**Fish Health Section** 



## FHS NEWS – April 2023

Fish Health Section website: https://units.fisheries.org/fhs/

Fish Health Section Facebook Site: <a href="https://facebook.com/FishHealthSectionAFS">https://facebook.com/FishHealthSectionAFS</a>

Fish Health Section Twitter feed: @AFSFishHealth

Would you like your recent open-access publication featured on our Twitter feed? We would like to share one publication per week. Just fill out the form at: <u>https://forms.gle/NWVXEFoGcdYME6gh8</u>.

<u>Membership notice</u>: Starting in March 2023, only paid FHS members will receive newsletters and communications from the section. Thank you to all the renewing members! You are what makes this section successful! Make sure to add <u>fhs@afsmembers.simplelists.com</u> to your safe list to continue to receive communications from the section!

## **QA/QC Committee Update**

The laboratory QA/QC committee has recently updated applications and created renewal criteria for our Tier 1 and Tier 2 programs. The updated material is currently available on the FHS <u>website</u> so we encourage everyone to visit this site and participate in improving laboratory QA programs for our aquatic animal health laboratories.

## AFS-FHS Call for Nominations: Deadline extended to May 5th

Do you know someone who can help contribute to the Fish Health Section? Are you looking to be more involved in your professional community?



Those that volunteer their time to serve on FHS committees gain valuable experience, advance their priorities, build relationships, and make a big difference for the profession. It really is a win-win!

The Nominating and Balloting Committee is seeking nominees for the following positions:

- Vice-President (4-year term)
- Technical Standards Committee (3-year term)
- Professional Standards Committee (3-year term)
- Policy/Position Development Committee (3-year term)
- Nominating and Balloting Committee (3-year term)

More information on these positions can be found on the FHS website. <u>https://units.fisheries.org/fhs/about/by-laws/</u>

All nominees must be Fish Health Section members in good standing. Nominees for the Professional Standards Committee must be a Certified Fish Health Inspector, a Certified Fish Pathologist, or a Doctor of Veterinary Medicine.

The nomination period is open until April 15<sup>th</sup>, 2023. Please send all nominations to Nick Phelps, <u>phelp083@umn.edu</u>. Self nominations are ok!

Don't miss out on this chance to serve our important fish health organization!

## **Snieszko Student Travel Award Announcement**

AFS-FHS is soliciting applications for the Snieszko Student Travel Awards, which will award a sum of up to \$2000 to students to defray costs of travel to a professional meeting to present a talk in the aquatic animal health field (e.g. FHS Annual Meeting, Western Fish Disease Workshop, etc.)

To apply students must submit the following items by the deadline of May 8th, 2023:

- 1. Letter of application and statement of any special financial circumstances (i.e., not supported by a stipend, etc.)
- 2. Curriculum vitae
- 3. Three letters of recommendation
- 4. Itemized budget on how money is to be spent, i.e., travel, meals, lodging and registration
- 5. Copy of abstract of paper to be presented
- 6. The student must be a member of FHS. As long as they have an active AFS-FHS student membership for the year, they are eligible for student awards through the end of the year, even if the conference is happening after graduation.

Applications will be judged on:

- 1. Quality of abstract
- 2. Significance of the research
- 3. Academic achievement
- 4. Professional achievement
- 5. Financial need

Email application material to the Awards Committee Chair (Isaac Standish, sirisaac\_standish@fws.gov)

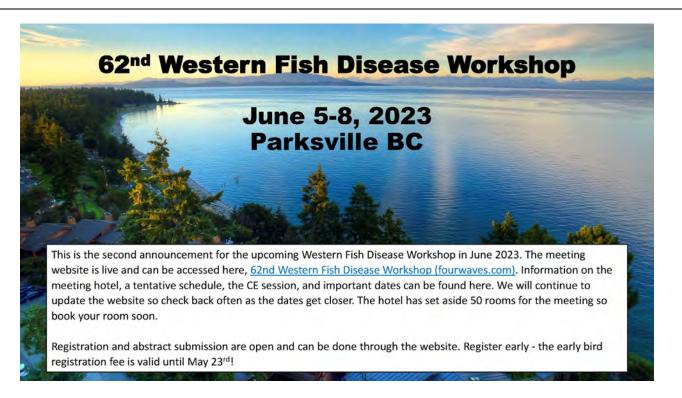
Feel free to contact members of the Awards Committee with questions.

Awards Committee

| Isaac Standish, chair | (sirisaac_standish@fws.gov)        |
|-----------------------|------------------------------------|
| Nicole Nietlisbach    | (nicole.nietlisbach@wisconsin.gov) |
| Luke Iwanowicz        | (liwanowicz@usgs.gov)              |

## **MEETINGS, WORKSHOPS AND COURSES**

Western Fish Disease Workshop June 6-8, 2023 Parksville, B.C. https://event.fourwaves.com/cbd19bf6-2dec-4ea7-bfd4-6762a939ace5/pages



#### Deadline for Abstract Submission for the 62<sup>nd</sup> WFDW in Parksville BC

Greetings from the organizing committee for the upcoming WFDW **June 5-8<sup>th</sup> in Parksville BC**! Please remember that the deadline for abstract submission is coming up soon on **April 30<sup>th</sup>**. Please send us your abstract or poster submission soon such that we can start putting the program together for this important meeting. We are excited to welcome everyone to Vancouver Island and are looking forward to a productive meeting. If you have not booked a room at the meeting venue yet, please do as the deadline for WFDW rates is also approaching on **May 5<sup>th</sup>**. For all of the information that you need and to submit your abstract and registration, please go to the event website at <u>https://event.fourwaves.com/cbd19bf6-2dec-4ea7-bfd4-6762a939ace5/pages</u>. If you have any questions, please don't hesitate to reach out to Mark Higgins at <u>mark.higgins@dfo-mpo.gc.ca</u>

## 2023 Joint Meeting of the Northeast Fish Health Committee and the AFS Fish Health Section



## "Applying Research: Bridging the Gap Between Aquatic Animal Health Research and Inspections"

## University of Vermont, Burlington, Vermont July 24 – 27, 2023

The 2023 Annual Meeting of the AFS Fish Health Section will be held jointly with the Northeast Fish Health Committee (NEFHC) for the first time on July 24-27, 2023 in Burlington, VT! The theme for the meeting is "Applying Research: Bridging the Gap Between Aquatic Animal Health Research and Inspections". The venue for the meeting is the University of Vermont. Room rates are extremely affordable for Fall in New England; \$79 per night for single and \$59 per person per night for a double. The University is on beautiful Lake Champlain and only a few blocks from the <u>Church Street</u> <u>Marketplace</u> – Vermont's award-winning open-air mall featuring over 100 places to shop and dine.

The FHS looks forward to co-hosting this meeting with the NEFHC and provides a tremendous opportunity for learning more about fish health research and topics unique to the Northeast US and provides an opportunity to attract our Canadian colleagues to the meeting.

The meeting will begin on July 24-25 with the Northeast Fish Health Committee Meeting, followed by a Continuing Education Course on July 25<sup>th</sup>, and the FHS meeting will occur on July 26<sup>th</sup>-27<sup>th</sup>. We are planning the following special sessions: (1) "Fish Health Research/Topics in the Northeast US, (2) The Role of Thiamine in Fish Health and (3) Freshwater Mussel Health What We Know and Don't Know, plus several general sessions.

#### **REGISTRATION** (LINK TO COME)

Early registration ends **June 24, 2023**. The registration fee (U.S. dollars) includes a reception on Tuesday evening with heavy hors d'oeuvres, electronic workshop proceedings, refreshments at breaks, breakfasts, and luncheons on each of the two full days of the workshop (Wednesday, Thursday), and a banquet dinner on Thursday night. Late registration will incur an additional fee of \$50 (U.S. dollars), for each registration category. Early registration prices are:

| NEFHC Meeting Registration (July 24-25)                           |       |
|---|-------|
| Continuing Education Session (July 25)                            |       |
| FHS Meeting Member Regular Registration (July 26-27)              | \$375 |
| FHS Meeting Non-Member Regular Registration (July 26-27)          |       |
| FHS Student Registration  |       |
| One-Day Registration  | \$188 |
| Additional Banquet Ticket   | \$ 60 |
| Additional T-Shirt (one is included in general registration cost) | \$ 20 |

Lodging (Link coming soon)

#### **University of Vermont**

Rooms for the conference are \$79/night for a single and \$59/person/night for a double.

There are hotels available in the area if you wish to stay off-campus. We do not have contracts with any of the local hotels.

**Directions/Travel:** The University of Vermont is only minutes away from <u>Burlington International</u> <u>Airport</u>. Transportation from the airport to the hotel, such as taxis, Uber, and Lyft, are readily

accessible from the airport.

<u>Rental cars</u> are also available from the airport, and if this option is used, the University does charge \$10/day for parking.

#### Student Travel Awards: Application deadline May 8, 2023

The AFS-FHS is pleased to announce that the Snieszko Student Travel Awards will be available to help students with the cost of attending the 2020 Joint Meeting of the NEFHC and the AFS-FHS. These awards of up to \$2000 to allow students (undergraduates, graduates, or veterinary) post-docs or residents to give an oral or poster presentation at the conference. For more details, including application requirements, please refer to <u>https://units.fisheries.org/fhs/about/awards/</u>. Please direct all inquiries and submissions to the Chair of the FHS Awards Committee at <u>sirisaac\_standish@fws.gov</u>

#### **Continuing Education:**

A full day of Continuing Education, entitled "**Molecular biology tools: from diagnostics to understanding epidemiology to guide aquatic animal health management**", will be held on July 25<sup>th</sup>. Molecular biology has revolutionized the aquatic animal health lab, providing accurate and sensitive methods to detect pathogens. As the technology is constantly improving and the price continues to drop, molecular biology techniques can be applied in innovative ways to improve our understanding of aquatic animal health. Though the technology has significantly improved disease diagnostics and pathogen discovery, it has also enhanced our understanding of epidemiology. This continuing education course will cover some of the basics of molecular biology, how such techniques have been used to advance aquatic animal health, and benefits of this research to fish health managers and aquaculturists. Pending final CE committee approval, this session will provide 6 RACE CE credits.

We look forward to seeing all of you at the meeting in June. For additional information please contact: Anita Kelly <u>amk0105@auburn.edu</u> (334-624-4016) or Tom Jones <u>Tom.Jones@vermont.gov</u> (802-793-6781).

## **JOBS/GRADUATE ASSISTANTSHIPS**

#### Vet Specialist - Fish Pathologist

Job Description:

Join dedicated professionals making valuable contributions to the lives of British Columbians.

The Plant and Animal Health Branch supports the sustainability of animal and plant agriculture, while serving to protect the well-being of the people of the province of British Columbia through surveillance, regulatory compliance, risk assessment, and the development of strategies to address identified risks. The Plant and Animal Health Branch consists of three key program areas: the Animal Health Centre, the Plant Health Unit, and the Business Unit.

The Animal Health Centre is accredited by the Standards Council of Canada to the international ISO/IEC 17025 standard and is an American Association of Veterinary Laboratory Diagnosticians accredited provincial veterinary diagnostic laboratory that provides world class diagnostic services to protect the health of all animals in B.C. in support of disease prevention, control, and eradication. The

Animal Health Centre protects human health with the timely and accurate diagnosis of zoonotic diseases that transmit from animals to humans, in both the public health and the food safety sectors. The Animal Health Centre supports the principles of One Health and provides a strong collaborative work environment with a focus on continuous learning and collegial support.

This position provides leadership in the specialized field of veterinary diagnostic pathology, specifically as it applies to fish species.

Job Requirements:

\* Doctor of Veterinary Medicine, or an equivalent degree, from a university of recognized standing, and relevant experience may also be considered. AND

\* Doctor of Philosophy (PhD) in Science or Veterinary medicine OR

\* Master's Degree and must have certification by the American College of Veterinary Pathologists or European College of Veterinary Pathologists

\* Must be eligible to be licensed to practice by the College of Veterinarians in British Columbia or an equivalent Veterinary Licensing body in North America.

\* Completed at least three years of study in a veterinary anatomic pathology training program under the tutelage of pathologists certified by the American College of Veterinary Pathologists or European College of Veterinary Pathologists.

\* Two years or more of relevant experience in diagnostic fish pathology.

\* Preference may be given to candidates with both certification from the American College of Veterinary Pathologists or European College of Veterinary Pathologists and a Doctor of Philosophy degree (PhD).

Willingness Statements

\* Must obtain rabies vaccination upon employment (if not previously vaccinated) and required to participate in the rabies vaccination and titre program to maintain employment.

\* Must meet safety standards of Work Safe BC.

\* Willing and able to report findings using specific criteria requested or required by clients.

For questions regarding this position, please contact <u>Heather.Osachoff@gov.bc.ca</u>

About this Position:

Amendment (April 17, 2023): Updated Work Options to Hybrid work.

Flexible work options are available; this position may be able to work up to 2 days at home per week as per the Telework Agreement.

An eligibility list may be established for future temporary and/or permanent vacancies.

This position may be eligibility for Veterinarian Qualification Differential (VQD). Veterinarians with relevant postgraduate education or training (as determined by the employer) beyond the Doctor of Veterinary Medicine level receive this pensionable earnings differential allowance (EDA). The allowance is not cumulative.

Working for the BC Public Service:

The BC Public Service is committed to creating a <u>diverse workplace</u> to represent the population we serve and to better meet the needs of our citizens. Consider joining our team and being part of an innovative, inclusive and rewarding workplace.

The Indigenous Applicant Advisory Service can help Indigenous applicants (First Nations [status or

non-status], Métis or Inuit) interested in BC Public Service job positions.

The BC Public Service offers a healthy work/life balance, excellent <u>benefits</u>, including one of the best <u>pension plans</u> available, and a variety of opportunities for career learning and development. Regular, full time Professional Employee Association members are also entitled to 7% allowance in Lieu of Overtime Shiftwork and Standby (taken as time or money), have a 35-hour work week, and 4 weeks' annual paid leave entitlement. To find out more, explore <u>What the BC Public Service offers You</u>.

How to Apply:

Your application must clearly demonstrate how you meet the job requirements list above.

Cover Letter: YES - A cover letter is required as part of your application. The content and/or format of your cover letter may be evaluated as part of the assessment process.

Resume: YES - Ensure your resume includes your educational accomplishments, employment history including start and end dates (month and year) of your employment, and any relevant information that relates to the job to which you are applying.

Questionnaire (BASIC): YES - As part of the application process, you will be prompted to complete an online questionnaire to demonstrate how you meet the job requirements.

Helpful tips, videos and more regarding the application process can be found on the Your Job Application <u>https://www2.gov.bc.ca/gov/content/careers-myhr/job-seekers/current-job-postings/job-application</u> page of MyHR. If you are experiencing technical difficulty applying, e-mail <u>BCPSA.Hiring.Centre@gov.bc.ca</u>, before the stated closing time, and we will respond as soon as possible.

Additional Information: A Criminal Record Check (CRC) will be required.

Applicants selected to move forward in the hiring process may be assessed on the Knowledge, Skills, Abilities and Competencies as outlined in the attached Job Profile located at the bottom of the posting.

Applications will be accepted until 11:00 pm Pacific Daylight Savings Time on the closing date of the competition.

Posting Close Date: 5/16/2023

#### M.S. assistantship in Catfish Nutrition

**Mississippi State University** Department of Wildlife, Fisheries and Aquaculture College of Forestry Resources ~20,000/year (before taxes) + tuition + health insurance Start date: August 2023

#### Description

The M.S. student will take classes on the main campus at Starkville, MS, and conduct the research in Stoneville, MS, at the Thad Cochran National Warmwater Aquaculture Center. The student will be trained in the nutritional aspects of catfish aquaculture, ingredient/feed digestibility, nutrition trials, immunological assays, proximate composition analyses, etc.

#### **Required qualifications:**

• B.S. degree in Aquaculture, Fisheries, Nutrition, Microbiology, or related sciences with GPA>3.2

• If the applicant is not a U.S. citizen, then the TOEFL exam for English proficiency must be taken. The TOEFL score should be a minimum of 79.

• Interested candidates should send an e-mail to Dr. Fernando Yamamoto (<u>fyy5@msstate.edu</u>) with the subject line: "M.S. applicant 2023" with C.V. and transcript (B.S.)

## Chief Executive Officer Health & Nutrition

#### Center for Aquaculture Technologies Canada

Victoria, Prince Edward Island

Reporting to the Board, the CEO provides the leadership and vision to achieve CATC's long-term goals and objectives. The CEO is accountable for working closely with the Board, staff, and key stakeholders in articulating a vision, setting priorities, and delivering on the strategy that delivers top and bottom-line objectives, championing a corporate culture that has quality, service, innovation, collaboration, and empowerment as its pillars. They are responsible for building capacity for growth and ensuring strong commercial relationships with clients and suppliers and leading the organization internally through good corporate governance, regulatory compliance, and operational excellence. The CEO will build effective and productive external relationships with a wide range of stakeholders including industry, government regulators and academics.

See attached .pdf for details.

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

## **RESOURCES/NEWS**

Join us for a Free On-Line Symposium with CE Credits June 1, 2023 8:00 AM –2:00 PM PDT

Hosted by the US Fish and Wildlife Service Pacific Region Fish Health Program



## Does veterinary intervention interfere with the adaptation of wild animals to a rapidly changing world?

The health of wild animals is being challenged by climate change and by other human impacts to critical ecosystems. Veterinary medicine can address some of these emerging disease problems, but intervention in the health of wild animal populations triggers many complex ethical and biological questions.

•Are we interfering with natural selection and preventing the evolution of traits that would allow species to survive?

•Is it ethical to risk making wild animal populations dependent on human intervention when that intervention cannot be guaranteed over the long term?

•What are the ethical implications of not treating diseases that have a clear impact on animal health and welfare?

To answer these questions, we have gathered a panel of speakers that will look at current examples of these ethical and biological challenges and examine the human response and its implications. The international panel of

seven presenters will discuss aquatic and terrestrial animals including Pacific salmon, amphibians, red wolves, bison, and more.

## To register for this free symposium <u>Click Here</u> For more information contact: <u>WildlifeSymposium@fws.gov</u>



## We are pleased to announce the AFS-FHS Summer Seminar Series is back for another year!

Over the past three years, graduate students and early career professionals have had limited chances to network or share their important work. This summer seminar series provides an avenue for young scientists to showcase their work in a time of limited travel budgets and other restrictions.

If you missed the previous year's series, the presentations have been archived here: <u>http://z.umn.edu/fishhealthseminar</u>.

#### We will again be awarding Best Student Paper Awards to support student travel, made possible by our generous sponsors!

Thanks to generous contributions from our sponsors, we have been able to award 12 student travel awards over the past three years and anticipate the same level of support this year.

## Want to present?

This is a low-stakes opportunity for students and early career professionals to introduce themselves to a mix of lab groups from across the country and show off their work. Presentations (20-minute talk followed by 5-minute Q&A) will take place on Thursday afternoons (12-1 pm Central Time) from May 4th - Aug 24th. Eligibility for the best presentation awards will be limited to active AFS-FHS student members so make sure your membership is up-to-date!

Slots are limited and will be allotted in a first come, first serve basis. Preference will be granted to <u>active AFS-FHS student members</u> so update your student membership now!

## Want to be notified of upcoming seminars?

Anyone interested in receiving announcements regarding upcoming seminars and abstracts can join the AFS Summer Student Seminar Listserv.

The seminars are free and open to the public - please forward these announcements to your networks. The seminar calendar and Zoom access information will be available mid-April.

## Important links:

Student and early career professional presentation signup.

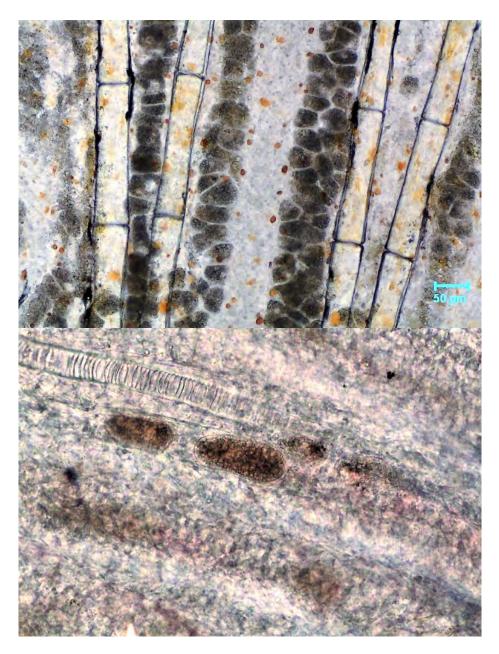
AFS-FHS Student Seminar Series Listserv Seminar calendar and Zoom access information

If you have any questions, please don't hesitate to contact us. We hope to see you this summer!

Matt Griffin (<u>matt.griffin@msstate.edu</u>) Megan Shavalier (<u>shavali1@msu.edu</u>) Nick Phelps (<u>phelp083@umn.edu</u>)

Aquatic Animal Drug Approval Partnership (AADAP) Updates are now available online (new link): <u>https://www.fws.gov/library/collections/aquatic-animal-drug-approval-partnership-update</u>

## **Editor's Random Pics**



Wet mounts showing a systemic Tetrahymena infection in a guppy? One pic shows them in the fin vasculature, the other in the gills. Histo verified that the infection was systemic. Photos courtesy of Andy Goodwin, US Fish and Wildlife Service.

#### NEFHC and AFS FHS Joint Meeting July 24-27, 2023 Burlington, VT

#### Call for Papers/Posters: Abstract/Title deadline June 24, 2023

Individuals interested in presenting an oral presentation or poster can submit a complete abstract using the guidelines and submission process outlined below. If you are interested in presenting a case study during the first evening's social, please submit an abstract via the guidelines below. The deadline for submitting abstracts and/or case titles is *June 24, 2023*.

#### **Guidelines for Abstract Preparation (oral presentation and poster)**

- 1. Prepare in Microsoft Word format.
- 2. The abstract must fit on a single side of a page with margins set at 1" on all sides.
- 3. Use Times New Roman 12-pitch font.
- 4. Center the title. Genus and species names should be in italics.
- 5. Provide a double space between the title and authors.
- 6. For each author, provide first name, middle initial and last name.
- 7. Use bold script for the author presenting the paper.
- 8. Follow each name with a numeric superscript to denote affiliations.
- 9. Provide a single space between authors and affiliations.
- 10. Affiliations should include mailing addresses plus zip codes.
- 11. Provide double space between affiliations and the body of the abstract.
- 12. An abstract is needed for the Tuesday night case studies and the main meeting scientific talks
- 13. Please email abstracts to amk0105@auburn.edu by June 24, 2023

#### **Guidelines for Oral Presentation**

- 1. PowerPoint format (PC).
- 2. General session talks will be in 15-minute allotted slots. Recommend 12 minutes for presentation and 3 minutes for questions.
- 3. Make sure the fonts in the presentation are greater than 24 pitch
- 4. **Compress picture files, please**! This significantly reduces the size of your file and shortens loading times between talks. To reduce the size of your file:
  - 1. Click on the picture to be compressed.
  - 2. Click on Picture Format.
  - 3. Click on Compress Picture.
    - a. To compress the current picture only, check **Apply only to this picture** under **Compress options.** To compress all pictures in the presentation, uncheck **Apply only to this picture** under **Compress options.**
    - b. Check Delete cropped areas of pictures under Compression options.
    - c. Under Resolution, select Web (150 ppi): good for web pages & projectors.
    - d. Click Ok.

5. PowerPoint presentations must be uploaded to <u>https://drive.google.com/drive/folders/10clLBYey1QqyOSy2fCH8TcGYCVgXUDfkWE</u> <u>wtcw51UUrfNj7Rch6QXkLrw7iIOXuXzYDqNWjL?usp=sharing</u>

Be sure to fill in the submission form completely. Note, it will not be possible to revise your **PowerPoint file or upload a new version after submission, nor during the in-person venue** (i.e., we will not be uploading slide decks at the meeting); please plan accordingly. All submitted PowerPoint presentations will be linked to a Master Program to ensure a seamless meeting, so <u>be sure to provide your talks by the appropriate deadline!</u>

#### **Guidelines for short case reports – casual presentation during evening social**

- 1. Anyone can present a short case study for review during the Monday evening social. **Must be unusual or uncommon cases and not shorted research reports.**
- 2. Case studies should be **8 minutes with 2** minutes for questions. They can be presented as a PowerPoint, general discussion, Haiku, or song and dance.
- 3. This is an opportunity for everyone to present and discuss interesting case studies casually, so feel free to select the most appropriate delivery method.
- 4. Please upload abstracts and presentations to the links provided above by June 24, 2023.

#### **Guidelines for Posters**

- 1. The typical size of a poster is 91 cm x 112 cm (36" x 44") in a landscape
- 2. Column arrangement: A 3-column format best fits this size poster in landscape format. The flow of material should be from top to bottom of each column and left to right among columns.
- 3. Leave  $3.8 \text{ cm} (1.5^{\circ})$  between columns
- 4. Highlighting the sections: This can be done in several ways.
  - a. One can use thin-lined borders around sections or blocks of subsections to emphasize how items are grouped.
  - b. Light-colored background fill can also be used to highlight different sections.
- 5. Use of photographs as backgrounds is not recommended, because legibility is usually compromised.
- 6. Background: Light pastel backgrounds are attractive and allow use of contrasting font colors, such as black, dark blue, and red. White backgrounds are acceptable, though they are less attractive than colored ones.
- 7. Font type and size: Sans serif typeface such as Arial is best for good visibility at a distance; use the same font type throughout.
  - a. Title 72 point or larger; keep it short, not more than 80 characters including spaces.
  - b. Authors' names and affiliations 48 point.
  - c. Section headings 36 point, bold.
  - d. Text 28 point.
  - e. Graphs and tables all numbers and labels 28 point or larger.
  - f. Graph bars and symbols use colors; avoid cross hatching.
- 8. Acknowledgments 20 to 24 point
- 9. Please set up posters after you have registered.
- 10. Posters will be displayed for the entire conference, but a poster session is scheduled for Wednesday, July 26, from 5:30-7:00 pm.

# boyden



## Executive Brief

Chief Executive Officer Health & Nutrition Center for Aquaculture Technologies Canada

March 2023

## Executive Brief Chief Executive Officer Health & Nutrition, CATC

## Essence of the Opportunity

The Center for Aquaculture Technologies Canada (CATC) is an R&D and contract research organization (CRO) focused on the application of biotechnologies to improve productivity, efficiency and sustainability in aquaculture and related industries. The Canadian operations are located in Victoria, and Souris, Prince Edward Island. Their aquacultural expertise and experience, combined with a solid background in cellular and molecular technologies and *in vivo* testing gives CATC, a vertically integrated service provider with a unique advantage in delivering research-based solutions.

The sister company to CATC is CAT USA, an organization with facilities in San Diego, California. CAT USA provides client-focused solutions and specializes in developing custom tools to accelerate genetic improvement in aquatic species. Their tools support a wide range of applications, from understanding population genetics to selecting for commercially important traits.

Established in 2012, CATC works with clients worldwide to develop customized solutions to improve productivity, efficiency, and sustainability in the aquaculture industry. Their world-class research teams and state-of-art GLP & GMP-certified facilities are equipped to support a diverse range of projects from discovery through to final product development and testing/clinical trials. Unique to CATC is the ability to work with issues facing a wide range of cold and warm water species. Salmon, trout, tilapia, catfish, shrimp and oysters are some of the key species the center is working with.

CATC has the ability to control all aspects of testing from water condition to novel treatment applications and producing custom feed on-site - controlling the quality and delivery of feed for projects - saving the client time and cost, all the while producing reliable results.

Over the last couple of years, the organization has gone through some leadership transitions that have hindered the growth plan for the company. To put the company on a strong foundation, the Chair asked one of the Board Members (who is also a Member of the Cuna del Mar Management Committee) to step into the CEO role while the Board launches a search for a CEO, **Health & Nutrition ("CEO")** who is a strong leader with deep operational expertise to build on the great work of the interim leader.

Reporting to the Board, the CEO will provide the leadership and vision required to **achieve CATC's long**-term goals and objectives. The CEO is accountable for working closely with the Board, staff and key stakeholders in articulating a vision, setting priorities and delivering on the strategy that delivers top and bottom-line objectives, championing a corporate culture that has quality, service, innovation, collaboration and empowerment as its pillars. They are responsible for building capacity for growth, ensuring strong commercial relationships with clients and suppliers and leading the organization internally through good corporate governance, regulatory compliance and operational excellence. The CEO will build effective and productive external relationships with a wide range of stakeholders including industry, government regulators and academics.

The successful candidate is an experienced operational leader who has ideally worked in a regulated business/unit within biotech, pharma, life sciences, or feed/food manufacturing. They can demonstrate an understanding of how to drive resource optimization in an environment where the business model and planning, contract negotiations, pricing and staffing are all major factors in operational and financial success.

The operations are located in Victoria, Prince Edward Island. The preference is for the CEO to reside on Prince Edward Island.



## Key Opportunities & Challenges

After consulting with key stakeholders at the Center for Aquaculture Technologies Canada, the following opportunities and challenges were identified for the new Chief Executive Officer Health & Nutrition:

#### The Commitment of the Parent Company

Cuna del Mar LP ("CdM") is an impact investment fund company committed to investing in companies that are making the oceans healthier and contributing to global food accessibility through sustainable aquaculture. They invested in CATC because the **center's** scientific work enables breakthroughs which will in turn drive the growth of the sustainable aquaculture industry.

#### World Class Reputation

CATC has worked with clients locally and worldwide in every sector of the industry. They have developed a reputation for being innovative and flexible. CATC can offer clients tailor-made testing solutions/clinical trials that support operational needs.

#### Certified Facilities

The facilities in PEI have achieved GMP and GLP certifications. This is a tremendous milestone in the company's evolution as it provides clients with the confidence of knowing that their studies and clinical trials are being carried out under the highest levels of quality control. Their world-class facilities support world-class testing and clinical trials.

#### Depth of Technical Expertise

Unlike many of its competitors, CATC has the ability to run over 200 pre-existing molecular tests and established challenge models in aquatic animals. Additional fit-for-purpose diagnostics and aquatic studies are developed as needed based on the client's goals. This depth of expertise has not been effectively marketed to the industry and as a result, CATC is currently operating below optimal capacity. Utilization is core to success.

#### Commitment to Quality

CATC is committed to delivering on its commitments to clients and will ensure studies are conducted with the highest level of quality to meet clients' and regulatory expectations.

#### Develop a Well-Defined Strategic Vision

To ensure CATC reaches its full potential, the Board and leadership team believe that the company has reached a stage where it is imperative that time and effort be spent in the development of a strategic plan that sets out a brand and culture strategy, identifies aspirational goals and establishes a roadmap and milestones for achieving these objectives and key results. Driving towards a long-term objective will ensure effective and measurable decision making.

#### Drive Performance

Driving revenue and profitability while ensuring a commitment to quality and compliance with **all regulatory requirements is at the core of the CEO's mandate. The successful** candidate must be able to set a strategy, inspire the team and develop an operational plan that delivers results. Creating a performance culture with collaboration, empowerment and quality as the key pillars will be critical to delivering on the growth mandate.



#### Executive Brief

#### Chief Executive Officer Health & Nutrition, CATC

#### Regulatory Environment

As a CRO working with fish that enter the food chain, CATC operates under a number of regulatory frameworks. As the CEO, the successful candidate will be a signatory to documents that verify the level of QC and QA related to regulatory requirements including the welfare of animals. This is critical to the long-term viability of the business.

#### Build Scalable Operational Infrastructure

The operational infrastructure has supported the company to this stage, but growth will require the business to continually advance systems, processes, planning, pricing forecasting, operational efficiency and financial performance. Enhancing internal communications, interdepartmental collaboration, discipline, and decision making based on operational metrics, and market conditions will be fundamental to driving top and bottom-line performance as the business grows.

#### Top-Line Growth Ambition

The Board and Leadership Team feel the organization requires a clear vision for delivering top-line revenue objectives. To deliver on this growth objective, the company needs to develop strategies that enhance brand awareness, and build the reputation of CATC with the global feed producer and vaccine companies.

#### Feed Production

Unique to CATC is its ability to produce high-quality specialty feeds for clients who have tested their formulas in the CATC testing/clinical trial facilities and now need to produce limited production runs. This is an underdeveloped business line that has growth potential.



## Organizational Profile

#### Cuna Del Mar

Cuna del Mar is a mission-driven impact investment fund that intends to help reverse the degradation of the oceans by shifting the demand for seafood from wild fisheries and conventional fisheries farming/production methods to new industries in open ocean aquaculture. Cuna del Mar explores, supports and develops open ocean aquaculture methods that are economically viable as well as environmentally and socially responsible. They invest in businesses that have the potential to create disruption in the industry by incorporating positive change agents to produce a diverse supply of healthy, wholesome seafood. Cuna Del Mar is committed to being ocean stewards that conduct business with integrity and respect. They seek excellence in people and systems in the spirit of continuous improvement. Personal growth, innovation, initiative and enrichment are at the center of the culture they espouse. They support their companies in the achievement of goals and objectives. Cuna Del Mar acquired the Center for Aquaculture Technologies because of the quality of the team and GMP-certified facilities that support testing and trials for global aquaculture producers, and feed and health science companies.

#### About the Center for Aquaculture Technologies

#### Innovative, Tailor-Made Solutions for Organizations in the Industry

The Center for Aquaculture Technologies Canada (CATC) is an R&D and contract research organization (CRO) focused on improving the level of productivity, efficiency and sustainability in aquaculture and related industries through expertise in molecular biology, pathobiology and animal health and nutrition.

The Canadian operation has facilities located in Victoria and Souris, Prince Edward Island, Canada. CATC's aquaculture expertise and experience combined with a solid background in cellular and molecular technologies and tank-based studies gives them a unique advantage in delivering research-based solutions. CATC has received GMP certification for quality control batch release testing of veterinary medicinal products and is finalizing its GLP certification.

CATC is a full-service organization that can integrate and customize all of their services to maximize project value. Learn more about CATC: <u>www.aquatechcenter.com</u>

#### Differentiators

Service Integration: CATC offers fully integrated services in <u>Health</u> and <u>Nutrition</u> to add value to clients' projects and optimize timelines by eliminating the need to work with multiple companies or laboratories.

World-Class Expertise: CATC brings decades of expertise working with aquatic animals. They provide continuous guidance and support throughout the project.

Quality Management: Their in-house quality system and <u>world-class certification</u> allow them to conduct *in vivo* and *in vitro* studies with imported as well as domestic aquatic animal pathogens.

State-of-the-art Facilities: Facilities are equipped to support a diverse range of projects from discovery through final product development and testing.

Maximized Project Value: They help measure Return on Investment and customize services to maximize project value.



#### Executive Brief

#### Chief Executive Officer Health & Nutrition, CATC

Custom Solutions: They offer client-focused solutions and specialize in developing custom tools to deliver results.

Free Initial Consultation with Clients: CATC is committed to providing a high-quality product and client support – consulting is one of their adjacent services.



#### Services

#### Health

The CATC Health team works with clients in aquatic animal health to develop innovative solutions for the prevention and treatment of disease.

- Custom pathogen and disease challenge model development
- Evaluation of vaccines, functional feeds, and other fish health products
- Assess novel methods of treatment administration
- GMP and non-GMP batch release testing for products
- In vitro product screening
- Family studies for broodstock selection
- Benchmark the performance of competing products
- Evaluation of environmental and handling stressors on animal health

#### Health - Disease Models

World-class facilities and containment certification allow their expert health team to work with disease-causing organisms from anywhere in the world.

The health team are expert at developing tank-based models that mimic chronic and acute conditions for aquatic species.

#### Health - LabTech

The CATC molecular and support laboratories add value for clients because they provide a one-stop service to assess the safety and functionality of novel compounds in an efficient and cost-effective manner before moving into tank-based studies. In-house diagnostic, prognostics, and health monitoring services used to validate and increase the value of tank-based studies by providing timely and high-quality

sample analytics. Additionally, LabTech offers services that improve the resolution of tank-based studies.



#### Nutrition

The Nutrition Department specializes in providing innovative solutions to improve the performance, cost-effectiveness, and sustainability of aquafeeds. Experts at CATC facilitate the development of products that meet or go beyond the basic nutritional requirements of aquatic species and help bring them to market faster. Services include:

- Evaluation of novel feed ingredients and feed additives
- Fish meal and fish oil replacement trials
- Digestibility determination
- Palatability assessment
- Shadow pricing for novel feed ingredients
- Mathematical modelling of growth
- Feed formulation
- Pilot-scale feed extrusion and steam pelleting
- Pellet quality assessment
- Nutrigenomics and Gut Microbiome Analysis

#### FeedTech

The CATC FeedTech center is the first of its kind pilot-scale extrusion line in North America. Located in Souris, Prince Edward Island, Canada, the FeedTech production facility provides a fully integrated service from feed formulation and optimization of extrusion conditions, to tank-based evaluation and analytical quality assessments of ingredients and finished feeds. FeedTech innovative solutions are ideal for fish farmers, feed companies, aquafeed researchers, and raw material suppliers.

#### Research & Development

CATC is an expert in evaluating and testing biotechnology, as well as in adapting it to the needs of the aquaculture industry. They actively seek collaborative partners for the development and commercialization of novel technologies.



## Facilities

CAT**C's** state-of-art facilities are equipped to support a diverse range of projects from discovery through final product development and testing.

#### Victoria, Prince Edward Island, Canada

The 46,000 square-foot aquatic animal research facility in Victoria, Prince Edward Island includes expansive, purpose-built, wet and dry lab space. Housing eight aquarium lab spaces and one dry lab with 20 discrete rooms, this facility is primarily dedicated to Health trials conducted within AQC3.

The dedicated GMP quality control labs are also located in this facility. These labs allow for rearing and stockholding of the study animals, dedicated spaces for water *in-vivo* non-pathogenetic batch release testing and AQC3-approved laboratories for pathogenic batch release testing.

#### Details

| $\bigcirc$ | SALT WATER  | ( AUTOMATIC MONITORING                   |
|------------|---|--|
|            | Ground water wells -                              | Oxygen and Temperature                   |
|            | Supplementation available                         | Effluent Decontamination                 |
| -          |   | HVAC                                     |
|            |   | Fridges, Freezers                        |
| $\cap$     | FRESH WATER                                       | Mechanical & Electrical System           |
|            | Ground water wells -<br>Supplementation available | O BACK UP SYSTEMS                        |
| -          | cappionioniation analiano                         | Redundant emergency generators with auto |
|            |   | transfer                                 |
|            | TEMPERATURE                                       | UPS                                      |
|            | TEMPERATURE                                       | Oxygen                                   |
| 6          | 4-30 Degrees                                      | EFFLUENT DECONTAMINATION                 |
|            |   | Ozone + UV Treatment                     |

Airflow: Inward directional airflow throughout the facility; monitored daily HEPA-filtered exhaust in AQC3. Supply and exhaust interlocked in AQC3 AQC2 supply laboratories.

Oxygen Supply: Main oxygen supply is from an oxygen generator or backup is provided by additional oxygen generators and cylinders.

Controlled Access: Controlled access to the facility, controlled access to the wet labs and AQC3, entrance to the AQC3 area by interlocked doors, and visitor access is controlled.

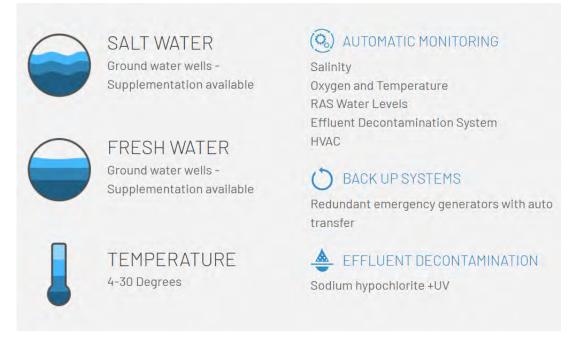


#### Souris, Prince Edward Island, Canada

The 21,000 square feet aquaculture research facility was constructed in 2015, CATC expanded operations as a formal, independent CRO for aquaculture and related industries providing services in the areas of genomics, drug approvals, vaccine testing, and evaluation of novel feed ingredients.

CATC facilities include a quarantine unit for the purpose of isolating animals. Source animals are tested for common, disease-causing organisms before they arrive or while they are in quarantine at the facilities.

#### Details



Airflow: Inward directional airflow throughout the facility; monitored daily HEPA filtered exhausted in AQC3. Supply and exhaust interlocked in AQC3 AQC2 supply laboratories.

Oxygen Supply: Main oxygen supply is from an oxygen generator or back up is provided by an additional oxygen generators and cylinders

Controlled Access: Controlled access to the facility, controlled access to the wet labs and AQC3, entrance to AQC3 area by interlocked doors, and visitor access is controlled.



#### www.boyden.com

## Leadership Team

| Roly Morris        | CEO Health & Nutrition (interim)       |
|--------------------|--|
| TBD                | Vice President of Business Development |
| Meaghan McCormack  | Director of Finance                    |
| Ivan Tankovski     | Director of Nutrition                  |
| Shaun Macleod      | Director of Operations                 |
| Fabio Zanuzzo      | Manager of Fish Health                 |
| Catherine Albert   | Director of Quality                    |
| Jordan Poley       | Manager of Lab Technologies            |
| Nayara Moraes Lima | Manager of Human Resources             |

Learn more about CAT - Click the link below



## Position Description

Chief Executive Officer



#### General

Reporting to the Board, the CEO provides the leadership and vision to achieve CATC's long-term goals and objectives. The CEO is accountable for working closely with the Board, staff and key stakeholders in articulating a vision, setting priorities and delivering on the strategy that delivers top and bottom-line objectives, championing a corporate culture that has quality, service, innovation, collaboration and empowerment as its pillars. They are responsible for building capacity for growth and ensuring strong commercial relationships with clients and suppliers and leading the organization internally through good corporate governance, regulatory compliance and operational excellence. The CEO will build effective and productive external relationships with a wide range of stakeholders including industry, government regulators and academics.

#### Specific Accountabilities

#### Board Accountability

The CEO works closely with the Board of Directors in the determination of organizational vision and strategy and supports the Board in the fulfillment of their governance responsibilities, including formulation of alternatives for consideration by the Board to ensure that the organization's goals and objectives are achieved through effective and realistic strategies.

Reports to the Board on the achievement of operational and financial goals and objectives and keeps the Board apprised of material issues that may affect CATC's ability to achieve the operational and financial objectives set out in the strategic and business plan.

Provides appropriate and timely advice, background information and briefing materials to the Board of Directors prior to all board meetings and as requested.

Prepares a guarterly analysis of the progress made in achieving the objectives established in the plan, sets out the rationale for variances, and recommends modifications to the plan for the remainder of its term. This plan will be updated on an annual basis and will act as the framework in which the business is operated.

#### Strategic Planning

Works with the Board and leadership team to formulate a strategic plan that sets out a future vision, identifies the critical issues and establishes short, medium and long-term goals and objectives that will drive CATC toward its growth objective with a strong and loyal global customer base based on its ability to execute testing/clinical trials that meet clients needs in a timely and cost-effective manner.

#### Client Insights

Ensures the company has the research and internal knowledge to fully understand and anticipate the needs of the target clients to evaluate and make decisions on the evolution of its operations, with the ultimate goal of having the testing/clinical trial capabilities, pricing structure and teams to meet client demand.



#### Chief Executive Officer Health & Nutrition, CATC

#### Annual Operating Plan

Works with the leadership team to formulate and recommend to the Board an annual operating plan based on the Strategic Priorities, Objectives and Key Results identified in the strategic plan.

#### Performance Management

Responsible for the achievement of Revenue, Gross Margin targets, Operating Expenses, EBITDA and the achievement of operational efficiencies through strong leadership, a culture of accountability and the effective execution of the business plan.

Ensures a disciplined and rigorous approach to revenue forecasting, demand planning, allocation and pricing.

Works with the leadership team in the development of dashboards, metrics and monthly analysis reports that ensures they have visibility of their departments and the progress made in achieving their financial and operational objectives. Takes the appropriate steps to ensure quarterly and annual objectives are achieved in a fiscally responsible manner.

#### Regulatory & Risk Management

Responsible for ensuring the processes are in place to manage and mitigate regulatory, financial, operational, and reputational risk. Ensures the business complies with all legal and regulatory requirements and that all activities are carried out with the highest level of ethics and integrity.

Ensures the company operates in accordance with all regulatory frameworks. Is the signatory to compliance.

#### Capital Investment

Develops an in-depth business plan to support the need for capital investment to support growth and innovation.

#### Resource Acquisition, Allocation and Utilization

Within the parameters of the approved business plan, ensures the effective acquisition, allocation and utilization of resources needed to scale the business in a fiscally responsible and timely manner.

#### Leadership and People

Provides the inspiration, vision, leadership, mentoring, and coaching needed to lead a high-performance team that delivers on operational, revenue and bottom-line objectives.

Ensures objectives and standards of performance are not only understood but owned by the leadership team and cascaded to their teams.

Responsible for guiding the elements of human resources, including compensation plans and benefits to support CATC in the recruitment and retention of high-performing team members at every level of the organization. Role models team member engagement and empowerment in all aspects of their work.

#### Resource Acquisition, Allocation and Utilization

Within the parameters of the approved business plan, ensures the effective acquisition, allocation and utilization of resources needed to scale the business in a fiscally responsible and timely manner.

#### Stakeholder Relations

In conjunction with the leadership team, ensures the development of positive and productive working relationships with a wide variety of key partners and stakeholders.

Develops and implements a strategy to raise the positive profile of CATC within the broader aquaculture, fish science and feed industry.



#### **Executive Brief**

#### Chief Executive Officer Health & Nutrition, CATC

Plays an active role within the industry and at international conferences. Develops strong relationships with the leadership within key customers.

Financial and Administrative Management

Ensures effective financial and administrative systems are in place that maximize the effectiveness of resource utilization within the objectives, policies, plans and budgets established by the Board.

Scientific and Industry Trends

Keeps abreast of trends and developments in the diverse industry sectors in which CATC has an interest and in the CRO, aquaculture, fish science, feed and Pharma sectors. Uses this market intelligence to ensure that CATC has the best possible information with which to address and consider emerging issues and opportunities.

#### Reporting Relationships

| Reports to:     | Board Chair                            |
|-----------------|--|
| Direct reports: | Vice President of Business Development |
|                 | Director of Nutrition                  |
|                 | Director of Operations                 |
|                 | Director of Quality                    |
|                 | Senior Manager of Business Development |
|                 | Manager of Fish Health                 |
|                 | Manager of Lab Technologies            |
|                 | Manager of Human Resources             |
| Total staff:    | 75+                                    |



Candidate Profile

Chief Executive Officer



#### Priority Criteria

Experience: An experienced operational leader who has worked in a federally regulated business within biotechnology, pharmaceutical, life sciences, or feed/food manufacturing. Can demonstrate an understanding of how new science-based services are delivered. Understands what it takes to grow a small organization where utilization is core to driving financial performance.

Strategic Thinker: Has a well-developed ability to articulate a vision for an organization. Is able to lead the development of a vision and strategy for the future; can foster alignment and support for the strategy throughout the organization and externally among a wide range of stakeholders including industry leaders.

Leadership and Management Skills: A motivational and empowering leader. Excellent communication skills. Understands how to best structure an organization and create a performance culture. Has capacity for team building and developing effective coordinated action between Business Units. Is respected for their ability to give their team responsibility and authority. A track record of hiring, retaining and promoting talented people who are accretive to the organization.

Bias for Action: A demonstrated track record of optimizing performance and driving profitability while maintaining a commitment to innovation, quality, and service. Believes in a culture of accountability at every level of the organization. Has worked collaboratively with the leadership team to create KPIs and metrics that provide the leadership team with clear visibility to what is working and what needs attention in real time. Believes in managing both leading and lagging indicators, including the use of OKRs and KPIs.

Financial & Operational Acumen: Has the financial and operational acumen to understand the levers that need to be used to manage weakness or accelerate growth, understands where to make investments and how to measure the ROI. Has the operational acumen to oversee all aspects of the business.

Emotional Intelligence: Has strong emotional intelligence and is self aware. Has the ability to self-manage including demonstrating emotional self control, adaptability, achievement orientation and a positive outlook. Displays social awareness through empathy and organizational awareness. Has the ability to influence and provide coaching and mentoring, manage conflict and provide inspirational leadership.

Relationship Skills: Outstanding interpersonal skills. Builds relationships on trust, authenticity and transparency. Able to maintain strong, positive and transparent working relationships with both internal and external stakeholders, including all staff, shareholders, business partners, clients, regulators suppliers, external advisors, industry associations and academic institutions.

Communications: An open, authentic, confident and succinct communicator. Thrives on a high level of interaction with others. Able to distill complex issues and communicate to others in a language that the



#### Executive Brief

#### Chief Executive Officer Health & Nutrition, CATC

audience understands. Ability to participate in and facilitate group meetings. Can inspire others into action.

Governance: Has experience working with a Board of Directors that is supportive of the business and there to provide advice and counsel. Has an understanding of how to effectively present to a Board. Believes in keeping the Board informed in a timely manner.

Politically astute: High level of political acuity. Has the ability to work collaboratively with the industry and government.

Capacity: Brings tremendous passion, energy, and commitment to driving a business. Able to multitask and prioritize effectively. Can move between being strategic and tactical. Not afraid to roll up their sleeves and lean into an issue with their team. Ability to motivate teams to produce results within tight timeframes and simultaneously manage several projects. Sets stretch goals for the team.

Style: Energetic and enthusiastic; positive, collaborative, confident, calm and reasoned. High integrity and emotional intelligence.

Education: Relevant education, preferably a degree in business or science. Brings a real interest and passion for the aquaculture sector and the important role it plays in providing protein to feed the world's population.

Travel: Is able to travel both in North America and internationally as required.



## Executive Brief Chief Executive Officer Health & Nutrition, CATC

## Overview of Search

#### About Us

Founded in 1946, Boyden was the first firm to focus entirely on retained executive search. Today Boyden remains a global leader in executive search, set apart by a client-centric approach and a consistent track record of recruiting high-calibre executive talent.

Boyden consists of an integrated global community of search professionals and industry specialists across more than 70 offices in 40 countries worldwide. With an intimate understanding of their local markets and a truly global perspective, Boyden Partners offer clients a decided advantage, both locally and internationally.

As one of the largest and most experienced executive search firms in the country, with more than 90 search professionals based in Calgary, Ottawa, Toronto, Montreal and **Vancouver, Boyden Canada serves all of Canada's key sectors and executive functions.** The search professionals of Boyden Canada have a rich foundation of experience and knowledge, reflected in the insight we bring to each of our industry and functional practices.

#### Our Philosophy

Boyden Vancouver focuses on providing clients with the highest return on investment in leadership, developing committed client relationships and exceeding expectations by working to four key operating principles:

- Integrity: We are committed to openness and candour with our clients, candidates, and each other.
- Client Focus: Our clients always come first. Client satisfaction is the key measure of our success.
- Innovation: Anticipating and acting on our clients' needs helps us think creatively and challenge the status quo.
- Teamwork: Shared goals and cooperation with clients, among team members and across international borders, optimizes performance.

Boyden Vancouver has always respected the privacy and the confidentiality of the personal information provided to us in context with our executive search assignments. This has been a fundamental value in building trust with our candidates and clients.

Boyden Vancouver is a member of the Association of Executive Search Consultants and operates in a manner consistent with the AESC Code of Ethics.



#### www.boyden.com

## Boyden Team



Cathie Van Alstine Managing Partner, Canada +1-604-602-2561 <u>cvanalstine@boyden.com</u> <u>Biography</u>



Cameron Morrison Principal, Canada +1-613-742-3219 cmorrison@boyden.com Biography



Darrell Cutt Senior Associate, Canada +1-604-602-2576 dcutt@boyden.com Biography

## Organization Information

## Boyden

900 West Hastings Street, Suite 1400 Vancouver, BC V6C 1E5 Tel: 604 685 0261 <u>http://www.boyden.com</u>

