



ARKANSAS SCIENCE & TECHNOLOGY AUTHORITY

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**MINUTES OF THE 57TH MEETING OF THE
ARKANSAS SCIENCE & TECHNOLOGY AUTHORITY
BOARD OF DIRECTORS
LITTLE ROCK, ARKANSAS
MAY 21, 1993**

CALL TO ORDER

The meeting was called to order at 1:37 p.m. by Mr. Jerry Webster, Vice Chairman of the Board, in the conference room of the Technology Center, Little Rock.

A quorum of Board members were present and included: Mr. William C. Bridgforth, Dr. Diane Gilleland, Dr. Don Pederson, Dr. Phillip Rayford, Mr. John Troutt, and Dr. William Willingham.

Staff members present included: John Ahlen, Jim Benham, Joe Gentry, Chuck Myers, Melissa Adams, Susan Collins, Ed Sartain, Al Grijalva, Joyce Sadler, Julie Welch and Janell Sanders.

Visitors included: Kelly Hunt, Governor's Office; Carol Griffiee, Editorial Services, Inc.

APPROVAL OF MINUTES

Mr. Webster presented the minutes from the March 19, 1993 Board meeting for approval. Mr. Bridgforth made a motion for the approval of the minutes. Dr. Gilleland seconded the motion; the Board gave its unanimous approval.

RESEARCH COMMITTEE

Dr. Rayford stated that the Research Committee met on May 4, 1993 and recommended for the Board's approval the following resolutions:

Draft Resolution 93-20 provides for the funding of one applied research proposal.

PROPOSAL NO. 94-A-01, "An Investigation of Factors Which Lead to Ascites in Broilers," by Dr. Walter G. Bottje of the University of Arkansas, Fayetteville, in the amount not to exceed \$18,450.00. This project is cosponsored by the Arkansas Poultry Federation in the amount of \$20,000.

Dr. Rayford made a motion to approve Draft Resolution 93-20. Dr. Willingham seconded the motion. Dr. Pederson stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 93-21 provides for the funding of three basic research proposals.

PROPOSAL NO. 94-B-02, "Grass Cell Wall Characteristics and Ruminant Energy and Nitrogen Metabolism," by Dr. Arthur L. Goetsch of the University of Arkansas, Fayetteville, in the amount not to exceed \$35,300.

PROPOSAL NO. 94-B-04, "Phylogenetic Relationships Between Polydnviruses and Glyptapanteles Parasitoid Wasps," by Dr. James B. Whitfield of the University of Arkansas, Fayetteville, in the amount not to exceed \$26,000.

PROPOSAL NO. 94-B-05, "Production of Transgenic Spinach Resistant to Infection by Cucumber Mosaic Virus (CMV)," by Dr. Edwin J. Anderson of the University of Arkansas, Fayetteville, in the amount not to exceed \$35,000.

Dr. Rayford made a motion to approve Draft Resolution 93-21. Dr. Gilleland seconded the motion. Dr. Pederson stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 93-22 provides for the funding of two basic research proposals.

PROPOSAL NO. 94-B-06, "Function of Bacteriophage oX174A* Protein in vivo," by Dr. Bentley A. Fane of the University of Arkansas, Fayetteville, in the amount not to exceed \$27,400.

PROPOSAL NO. 94-B-09, "Modeling, Parameter Estimation and Control of Periodic Structures," by Dr. Robert E. Miller of the University of Arkansas, Fayetteville, in the amount not to exceed \$16,193.

Dr. Rayford made a motion to approve Draft Resolution 93-22. Dr. Willingham seconded the motion. Dr. Pederson stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

Draft Resolution 93-23 provides for the funding of one basic research proposal.

PROPOSAL NO. 94-B-03, "Coordinated Astrocytic and Neuronal Calcium Activities," by Dr. Roger A. Buchanan of Arkansas State University, in the amount not to exceed \$35,000.

Dr. Rayford made a motion to approve Draft Resolution 93-23. Dr. Pederson seconded the motion; the Board gave its unanimous approval.

Draft Resolution 93-24 provides for the funding of one basic research proposal.

PROPOSAL NO. 94-B-15, "Alumina Supported Catalytic Membranes of Aluminum Phosphate and Boron Phosphate," by Dr. David Lindquist of the University of Arkansas at Little Rock, in the amount not to exceed \$25,300.

Dr. Rayford made a motion to approve Draft Resolution 93-24. Dr. Willingham seconded the motion; the Board gave its unanimous approval.

Draft Resolution 93-25 provides for the funding of fifteen basic research proposals. The following proposals provide funding for DOE/ASTA traineeships.

PROPOSAL NO. 94-EB-04, "Development of a Prototype Raman Particle Analyzer, Capable of Probing Suspended Particles Both in a Flow Stream and in a Trapping Cell," by Mr. Chris Masters, grant recipient, and Dr. Al Adams of the University of Arkansas at Little Rock, in the amount not to exceed \$7,292.

PROPOSAL NO. 94-EB-05, "Structural Studies of Molecular Conductors," by Mr. Clinton D. Bryan, grant recipient, and Dr. A. Wallace Cordes of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-06, "Study of Fluorinated Hydrogenated Amorphous Germanium Carbon (a-Gecx:H,F) Alloy for High Efficiency Multijunction Solar Cells," by Mr. Paul Moffitt, grant recipient, and Dr. S.S. Ang of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-07, "Study of Fluorinated Hydrogenated Amorphous Silicon Germanium Alloy for High Efficiency Multijunction Solar Cells," by Mr. Warren Harper, grant recipient, and Dr. W.D. Brown of the University of Arkansas, Fayetteville, in the amount not to exceed 12,500.

PROPOSAL NO. 94-EB-08, "The Harmonic Impact of Photovoltaic Inverter Systems Used for Bulk Power Generation in Electric Power Systems," by Mr. David G. Daniels, grant recipient, and Dr. Kraig J. Olejniczak of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-09, "Materials Compatibility in Superconducting Multi-Chip Modules," by Mr. James Palmer, grant recipient, and Dr. Richard Ulrich of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-10, "Material Degradation Mechanisms in Superconducting Diamond-Based and Conventional Multi-Chip Modules," by Mr. David Nelms, grant recipient, and Dr. Richard Ulrich of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-11, "Optical Characterization of High-Tc Superconductor Thin Films," by Mr. Steven E. Elkins, grant recipient, and Dr. Gregory J. Salamo of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-12, "Optical Characterization of Diamond Film for Superconductor MCM's," by Ms. Diane L. Bootz, grant recipient, and Dr. Min Xiao of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-13, "Measure the Concentrations of Combustion Gases in Burners and Other Combustion Applications," by Ms. Diana M. Lindquist, grant recipient, and Dr. M. Keith Hudson of the University of Arkansas at Little Rock, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-14, "Development of an Improved Gas/Steam Turbine Seal," by Mr. Christopher C. Kopp, grant recipient, and Dr. Matthew H. Gordon of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-16, "Production of Methane From Cellulosic Materials by Anaerobic Fermentation," by Mr. Matthew Taylor, grant recipient, and Dr. James W. Moore of the University of Arkansas, Fayetteville, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-17, "Instrumenting the STAR Detector for the RHIC Collider," by Mr. G. Douglas Mauldin, grant recipient, and Dr. A. Andre Rollefson of the University of Arkansas at Little Rock, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-18, "Design Studies for Investigating Coherent Pions," by Mr. Charles M. Byrd, grant recipient, and Dr. Wilfred J. Braithwaite of the University of Arkansas at Little Rock, in the amount not to exceed \$12,500.

PROPOSAL NO. 94-EB-19, "High Temperature Flue Gas Cleaning with Ceramic Granular Filters," by Mr. Chien Wang, grant recipient, and Dr. Malay K. Mazumder of the University of Arkansas at Little Rock, in the amount not to exceed \$12,500.

Dr. Rayford made a motion for the approval of Draft Resolution 93-25. Dr. Pederson seconded the motion. Dr. Pederson stated that UAF was the institution of his affiliation. The Board gave its unanimous approval.

INVESTMENT COMMITTEE

Mr. Troutt called the Board's attention to the Investment Fund Report and the FY 93 General Fund Expenditure Report for the quarter ending March 31, 1993. Mr. Troutt made a motion for the acceptance of the fund reports. Dr. Gilleland seconded the motion; the Board gave its unanimous approval.

DRAFT RESOLUTION 93-26

Draft Resolution 93-26 provides for a seed capital investment of \$150,000 to EarthCare Systems, Inc., located in Lincoln, Arkansas. Mr. Benham stated that EarthCare manufactures earth tenders that composte municipal solid waste in an odorless fashion. At this time, they are the only company able to composte grease and oil in an odorless fashion. Mr. Benham stated that the technology is very strong.

Mr. Troutt stated that at the moment, the company is undercapitalized. One question is will the markets develop for them.

Mr. Bridgforth stated that the Investment Committee wanted to give EarthCare the funds, but with certain stipulations. One being that ASTA give EarthCare the \$150,000 in three increments of \$50,000. The first being given now, the remaining two increments of \$50,000 will be contingent upon EarthCare selling an earth tender or earth grinder. Another stipulation would be that the principal owners will not take money from the company until sales of the earth tender or grinder are made.

Mr. Troutt made a motion for the approval of Draft Resolution 93-26 with the added stipulations. Mr. Bridgforth seconded the motion; the Board gave its unanimous approval.

PRESIDENT'S REPORT

Dr. Ahlen stated that Jacqui Klodt had resigned her position to return to Oklahoma. The Finance Program Manager position has been advertised and Jim Benham would be interviewing applicants in the upcoming week.

ASTA is involved in the Technology Reinvestment Project. Governor Tucker has established a coordinating council and appointed Dr. Ahlen to head the council. Dr. Ahlen stated that the proposals are due July 23rd. Five federal agencies are involved in this project.

OLD BUSINESS

Dr. Ahlen stated that ASTA's appropriation for the biennium is \$1,900,000.

NEW BUSINESS

Dr. Ahlen stated that the September 17th Board meeting will mark the 10th anniversary of the ASTA Board. Dr. Ahlen stated that the staff hoped to plan something special to mark that occasion.

A Board planning meeting is also being planned for sometime during the summer.

The next meeting date is September 17, 1993.

ADJOURNMENT

With no further business to conduct, the meeting was adjourned at 2:15 p.m.

Respectfully submitted,

D. O. Pederson

Donald O. Pederson, Ph.D.
Secretary
Board of Directors

APPROVED by the Board of Directors
on this 17th day of September, 1993

D. O. Pederson

Donald O. Pederson, Ph.D.
Secretary
Board of Directors