

International Association for Aquatic Animal Medicine

IAAAM News

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MESSAGE FROM THE IAAAM PRESIDENT

Dear Colleagues and Members if the IAAAM,

Happy Holidays to all! As we approach the end of this year, we look forward to an exciting 2015! We will be gathering early this year, in April, for our Annual Conference at the Shedd Aquarium in Chicago.

As you already know, Dr. Bill Van Bonn and his incredible team are our hosts this year. They, along our President Elect and Scientific Session Chair, Dr. Lisa Murphy, are organizing another fantastic meeting. Please look for the update from Dr. Murphy in this newsletter for more details on the conference.

Fall season is membership renewal time. We are now officially operating on a calendar year so membership runs from January 1 to December 31 each year. All current memberships will expire **December 31, 2014** and must be renewed prior to **March 1, 2015** to qualify for member discounted registration at the 2015 Annual Conference. Please note that we have increased the member's dues this year. The decision to increase dues was a difficult one, but the costs of running our organization have increased year over year, and we have not increased membership dues in the past 5 years. And despite this increase, IAAAM membership is still a bargain relative to other professional organizations.

As always, membership in the organization includes:

- Access to the members contact information
- Discounted rates for our annual conference
- Full Access to IAAAM cumulative proceedings

And a new membership benefit this year is a result of our finalized memorandum of agreement with the Wildlife Disease Association. IAAAM members now can take advantage of a reduced cost membership in the WDA. This 'Aquatic Animal Membership' costs \$40 and includes all the benefits of membership in WDA at the Associate level plus direct access to selected aquatic animal health articles from each quarterly issue of Journal of Wildlife Diseases. You should receive an email from the WDA directly with all the details.

Of course, the greatest benefit of membership is being part of this incredible community of professionals and all around great people. We are only a little over 4 months away from our annual gathering and all the fun that comes along with it. In the meantime, enjoy your friend and families and the holiday season!

All the very best, Chris

MESSAGE FROM THE IAAAM PRESIDENT ELECT

With the holidays upon us I hope everyone is already looking forward to 2015, including the IAAAM abstract submission deadline of **January 15, 2015** (subtle, right?). The Scientific Program is continuing to come together as we anticipate a larger-than-usual number of abstract submissions. With this in mind, I'd like to share the tentative daily conference schedule:

Monday, April 6, 2015

0900-1600 IAAAM Board Meeting 1800-2100 Icebreaker Event at Shedd Aquarium

Tuesday, April 7, 2015

0800-1730 Plenary, One Health, Case Reports, and Novel Techniques Sessions

1730-1830 IAAAM Business Meeting

1830-?? Free night out in Chicago

Wednesday, April 8, 2015

0800-1630 Marine Mammal, Avian, Stranding, Nutrition, and Management & Education Sessions 1730-2200 Student Workshop, Case Conundrums, and Poster Session at Shedd Aquarium

Thursday, April 9, 2015

0800-1200 Reproduction, Pathology, Immunology, and Toxicology Sessions

1400-1800 Tour Day at Brookfield Zoo

1800-2100 Dinner and Student Auction at Brookfield Zoo

Friday, April 10, 2015

0800-1700 Invertebrates, Sea Turtles, Fish, and Aquazoonoses Sessions

1900-2400 Banquet and Awards at Swissotel

To best foster an active and robust exchange of ideas and information in Chicago there will not be concurrent sessions during the conference. While the session chairs and I are looking forward to building a fully-loaded, diverse and exciting program for you, I also hope all potential speakers will be open to alternatively presenting their work as part of the April 8th poster session if we cannot provide you with an oral presentation slot this year.

Workshops will be held on Saturday, April 11, 2015, featuring ophthalmology with Drs. Carmen Colitz, Mike Walsh, and Ed Latson; a Marine Mammal Water Quality Workshop co-sponsored by USDA APHIS; and last but not least an all-day program presented by the American Association of Fish Veterinarians (AAFV).

We anticipate opening conference registration and abstract submissions in **mid-December**, so please keep an eye on the IAAAM website, <u>www.iaaam.org</u>.

MESSAGE FROM THE 46TH IAAAM ANNUAL CONFERENCE HOST

Greetings Friends and Colleagues-

Plans are coming along nicely. We anticipate having the registration site live and able to accept registrations in mid-December. We are using a new conference registration host this year and folks will register for the conference and upload their abstracts (and potentially slides) at the same site. We are busy continuing to ask for sponsorship support to keep costs down. Please contact Bill Van Bonn if you have not yet done so with your institutions support plans and spread the word- we need more sponsors. We are anticipating a well-attended meeting. This year we will include Veterinary Technician specific activities so plan to bring your technicians along too. Watch for more details soon.

William Van Bonn, DVM Vice President, Animal Health John G. Shedd Aguarium

Conference rate hotel reservations are now available at the Swissotel:

1-888-73-SWISS (1-888-737-9477)

reservations.chicago@swissotel.com

https://resweb.passkey.com/go/iaaam2015

All bookings should be made no later than Friday, March 6, 2015

CALL FOR STUDENT TRAVEL AWARD APPLICATIONS 2015

The IAAAM Executive Board will again be granting monetary awards to students planning to deliver **ORAL** presentations at the annual IAAAM conference in April 2015. The awards are intended to defray the cost of travel to the April 6-11, 2015 conference in Chicago, Illinois in order to promote student participation in the professional program and to further the commitment of the IAAAM to its students. Moneys will be awarded on a competitive basis, with the goal of supporting as many students as possible. Undergraduate students, Masters and PhD students, veterinary students, veterinary interns/residents, and postdocs are eligible. For more information regarding student travel awards and application instructions please visit the IAAAM website: www.iaaam.org. **The deadline for receipt of complete application packets will be January 15, 2015. Students submitting abstracts for the travel award competition must still separately submit their presentation abstract for acceptance into the conference proceedings.** For questions regarding the student travel award contact Dr. Allison Tuttle at atuttle@searesearch.org.

2015 IAAAM STUDENT AUCTION

It's never too early to start thinking of items to donate to the student auction that will be held during the 46th Annual IAAAM Meeting and Conference in Chicago, Illinois. Items can be sent to Chicago prior to the start of the meeting at the address below. Please mark the item with the donor's name and estimated retail value:

John G. Shedd Aquarium Attn: Animal Health/IAAAM 1200 South Lakeshore Drive Chicago, IL 60605

2015 IAAAM MEMBERSHIP DUES UPDATE

Membership runs from January 1 to December 31 each year. All current memberships will expire December 31, 2014 and must be renewed prior to March 1, 2015 to qualify for member discounted registration at the 2015 Annual Conference. Complete membership information is available http://www.iaaam.org under the membership link, including online or downloadable new membership and membership renewal forms to submit with your payment.

Renewing members: you can check your membership status if you are not sure when you renewed last. Go to the Membership Directory in the Members Only link and check the date of the last payment next to your name. While you are there, please verify that we have your contact information listed correctly in the Directory as this is how we can reach you for newsletter notifications, announcements, polls and other IAAAM business. (If you do not see your name, contact the Treasurer or send an email to iaaam.main@gmail.com).

In order to keep up with increased costs of maintaining communications, organizing the annual meeting and producing the Conference Proceedings, the IAAAM Executive Board voted to increase dues slightly for the coming year. As of November 1, 2014, the website is accepting online payment for 2015 dues as shown below.

FULL MEMBER – \$75.00/year - Persons contributing to the advancement of, or devoting a portion of their professional activities to, aquatic animal medicine practice, research, teaching or management. New Full Member applications must have an IAAAM member sponsor.

STUDENT MEMBER – \$40.00/year - Students having an interest in veterinary practice, research, husbandry, management or conservation of aquatic animals. Student membership is open to all full-time undergraduate, graduate, veterinary and postdoctoral students enrolled in formal programs at academic and comparable institutions as well as individuals enrolled in full time internships and residencies.

SUSTAINING MEMBER / ASSOCIATION — Individuals, institutions or associations which make significant financial contributions (\$250 or more) to sustain the IAAAM. (Contact Treasurer for additional information).

LIFE MEMBER - Upon professional retirement, full members in good standing for a minimum of 10 consecutive years of active membership may be afforded life membership by the Executive Committee upon petition by the member.

HONORARY LIFE MEMBER - Individuals who have made an outstanding contribution to the promotion of aquatic animal medical science and the objectives of the Association.

The LIBRARY / INSTITUTIONAL MEMBERSHIP - \$100/year - is now open again. Due to the prohibitive expense of printed materials, IAAAM has moved to an electronic format and will no longer be providing printed Proceedings and Newsletters. We are now able to offer these materials electronically to Library and Institutional Members and encourage anyone with questions to contact our membership board member, Marty Haulena (email address below) for additional information.

Dues payment may be made by credit card at the "Join IAAAM" or "Renew Membership" links on the website at http://www.iaaam.org. If paying by check, be sure to make your check payable to "IAAAM" and mail your completed membership form and payment to: IAAAM/ Pam Tuomi, DVM

c/o Alaska SeaLife Center P.O. Box 1329 Seward, AK 99664

Questions? Email <u>pamt@alaskasealife.org</u> (Treasurer) or <u>Martin.Haulena@vanaqua.org</u> (Membership Board Member)

OTHER NEWS

Medway Scholarship Program Update

Mark your calendars. The 2015 Medway Scholarship applications will be due **March 2, 2015**. Now is the time to start thinking about suitable projects and lining up potential students for 2015 summer projects. Detailed application instructions are provided within this newsletter.

Bill Medway Fund

The Medway Fund is part of the IAAAM 501(c)3, so all or part of your donation is tax deductible. The fund is still in need of donations. Please click on the DONATE tab under **Education** on the main IAAAM website to donate.

Medway Scholarship Student Reports

Wondering what our previous Medway scholarship winners are up to? Below are reports written by scholarship winners, Ashley Barratclough, Hillary Braverman, and describing their experience and research.

Ashley Barratclough

Barratclough, Ashley, et al. "How much does a swimming, underweight, entangled right whale (Eubalaena glacialis) weigh? Calculating the weight at sea, to facilitate accurate dosing of sedatives to enable disentanglement." Marine Mammal Science (2014).

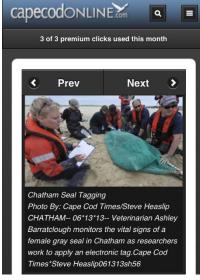
The IAAAM Medway Scholarship funding facilitated my masters project which was undertaken as part of my MSc in Wild Animal Health at the Zoological Society of London and the Royal Veterinary College. As a result of the generous funding I was able to travel to Woods Hole Oceanographic Institute to study the North Atlantic right whale. I completed my MSc in September and my work was published in Marine Mammal Science earlier this year. As a result of my successful research project I secured a Fellowship in manatee health through the University of Florida at Tampa's Lowry Park Zoo. I am currently undertaking a 2 year clinical training program at the Zoo in addition to obtaining an MSc in Manatee Health, studying Cold Stress Syndrome.

Fishing gear entanglement represents a significant source of anthropogenic mortality in North Atlantic right whales (*Eubalaena glacialis*). The current methods of photo identification and post-mortem examination of stranded carcasses, give a good indication of the prevalence of entanglements. Consistent monitoring of the trends in entanglements has demonstrated a rise in the number of North Atlantic right whales affected. The implications of this trend are of serious concern for both welfare and continued survival of this endangered species.





Figure 1 - Aerial image of a North Atlantic right whale Eg 3311 demonstrating the rapid weight loss which can occur due to chronic fishing gear entanglements. Left: Eg 3311 21st April 2008 demonstrating good body condition; Right: Eg 3311 6th March 2009 loss of body condition noted by decreased width.





The decrease in body condition as a result of entanglement is clearly apparent in Figure 1. Both acute and chronic entanglement cases can occur with the average entanglement endurance prior to mortality, being shown as six months and the maximum known extending to eighteen months. The chronic cases can result from the whale becoming increasingly entangled as it attempts to escape.

Disentanglement of whales from fishing gear is one potential mitigation option, however approaching a distressed whale is challenging. Sedation has facilitated the approach, however accurate sedative dosing is essential to prevent fatalities. Accurate body weight estimation is therefore required to calculate the correct dose. By examining the post-mortem data of emaciated whale morphometrics and performing a step wise linear regression analysis relating length and girth measurements, we established a formula to estimate the weight of entangled North Atlantic right whales at sea from an aerial photograph: Weight = $6044.79 - 17.88 \times (length) - 9.14 \times (girth) + 0.05 \times (length \times girth)$. Further research into the prevention of the initial entanglement will be necessary to mitigate this anthropogenic cause of mortality in North Atlantic right whales.

During my time spent in Cape Cod I was able to gain experience in wild grey seal health assessments and also assisted in a Risso's dolphin rescue with IFAW. Both of these experiences are invaluable and would not have been possible without the support from the IAAAM Medway foundation.

Hillary Braverman

When I began veterinary school, I started with a goal in mind: work towards becoming an aquatic veterinarian. As an undergrad marine biology major I had done research on a sea vessel, tropical island and even the laboratory where I studied whales, tropical fish, sharks and more. Each of those experiences were a blast and solidified my desire to combine a love of medicine with a love of aquatic life.

As a veterinary student, I sought to do more aquatic animal research, but this time with a more medical focus. I contacted a few facilities and thankfully Dr. Innis at the New England Aquarium had a project in mind for me: looking at a bacteria that has been causing a novel infection in cold-stunned Kemps Ridley Sea Turtles. The Kemp's ridley turtle is the smallest and rarest species of marine turtle. Typically, the adult Kemp's ridley turtles reside in the Gulf of Mexico; however,

during the summer months juveniles often forage along the northeastern coast of the US. In autumn, as the water temperatures begin to drop, juveniles return to the southeastern United States and Gulf of Mexico. In some instances, however, turtles fail to migrate to warmer waters and may become hypothermic, or "cold-stunned" as water temperatures fall below 50°F. Common pathologic findings in these turtles include lesions in the respiratory, gastrointestinal, urinary, and neurologic systems. Some of the turtles seen by Dr. Innis and the sea turtle rescue team presented septic with the gram positive bacteria *Enterococcus* cultured from their blood, bone or skin. In general, bacterial infections in reptiles, including sea turtles are caused by gram negative bacteria that are commonly found in the environment or as part of the animal's normal flora. Infections caused by gram positive bacteria are relatively uncommon in reptiles, with only rare individual case reports of infections caused by *Enterococcus* in the literature.

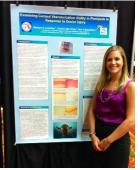
My task was to summarize clinical data for Kemp's ridley turtles diagnosed with *Enterococcus* infections at New England Aquarium and other rehabilitation centers including clinical signs at admission, medication history, day of diagnosis, clinical signs at diagnosis, microbiology results, histopathology results, radiographic findings, and more. From that information, we were able to determine the clinical signs associated with Enterococcus infections, how it can be diagnosed, what antibiotics are best for treating the infection and the overall prognosis for survival. Through everyone's efforts, a manuscript was developed and accepted for publication to the Journal of the American Veterinary Medical Association (JAVMA). In fact, it was just published! See the citation below for more information on this study: Innis, C. J., Braverman, H., Cavin, J. M., Ceresia, M. L., Baden, L. R., Kuhn, D. M., & Merigo, C. (2014). Diagnosis and management of Enterococcus spp infections during rehabilitation of cold-stunned Kemp's ridley turtles (Lepidochelys kempii): 50 cases (2006–2012). *Journal of the American Veterinary Medical Association*, *245*(3), 315-323.

I want to thank IAAAM for awarding me the Medway Scholarship and for giving me the means to make this study happen! Through this study, I was able to learn a lot about sea turtle medicine and rehabilitation which I hope to utilize in the future.

Barbara Linnehan

Greetings, fellow aquatic animal medicine enthusiasts! I would like to extend a tremendous thank you to the IAAAM board, members, and supporters of the Medway Scholarship Fund, for granting me the 2012 Medway Scholarship. This funding enabled me to conduct research in aquatic animal medicine during my 2nd year of vet school, which was a fantastic experience that further strengthened my interest in pursuing a career in aquatic animal medicine.

During the summer of 2012, I performed research on pinniped corneas with the support of the Merial Veterinary Scholars Program and the Medway Scholarship, under the mentorship of Drs. Don Samuelson and Carmen Colitz. My project was entitled "Examining corneal vascularization ability in pinnipeds in response to ocular injury," and investigated whether pinniped corneas possess the main components necessary for neovascularization in the process of corneal wound healing. Corneal disease is a major problem in both wild and captive pinnipeds and this research is an essential element and important first step in determining the underlying





Presentations at the Merial-NIH Veterinary Scholars Symposium, Colorado State University in August 2012 (left); and the 2013 IAAAM Conference in Sausalito, California (right).

reason for its prevalence. We concluded that pinniped corneas do possess the fundamental components of the corneal neovascularization pathway, but that the pathway is not being adequately triggered in response to disease, perhaps due to another factor or factors, such as chaperone proteins.

I have had several wonderful opportunities to present this research project over the past few years. The first was a poster presentation at the Merial-NIH Veterinary Scholars Symposium at the end of the 2012 summer. The following year, I received the IAAAM Student Travel Award, which enabled me to attend the 2013 IAAAM Conference. Here, I presented my project as an oral presentation and won the 2nd place Student Presentation Award. I also presented this project as a poster for Phi Zeta Day at UF CVM in March 2014. Through these avenues, I have learned so much in presenting and discussing my project with experienced, knowledgeable aquatic animal professionals whom I admire greatly. I am incredibly grateful for the IAAAM Student Travel Award and the opportunity to attend such fun and informative conferences. This study is currently in preparation for publication. Stay tuned!

This project opened my eyes to the exciting field of marine mammal research and the myriad of opportunities it holds to explore areas of science and medicine that no one has thought of before. Since then, I have completed two marine mammal veterinary externships, at The Marine Mammal Center in Sausalito, California and at The Navy Marine Mammal Program in San Diego, California. I am also currently involved in a drug pharmacokinetic study in sea lions and will hopefully continue to be involved in the exciting, unexplored territory of marine mammal medicine for years to come. I am now finishing my 4th year of vet school at UF CVM and will graduate in May 2015. Following graduation, I plan to do a small animal internship and pursue a career in aquatic animal medicine down the road!

2015 IAAAM Medway Scholarship Program

The International Association for Aquatic Animal Medicine (IAAAM) recognizes a continuing need for the funding of research projects focused on aquatic animal medicine. IAAAM also recognizes the value and importance for students to gain solid scientific research training. To help fill these needs and to further promote involvement of students in aquatic animal medicine, the IAAAM has established the Medway Scholarship Program designed to support research experiences for students interested in pursuing careers in aquatic animal medicine. The program is primarily intended for undergraduate, veterinary, and graduate students without stipends or other sources of funding. The purpose of the scholarship is to partially support the student for research experiences beyond that which they might experience with normal undergraduate classwork or a graduate/veterinary curriculum.

Objectives

- Provide students with exposure to sound research practices in the field of aquatic animal medicine beyond what is normally included as part of the undergraduate or graduate/veterinary curriculum.
- Encourage students to pursue post-graduate careers incorporating research in aquatic animal medicine.
- Encourage student participation in the IAAAM.

Program Description

The IAAAM Medway Scholarship Program provides scholarships of up to \$3,000 each to students who have been accepted to participate in a research project organized and funded by government, academic, or private entities. The sponsoring entity must provide the student with at least a 10 to 12-week working exposure to research focused on aquatic animal medicine and must involve direct interaction with a current IAAAM member in good standing. Funding for the research activity must be provided by the sponsoring entity. Scholarship awards are intended to support the student's personal expenses while participating in the funded research. Scholarship recipients will be required to present their research findings at a future IAAAM conference, and will still be eligible for other IAAAM student awards. Factors that are considered in selecting the scholarship recipient are briefly described below. They are not listed in any particular order of importance but are included to assist the applicant in preparing the application form and letter.

- Commitment of the applicant to a career in aquatic animal medicine as reflected in the applicant's letter of intent and curriculum vitae (CV).
- Applicant's grade point average/class rank.
- Quality, scientific merit, and duration of intended research. Applicants are encouraged to select research projects with established funding sources, clearly defined aims, and project timelines that will enable the student to complete the research during the allotted time period. Applicants are encouraged to pursue research activities at institutions with proven or established aquatic animal research programs. Project summaries detailing the planned

research, aims, importance, methods, and funding sources will be judged for each applicant. Projects for which the budgeted work has already been completed are not eligible for consideration.

- Two (2) current letters of recommendation, one of which must come from a member in good standing of IAAAM.
- Financial needs of the student in addition to other available funding such as that provided by the institution providing the research opportunity.
- Previous recipients of the award are encouraged to apply, however priority will be given to those who have not previously received the scholarship.
- Application Submission Deadline: March 6, 2015. Please submit completed applications to:

Dr. Kathleen Colegrove, IAAAM Education Board Member Zoological Pathology Program LUMC Bldg 101, Rm 0745 2160 South First Avenue Maywood, IL 60153

Fax: 708-216-5934

Email: katie.colegrove@gmail.com

- Submissions can be sent either by mail or electronically. Electronic submissions should be in **pdf format**. All materials must be received by **March 6, 2015**.
- Winners will be notified by April 3, 2015 and recognized during the 2015 IAAAM Conference in Chicago.

Application requirements:

- Application form (download from IAAAM website: www.iaaam.org)
- Letter of intent detailing applicant's career goals and goals for the research activity.
- Two (2) letters of recommendation, one of which must come from a member in good standing of IAAAM
- Student's curriculum vitae (should include any other research experience with citations)
- Official school transcripts for currently enrolled institution only
- Letter of agreement from the principle investigator at the sponsoring institution, identifying the location and duration of the research project and its expected funding source(s)
- Student budget of estimated expenses (e.g. transportation, rent, meals) separate from direct research related expenses.
- Project Summary completed by student applicant: (3-page limit; single spaced; ¾-inch margins; 11-point Times, Times New Roman or Arial font).

Failure to adhere to these guidelines will result in disqualification.

Project Summary should include:

- Brief project abstract/overview
- Project aims/hypotheses
- Justification and literature review
- Materials and methods
- Significance to the field of aquatic animal medicine/health
- Research budget including direct and indirect funding sources
- Research time table
- Student's role in the project
- Mentor's qualifications

If live animals (including client/privately-owned animals) are used in any way in the project, the mentoring researcher must provide assurance that the planned research project has or will obtain full Institutional Animal Care and Use Committee (IACUC) approval.

The Newsletter of the International Association for Aquatic Animal Medicine is published four times a year (usually in January, April, August, and November). An annual conference is held every year in the spring and electronic proceedings from that conference are mailed out in June or July to current members not in attendance. The International Association for Aquatic Animal Medicine is a nonprofit organization dedicated to advancing the art and science of aquatic animal medicine and health.

Newsletter submissions are welcomed, although the newsletter editor and the IAAAM board reserve the right to edit and/or refuse the publication of any submissions. The deadlines for submissions are December 1, March 1, July 1, and October 1. Submissions should be made in WORD, without complex formatting. For submissions contact Stephanie Venn-Watson, Newsletter Editor, at

stephanie.venn-watson@nmmf.org.

For membership information, including address changes, contact Marty Haulena at martin.haulena@vanaqua.org

HONORARY LIFE MEMBERS

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IAAAM Site Selection:

Sam Dover (sdoverdvm@cox.net)

IAAAM Student Liaison:

Allison Tuttle (atuttle@searesearch.org)

^{*}deceased