

RALPH CAMPBELL, JR.
STATE AUDITOR

STATE OF NORTH CAROLINA
Office of the State Auditor

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March 27, 1997

The Honorable James B. Hunt, Jr., Governor
The Honorable Marc Basnight,
President Pro-Tempore of the Senate
The Honorable Harold Brubaker,
Speaker of the House of Representatives

Gentlemen:

Enclosed is a copy of the management letter detailing our review of the issues surrounding the funding for the *Pfiesteria* research and the response from the Department of Environment, Health, and Natural Resources (DEHNR). We did a thorough review of the procedures surrounding the entire process, from the initial conversations about the need for research through the awarding of the grant funds. We found that personnel in both DEHNR and Sea Grant followed the established state regulations and university grant procedures.

In Representative John Nichols' letter of November 8, 1996, requesting that we review the issue, Representative Nichols specifically expressed concern over the qualifications of some of the researchers awarded grants. As part of the university grant procedures, the professional qualifications of all researchers were examined in detail by both a technical peer review committee and the Sea Grant steering committee overseeing the review and selection process for the grants. While we did find miscommunication between Dr. Burkholder and DEHNR personnel regarding the initial funding needs and the budgetary process, we found no indication of any fraud or substantial deviations from the established procedures. Furthermore, we found that the process for reviewing technical qualifications worked as designed. This confirmed the internal review conducted by North Carolina State University.

However, the review of this grant procedure confirmed several concerns we have previously identified for further study relative to scientific and research grants awarded by the State, particularly those which involve environmental and health issues affecting North Carolina's citizens. Because of the importance to the State of these issues, I have instructed my staff to include these topics in our performance audit plan. Should you have questions, please feel free to contact me.

Sincerely,

original signed by Ralph Campbell, Jr.

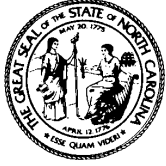
Ralph Campbell, Jr.
State Auditor

cc: Secretary Jonathan Howes,
Department of Environment, Health and Natural Resources

RCjr:dr

Enclosure





RALPH CAMPBELL, JR.
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March 17, 1997

Mr. Jonathan B. Howes, Secretary
Department of Environment, Health
and Natural Resources
Archdale Building
512 North Salisbury Street
Raleigh, North Carolina 27604-1148

Dear Secretary Howes:

We have completed a review of the *Pfiesteria piscicida* funding awarded in December 1995 through the North Carolina Sea Grant Program. Our work was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States. Our objectives were to review the circumstances surrounding the initiation of the grants and the procedures for evaluating the grant proposals and awarding the research funds.

We interviewed key personnel from the Department of Environment, Health and Natural Resources (DEHNR) and North Carolina State University (NCSU) to understand the events leading to the funding for the research. Also, we interviewed key Sea Grant personnel, as well as all members of the steering committee to determine the procedures followed by the committee for awarding the grants, the committee's role and input in the grant review process, and the role of the outside peer reviewers. Additionally, we reviewed the following documentation:

- Memo of Understanding between DEHNR and Sea Grant;
- Request for Proposal prepared by the steering committee;
- Each principal investigator's application ;
- Peer review comments and steering committee comments for each application;
- Sea Grant Project Award Notices (with accompanying letters explaining the reduction in funding and requesting a revised budget); and
- Various memos related to the grants.

During early 1994, DEHNR personnel first met with Dr. JoAnn Burkholder, an associate professor with NCSU's Department of Botany, who characterized and named the toxin *Pfiesteria piscimorte*. DEHNR personnel reported that initial discussions were centered on potential health and environmental problems which may be caused by this toxic organism. Their major concern was the relationship between the toxin and water quality. DEHNR personnel also reported that funding needs/requests, as well as the budget

process, were discussed in subsequent conversations. Additionally, DEHNR personnel suggested that Dr. Burkholder contact “any friends” in the Legislature in an effort to obtain funding for the research.

DEHNR subsequently identified \$600,000 to support the study. DEHNR retained \$15,000 for administrative expenses and signed a Memo of Understanding (as allowed by Purchase & Contract regulations) with the Sea Grant College Program at NCSU to administer the remaining funds (\$585,000). Sea Grant established a seven person steering committee to develop priorities and oversee the review and selection processes. A Request for Proposal was developed and sent to universities throughout the state. The four proposals submitted to Sea Grant were reviewed by both outside peer reviewers and the steering committee. All proposals were awarded but at amounts less than requested due to the limited funds available. Table 1 depicts the amount requested and actually awarded to each principal investigator.

Following established grant procedures, Sea Grant requested revised budgets from each principal investigator reflecting the actual amounts awarded. All investigators, except Dr. Burkholder, submitted their revised budgets and began work on their projects in 1996. After several months of negotiations for a detailed, revised budget, Dr. Burkholder withdrew her application from the Sea Grant Program. Since DEHNR believed the research was necessary, it agreed to transfer funds from Sea Grant to the NCSU Department of Botany. The Department submitted a revised proposal for Dr. Burkholder which included a request for the original

TABLE 1 SUMMARY OF GRANTS AWARDED FOR THE TOXIC DINOFLAGELLATE STUDY			
PRINCIPAL INVESTIGATOR	TITLE OF PROPOSAL SUBMITTED	AMOUNT REQUESTED	AMOUNT AWARDED
1	Continuing Effort to Characterize Impacts of the Toxic Estuarine Dinoflagellate, <i>Pfiesteria piscicida</i>	\$431,486	\$319,000*
2	An Exploratory Study of Potential Human Health Effects of Deteriorating Water Quality Among North Carolina Crabbers	149,010	126,349
3	Environmental Control of <i>Pfiesteria piscicida</i> Outbreaks: The Role of Anthropogenic Nutrient Loading	145,822	113,645
4	Consumer Health Risks Due to Incidental Exposure of Fish to <i>Pfiesteria piscicida</i>	16,000	16,000**
*On March 29, 1996, \$67,000 of the \$319,000 grant awarded to Principal Investigator 1 was used on the “Neurobehavioral Effects of Dinoflagellate Toxins in Rats” study, performed by a co-investigator of Principal Investigator 1.			
**The Steering Committee approved withholding \$25,000 of the total \$585,000 to be used to pay for “outreach, reports, application, meetings, workshops, etc.,” \$16,000 of the \$25,000 was used to fund this mini-grant.			
Source: Sea Grant records			

awarded funds and a request for additional funding for 1997-1998. Table 2, attached, depicts the major events related to the toxic dinoflagellate study. In late July 1996, NCSU initiated an internal review to determine whether Sea Grant followed the prescribed university administrative procedures. This review was completed in October 1996, concluding that all procedures had been followed.

Based upon our review, it is our opinion that the procedures for identifying the need for the research, funding the research, contracting for a project manager, evaluating the grants and awarding of funds were adequate. DEHNR followed the established procedures for state agencies, and Sea Grant followed the established university procedures. However, information obtained from both DEHNR personnel and Dr. Burkholder indicated there was miscommunication regarding the initial funding needs/request and the

Mr. Jonathan B. Howes, Secretary

March 17, 1997

Page 3

budgetary process. This miscommunication contributed to Dr. Burkholder's withdrawal of her grant proposal; however, it did not invalidate the procedures used for the awarding of the grants.

In accordance with our policies and procedures, we request that your office provide us with a written response to the issues identified in this management letter. The response should be delivered to this office no later than April 1, 1997, in order to be included with the distribution of this management letter.

If you wish to discuss any of the issues above, please let us know. We appreciate the courtesy, cooperation, and assistance provided to us during this review.

Sincerely,

original signed by Ralph Campbell, Jr.

Ralph Campbell, Jr.

State Auditor

RCjr:dr

Attachment

Management letters and responses receive the same distribution as audit reports.

**TABLE 2
SUMMARY OF MAJOR EVENTS RELATED TO THE TOXIC DINOFLAGELLATE STUDY**

DATE	DESCRIPTION OF THE EVENT
1994 April	DEHNR's State Health Director, Principal Investigator 1, Principal Investigator 1's Assistant, and other DEHNR personnel meet to discuss the potential health effects of Pfiesteria; Principal Investigator 1 requests funding for research
May	State Health Director, Principal Investigator 1, and others meet to discuss research funding details
June 2	State Health Director requests budget transfer of funds for Pfiesteria study; informs the Director of the NC Sea Grant Program of intent to transfer funds to the NC Sea Grant Program for Pfiesteria study
July 12	DEHNR staff hold a meeting with 8 research scientists to discuss the potential health effects of Pfiesteria piscimorte
July 19	Principal Investigator 1 writes letter to Governor Hunt requesting intervention on her behalf in receiving DEHNR funds
1995 March 16	Memorandum of Understanding (95-1310) between NCSU (NC Sea Grant Program) & DEHNR concerning the "Research on Toxic Algae" is prepared
May 2	DEHNR issues check to NCSU for \$585,000 to be used for the "Research on Toxic Algae"
August 15	Director of the NC Sea Grant Program writes the Steering Committee members outlining the committee's responsibilities and scheduling date to meet
August 21	Steering Committee members meet to "develop principles of operation, finalize priorities and issue a 'Request for Proposals'"
August 27	NC Sea Grant Program issues the Requests for Proposals
October 10	NC Sea Grant Program receives 3 full proposals from Principal Investigators 1, 2, & 3 requesting funding to participate in the Pfiesteria research
October ?	NC Sea Grant Program receives a fourth proposal from Principal Investigator 4 requesting \$16,000 in funding
November 20	Steering Committee members meet to review the peer reviewers comments & discuss proposals
November 21 - 27	Director of the NC Sea Grant Program meets with principal investigators to discuss recommendations by Steering Committee & request revised detailed budgets to reflect available funding
November 27	Principal Investigator 2 awarded a \$126,349 grant
December ?	Principal Investigators 2 & 3 submit approved, revised budgets to NC Sea Grant Program
December 11	Principal Investigator 3 awarded a \$113,645 grant
1996 January 20	Principal Investigator 1 submits revised estimates to Director of the NC Sea Grant Program for the grant, agreeing to the \$319,000
February 26	Principal Investigator 4 awarded a \$16,000 grant
March 6	Co-investigator working with Principal Investigator 1 submits an approved, revised budget for the study, "Neurobehavioral Effects of Dinoflagellate Toxins in Rats"
March 8	Director of the NC Sea Grant Program writes Principal Investigator 1 requesting a detailed budget revision processed through the appropriate university administrative channels
March 29	Co-Investigator 1 awarded \$67,000 (from \$319,000 awarded Principal Investigator 1) for "Neurobehavioral Effects of Dinoflagellate Toxins in Rats"
July ?	Vice Chancellor for Research, Outreach, Extension and Economic Development at NCSU initiates internal review to determine whether Sea Grant followed university administrative procedures
July 8	Director of the NC Sea Grant Program writes Principal Investigator 1 requesting an approved revised budget for the grant by 7/22/96
July 22	Principal Investigator 1 writes Director of the NC Sea Grant Program withdrawing grant application from the NC Sea Grant Program
August 28	DEHNR Secretary requests information from Director of the NC Sea Grant Program concerning the grant proposals submitted, review committee meetings, and other pertinent data; after review, concludes actions consistent with Memorandum of Understanding
September ?	After consultation with DEHNR, Sea Grant transfers grant funds awarded to Principal Investigator 1 to NCSU's Department of Botany
October 21	Vice Chancellor for Research, Outreach, Extension and Economic Development at NCSU writes Principal Investigator 1 stating that an internal NCSU review of the grant process has been completed; concluded prescribed procedures were followed
November 8	NC House Representative requests a review from the State Auditor on the Pfiesteria grant
1997 January 1	NCSU Contracts and Grants Section transferred unexpended funds from Sea Grant to the Department of Botany for the completion of research

Source: Compiled from records and interviews with DEHNR, NCSU, and Sea Grant personnel

State of North Carolina
Department of Environment,
Health and Natural Resources

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary



March 19, 1997

By Hand Delivery

The Honorable Ralph A. Campbell, Jr.
Office of the State Auditor
300 N. Salisbury Street
Raleigh, N.C. 27603-5903

Re: Management letter of March 17, 1997 concerning research funding for *Pfiesteria piscicida*

Dear Mr. Campbell:

I have received and reviewed the above-referenced management letter. The Department of Environment, Health and Natural Resources concurs in the conclusions reached by you and your staff in your review of this research effort. In addition, I would like to thank and commend your staff for their prompt attention to this matter. It appears to me that their work was thorough, impartial, and responsive to the concerns raised about the funding. I believe they have laid those concerns to rest. I fervently hope that the research itself can now continue and be useful to the State without the cloud of misinformed claims that have threatened to hinder progress towards our understanding of *Pfiesteria*.

Sincerely,

original signed by Jonathan Howes

Jonathan Howes

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-715-4100

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