

GEORGIA INSTITUTE OF TECHNOLOGY  
Engineering Experiment Station

PROJECT INITIATION

Date October 13, 1966

Project Title: Biomedical Sciences Support

Project No.: B-304

Project Director: R. H. Fetner

Sponsor: Public Health Service

Effective: June 1, 1966 Estimated to run until: May 31, 1967

Type agreement: Grant No. 1-S05 -FR-07024-01

Amount: \$30,405

Reports: Annual Progress Report \*  
Annual Expenditures Report \*

Contact Person: Dr. Herbert B. Pahl, Chief,  
General Research Support Branch  
Division of Research Facilities and Resources  
National Institute of Health  
Bethesda, Maryland 20014

\*Refer to Section VIII, page 15 of General Policy and Information Statement of Biomedical Sciences support grant booklet, dated March, 1966.

Assigned to School of Biology Division

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*REPORTS*  
*300-13-304*

GEORGIA INSTITUTE OF TECHNOLOGY  
Engineering Experiment Station

PROJECT TERMINATION

Date September 20, 1967

PROJECT TITLE: Biomedical ~~HEMI~~ Sciences Support

PROJECT NO: B-304

PROJECT DIRECTOR: R. H. Petner

SPONSOR: Public Health Service

TERMINATION EFFECTIVE: May 31, 1967

CHARGES SHOULD CLEAR ACCOUNTING BY: All charges cleared

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School of Biology

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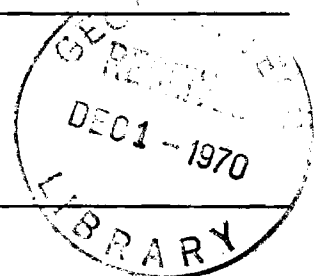
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DEPARTMENT OF HEALTH, EDUCATION AND WELFARE  
PUBLIC HEALTH SERVICE  
NATIONAL INSTITUTES OF HEALTH

B-304

## ANNUAL NARRATIVE PROGRESS REPORT

1. NAME OF RECIPIENT INSTITUTION ( <i>Identify Health Professional School Where Appropriate</i> )  Georgia Institute of Technology School of Biology		Check Type of Grant	
		<input type="checkbox"/> GENERAL RESEARCH SUPPORT <input checked="" type="checkbox"/> BIOMEDICAL SCIENCES SUPPORT	
		2. PHS GRANT NUMBER  FR- 07024-01	
3. GRANT PERIOD	a. FROM ( <i>Month, Day, Year</i> )  June 1, 1966	b. TO ( <i>Month, Day, Year</i> )  May 31, 1967	
	4. NAME AND TITLE OF PROGRAM DIRECTOR ( <i>Please Type</i> )  Robert H. Fetner, Director School of Biology		
5. SIGNATURE OF PROGRAM DIRECTOR		DATE	
		August 23, 1967	
6. NAME AND TITLE OF AUTHORIZED OFFICIAL OF INSTITUTION ( <i>Please Type</i> )  Harry L. Baker, Jr., Director Research Administration Office of Research Administration			
7. SIGNATURE OF AUTHORIZED OFFICIAL OF INSTITUTION		DATE	
		August 23, 1967	



## Continuation page

## ITEM I: FLEXIBILITY OF FUNDS

The availability of these grant funds made possible a major advance in basic biological research and graduate education capability which would not otherwise have been available during this period. Biology, as a discipline, has been late arriving on the Georgia Tech campus and there is an urgent need for some haste in strengthening the program so that it may catch up to the other basic sciences. A strong basic biological research and graduate training program will provide the necessary catalyst for growth of health-related research on this campus. These funds permitted us to establish an electron spin spectrometer laboratory which will be devoted to basic studies of biological systems. This laboratory is under the direction of Dr. John J. Heise, a member of the School of Biology faculty. Dr. Heise did his doctoral dissertation in electron spin spectroscopy in biological systems with Dr. Barry Commoner at Washington University. He has also worked with Abbott Pharmaceutical Laboratories on investigating the use of ESR in molecular pathology. We are very fortunate that he is with us to pursue this advanced area of research. The ESR instruments are quite expensive and the cost of the one purchased was shared by the biomedical grant funds and funds from the Georgia Institute of Technology.

With the help of this grant we also sponsored a one-day symposium entitled Biomedical and Biological Applications of Electron Spin Resonance, which was given on Monday, February 27, 1967. This symposium featured talks by Dr. John J. Heise of this School, Dr. Daniel W. Nebert of the National Cancer Institute of the National Institutes of Health, Bethesda, Maryland, and Dr. Peter Kenny of the Botany Department, Washington University, St. Louis, Missouri (See Appendix I). The symposium was well attended with representatives from most of the states in the southeast. Grant funds were used to provide honorariums for the speakers and other incidental expenses and the Georgia Tech Alumni Foundation provided a dinner for the speakers and invited attendees. Without the help of this grant such conferences are very difficult to finance from budgeted school funds.

Funds were also used to share in the purchase of a Dupont Curve Resolver. This instrument is a 10 channel analogue computer specifically designed to resolve overlapping curves generated by a variety of experimental procedures. Many of which have definite biomedical implications, as for example, gas chromatography, electrophoresis, and x-ray diffraction. When this machine is set up and functional a series of workshops will be arranged so that biomedical researchers in this area can become acquainted with the usefulness of this instrument in their research programs. We believe that one of the functions of Biology in an environment of technology such as ours should be to develop and make available advanced instrumentation for the biomedical community. Both of the instruments purchased fulfill this need and the available grant funds provided the major means of obtaining this objective.

## ITEM II: SCIENTIFIC CONTROL OF FUNDS

Same.

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ITEM III: MAJOR SCIENTIFIC ACCOMPLISHMENTS

One of the major scientific accomplishments of this grant was to establish an electron spin spectroscopy laboratory for biological research through the purchase of a Model 3 Varian Electron Spin Spectrometer. This is a frontier area of biomedical research and because we are fortunate in having someone trained in the use of this instrument on our staff, Dr. John J. Heise, we believe it will make a significant contribution to the research and graduate training in the biomedical sciences. The grant was also used to support a one-day symposium entitled: Biomedical and Biological Applications of Electron Spin Resonance, which was given at the Georgia Institute of Technology on Monday, February 27, 1967. This symposium featured talks by Dr. Daniel W. Nebert of the National Cancer Institute of the National Institutes of Health, Dr. Peter Kenny of the Botany Department, Washington University, St. Louis, Missouri, and Dr. John J. Heise of the School of Biology faculty at Georgia Tech. The conference was well attended with a considerable representation from various states in the southeastern region.

ITEM IV: VISITING SCIENTISTS

Two scientists were brought on campus - Dr. Daniel W. Nebert of the National Cancer Institute and Dr. Peter Kenny of the Botany Department, Washington University. Both stayed on campus for two days to participate in the symposium mentioned above, and to consult with the staff.

ITEM V: PUBLICATIONS

No publications have resulted as yet from research supported under the biomedical grant.

ITEM VI: DISTRIBUTION OF GRANT FUNDS BETWEEN HEALTH-RELATED RESEARCH AND RESEARCH TRAINING

Primarily research (1)	<u>75</u> percent
Primarily research training (2)	<u>25</u> percent
Total for (1) and (2)	<u>100</u> percent

ITEM VII: IMPACT OF INSTITUTIONAL PROGRAMS

The funds made available by this grant have provided additional impetus to the development of Biology on this campus. They have materially shortened the time which will be required to achieve some of our stated objectives, namely the establishment of Biology as a strong basic discipline and the rapid growth of our research and graduate training program so that they can make a more effective contribution and

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can provide the catalyst for the growth of health-related research at the Georgia Institute of Technology.

ITEM VIII: ATTRACTION OF OTHER FUNDS

As yet, the Biomedical Grant Funds have not evolved projects which are not now funded by other sources.

ITEM IX: CIRCUMSTANCES RESULTING IN CARRY-OVER

Not applicable.

ITEM X: CRITICISMS OR SUGGESTIONS

We have high praise for the Biomedical Research Program. It comes at a very critical time in the evolution of Biology and health-related research on the Georgia Tech campus. It has provided equipment which would have been very difficult to obtain otherwise, and research and training programs would have required long periods of time to achieve by other means. These grant funds have materially shortened the time that it will take us to achieve excellence in those areas of biological research which we feel are most appropriate for a technological environment. We believe that we can draw scientists from other disciplines into health-related research through mutual interests developed by common research methods.

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