



GEORGIA INSTITUTE OF TECHNOLOGY  
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Closeout Notice Date 02/01/95

Project No. G-32-641 \_\_\_\_\_ Center No. 10/24-6-R7878-0A0\_  
Project Director WARTELL R M \_\_\_\_\_ School/Lab BIOLOGY \_\_\_\_\_  
Sponsor DHHS/PHS/NIH/NATL INSTITUTES OF HEALTH \_\_\_\_\_  
Contract/Grant No. 1 S15 HL51338-01 \_\_\_\_\_ Contract Entity GTRC  
Prime Contract No. \_\_\_\_\_  
Title SMALL INSTRUMENT GRANT \_\_\_\_\_  
Effective Completion Date 940731 (Performance) 941031 (Reports)

Closeout Actions Required:	Y/N	Date Submitted
Final Invoice or Copy of Final Invoice	Y	_____
Final Report of Inventions and/or Subcontracts	Y	_____
Government Property Inventory & Related Certificate	Y	_____
Classified Material Certificate	N	_____
Release and Assignment	N	_____
Other _____	N	_____

Comments \_\_\_\_\_

\*\*\*NOTE\*\* USE DHHS FORM FOR PATENT. \_\_\_\_\_

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

Continues Project No. \_\_\_\_\_

Distribution Required:

Project Director	Y
Administrative Network Representative	Y
GTRI Accounting/Grants and Contracts	Y
Procurement/Supply Services	Y
Research Property Management	Y
Research Security Services	N
Reports Coordinator (OCA)	Y
GTRC	Y
Project File	Y
Other _____	N
_____	N

NOTE: Final Patent Questionnaire sent to PDPI.

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**FINAL PROGRESS REPORT**  
**OF**  
**NATIONAL INSTITUTES OF HEALTH**  
**SMALL INSTRUMENT GRANT S15 HI51338**  
**Period of Grant: August 1, 1993 to July 31, 1994**

**Principal Investigator**

**Roger M. Wartell**  
**School of Biology**  
**Georgia Institute of Technology**  
**Atlanta GA 30332**

**January 22, 1995**

## FINAL PROGRESS REPORT

Funds from the small instrument grant were used to purchase an ultracentrifuge and rotor that is used for research and research training by faculty at Georgia Tech. Users of the instrument are in the School of Biology and School of Biochemistry and Chemistry.

The instrument purchased was a Beckman ultracentrifuge model L-80 with the 70 Ti preparative rotor. The ultracentrifuge was installed in December 1993 in the Cherry Emerson Building at Georgia Tech. It replaced a 21 year old unit that was only being used at low speeds and for short time runs.

The new instrument is being employed to support several National Institutes of Health sponsored research projects, for training of graduate students in ultra-centrifugation, and for other faculty research projects.

Most extensive use of the centrifuge is by the research group of Dr. Peggy Girard who is studying the effect of shear stress on the surface proteins of endothelial cells. The instrument is used to isolate cellular plasma membrane to characterize cell membrane associated proteases following exposure of the cells to different shear stress environments.

The instrument has also been employed by Dr. Roger Wartell's and Dr. Jung Choi's research groups for the isolation of plasmid DNA. The isolated DNA is used either for cloning experiments or for DNA melting studies of DNA fragments obtained from restriction digests of the plasmid DNA. Dr. Richard Ikeda and Dr. Sheldon May from the School of Biochemistry and Chemistry have made use of the 70 Ti rotor in their protein isolations. Several other faculty and graduate students in the School of Biology have learned how to run the ultracentrifuge and are employing it for the isolation of microbial enzymes, and surface glycoprotein of rotifers.

### Publications to date:

Girard, PR and Nerem, RM, 1995, "Shear stress modulates endothelial cell morphology and F-actin organization through the regulation of focal contact-associated proteins." J. Cell Physiol. in press.

Thoumine O., Nerem, R. M., and Girard, P.R. 1995 "Oscillatory shear stress and hydrostatic pressure modulates cell-matrix attachment proteins in cultured endothelial cells." In Vitro in press.

Ke, S.-H and Wartell, R.M. 1995 "The Influence of Neighboring Base Pairs on the Stability of Single Base Bulges in a DNA Fragment" Nucleic Acids Res. in press.