medicine a financially viable one (ornamental and farm). The key to doing this is putting efforts toward making fish a "normal veterinary animal" both within the veterinary profession and from a lay-perspective. WAVMA became a separate entity, instead of affiliating with existing organizations, because there needed to be an association that was an advocate for fish veterinarians. To this, I feel that WAVMA would best serve fish medicine by, firstly, developing a public policy on "what constitutes the practice of fish medicine". We have been skirting this issue for 20 years and it is time to be bold and draw a line in the sand, working towards settling this once and for all. This does vary from country to country, and even within provinces and states of some countries, so after we develop a policy ("ideal"), we can hold it up to various practices around the world and see where it matches and doesn't match.

Secondly, legal drug use, regulation and enforcement greatly lags other forms of veterinary medicine, somewhat in fish farming, but especially in the ornamental sector. There are signs in many countries that regulators would like this to change, but are finding it difficult to figuring out how to proceed. Veterinarians can greatly aid in this, and benefit both the profession and the aquatic animal health field, bringing the standards up to that of traditional medicine. WAVMA should take leadership in this.

Those are my two cents. For more on these and other issues, sit in on a Tuesday call and see where you fit in and, if you want, lend your point of view! And/or give me a call: **(425) 821-6821** or an email ([hughm@aqualifesci.com](mailto:hughm@aqualifesci.com)) with any comments, suggestions or catcalls. Hope to see you in Seattle for the AGM this summer, at the same time as the American Veterinary Medical Association meeting. We hope to get future meetings out of North America. Suggestions are very welcome.

**Hugh Mitchell, DVM, MSc**  
WAVMA President 2009

## Secretary's Report

The 2009 WAVMA Annual General Meeting will be held on the evening of July 14<sup>th</sup> during the AVMA Convention, Seattle, Washington, USA. All members are welcome to attend. Further details are in this newsletter.

Nominations have now opened for 2010 Officers and Directors at Large, and close on the 18<sup>th</sup> of June. It's the time of the year to think about nominations for WAVMA's leadership to serve in office for January 1 – December 31, 2010. If you know of suitable candidates (or are interested yourself) consider completing the nomination form found at <http://www.wavma.org/index.cfm/id/37> and returning it to the Secretary ([chris.walster@onlinevets.co.uk](mailto:chris.walster@onlinevets.co.uk)). You must be a full member of WAVMA and it is acceptable for WAVMA Members to self-nominate.

In an effort to expand communications and discussions among WAVMA members, and recognizing some difficulties in subscribing to WAVMA's listserv, we are going to add all present and past members not already subscribed to the WAVMA Members-L email listserv. This will have been completed by the time you read this edition of the AVN.

We believe that you'll find Members-L extremely useful for new hints, tools and techniques for practicing aquatic veterinary medicine. You will be able to receive and inform other aquatic veterinarians of emerging issues – from diseases, diagnostics and treatments, to information on jobs, CEPD opportunities and legislation and regulations affecting aquatic veterinary medicine. And it's all driven and discussed by WAVMA members.

Please note that WAVMA Members-L is restricted to current and past WAVMA members who are all veterinarians or veterinary students. Although we currently allow past members to subscribe (until the end

of July), the WAVMA Executive Board reserves the right to have WAVMA Members-L restricted to members in good standing. Should you require further information on the Members-L then please contact the Secretary.

This last quarter seems to have been particularly busy with weekly Executive Board conference calls, further preparations for the IABC, the start of preparations for the WAVMA AGM and representing WAVMA at a couple of meetings. In conjunction with the Communications Committee, further progress has been made with the revamp of the website.

The weekly EB conference calls are held via the internet using Skype ([www.skype.com](http://www.skype.com)) and are open to all members and last for about one hour. At present they are held on a Tuesday but do move around a bit to accommodate member's needs. If you are interested in joining in on a call then contact one of the EB members for further details (<http://www.wavma.org/index.cfm/id/38>).

The International Aquaculture Biosecurity Conference ([www.iabconference.org](http://www.iabconference.org)) seems to be reaching the home straight now after a couple of years in the developing, and those of you who have the slightest interest in biosecurity should consider attending. Being a co-organiser is a big commitment for WAVMA, but demonstrates its international capabilities, potential to drive an agenda and cooperate with numerous national and international entities. Even after the conference it would seem that this is a project that will develop even further. Plans to publish a textbook based on the conference presentations and a practical manual are well developed and a publisher is involved. Even before the conference is held there have been enquiries to hold further conferences and develop workshops.

I was fortunate enough to represent WAVMA at the 11<sup>th</sup> Aquaculture Insurance and Risk Management Conference held in Dubrovnik, Croatia following an invitation to WAVMA from the conference organiser, AUMS Ltd. ([www.aums.com](http://www.aums.com)). The conference provided an interesting insight into the concerns, needs and practices of the aquaculture insurance industry, and the level of knowledge on health issues amongst many others was impressive. The conference proceedings currently are not freely available but I would recommend visiting <http://www.aquacultureinsurance.com/index.cfm?p=6601> and looking at the proceedings from previous conferences. The website provides much useful information on and contacts in the insurance industry. It appeared to me, talking to delegates, during the conference that the industry recognises a need for close cooperation with veterinarians and WAVMA will continue to work closely and promote further ties with the industry to the benefit of veterinarians, the insurance industry and clients.

The revamp of the website continues to inch forward. Looking back through previous committee minutes the revamp was supposed to have been completed around the start of 2008. In an age when it is possible for anyone to set up a website using commercially available software, literally overnight, it seems incredible that the project has still not been completed. There are many reasons why the project has been so slow but I would like to highlight two. Firstly it is important to ensure it projects the correct image and provides the services and facilities WAVMA members require. It is member's money being spent so it has to be spent wisely. Secondly, is that there has been considerably more input required than originally envisaged and with only a few people involved, meeting on a



## Secretary's Report—continued

monthly basis, progress was bound to be slow. There is always a need for more people to become involved in running WAVMA and once again if you have some spare time and feel you can contribute get in touch with any of the Board members or committee chairs (contact details - <http://www.wavma.org/index.cfm/id/38>).

There is also a need for people to provide content for the website so if you have any pictures, articles or useful information such as presentations, clinical reports, novel treatments or just good educational material that you would like to share then please send it in.

Once the new website is up and running much of the content will be members only, so if you have yet to renew your membership this year then please send your dues to the Treasurer.

As ever, the more people who are actively involved in WAVMA the sooner WAVMA can achieve its aims. Hopefully by the time of the next AVN I will be able to report that the new website is up and running, there were several candidates for each of the positions up for election and WAVMA has started several more projects.

**Chris Walster**  
WAVMA Secretary  
[chris.walster@onlinevets.co.uk](mailto:chris.walster@onlinevets.co.uk)

## WAVMA COMMITTEE REPORTS

### Communications Committee

We are accepting display advertising in future issues. If your company would like to advertise in the AVN newsletter, please contact the editor. See display advertising rate box on page two for more information. For all WAVMA members, we will publish a FREE business card advertisement. Email a digital image of your business card for insertion in the next issue to [Saint-Erne@q.com](mailto:Saint-Erne@q.com)!

Any member who has experience designing or managing websites is asked to volunteer a bit of time to help maintain and update the WAVMA website. Contact the Secretary, Chris Walster ([chris.walster@onlinevets.co.uk](mailto:chris.walster@onlinevets.co.uk)).

The Communication Committee has a Skype conference call the first Saturday of each month. Contact me if you would like to join in!

**Nick Saint-Erne, DVM**  
WAVMA CC Chair  
[saint-erne@q.com](mailto:saint-erne@q.com)

### Meetings Committee

The Annual General Meeting of WAVMA will be held on Tuesday evening, July 14, 2009 in conjunction with the AVMA meeting in Seattle, Washington. At this meeting we will vote for new officers for 2010. For those members who are not able to attend the meeting, absentee ballots can be cast by July 3rd. The absentee ballots and backgrounds of the nominees will be posted on the WAVMA website by June 20, 2009.

Along with the Annual General Meeting, there will be four full days of Aquatic Animal Medicine Continuing Education programs from Saturday to Tuesday at the AVMA meeting. See the complete schedule of speakers in this issue of Aquatic Veterinary News.

Contact me for further information about any of the meeting events. Hope to see you at the meeting.

**Julius M. Tepper, DVM**  
Meetings Committee  
[cypcarpio@aol.com](mailto:cypcarpio@aol.com)

**PLEASE FEEL FREE TO CONTACT ANY OF THE WAVMA EXECUTIVE BOARD MEMBERS OR COMMITTEE CHAIRS ON ISSUES INVOLVING THE ASSOCIATION.**

**REFER TO THE "CONTACT CORNER" ON PAGE 28 OF THIS NEWSLETTER FOR EXECUTIVE BOARD AND COMMITTEE CHAIR'S CONTACT INFORMATION.**

## Aquatic Veterinary News Welcomes These New WAVMA MEMBERS:

### Full Members

**Foytini Athanassopoulou** – University of Thessaly, Trikala, Greece

**Rachel Chiasson** – Milwaukee, Wisconsin, USA

**Peter McKenzie** – McKenzie Aquatic Veterinary Services, British Columbia, Canada

**Mary Mouriz** – Key West, Florida, USA

**Jan Myburgh** – University of Pretoria, Karenpark, South Africa

**Jason Randall** – Animal Hospital of Woodstock, Illinois, USA

**Angelique Schultz** – Altadena, California, USA

**Frank Virga** – North of the River Veterinary Hospital, California, USA

### Allied Veterinary Organization Member

**Eastern Aquaculture Veterinary Association** – Canada/USA

### Student Members

**Cassandra Hill** – Virginia-Maryland Regional College of Veterinary Medicine, USA

**Amanda Kilby** – University of Pennsylvania, School of Veterinary Medicine, USA

**Sarah Wissmann** – Iowa State University, College of Veterinary Medicine, USA

## ASSOCIATION'S ENDEAVORS

There has been some interesting discussions on the WAVMA listserv recently. Be sure to sign up for the members listserv.

### QUESTION:

I'm writing a paper for my clinical pharmacology course regarding antibiotic therapy in koi. I'd like to include information about the costs of diagnostic tests to the owner but that information is nearly impossible to find. So--to all your private practitioners: what is an average cost for a pond visit, water tests, cytology (gill and skin), culture and sensitivity, and some antibiotic costs?

My scenario is a koi pond with water quality problems and secondary *Aeromonas hydrophila* and *Pseudomonas fluorescens* bacterial infections.

Thanks for your help in this!

### Casey Hill

Class of 2010

Virginia-Maryland Regional College of Veterinary Medicine  
Aquamed class of 2008

## MEMBER'S LETTERS

Hi all,

I had a Pre-Vet student ask me today if I could give her some advice as to how to become an Aquatic Animal (mostly fish) Veterinarian. She has about 2 years before she will be in veterinary school. I know that in this group there are veterinarians that have been involved with fish health a long time and I was wondering if anyone would be willing to send me their recommendations for her quest. Thank you,

### Regg Neiger DVM

South Dakota State University  
Box 2175, North Campus Drive  
Brookings, SD 57007-1396  
Regg.Neiger@SDSTATE.EDU

### RESPONSES:

**From a British Practitioner -**  
(1 British pound £ = US \$1.66)

Local pond visit £60 (about US \$100)  
Where distance is not local or treating whole ponds/systems/facilities aim would be £500 per day plus costs (mark-up on costs would vary between 50 -100%).

Consultation £20

Pond side scrapes/ water tests £10

Culture & Sensitivity £62

Antibiotic cost per fish £2-4.

Batches of fish would depend on time (£50 per hour) plus cost of drug and mark up (say 100%).

There are some charging twice the amount we do but they are a minority. We are also in a low fee area which comes about for historical reasons. Whenever I have tried charging more with fish clients they generally decline the visit.

A reply from the WAVMA Listserv:

I recommend our online Fish Health Medicine Certificate Program to get a taste for fish farm medicine:  
<http://vetmedce.vetmed.wisc.edu/fhm>

We also offer hands-on training.  
Regards,

### Myron J. Kebus, MS, DVM

State Fish Health Veterinarian  
Division of Animal Health  
Wisconsin Dept of Agriculture,  
Trade and Consumer Protection  
2811 Agriculture Drive  
Madison, WI 53708-8911  
phone: 608-224-4876  
fax: 608-224-4871  
Myron.Kebus@Wisconsin.gov

**From a US Practitioner -**

Pond Call \$110  
Mileage <10 miles no additional charge, >10 miles add \$2/mile.

Water testing \$15-50  
(depends on spectrum of testing)

Sedation/anesthesia to perform cytology \$15-30

Wet mount cytology \$20-25

Culture & Sensitivity test \$95-110

Antibiotics: I use a lot of ceftazidime as first choice. I also leave enough for several doses pending culture results. \$30-60 depending on number of fish, time spent, labor involved (do I have to catch them all myself?).

Topical meds or medicated food may also be Rx'd. (For medicated food, I will script out oral meds with instructions for owner to mix into home-made diet or Mazuri gel food).

Recheck exam are about \$75, including wet mount cytology.

**HELP WANTED**

**Communications Committee Members**



**To assist with Newsletter & Web Designs**

**Contact Nick Saint-Erne**  
**Saint-Erne@Q.com**

## BOOK / LITERATURE REVIEWS

Some Wiley-Blackwell Aquaculture, Fisheries and Fish Science journals of interest to aquatic veterinarians  
For more information go to [www.wiley.com/WileyCDA/Section/id-351864.html](http://www.wiley.com/WileyCDA/Section/id-351864.html).

### **Journal of Fish Diseases**

Edited by R.J. Roberts and R. Wooten, this is dedicated to the diseases of fish and shellfish and enjoys an international reputation for original research into all aspects of disease in both wild and cultured fin-fish and molluscs and crustaceans. Areas of interest covered by the journal include:

- Fish and shellfish diseases
- Biology of fish/shellfish pathogens
- Host-pathogen relationships in fish and shellfish
- Defense mechanisms & immunity
- Diagnostic methods
- Disease control
- Epidemiology of diseases
- Descriptions of new diseases

### **Aquaculture Research**

Edited by Ronald W. Hardy, Marc Verdegem and Lindsay Ross, the journal *Aquaculture Research* is a well-established and independent journal covering research on production of all aquatic organisms, related directly or indirectly to human consumption. The *Journal* publishes hypothesis-driven papers on applied or scientific research relevant to freshwater aquaculture; brackish water aquaculture; and marine aquaculture, including:

- Breeding and selection in fish farming
- Nutritional and dietary requirements in aquaculture

- Environmental conditions affecting the growth of farmed fish
- Effects of fish farming on the aquatic environment

### **Aquaculture Nutrition**

Edited by Dr Rune Waagbø, this journal provides a global perspective on the nutrition of all cultivated aquatic animals. Topics range from extensive aquaculture to laboratory studies of nutritional biochemistry and physiology which strive to:

- Increase basic knowledge of the nutrition of aquacultured species and elevate the standards of published aquaculture nutrition research.
- Improve understanding of the relationships between nutrition and the environmental impact of aquaculture.
- Increase understanding of the relationships between nutrition and processing, product quality, and the consumer.
- Help aquaculturalists improve their management and understanding of the complex discipline of nutrition.
- Help the aquaculture feed industry by providing a focus for relevant information, techniques, tools and concepts.

### **Journal of Fish Biology**

The journal of the Fisheries Society of the British Isles. Edited by J.F. Craig, the journal is a leading international journal for scientists engaged in all

aspects of fish and fisheries research, both freshwater and marine. The journal publishes high-quality papers relevant to the central theme of fish biology and aims to bring together under one cover an overall picture of the research in progress and to provide international communication among researchers in many disciplines with a common interest in the biology of fish. Topics covered include: Aquaculture; Behavior; Biochemistry; Diseases; Distribution; Ecology; Genetics; Growth; Immunology; Migration; Morphology; Parasitology; Physiology; Pollution; Population studies; Reproduction; Taxonomy; Toxicology.

### **Journal of the World Aquaculture Society**

Published on behalf of the World Aquaculture Society since 2008 and edited by Carl Webster, this international scientific journal publishes original research on the culture of aquatic plants and animals including:

- Nutrition
- Disease
- Genetics and breeding
- Physiology
- Environmental quality
- Culture systems engineering
- Husbandry practices
- Economics and marketing

Papers are selected for publication based on scientific competence and the significance of the knowledge or ideas presented, providing readers the highest quality information available.

## STUDENT'S ISSUES

**We invite student members to contribute issues or information to this column.**

Important news for students wanting to join the WAVMA – all students currently enrolled in recognized veterinary academic programs (including post-graduate programs, internships and residencies) can join the WAVMA for 50% off the normal dues. This could be the best \$50 you ever spent.

Further information is available on the WAVMA.org website and on the 2009 Membership Application at the end of this Newsletter.

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**COLLEAGUE'S CONNECTION****Dr. Brian Palmeiro—Fish Health Veterinarian**

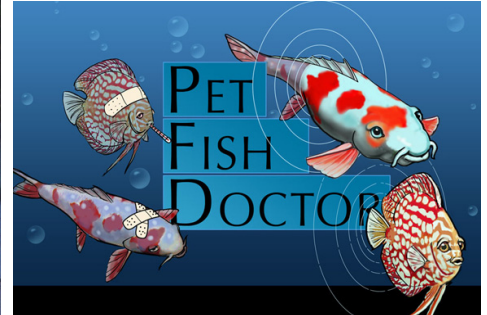
In the Philadelphia area, a WAVMA member veterinarian is well known as the “Pet Fish Doctor.” That is Dr. Brian Palmeiro, of the Veterinary Referral Center in Malvern, PA. He received a Bachelor of Science degree from Rutgers University with a major in animal science and a minor in marine biology. While at Rutgers, he worked as head aquarist at the Institute of Marine and Coastal Sciences.

Then, Dr. Palmeiro attended veterinary school at the University of Pennsylvania, School of Veterinary Medicine, followed by an internship and residency in dermatology. He is a board certified specialist in veterinary dermatology.

Dr. Palmeiro is a fish veterinarian that does consultations for private koi/goldfish ponds, aquaria, and fish retail facilities. He is the staff veterinarian for a large ornamental fish wholesaler in Philadelphia. He is an aquatic animal medicine consultant for the Veterinary Information Network.

Dr. Palmeiro published biochemical reference intervals for koi using the Abaxis biochemical analyzer (JAVMA, Vol 230, No 5, March 1, 2007). He is also involved in various studies focusing on ornamental fish health, including a current project on the microbiological characteristics of ulcerative dermatitis in koi.

He has given numerous lectures on fish medicine to veterinary students, veterinarians and hobbyists. In 2007, Dr. Palmeiro created and directed the first clinical rotation in pet fish medicine at the University of Pennsylvania. He is a founding member of the World Aquatic Veterinary Medical Association, and a member of the Fish Veterinary Society.



Contact Dr. Brian Palmeiro at:

Pet Fish Doctor  
645 Pennsylvania Avenue  
Prospect Park, Pennsylvania  
19076 United States  
[petfishdoctor@gmail.com](mailto:petfishdoctor@gmail.com)

Veterinary Referral Center  
340 Lancaster Ave.  
Malvern, PA 19355

Photo at left:  
Dr. Palmeiro draws blood from a koi

**If you are active or interested in any areas of aquatic veterinary medicine register in the free online directory.**

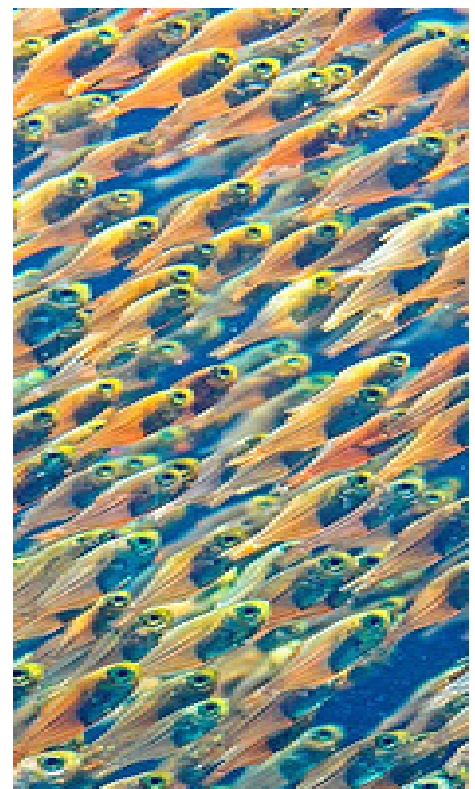
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**CLINICAL REPORTS****CASE OF ACUTE KOI MORTALITIES**

Submitted by

**Dr Richmond Loh**BSc, BVMS, MACVSc (Aquatics),  
MPhil (Pathology)**CLINICAL HISTORY**

Client has a >3 year old rectangular outdoor pond beside the house. Fish housed successfully previously, however, experiencing fish mortalities in the last year. Problems suspected to have arisen ~9 months ago when neighbour applied some herbicide spray which may have drifted into the pond (as evidenced by dead branches of a *Tipuana tipu* tree). Leaves & winged fruits from this tree fell into the pond. Large partial water change was conducted and 3 resident koi (*Cyprinus carpio*) fish & some marron (*Cherax cainii*) remain.

On the weekend, 15cm & 20cm long healthy koi were introduced to the pond. Within 2 days, the smaller fish started dying. Marron appears to be unaffected and 3 other fish that remain in the pond appear to be well.

**CLINICAL FINDINGS**

Affected fish are lethargic, gasping at the surface. Smaller ones appear to be more severely affected. There is loss of balance prior to death. Some fish recovered slowly when placed in clean fresh water in a basin with supplemental aeration and zeolite.



*Tipuana tipu* foliage and seed pods

**WATER QUALITY TEST RESULTS**

pH: 7.2  
KH: 120 ppm  
GH: 100 ppm  
Cl<sub>2</sub>: 0 ppm  
TAN: <0.25 ppm  
NO<sub>2</sub>: 0 ppm  
NO<sub>3</sub>: <10 ppm  
CO<sub>2</sub> (calculated): ~10 ppm  
DO: 6.5 ppm

**GROSS FINDINGS**

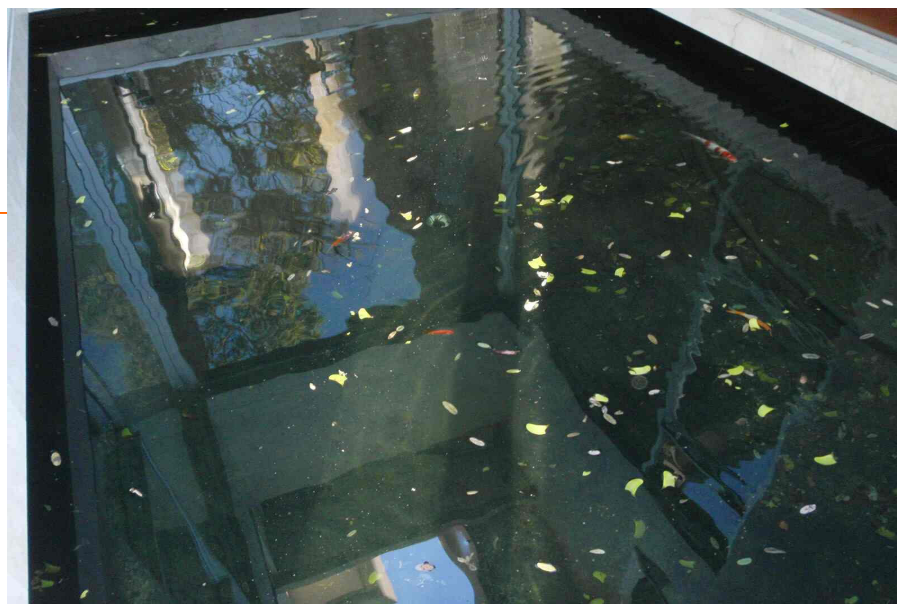
Gills appeared darker/brownish in colour. Gall bladder was distended and there were no ingesta in the gastrointestinal tract. No other significant findings on necropsy.

**WET PREPARATION****MICROSCOPIC FINDINGS**

No evidence of organisms in gill biopsy and mucus smears.



Necropsy examination of a koi



Pond surface with floating plant material

**CLINICAL REPORTS—CONTINUED****HISTOLOGICAL FINDINGS**

Three moribund fish were euthanased for histopathology examination.

**Gills:** there is marked diffuse hyperaemia and marked diffuse interlamellar cell hyperplasia along the entire length of the primary gill filaments, sometimes with entrapment of algae. Eosinophilic granular cells are over-represented in the sections.

**Skin:** there is mild diffuse epithelial hyperplasia in exposed skin (skin within scale pocket appear normal) and hyperplasia of clavate cells. There are occasional single-cell necrosis in the basilar epithelial cells.

There are no significant findings in the brain, intestine, stomach, swim bladder, liver, spleen, pancreas, fat, skeletal muscle, heart, kidney & haematopoietic cells.

**MORPHOLOGICAL DIAGNOSIS**

**Gills:** epithelial hyperplasia, diffuse, severe, acute; with EGC hyperplasia.

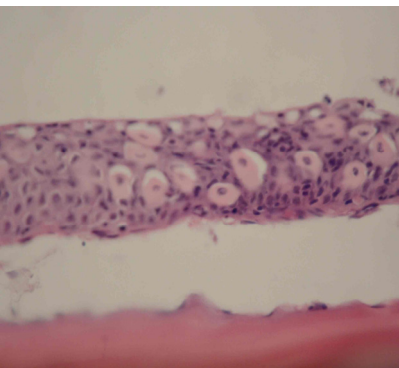
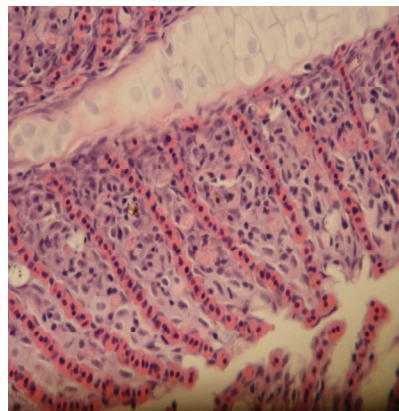
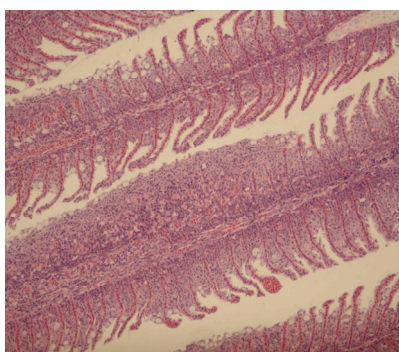
**Skin:** epithelial hyperplasia, diffuse, mild, acute; with clavate cell hyperplasia.

**CLIENT EDUCATION**

The way forward would be to:

- Perform 100% water change and to give the pond base and walls a good scrubbing and flushing.
- Rinse filtration equipment well.
- Re-fill the pond and dechlorinate the water.
- Run an internal filter with activated carbon to adsorb any remaining toxins.
- After 1-2 days, fish can be re-introduced.

Fish should be given supplemental aeration at all times until fully recovered. Signs of recovery include, reduced time spent at the surface gasping for air, increased activity and increased appetite.

**DISCUSSION/COMMENTS**

Such extensive gill changes would severely impair gas exchange and waste excretion. Congested gills also suggests there is high blood pressure.

The findings are highly suggestive of a dissolved toxin. The tree in question, *Tipuana tipu*, was initially suspected to be a candidate source of toxin. Because it belongs to the legume family, together with the brownish gill discolouration and clinical signs of hypoxia, I was suspecting nitrite toxicity. However, water quality testing shows very limited levels of nitrogenous wastes. In addition, research on the potential toxicity of the tree has been unrewarding. I would say that this tree and its parts is considered to be non-toxic based on the absence of information on the contrary.

Based on the microscopic changes, I would be leaning towards a substance possibly belonging to the organic toxicant group.

**ADDITIONAL COMMENTS**

I agree with your conclusion and treatment advice. Looking at the pond picture it would seem that there are numerous seeds from the tree mentioned. Apparently over 2000 plants can cause cyanide toxicity. The problem with a plant toxin is that you need to ingest the plant yet you say there was no sign of ingesta. One possible way to get around this would be if plant material was found in the filter, digested by bacteria there and then the toxin was returned to the pond.

The fact smaller fish were affected might also support a toxin on the basis of higher mg/kg if it was contained in the water (presuming equal concentration/exposure in the tissue and water). The amount of gill hyperplasia might suggest that you are not dealing with an acute toxin such as cyanide but something causing more chronic tissue damage.

From the gross/histopath I see no obvious evidence of infection.

Chris I. Walster, BVMS MVMH MRCVS



## EMERGING ISSUES

### **Florida A & M University Extension Program Develops Aquaculture Project For Small, Limited Resource, Economically Disadvantaged Farmers**

Submitted by **Dr. Uford A. Madden**  
E-mail: [uford.madden@famu.edu](mailto:uford.madden@famu.edu)

The program addresses problems and needs of small, limited resource and economically disadvantaged farmers, and facilitates cooperation of specialists and county agents in finding solutions to various challenges encountered in the industry. Initially the project involved ten (10) existing and new farmers in counties within a one hundred (100) mile radius. Farmers currently growing fish and those interested in growing fish, with or without ownership of existing water bodies were identified. The project began in July 2006 at FAMU Research and Extension Center, Quincy, Florida, where there are ponds; and it provided classroom and hands-on training and a farm visit was made with each farmer.

A training curriculum was developed with modules and information used for the instruction. Fourteen farmers were trained on the best management practices and alternative methods for improvement of production systems for fish (e.g. Bait fish and Sturgeon). Marketing strategies were addressed to sustain the increased production of fish and profitability. Brochures were developed to support development of small scale enterprises, production of fingerlings and utilization of existing natural resources and reduction of specialized inputs.

Four revitalized ponds were filled with water and water analyses were conducted once per week to monitor the various parameters, pH, temperature, depth and dissolved oxygen as the ponds stabilized. A shade screen (60%) was constructed over the pond for holding

the Sturgeon to help in maintaining the temperature of the water within the normal range required by the fish and to serve as deterrent to predators. Also, a facility was constructed using the 60% shade screen and four 1,000 gallon tanks were purchased and installed for holding the fish before releasing them into the pond. Mr. Neil Aymond provided invaluable technical assistance in the designing of the re-circulating pond-tank system with the four tanks. Two submersible pumps were installed in the pond where the fish would be released and two filters with sinking beads were installed in the holding facility with the four tanks and each filter provided filtration for two tanks. Water was re-circulated from the pond to the tanks, filtered then returned to the pond for re-oxygenation before returning to the tanks.

The juvenile Sturgeon were picked up from the Mote Marine Research on February 19, 2008 and transported in a tank provided by the UF Aquatic Sciences to FAMU Community Development Center (CDC). Two bags of feed were obtained with the fish. A total of 66 animals weighing 399 pounds were placed in the four tanks. Two tanks had 16 animals each and the other two tanks had 17 animals each. The animals were fed a 43% protein feed at 0.1% of body weight once per day and the various parameters, pH, temperature, and dissolved oxygen of the water in the tanks were monitored three times per week. The same parameters were monitored in the tanks as in the pond. The animals were to be kept in the tanks according to the protocol of the Mote Marine Research, Sarasota, Florida, for nearly four weeks. On March 12, 2008, the electricity was interrupted and the re-circulation of the water stopped for some time resulting in termination of the project.

The sturgeons weighed an average of 6.05 pounds at the beginning

of the project. At the termination of the project, tank 1 had a total body weight of 101 pounds with a range of 5 to 8 pounds and an average of 6.31 pounds. Tank 2 had a total body weight of 113 pounds with a range of 6 to 8 pounds and an average of 7.06 pounds. Tank 3 had a total body weight of 113 pounds with a range of 4 to 10 pounds and an average of 6.65 pounds. Tank 4 had a total body weight of 111 pounds with a range of 5 to 9 pounds and an average of 6.53 pounds. The total weight of fish in all four tanks was 438 pounds which represents an increase of 39 pounds and an average of 6.64 pounds body weight per fish.

The results showed that there was an average increase of 0.59 pounds per fish during the three weeks of the project. This represents a 9.77% increase in total fish weight and 9.75% increase in average weight of each fish. Three brochures were developed to support development of small scale enterprises, production and utilization of existing natural resources and reduction of specialized inputs. The results suggest that designing program focused on providing hands-on training and demonstrations, and extension assistance to small, limited resource economically disadvantaged farmers to optimize production systems can allow them to produce aquaculture products with high product value, contribute to food production providing more healthful products for consumers while contributing to the economy of the State of Florida to the development of the fish industry.

This project was funded by a grant from the Florida Department of Agriculture and Consumer Services, Division of Aquaculture, Charles H. Bronson Commissioner of Agriculture. Collaborators of the project were University of Florida, Florida Department of Agriculture and Consumer Services, and Florida Farm Bureau Federation.



## New Web Site Focuses On VHS Disease Prevention

AMES, Iowa -

Viral hemorrhagic septicemia (VHS), a serious and often fatal disease of fresh and marine fish species, has been found in the Great Lakes region of the U.S. and Canada. As part of a national outreach campaign to educate the public about VHS, a new Web site – [www.FocusOnFishHealth.org](http://www.FocusOnFishHealth.org) – has been launched. The campaign and Web site are funded by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA APHIS) and was a collaborative effort of fisheries and aquaculture stakeholders from industry, universities, state and federal agencies and national organizations.

The Web site is designed to help boaters, anglers, aquaculture producers, and bait fish dealers learn more about the serious nature of VHS and it encourages them to take measures that will slow or prevent the spread of the disease.

VHS has caused die-offs in recreational and sport fish species like muskellunge, smallmouth bass, and yellow perch, as well as a number of baitfish. Fish can become infected from the urine or reproductive fluids of infected fish, or by eating infected fish. The virus spreads to new locations primarily by the movement of infected fish or water.

While VHS has not been found in aquaculture facilities in the United States, the virus can affect commercially farmed species, so biosecurity and prevention resources for aquaculture producers are included on the Web site.

The [www.FocusOnFishHealth.org](http://www.FocusOnFishHealth.org) Web site also serves as a clearinghouse for VHS resources. Extension specialists, educators and researchers can view the resources developed by their colleagues and download the latest information about VHS. Visitors can submit their resources to the site.

"This Web site helps the public and individuals involved in recreation and aquaculture to understand that the simple precautions they take can help prevent the spread of this serious disease," said Dr. Gary Egrie, APHIS Senior Staff Veterinary Medical Officer, Aquaculture Program.

In the future, based on stakeholder input and support, as well as available funding, we envision that the site could offer information on other aspects of fish health.

The Web site was developed by the Center for Food Security and Public Health at the Iowa State University College of Veterinary Medicine. The CFSPH has an award winning Web site:

<http://www.cfsph.iastate.edu/>

## Anchovy Parasite Risk Determined by Origin

Spanish researchers have shown the *Anisakis* parasites are present at higher levels in anchovies from the south east Atlantic coast and the north east Mediterranean, and urge consumers to freeze or cook the fish before eating.

*Anisakis* is a genus of parasitic nematodes, which have a life cycle involving fish and marine mammals. They are infective to humans and cause Anisakiasis, and fish which have been infected with *Anisakis* spp. can produce an anaphylactic reaction in people who have become sensitized to Immunoglobulin E (IgE).

Although the European Union and Spanish regulations require restaurants to freeze fish that is eaten raw, "people still run the risk of anisakiasis infection from home-made anchovies in vinegar if they have not got into the habit of freezing the fish for at least 24 hours at -

20°C", according to a team of scientists from the University of Granada (UGR), which has found the larvae of *Anisakis* spp and another similar parasite, *Hysterothylacium aduncum*, in anchovies from the west of the Mediterranean Sea and the east of the Atlantic Ocean.

"The risk of developing anisakiasis from eating anchovies (*Engraulis encrasicolus*) could be affected by the geographical area in which the fish were caught, because there is a great variation in parasitiation (average prevalence and intensity) among anchovies from different areas", Adela Valero, a researcher at the UGR's Department of Parasitology, explains.

See full story at:

<http://www.thefishsite.com/fishnews/9941/anchovy-parasite-risk-determined-by-origin>



**Anisakid larvae in the body cavity of a herring (*Clupea harengus*)**

From:

<http://en.wikipedia.org/wiki/Anisakis>

## LEGISLATIVE & REGULATORY ISSUES

### **The Canadian Shellfish Sanitation Program (CSSP)**

The Canadian Food Inspection Agency's plans and priorities link directly to the Government of Canada's priorities for bolstering economic prosperity, strengthening security at the border and of the safety of the food supply, protecting the environment and contributing to the health of Canadians.

The Roles and Responsibilities of the CSSP is overseen by the Fish, Seafood and Production Division of the Canadian Food Inspection Agency and:

\* regulates the import and export, processing, packaging, labelling, shipping, certification, storage, re-packing of shellfish to protect against contamination and product quality degradation, to maintain source and lot identity and integrity. Suspends operations or decertifies shellfish processors on the basis of unacceptable operating and sanitation conditions.

\* regulates the depuration (i.e., controlled purification) of shellstock, verifies product quality and purification effectiveness, maintains production and product quality records,

\* evaluates laboratories performing shellfish analyses in accordance with the requirements of the CSSP and maintains a biotoxin surveillance program of shellfish growing areas in support of DFO and CFIA activities.

The following have been updated:

"Definition":  
<http://www.inspection.gc.ca/english/fssa/fispoi/man/cssppccsm/define.shtml>

"Chapter 2 - Growing Area Survey and Classification":  
<http://www.inspection.gc.ca/english/fssa/fispoi/man/cssppccsm/chap2e.shtml>

"Appendix III - Procedures for Molluscs Exceeding CFIA Bacteriological Guidelines"

<http://www.inspection.gc.ca/english/fssa/fispoi/man/cssppccsm/append3e.shtml>

"Appendix VIII - Protocol for Emergency Closure of any Shellfish Growing Area"  
<http://www.inspection.gc.ca/english/fssa/fispoi/man/cssppccsm/append8e.shtml>

Appendix IX - Protocol for the Management of a Conditional Area <http://www.inspection.gc.ca/english/fssa/fispoi/man/cssppccsm/append9e.shtml>

See the website for the complete list of changes and updates:

<http://www.inspection.gc.ca/english/fssa/fispoi/cssppccsme.shtml>

### **United States FDA Announces Minor Use / Minor Species (MUMS) Grant Program**

The US Food and Drug Administration announced the initiation of a grant program to support the development of new animal drugs intended for minor species or minor uses in major species. (Major species are horses, dogs, cats, cattle, pigs, turkeys and chickens.)

The grant program was established by the Minor Use and Minor Species Animal Health Act of 2004 and funding was authorized to start after finalization of regulations to implement the Designation provisions of the statute. (Section 573 of the Federal Food, Drug & Cosmetic Act) The implementing regulations for Designation were finalized in July 2007, and Congress appropriated money to support the program in March of this year.

FDA now has \$750,000 to offer in MUMS grants for the fiscal year ending September 30, 2009. In accordance with the statute, a MUMS grant must be for the purpose of "defraying the costs of qualified safety and effectiveness testing expenses incurred in connection with the development of designated new animal drugs."

Qualified testing occurs after the date a drug is designated under Section 573 of the act and before the date on which a new animal drug application for the drug is submitted under Section 512 of the act. In addition, a study for which a grant is sought must be subject to a protocol accepted by the Center for Veterinary Medicine prior to the submission of a grant application.

Grants for total costs will be available for up to \$50,000 per year for up to two years for routine studies; and up to \$100,000 per year for up to two years for studies of unusual complexity, duration or size. A third year of funding may be available for long-term toxicology studies. Therefore, grants could range from under \$50,000 for a routine study that could be completed in less than a year, to \$200,000 for a complex study requiring two years for completion, to \$300,000 for a long-term toxicology study.

The complete Request for Applications is available at [Research Project Grant \(R01\)](#) and applications must be submitted electronically through Grants.gov (<http://www.grants.gov/>) by July 01, 2009.

## Import Risk Analysis Report For Ornamental Finfish With Respect To Iridoviruses

Biosecurity Australia Advice 2009/06

This Biosecurity Australia Advice (BAA) notifies stakeholders of the release of the Draft Import Risk Analysis report for freshwater ornamental finfish with respect to quarantine risks associated with gourami iridovirus and other related viruses.

The draft import risk analysis (IRA) report assesses the risks associated with imports of ornamental finfish and proposes that additional quarantine measures are required to manage the quarantine risks in accordance with Australia's conservative approach to quarantine. The IRA recommends fish be sourced from populations demonstrated to be free of the iridoviruses of quarantine concern, or batch-tested on arrival to show they are free of iridoviruses of quarantine concern.

The draft IRA report is being issued for 60 days consultation. Written comments will need to be provided to Biosecurity Australia by 24 June 2009.

On 11 September 2008, Biosecurity Australia announced the formal commencement of a standard, regulated IRA to assess the current quarantine policy for the importation of live freshwater ornamental finfish with respect to gourami iridovirus and related viruses (BAA 2008/29). This BAA notifies stakeholders of the release of the Draft import risk analysis report for freshwater ornamental finfish with respect to quarantine risks associated with iridoviruses and other related viruses. Under the Quarantine Regulations 2000, stakeholders have until 24 June 2009, to provide written comments on the draft IRA report.

Gouramis, cichlids (such as angelfish and oscars) and poeciliids (such as guppies and platys) are popular aquarium species. Ornamental finfish are imported under a range of quarantine conditions based on an IRA completed in 1999. Australia's quarantine measures include that the fish are held in an export premises for a

minimum 14-day period prior to export, health certification that they are sourced from populations with no known significant disease in the last six months, and that the gouramis and cichlids are held in post-arrival quarantine for a minimum of 14 days and poeciliids for a minimum of seven days. Millions of ornamental fish are imported into Australia each year.

Evidence, including research by the University of Sydney, has indicated possible changes to the understanding of iridoviruses. This prompted the commencement of a policy review in 2005. The policy review is being completed as a regulated IRA.

The draft IRA report recommends additional tighter quarantine measures. These are:

- \* sourcing fish from populations demonstrated to be free of the iridoviruses of quarantine concern; or
- \* batch-testing fish on arrival to show they are free of iridoviruses of quarantine concern.

The existing pre-export quarantine period of 14 days and relevant official health certification would apply, together with a post arrival quarantine period of seven days.

The draft IRA report and information about the regulated IRA process are available from the Biosecurity Australia website, [www.biosecurityaustralia.gov.au](http://www.biosecurityaustralia.gov.au).

Comments on the draft IRA report need to be submitted by 24 June 2009 to:

Animal Biosecurity  
Biosecurity Australia  
GPO Box 858  
CANBERRA ACT 2601  
E-mail: [animal@biosecurity.gov.au](mailto:animal@biosecurity.gov.au)

Stakeholder comments will be carefully considered and a provisional final report will be prepared. The provisional final report will be open to appeal. Following the appeal process, the final report and recom-

mendations will be provided to Australia's Director of Animal and Plant Quarantine to make a quarantine policy determination.

### Confidentiality

Stakeholders are advised that, subject to the Freedom of Information Act 1982 and the Privacy Act 1988, all submissions received in response to BAAs will be publicly available and may be listed or referred to in any papers or reports prepared on the subject matter.

The Commonwealth of Australia reserves the right to reveal the identity of a respondent unless a request for anonymity accompanies the submission. Where a request for anonymity does not accompany the submission the respondent will be taken to have consented to the disclosure of their identity for the purposes of Information Privacy Principle 11 of the Privacy Act.

The contents of the submission will only be treated as confidential if they are marked 'confidential' and can be classified as such in accordance with the Freedom of Information Act.

### Contact officer:

Dr Ramesh Perera  
Telephone: +61 2 6272 4675  
Facsimile: +61 2 6272 3399  
Email: [Ramesh.Perera@biosecurity.gov.au](mailto:Ramesh.Perera@biosecurity.gov.au)

Documents are available at [http://www.daff.gov.au/ba/ira/current-animal/ornamental\\_fish](http://www.daff.gov.au/ba/ira/current-animal/ornamental_fish).

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## FDA Announces New Animal Drug to the Index

### First Drug Product Added to the Index of Legally Marketed Unapproved New Animal Drugs for Minor Species (the Index)

CVM Update—March 19, 2009

The US Food and Drug Administration announced today the first new animal drug granted to the Index of Legally Marketed Unapproved New Animal Drugs for Minor Species, i.e. the Index. The drug, Ovaprim (salmon gonadotropin releasing hormone analog plus domperidone), is indicated for use as a spawning aid in ornamental finfish broodstock.

An animal drug product intended for use in a minor species must be approved, conditionally approved, or indexed by the FDA in order to be legally marketed.

The Index is one incentive under the Minor Use and Minor Species

(MUMS) Animal Health Act of 2004. It's intended to allow companies to legally market veterinary drugs for minor species for which there are no human food safety concerns without having to go through the long and expensive process of a new animal drug approval. Inclusion in the Index is largely based on the evaluation of the target animal safety and effectiveness of each specific product by a panel of qualified experts.

Minor species are all animals other than the major species (cattle, horses, swine, chickens, turkeys, dogs, and cats), for example, sheep, goats, honey bees, zoo animals, ornamental fish, parrots, ferrets, and guinea pigs. However, the Index is limited to non-food-producing minor species with the exception of certain non-food early life stages of food animals, such as some fish eggs.

The holder of the Index listing for Ovaprim is Western Chemical Inc. of Ferndale, Washington. For additional information on Ovaprim, please see: <http://www.wchemical.com/Webpage.aspx?WebpageId=18>

Questions about the Index may be directed to:

Dr. Joan Gotthardt,  
Center for Veterinary Medicine,  
7500 Standish Place,  
Rockville, MD 20855,  
240-276-9331,  
[Joan.Gotthardt@fda.hhs.gov](mailto:Joan.Gotthardt@fda.hhs.gov).

FDA, Center for Veterinary Medicine  
Communications Staff, HFV-12  
7519 Standish Place,  
Rockville, MD 20855  
Telephone: (240) 276-9300  
FAX: (240) 276-9115

## EU Advises Importers to Use New Health Certificates for Seafood

09 April, 2009

Source:

<http://www.fishupdate.com/news/fullstory.php/aid/12348>

The health certificates that have to accompany seafood imported to the European Union are changing. Importers need to be aware that after 30 June 2009 only the new certificates will be accepted for some types of imports. As these new certificates are quite complicated it would be prudent to start using them now, advises Seafish, the authority on seafood.

The two new certificates for seafood - one for fishery products and the other for live bivalve molluscs - have been published in Regulation 1250/2008/EC. The new certificates can be used now, but there is a transitional period during which border inspectors will continue to accept the old certificates.

The main changes to the certificates concern the animal health part

of the certificate and this applies only to certain types of seafood containing material of aquaculture origin, such as ungutted catfish, tilapia or cod of aquaculture origin, and farmed salmon roe that is not in a retail pack. For these types of imports the transitional period runs only to 30 June 2009, after which border staff will only accept the new certificates.

There are exemptions which are detailed in the new certificate. These include all wild-caught fish, seafood in retail packs, and farmed crustacea that are either dead or unable to survive if released. For these types of imports the transitional period extends to 31 July 2010.

"Defra has advised importers to start using the new certificates now rather than wait for the end of the transitional periods and this is very sound advice," said Ivan Bartolo, of Seafish Legislation. "This will give importers valuable time to talk to their suppliers and ensure officials in the

exporting country are aware of the new requirements. From 1 July 2009, non-exempted consignments arriving at the UK Border Inspection Posts with incorrectly completed certificates may be rejected."

Further information can be found on the Defra web site at <http://www.defra.gov.uk/animalh/int-trde/imports/> or visit the Seafish Business-to-Business site at <http://www.seafish.org/b2b/info.asp?p=119>



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**WAVMA Meetings will be in the Douglas Room  
Sheraton Hotel, 1400 6th Avenue,  
Seattle, Washington, 98101**

**Sunday, July 12 – 6-9 pm**

**Symptomatology Roundtable Discussion**

Focusing on the private practitioner—come listen, contribute and discuss the clinical signs, symptoms and signalment of common, not so common, and unusual bacterial, virus and parasitic diseases in finfish. Discover useful diagnostic tools and tests are used to narrow differential lists.

**Monday, July 13 – 6-9 pm**

**Diagnostics & Therapeutics Roundtable Discussion**

Focusing on the private practitioner—come listen, contribute and discuss how to you and others have diagnosed or treated common, not so common, and unusual bacterial, virus and parasitic diseases in finfish and other aquatic species. Discover useful tools to diagnose, control and treat specific finfish and aquatic species diseases.

**Tuesday, July 14 – 6-9 pm**

**WAVMA Annual General Meeting**

- President's vision for 2009 and beyond
- Officer's & Committee Reports
- Discussion Forum for your input to Officers/Directors
- 2010 Officer and Director-at-Large Elections

**Are you interested in presenting a 15 minute case?**

If you have data, diagrams, photos and video clips you'd like to share, contact:  
Julius Tepper – (631) 281-5612, [cypcarpio@aol.com](mailto:cypcarpio@aol.com).



*From Bass to Baristas*



*From Eel to Espresso*



*From Trout to Tea*



*From Cod to Café Au Lait*

## AVMA convention 2009 seattle

### Opening Session

Saturday July 11, 2009

7:00 am – 9:00 am

Washington Convention and Trade Center

Presented by



When you think about teamwork, fish probably aren't the first things that come to mind. But John Yokoyama, owner of Pike Place Fish Market, wants to show you a different way to think. Join John and his team during the Hill's Opening Session, and let them show you an innovative way to achieve a better working environment.

### Bayer Bash

Saturday July 11, 2009

6:30 pm – 8:00 pm

Washington Convention and Trade Center

Presented by



To keep the fun rolling, the Bayer Bash is back and better than ever. Roll up your sleeves and learn how those charming baristas concoct your favorite coffee beverages and other enjoyable treats from the great Northwest. Enjoy catching up with colleagues and friends at this not-to-be-missed social hour.

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**Washington State Convention & Trade Center**

 For registration, housing and other information, go to [www.avma.org/convention/2009/ce/](http://www.avma.org/convention/2009/ce/)

Date/Time	Rm	Title	Speaker(s)
Sat 7/11 9:00am-9:50am	309	Increase Your Gross: Adding Pet Fish Medicine to Your Practice	Helen E Roberts
Sat 7/11 10:00am-10:50am	309	Freshwater Life Support Systems	Helen E Roberts
Sat 7/11 11:00am-11:50am	309	Clinical Assessment of Aquarium Life Support Systems	Tim Miller-Morgan
Sat 7/11 1:00pm-1:50pm	309	Water Quality and Pet Fish Health	Helen E Roberts
Sat 7/11 2:00pm-2:50pm	309	Clinical Techniques of Tropical and Ornamental Fish	Stephen A Smith
Sat 7/11 3:00pm-3:50pm	309	Diagnostic Imaging of Tropical and Ornamental Fish	Stephen A Smith
Sat 7/11 4:00pm-4:50pm	309	Clinical Pathology of Pet Fish	Brian S Palmeiro
Sat 7/11 5:00pm-5:50pm	309	Parasitic Diseases of Tropical and Ornamental Fish	Stephen A Smith
Sun 7/12 8:00am-8:50am	618	Overview of Shellfish Culture on the West Coast	John L Pitts
Sun 7/12 9:00am-9:50am	618	Shellfish Health Management for Intensive Care	Ralph A Elston
Sun 7/12 10:00am-10:50am	618	Certification of Shellfish for Shipment Overseas	John L Pitts
Sun 7/12 11:00am-11:50am	618	Shellfish Health Inspection Techniques	Ralph A Elston
Sun 7/12 2:00pm-5:50pm	617	<b>Interactive Wet Lab -</b> Shellfish Health Inspections: Clinical Techniques	Ralph Elston John Pitts

The Pacific Northwest is a major supplier of cultured shellfish, particularly oysters, to national and global markets. This lab will start with morning lectures that will introduce participants to the shellfish industry in the Pacific Northwest, techniques of shellfish health management on the West Coast, certification requirements for shipment and export, and shellfish health inspection techniques. The course will provide participants with the opportunity to review the anatomy of commonly cultured shellfish species and observe and practice the common clinical techniques required to carry out a shellfish health inspection.

For more Aquatic Education opportunities, see the last issue of AVN and review the listings on the WAVMA.org website.

## 2009 AVMA Aquatic Veterinary Medicine Lectures & Wet Labs Washington State Convention & Trade Center

For registration, housing and other information, go to [www.avma.org/convention/2009/ce/](http://www.avma.org/convention/2009/ce/)

### Monday and Tuesday Aquatic Lectures:

Mon 7/13 8:00am-9:50am	309	Common Clinical Problems of Pet Fish	Tim Miller-Morgan Helen E Roberts
Mon 7/13 10:00am-10:50am	309	KHV Update for Practitioners	Tim Miller-Morgan
Mon 7/13 11:00am-11:50am	309	Biosecurity Basics for Pet Fish Owners	Tim Miller-Morgan
Mon 7/13 2:00pm-2:50pm	309	Humans Beware! Zoonotic Diseases of Pet Fish	Stephen A Smith
Mon 7/13 3:00pm-3:50pm	309	Koi Ulcer Disease: Filling in the Holes	Brian S Palmeiro
Mon 7/13 4:00pm-4:50pm	309	Cutaneous Biology and Dermatologic Diseases of Pet Fish	Brian S Palmeiro
Mon 7/13 5:00pm-5:50pm	309	Sink, Float, or Swim: Battling Buoyancy Disorder in Pet Fish	Brian S Palmeiro
Tue 7/14 8:00am-8:50am	309	Anesthesia and Surgery of Pet Fish	Craig A Adams
Tue 7/14 9:00am-9:50am	309	Reproductive Medicine of Pet Fish	Helen E Roberts
Tue 7/14 10:00am-10:50am	309	Biosecurity Consideration for the Pet Fish Industry	Tim Miller-Morgan
Tue 7/14 11:00am-11:50am	309	Current Issues in Fish Welfare	George E Sanders
Tue 7/14 2:00pm-2:50pm	309	Aquatic Vets in the Lab	George E Sanders
Tue 7/14 3:00pm-3:50pm	309	Diagnostic Histopathology in Pet Fish Medicine	Stephen A Smith
Tue 7/14 4:00pm-4:50pm	309	Common Ambulatory Fish Practice Cases	Craig A Adams
Tue 7/14 5:00pm-5:50pm	309	Minding Nemo: Management of Postshipping Morbidity and Mortality in Marine Ornamental Fish - Observations and Recommendations	Tim Miller-Morgan

#### 4th FRDC Aquatic Animal Health Subprogram Scientific Conference

The Rydges Esplanade Resort  
Cairns, Australia  
**22-24 July, 2009**

The format for the conference will be similar to that of the previous FRDC AAHS conferences with three days of scientific presentations including keynote lectures by an international expert.

For the 2009 Conference this will be Dr Stephen Feist, Head of Pathology and Parasitology, CE-FAS Weymouth Laboratory, Weymouth UK. Steve's research interests include fish and shellfish diagnostic histopathology; myxozoan diseases, ultrastructure, host-pathogen interactions; fish diseases in environmental health monitoring. Steve is looking forward to participating in the conference and, like previous keynote speakers, will give three keynote presentations:

1. The application of fish health parameters in marine environmental monitoring programmes
2. Histopathology of fish parasite infections
3. Crustacean disease and the EU Fish Health Directive (2006/88/EC)

For those with FRDC-funded projects this is the conference at which you need to present your research and network with other aquatic animal health specialists in Australia.

All conferees (including students) need to register. There is a registration fee, payable by credit Mastercard or Visacard of \$275 for all conferees except for students. For students who provide proof of their status (e.g. copy of enrolment form or letter from the university administration office/academic supervisor), registration for the conference is free.

The Rydges Esplanade Resort, Cairns has reserved a limited number of rooms at a special rate for the conference and so if you want to take advantage of this offer you will need to register early. If you wish to stay at the Rydges Esplanade Resort send in your registration now and Nette Williams will make your reservation at the resort for you.

For more information and to receive a registration form, contact:

Lynette M Williams  
CSIRO, Livestock Industries  
PO Bag 24,  
GEELONG, Vic, 3220  
Voicemail 03 52275442  
Lynette.Williams@csiro.au

#### SeaVet II Aquatic Veterinary Education

Gainesville, FL, USA  
**June 20-27, 2009**

SeaVet Clinical Training is an intensive one-week course designed to teach veterinary medical students and veterinarians through didactic lecture, case-based problem-solving and practical experience. The program also features an educational and interactive swim session with dolphins to provide realistic exposure and hands-on training. Student participation in this program will help in the future de-

sign of a state-of-the-art SeaVet course. This is a two-credit graduate and professional class through the University of Florida. Academic credit may only be granted to UF veterinary students. Continuing education credit may be earned by veterinarians.

<http://conference.ifas.ufl.edu/SeaVet/>

For More Information contact:  
Dr. Mike Walsh, Program Organizer  
University of Florida  
College of Veterinary Medicine

PO Box 100136  
Gainesville, FL 32610-0136  
Phone: 352-222-4948  
Fax: 352-846-1171  
Email: walshm@vetmed.ufl.edu

Kim Brand, Registrar  
University of Florida/IFAS  
Office of Conferences & Institutes  
PO Box 110750, Building 639,  
Mowry Road  
Gainesville, FL 32611-0750  
Phone: 352-392-5930  
Fax: 352-392-9734  
Email: kimmer72@ufl.edu

#### OREGON STATE UNIVERSITY SALMONID DISEASE WORKSHOP

Corvallis, OR, USA  
**July 13-24, 2009**

Registration is now open, please register online at:

<http://oregonstate.edu/conferences/registration.html> or <https://secure.oregonstate.edu/ocs/register.php?event=355>

For additional information, see:

<http://microbiology.science.oregonstate.edu/Salmon+Disease+Workshop>



## International Aquaculture Biosecurity Conference 2009

The International Aquaculture Biosecurity Conference (IABC), **17-19 August 2009** Trondheim, Norway ([www.IABConference.org](http://www.IABConference.org))

The IABC is an international forum on current and future aquatic biosecurity practices for prevention, control, and eradication of diseases. Aquaculture producers, veterinarians, and government officials will convene in Trondheim to share opinions about practical approaches to biosecurity, just prior to the start of AquaNor, one of world's largest aquaculture trade shows.

Dr. James Roth, IABC co-chair and Director of Center for Food Security and Public Health at Iowa State University emphasized that "Aquaculture production has seen rapid growth and become a significant part of global animal agriculture in the recent years, but disease-related problems are becoming a significant threat to international trade and seafood safety."

Dr. Roar Gudding, IABC co-chair and Director of the Norwegian National Veterinary Institute said "The greatest obstacle to sustainable aquaculture development is spread of aquatic animal diseases. The goal of the International Aquaculture Biosecurity Conference is to provide expert opinions and tools for implementing practical, economic, and effective biosecurity plans to control and potentially eliminate disease impacts on the industry."

"Internationally-recognized speakers will spend two days with the conference attendees delivering a series of presentations and participating in round table discussions on the economic impacts of diseases and biosecurity programs, the components of ideal biosecurity plans, and development of interna-

tional and national strategies," said Dr. Chris Walster, Secretary of World Aquatic Veterinary Medical Association and private aquatic veterinary practitioner from U.K.

Dr. Dusan Palic of the Iowa State University College of Veterinary Medicine said, "With increased occurrences of aquatic animal disease outbreaks worldwide, the IABC provides an interface of producers, health professionals and governments addressing timely topics such as identifying and prioritizing hazardous diseases, determining critical control points, epidemiology, surveillance and monitoring, and most importantly, implementing and certifying biosecurity programs at all levels."

Dr. David Scarfe of the American Veterinary Medical Association voiced the opinion of the entire IABC executive board in saying, "We believe the conference will help set a solid framework for the development and implementation of biosecurity plans at all levels of aquaculture. It is our intention to develop practical and effective tools to assist in the prevention, control and possible eradication of many priority diseases. A good start in this endeavor is to outline and discuss the potential for industry-government cost-sharing programs related to biosecurity."

"We expect to welcome participants from aquatic veterinary organizations, aquaculture producers and industry organizations, government agencies, standard setting bodies, academic institutions and aquaculture related industries," said Dr. Torkjel Bruheim of National Veterinary Institute in Trondheim. "August is a great time to visit the west coast of Norway, and the Conference attendees will have numerous opportunities to engage in professional as well as leisure activities

while in Trondheim. The IABC will organize a visit to nearby fish farms, and thousands of visitors involved in the business of aquaculture will be at the AquaNor, providing many opportunities for networking."

The Conference is organized by the Norwegian National Veterinary Institute, the Center for Food Security and Public Health and the Institute for International Cooperation in Animal Biologics, College of Veterinary Medicine, Iowa State University, the American Veterinary Medical Association, the Norwegian Veterinary Association, the Atlantic Veterinary College, University of Prince Edward Island, and the World Aquatic Veterinary Medical Association.

Conference sponsors currently include the Norwegian Ministry of Fisheries and Coastal Affairs, the Norwegian National Veterinary Institute, the Research Council of Norway, the Norwegian Veterinary Association, AquaNor, the OIE, the American Veterinary Medical Association, the Center for Food Security and Public Health, Intervet Schering-Plough Animal Health, Novartis Animal Health, Europharma, Pharmaq, and the World Aquatic Veterinary Medical Association.

For details of the Conference and Sessions and to register or to submit an abstract go to: [www.IABConference.org](http://www.IABConference.org)





**INTERNATIONAL AQUACULTURE BIOSECURITY CONFERENCE:**  
Practical Approaches for the Prevention, Control, and Eradication of Disease

**August 17-18, 2009 • Trondheim, Norway • [www.iabconference.org](http://www.iabconference.org)**  
Held in conjunction with Aqua Nor 2009, the international aquaculture venue,  
August 18-21, 2009 Trondheim, Norway • [www.nor-fishing.no](http://www.nor-fishing.no)



**A two day program of Internationally-recognized keynote speakers and contributed posters on the following topics:**

- » Economic impact of disease and biosecurity programs
- » Components of ideal biosecurity plans and programs
- » International, regional and national strategies
- » Identifying and prioritizing hazardous diseases and evaluating risks
- » Determining and mitigating hazardous disease critical control points and risks
- » Disease epidemiology, surveillance and monitoring
- » Determining disease status and freedom
- » Control and eradication contingency plans and programs
- » Disease diagnostics, medical and farm record keeping
- » Implementing, auditing and certifying biosecurity programs

**The goal of this conference is to provide expert opinions and tools for implementing practical, economic and effective biosecurity plans and programs. A call for posters is forthcoming on the website.**

- » Registration by May 1, 2009: NOK 3500 (≈ \$500 USD) • Registration after May 1, 2009: NOK 4500 (≈ \$650 USD)
- » A tentative agenda and additional information is available at [www.iabconference.org](http://www.iabconference.org)



## The 7th Annual Turtle Survival Alliance Symposium on Chelonian Conservation and Biology

St Louis, Missouri, USA  
**August 5th - 8th, 2009**

The Turtle Survival Alliance (TSA) is pleased to announce our 7th annual Symposium, generously hosted by the renowned St Louis Zoo. This event is the largest gathering of non-marine chelonian biologists and captive breeding specialists in the world. We understand that these are tough economic times and are making an effort to keep costs to a minimum. This meeting will be an extraordinary value, with an icebreaker, zoo tour, awards banquet, BBQ and auction, and breakfasts included in the cost of registration. Double rooms will cost under \$100.00/night.

Mark your calendars and register early for substantial savings. Discounted rates are available to TSA members, so join today! For details on membership, registration, program and events, please visit our website at <http://www.turtlesurvival.org>.

The venue is the Hilton at the Ballpark in downtown St Louis and they are dedicating an entire wing of the hotel to us, so when you leave your room the elevator opens at the TSA meeting. The hotel will be honoring group rates both before

and after the meeting if you are interested in extending your stay in St Louis.

Those interested in speaking should contact TSA Program Co-Chairs Chuck Schaffer at [chelonian1@aol.com](mailto:chelonian1@aol.com) or Andrew Walde at [awalde@hotmail.com](mailto:awalde@hotmail.com) For vendor information, or to volunteer, please contact Conference Chair: Lonnie McSkill at [lonnie.mccskill@disney.com](mailto:lonnie.mccskill@disney.com).

TSA is committed to engaging our student members in our conference venues. We realized that conference attendance can be costly to our student membership, therefore, we have lowered the student membership to \$25 and conference registration fees to \$75. In addition, we have arranged for "student" rooms at the conference hotel which will accommodate up to four students for each room; students will share the hotel expense with the other students in the room. Educators and other chelonian enthusiasts: this is a perfect venue for students to present their research at a professional conference in a friendly atmosphere. Visit our website for more information at <http://turtlesurvival.org/> or contact Beth Walton at [walton.beth@gmail.com](mailto:walton.beth@gmail.com).

Registration and hotel information will be up on the TSA website soon, so be sure to check for updates and announcements. The program will be international in scope but will feature several North American sessions including Graptemys, Southwestern Kinosternids and Dermatemyd. Wet labs and hands on workshops will again be offered. Special thanks to our conference title sponsor, ZooMed, who every year works closely with the TSA to insure a special event.

Pre-Registration Rates:  
 (Effective through July 5, 2009)  
 Member \$125.00  
 Non-Member \$175.00  
 Students/Minors \$75.00  
 Late Registration Rates:  
 (Effective July 6th, 2009)  
 Member \$225.00  
 Non-Member \$250.00  
 Students/Minors \$150.00  
 Registration Daily Rates  
 All Attendees: \$75.00 per day

Contact:  
 Elizabeth M. Walton  
 Doctoral Candidate and Lecturer  
 Department of Geography  
 University of North Carolina at  
 Greensboro  
 336.256.2601  
[emwalton@uncg.edu](mailto:emwalton@uncg.edu)

## 14TH INTERNATIONAL CONFERENCE ON DISEASES OF FISH AND SHELLFISH

Prague, Czech Republic  
**14th-18th September 2009**

"The 14th International conference on diseases of fish and shellfish" (organised by the European Association of Fish Pathologists - EAFP) will be held at the Clarion Congress Hotel in Prague, Czech Republic. Scientific and technical sessions consisting of poster presentations, invited talks, keynotes, oral presentations, workshops and an EAFP General Assembly will

take place during the Conference. We will welcome suggestions for potential topics for scientific sessions and workshops. Planned social events include a Welcome cocktail, Civic reception and the traditional Conference Banquet.

More information about the conference will be available on the EAFP website (<http://eafp.org/>) as well as in the 2nd announcement.

Feel free to contact the Meetings Secretary for questions or additional information:

Stephen Feist,  
 EAFP Meetings Secretary  
 Centre for Environment, Fisheries  
 and Aquatic Science (Cefas)  
 Weymouth Laboratory,  
 Barrack Road The Nothe,  
 Weymouth, Dorset DT4 8UB, UK  
 Tel. +1305 206600,  
 Fax. +1305 206601.  
 E-mail. [stephen.feist@cefasc.co.uk](mailto:stephen.feist@cefasc.co.uk)



## Harmonisation of the Care & Use of Fish in Research

International consensus meeting,  
Oslo, Norway  
**22 – 24 September 2009**

### *Why are we arranging this meeting?*

Fish comprise one of the largest but least understood groups of animals used in research in Europe. In Norway alone, over 5 million animals were used in animal research in 2007, and 90% of these were fish. There is considerable political interest in many countries to reduce the numbers of animals used.

What is less well known is the work currently being undertaken in Brussels and Strasbourg to revise the EU directive and to follow up the revision of Appendix A of the Council of Europe convention on the protection of animals used in research. These documents have great consequences for all those conducting research on live animals, including fish.

### *The 3 R's: Replace, Reduce, Refine*

International focus on ethical and scientific evaluation of animal research, summarised in "The Three R's" has led many countries, including Norway, to revise their legislation. It is vital that researchers participate while these decisions are being made.

This meeting aims to review what we consider to be "best practice" within research on fish species. It follows up an international consensus meeting held in Oslo in May 2005. What have we achieved during the last 4 years, and what still remains to be done?

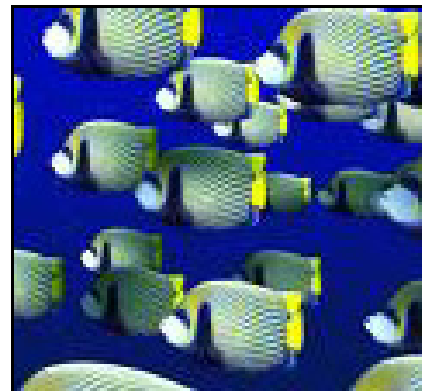
### *Can we reach consensus?*

The next World Congress on the three R's will be arranged in Rome in August 2009. We hope to be able to report the conclusions from that meeting, including a consensus statement from the participants, at the Congress.

*We welcome suggestions for topics from the participants!*

This meeting is arranged by Norecopa, Norway's consensus-platform for the replacement, reduction and refinement of animal experimentation.

Please see <http://www.norecopa.no> for more details.



## 10<sup>TH</sup> WORLD CONGRESS OF VETERINARY ANAESTHESIA

31<sup>ST</sup> AUGUST TO 4<sup>TH</sup> SEPTEMBER 2009, GLASGOW, UK

FOR FURTHER DETAILS VISIT [WCVA2009.COM](http://WCVA2009.COM)



### The 10th World Congress of Veterinary Anaesthesia

Glasgow, Scotland

**31st August—4th September, 2009.**

Bute Hall provides an impressive backdrop for a panel of world class speakers, including Dr Duncan Young, Dr Andrew Lumb and Dr Sue Hill.

Convening every three years, this event explores the very latest research and developments in veterinary anaesthesia, providing an unparalleled opportunity for the exchange of ideas and discussion at an international level.

The full scientific program has yet to be finalised, however topics under discussion will include pharmacogenetics, pulmonary function, ethics and physiology in avian and **piscine anaesthesia**.

Controversies will be led by Dr Jo Murrell & Dr Bruno Pypendop on "MAC – an irrelevant outdated and misused construct or the basis of safe surgical anaesthesia?"

"Acepromazine, nitrous oxide and halothane – 50 years past their sell by date or the bedrock of safe anaesthesia?" – (Dr Martina Mosing & Dr Emma Love).

And... "Ethics: medical and veterinary viewpoints" (Dr Peter Sandoe & Dr Dominic Wilkinson).

Sponsorship opportunities for this prestigious event are still available in a number of options and can be tailored to suit individual requirements, either within the commercial exhibition or as a major sponsor of the congress.

For further information on either registration or sponsorship please contact:

Mrs Louise Holder  
R&W Communications  
Suites 3&4, 8 Kings Court, Willie  
Snaith Road,

Newmarket, Suffolk. CB8 7SG  
Tel. 01638 667600

Mobile 07813 218396  
Email:

[louise.holder@rw-communications.co.uk](mailto:louise.holder@rw-communications.co.uk)

## 7th International Conference on Behaviour, Physiology and Genetics of Wildlife

Leibniz Institute for Zoo and Wildlife Research (IZW) and the European Association of Zoos and Aquaria (EAZA) Berlin, Germany

**21st - 24th September 2009**

For those who have not registered yet, please do so:

<http://www.bayceer.uni-bayreuth.de/izw7/>

### The main topics of the conference are:

- **Life History & Maternal Effects**  
(Pat Monaghan, University of Glasgow, UK)
- **Stress & Disturbance**  
(Marco Apollonio, Università Sassari, Sardinien, Italy)
- **Reproduction Biology**  
(David Wildt, Smithsonian National Zoological Park, USA)
- **Evolutionary Genomics in Conservation**  
(Pierre Taberlet, Université Joseph Fourier, Grenoble, France)
- **Conservation Biology**  
(Eric Dinerstein, Director of science WWF-USA, Washington, USA)

### The Conference offers several workshops:

- 1. Evolutionary Genomics in Conservation**  
(Pierre Taberlet, Université Joseph Fourier, Grenoble, France & Simone Sommer, IZW, Berlin, Germany)
- 2. Communication in Mammals and Birds**  
(Francesco Bonnadonna, Centre d'Ecologie Fonctionnelle et Evolutive, Montpellier, France & Martin Dehnhard, IZW, Berlin, Germany)
- 3. Welfare and Conservation**  
(Eric Dinerstein, senior scientist WWF-USA, Washington, USA & Marion East, IZW, Berlin, Germany)
- 4. Stable Isotopes, Nutrition and Energetics**  
(Carlos Martinez del Rio, University of Wyoming, USA; Sylvia Ortmann, IZW, Berlin, Germany & Christian Voigt, IZW, Berlin, Germany)

**5. Behavioural Rhythms**  
(Serge Daan, University of Groningen, the Netherlands & Anne Berger, IZW, Berlin, Germany)

**6. Research by, in, with and for zoos, aquaria and other ex situ-institutions**  
(Kirstin Leus, EAZA & IUCN/SSC:CBSE Europe, Antwerpen, Belgium)

A practical training workshop on non-invasive monitoring of hormones will also take place at the IZW/Berlin during the week preceding the conference; Martin Dehnhard, IZW.

The conference dinner will take place at a beautiful setting in the city center overlooking the river "Spree".

You will find more information about the conference on our homepage at: <http://www.izw-berlin.de/de/flink/7thIZW-Conference.html>

Please do not hesitate to contact us if you require any further information at: [symposium@izw-berlin.de](mailto:symposium@izw-berlin.de).

Contact:

Dr. Petra Kretzschmar

Organisation Committee  
Leibniz-Institute for Zoo and Wildlife Research (IZW) in the Forschungsverbund Berlin e.V.

Alfred-Kowalke-Straße 17  
10315 Berlin, GERMANY

PoBox 60 11 03, 10252 Berlin,  
Germany

Tel. + 49 - 30 - 51 68 - 108  
Fax + 49 - 30 - 51 26 - 104  
<http://www.izw-berlin.de>



## AQUATIC VETERINARY JOB OPPORTUNITIES

### Fish Histopathology Training Program

ORGANIZATION:  
Animal Health Centre,  
Ministry of Agriculture and Lands

LOCATION:  
Abbotsford, British Columbia,  
Canada

What? A one year training program in fish histopathology for a veterinarian with at least one year of anatomic pathology training.

Where? The Animal Health Centre is a full-service veterinary diagnostic laboratory certified by the American Association of Veterinary Laboratory Diagnosticians (AAVLD). Ancillary diagnostic support includes immunohistochemistry, molecular diagnostics including DNA sequencing, PCR test development, and high-resolution digital photomicroscopy.

Duties? Develop diagnostic expertise in fish histopathology through fish submissions to the Animal Health Centre under the supervision of an ACVP pathologist. Develop expertise in writing and digital imaging through "board-quality" descriptions and publication-grade photography of cases from the Centre's Fish Histopathology Study Set. The trainee will be encouraged to pursue an area of interest that might include (1) development of a web-based resource for fish histopathology, or (2) publication of a case report from clinical submissions.

Case material? Diagnostic cases are derived from the largest salmon aquaculture industry in North America, and the Vancouver Aquarium provides a cornucopia of species diversity.

Supervisor? Dr. Gary D. Marty is board-certified in anatomical pathology, with more than 20 years of experience in fish pathology research and diagnostics.

Salary? This contract position provides CDN \$40,000 per year plus \$1,000 to help defray costs of attending a scientific meeting.

When? The start date will depend on the availability of the successful applicant, with a goal start date of Oct. 1, 2009.

Application? Applications will be evaluated as received and should include a curriculum vitae, a description of pathology experience, a statement of professional goals, and the names and contact information for three professional references. The applicant must be fluent in English. Applications or inquiries should be addressed to Gary.Marty@gov.bc.ca or to Dr. Gary D. Marty, Animal Health Centre, Ministry of Agriculture and Lands, 1767 Angus Campbell Rd., Abbotsford, BC, V3G 2M3, Canada.

### Chief Executive Officer, BC Centre for Aquatic Health Sciences

The British Columbia Centre for Aquatic Health Sciences (BC CAHS) seeks a dynamic individual for the position of Chief Executive Officer. The CEO will guide the BC CAHS into the future by focusing on operations, strengthening existing collaborations, building new partnerships and executing programs and initiatives that support the CAHS mission statement.

The CEO will be responsible for obtaining and managing operational funding from government, academic, industry and community sources and in addition will be responsible for the day to day management of both administrative and technical staff. In order to work effectively in this management capacity, the CEO will have a proven track record in areas such as:

- Strategic planning, research fund-raising and proposal writing
- Business plan preparation, financial and human resource management
- Economic development in coastal communities, including First Nations
- Communication, outreach and consensus building among diverse stakeholders

The successful candidate will be a person who understands the value of teamwork and effective leadership while possessing the business skills that support day to day operations.

Professional experience or education in the areas of aquatic science or related disciplines is a requirement. A good understanding of the political

and social environment of British Columbia would be an asset.

The position is based in Campbell River, BC. For further information about BC CAHS, consult the website ([www.cahs-bc.ca](http://www.cahs-bc.ca))

Submit your curriculum vitae to BC CAHS by Monday June 8<sup>th</sup>, 2009 either in person, by email to ([tracy.burgess@cahs-bc.ca](mailto:tracy.burgess@cahs-bc.ca)) or by Fax (250-286-6103).



## SPONSORS AND SUPPORTERS



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## CONTACT CORNER

### 2009 WAVMA Executive Board

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[hughm@aqualifesci.com](mailto:hughm@aqualifesci.com)

#### President Elect

Dr Otis Miller (USA)  
[otis.miller@aphis.usda.gov](mailto:otis.miller@aphis.usda.gov)

#### Immediate Past President

Dr Ron Roberts (UK)  
[heronpisces@btinternet.com](mailto:heronpisces@btinternet.com)

#### Secretary

Dr Chris Walster (UK)  
[chris.walster@onlinevets.co.uk](mailto:chris.walster@onlinevets.co.uk)

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[dulep@iastate.edu](mailto:dulep@iastate.edu)

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Dr Paul Hardy-Smith (AUS)  
[PANAQUATIC@OZEMAIL.COM.AU](mailto:PANAQUATIC@OZEMAIL.COM.AU)



KOI PHOTO BY NICK SAINT-ERNE, DVM

## Committee Chairs

**Aquatic Veterinary Education Committee-** Dr Scott Weber. E-mail: [fishdoc@charter.net](mailto:fishdoc@charter.net)

**Budget and Finance Committee-** Dr Dušan Palić. E-mail: [dulep@iastate.edu](mailto:dulep@iastate.edu)

**Communications Committee-** Dr Nick Saint-Erne. E-mail: [saint-erne@q.com](mailto:saint-erne@q.com)

**Credentialing Committee-** Dr Ron Roberts. E-mail: [heronpisces@btinternet.com](mailto:heronpisces@btinternet.com)

**Ethics and Governance Committee-** Dr Peter Merrill. E-mail: [wetvet@comcast.net](mailto:wetvet@comcast.net)

**Meetings Committee-** Dr Julius Tepper. E-mail: [cypcarpio@aol.com](mailto:cypcarpio@aol.com)



A well planted display aquarium built into a wall –

Photo by Nick Saint-Erne

# World Aquatic Veterinary Medical Association

One Profession; One Discipline; One Voice – Cohesive & Inclusive!

## 2009 MEMBERSHIP APPLICATION

### INITIAL APPLICATION or RENEWAL (circle one)

For your convenience please complete and mail with the correct remittance (in US\$), or credit card information, to:

**Dr. Dusan Palic**  
4211 Welbeck Dr.  
Ames, IA 50010-4018 USA  
Phone/Fax: (515) 294-2571  
e-Mail: [dulep@iastate.edu](mailto:dulep@iastate.edu)

#### Credit Card Payments Visa; or Master Card

Name on Card \_\_\_\_\_

Card Number \_\_\_\_\_

Expiry Date Mo / Yr \_\_\_\_\_ Card Security Code \_\_\_\_\_

Signature \_\_\_\_\_

For e-Copies - typing your name will indicate your signature

Complete **all mandatory fields marked with an \***.  
Please be as comprehensive as possible.

#### Contact Information

\*Name (First, Middle, Last) \_\_\_\_\_ Date \_\_\_\_\_

Business/Organization (if applicable) \_\_\_\_\_ Position/Title \_\_\_\_\_

\*Mailing Address \_\_\_\_\_

\*City \_\_\_\_\_, \*State/ Province/ Canton/ County (UK) \_\_\_\_\_

\*Zip/Postal Code \_\_\_\_\_, \*Country \_\_\_\_\_

\*Primary Phone \_\_\_\_\_ Is this a business ? /home ? or /cell/mobile ?

Secondary Phone \_\_\_\_\_ Is this a business ? / home ? or /cell/mobile ?

\*Primary e-Mail \_\_\_\_\_; Secondary e-Mail \_\_\_\_\_

(Secondary e-Mail addresses will be used if the primary address becomes non-functional)

#### **Check one membership category** <sup>1</sup>

**Full Member** (US\$100) **Student Member** (US\$50)

Primary Veterinary Degree (as awarded, e.g. DVM; VMD; BVMS; DEDV; Dr. vet. med.; MVZ, etc) \_\_\_\_\_

Year \_\_\_\_\_; University \_\_\_\_\_; City \_\_\_\_\_; Country \_\_\_\_\_

**Veterinary Technician/Nurse Member** (US\$50)

Name of supervising veterinarian \_\_\_\_\_; Phone \_\_\_\_\_; e-mail \_\_\_\_\_

**Affiliate Member** (US\$100)

\*Degree \_\_\_\_\_; \*Year \_\_\_\_\_; \*University \_\_\_\_\_; \*City \_\_\_\_\_, \*Country \_\_\_\_\_

**Allied Veterinary Organization Member** (US\$500)

\*Total number of current members \_\_\_\_\_; \*Number (or %) of members that are *veterinarians* \_\_\_\_\_;

\*Estimated number of members involved with *aquatic veterinary medicine* (any species/disciplines) \_\_\_\_\_

Would you like any information to be excluded from your membership listing in an Annual Membership Directory? If so, please specify what information you want excluded \_\_\_\_\_

#### <sup>1</sup> Membership Categories & Privileges

**Full Member**—individual veterinarians that have graduated from veterinary Schools, Colleges or Universities recognized by any country as being a prerequisite for practicing veterinary medicine. Full Members are eligible to be nominated and serve as WAVMA Officers, and to serve on any WAVMA Committees.

**Allied Veterinary Organization Member**—legally formed organizations or entities (association/society) whose members are predominantly veterinarians. Allied Veterinary Organization Members are eligible to appoint a delegate and alternate delegate (must be WAVMA Full Members in good standing) to serve on the WAVMA Advisory Council.

**Student Member**—students enrolled fulltime in veterinary Schools, Colleges or Universities recognized by any country as being a prerequisite for practicing veterinary medicine. Student Members are entitled to all the rights and privileges of Full Members, except to serve as an Officer of the Association, or to vote in any general election, referendum or ballot of the association's Full Members.

**Veterinary Technician/Nurse Member**—any non-veterinarian that is employed to assist in the legal practice of veterinary medicine, while under the direct supervision or direction of a veterinarian. Veterinary Technician/Nurse Members are entitled to all the rights and privileges of Full Members, except to serve in any voting capacity on any committees, councils, trusts, boards, liaisons or other entity that may be formed to do Association business.

**Affiliate Member**—any non-veterinarian that is a graduate of a nationally recognised university or institution of higher education, and who supports the Mission and Objectives of the Association. Affiliate Members are entitled to all the rights and privileges Student Members, except to serve in any voting capacity on any committees, councils, trusts, boards, liaisons or other entity that may be formed to do Association business.



## World Aquatic Veterinary Medical Association

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### WHO ARE WE

The mission of the World Aquatic Veterinary Medical Association is to serve the discipline of aquatic veterinary medicine in enhancing aquatic animal health and welfare, public health, and seafood safety, in support of the veterinary profession, aquatic animal owners and industries, and other stakeholders.

### The purpose of the World Aquatic Veterinary Medical Association is:

- To serve aquatic veterinary medicine practitioners of many disciplines and backgrounds by developing programs to support and sustain members, and the aquatic species industries that they serve.
- To identify, foster and strengthen professional interactions among aquatic medical practitioners and other organizations around the world.
- To be an advocate for, develop guidance on, and promote the advancement of the science, ethics and professional aspects of aquatic animal medicine within the veterinary profession and a wider audience.
- To optimally position and advance the discipline of aquatic veterinary medicine, and support the practice of aquatic veterinary medicine in all countries.

We're on the Web:  
[WWW.WAVMA.org](http://WWW.WAVMA.org)

*The ideas presented in this publication express the views and opinions of the authors, may not reflect the view of WAVMA, and should not be implied as WAVMA recommendations or endorsements unless explicitly stated. Information related to the practice of veterinary medicine should only be used within an established valid Veterinary-Patient-Client Relationship.*