

14:34:09

OCA PAD INITIATION - PROJECT HEADER INFORMATION

06/15/88

Active

Project #: G-32-647  
Center #: R6511-OA0

Cost share #: G-32-346  
Center shr #: F6511-OA0

Rev #: 0  
OCA file #:  
Work type : RES  
Document : GRANT  
Contract entity: GTRC

Contract#: 1 S15 GM41160-01  
Prime #:

Mod #:

Subprojects ? : N  
Main project #:

Project unit: AP BIO Unit code: 02.010.134  
Project director(s):  
TORNABENE T G AP BIO

Sponsor/division names: DHHS/PHS/NIH  
Sponsor/division codes: 108

/ NATL INSTITUTES OF HEALTH  
/ 001

Award period: 880601 to 890531 (performance) 890831 (reports)

Sponsor amount	New this change	Total to date
Contract value	18,780.00	18,780.00
Funded	18,780.00	18,780.00
Cost sharing amount		11,196.00

Does subcontracting plan apply ? : N

Title: NIH-SMALL INSTRUMENTATION PROGRAM

PROJECT ADMINISTRATION DATA

OCA contact: E. Faith Gleason 894-4820

Sponsor technical contact

Sponsor issuing office

LORE ANNE MCNICOL  
(301)496-0334  
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BETHESDA, MD 20892

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Security class (U,C,S,TS) :

ONR resident rep. is ACO (Y/N): N

Defense priority rating :

N/A supplemental sheet

Equipment title vests with: Sponsor

GIT X

FUNDS RESTRICTED TO PURCHASE EQUIPMENT IDENTIFIED IN GRANT APPLICATION

Administrative comments -

INITIATION. THIS IS A SMALL INSTRUMENTATION PROGRAM GRANT UNDER THE AUSPICES OF THE BIOMEDICAL RESEARCH SUPPORT GRANT PROGRAM.

GEORGIA INSTITUTE OF TECHNOLOGY  
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Date 8/24/89

Project No. G-32-647 Center No. R6511-OA0

Project Director T. G. Tornabene School/Lab Biology

Sponsor DHHS/PHS/NIH

Contract/Grant No. #1 S15 GM41160-01 GTRC XX GIT     

Prime Contract No. N/A

Title NIH-Small Instrumentation Program

Effective Completion Date 5/31/89 (Performance) 8/31/89 (Reports)

Closeout Actions Required:

- None
- Final Invoice or Copy of Last Invoice
- Final Report of Inventions and/or Subcontracts-Patent questionnaire sent to P.I.
- Government Property Inventory & Related Certificate
- Classified Material Certificate
- Release and Assignment
- Other \_\_\_\_\_

Includes Subproject No(s). \_\_\_\_\_

Project Under Main Project No. \_\_\_\_\_

Continues Project No. \_\_\_\_\_ Continued by Project No. \_\_\_\_\_

Contribution:

- |                                  |             |                                 |
|----------------------------------|-------------|---------------------------------|
| Project Director                 | <u>X</u>    | Reports Coordinator (OCA)       |
| Administrative Network           | <u>X</u>    | GTRC                            |
| Accounting                       | <u>X</u>    | Project File                    |
| Procurement/GTRI Supply Services | <u>Z</u>    | Contract Support Division (OCA) |
| Research Property Management     | <u>    </u> | Other _____                     |
| Research Security Services       | <u>    </u> | _____                           |

SR. 714

**FINAL REPORT**

To: National Institute of Health  
Contract: 1 S15 GM41160-01  
Title: NIH-Small Instrumentation Program  
Award Period: 880601 to 890831  
Project Director: Thomas G. Tornabene  
School of Applied Biology  
Georgia Institute of Technology  
Atlanta, GA 30332  
(404)894-3735  
  
Date Submitted: 890823

## ILLUSTRATIVE USE OF FUNDS

Two Varian Model DMS 300 UV/Vis spectrophotometers and accessory instrumentations were purchased with the monies awarded by this contract and cost sharing from the Georgia Institute of Technology. One of the spectrophotometers is dedicated to the molecular biology research programs. The system has been configured to transmit absorbance and temperature data to an IBM compatible computer through RS 232 serial channels. Data acquisition and control software is being written and implemented. The temperature probe (a platinum resistor) is inserted directly in the sample cuvette. The analog voltage signal from the temperature module is sent to a 12-bit A/D input board in the computer. The system is being employed to obtain data from a set of DNA oligomers 20-30 bp in length and to obtain high resolution DNA helix coil transition data. These studies are aimed at determining the effects of base pair sequence on DNA stacking interactions and the influence of electrostatic end-effects on DNA stability. Other applications have included characterization of the GC content of bacterial strains being investigated by faculty members in the Schools of Applied Biology, Physics and Chemistry.

Accessories purchased include a photomultiplier with low noise, thermostable cell holder, DMS thermal isolator walls, input/output option, high resolution plotter, station mount, 0 to 100 Degree Platinum Probe, single module MB-series mount, IEEE-488 interface-short board, IBM data acquisition and control adapter, and a computer system with its accessories to run the spectrophotometer.

The second spectrophotometer is being used for conventional analyses and assays of proteins, enzymes, pigments, lipids and nucleic acids by faculty in the Applied Biology, Chemistry, Physics, and the Environmental and Biomedical Engineering programs.

Both instruments and their accessories are housed in the Research Center for Biotechnology. This Center is a multi-user facility that provides service to the faculty and staff at the Georgia Institute of Technology. The Center is housed in the first two floors of the Cherry Emerson Building. The spectrophotometers are under the supervision of Dr. Thomas G. Tornabene, the Director of the School of Applied Biology and the Research Center for Biotechnology. The Director has assigned the responsibility of managing these spectrophotometers to Dr. Roger Wartell, a Biophysicist and faculty member in the Biotechnology program.