



MEMO

To: The aquaculture research community
From: Scott McKinley, Executive Scientific Director
Date: January 29, 2004
Subject: AquaNet Call for Proposals, January 29, 2004

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AquaNet is inviting proposals in an urgent research area. The attached document outlines the background and rationale, suggested team members, partners and deliverables.

Evaluation criteria for the proposal, the submission process and a description of AquaNet policies and procedures pertaining to the awarding and monitoring of research grants are posted in the research section of AquaNet's website at www.aquanet.ca.

AquaNet invites applications from all eligible researchers in the field described. In addition to the eligibility criteria listed at the above web address, applicants must also

- state relevance to the Canadian aquaculture sector,
- have a partner who will commit a minimum of 50% of the funding required; and
- deliver to AquaNet a detailed technical report of results within one year of project initiation.

Deadline for application: March 8, 2004

Decisions about successful applications are expected by April 5, 2004

Sincerely,

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**AquaNet Call for Proposals
January 29, 2004**

Topic:

Nutritive value of novel protein and lipid products derived from the processing of oilseeds alone and with animal protein sources for finfish aquaculture

Background and Rationale

Global production of farmed marine finfish species is predicted to increase dramatically over the next decades. Total world farmed salmon production in 1999 alone was 901,843 tonnes (wet weight basis) and the production of farmed Atlantic salmon and coho salmon has increased by 27.2% and 20.7% per year, respectively, since 1984. The increased culture of other aquatic species together with salmon and trout is placing increased demands on the global supplies of fishmeal and fish oils and has put considerable pressure on wild forage fish stocks supplying the feed industry, unless suitable cost effective alternatives are identified and developed. Feed is the largest component of finfish aquaculture production costs and research supporting global competitiveness is focused on finding cheaper alternate nutritional lipid and protein sources in feeds, while still maintaining optimum results in terms of growth, maturation, health and quality.

Furthermore, recent studies have identified higher concentrations of contaminants in farmed Atlantic salmon than wild salmon species; these are assumed to be due to the concentrated levels in the wild fish used as feed. Consumers demand healthy and safe seafood products that have been produced using sustainable, environmentally-friendly methods.

This study will focus on alternate processes and procedures to determine acceptable dietary concentrations of protein and lipid sources with reduced to no contaminant levels for the different stages of the life history of finfish species and their impacts on growth performance, fish health and flesh quality for human consumption and consumer acceptance.

Members of the interdisciplinary research team(s) should have expertise in areas such as:

- Fish physiology (growth and maturation in fishes, juveniles to grow-out)
- Fish health management and risk assessments
- Fish nutrition
- Economics
- Food safety and toxicology
- Humanities (evaluation of risk perception)

- **Partners:**
- Commercial finfish growers
- Feed companies

Deliverables:

- Assessment of alternate lipid and protein sources in various feed formulations and their impact on growth performance, fish health and flesh quality
- Recommendations on optimising feed formulations

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- Reduced levels of dioxins and PCBs in protein and lipid feed sources
- Cost/benefit analysis of various fish feed formulations
- Development of specific strategies for commercialisation
- Assessment of food quality, safety and consumer acceptance
- Training of highly qualified personnel (graduate students and post-doctoral fellows)



Submission Process for Research Proposals

Letters pledging cash and in-kind support (# 14 below) are required as part of the proposal. Support letters may be submitted by electronic mail (to info@aquanet.ca), by fax (to 709-737-3500) or by mail (to the AquaNet Administrative Centre, c/o Ocean Sciences Centre, Memorial University, St. John's, NL A1C 5S7.) The deadline for submission of letters of support is **March 8, 2004**.

Your proposal should include the following items:

1. AquaNet research question(s)
2. Study Title
3. Network Investigators, network partners and other collaborators: (include affiliation, address, telephone, fax, e-mail). Identify the Principal Investigator.
4. Introduction (literature background/conceptual framework/rationale for study)
5. Objectives
6. Approach/Methodologies
7. Clearly explain how the research project:
 - (i) contributes to existing knowledge in this field;
 - (ii) complements your on-going research funded from other sources or any other research proposal for which you have a current application pending.
 - (iii) addresses the research question; and
 - (iv) advances the mission statement of AquaNet

8. Milestones: (one page limit)
detailed targets for April 5, 2004 – March 31, 2005
detailed targets for April 1, 2005 – March 31, 2006
9. Research involvement of each participant, including collaborators, partners and graduate students (1/2 page limit per participant).
10. References (no page limit)
11. Names and contact information (title, affiliation, phone, e-mail and mailing addresses) of three experts who would be qualified to review your proposal. Please ensure that the persons proposed are not in a conflict of interest as defined by NSERC regulations. For more information see the NSERC website at:
http://www.nserc.ca/commit/prm2003/guidelines_conflict_e.htm
12. Budget request from AquaNet: Complete a "[*budget by investigator*](#)" form for each investigator receiving funds. Also complete the "[*budget by project*](#)" form for the total project and include a separate sheet justifying each line item request (no page limit).
13. A ½ page summary of your research project written for a non-scientific audience. If your proposal is funded, this will be used in various AquaNet publications and on the web site.
14. All proposals must have partners that have pledged cash or in-kind support to the project. Letters of support from network partners clarifying and quantifying the level of support must be provided. **The deadline for submission of letters of support is March 8, 2004.**
15. Investigators are required to submit a Form 100 (NSERC personal data form) (http://www.nserc.ca/programs/pdf100_e.htm) or a SSHRC curriculum vitae (https://webapps.nserc.ca/sshrc/logon_e.htm) for each researcher on the project.
16. All proposals must include a Form 101 (Environmental Assessment form), including the cover letter, and Appendix A and B. For more information see the NSERC website at:
http://www.nserc.ca/programs/EA_e.htm

Items 1-3 should be on a separate page. Items 4-7 (inclusive) must be no more than five (5) pages in length. The document should be formatted as follows: Word or WordPerfect, one-inch margins, single-spaced, Times New Roman font in 12 point.

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AquaNet Policies

Deadlines

Please address your proposal to the Executive Scientific Director and outline the research question (s) your proposal is addressing. The completed application should be sent on CD to: AquaNet Executive Scientific Director, c/o AquaNet Administrative Centre, Ocean Sciences Centre, Memorial University, St. John's, NL A1C 5S7. Proposals must be postmarked no later than Monday, **March 8, 2004. Proposals postmarked later than March 8, 2004 will not be accepted.** The deadline for submission of letters of support is also **March 8, 2004. Proposals may be submitted in either official language.**

Eligibility

AquaNet follows NSERC's guidelines for determining eligibility of expenditures. Guidelines on eligible expenditures are available on the NSERC website at: http://www.nserc.ca/professors_e.asp?nav=profnav&lbi=f3

NSERC now requires that students sign a consent form, signed by their supervisor, to allow their names to be included in an application for funding. For further information, please refer to the NSERC website at:

http://www.nserc.ca/programs/pdf100_e.htm

Funding

The maximum stipend support awarded by AquaNet is two years for a Masters student and three years for a PhD student. Maximum stipend support awarded is \$16,500 for a Masters student and \$19,000 for a PhD student.

Salary funds are not typically awarded for research assistants or technicians and if requested will require justification.

Funding for the projects is available for 2004/05 (and 2005/06 if applicable). The timeframe for individual projects is no more than two years (if applicable).

Funding for adjunct professors must be for activities related to training of Highly Qualified Personnel (HQP) at the institutions where the professors receive adjunct status.

Evaluation Process

Proposals will undergo a two-tier evaluation process: the first is a peer-review of the scientific merit of the project (i.e., excellence of the research and the researcher); the second is evaluation according to the NCE/AquaNet selection criteria listed below. Recommendations on funding are made by the RMC to the AquaNet Board of Directors., All decisions of the Board of Directors with respect to the awarding of funds will be final.

AquaNet/NCE Evaluation and Selection criteria: (a comprehensive description of the NCE criteria is provided on a separate page.)

1. Excellence of the science
2. Development of highly qualified personnel
3. Networking and partnerships
4. Knowledge exchange and technology transfer
5. Management of project
6. Does the proposal adhere to AquaNet's guiding principles of innovation, risk management and/or respect for traditional and local knowledge?
7. Does the proposal address the research question?
8. The proposal is expected to achieve results in one to two years.

An overall rank will be applied to each proposal based on the above two evaluation processes. Grants will be awarded based on the ranking assigned to each proposal, and the availability of network research funds. Successful proposals will be announced no later than **April 5, 2004**.

Reporting requirements

Progress reports will be due on **Monday, December 13, 2004** and should be submitted to the Executive Scientific Director. Progress reports will be reviewed by the RMC, which will make a recommendation to the Board regarding continued funding. There will be a 15% holdback of funds in each year pending review of progress reports. If progress is deemed to be unsatisfactory when measured against the milestones set by the researchers and accepted by the RMC, or if the funds are no longer required to complete the research study, the RMC reserves the right to reallocate these funds.

Information on the projects may be requested on an *ad hoc* basis to fulfil AquaNet's reporting requirements to the Network of Centres of Excellence (NCE) program. Financial information will be obtained annually through the Financial Services departments of the institutions receiving AquaNet funds.

For communications purposes, AquaNet must be notified of the titles of AquaNet-funded publications no later than the date of publication.

Acknowledgement of funding

AquaNet must be acknowledged as the funding source in all research dissemination activities related to AquaNet-funded proposals. The standard acknowledgement is: *This research is funded by AquaNet, Canada's Network of Centres of Excellence in aquaculture.*

Background Information

The Networks of Centres of Excellence (NCE) program is part of the federal government's Innovation Strategy. It is an investment in Canadian research and entrepreneurial talent to turn innovation into economic and social benefits for all Canadians.

Leading researchers from different universities and the public and private sectors work together on common areas critical to Canada's social and economic development. Graduate students and postdoctoral fellows are trained in a team environment and exposed to areas of national and industrial concern. Small, medium and large-sized business partners tap into valuable expertise and research, providing the competitive edge to develop NCE innovations.

These networks extend across the country and are turning research results into marketable products, processes, policies and services for businesses, governments and people.

Business partners are capitalizing on these innovations to meet the demands of a rapidly evolving and increasingly knowledge-based global economy.

The Networks of Centres of Excellence Program brings together partners in Canada and abroad, including universities, federal government agencies and departments, provincial governments, industrial partners and other organizations.

AquaNet's funding comes from Industry Canada through SSHRC and NSERC. AquaNet, like all other NCEs, funds research of relevance to the mission of the Network. Some distinctions between AquaNet and the granting agencies are:

- AquaNet-funded research is driven by the aquaculture sector;
- Networking and partnerships are mandatory for AquaNet-funded research.

Networks of Centres of Excellence Program

Selection and Evaluation Criteria

To ensure that the program objectives are met, proposals are assessed against the five criteria outlined below. Networks are also evaluated on an ongoing basis during tenure of a grant against these same criteria. A threshold of excellence must be exceeded for each criterion. The quality of research is considered first and, unless it is deemed excellent, the network is denied NCE funding. In other words, research excellence is a necessary condition for the initial or continued funding of an NCE. It is not the sufficient condition, because the goals of the program are also reflected in the four additional criteria.

The descriptors of the five criteria are given below for the guidance of applicants. They are not all-inclusive.

Criterion 1. Excellence of the Research Program

- The excellence, focus and coherence of the research program;
- The achievements of the researchers and their ability to contribute to the research program;
- The value added by the network approach, in terms of the quality of the research and achievement of the goals that can be pursued;
- The extent to which the program will contribute to Canada's ability to lead in areas of research with high economic and/or social impact;
- The extent to which new and emerging social and ethical issues, where relevant, will be addressed in the research program;
- The relationship of the research program to similar work conducted in Canada and abroad.

Criterion 2. Development of Highly Qualified Personnel

- The ability to train and retain outstanding researchers in research areas and technologies critical to Canadian productivity, economic growth, public policy and quality of life;
- Training strategies that promote multidisciplinary and multisectorial research approaches and encourage trainees to consider the economic, social and ethical implications of their work.

Criterion 3. Networking and Partnerships

- Effective research and technology development links between academic institutions, federal and provincial agencies and private sector participants;
- Multidisciplinary, multisectorial approaches in the research program;
- Evidence that an effort has been made to include all suitably qualified groups;
- Optimization of resources through the sharing of equipment and research facilities, databases and personnel;
- Presence, nature and extent of contributions from the private sector and federal and provincial agencies, and prospects for increasing commitments as the work progresses.

Criterion 4. Knowledge Exchange and Technology Exploitation

- Likelihood that new products, processes or services can be commercialized by firms operating in Canada and that they will strengthen the Canadian industrial base, enhance productivity, and contribute to long-term economic growth and social benefits;
- Prospect for social innovation and the implementation of effective public policy through collaboration with the public sector;
- Effective collaboration with the private and public sectors in technology, market development, and public policy development;
- The impact, or potential impact, on the partners' science and technology capabilities;
- Effective management and protection of intellectual property resulting from network-funded research.

Criterion 5. Management of the Network

Each network must possess an organizational structure appropriate for the management of the research and business functions of a complex multidisciplinary, multi-institutional program. These elements must include:

- A board and committee structure to ensure that appropriate policy and financial decisions are made and implemented;
- The presence of effective leadership and expertise in the research and the business management functions;
- Effective research planning and budgeting mechanisms;
- Effective internal and external communications strategies.