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<td>Subject report identifies the approved clinical research activities conducted at WRAMC (during FY-82) that have been approved and annually reviewed by the Clinical Investigation and Human Use Committee members. An annual progress report is enclosed for each protocol active during FY-82. Also, enclosed is a list of publications and presentations during FY-82 that reflect work accomplished in conjunction with approved clinical investigation protocols.</td>
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This report covers the period (1 October 1981 thru 30 September 1982).

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED.
FORWARD

The enclosed annual progress reports constitute documentation of the continuing review of approved research by the WRAMC Institutional Review Board (Clinical Investigation Committee (CIC) and Human Use Committee (HUC)) which is required by federal and local regulations.

Requests for annual progress reports are sent to investigators in August, and the reports are due 15 October. When the annual progress reports are received by Department of Clinical Investigation (DCI), they are checked for accuracy by our DCI editorial staff and sent to an institutional review board member for review. This reviewer may either recommend approval of the annual progress report, request additional information from the investigator, or propose scrutiny of the annual progress report by the entire board. The process of acquiring additional information from investigators is time-consuming but usually results in approval of most annual progress reports, leaving few for review by the entire committee. All annual progress reports in the current report have been approved by this committee process and therefore represent the culmination of the review process for ongoing research.

The progress reports for FY-82 utilize our adaptation of the recommended HSC format. Each investigator is specifically asked whether significant unexpected side effects have occurred during the study, thereby assuring that the CIC and HUC will have an opportunity to assess the risks and safety of human use prior to approving the continuation of the study for another year.

The compilation of this report and the editorial review of over 500 annual reports could not have been accomplished without the perseverance, patience, and proficiency of Mrs. Ethel Ervin.
FY-82 saw continued growth of the WRAMC Clinical Investigation Program. We added 170 new protocols to the 372 which were ongoing at the year's start. There were more than 145 publications resulting from approved Clinical Investigation projects. The growth in the number of approved protocols reflects the improved health of the Army Medical Department with both the number and quality of personnel essential for clinical research and increased efficiency now present in the review process. Under policies now in operation at OTSG and HSC, protocols not involving an investigational drug have potential for having completed the review process within 30 days. "Expedited review" of certain low risk protocols has been in place for two years at WRAMC, potentially permitting approval to be granted within weeks, and the most recent improvement in the protocol review process, was the delegation of approval authority from OTSG to HSC for drug-company sponsored investigational drug protocols, which has resulted in HSC's approval of most drug company sponsored drug protocols within two weeks of receipt. Department of Clinical Investigation (DCI), WRAMC, has been very fortunate to have had and continue to have outstanding personnel facilitating the protocol approval process, Iris Hepburn, and more recently Kanika Brookins and Judi Fisch.

It must be emphasized that this annual progress report not only records the progress during FY-82, but documents the process by which each ongoing protocol is reviewed at least annually, by the WRAMC Clinical Investigation Committee (CIC) and Human Use Committee (HUC), our institutional review board (IRB), as required by DHHS and FDA regulations. This review is necessary to insure the protection of human subjects involved in WRAMC Clinical Investigation projects.

The members of the WRAMC CIC and HUC deserve special recognition for their selfless devotion of time to the review and approval of other's research protocols. Expedited review, counselling sessions with investigators, and more intensive annual review of research projects have created additional demands upon their time. They can be gratified that their efforts have resulted in a quality of institutional review of research at WRAMC which is unsurpassed.

During FY-82 progress was realized in multiple areas. The Animal Research Laboratory, under Fred Coleman, fully supported several research protocols, including kennelling and microsurgery. A cooperative agreement for veterinary support of the laboratory with WRAIR was ratified. The Vietnam Head Injury Study (VHIS) evaluated approximately 200 more subjects, bringing the total to about 300. It was rewarding that the health status of many veterans was improved as a consequence of their participation in the study. CPT Patricia Young's Biochemistry Lab developed state
of the art methodology for apolipoprotein and cholesterol ester measurement. MAJ Ollie S. King’s computers were purchased, making automation of protocol and supply data an attainable dream. Despite an ever increasing workload, Mr. Jack Burton continued to keep track of budget and supplies unerringly. Kyle Metabolic Unit (KMU) continued its tradition of high productivity in Endocrinology, and the programs in Gastroenterology, Pulmonary, Allergy, Oncology, Audiology, and Infectious Disease received national recognition.

During FY-82, DCI supported our Army mission and directives by the Chief of Staff. Several protocols of special military interest were the Carlisle over 40 screen of patients for Coronary Artery Disease, which compared several non-invasive modalities for assessing Coronary Artery Disease, and a study involving behavioral modification techniques directed at improving fitness in the Carlisle War College population. DCI also made arrangements to accommodate the Phase II Drug antimalarial program at WRAMC, which should more optimally protect the involved volunteers and provide an instructive patient population for medical residents and Infectious Disease Fellows. DCI staff members also made individual contributions to readiness. LTC Boehm attended the Red Flag Exercise, CPT Young earned the Expert Field Medical Badge, SFC Moody was a key member in the team that planned and implemented the WRAMC field training exercises. DCI is delighted to have a new Assistant Chief, MAJ (P) Wayman W. Cheatham, who brings field experience to the assignment, and a biostatistician, Mrs. Judy Evaul. Due to the availability of these personnel and LTC Brian G. Schuster, who is on loan from WRAIR as our other Assistant Chief, DCI can offer outstanding consultative expertise.

The future of DCI at WRAMC holds challenges and excitements. There is currently a trend to entrust the protocol review process to the local institutions, both within the federal government and the Army, and we at WRAMC must continue to meet that challenge. The program has grown to the extent that present resources at WRAMC are no longer sufficient for all our needs and research aspirations. Flexible approaches for procurement of necessary personnel will need to be developed, as well as innovative ways for obtaining sources for funding. At year’s end some of the unresolved issues with potential for enhancing support included:

1) Feasibility of support from drug companies during participation in drug company sponsored studies.

2) Access to grant funding from other federal agencies.

3) Feasibility of obtaining personnel support from outside to assist in collaborative studies.
DEPARTMENT OF CLINICAL INVESTIGATION

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9057-82 A Descriptive Study of Nursing Activities, Behavior and Cognitive Functions of the Registered Nursing during the Intraoperative Phase of Surgery. (FY-82) I P  

9058-81 An Identification of the Expressed Needs of Family Members of the Terminally Ill Patient in a Hospital Setting. (FY-81 F)  

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9052 Cellular Dynamics of Uterine Epithelium (FY-81 F)  

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UNIT SUMMARY SHEET

1. Mission Changes:

   a. The Vietnam Head Injury Study was fully staffed and implemented: 278 patients were evaluated during FY-82. Support from the 57th Aeromedical Evacuation Squadron, Scott AFB, ILL. and the American Red Cross in the transportation of these patients to and from their homes for the study has been excellent.

   b. Additional laboratory space in the basement of building 7 was obtained to support expanded requirements of the Animal Procedures, Kyle Metabolic, and Organ Transplant laboratories. Two additional "Bio-Clean" containment units were obtained for the Animal Procedures Laboratory which now boards approximately 50 small animals.

   c. The recently completed manpower survey has recognized the increased need for personnel to support WRAMC sponsored research. Much of this was documented from the work done by the investigators during their off-duty hours.

2. Personnel Actions, Current Strength

   a. Personnel hired on temporary appointment and term appointment to support WRAMC research projects.

      Alston Stephanie  GS 04  0699  Temporary
      Anderson Jeffrey  GS 09  0644  Temporary
      Youm Youngil     GS 12  0858  4 yr Term

   b. Personnel hired on a 4 year term appointment and paid by Grant funds from V.S. to support the Vietnam Head Injury Study.

      Brown Herbert   GS 11
      Fair Christine  GS 11
      Parker Yvonne   GS 05
      Rohland Anne Marie GS 06
      Rosenberg Jennette GS 11
      Spencer Elmer    GS 08
      Spizler Judy     GS 09
      Vinkanes Mark    GS 09
      Zirk Deborah     GS 09

   c. Personnel hired for a 4 year term appointment are paid for by Grant funds from NIH to support the Hematology-Oncology research studies.

      Bailey Carolyn  GS 09
      Brooks Frances GS 05
      Harris Carolyn GS 05

   d. Current Manpower

   Description  Grade  Mos  Br  Actual  Name
   C, Dept of Clin Invest  05  61F9C  MC  1  Boehm
### d. Current Manpower, Con't

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3. Investigation Program Summary

- Number of Active Protocols: 417
- Number of Completed Protocols: 125

4. Incentive

The Bailey K. Ashford Award, presented annually to the house staff member at WRAMC whose research project was voted the most outstanding contribution to clinical investigation, was given to David J. Perry, MAJ MC, for his research in the area of head and neck cancer.

5. Funding

- FY-82
  - Civilian Personnel: $723,000
  - Civilian Personnel (Reimbursable Grants): $198,000
  - Military Personnel: $363,831.41
  - Travel: $27,400.00
  - Contracts: $290,000.00
  - Supplies: $645,000.00
  - MEDCASE: $331,396.97

Total: $2,578,628.38
TITLE OF PROJECT: PVSG Protocol-12: "Efficacy trial using hydroxyurea (HU) in the treatment of primary thrombocytosis."

PROJECT OBJECTIVE: To study the usefulness of hydroxyurea (HU) as a non-alkylating chemotherapeutic agent for the treatment of primary thrombocytosis.

TECHNICAL APPROACH: No changes were made in the study design during the past year.

PROGRESS DURING FY-82: At the November 13th meeting of the PVSG this study was closed to further patient accrual. No new data will be forthcoming until the minutes of that meeting are published. No WRAMC patients were entered.

NUMBER OF SUBJECTS STUDIED:
FY-82: NONE   Total (to date): NONE   Before completion of study: NONE

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: Hydroxyurea (HU) appears to be a useful agent in the prompt and continuous control of high platelet counts in primary thrombocytosis without significant toxicity. Leukemogenic potential remains unknown and will require continued followup of the patients now on study. Based on other data the leukemogenic potential for this drug is felt to be less than that of available alkylating agents used to control this disease.

PUBLICATIONS OR ABSTRACTS, FY-82: NONE
STUDY OBJECTIVE: To determine if the carbohydrate portions of the hCG molecule determine the ability of the subunits to combine to form the biologically active hormone.

TECHNICAL APPROACH: During FY82 we made further significant strides in studying the role of carbohydrate in the two systems we have been studying:
1. In association with Drs. Lawrence Cole and Robert Hussa at the Medical College of Wisconsin (cont.)
   1. We demonstrated that DoT and CasKi cells do, in fact, produce hCG beta moieties that retain biological activity, in the sense that they are able to (cont.)

NUMBER OF SUBJECTS STUDIED:
FY-82: 0 TOTAL (TO DATE): 0 BEFORE COMPLETION OF STUDY: None

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE STATE): None

CONCLUSIONS:
See PROGRESS DURING FY-82

PUBLICATIONS OR ABSTRACTS, FY-82:

None.
TECHNICAL APPROACH:

of Wisconsin, we have continued to examine the combining properties of various forms of affinity-purified hCG beta produced ectopically by the DoT and CasKi lines of human cervical carcinoma cells. We have examined the hCG so produced by specific radioimmunoassay and a rat testis radioreceptor assay.

2. We have continued our studies of the combining properties of standard hCG subunits before and after treatment with mixed exoglycosidases which putatively removed greater than 80% of the carbohydrate from these glycoproteins. We have extended these studies and have done multiple control experiments to try to rule out the presence of contaminating species that might inhibit combination.

PROGRESS DURING FY-82:

combine with standard hCG alpha to produce hCG molecules that are active in both radioimmunoassay and radioreceptor assay systems. Shortly before we were to publish these results, Hussa and co-workers demonstrated a rather remarkable finding. Further purification by ion exchange and affinity chromatography demonstrates that ectopic hCG-beta can be distinguished into two forms. One was indistinguishable from standard hCG-beta while the other, although larger on gel chromatography, lacked the characteristic COOH-terminal peptide (CTP). This was shown by the failure of antisera specific for determinance on the CTP to recognize this molecule and by the apparent absence of the O-linked oligosaccharides and thermolysin cleavage site normally found in this region. (Cole, Birken, Sutphen, Hussa and Pattillo: Endocrinology 110: 2198-2200, 1982)

We, therefore, have begun the large scale production by these cells of ectopic hCG beta in hopes to purify large (200-300 ug) amounts of each form of hCG-beta to study both the combining properties as well as the chemistry of these forms. Furthermore, once the cells are harvested, they will be sent to Dr. Irving Boime (Washington University, St. Louis) for eventual studies of the genome of these cells.

2. Although we have been able to demonstrate that deglycosylation of the hCG subunits greatly inhibits the ability of the subunits to combine with the opposite fully glycosylated subunit using two entirely different sets of exoglycosidases, we have had difficulty demonstrating that control experiments (in which the hCG subunits were similarly handled but were not deglycosylated) did not result in similar inhibition of combination.
Study Objective: To determine the specific abnormalities associated with thyroid hormone resistance in patients with inappropriate secretion of thyrotropin (TSH).

Technical Approach: During FY-82 we completed studies of nuclear thyroid hormone receptors and fibroblasts taken from the skin of normal patients and patients with thyroid hormone resistance. We also conducted extensive studies of thyroid hormone...

Progress during FY-82:

We demonstrated that there are no significant abnormalities in nuclear receptor number or affinity when whole cells are studied for triiodothyronine binding, (cont.)

Number of Subjects Studied:

FY-82: 3 Total (to date): 3 Before completion of study: 10

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):

None. (Fibroblasts were harvested from a number of otherwise discarded foreskin samples obtained after circumcision by the Obstetrics Service.)

Conclusions:

See progress during FY-82.

Publications or Abstracts, FY-82:

Publication:


Publications and Abstracts FY-82 Worked on in Collaborative Study Performed at Kimbrough Army Hospital, Ft. Meade, MD, under an HSC-Approved Clinical Investigation Protocol:

WORK UNIT NO.: 1008

TECHNICAL APPROACH:

action in cultured fibroblasts from normal patients exposed to normal and reduced concentrations of thyroid hormone in the medium.

PROGRESS DURING FY-82:

comparing normals to patients with thyroid hormone resistance. In studies of specific binding of radio-labeled thyroxine to nuclear receptors, we determined that that this species was most likely triiodothyronine converted intracellularly and not direct binding of thyroxine. We attempted to demonstrate specific abnormalities of glucose utilization, lactate formation, 2-deoxyglucose uptake and uridine incorporation into whole cells and cell protein in fibroblasts obtained from normal subjects exposed to normal and to reduced levels of thyroid hormone. In three sets of experiments in our laboratory and another set of experiments conducted at the National Naval Medical Center by Dr. Judy Fradkin, we were unable to demonstrate any decrease in metabolic function in cells grown in thyroid hormone depleted medium. We are, therefore, embarking on two other lines of investigation. First, we will study a membrane phenomenon, the presence of beta adrenergic receptors (both number and affinity by Schachtard analysis) and Malic enzyme activity in fibroblasts grown in medium containing excess and deficient amounts of thyroid hormone.
STUDY OBJECTIVE: Define role of CT and ultrasound in management of urinary tract infection.

TECHNICAL APPROACH: Ultrasound and cat scan performed on patients admitted with severe urinary tract infection.

PROGRESS DURING FY-82: Only two patients fit criteria and were entered in the study from WRAMC.

NUMBER OF SUBJECTS STUDIED:
FY-82: 2

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: These two patients will be added to the pool of subjects at Bethesda. Findings are now being processed.

PUBLICATIONS OR ABSTRACTS, FY-82: NONE
PRINCIPAL INVESTIGATOR(s): Henry G. Fein, MAJ MC and Thomas A. Klein COL MC
ASSOCIATE INVESTIGATOR(s): Kristen Raines CPT MC

ACCUMULATIVE FED CASE COST: 0
ACCUMULATIVE CONTRACT COST: 0
ACCUMULATIVE SUPPLY COST: 0

Study Objective: To determine the incidence of postpartum lymphocytic thyroiditis in an unselected population and to determine appropriate means for screening for this disorder.

Technical Approach: During fiscal year 1982 we began this study in 2 different ways:
(1) we have begun to enroll obstetric patients, who have delivered here at WRAMC, for a prospective study to determine the incidence and severity of lymphocytic thyroiditis in an unselected population. (continued on page 2)

Preliminary steps were instituted to begin these studies as delineated under Technical Approach, and the first patients were enrolled.

Number of Subjects Studied:
FY-82: 6 Total (to date): 6 Before Completion of Study: 250

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None.

Conclusions:
See Progress During Fiscal Year 1982.
Technical Approach (cont) (2) In association with Dr. T. Nikolai of the Marshfield Clinic, Marshfield, Wisconsin, and Dr. C. Johnson of the Lombardi Cancer Research Center, Georgetown University Medical Center, we have begun HLA typing to determine the gene frequencies present in patients with postpartum lymphocytic thyroiditis, spontaneously resolving thyroiditis not associated with pregnancy and a control population with classical Hashimoto's disease.
TITLE OF PROJECT: Effect of Therapeutic Exercise on Muscle Enzymes in Patients with Polymyositis

STUDY OBJECTIVE: To assess the effect of a single exercise session on muscle enzyme levels in patients with polymyositis.

TECHNICAL APPROACH: Recovering, ambulatory patients perform a mild, isometric exercise session under supervision. Pre-exercise, 4-hour and 24-hour post-exercise CPK and aldolase levels are measured. Protocol repeated with a mild calisthenic exercise session at least one week later.

PROGRESS DURING FY-82: Three patients have completed the protocol. Two others are scheduled to participate in the next several weeks.

NUMBER OF SUBJECTS STUDIED:
FY-82: 3 Total (to date): 3 Before Completion of Study: 20

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (If none so state):
None

CONCLUSIONS: Insufficient number of patients studied to make conclusions.
Study Objective: To compare the effect of prednisone and cytotoxic agents coupled with plasma-exchange in the treatment of anti-glomerular basement membrane antibody mediated renal disease.

Principal Investigator(s): John P. Johnson, MD, LTC, MC   Jack Moore, Jr., MD, MAJ, MC

Facility: WRAMC

Dept/Svc: Medicine/ Nephrology

**Accumulative FE/CASE Cost:** 0

**Accumulative Contract Cost:** 0

**Accumulative Supply Cost:** 0

FY-83 PDCASE: 0  Contract Cost: 0  Supply Cost: 0

**Date of Committee Approval of Annual Progress Report:** FEB 25 1980

**Study Objective:** To compare the effect of prednisone and cytotoxic agents coupled with plasma-exchange in the treatment of anti-glomerular basement membrane antibody mediated renal disease.

**Technical Approach:** Patients with confirmed anti-GBM ab mediated renal disease will be randomized to RX with either pred/cytotoxic alone or in combination with plasma exchange. Disappearance rates of ab will be calculated and compared along with clinical outcome.

**Progress During FY-82:** A total of 17 patients have been entered in the study, two of which were entered in FY-82. Analysis of the data at this point suggests a more rapid disappearance of ab in the plasma exchange group, with a more favorable clinical outcome.

**Number of Subjects Studied:**

- FY-82: 2
- Total (to date): 17
- Before Completion of Study: 30

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):**

- No serious or unexpected side effects have occurred so far.

**Conclusions:** More patients are required in each treatment group before meaningful conclusions can be drawn statistically. Analysis of the data at this point suggests that a more favorable clinical outcome is achieved via the use of plasma exchange, and that ab disappearance rates are more rapid with plasma exchange. We continue to collaborate with the NIH and with FAMC, and intend to have other Army MedCens collaborate to increase the patient population.

**Publications or Abstracts:** FY-82: An abstract delineating our results has been submitted and selected for presentation at the 14th Annual Meeting of the American Society of Nephrology, December, 1982, in Chicago, IL. A copy of this abstract is attached.
**Study Objective:** To determine if hyperuricemia occurring in patients with chronic renal failure from other causes is a deleterious factor in the progression of their renal failure.

**Technical Approach:** Patients with progressive chronic renal failure and significant hyperuricemia will be prospectively followed until they enter hemodialysis or kidney transplantation. They will be randomized into groups whose hyperuricemia is untreated or normalized with allopurinol. Their course will be evaluated for comparison between progress during FY-82: the two groups, and before and after entering the study.

Protocol remained inactive during FY 82.

**Number of Subjects Studied:**

- FY-82: 0
- Total (to date): 4
- Before Completion of Study: 20

**Serious/ Unexpected Side Effects in Subjects Participating in Project (if none so state):**

NONE

**Conclusions:** Protocol will not be continued because of limited availability of suitable patients, and no support personnel to assist with patient location and longitudinal follow-up. Further, I foresee no probability of altering either of these limiting factors. Therefore, no conclusions could be drawn from data obtained.

**Publications or Abstracts, FY-82:** NONE
S50 1jj... To systematically follow-up patients with borderline hypertension prospectively, to evaluate their natural history. To determine if certain procedures which are available to the practitioner (i.e., ECG, Echocardiogram, Isometric Stress Response Plasma Renin) may be used to predict outcome, and to determine the impact of weight reduction and sodium restriction regimens.

**TECHNICAL APPROACH:** Patients with borderline hypertension will receive a complete medical evaluation to include renin activity, ECG, Echocardiogram, Blood pressure response to positional changes and isometric exercise will be determined. Patients will be treated with weight reduction diet and sodium restriction as would be standard practice. These factors will be considered for their response to the frequency and rate of development of fixed hypertension.

**Patients Entering FY-82:** Twenty-three patients with borderline hypertension have been entered into the study and followed for at least 6 months. Because investigators will not be able to continue the study, no further entries into the protocol will be accepted. The data will be analyzed during the remainder of 1982, patients will be referred for follow-up through other sources

**NUMBER OF SUBJECTS STUDIED:**

FY-82: 6  Total (to date): 23  Before Completion of Study: 23

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** None

**CONCLUSIONS:** Data will be analyzed to determine if correlation can be obtained from the small number of patients entered into the study with respect to the importance of dietary salt weight reduction, plasma renin activity, orthostatic posturing, isometric exercise, blood pressure response, etc. On the incidence of development of fixed hypertension in patients initially diagnosed as having borderline hypertension. It is probable that limited conclusions can be drawn as a consequence of the small number of entries into the study.

**PUBLICATIONS OR ABSTRACTS, FY-82:** None at the present time, any that evolve in the future will be made known to the Clinical Investigation Service for the purpose of amending this final report.
**DATE:** Nov 82  | **Work Unit No.:** 1128  | **STATUS:** INTERIM X  | **FROM:**

| **STARTING Date:** June 1979 | **DATE OF COMPLETION:** Undetermined |

**Key Words:** End-stage Renal Disease, Rehabilitation, Activity Monitoring

**TITLE of PROJECT:** "Evaluation of the Rehabilitation of End-stage Kidney Disease by Hemodialysis and Kidney Transplantation Using Activity Recording"

**Principal Investigator(s):** Gregory Belenky, MD

**Associate Investigator(s):** Jimmy Light, MD

**Facility:** VAAT Neuropsychiatry Dept./SVC: Psychiatry/Organ Transplantation

**Accumulative PEUCASE Cost:**  | **Accumulative Contract Cost:**  | **Accumulative Supply Cost:**

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**Study Objective:** To monitor activity of patients with end-stage renal disease prior to and after being treated by several rehabilitation modes.

**Technical Approach:** A movement monitor (actigraph) will be placed on patients with end-stage renal disease and are in imminent need of hemodialysis or kidney transplantation. Baseline activity will be compared to repeat determination of activity after end-stage renal disease therapy. The difference in activity will be used as a measure of rehabilitation.

Third generation actigraph has been developed with improved sensitivity, compactness, and reproducing ability. In house computer programing has been completed for representation and interpretation of data. Additional subjects have been studied.

**Number of Subjects Studied:**

| FY-82:  | Total (to date): 7  | Before Completion of Study: 20-40 |

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):** None

**Conclusions:** None

**Publications or Abstracts, FY-82:** None
**DATE:** 7 Nov 82  **WORK UNIT No.:** 1129  **STATUS:** INTERIM  **FUNDING:** XXXXXX

**START DATE:** November 1979  **DATE OF COMPLETION:** 7 November 1982

**Key Words:** Acetate dialysate; bicarbonate dialysate

**Title of Project:** "Comparison of the Cardiopulmonary Variables of Patients Dialyzed Against Acetate or Bicarbonate Buffer"

**Principal Investigator(s):** Suzanne Bereman, MD, MAJ, MC  Jack Moore, Jr. MD, MAJ, MC

**Associate Investigator(s):** NONE

**Facility:** WRAMC  **Dept/Service:** Medicine/ Nephrology

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**FY-82 PEDCASE:** 0  **Contract Cost:** -  **Supply Cost:** 0  **Date of Committee Approval of Annual Progress Report:** FEB 25 1983

**Study Objective:** To determine if there is a difference between cardiopulmonary variables in patients dialyzed against acetate vs. bicarbonate buffers using the aforementioned buffers

**Technical Approach:** Hemodynamic monitoring during dialysis, sequential dialysis using the aforementioned buffers

**Progress During FY-82:**

**Number of Subjects Studied:**

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**Serious/Unexpected Side Effects in Subjects Participating in Project (If None, So State):**

**Conclusions:**

Request that this protocol be deactivated. We have no nursing support to complete the protocol as it requires a full time hemodialysis nurse. The PI has left the US Army, and there appears to be no reasonable possibility to obtain the technical support necessary to reactivate this protocol.

**Publications or Abstracts, FY-82:**

NONE
DATE: 7 Nov 82

STARTING DATE: 08 April 1980
DATE OF COMPLETION: April 1984

KEY WORDS: Nephrotoxicity, Radiocontrast Agents, Uric Acid

TITLE OF PROJECT: "THE ROLE OF HYPERURICOSURIA IN THE NEPHROTOXICITY OF RADIOCONTRAST AGENTS"

PRINCIPAL INVESTIGATOR(s): JACK MOORE, JR., MD, MAJ, MC

ASSOCIATE INVESTIGATOR(s): ---------

FACILITY: MRC
DEPT/SVC: Dept. of Medicine/Nephrology Service

ACCUMULATIVE PEDCASE COST: 0
ACCUMULATIVE CONTRACT COST: 0
ACCUMULATIVE SUPPLY COST: 0

FY-83 PEDCASE: 0
Contract Cost: 0
Supply Cost: 0

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB. 25, 1983

STUDY OBJECTIVE: To determine if the incidence of, or severity of RC-induced ARF can be attenuated by pre-RC therapy with volume expansion.

TECHNICAL APPROACH: High risk patients are randomly assigned to one of 3 treatment groups for IV fluid therapy. After RC sequential blood and urine tests for renal function are conducted.

PROGRESS DURING FY-82: 4 Patients were studied during FY 82

NUMBER OF SUBJECTS STUDIED:
FY-82: 4
TOTAL (TO DATE): 32
BEFORE COMPLETION OF STUDY: 50

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: Preliminary data analysis suggests that there are no differences in renal outcome in the 3 treatment groups.

PUBLICATIONS OR ABSTRACTS, FY-82:
"Radiocontrast Dye Induced Nephrotoxicity: Relationship With Uric Acid Excretion."
### Study Objective

To determine the incidence of microscopic hematuria in patients on standard Coumadin therapy. To determine etiology of hematuria when it occurs in such patients. To determine if urine urokinase is abnormal in such patients.

### Technical Approach

Patients receiving Coumadin for standard indications and standard dosages will be screened for the presence of microscopic hematuria. Those determined to have hematuria on repeat examination and in the absence of Coumadin over-anticoagulation will be further evaluated for causes of hematuria. Furthermore, urine urokinase activity will be determined to see if this urinary anticoagulant is abnormal in such patients.

No additional patients were added to the protocol during FY-82. Efforts were made to establish a meaningful urine urokinase activity. However, all efforts to obtain a reasonably reliable assay were disappointing. This aspect of the protocol was discontinued, and no further attempts were made to obtain the urokinase assay at this time.

### FY-82

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### Inclusions

Observations would suggest that patients on standard dose Coumadin may have an incidence of hematuria as high as 10% in the absence of any pathological findings of standard urological work-up. Because of the low number of patients evaluated it is possible that our findings will not obtain a high degree of significance. Information with respect to this significance of urinary urokinase could not be determined.

### Publications or Abstracts

FY-82: None. If any information is determined for the publication after final analysis of all data generated, this will be submitted to Clinical Investigation Program for amendment of this final progress report.
STUDY OBJECTIVE: To determine pathologic and clinical criteria for the diagnosis of IgA Nephropathy, the prognosis of patients with the diagnosis and their suitability for military service, the extent of evaluation and the degree of follow-up required for medical support.

TECHNICAL APPROACH: Patients with a biopsy proven diagnosis of IgA Nephropathy will be enrolled in the study. They will have baseline evaluations of their 24 hr. urine, CBC, sedimentation rate, HLA typing, IgA coated lymphocytes, serum IgA levels, and skin biopsy. Follow-up will be every six months with a UA, 24 hr. urine, serum creatinine, serological, and physical. Three new patients enrolled into the study.

CONCLUSIONS: No conclusions can be reached as of yet, but the small number and the short follow-up time. Preliminary analysis of data is planned when data processing money becomes available.

PUBLICATIONS OR ABSTRACTS. FY-82: None
Primary Renal Hematuria: A Prospective Study

Study Objective: To determine the etiology and significance of hematuria, as well as prognosis without a prior history of renal or systemic disease. In this respect, clinical pathological correlations will be made with conclusions drawn concerning appropriate extent of medical evaluation.

Technical Approach: Patients which qualify for the protocol will have renal arteriograms, renal biopsies, skin biopsies, urine urokinase, HLA typing, IgA coated Lymphocytes, lysed red blood cell cultures performed.

Progress During FY-82: Six new patients enrolled in the study.

Number of Subjects Studied:
FY-82: 6
Total (to date): 24
Before Completion of Study: 50

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state): None

Conclusions: No conclusions reached as yet. Preliminary analysis of data is planned when data processing money becomes available.

Publications or Abstracts, FY-82: None
**DATE:** 24 Nov 82  **Work Unit No.:** 1134  **Status:** INTERIM  **Fiscal:** X

**START DATE:** 18 September 1980  **DATE OF COMPLETION:** 24 November 1982

**Key Words:** Catecholamines, Opioid Peptides, Hemodialysis

**Title of Project:** "Catecholamines, Opioid Peptides, and Hemodialysis"

**Principal Investigator(s):** James R. Cain, MD and C. Raymond Lake, MD

**Associate Investigator(s):** L. Harrison Hassell, MD

**Facility:** IRIS  **Dept/Svc:** Nephrology

**Accumulative PEDEase Cost:**  **Accumulative Contract Cost:**  **Accumulative Supply Cost:**

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**Study Objective:** To determine the level of plasma catecholamines and opioid peptides during hemodialysis and ultrafiltration.

**Technical Approach:** Serial samples of blood drawn and assayed for catecholamines and peptides during variations of dialysis and ultrafiltration.

**Progress During FY-82:** None

**Number of Subjects Studied:**

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**Serious/Unexpected Side Effects in Subjects Participating in Project (if any so state):** None

**Conclusions:** No conclusions reached to date. Project will be discontinued because of inability to obtain adequate assays and lack of interest on the part of intended investigators.

**Publications or Abstracts, FY-82:** None
**Study Objective:** To determine whether furosemide therapy favorably affects the outcome of early oliguric renal failure.

**Technical Approach:** Any patient with oliguria for greater than 2 hours, in whom prerenal and postrenal causes have been ruled out, will randomly assigned to receive graded doses of furosemide in sequence, with control pts. receiving saline.

**Progress During FY-82:** None—despite appeal to service and department chiefs, no patients have been referred. High dose lasix should still be considered experimental.

**Number of Subjects Studied:**

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**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**

NONE

**Conclusions:** We believe that the question of furosemide therapy in this situation needs to be answered. The routine use of high dose furosemide should be considered experimental. Indeed, several studies have shown it, under slightly different circumstances, to be ineffective. We would appreciate any help CIS can give us in soliciting support from the various house staff.

**Publications or Abstracts, FY-82:**

NONE
**DATE:** 29 Nov 82  |  **Work Unit No.:** 1137  |  **STATUS:** INTERIM  |  **Final**  
**STARTING DATE:** 01 April 1981  |  **DATE OF COMPLETION:** Undetermined  
**KEY WORDS:** Uremia, Chronic Renal Failure Anemia  
**TITLE OF PROJECT:** "The Role of Cholinergic Mediated Calcium Uptake on Red Blood Cell (RBC) Deformability and Hemolysis in Acute and Chronic Renal Failure"  
**MAJOR INVESTIGATOR(S):** William P. Wiesmann, MAJ, MC  
**ASSOCIATE INVESTIGATOR(S):** Jack Moore, Jr., MAJ, MC  
**FACILITY:** WRAMC/WRIN  |  **DEPT/SCH:** Dept of Medicine/Nephrology Service  
**ACCUMULATIVE PEDCASE COST:**  |  **ACCUMULATIVE CONTRACT COST:**  |  **ACCUMULATIVE SUPPLY COST:**  
**FY-83 PEDCASE:**  |  **CONTRACT COST:**  |  **SUPPLY COST:**  |  **DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT:** FEB 25 1984  
**STUDY OBJECTIVE:** To assess the contribution of Cholinergic receptor activity to the pathogenesis of hemolytic anemia in uremic patients.  
**TECHNICAL APPROACH:** The technical approach is as described in the original protocol to include analysis of deoxynucleosides as indicators of cholinergic activity and their rate of appearance in renal disease and their relation to RBC function.  
**STATUS OF PROJECT DURING FY-82:** The assays for cholinergic receptor activity and cGMP have been refined and more fully developed.  
**NUMBER OF SUBJECTS STUDIED:**  
**FY-82:** None  |  **TOTAL (TO DATE):** 15  |  **BEFORE COMPLETION OF STUDY:** 60  
**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE STATE):** None  
**CONCLUSIONS:** Data is insufficient  

**PUBLICATIONS OR ABSTRACTS FY-82:**  
**Study Objective:** To determine the efficacy and side effects of bolus methylprednisolone versus oral cyclophosphamide in a randomized trial in patients with idiopathic RPGN. Both groups receive oral corticosteroids.

**Technical Approach:** After biopsy proof of crescentic GN, and exclusion of diseases known to cause this disorder, Pts will be randomly assigned to receive either 1 gram iv ctx q month for 6 months, or iv methylprednisolone each month for 6 months. Repeat biopsy will be done.

- **FY-83:** no patients studied- protocol approved 15 Jan 82
- **Number of Subjects Studied:**
  - FY-82: 0
  - Total (to date): 0
  - Before completion of study: 20
- **Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**
  - no serious effects since no patients studied

**Conclusions:** No patients studied- nature of the disease precludes rapid patient recruitment, therefore this is a collaborative protocol with the NIH.

**Publications or Abstracts, FY-82:**

none
TITLE OF PROJECT: Erythrocytosis in Renal Allograft Recipients

PRINCIPAL INVESTIGATOR(s): Anthony R. Henry, MD, MAJ, MC
Jack Moore, Jr. MD, MAJ, MC

ASSOCIATE INVESTIGATOR(s): James A. Hasbargen, MD, CPT, MC
Jimmy A Light, MD, COL, MC

FACILITY: IRAD

DEPT/SVC: Medicine/ Nephrology

ACCUMULATIVE FEDCASE COST: 0
ACCUMULATIVE CONTRACT COST: 0
ACCUMULATIVE SUPPLY COST: 0

FY-83 FEDCASE: 0
CONTRACT COST: 1000.00
SUPPLY COST: 500.00

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: To determine the site of erythropoietin production in patients with elevated hematocrits post renal transplant

TECHNICAL APPROACH: After secondary causes of erythrocytosis, and P. vera, have been eliminated, patients undergo renal arteriography and renal venography with sampling for erythropoietin. Then, allograft biopsies are done, and scored for rejection.

PROGRESS REPORT FY-82: 3 patients were studied— none showed evidence of allograft rejection
2 patients were demonstrated two have erythropoietin emanating from their native kidneys- 1 patient did not have an erythropoietin step-up across any renal bed

NUMBER OF SUBJECTS STUDIED: 3
FY-82: 3 TOTAL (TO DATE): 3 BEFORE COMPLETION OF STUDY: 10

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
no serious or untoward effects have occurred

CONCLUSIONS: In two of three patients, erythropoietin appears to emanate from the native kidney, not from the allograft. Additionally, there appears to be no evidence of chronic rejection. This suggests that the native kidneys are responsible for the erythrocytosis seen after renal transplantation

PUBLICATIONS OR ABSTRACTS. FY-82:
A preliminary abstract was submitted and published in Clinical Research Vol 30 (2) p. 450 A, 1982. A copy of this abstract is attached.

23
**Title of Project:** "The Role of Vitamin D in Calcium and Phosphate Imbalance in Acute Renal Failure"

**Principal Investigator(s):** Clifford Ferguson, MD, MAJ, MC, Fellow Nephrology Svc

**Associate Investigator(s):** Jack Moore, Jr., MD, MAJ, MC, Asst., Chief Nephrology Service

**Facility:** WRAMC

**Study Objective:** To determine the relationship of Vitamin-D on the calcium and phosphate imbalances previously noted to occur in patients with acute renal failure. Patients with acute renal failure will be selected and interval measurements of 125, 2425, and 25 hydroxy Vitamin-D will be made in measurements correlated with serum calcium, parathyroid measurements.

**Number of Subjects Studied:**

FY-82: 0  
Total (to date): 0  
Before completion of study: 1

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None so State):**

NONE

**Conclusions:**

NONE

**Publications or Abstracts, FY-82:**

NONE
### Date: 11/17/82 | Work Unit No.: 1141 | Status: INTERIM X | FINAL

**STARTING DATE:** July 1982  
**DATE OF COMPLETION:** June 1983

**Key Words:** Potassium, Dialysate Glucose

**Title of Project:** "Characterization of Potassium Removal By Hemodialysis"

**Principal Investigator(s):** Daniel A. Nash, Jr., MD, COL, MC, Chief, Nephrology Service

**Associate Investigator(s):**

**Facility:** WRAMC  
**Dept/Svc:** Dept Medicine/Nephrology Service

**Accumulative PEDCASE Cost:**  
**Accumulative Contract Cost:**  
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**Study Objective:** To determine the influence of dialysate glucose concentration on the rate of potassium removal during standard hemodialysis.

**Technical Approach:** Direct measurement of dialysate effluent during standard hemodialysis utilizing either a low or high dialysate glucose concentration.

**Progress During FY-82:** Five patients have been adequately evaluated utilizing high and low glucose dialysate with measured potassium losses.

**Number of Subjects Studied:**

- **FY-82:** 7  
- **Total (to date):** 7  
- **Before Completion of Study:** 20

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):** NONE

**Conclusions:** Initial observations would suggest that in the non-diabetic patients that dialysate glucose concentration has minimal effect on the rate of potassium removal in the standard concentration of dialysate glucose presently used clinically.

**Publications or Abstracts, FY-82:**

Abstract submitted to the Clinical Dialysis and Transplantation Forum and accepted for presentation at their Annual National Meeting. The abstract will be expanded into a formal paper addressing the details and the data that supported the abstract, and will be published in the proceedings of the Clinical Dialysis and Transplantation Forum.
DATE: 3 JAN 83  WORK UNIT NO.: #1217  STATUS: INTERIM x FINAL
STARTING DATE: 15 DEC 1980  DATE OF COMPLETION: N/A

KEY WORDS: N/A

TITLE OF PROJECT: Evaluation of Amiodarone for Therapy of Cardiac Arrhythmias (IND #17858)

PRINCIPAL INVESTIGATOR(s): William J. Oetgen, M.D.
ASSOCIATE INVESTIGATOR(s): James E. Davia, M.D.

FACILITY: HRMC  DEPT/SVC: Cardiology

ACCUMULATIVE PEPCASE COST: -0-  ACCUMULATIVE CONTRACT COST: -0-  ACCUMULATIVE SUPPLY COST: -0-
FY-83 PEP CASE: CONTRACT COST: SUPPLY COST:  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: N/A

STUDY OBJECTIVE:
No Change

TECHNICAL APPROACH:
No Change

PROGRESS DURING FY-82:
N/A

NUMBER OF SUBJECTS STUDIED:
FY-82: 19  TOTAL (TO DATE): 19  BEFORE COMPLETION OF STUDY: N/A

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
See attached memo

CONCLUSIONS:
None as yet

PUBLICATIONS OR ABSTRACTS, FY-82:
None
DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL
HSHL-MC

SUBJECT
Annual Progress Report FY 82, Clinical Investigation Program Work Unit #1217 "Evaluation of Amiodarone for Cardiac Arrhythmias"

THRU: C, CIS

TO:
HQDA
SGRD-HR
Wash., D.C. 20314

FROM: Dir, CCU
LTC OETGEN/rj/63836

DATE: 10 JAN 83

CMT 1

1. In accordance with AR 40-7 the following data are submitted:

a. Specific study - evaluation of amiodarone for the therapy of cardiac arrhythmias - WRAMC Work Unit #1217; IND #17858, Principal Investigator: William J. Oetgen, MD, LTC, MC; James E. Davia, MD, COL, MC.

b. Location: Walter Reed Army Medical Center

c. Number of subjects: 19 (see below)

d. Narrative of progress of patient (see below)

(1) Della Kearney - see 1981 report
(2) Charles Guthrie - see 1981 report
(3) Allan Barnabei - see 1981 report. Patient continues to do well, no side effects reported. Arrhythmias controlled.
(4) William Hoffman - see 1981 report
(5) Henry Robinson - see 1981 report. Patient has been discontinued because of development of pulmonary fibrosis probably secondary to amiodarone therapy.
(6) Curtis Clemmons - see 1981 report. Patient continues to do well, no side effects reported. Arrhythmias controlled.
(7) Linda Hedley - see 1981 report
(8) Hans Heckes - see 1981 report. No symptoms. Amiodarone was discontinued on 9 March 1982 because of the clinical opinion that the arrhythmias were associated with acute myocarditis and that the likelihood of arrhythmias now are small. The patient will be see in follow-up.
(9) Leana Fisher - 539-44-8314. Amiodarone discontinued on 27 September 1981. Ventricular tachycardia recurred February 1982; amiodarone was restarted for two weeks and was discontinued on 10 March 1982 because of photophobia.
(10) William Liverman - see previous report. The patient was discontinued on 25 April 1982 because of fatigue, malaise, nystagmus, poor coordination and failure to control arrhythmias. He is currently doing well on another experimental antiarrhythmic.
(11) James McMahon - 036-07-6469 - 72 year old male with aortic stenosis and ventricular tachycardia. The patient was started on amiodarone on 17 April 1982. He underwent aortic valve replacement on 19 April 1982 and continues to do well on therapy.
(12) Clark Norman - 005-32-1986 - 45 year old male with coronary artery disease and ventricular tachycardia. Following administration of amiodarone, the patient had three episodes of ventricular tachycardia on successive days. He has been discontinued because it was felt that the amiodarone facilitated a ventricular tachycardia.
Annual Progress Report FY 82, Clinical Investigation Program Work Unit #1217 "Evaluation of Amiodarone for Cardiac Arrhythmias"

(13) Charles Collins - 20-218-24-5046. A 46 year old male with coronary artery disease, post myocardial infarction in 1975 with recurrent symptomatic ventricular tachycardia. The patient has been refractory to conventional antiarrhythmics and to flecainide. Amiodarone was begun on 3 November 1982. The patient continues to do well.

(14) Herbert Lawrence  438-50-5752. A 45 year old male with ischemic cardiomyopathy, and ventricular tachycardia. The patient was intolerant to conventional antiarrhythmics. He was started on amiodarone on 16 June 1981 for control of his arrhythmias, however, he had a stroke and died on 1 January 1983. It is not felt to be secondary to amiodarone therapy.

(15) Masters, William - 361-03-0167. A 63 year old white male had a large anteroseptal infarction with refractory ventricular tachycardia. He died of ventricular fibrillation 24 December 1981, five days after addition of amiodarone therapy.

(16) Leonard, Grace - 061-12-1286, a 67 year old female with ventricular tachycardia, post myocardial infarction. Started on Amiodarone 10 November 1982, because of nausea and anorexia, the dose has been decreased to 400mg a day. The patient is doing well.


(19) Brewster, James: A 54 year old white male with coronary artery disease, ventricular tachycardia. Amiodarone started 15 November 1982. The patient is doing well.
DATE: 3 JAN 83  WORK UNIT NO.: #1218  STATUS: INTERIM X FINAL

STARTING DATE: 15 NOV 82  DATE OF COMPLETION: Ongoing

KEY WORDS:

TITLE OF PROJECT: Cardiac Manifestations of Polymyositis

PRINCIPAL INVESTIGATOR(S): William J. Oetgen, MD
ASSOCIATE INVESTIGATOR(S): James E. Davia, MD

FACILITY: WRAMC  DEPT/SVC: Cardiology/WRAMC

ACCUMULATIVE PEDCASE COST: $0.00  ACCUMULATIVE CONTRACT COST: $0.00  ACCUMULATIVE SUPPLY COST: $345.00 (Routine patient care)

FY-83 PEDCASE: $0.00  CONTRACT COST: $0.00  SUPPLY COST: $0.00  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT N/A

STUDY OBJECTIVE:

No Change

TECHNICAL APPROACH:

No Change

PROGRESS DURING FY-82:

No patients were admitted to study in FY-1982

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (TO DATE): 5  BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

None

CONCLUSIONS:

None

PUBLICATIONS OR ABSTRACTS, FY-82:

None
Clinical Investigation Program, work unit #1220, Efficacy of Nifedipine in the Management of Angina Pectoris was initiated by MAJ Fayaz A. Shawl, MC.

The project was terminated as of 30 June 1982 for two reasons:

a) The drug under investigation, nifedipine, was released on the commercial market several months ago.

b) MAJ Shawl became a civilian on 30 June 1982.
STUDY OBJECTIVE: To test clinically an A-V sequential pacemaker and an advanced function pacemaker.

TECHNICAL APPROACH: Implantation and follow-up of pacemaker.


NUMBER OF SUBJECTS STUDIED:
FY-82: _
TOTAL (TO DATE): 5
BEFORE COMPLETION OF STUDY: _

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: The A-V sequential pacemaker has functioned normally.

PUBLICATIONS OR ABSTRACTS, FY-82: None

STARTING DATE: 18 Jan 1982  DATE OF COMPLETION: 15 May 1982

Key Words: Cardiovascular Screening Evaluation in Asymptomatic Males

TITLE OF PROJECT: A Pilot Multi-Stage Cardiovascular Screening Evaluation to Test for Cardiovascular disorders in Asymptomatic Active Duty Army Personnel Over the Age Forty.

PRINCIPAL INVESTIGATOR(s): Jerel M. Zoltick, M.D., John Patton, PhD, James Vogel, PhD

ASSOCIATE INVESTIGATOR(s): James Davia, M.D.; Julius Bedynek, M.D. PhD

FACILITY: WAC/Dunham Health  Dept/Svc: Medicine/ Cardiology

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Study Objective: To determine extent of coronary artery disease in an asymptomatic population.

Technical Approach: To identify coronary artery disease in asymptomatic males over the age of 40, a cardiovascular screen was performed on 249 active duty military volunteers. (continued on the attached sheet.)

Progress During FY-82: Clinical testing performed 15 Jan-4Feb 1982  Nuclear Testing 1 March-30 April 1982  Coronary Angiography 1 May-28 May 1982

Number of Subjects Studied:

FY-82: 249  Total (to date): 249  Before Completion of Study:

Serious/Unexpected Side Effects in Subjects Participating in Project (if any so state):
none

Conclusions:
Using a multitude of testing devices, coronary artery disease was found in 23 individuals. 13 had critical coronary artery disease in which 5 eventually required CABG surgery and 1 requiring angioplasty. There were no complications during any of the testing nor followup coronary angiography or surgery.

Publications or Abstracts, FY-82:
Abstract (enclosed): Cardiovascular Screening Evaluation To Test For Coronary Artery Disease in Asymptomatic Males over the age of Forty.


Note: Exact funding Requirements came from USARIEM, Natick, Mass for the initial study at Carlisle Barracks, Pa. The funding for the Nuclear studies, coronary angiography, and coronary artery bypass (the later two were not part of the study, but were recommended by cardiologists and thoracic surgeons not part of the research team) came from general expenses from the respective departments. The only added expense was overtime, approx $2000, which came from general hospital funds as per General Mendez.
The following coronary risks were evaluated on the population: cardiovascular history and exam, family history, tobacco history, ECG, fasting blood sugar, cholesterol, cholesterol-HDL ratio, triglycerides, percent body fat, calculation of Framingham risks index. All subjects had normal treadmill tests, cardiokymography and determination of maximal oxygen consumption. Patients with an abnormal treadmill test, i.e., greater than 1 mm depression and/or abnormal cardiokymography underwent further testing: fluoroscopy, exercise value study and radionuclide ventriculography. Patients with abnormal results were referred to an outside Army cardiologist (not part of the study) for recommendations for follow-up.
DATE: 9 Nov 82  WORK UNIT NO.: 1224  STATUS: INTERIM XX  F/U:xx
STARTING DATE: January 1982  DATE OF COMPLETION: June 1982

KEY WORDS:

TITLE OF PROJECT: PULMONARY VASOSPASM IN RAYNAUD'S DISEASE AND PROGRESSIVE SYSTEMIC SCLEROSIS: PREVALENCE AND RESPONSE TO NIFEDIPINE.

PRINCIPAL INVESTIGATOR(S): John W. Shuck, MD, MAJ, MC
ASSOCIATE INVESTIGATOR(S): William J. Oetgen, MD, LTC MC

FACILITY: URIE  DEPT/SVC: Cardiology

ACCUMULATIVE FEDCARE COST: 0  ACCUMULATIVE CONTRACT COST: 0  ACCUMULATIVE SUPPLY COST: 0

FY-83 FEDCARE: 0  CONTRACT COST: 0  SUPPLY COST: 0  DATE OF COMMITTEE APPROVAL OF
ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: To evaluate presence of pulmonary hypertension and vasodilator Nifedipine.

TECHNICAL APPROACH: Clinical and non invasive evaluation patients and right heart catheterization.

PROGRESS DURING FY-82: Four patients studied to date, FY-82.

NUMBER OF SUBJECTS STUDIED: (projected)
FY-82: 4  TOTAL (to date): 4  BEFORE COMPLETION OF STUDY: 16 additional

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: Two of four patients found with pulmonary hypertension.
Two of these two patients decreased pulmonary vascular resistance with Nifedipine; the two remaining patients without pulmonary hypertension had no inducible pulmonary hypertension with cold pressor test.

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE
1. Soon after this protocol was approved, the FDA approved streptokinase for intracoronary administration on a non-protocol basis.

2. Several recent papers have been published which clearly document the efficacy of intracoronary streptokinase in the setting of an acute M.I.

3. Publication of the results of this study would be unlikely.

4. No patients have been entered in this study to date.

5. Request that this study be terminated and that HSC (see attached DF) be informed of this termination.

WILLIAM J. OETGEN, MD
LTC, MC
Director, Coronary Care Unit
TITLE OF PROJECT: ELECTRICAL CARDIOVERSION IN PATIENTS TAKING DIGITALIS.

PRINCIPAL INVESTIGATOR(S): John W. Shuck, MD, MAJ MC

ASSOCIATE INVESTIGATOR(S): William J. Oetgen, MD, LTC MC

FACILITY: WRAMC  DEPT/Svc: Cardiology

ACCUMULATIVE PEDCASE Cost:  0  ACCUMULATIVE CONTRACT Cost:  0  ACCUMULATIVE SUPPLY Cost:  0


STUDY OBJECTIVE: Determine the incidence of significant arrhythmias during cardioversion in patients on digitalis.

TECHNICAL APPROACH: Determine blood digitalis levels at time of cardioversion monitoring arrhythmias during and after cardioversion.

PROGRESS DURING FY-82: None

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (to date): 0  BEFORE COMPLETION OF STUDY: 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS:

PUBLICATIONS OR ABSTRACTS, FY-82:
1. Please see attached letter terminating entry into WU #1227 and cancelling protocol.

2. One patient (Grace C. Leonard) was entered into study by emergency approval prior to HSC approval (which has not yet been received). This patient had one episode of ventricular tachycardia on protocol, and the code was broken, indicating that she had been receiving placebo.

3. Because R-818-028 (Open label Flecanide protocol) was closed to admission, the patient was started on Amiodarone (WU #1217) and has done well.

4. Please terminate WU #1227 and inform HSC of this termination.

WILLIAM J. OETGEN, MD
LTC, MC
Director, Coronary Care Unit
1. The sponsoring pharmaceutical company terminated entry of patients into this study, prior to final approval of WRAMC protocol #1228.

2. No patients were admitted to this WRAMC protocol. Several patients were referred from WRAMC to the Washington VA Hospital where they entered this study under a VA protocol.

3. Request that this study be terminated.

WILLIAM J. OETGEN, MD
LTC, MC
Director, Coronary Care Unit
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A
1. Please see attached letter from Riker Laboratories, Inc.

2. Four patients were admitted to this protocol. Two patients had recurrent ventricular tachycardia while taking flecainide, and they were taken off the drug.

Two patients (Leana Fischer and William Liverman) have continued to take the drug and are doing well.

3. As per attached letter, no new patients will be admitted to this drug protocol until enrollment is resumed by drug company.

4. The attached abstract was accepted for poster presentation at the American Federation for Clinical Research meeting in Washington, D.C. April 1983.

5. A full draft of this report will follow.

6. Please confirm that full HSC and SGO approval has been granted for WU #1229; we do not have written documentation of this fact in our file although it has been acknowledged verbally by Mrs. Ervin.

WILLIAM J. OETGEN, MD
LTC, MC
Director, Coronary Care Unit
Study Objective: To remove thyroid hormones from circulating blood stream by anion exchange resin in a patient requiring immediate removal of these hormones.

Technical Approach: Venous catheter is placed in the patient, peripheral blood is perculated through this catheter with a venous to venous anastomosis and a column containing resin is interposed between the venous channels and

Progress During FY-82: It should be mentioned that no patient has been entered on this protocol. However, since thyroid storm is a potentially life threatening circumstance, we would like to have this protocol on record in

Number of Subjects Studied:
FY-82: ___________ TOTAL (to date): ___________ BEFORE COMPLETION OF STUDY: 1-3

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state): None yet.

Conclusions: None yet.

Publications or Abstracts. FY-82: None yet.

Technical Approach (continued): this venous channel will filter out the thyroid hormones.

Progress During FY-82 (continued): a continuing fashion to be available in case such a patient did come in the hospital.
Title of Project: Effect of FSH (Pergonal) on Serum Testosterone in Men with Choriocarcinoma or Other HCG-secreting Tumors

Principal Investigator(s): Robert A. Vigorsky, M.D.

Associate Investigator(s): David Bloom, M.D.

Facility: VAMC

Scope: Rel. Not Available

Accumulative Released Cost: 0

Date of Committee Approval: 0

Final Progress Report: 12/25/1973

Study Objective: To elucidate the mechanisms by which testosterone is inappropriately normal or low in men with HCG-secreting tumors.

Technical Approach: A short HCG test to be performed in men with HCG-secreting tumors before and after seven days of FSH 2225 u/day LHRH.

Progress During FY 82: The protocol has not yet begun because the Pergonal which is to be supplied by the Serum Co. has not yet been delivered.

Number of Subjects Studied:

FY 82: 0

Total (to date): 0

Before Completion of Study: 10

Serious/Unexpected Side Effects in Subjects Participating in Project (if any so state):

Not applicable

Conclusion: The study should begin before the end of the calendar year.

Publications or Abstracts, FY 82: 0

Copy available to DTIC does not permit fully legible reproduction.
**PRINCIPAL INVESTIGATOR(s):** Robert A. Vigersky, M.D.

**ASSOCIATE INVESTIGATOR(s):**

**FACILITY:** VA MedC Cerl

**DATE:** 8 Oct 82

**WORK UNIT NO.:** 1354

**STATUS:** INTERIM

**ACCUMULATIVE MEDCASE COST:** None

**ACCUMULATIVE CONTRACT COST:** None

**ACCUMULATIVE SUPPLY COST:** $4,114.83

**FY-83 MEDCASE:** $0

**CONTRACT COST:** $500

**SUPPLY COST:** $4,000

**DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT:** FEB 25 1987

**STUDY OBJECTIVE:**

See Attached

**TECHNICAL APPROACH:**

See Attached

**PROGRESS DURING FY-82:**

See Attached

**NUMBER OF SUBJECTS STUDIED:**

FY-82: Not Appl. Total (to date): Before completion of study:

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):**

Not Applicable

**CONCLUSIONS:** Purification of TEBG has been accomplished and the present aim is to use this to construct a radioimmunoassay.

**PUBLICATIONS OR ABSTRACTS, FY-82:**

None
Study Objective: To purify, characterize, and develop a radioimmunoassay for TEBG. This binding protein controls availability of sex steroids to breast, skin and prostate.

Technical Approach: Sequential use of concanavalin A in affinity chromatography and preparative polyacrylamide gel electrophoresis. Quantitative analysis of the progress of purification by the use of analytical polyacrylamide gel electrophoresis and dextracharcoal assay measuring total binding capacity.

Progress During FY82: We have used successfully the strategy of sequential purification to purify TEBG to homogeneity. The last few months have been spent by using this strategy to accumulate sufficient quantities of the purified proteins to inject into rabbits for the formation of antibodies and for iodination.
To determine the factors that are associated with altered T3 action and receptor binding in peripheral white cells and obese patients, both in the fed and fasting state.

TECHNICAL APPROACH: A T3 solubilized receptor assay has been developed in which approximately 14-18 mls of blood are obtained in a green top tube, ficoll-hypaque gradient is obtained. The mononuclear cells are obtained in this manner and normal in obesity and probably unchanged in fasting whereas with solubilized preparations they are increased.

Progress During FY-82: T3 receptors are utilizing unsolubilized techniques and probably decreased during fasting whereas with solubilized techniques they are increased.

Number of Subjects Studied:
FY-82: 20
Total (to date): 20
Before Completion of Study: 30

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None

Conclusions: T3 receptors vary depending on the method of analysis, but they probably decrease during fasting and use unsolubilized techniques and increased during fasting using solubilized techniques.

T3 receptors are utilizing unsolubilized techniques and probably decreased during fasting whereas with solubilized preparations they are increased.

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: T3 receptors vary depending on the method of analysis, but they probably decrease during fasting and use unsolubilized techniques and increased during fasting using solubilized techniques.

Technical Approach Cont'd:

extracted with ammonium sulfate and the solubilized preparation of thyroid hormone receptor is used to determine T3 and T4 binding. Utilizing this technique we have studied approximately 20-25 patients in obesity who are obese and fasting and have published and have found that T3 receptors are unchanged during obesity and may increase during fasting. However, an alternative method of performing this technique is now being investigated in our laboratory which would involve isolation of the mononuclear cells on ficoll-hypaque gradient but not to solubilize them but just put the white cells into binding tubes. This assay gives different results than earlier noted and that we are in the process of repeating these studies on a separate group of 20 obese patients. It should be noted that this assay requires approximately 40 mls of blood where as the earlier assay only required 20 mls of blood. In general, our approach will be to perform the assay on days 4 and 5 of the fed period and days 6 and 7 of the fasting period.
TITLE OF PROJECT: Effect of Dietary Phosphate on Serum Levels of Vitamin D Metabolites in Hypoparathyroidism

PRINCIPAL INVESTIGATOR(S): H. Linton Wray, COL, MC
ASSOCIATE INVESTIGATOR(S): Joseph Bruton, Ph.D., Ira Mehlman, LTC, MC

FACILITY: M-HC
DEPT/SVC: Kyle Metabolic Unit

ACUMULATIVE PEDCASE COST: $12,662
ACUMULATIVE CONTRACT COST: $4,553
ACUMULATIVE SUPPLY COST: $85,812

FY-83 PEDCASE: $5,000
CONTRACT COST: $2,000
SUPPLY COST: $21,000

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: See Attached

TECHNICAL APPROACH: See Attached

PROGRESS DURING FY-82:
See Attached

NUMBER OF SUBJECTS STUDIED:
FY-82: 0
TOTAL (TO DATE): 8
BEFORE COMPLETION OF STUDY: 10

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: Deferred

PUBLICATIONS OR ABSTRACTS, FY-82:
Work Unit No: 1368

Study Objective: To determine if serum levels of 25-OH-D (25 hydroxy-vitamin D), 24,2(OH)₂D (24, 25-dihydroxyvitamin D) and 1,25-(OH)₂-D (1,25-dihydroxy vitamin D) are changed by short-term manipulation of dietary phosphate intake in hypoparathyroid patients.

Technical Approach: The 15 day protocol consists of 2 days on normal phosphate intake (1.0 g of phosphorus), 10 days on low phosphate intake (0.5 g of phosphorus) and 3 days on high phosphate intake (1.5 g phosphorus). During the period of phosphate restriction, phosphate-binding antacids will be given. Serum inorganic phosphate, ionized calcium, total calcium, magnesium and creatinine and plasma 25-OH-D, 24, 25-(OH)₂D and 1,25-(OH)₂-D will be determined.

Progress During FY82: A careful analysis of our study of dietary phosphorus restriction in pseudohypoparathyroidism was published (attached). The results of our assay of 1,25-(OH)₂-D in eight patients are being compared to the values obtained in another laboratory on the same sample. When this analysis is completed, the direction of this protocol will be defined (i.e., report the present data or study several more patients).
DATE: 8 Oct 81  | Work Unit No.: 1370  | STATUS: INTERIM
STARTING DATE: 24 May 1977  | DATE OF COMPLETION: 30 Sept 1985

Key Words: Thyroid, Estrogen, Receptors
Title of Project: Sex steroid receptors in the human thyroid gland

Principal Investigator(s): Robert A. Vigersky, M.D.
Associate Investigator(s):

Facility: IRAYC
Dept/Unit: Kyle Metabolic Unit

Accumulative PECASE Cost: None
Accumulative Contract Cost: None
Accumulative Supply Cost: $699.15

FY-83 PECASE: 0  | Contract Cost: $500  | Supply Cost: $1,000
Date of Committee Approval: FEB 25 1983

Study Objective:
See Attached

Technical Approach:
See Attached

Progress During FY-82:
See Attached

Number of Subjects Studied:
FY-82: Total (to date): Before Completion of Study: 10

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): None

Conclusions: Methods have been perfected with other tissues and the plan is to access the patients into the study over the succeeding 2 to 3 years.

Publications or Abstracts, FY-82:
None

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Study Objective: To determine whether the increased incidence of thyroid disease seen in women is due to abnormalities in the receptor for estrogen and/or androgen in their thyroid glands.

Technical Approach: Physio-chemical characterization of the sex steroid receptors to determine if any differences are present which may indicate a pathophysiology of the thyroid disorder.

Progress During FY82: None
TITLE: Evaluation of testosterone reserve in infertile men

PRINCIPAL INVESTIGATOR(S): Allan R. Glass, MD, LTC, MC
ASSOCIATE INVESTIGATOR(S): Robert A. Vigarsky, MD, LTC, MC

STUDY OBJECTIVE: To explore androgen production in various categories of infertile men.

TECHNICAL APPROACH: Measurement of serum hormone levels during tests of pituitary-testicular function.

PROGRESS DURING FY-82: Approximately 6 new patients studied. Data analysis currently being completed for preparation of new abstract and paper.

NUMBER OF SUBJECTS STUDIED:
FY-82: 6
TOTAL (TO DATE): 80
BEFORE COMPLETION OF STUDY: 100

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: Leydig cell impairment is common, but mild, in men with oligospermia. Mechanism of decreased androgens is very complex and heterogeneous.

PUBLICATIONS OR ABSTRACTS: FY-82:
Fertility Sterility 38:92, 1982
Additional abstract in preparation.
TITLE OF PROJECT: Effect of post-weaning undernutrition on reproductive hormones in rats

PRINCIPAL INVESTIGATOR(s): Allan Glass MD LTC MC

ASSOCIATE INVESTIGATOR(s):

FACILITY: WRAMC

DEPT/SVC: Endocrinology-Metabolism

ACCUMULATIVE FEDCARE COST: 0
ACCUMULATIVE CONTRACT COST: $30,272.50
ACCUMULATIVE SUPPLY COST: $28,148.00

FY-82 FEDCARE: CONTRACT COST: $27,000
SUPPLY COST: $15,000

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: To explore the effects of undernutrition in rats on endocrine function.

TECHNICAL APPROACH: Measurement of serum hormones and endocrine function tests in undernourished and control rats.

PROGRESS DURING FY-82: Highly productive. 3 major experiments on testicular function in nephrotic rats completed; also 4 experiments on thyroid function in these rats. Work in these areas ongoing. Also completed study of puberty on low protein diet.

NUMBER OF SUBJECTS STUDIED: N/A

FY-82: TOTAL (TO DATE): BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

NONE

CONCLUSIONS:

Effect of undernutrition on endocrine function is highly complex and does not fit into a single model - further experiments ongoing to clarify this highly interesting area.

PUBLICATIONS OR ABSTRACTS, FY-82:
Papers published: Metabolism 31:538, 1982
Endocrinology 110:1542, 1982

Am J Clin Nutr 36:xviii, 1982
DATE: Oct 82  WORK UNIT NO.: 1380  STATUS: INTERIM X FUND

STARTING DATE: 19 October 1977  DATE OF COMPLETION: 30 September 1982

KEY WORDS: Thyroid Hormone, Cyclic AMP, Cyclic GMP

TITLE OF PROJECT: Effect of Thyroid Status on the Hormonally Induced Cyclic AMP Responses of the Kidney

PRINCIPAL INVESTIGATOR(S): H. Linton Wray, COL, MC

ASSOCIATE INVESTIGATOR(S): Wayman W. Cheatham, MAJ, MC, Gerald S. Kidd, LTC, MC

FACILITY: WRAMC  DEPT/SVC: Kyle Metabolic Unit

ACCUMULATIVE FEDCASE COST: $7,375  ACCUMULATIVE CONTRACT COST: $7,000  ACCUMULATIVE SUPPLY COST: $38,442

FY-83 FEDCASE: $5,000  CONTRACT COST: $1,000  SUPPLY COST: $6,000  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: See Attached

TECHNICAL APPROACH: See Attached

PROGRESS DURING FY-82: See Attached

NUMBER OF SUBJECTS STUDIED:
FY-82: 1  TOTAL (TO DATE): 22  BEFORE COMPLETION OF STUDY: 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: The delayed water excretion in hypothyroid patients and the decreased fractional excretion of phosphate in hyperthyroid patients are not associated with demonstrated changes in renal responses to vasopressin and parathyroid hormone.

Study Objective: To determine if the renal hormone receptor - second messenger systems of two unrelated polypeptide hormones are affected by thyroid hormone. By measuring nephrogenous cyclic AMP during parathyroid and vasopressin infusions in hyper- and hypothyroid patients, it can be determined if thyroid hormone influence the renal cyclic AMP responses to these hormones.

Technical Approach: Hyperthyroid and hypothyroid patients will be admitted to Ward 47 for a 3 day study protocol and will be similarly studied after becoming euthyroid. During each admission the patient will undergo two 3-hour renal clearance procedures, one with PTH infusion and another with vasopressin infusion.

Progress During FY82: The data on the N-terminal PTH levels has been analyzed and compared with the C-terminal PTH levels during PTE infusion in hypothyroid and control subjects. All study results are being used in the writing of four papers and to determine the need for future studies. The PTH infusion data in two patients with borderline hypothyroidism was published in an abstract.
COCLUSIONS: While preliminary studies show that estrogen receptors do exist in the thyroid of both male and female rats which are similar to those of estrogen receptors in other tissues, the impetus to continue these studies has greatly diminished thus the protocol will be terminated.
Study Objective: To study the nature of the estrogen receptor in the rat thyroid so that these studies can be used as a model for examining similar receptors in the human thyroid.

Technical Approach: Determination of the binding capacity, affinity, steroid specificity, net size and charge, sedimentation coefficient, etc. of the receptors obtained from the cytosol of male and female rats of varying age.

Progress During FY82: None
A blood testis barrier seems to prevent methotrexate and cytosine arabinoside from entering the seminiferous tubule. The testis appears to have a metabolic function for adriamycin so that inactive adriamycin enters the seminiferous tubule fluid.

CONCLUSIONS: A blood testis barrier seems to prevent methotrexate and cytosine arabinoside from entering the seminiferous tubule. The testis appears to have a metabolic function for adriamycin so that inactive adriamycin enters the seminiferous tubule fluid.

Study Objective: To quantitate the levels of steroids in the seminiferous tubules and epididymes of the rat and to study the blood testis barrier for the steroids and other substances.

Technical Approach: Glass micropipets are used to obtain fluid from the above sites. The focus of last years work has been the completion of these studies to detect and quantitate the blood testis barrier to the antimetabolite methotrexate and cytosine arabinoside and to begin studies with adriamycin.

Progress During FY82: The studies on methotrexate and cytosine arabinoside have been completed and substantial progress has been made towards performing similar studies with adriamycin. The technical assistance of Dr. Bednarik whose HPLC method for detection of adriamycin and its metabolites has made this work possible. We have found that only the aglycone of adriamycin is able to penetrate the blood testis barrier thus making adriamycin perhaps an ineffective agent for testicular cancers.
TITLE OF PROJECT: The effect of \( \Delta_1 \)-testolactone (teslac) in male infertility

KEY WORDS:

PRINCIPAL INVESTIGATOR(s): Robert A. Vigersky, M.D.

ASSOCIATE INVESTIGATOR(s):

FACILITY: IRAY  

ACCUMULATIVE FEDCASE COST: $2,000  
ACCUMULATIVE CONTRACT COST: $49,707.60  
ACCUMULATIVE SUPPLY COST: $18,255.38

FY-83 FEDCASE: 0  
CONTRACT COST: $1,500  
SUPPLY COST: $3,000  
DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT \( FE \): 2.5.1993

STUDY OBJECTIVE: See Attached

TECHNICAL APPROACH: See Attached

PROGRESS DURING FY-82: See Attached

NUMBER OF SUBJECTS STUDIED:

FY-82: 8  
TOTAL (TO DATE): 25  
BEFORE COMPLETION OF STUDY: 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: Teslac and tamoxifen are an effective combination in improving the sperm counts and fertility in men with idiopathic oligospermia. The mechanism by which this occurs appears to be maximization of the androgen/estrogen ratio.

PUBLICATIONS OR ABSTRACTS, FY-82: None

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Work Unit No: 1386

Study Objective: To improve sperm counts infertility in men with idiopathic oligospermia and to study the mechanism by which these men have diminished sperm counts.

Technical Approach: LRH and HCG tests are performed before and at the completion of treatment with teslac 1 gm per day and tamoxifen 20 ml per day orally. Semen and hormonal parameters are monitored monthly as well as screening for the toxicity of the drugs.

Progress During FY82: An additional 10 men have now been entered into the study. The results of the hormonal parameters comparing the effects of teslac and tamoxifen to teslac alone are currently undergoing analysis. The preliminary analysis of the semen data and pregnancy rate indicates that the addition of tamoxifen has not substantially improved either. There is an improvement in sperm count in approximately 90% of the men and a fertility rate of 35% in the couples.
**DATE:** 21Oct82  |  **Work Unit No.:** 1391  |  **STATUS:** INTERIM X FISCAL

**STARTING DATE:** January 1978  |  **DATE OF COMPLETION:** 1982

**Key Words:** T3 Receptors

**Title of Project:** Regulation of the Initiation of Thyroid Hormone Action

**Principal Investigator(s):** Kenneth D. Burman, LTC, MC

**Associate Investigator(s):** Leonard Wartofsky, COL, MC, Keith Latham, Ph.D., Yvonne Lukes

**Facility:** WRAY  |  **Dept/Svc:**

**Accumulative PEDCASE Cost:** |  **Accumulative Contract Cost:** |  **Accumulative Supply Cost:**

**FY-83 PEDCASE:**  |  **Contract Cost:**  |  **Supply Cost:**  |  **Date of Committee Approval of Annual Progress Report:** FEB 25 1983

**Study Objective:** To investigate the mechanism by which thyroid hormones exert their activity.

**Technical Approach:** To isolate and purify thyroid hormone receptors from membranes and nuclei from liver and to assess their purity by gel electrophoresis and HPLC. These receptors are then purified as well as possible.

**Progress During FY-82:** We, in conjunction with Dr. Latham, have purified the T3 receptor and are presently making antibodies against this protein. It appears the receptor is made of 3 components, a T3 component, a T1 preferring component.

**Number of Subjects Studied:** Animal Study and an acetylase preferring component.

**FY-82:**  |  **Total (to date):**  |  **Before Completion of Study:**

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):** None

**Conclusions:** Receptor has acetylase activity in the amount of 50,000 daltons.

**Publications or Abstracts. FY-82:** Presentation at the American Thyroid Association September 1981 and paper by Burman, Lukes, Latham and Wartofsky, "Ipodate and ANS Block Receptor Binding of T3 in Rat Liver", Hormone and Metabolic Research
STUDY OBJECTIVE: To determine if T3 receptors and TSH receptors decrease during fasting.

TECHNICAL APPROACH: Thyroid glands are isolated from 20-40 rats and a homogenate prepared. The membranes are isolated in 125 and TSH is added. A Scatchard plot is then performed and number of receptor sites determine.

PROGRESS DURING FY-82: We have performed studies on approximately 100 rats during the fed and fasting period and determined that the number of TSH receptors increase, although the serum TSH levels decrease.

NUMBER OF SUBJECTS STUDIED: Rat Study

FY-82: Total (to date): Before Completion of Study:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, STATE): None

CONCLUSIONS: Fasting associated with the number of TSH receptors in the thyroid gland. We are presently investigating the mechanism by which this occurs.

PUBLICATIONS OR ABSTRACTS, FY-82:
**STUDY OBJECTIVE:** To study the mechanism by which glucose enhances T4 to T3 conversion in humans and in rat liver.

**TECHNICAL APPROACH:** Hepatic homogenate is obtained or hepatic cells are isolated. T4 is added to these preparations. The amount of T3 is measured by radioimmunoassay. Various modulations both in vitro and in vivo to rats is administered (below).

**PROGRESS DURING FY-82:** We have shown that sulfhydryl groups in glucose increase enzyme activity and are exploring the mechanism by which this occurs.

**NUMBER OF SUBJECTS STUDIED:** Rat Study

**FY-82:** Total (to date): Before completion of study:

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT:** None

**CONCLUSIONS:** Glucose enhances T4 to T3 conversion.

**PUBLICATIONS OR ABSTRACTS, FY-82:** None Yet.

**Technical Approach (continued):** and determine whether T4 to T3 conversion is altered.
STUDY OBJECTIVE: To determine if somatostatin alters T4 conversion and T3 receptors and to determine if somatostatin receptors are altered by thyroid hormone levels.

TECHNICAL APPROACH: Somatostatin receptors are measured in thyroid and pituitary gland as well as peripheral red cells and white cells. These receptors are measured and kinetics analyzed in various states of thyroid function.

PROGRESS DURING FY-82: We have had difficulty developing an assay to measure somatostatin receptors in thyroid and pituitary glands and we are not sure at the present time whether it is just non-specific binding.

NUMBER OF SUBJECTS STUDIED: rat study

FY-82: Total (to date): Before completion of study:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

None

CONCLUSIONS: None yet.

PUBLICATIONS OR ABSTRACTS, FY-82: None yet.
Study Objective: To determine if T3 receptors in white cells are altered in various metabolic conditions.

Technical Approach: The obtaining and separating of T3 receptors by Ficoll Hypaque isolation and measuring by Scatchard Analysis of T3 and T4 receptors.

Progress During FY-82: We have investigated using solubilized and unsolubilized techniques. T3 receptors in diabetes and critical illness and it appears that both of these states are associated with decreased number of receptors.

Number of Subjects Studied:
FY-82: 20 Total (to date): 30 Before Completion of Study: 50

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None

Conclusions: T3 receptors are decreased in circulating white cells.

DATE: 30 Oct 82  WORK UNIT NO.: 1398  STATUS: INTERIM X Final

STARTING DATE: June 1978  DATE OF COMPLETION: 30 September 1983

KEY WORDS: Hypocalcemia, osteoblasts, cancer

TITLE OF PROJECT: Studies on the pathogenesis of hypocalcemia in tumors associated with osteoblastic metastases

PRINCIPAL INVESTIGATOR(s): H. Linton Wray, COL, MC, Robert C. Smallridge, LTC, MC
ASSOCIATE INVESTIGATOR(s): Marcus Schauf, M.D., John Horton, M.D., Wayman W.

FACILITY: WRAIR  DEPT/SVC: Kyle Metabolic Unit

ACCUMULATIVE PECASE COST: None  ACCUMULATIVE CONTRACT COST: None  ACCUMULATIVE SUPPLY COST: $8919


STUDY OBJECTIVE: See Attached

TECHNICAL APPROACH: See Attached

PROGRESS DURING FY-82: See Attached

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 0  BEFORE COMPLETION OF STUDY: 8

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: Deferred

PUBLICATIONS OR ABSTRACTS, FY-82: None
Work Unit No: 1398

Study Objective: To determine whether the hypocalcemia seen in some patients with osteoblastic metastases is due to hypoparathyroid, secondary hyperparathyroidism with an abnormality in vitamin D metabolism, or an unidentified humoral substance with osteoblastic activity.

Technical Approach: (1) 24 hour urines for calcium, phosphate, creatinine and other substances.
(2) Serum for Ca, P04, Mg, alkaline phosphatase, parathyroid, vitamin D metabolites and other substances.
(3) Calcium and parathormone infusions
(4) Bone marrow biopsigs for tissue culture to test in vitro the cells' ability to incorporate H-proline into collagen.

Progress During FY82: Vitamin D metabolite assays were standardized.
TITLE OF PROJECT: An assessment of parathyroid hormone (PTH) levels in normal subjects and in patients with disorders of calcium metabolism.

PRINCIPAL INVESTIGATOR(s): H. Linton Wray, COL, MC, Robert C. Smallridge, LTC, MC
ASSOCIATE INVESTIGATOR(s): Marcus Schaal, MD, Wayman W. Cheatham, LTC(P), MC

FACILITY: KMC
DEPT/SC: Kyle Metabolic Unit

Study Objective: To establish the ranges of serum PTH levels in normal subjects and patients with metabolic disorders.

Technical Approach: Venipuncture for blood samples to measure PTH levels. The Nichols Institute kit has been utilized in the past. We are now developing an assay using antisera of proven clinical use which has been provided by Dr. L. E. Mallette of Baylor Medical College.

Analysis of data from 75 samples showed the Nichols Institute kit assay to be of only marginal usefulness.

NUMBER OF SUBJECTS STUDIED:
FY-82: 30 TOTAL (TO DATE): 110 BEFORE COMPLETION OF STUDY: 200

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT IF NONE ENTER:
None

CONCLUSIONS:
Deferred

PUBLICATIONS OR ABSTRACTS, FY-82: None

Technical Approach (continued) Dr. L. E. Mallette of Baylor Medical College.
**DATE:** 20 Oct 84  **Work Unit No.:** 1300-78  **Status:** INTERIM X FINAL

**Starting Date:** 1978  **Date of Completion:** 1982

**Key Words:** Triiodothyronine/Immunoassay

**Title of Project:** The Development of a Radioimmunoassay of Triiodothyronines

---

**Principal Investigator(s):** Kenneth D. Burman, LTC, MC

**Associate Investigator(s):**

**Facility:** WPC

**Dept/Svc:**

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<th>Accumulative PE/CASE Cost:</th>
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**FY-83 PE/CASE: Contract Cost: Supply Cost: Date of Committee Approval Of Annual Progress Report:**

**Study Objective:** To utilize rabbits to make antibodies against routine hormones such as T3 and against more difficult sophisticated material such as TSI, T3 receptor, TSH receptor.

**Technical Approach:** Rabbits are injected with conjugate and the hapten and they are bled 3-6 months later.

**Progress During FY-82:** Antibodies are presently being generated against thyroid stimulating immunoglobulin, the protein which causes hyperthyroidism.

**Number of Subjects Studied:** Animal Protocol

**FY-82: None**  **Total (to date): None**  **Before Completion of Study:**

**Serious/UnExpected Side Effects in Subjects Participating in Project (if none so state):** None

**Conclusions:** None yet.

**Publications or Abstracts, FY-82:** None
<table>
<thead>
<tr>
<th>Date</th>
<th>Project Title</th>
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<tr>
<td>8 Oct 82</td>
<td>Studies in the Alterations of Drug Metabolism in Hyperthyroidism</td>
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**Key Words:** Hypothyroidism, Drug Metabolism

**Principal Investigator(s):** Robert A. Vigorsky MD, Kenneth Burman MD, Leonard Wortofsky

**Associate Investigator(s):** Joseph Bruto, Robert Smallridge, Jack O'Brien

**Facility:** HDAC

**Department:** Kyle Metabolic Unit

**Accumulative Pedcase Cost:** None

**Accumulative Contract Cost:** None

**Accumulative Supply Cost:** $179.20

**FY-83 Pedcase:** None

**FY-83 Contract Cost:** None

**FY-83 Supply Cost:** None

**Date of Committee Approval of Annual Progress Report:** FEB 25 1983

**Study Objective:** See Attached

**Technical Approach:** See Attached

**Progress During FY-82:** See Attached

**Number of Subjects Studied:**

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<th>FY-82</th>
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**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):** None

**Conclusions:** Our second year fellow, Anthony Zavadil decided not to pursue the completion of this protocol and thus we are requesting that it be terminated.

**Publications or Abstracts, FY-32:** None
Work Unit No: 1303-78

**Study Objective:** To determine if changes in metabolism of drugs used to treat hypothyroidism are due to the elevated thyroxine levels per se or mediated through beta adrenergic affects.

**Technical Approach:** Methimazole and dexamethasone clearance rate will be determined in ten hyperthyroid subjects before therapy while on beta blockade and when ultimately euthyroid. Cardiovascular status will be monitored by assessment of ejection fraction and cardiac output using radionuclide imaging.

**Progress During FY82:** None
DATE: 8 Oct. 82  WORK UNIT NO.: 1304-78  STATUS: INTERIM X  FIRM.
STARTING DATE: July 1978  DATE OF COMPLETION: 2-3 years

KEY WORDS: Acromegaly/cardiac function

TITLE OF PROJECT: Radionuclide Assessment of Cardiac Function in Patients with Acromegaly

PRINCIPAL INVESTIGATOR(S): Robert C. Smallridge, LTC MC
ASSOCIATE INVESTIGATOR(S): M. Schaaf, M.D.; S. Raible, MAJ MC; D. VanNostrand, LTC MC

FACILITY: IRANC  DEPT/SVC: Medicine/Endocrinology

ACCUMULATIVE PEACE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST: 1,400.00
FY-83 PEACE: CONTRACT COST:  SUPPLY COST: 400.00  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: To determine whether acromegalic patients have impaired left ventricular function.

TECHNICAL APPROACH: Multigated radionuclide angiography (MUGA) scans are done before and after bicycle exercise to evaluate cardiac contractility. This procedure involves injection of 99-technetium to label human red blood cells.

PROGRESS DURING FY-82: The protocol was modified to study subjects before and after exercise, to look for earlier evidence of cardiac dysfunction.

NUMBER OF SUBJECTS STUDIED: Open ended - all new acromegalis
FY-82: 12  TOTAL (TO DATE): 30  BEFORE COMPLETION OF STUDY: patients

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: Data are being analyzed.

PUBLICATIONS OR ABSTRACTS, FY-82: None
l. The following information is provided in response to the reviewer's comments on my APR for Work Unit 1304-78:

   a. The completion date is not open ended. Please note on line two of the APR that a date of completion of 2-3 years is expected. What is open ended is the number of new patients to be studied during that time, since the number of new acromegalics who will be arriving at our institution is unknown. The original protocol submitted and approved in 1978 did not specify an exact number of patients to be examined.

   b. I take umbrage at the reviewer's comment "no conclusion after 4 years!". Had he read our APRs for 1980 and 1981 he would have seen our conclusions based on our experience using rest MUGA scans. Our previous APR also referred to our published abstract (Clin Res 28: 198A, 1980). An addendum to this protocol was submitted to the CIS (see DF of 17 Aug 81, copy attached) and was approved to change our protocol to study patients using exercise MUGA scans. The conclusions in our 1982 APR refer only to the achievements relating to our revised study. We are quite pleased that twelve patients were studied in the past year, and do not find it unreasonable to defer any conclusions until more patients are examined and the data analysis is finalized.

Incl

ROBERT C. SMALLRIDGE, M.D.
LTC, MC
Chief, Dept of Clinical Physiology
WRAIR
1. During the past 2 1/2 years, radionuclide multiple gated acquisition (MUGA) scans have been performed on many of our acromegalic patients under the auspices of a protocol entitled "Radionuclide Assessment of Cardiac Function in Patients with Acromegaly." A preliminary report of the data (Mutter, Smallridge, Oetgen, et al. Clin Res 28:198A, 1980) has suggested that some patients with acromegaly may have impaired left ventricular (LV) function. A more sensitive measure of LV function can be obtained by performing MUGA scans before and after bicycle exercise, a technique only recently available at WRAMC.

2. Request permission to change our protocol to permit performance of exercise MUGA scans. The details of this procedure have been outlined in another protocol (Work Unit #8051) and the appropriate methodologic considerations and radiation dosimetry are attached to this DF. Also attached is a revised Patient Consent Form for this procedure.

ROBERT C. SMALLRIDGE, M.D.
LTC, MC
Chief, Department of Physiology
WRAIR
**DATE:** 8 Oct. 82  
**Work Unit No.:** 1305-78  
**Status:** INTERIM X  
**Final**

**STARTING DATE:** July 1978  
**DATE OF COMPLETION:** Early 1983

**Key Words:** Thyroid hormone/breast cancer  
**Title of Project:** Breast carcinoma and thyroid hormone receptors

**Principal Investigator(s):** Robert C. Smallridge, LTC MC  
**Associate Investigator(s):** Keith Latham, Ph.D.

**Facility:** HMAX  
**Dept/Svc:** Medicine/Endocrinology

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**FY-83 FEDCASE:**  
**Contract Cost:**  
**Supply Cost:** 200.00  
**Date of Committee Approval:** 06/06/1983  
**Annual Progress Report:** FEB 25 1983

**Study Objective:** To determine whether thyroid hormone receptors can be identified in human breast carcinomas

**Technical Approach:** Breast tumor is frozen in liquid nitrogen and processed in a receptor binding assay (Latham et al. J Biol Chem 251:7388, 1976)

**Progress During FY-82:** Reviewers of manuscript have requested additional data.

**Number of Subjects Studied:**

| FY-82 | Total (to date): 5 | Before completion of study: 7 |

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):** None

**Conclusions:** Thyroid hormone receptors exist in breast cancer tissue. Several additional samples will be examined early in FY 83. Based on present results, a prospective study is being designed and will be submitted for review in the near future.

**Publications or Abstracts, FY-82:** None
DATE: 21 Oct 82   WORK UNIT NO.: 1307-78   STATUS: INTERIM X FISCAL

START DATE: 1979   DATE OF COMPLETION: 

KEY WORDS: Fasting/TSH

TITLE OF PROJECT: The Effect of Fasting Upon TSH Response to TRH

PRINCIPAL INVESTIGATOR(s): Kenneth D. Burman, LTC, MC

ASSOCIATE INVESTIGATOR(s): 

FACILITY: WRJIC   DEPT/SVC: 

ACCUMULATIVE PED/Case COST: ACCUMULATIVE CONTRACT COST: ACCUMULATIVE SUPPLY COST: 

FY-83 PED/Case:  CONTRACT COST: SUPPLY COST:  Date of Committee Approval of Annual Progress Report FEB 25 1983

STUDY OBJECTIVE: To determine the mechanism by which TSH secretion to TRH is decreased in fasting.

TECHNICAL APPROACH: Measurement by immunoassay of hormone os TSH basally and after TRH stimulation during fed and fasting periods.

PROGRESS DURING FY-82: Various carbohydrate and fat contents have been fed to patients but they have not been able to stimulate the TSH response back to normal.

NUMBER OF SUBJECTS STUDIED:

FY-82: 15   TOTAL (TO DATE): 20   BEFORE COMPLETION OF STUDY: 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: None

PUBLICATIONS OR ABSTRACTS, FY-82: Forsham Address, Annual Meeting of the Military Society of Endocrinology, June 1982

75
DATE: 21Oct82  WORK UNIT No.: 1300-79  STATUS: INTERIM  x  FINAL
STARTING DATE: 18 Aug 80  DATE OF COMPLETION: 15 Aug 83

Key Words: HPLC/Iodothyronines

TITLE OF PROJECT: Measurement of Iodothyronines by HPLC

Principal Investigator(s): Kenneth D. Butman, LTC, MC

Associate Investigator(s):

Facility: MRAP

Department/Svc:

Accumulative PEDCASE Cost:  Accumulative Contract Cost:  Accumulative Supply Cost:

FY-83 PEDCASE:  Contract Cost:  Supply Cost:  Date of Committee Approval of Annual Progress Report: FEB 2.5 1993

Study Objective: To determine if serum T3 and T4 can be measured by HPLC and to use HPLC as tool to separate proteins that cause autoimmune thyroid disease.

Technical Approach: Either serum extracts or receptor extracts are placed on a column in molecular weight in number of protein peaks determined.

Progress During FY-82: HPLC of T3 and T4 can be performed in serum and has been performed and correlated well with radioimmunoassay values. We are presently performing the receptor purification techniques.

Number of Subjects Studied:

FY-82: 30  Total (to date): 40  Before Completion of Study: 50

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state): None

Conclusions: HPLC can be used to measure T3 and T4 in serum as an alternative method to RIA.

Publications or Abstracts, FY-82:

76

STARTING DATE: 1 Jan 79  DATE OF COMPLETION: 1 Jan 84

KEY WORDS: Metabolic Condition/T3 Receptors

TITLE OF PROJECT: Effect of Various Metabolic Conditions and T3 Receptors on Circulating Cells

PRINCIPAL INVESTIGATOR(s): Kenneth D. Burman, LTC, MC

ASSOCIATE INVESTIGATOR(s):

FACILITY: IRVC

DEPT/SVC:

ACCUMULATIVE FED/STATE COST: 3,000.00
ACCUMULATIVE CONTRACT COST: 5,338.70
ACCUMULATIVE SUPPLY COST: 39,158.92


STUDY OBJECTIVE: To determine if T3 receptors in white cells are altered in various metabolic conditions.

TECHNICAL APPROACH: The obtaining and separating of T3 receptors by Ficoll Hypaque isolation and measuring by Scatchard Analysis of T3 and T4 Receptors.

PROGRESS DURING FY-82: We have investigated using solubilized and unsolubilized techniques. T3 receptors in diabetes and critical illness and it appears that both of these states are associated with decreased number of receptors.

NUMBER OF SUBJECTS STUDIED:
FY-82: 20  TOTAL (TO DATE): 30  BEFORE COMPLETION OF STUDY: 50

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NONE 50 STATE): None

CONCLUSIONS: T3 receptors are decreased in circulating white cells.

PUBLICATIONS OR ABSTRACTS. FY-82: Manuscript submitted to the Journal of Endocrinology and under evaluation.
DATE: 8 Oct 82 | WORK UNIT NO.: 1302-79 | STATUS: INTERIM

STARTING DATE: 24 April 1979 | DATE OF COMPLETION: 24 April 1983

Request to extend this to

Key Words: Hodgkin's Disease, Sterility, Gonadal Damage

Title of Project: Prevention of Gonadal Damage in Men Treated with Combination Chemotherapy for Hodgkin's Disease and Histiocytic Lymphomas

Principal Investigator(s): Robert A. Vigersky, MD, Jeffrey Berenburg, M.D.

Associate Investigator(s):

Facility: NCI

Dept/Svc: Kyle Metabolic Unit, Hematology/Oncology

Accumulative PE/CASE Cost: $3875
Accumulative Contract Cost: $11608
Accumulative Supply Cost: $283.55

FY-83 PE/CASE: 0
Contract Cost: $10,000
Supply Cost: $1,200

Date of Committee Approval Of Annual Progress Report: FEB 25 1983

Study Objective:

See Attached

Technical Approach:

See Attached

Progress During FY-82:

See Attached

Number of Subjects Studied:

FY-82: 21
Total (to date): 35
Before Completion of Study: 50

Serious Unexpected Side Effects in Subjects Participating in Project (if none so state):

None

Conclusions:

Men with Hodgkin's Disease have pretreatment abnormalities of gonadal function suggestive of a combined abnormality of both the pituitary and the testis. This is markedly different than patients with other malignancies suggesting specificity to the abnormality in Hodgkin's Disease.

Study Objective: To prevent the germ cell and Leydig cell damage induced by combination chemotherapy in the treatment of Hodgkin's Disease and Histiocytic Lymphoma.

Technical Approach: Men with the above diagnoses are treated before induction of chemotherapy with testosterone annanthate 200 ml i.m. weekly for at least two weeks in order to suppress their testis. Sperm counts and a short HCG test are performed before and after cessation of chemotherapy (approximately 6 months later).

Progress During FY82: Of the four patients eligible for this protocol during this past fiscal year only 1 patient was entered because their was refusal on the part of two and one had to be treated on an emergency basis. In addition nine patients with Hodgkin's Disease and eleven patients with other malignancies were tested with semen analysis and short HCG tests prior to their therapy.
**Study Objective:** To measure thyroid hormone levels in CSF.

**Technical Approach:** CSF is obtained from routine clinical samples and T3/T4 levels are measured.

**Progress During FY-82:**

**Number of Subjects Studied:**

| FY-82 | 30 | Total (to date): | 30 | Before Completion of Study: | 30 |

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**
None

**Conclusions:** T3, T4, and rT3 exist in CSF.

**Publications or Abstracts, FY-82:** JCEM
DATE: 15 Sept 81  WORK UNIT NO.: 1308-79  STATUS: INTERIM X  FINAL
STARTING DATE: N/A  DATE OF COMPLETION: N/A

KEY WORDS: amenorrhea, stress

TITLE OF PROJECT: Stress-induced amenorrhea in military cadets.

PRINCIPAL INVESTIGATOR(s): Allan Glass MD LTC MC
ASSOCIATE INVESTIGATOR(s): Leigh Wheeler MD LTC MC

FACILITY: WRAXC  DEPT/SVC: Endocrinology-Metabolism

ACCUMULATIVE PEDCASE COST: 0  ACCUMULATIVE CONTRACT COST: 0  ACCUMULATIVE SUPPLY COST: 0
FY-83 PEDCASE: 0  CONTRACT COST: 8,000  SUPPLY COST: 1,500  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FE. 1983

STUDY OBJECTIVE: To explore the mechanism of amenorrhea which develops in female West Point cadets.

TECHNICAL APPROACH: Performance of ovarian function tests in normal and amenorrheic female West Point cadets.

PROGRESS DURING FY-82: Trip to West Point made to recruit volunteers—no cadets volunteered. One co-investigator has left. Will consider another recruiting effort in FY-83.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 0  BEFORE COMPLETION OF STUDY: 15

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS:
Deferred—no data yet

PUBLICATIONS OR ABSTRACTS, FY-82:
None
DATE: 8 Sept 82  WORK UNIT NO.: 1310-79  STATUS: INTERIM  INDEX

STARTING DATE: 3 July 1980  DATE OF COMPLETION: 3 July 1983

KEY WORDS: Hirsuitism, Cimetidine

TITLE OF PROJECT: Pilot investigation for the treatment of hirsuitism with oral cimetidine.

PRINCIPAL INVESTIGATOR(s): Robert A. Vigersky, M.D., Allan R. Glass, M.D., Ira Nehlman, M.D.

ASSOCIATE INVESTIGATOR(s): None

FACILITY: IRAY  DEPT/SVC: Kyle Metabolic Unit

ACCUMULATIVE PREDICT COST: 0  ACCUMULATIVE CONTRACT COST: $22,574  ACCUMULATIVE SUPPLY COST: $9,828.10

FY-83 PREDICT COST: $10,000  SUPPLY COST: $1,200  DATE OF COMMITTEE APPROVAL OR ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: To observe the effects of cimetidine in hirsuit women and determine the mechanism of its effect.

TECHNICAL APPROACH: Women with hirsuitism are studied with a 24 hour ACTH infusion Q 20 min. blood sampling for LH and FSH over 8 hours, and a TRH test before and after 3 months of taking cimetidine 300 ml 5 times daily. Hair growth rate is.

Progress During FY-82: An additional four patients have been studied during this fiscal year. The results of the study on these patients has by and large mirrored that of the previous 10 patients, i.e. approx. 50% decrease in hair growth rate

NUMBER OF SUBJECTS STUDIED:

FY-82: 4  TOTAL (TO DATE): 14  BEFORE COMPLETION OF STUDY: 20

SEVERE/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

None

CONCLUSIONS: Cimetidine is a safe effective treatment of hirsuitism regardless of the ideology. Its effects are reversible and there is a 50% decrease in the rate of hair growth.

PUBLICATIONS OR ABSTRACTS, FY-82: None

Technical Approach (continued): determined before and while on cimetidine by shaving and weighing a measured area of hair growth.

Progress During FY-82 (continued): during the time the drug is administered. A protocol for the administration of cimetidine and spironolactone in topical form has been applied for and is waiting approval by the Office of the Surgeon General.
Title of Project: Assessment of thyroid function and the intrathyroidal biosynthesis of thyroid hormone during the acute and recovery phases of subacute thyroiditis (SAT)

Principal Investigator(s): Robert C. Smallridge, LTC MC
Associate Investigator(s): L. Wortofsky, COL MC; K. Burman, LTC MC; N. Whorton, GS-11

Facility: AJAHG
Dept/Svc: Medicine/Endocrinology

Accumulative PEICASE Cost: $1,000.00
Accumulative Contract Cost: $2,500.00
Accumulative Supply Cost: $1,000.00

Study Objective: To determine the frequency with which an intrathyroidal biosynthetic exists in SAT, what the HLA type of SAT patients is, and whether either test may predict the occurrence of permanent hypothyroidism.

Technical Approach: Blood tests and fluorescent scans are done every 4-6 weeks until the disease resolves. A 3-hour RAU with perchlorate discharge is done at end of study. HLA typing is done in tissue typing lab.

Progress During FY-82: Four new patients enrolled in study and are being followed. HLA typing has been completed on 13 subjects.

Number of Subjects Studied:
FY-82: 4
Total (to date): 16
Before Completion of Study: 4 more

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):
None

Conclusions: Several patients have profound hypothyroidism and biosynthetic defects. HLA typing data are presently being analyzed.

Publications or Abstracts. FY-82:
None
DATE: 8 Oc. 82 | WORK UNIT NO.: 1313-79 | STATUS: INTERIM X FINAL

STARTING DATE: November 1979 | DATE OF COMPLETION: Indefinite

KEY WORDS: TSH/radioimmunoassay

TITLE OF PROJECT: A Radioimmunoassay for Human TSH

PRINCIPAL INVESTIGATOR(s): Robert C. Smallridge, LTC MC

ASSOCIATE INVESTIGATOR(s): R.C. Dimond, COL MC; Nancy E. Whorton, GS-11

FACILITY: KRAMC

DEPT/SVC: Medicine/Metabolism

ACCUMULATIVE FEDCASE COST: | ACCUMULATIVE CONTRACT COST: | ACCUMULATIVE SUPPLY COST:


STUDY OBJECTIVE: Ongoing need for sera from hyperthyroid subjects to maintain RIA support of human research studies

TECHNICAL APPROACH: Venipuncture

PROGRESS DURING FY-82: Sera was obtained from two volunteers.

NUMBER OF SUBJECTS STUDIED:

FY-82: 2 | TOTAL (TO DATE): 8 | BEFORE COMPLETION OF STUDY: 2/year

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

None

CONCLUSIONS:

None expected

PUBLICATIONS OR ABSTRACTS, FY-82:

None
**Study Objective:** To determine if Ipodate administration alters TSH responses.

**Technical Approach:** Ipodate is administered both in the fed and fasting periods and T3/T4 levels are measured.

**Progress During FY-82:** Approximately 25 patients have been studied and it has been determined that Ipodate inhibits inter-thyroidal and inter-pituitary T4/T3 conversion. TSH response to TRH increases with Ipodate administered.

**Number of Subjects Studied:**

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**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**

None

**Conclusions:** Ipodate alters extra-thyroidal conversion, especially occurring in the pituitary and that Ipodate decreases TSH basal levels and response to TRH.

**Publications or Abstracts, FY-82:** Manuscript submitted to the Journal of Clinical Endocrinology

**Progress During FY-82 (continued):** This effect of Ipodate is blocked by T3 administration.
An androgen receptor defect may be present in the male NZB mouse thymus and this may be linked to immunologic problems in this mouse model.
Work Unit No: 1315-80

Study Objective: To determine whether there are receptors for testosterone and estradiol in a mouse thymus gland.

Technical Approach: Normal and NZB mice are used to determine the presence or absence of cytosolic and nuclear receptors in their thymus gland. Thymucitu is homogenized and centrifuged and the cytosol is used in studies of binding of estradiol and dihydrotestosterone.

Progress During FY82: No further progress was made on this protocol during the past fiscal year.
1. We wish to keep this protocol active so that future studies can be expeditiously performed based on current work on techniques being developed at this time.

2. No budget is requested for FY 83.

ROBERT A. VIGERSKY, M.D.
LTC, MC
Assistant Chief, Endocrine-Metabolic Service
DATE: 25Oct82  WORK UNIT No.: 1316-80  STATUS: INTERIM X  FINAL

START DATE:  DATE OF COMPLETION:

Key Words:

Title of Project: T3 Receptors in Human White Cells and Liver

Principal Investigator(s): Kenneth D. Burman, LTC, MC
Associate Investigator(s): David Peura, LTC, MC, Leonard Wartofsky, COL, MC, Keith

Facility: WAMC  Dept/Svc: Dept of Med/Endo/KMJ/DCI/GI

Study Objective: To determine T3 receptor activity in human liver, nuclear preparations, and membrane preparations and to see if they correlate with assessment in white cells.

Technical Approach: Nuclear and membrane receptors are isolated by ultracentrifugation techniques and radioactive labelled T3 or T4 is added to these preparations and the placement curves are performed.

Progress During FY-82: Three patients have been studied and the preliminary results indicate that the binding is similar to that obtained in earlier studied of peripheral white cells.

Number of Subjects Studied:
FY-82: 5  Total (to date): 5  Before Completion of Study: 15

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State): None

Conclusions: T3 receptors exist in the thyroid gland.

Publications or Abstracts, FY-82: None yet.
Study Objective: To determine whether women, usually classified as having idiopathic hirsuitism, have a subtle defect in adrenal steroidogenesis. This would permit the rational treatment of these patients with dexamethasone suppression of the pituitary-adrenal axis.

Technical Approach: Infusion of ACTH over 24 hours with free- and post-ACTH measurement of adrenal steroids in the urine and plasma.

Progress During FY82: No further progress in this protocol has been made.

Before Completion of Study: 10

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State): None

Conclusions: Few if any patients with idiopathic hirsuitism have mild forms of congenital adrenal hyperplasia.

Publications or Abstracts, FY-82: None
**Study Objective:** To determine whether thyroid hormone administration alters the effects of cysts development in the thyroid gland.

**Technical Approach:** Patients are randomly allocated to administration of thyroid hormone or not and sonogram evaluation of whether the thyroid cyst altered.

**Progress During FY-82:** Approximately 10 patients have been included in this study and it appears that thyroid hormone thus far makes no difference in increasing resolution of cysts.

**Number of Subjects Studied:**
- FY-82: 10
- Total (to date): 15
- Before completion of study: 30

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):** None

**Conclusions:** Preliminary studies indicate that thyroid hormone does not make any difference in influencing the resolution of cysts.

**Publications or Abstracts, FY-82:** None yet.
### Study Objective:
To ascertain if during the fasting state in humans cyclic AMP response to glucagon is altered.

### Technical Approach:
Glucagon is infused in doses of 1-3 ng/Kg/min and cyclic AMP is measured as formed by the kidney and excreted in the urine. Cyclic AMP measurement is performed by specific radioimmunoassay and glucagon is noted to increase.

### Progress During FY-82:
Preliminary work has been done to optimize the assays for cyclic AMP and thyronine hormones. No subjects have been studied yet.

### Number of Subjects Studied:
- **FY-82:**
  - **Total (to date):**
  - **Before Completion of Study:** 20

### Publications or Abstracts, FY-82:
None yet.

**Technical Approach:** continued

The question of this study is whether the response is decreased in fasting patients.
TECHNICAL APPROACH: Thyroid glands are isolated from rats that have been rendered diabetic or fasting and compared to those obtained during the fed period.

PROGRESS DURING FY-82: The studies have been completed and have revealed that TSH levels decrease in fasting and diabetes and that the receptor levels increase but this increase is not associated with an elevation of thyroidal cyclicAMP.

Number of Subjects Studied: Animal Study

CONCLUSIONS: TSH regulates its own receptor.

Publications or Abstracts, FY-82: None yet.
TITLE OF PROJECT: The Relationship Between Calcitonin, Nitroprusside and T3.

PRINCIPAL INVESTIGATOR(S): Kenneth D. Burman, LTC, MC
ASSOCIATE INVESTIGATOR(S): Phyllis Kesler

STUDY OBJECTIVE: To determine if calcitonin and nitroprusside inhibit thyroidal conversion of T4 to T3.

TECHNICAL APPROACH: Liver homogenates are isolated and incubated with unlabelled thyroxine and the amount of T3 converted is assessed by radioimmunoassay.

PROGRESS DURING FY-82: Preliminary results indicate that the above compounds, specifically calcitonin and nitroprusside do not inhibit conversion of T4 to T3 as was hypothesized.

NUMBER OF SUBJECTS STUDIED:
FY-82: Total (to date): Before Completion of Study:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

CONCLUSIONS: Nitroprusside and calcitonin do not inhibit T4 to T3 conversion.

PUBLICATIONS OR ABSTRACTS, FY-82:
**Title of Project:** TSH Receptors in Human Tissues

**Principal Investigator(s):** Kenneth D. Burman, LTC, MC

**Associate Investigator(s):** Yvonne Lukes, Harold Feuster, Cyndy Ewel, Thomas Fleischer, Richard Walton, Julian Davis

**Facility:** KRMC

**Dept/Svc:** DCI/KMU/Surgery

**Accumulative FEDCASE Cost:**

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**Study Objective:**
1. To measure TSH receptors in Graves' dx non-toxic goiters and normal tissue.
2. To use TSH receptors to measure thyroid stimulation proteins in Graves' dx, hashimoto's, normals.
3. To measure and compare by fluorescence percent of cells that are specific variants in sera and thyroid glands.

**Technical Approach:**
(a) α, β, he-per, suppressor cell antibodies used to determine by fluorescence percent of cells that are specific variants in sera and thyroid glands.
(b) Radio receptor technique of TSH binding used to determine

**Progress Reporting FY-82:** Basic techniques have been developed and we are presently measuring and have been able to determine beta receptors are present in thyroid membranes and we are presently determining whether purified thyroid stimulating

**Number of Subjects Studied:**
- FY-82: 5
- Total (to date): 10
- Before completion of study: 30-40

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):** None

**Conclusions:**
1. Beta receptors are present in thyroid glands.
2. Probably TSI displaces binding of TSH and beta receptors.
3. Thyroid glands are infiltrated with abnormal amounts of T and B cells in Graves' disease.

**Publications or Abstracts, FY-82:** None
Work Unit #1323-80

Study Objective Cont'd:

α and β cell levels and function in peripheral blood and glands of n/s, Graves', hashimoto's, cancer, and other thyroid diseases, (4) use hybridoma antibodies against Graves' proteins and TSH receptor probes in ascertaining thyroid antigens relationships.

Technical Approach Cont'd:

effect of α and β cells and their interrelationship in normals, Graves', etc., (e) thyroid membranes also to be used for beta and alpha receptor memner, (f) IgG and TSH receptor hybridomas antibodies to be used to ascertain effect of A + E.

Progress During FY-82 Cont'd:

immunoglobulin may displaced these binding cites.
**Title of Project:** Suppression of plasma catecholamines by clonidine

**Principal Investigator(s):** Allan Glass MS LPT MC

**Associate Investigator(s):** Kristen Raines MD CPT MC

**Facility:** IVAE

**Dept/Svc:** Endocrinology-Metabolism

**Study Objective:** To evaluate the clonidine suppression test as a means for diagnosing early pheochromocytoma

**Technical Approach:** Measurement of plasma catecholamines before and after a single dose of clonidine.

**Progress During FY-82:** 4 subjects studied. Original theory validated by publications by other investigators. Revised protocol not started pending final approval from Johns Hopkins.

**Number of Subjects Studied:**
- **FY-82:** 4
- **Total (to date):** 4
- **Before completion of study:** 20

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**
- Moderate hypotension in 2 subjects after clonidine - no sequelae

**Conclusions:** Clonidine does not suppress plasma catecholamines in patients with pheochromocytoma- our results in a very small number of subjects confirm the data recently published by others in several articles. No data on revised version of study.

**Publications or Abstracts, FY-82:**
- None
Study Objective: To determine if acetylase activity in rats is altered by thyroid hormone administration.

Technical Approach: Various doses of T3 and T4 were administered to rats for periods of approximately 2 weeks and liver and white cells are isolated and the amount of acetylase activity determined by radiolabel.

Progress During FY-82: Studies have been completed and the preliminary results indicate that T3 administration does increase thyroid hormone action.

Number of Subjects Studied: Rat Study
FY-82: Total (to date): BEFORE COMPLETION OF STUDY:

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state): None

Conclusions: T3 increases acetylase activity.

**Study Objective:** To determine if eating the same amount of calories per day in different proportions causes difference in fuel substrates.

**Technical Approach:** Patients are randomly allocated to eating a given calorie diet, either with one meal per day or divided into three or four meals per day. In addition, the time of the meal is varied. During each of these periods thyroid function tests and metabolic substrates are measured.

**Publications or Abstracts, FY-82:**

Technical Approach Continued: function tests and metabolic substrates are measured.
CONCLUSIONS: Androgen receptors and detectable and quantifiable in the lymphocytes of normal men but not normal women and estrogen receptors are detectable and quantifiable in the lymphocytes and normal women but not normal men. The quantity and affinity of receptors for the sex steroids appears to be the same in men with a variety of endocrine disorders.

Study Objective: To detect, quantitate and characterize receptors for estrogen and androgens in the lymphocytes in normal men and women and in the lymphocytes of individuals with various endocrine and renal and neoplastic disorders.

Technical Approach: Leukapheresis using either a manual approach or by the automated blood cell separators are used in all patients except those with renal failure. The latter undergoing thoracic drainage will have their lymphocytes obtained from that source. Cytosol made from the lymphocytes is used for binding studies.

Progress During FY82: A modification of the prior technical approach has allowed us to look at both cytoplasmic and nuclear receptors in the same cells. This has a great advantage in detecting the relative location of the receptors which could previously not be determined. Several patients with a variety of disorders have been studied and comparison of results of some of these with the classic fibroblasts receptor assay for androgen has been achieved through the cooperation of Dr. Charles Eil at NNMC.
**Study Objective:** To increase the understanding of the mechanism by which dopamine mediates the inhibitory action on prolactin and the effects of aging on this process.

**Technical Approach:** Spontaneous persistent estrus middle-aged rats are injected with LH and blood withdrawn via a chronic atrial catheter for measurement of prolactin. These will be compared to the response of similar animals pre-treated with ergot alkaloids.

**Progress During FY-82:** All radioimmunoassays established. Several (15) spontaneous persistent estrus rats were chronically cannulated and injected with LH and bled at 3 hour intervals over at least 4 days and the PRL assayed. (continued see below)*

**Number of Subjects Studied:**

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**Conclusions:** Insufficient numbers of animals have been completed to statistically evaluate the results at present. However, initial data from these persistent estrus rats (at least 6 months old) suggest that absolute levels of prolactin as well as the semi-circadian rhythmicity of this hormone is important for the temporary resumption of cycles, the manifestation of pseudopregnancy, or the continuation of persistent estrus as a result of the LH injection.

**Publications or Abstracts, FY-82:**

* LH assays are in progress and additional rats are allowing to "age" for the remainder of the study.
STUDY OBJECTIVE: To increase the understanding of the mechanism by which dopamine controls prolactin secretion from the anterior pituitary and effect of aging on this process.

TECHNICAL APPROACH: Primary cell cultures of rat pituitary cells will be used to study the effect of hormonal status of the animal (state of estrus, persistent estrus or pseudopregnant) on the binding of dopamine agonists and antagonists to the dopamine receptor (from young and old rats). A cell culture facility has been established. Monolayer and superfusion cell culture techniques for pituitary cells have been perfected. (continued below)*

NUMBER OF SUBJECTS STUDIED:

FY-82: 30 Total (to date): 80 Before Completion of Study: 300

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF none so state):

none

CONCLUSIONS: The monolayer and superfusion culture systems show results consistent with established results for standard tests.

*Normal secretion of LH, FSH and prolactin as well as secretagogue response from pituitary cells from young female rats were determined in these systems for comparison with hormonal levels from cells from aging animals.

PUBLICATIONS OR ABSTRACTS. FY-82:
### Title of Project:
Utilization of Hybridoma Antibodies as a Physiologic Probe of Thyroid Hormone and TSH Action

### Principal Investigator(s):
Kenneth D. Burman, LTC, MC

### Associate Investigator(s):

### Technical Approach:
This is a very difficult and complicated procedure involving the fusion and making of hybridoma cells and culturing out these cells and isolating the monoclonal antibodies made.

### Progress During FY-82:
In January 1982 we worked with the WRAIR Hybridoma Laboratory and were successful in making antibodies against TSH receptor. However, technical problems precluded their routine use and we are reperforming these studies as of this date.

### Number of Subjects Studied:

| FY-82 | None |
| Total (to date) | None |
| Before Completion of Study | |

### Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):
None

### Conclusions:
None yet.

### Publications or Abstracts, FY-82:
None
STARTING DATE: 1 August 1981  DATE OF COMPLETION: 1 August 1984

KEY WORDS: TSH/TRH/Metoclopramide/Fasting

TITLE OF PROJECT: The Effect of Metoclopramide on TSH Response to TRH During Fasting

PRINCIPAL INVESTIGATOR(s): Kenneth D. Burman, LTC, MC
ASSOCIATE INVESTIGATOR(s): Robert C. Smallridge, LTC, MC, Phyllis Kesler

FACILITY: HAPC  DEPT/SCI: KM/DCI/Div pf Physio

ACCUMULATIVE FFDCASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST: 1,921.85

FY-83 FFDCASE:  CONTRACT COST:  SUPPLY COST:  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FED 2 6 1983

STUDY OBJECTIVE: To determine if dopamine antagonist will alter prolactin of TSH during fed and fasting periods.

TECHNICAL APPROACH: Patients are placed on a weight maintaining diet for 5 days and fasted for approximately 10 days. Metoclopramide is administered in separate patients during either one of those two periods and compared.

PROGRESS DURING FY-82: Approximately 25 patients were studied and it is concluded that there has been no change in prolactin/TSH response with or without Metoclopramide and that fasting did not alter prolactin levels but does.

NUMBER OF SUBJECTS STUDIED:
FY-82: 30  TOTAL (TO DATE): 30  BEFORE COMPLETION OF STUDY: 35

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: Dopamine does not regulate TSH or prolactin in the fasting period differently than in the fed period.

PUBLICATIONS OR ABSTRACTS, FY-82:

Technical Approach Cont'd:

with placibo administration.

Progress During FY-82 Cont'd:

alter TSH levels as they decrease during fasting.
**DATE:** 15 Sep 82  |  **WORK UNIT NO.:** 1332-82  |  **STATUS:** INTERIM X FINAL  

**START DATE:** N/A  |  **DATE OF COMPLETION:** N/A  

**KEY WORDS:** cancer, adrenal insufficiency  

**TITLE OF PROJECT:** Limitation of Adrenal Reserve in Patients with Malignancy.  

**PRINCIPAL INVESTIGATOR(S):** Allan Glass MD LTC MC  
**ASSOCIATE INVESTIGATOR(S):** Nelson Lum MD CPT MC  
**FACILITY:** NRVC  |  **DEPT/SEC:** Endocrinology-Metabolism  

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**DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT:** FEB 25 1983  

**STUDY OBJECTIVE:** To evaluate the status of adrenal function in patients with cancer.  

**TECHNICAL APPROACH:** Performance of short ACTH tests in patients with malignancy.  

**PROGRESS DURING FY-82:** Approximately 15 patients studied, no data calculated or assays run until more patients are completed.  

**NUMBER OF SUBJECTS STUDIED:**  
| FY-82: 15 | TOTAL (TO DATE): 15 | BEFORE COMPLETION OF STUDY: 100 |

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** None  

**CONCLUSIONS:** Deferred-insufficient data  

**PUBLICATIONS OR ABSTRACTS, FY-82:** None
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<td>Starting Date: 1 October 1981</td>
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<td>Key Words: Thyroid Function, Critical Illness</td>
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<td>Title of Project: Thyroid Function in Critical Illness</td>
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Principal Investigator(s): K.D. Burman, LTC, MC

Associate Investigator(s): Jim Bombenger

Facility: WMC Dept/Svc: Endocrine/Medicine/Pulmonary Endocrine

Accumulative FEDCASE Cost: $680.12

FY-83 FEDCASE: Contract Cost: Supply Cost: Date of Committee Approval of Annual Progress Report: FED 2 1-33

Study Objective: To determine what routine thyroid function test are and to determine what T3 receptors are in the critical ill.

Technical Approach: Radioimmunoassay of serum T3, T4, rT3, TSH, and isolation of white cells and measurement of T3 and T4 receptors in peripheral lymphocytes.

Progress During FY-82: Approximately 15 patients have been entered in this protocol and we have studied the white cell receptors in two different ways utilizing solubilized and nonsolubilized techniques. It appears that patients with

Number of Subjects Studied:

FY-82: 15 Total (to date): 25 Before Completion of Study: 50

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):

None

Conclusions: Radioimmunoassay of serum T3, T4, rT3, TSH, and isolation of white cells and measurement of T3 and T4 receptors in peripheral lymphocytes.


Progress During FY-82 Cont'd:

a critical illness may have a decreased receptor binding and certainly always have decreased serum T3 and most of the time serum T4 and that TSH may not be an accurate measure of the disease process.
Study Objective: To determine incidence of nutritional problems in patients admitted to the Endocrine Service.

Technical Approach: Patients will complete a nutritional risk questionnaire and diet history form. Data will be evaluated by principal investigator to determine nutritional adequacy of diet consumed by patient.

Progress During FY-82: Forms and analysis tool were developed, protocol was written and approved, and data collection was initiated.

Number of Subjects Studied:

FY-82: 4 Total (to date): 4 Before Completion of Study: 50

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):

No serious/unexpected side effects

Conclusions: Not applicable

Publications or Abstracts, FY-82:

None
TITLE OF PROJECT: Effect of Calcium Channel Blockers on Pituitary Testicular Function.

PRINCIPAL INVESTIGATOR(s): Allan Glass MD LTC MC

ASSOCIATE INVESTIGATOR(s): Anthony Zavadil MD LTC MC

FACILITY: WVC DPT/S: Endocrinology-Metabolism

ACCRUATIVE PECASE COST: 0

ACCURATIVE CONTRACT COST: 0

ACCURATIVE SUPPLY COST: 0

FY-83 PECASE: 0

CONTRACT COST: 9,000

SUPPLY COST: 3,500

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25, 1982

STUDY OBJECTIVE: To evaluate the effect of nifedipine on pituitary function

TECHNICAL APPROACH: Performance of pituitary function tests before and after patients are started on nifedipine

PROGRESS DURING FY-82: One patient studied pre-nifedipine. Further progress temporarily halted due to departure of cardiology co-investigator. Will resume in FY 83.

NUMBER OF SUBJECTS STUDIED:
FY-82: 1  TOTAL (TO DATE): 1  BEFORE COMPLETION OF STUDY: N/A

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: Deferred-insufficient data

PUBLICATIONS OR ABSTRACTS, FY-82:
None
Study Objective: To produce a suitable antisera in rabbits which will be used to develop a sensitive RIA procedure for the determination of 1α,25(OH)2D3 in human serum.

Technical Approach: Preparation of a suitable conjugate of 1α,25-(OH)2D3 to which a large protein may be attached. Injection of this protein into rabbits for production of a suitable antisera.

Progress During FY-82: A suitable conjugate to 1α,25(OH)2D3 has been developed. We are now ready to add the protein and follow up with the animal injections.

Number of Subjects Studied:
FY-82: None
Total (to date): None
Before Completion of Study: None

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None

Conclusions: The production of a suitable antisera will give rise to an assay procedure that will be selective for 1α,25(OH)2D3. This procedure will then be employed to study human physiology of vitamin D metabolism in selective pathological cases.
STUDY OBJECTIVE: To determine if patients with or without pretibial myxedema and other evidence of immune complex disease and autoimmune thyroid disease are associated with antibody formation.

TECHNICAL APPROACH: Skin biopsies of affected and non-affected areas.

PROGRESS DURING FY-82: 3 Patients were biopsied without complications. There was no circulating or deposited immunoglobulins.

NUMBER OF SUBJECTS STUDIED:
FY-82: 3 TOTAL (TO DATE): 3 BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

None

CONCLUSIONS: Immune complexes are not present or antibodies are not deposited in tissue in patients with unaffected disease. We are waiting until patients with affected skin to come to enter the protocol and to determine if that will be associated with antibody formation.

PUBLICATIONS OR ABSTRACTS. FY-82:

Study Objective Cont'd.

have immunofluorescently determined antibodies in their skin.
**DATE:** 25 Oct 82  
**WORK UNIT NO.:** 1338-82  
**STATUS:** INTERIM  

**STARTING DATE:** 1982  
**DATE OF COMPLETION:**  

**KEY WORDS:** Receptors/Mononuclear  

**TITLE OF PROJECT:** Membrane receptors in peripheral circulating mononuclear cells  

**PRINCIPAL INVESTIGATOR(S):** Kenneth D. Burman, MD  

**ASSOCIATE INVESTIGATOR(S):**  

**FACILITY:** VAHC  
**DEPT/SVC:**  

**ACCUMULATIVE FEDCASE COST:**  
**ACCUMULATIVE CONTRACT COST:**  
**ACCUMULATIVE SUPPLY COST:**  

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**STUDY OBJECTIVE:** To measure membrane receptors in humans.  

**TECHNICAL APPROACH:** Isolation of white cells  

**PROGRESS DURING FY-82:** Beta receptors measured in 20 patients found to increase with exercise  

**NUMBER OF SUBJECTS STUDIED:**  

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**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** None  

**CONCLUSIONS:** (1) Beta receptors increase in exercise. (2) Beta receptor binding is blocked by circulating immunoglobulin receptors.  

**PUBLICATIONS OR ABSTRACTS, FY-82:**  
Manuscript submitted.
STUDY OBJECTIVE: To investigate the mechanism of immune thyroid disease.

TECHNICAL APPROACH: The technical approach is a complex method involving identification of specific T and B cells in human blood and thyroid as well as developing complex hybridoma technology to develop antibodies against these receptors.

PROGRESS DURING FY-82: We have developed an ELISA assay to measure directly immunoglobulins formed in Graves' disease and have determined that 23 of 25 untreated Graves' patients have abnormal values.

NUMBER OF SUBJECTS STUDIED:
FY-82: 25
TOTAL (TO DATE): 25
BEFORE COMPLETION OF STUDY: 70

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: Because of sensitivity and specificity an ELISA assay is a useful probe when investigating the mechanism by which TSH receptor antibodies initiate disease.

PUBLICATIONS OR ABSTRACTS FY-82:
**Date:** 25 Oct 82  
**Work Unit No.:** 1340-82  
**Status:** Interim  
**Starting Date:** 1982  
**Key Words:** Beta Receptors/Thyroid  
**Title of Project:** Adrenergic Sensitivity and the Thyroid

**Principal Investigator(s):** Kenneth D. Burman, LTC, MC  
**Associate Investigator(s):** Keith Latham  
**FACILITY:** WRAMC  
**DEPT/SVC:**  
**ACCUMULATIVE FEEDCASE COST:**  
**ACCUMULATIVE CONTRACT COST:**  
**ACCUMULATIVE SUPPLY COST:**  
**FY-82 FEEDCASE:**  
**Contract Cost:**  
**Supply Cost:**  
**Date of Committee Approval of Annual Progress Report:** Feb 25 1983

**Study Objective:** To investigate if patients have autoimmuno antibodies against beta receptors when they have thyroid disease.

**Technical Approach:** To Develop a beta receptor assay when is sensitive and specific and to develop methods for screening for antibodies that have been formed against beta receptors.

**Progress During FY-82:** We have developed a sensitive and specific assay for measuring beta receptor antibodies and have determined that they are present in thyroid gland tissue and that hyperthyroid and euthyroid people have the same number of receptors.

**Number of Subjects Studied:**

**FY-82:** 25  
**Total (to date):** 25  
**Before Completion of Study:**

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None so State):**

None

**Conclusions:** Beta receptor antibodies are present in thyroid tissue and are no different in hyperthyroid and euthyroid people.

**Publications or Abstracts, FY-82:**

Beta Receptors Accutely Increase During Short Term Exercise, Burman, Ferguson, Smallridge, Latham, Wartofsky. Submitted for publication NEJM.
1. This DF is in response to your questions concerning the budget of $16,200.00 FY 83 and 84 inclusive for protocol #1340-82 entitled "Adrenergic Sensitivity and the Thyroid Gland", whereas the original request was $3,900.00. The reason for this discrepancy mainly relates to the interesting results which have been found that indicate that immunoglobulins circulate and initiate disease and that these immunoglobulins have characteristics of beta receptors. The enhanced funding mainly relates to previous communications with the Department of Clinical Investigation concerning making a hybridoma against the white cells of patients who make these particular antibodies. This hybridoma protocol has been devised and supported by the Department of Clinical Investigation; the supplies which are necessary for the development of this approved hybridoma contract represent the main difference in the price. We expect that this protocol will continue as it is giving tremendously interesting results. However, the cost in the following years will not be as high and, in fact, we fully expect the cost in FY 84 will probably reach half of that requested.

KENNETH D. BURMAN, M.D.
LTC, MC
Assistant Chief, Kyle Metabolic Unit and Endocrine-Metabolic Service
DATE: 15 NOV  WORK UNIT NO.: 1343-82  STATUS: INTERIM

STARTING DATE: JUNE 1982  DATE OF COMPLETION:

KEY WORDS: Unilamellar phospholipid vesicles  TSH Receptor

TITLE OF PROJECT: Purification of thyrotropin receptor from thyroid gland and incorporation into unilamellar phospholipid vesicles

PRINCIPAL INVESTIGATOR(s): CPT Patricia Young, PhD  MSC
ASSOCIATE INVESTIGATOR(s): LTC Kenneth Burman, MD  Yvonne Lukes

FACILITY: VPC  DEPT/SVC: Clinical Investigation

ACCUMULATIVE FEDCASE COST: 0  ACCUMULATIVE CONTRACT COST: 0  ACCUMULATIVE SUPPLY COST: 3,000

FY-83 FEDCASE: 0  CONTRACT COST: 2,500  SUPPLY COST: 5,000  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: To obtain biologically active purified, TSH receptor and incorporate it into a unilamellar phospholipid vesicle.

TECHNICAL APPROACH: TSH receptor purification will proceed by affinity chromatography. Unilamellar vesicles will be made by interacting the receptor with lecithin and deoxycholate followed by dialysis and column chromatography.

PROGRESS DURING FY-82: We have purified a TSH receptor from bovine thyroid and are ready to proceed with a human TSH receptor purification. We have synthesized unilamellar vesicles not containing the receptor and tested all.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 0  BEFORE COMPLETION OF STUDY: 0

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): No serious /unexpected side effects

CONCLUSIONS:
NONE

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE
Study Objective: To treat hirsuit women by the topical application of the antoandrogens spironolactone or cimetidine

Technical Approach: The drugs will be incorporated into individual creams which will be applied 3 times daily to the affected areas. The hair growth rate will be determined before and after and at the end of a 3 month period. A 3 month trial of cream alone will occur before or after the cream plus drug in a double blind fashion.

Progress During FY-82: This protocol has not yet been approved by the Office of the Surgeon General.

Number of Subjects Studied:
FY-82: 0 Total (to date): 0 Before completion of study: 20

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):
Not applicable

Conclusions: We hope to begin the study before the end of the calendar year.

Publications or Abstracts, FY-82: None
**Study Objective:** To study the clearance of acid from the esophagus utilizing the radiotopic technique. Also, to study the effects of a pharmacologic agent, beahanceol, on esophageal acid clearance.

**Technical Approach:** Specific changes have been made in the design of the protocol in that the patients will be asked to swallow a specific times over a period of time rather than to swallow in an uncontrolled fashion.

**Progress During FY-82:** During FY82, these changes (above) have been made in addition to reprogramming the computer to analyze the data in this fashion. Reprogramming the method of data collection and change in the design of the protocol has taken place over FY-82.

**Number of Subjects Studied:**

| FY-82 | 0 | Total (to date): 7 | Before Completion of Study: 20 |

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**

**Conclusions:** A change in the design of the protocol to allow patients to swallow at specific intervals versus swallowing in an ad lib fashion has been added to the protocol. Reprogramming of the computer to allow for these changes has also been made.

**Publications or Abstracts, FY-82:** NONE
To study the effects of dilation on esophageal emptying.

Technical Approach: To measure esophageal emptying of a solid meal in patients with achalasia. Technetium was tagged to cornflakes and milk and from this an esophageal emptying profile was established. Patients will be studied (see below) with a radioisotopic scan pre and post dilation.

Number of Subjects Studied:
FY-82: 7  Total (to date): 20  Before completion of study: 30

Side effects in subjects participating in project (if none state): NONF

Conclusions: Data concerning this project has been accumulated over the last 5 years and continues to be accumulated.

Publications or Abstracts FY-82: Data in one part of this study has already been published in Digestive Diseases 1981.
The aim of the study is to assess plasma ligandin levels as a potentially more sensitive indicator of hepatocellular damage than currently available tests.

Technical Approach: Patients having liver biopsies at Walter Reed Army Medical Center have blood drawn for clinical assessment. An aliquot is removed and frozen for plasma ligandin content. Plasma ligandin content is determined by a sensitive and quantitative radio-immunoassay technique at Albert Einstein College of Medicine in New York. Correlations between pathological diagnosis, enzyme values and ligandin levels will be made by standard statistical methods.

Technical Approach, continued: sensitive and quantitative radio-immunoassay technique at Albert Einstein College of Medicine in New York. Correlations between pathological diagnosis, enzyme values and ligandin levels will be made by standard statistical methods.
DATE: 28 Sep 82 | York Unit No.: 1419 | Status: INTERIM X | FINAL

STARTING DATE: 23 August 1977 | DATE OF COMPLETION: 5 years

Key Words: Cricopharyngeal Bar

Title of Project: Cricopharyngeal Bar: A Video Manometric Study

Principal Investigator(s): COL Lawrence F. Johnson, M.D.

Associate Investigator(s): James W. Kikendall, M.D., David J. Curtis, M.D.

Facility: WRAMC | DEPT/Svc: Gastroenterology Service

Accumulative PEDCASE Cost: N/A | Accumulative Contract Cost: N/A | Accumulative Supply Cost: N/A

FY-83 PEDCASE: 0 | Contract Cost: 0 | Supply Cost: $500.00 | Date of Committee Approval Or Annual Progress Report: FEB 25 1983

Study Objective: To study the functional significance of a cricopharyngeal bar shown in barium swallow.

Technical Approach: This is a synchronized manometric video tape fluoroscopic study of swallowing disorders of the hypopharyngeal, cricopharyngeal region and upper esophagus.

Progress During FY-82: We are awaiting installation of cable connecting the Gastroenterology Service manometric suite with the split screen capacity at WRAIR, which is the final link necessary prior to beginning this protocol. No subjects entered.

Number of Subjects Studied:

FY-82: 0 | Total (to date): 0 | Before Completion of Study: 20

Serious/Unexpected Side Effects in Subjects Participating in Project: If None so State: NONE

Conclusions: Deferred pending further investigation

Publications or Abstracts, FY-82: NONE
STUDY OBJECTIVE: To study the effects of carbachol and isoproterenol on the effects of the lower esophageal sphincter in cats. To study the effects of these pharmacologic agents on the intracellular enzyme adenyl cyclase.

TECHNICAL APPROACH: Since the inception of this protocol, several animal models have been tried including the cat, opossum, and finally the rabbit. Presently, this protocol would be studied utilizing the rabbit as an animal model.

PROGRESS DURING FY-82: Progress in FY82 has been hampered by a lack of a biochemist to do the enzyme assays of adenyl cyclase.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (to date): 30  BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: Continued problems in finding a biochemist with the ability to do enzyme assays have hampered the feasibility of this project. Presently I am involved in locating an interest in individuals at WRAIR who may be available for these enzyme assays.

PUBLICATIONS OR ABSTRACTS, FY-82:

122
STUDY OBJECTIVE: To evaluate the role of laparoscopy in clinical stage III or IV Hodgkin's patients.

TECHNICAL APPROACH: See PLAN section of original protocol.

PROGRESS DURING FY-82: Again, no patients have been assessed under this protocol since no patients have been referred to the Clinic that have undergone laparotomy following their laparoscopic examination. It is felt that continuation of this protocol should be incurred since an occasional patient will undergo laparotomy following his laparoscopic procedure; and hence, data can be generated. There is no funding involved in this protocol.

NUMBER OF SUBJECTS TO BE STUDIED BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT:

CONCLUSIONS: No conclusions can be drawn at this time since no additional patients have been assessed into the study.

PUBLICATIONS OR ABSTRACTS, FY-82: None
**Date:** 5 Oct 82  
**Work Unit No.:** 1426  
**Status:** INTERIM X Final

**Starting Date:** 1976  
**Date of Completion:**

**Key Words:** Indomethacin, rabbit esophagus, acid induced strictures

**Title of Project:** The Effect of Indomethacin on Experimentally Induced Acid Strictures on the Rabbit Esophagus

**Principal Investigator(s):** LTC Roy K. H. Wong, M.D.

**Associate Investigator(s):** COL Lawrence F. Johnson, M.D.

**Facility:** MCR  
**Dept/Svc:** Gastroenterology Service

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<tr>
<td>$5,000.00</td>
<td>0</td>
<td>$10,000.00</td>
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**FY-83 PEDCASE:** $5,000  
**CONTRACT Cost:** $5,000  
**SUPPLY Cost:** $15,000  
**DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT:** FEB 25 1983

**Study Objective:** To study the effect of indomethacin in preventing acid induced strictures in rabbits

**Technical Approach:** Infuse acid into the rabbit esophagus which in turn produces severe esophagitis. The animals are then followed by esophagoscopy and BA swallows for the development of stricture formation.

**Progress During FY-82:** Presently, with the addition of a new technician, beginning this protocol has been attempted. Animals have been procured and presently 5 animals have been studied manometrically for accession into the study.

**Number of Subjects Studied:**

- **FY-82:** 5  
- **Total (to date):** 40  
- **Before Completion of Study:**

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):** NONE

**Conclusions:** This study will be actively pursued at the beginning of this fiscal year as more technical help has been available.

**Publications or Abstracts, FY-82:**

**124**
DATE: 5 Oct 82 | Work Unit No.: 1427 | Status: Interim X Final

Starting Date: 1977

Achalasia, Esophageal Emptying, Aminophylline, Terbutaline,

Key Words: Nitroglycerine.

Title of Project: Nitroglycerine, Terbutaline, and Aminophylline in the Treatment of Achalasia

Principal Investigator(s): LTC Roy K. H. Wong, M.D.

Associate Investigator(s): COL Lawrence Johnson, M.D.

Facility: I.R.A.V.C. | Dept/Svc: Gastroenterology Service

Accumulative PECASE Cost: 0 | Accumulative Contract Cost: 0 | Accumulative Supply Cost: $500.00

FY-83 PECASE: 0 | Contract Cost: 0 | Supply Cost: $500.00 | Date of Committee Approval Of Annual Progress Report FEB 25 1983

Study Objective: To study the effects of aminophylline, nitroglycerine, and terbutaline in patients with achalasia

Technical Approach: Insertion of a manometry probe into the LES-measure pressures; infuse various pharmacologic agents and determine changes. Patients with significant changes in LESP undergo scanning (nuclear Med.) to quantitate esophageal emptying.

Progress During FY-82: Seven more patients have been entered into the study during FY82

Number of Subjects Studied:

FY-82: 7 | Total (to date): 13 | Before Completion of Study: 20

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): NONE

Conclusions: Study is progressing fairly rapidly and is expected to come to completion sometime in FY 83.

Publications or Abstracts, FY-82: Abstracts have been submitted in FY 80, Gastroenterology

125
**Title of Project:** Colchicine Therapy of Alcoholic Liver Disease  
A Multi-Center Randomized Controlled Study

**Principal Investigator(s):** MAJ Maria H. Siogren M.D.  
**Associate Investigator(s):** LTC David A. Peura, M.D., LTC Michael A. Dunn, M.D.

**Facility:** WRAMC  
**Dept./Sub:** Gastroenterology Service

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<th>SUPPLY COST</th>
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</table>

**Study Objective:** To evaluate the role of colchicine and its ability to prevent progression to cirrhosis in alcoholic liver disease, or affect already established alcoholic cirrhosis.

**Technical Approach:** Please refer to original protocol

**Progress During FY-82:** In this multi-national ongoing protocol, Emory University School of Medicine has randomized to date 20 patients with alcoholic hepatitis, the Center for Advanced Studies of the National Polytechnical Institute, (see below) Number of Projects Studied:

<table>
<thead>
<tr>
<th>FY-82</th>
<th>TOTAL (to date): 45</th>
<th>BEFORE COMPLETION OF STUDY: 150 (estimated)</th>
</tr>
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Side Effects Noted: No adverse effects have been noted. The data have not been analyzed yet.

**Publications in Abstracts, FY-82:** None

**Progress During FY-82, continued:** Mexico City has entered 19 patients and the Yale-New Haven University School of Medicine, 6 patients with alcoholic liver disease at WRAMC, 1 patient is currently being evaluated into the study.
TITLE OF PROJECT: A Double-blind Clinical Trial of the Efficacy of Indomethacin in Promoting Healing and Decreasing Symptoms of Peptic Esophagitis.

STUDY OBJECTIVE: To investigate the efficacy of Indomethacin in promoting healing and decreasing symptoms of peptic esophagitis.

TECHNICAL APPROACH: Patients with endoscopic and symptomatic reflux esophagitis will be entered into a double-blind cross over study of the effect of Indomethacin upon healing of their signs and symptoms of esophagitis.

PROGRESS DURING FY-82: No patients at WRAMC were entered into this protocol because no patients who met the strict criteria for entry were identified.

CONCLUSIONS: This study is terminated because of the difficulty in finding suitable patients due to the strict entry criteria of the protocol and because several of the investigators including the principal investigator have moved to different assignments or terminated their associations with the Military.

FY 83 - Funding requirements: none are anticipated.
**Title of Project:** Lithium, Nicotinic Acid, Aminophylline, and 16,16-Dimethyl PGE$_2$ as Cytoprotective Agents

**Principal Investigator(s):** LTC Roy K. H. Wong, M.D.

**Associate Investigator(s):** COL Lawrence F. Johnson, M.D.

**Facility:** WRAIC

**Department/Service:** Gastroenterology Service

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<td>$15,000</td>
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**Date of Committee Approval of Annual Progress Report:** FEB 25 1983

**Study Objective:** To study the effects of lithium chloride, nicotinic acid, and aminophylline, PGE$_2$ on gastric cytoprotection in the rat.

**Technical Approach:** Rats are pretreated with the pharmacologic agent, then 95% ETOH is instilled into their stomachs. The animals are then sacrificed and graded for degree of hemorrhagic gastritis.

**Progress During FY-82:** The second revision of manuscript on some of the cytoprotective data is in progress. Presently, additional work to fulfill requirements for publication are under way.

**Number of Subjects Studied:**

<table>
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<th>FY-82: 1,000 animals (rats)</th>
<th>Total (to date):</th>
<th>Before Completion of Study:</th>
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**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):**

**Conclusions:** Progress in this particular protocol has been substantial, and further work concerning cytoprotection is presently being investigated.

**Publications or Abstracts, FY-82:** Abstract submitted FY81 Work being reviewed for publication in a major gastroenterology journal.
STUDY OBJECTIVE: To develop a model of gastroesophageal reflux by infusing acid into the esophagus of a rabbit. Studies involving histology, thymidine uptake as measured quantitatively & qualitatively (radioautography) are underway.

TECHNICAL APPROACH: Rabbits are anesthetized, a catheter is then placed in the esophagus while HCl is infused for 30 mins. after varying periods of infusion, the animals are sacrificed - gross and histologic sections made and grade for the degree of change.

PROGRESS DURING FY-82: ~40 animals have been studied in FY 82 utilizing various groups of animals with different acid concentrations studying both the thymidine uptake and measuring the uptake via data emission and also (see below).

NUMBER OF SUBJECTS STUDIED:
FY-82: 40  TOTAL (TO DATE): 40  BEFORE COMPLETION OF STUDY: 80

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: Significant progress in terms of improving the experimental model has been made in FY82. One gastroenterology fellow has studied 40 animals using various concentrations of acid in the rabbit esophagus and has utilized techniques to extract the radioactive DNA and also to initiate the assembly of methods for radioautography. In addition, we are at present setting up these procedures in the laboratory with the addition of new technical help.

PUBLICATIONS OR ABSTRACTS, FY-82: NONE

Progress During FY-82 continued: studying samples for radioautography.
We are still collecting data over the last two years, and have collected 22 patients who have been typed with HLA determinations being made.
Title of Project: Magnetic Field Hemostasis, A Proposed Treatment for Upper Gastrointestinal Hemorrhage

Principal Investigator(s): MAJ Mark T. Birns, M.D.

Associate Investigator(s): COL Lawrence F. Johnson, M.D.

Facility: Gastroenterology Service

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Study Objective: To determine whether a ferromagnetic paste applied to a bleeding lesion in a magnetic field will stop upper gastrointestinal bleeding effectively.

Technical Approach: Application of this ferromagnetic paste via a catheter passed at the time of initial diagnostic panendoscopy for upper GI bleeding. An external electromagnet will provide the magnetic field.

Status During FY-82: Awaiting electromagnet arrival at present; MICU #4761, Bed 1 had three phase power and water supply/drain work order finished. Supplies and chemicals all on order; many received.

Number of Subjects Studied:

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<th>FY-82</th>
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<td>0</td>
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<td>75</td>
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Serious Unrelated Side Effects in Subjects Participating in Project (if any do exist):

N/A

Conclusions: N/A

Publications or Abstracts, FY-82: N/A
STUDY OBJECTIVE: To study the cause of diarrhea in patients on chemotherapy.

TECHNICAL APPROACH: Modification as per addendum (approved 29 June 1982) to allow for three, rather than one, post-chemotherapy breath tests.

PROGRESS DURING FY-82: The GI Clinic has only recently overcome technical problems with the gas chromatograph used in performing the breath tests; since we have been routinely employing the test (3 mos), we have not enrolled any patients.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0 Total (to date): 0 BEFORE COMPLETION OF STUDY: 15

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (If none so state):

CONCLUSIONS:

PUBLICATIONS OR ABSTRACTS: FY-82:
STUDY OBJECTIVE: To define sleep related events associated with acid esophageal reflux, a risk factor for pulmonary aspiration.

TECHNICAL APPROACH: Subjects with gastroesophageal reflux and symptoms suggestive of aspiration or with pulmonary illness thought to be associated with reflux, such as asthma, pulmonary fibrosis, interstitial pneumonitis will be studied during sleep.

PROGRESS DURING FY-82: One subject meeting the entry criteria (see below) was studied during the Fiscal Year 1982. Although the tracing obtained was technically adequate, it became apparent that computer support (see below) was necessary for adequate interpretation of the study. We are currently engaged in approaching various leads to determine the most efficacious means for obtaining such computer support.
**DATE:** 20 Sep 82  | **WORK UNIT NO.:** #1439  | **STATUS:** INTERIM_ x_ FINAL

**STARTING DATE:** 1 Jan 82  | **DATE OF COMPLETION:** Estimate: 1 Jun 83

**KEY WORDS:** Chronic Dyspepsia Reflux Biofeedback

**TITLE OF PROJECT:** Chronic dyspepsia and excessive daytime gastroesophageal reflux: manometric mechanisms associated with reflux and therapy with biofeedback

**PRINCIPAL INVESTIGATOR(S):** Steven S Shay LTC

**ASSOCIATE INVESTIGATOR(S):** Lawrence F. Johnson COL

**FACILITY:** WAC  | **DEPT/SCI:** Gastroenterology

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**FY-82:** FEDCASE: CONTRACT COST: SUPPLY COST: DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT

**FEB 25 1983**

**STUDY OBJECTIVE:** Effectiveness of behavioral therapy, biofeedback, on control of symptoms of heartburn and dyspepsia

**TECHNICAL APPROACH:** Step 1: Documentation reflux by standard tests; Step 2: defining mechanism of reflux as associated with a Valsalva's maneuver; Step 3: biofeedback against abdominal wall, + Tension; Step 4: Confirm efficacy or failure with repeat 24 hour pH monitoring.

**PROGRESS DURING FY-82:** 3 patients accrued in addition to 4 other patients previously studied and treated at LAMC

**NUMBER OF SUBJECTS TO BE STUDIED BEFORE COMPLETION OF STUDY:** 10

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT:** None

**CONCLUSIONS:** Preliminary: Five of seven patients have improved with documentation of same by 24 hour pH monitoring.

**PUBLICATIONS OR ABSTRACTS, FY-82:** None

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ANNUAL PROGRESS REPORT FY-82 VOLUME 1(U) WALTER REED
ARMY MEDICAL CENTER WASHINGTON DC T M BOEHM 1982

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NL
**Title of Project:** Does the Size of an Esophageal Stricture Determine Medical Treatment and Clinical Course?

**Principal Investigator(s):** David A. Peura, LTC, MC

**Associate Investigator(s):** Stephen R. Freeman, MAJ, MC; L. F. Johnson, COL, MC

**Facility:** IRBMC

**Department/Section:** GI

**Study Objective:**
1. Do x-ray and endoscopic measurements of esophageal stricture correlate?
2. Does stricture size dictate type & size of dilator initially chosen?
3. Is stricture dilation endpoint important in recurrence rate of symptoms?

**Technical Approach:** See Plan section of original protocol

**Progress During FY-82:** Twelve (12) patients have been entered into the protocol during the first year of its being in place. Of these 12, eight patients had a benign peptic stricture, four malignant.

**Number of Subjects Studied:**

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<th>FY-82</th>
<th>Total (to date)</th>
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**Publications or Abstracts, FY-82:** None
**Title of Project:** Study of the Prevalence of Fibromyalgia in Patients with Irritable Bowel Syndrome

**Principal Investigator(s):** Richard J Raskin, MAJ, MC, James W. Kinendall, MAJ, MC

**Associate Investigator(s):** Lawrence F. Johnson, COL, MC, Richard C. Welton, MAJ, MC

**Facility:** WRAMC

**Department/Section:** Gastroenterology/Rheumatology

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**Study Objective:** To determine the prevalence of symptoms of fibromyalgia in patients with irritable bowel syndrome.

**Technical Approach:** Patients with irritable bowel syndrome and control subjects will be identified among patients attending the Gastroenterology Service. These subjects will be referred to the Rheumatology Service for evaluation for symptoms or signs of fibromyalgia.

**Progress During FY-82:** It is our plan to assign to Staff Sergeant Carol MacDonald the task of identifying the irritable bowel subjects and control subjects using a flow diagram and referring the subjects to Dr. Raskin in the Rheumatology Clinic. This should markedly speed the process of identifying these patients.

**Publications or Abstracts, FY-82:** None
DATE: 20 Sep 82   WORK UNIT NO.: 1442   STATUS: INTERIM

STARTING DATE: 1 Jun 82   DATE OF COMPLETION: Est. 1 Jun 83

KEY WORDS: Domperidone, Severe gastroesophageal reflux

TITLE OF PROJECT: The Effect of Domperidone on Gastroesophageal Reflux in Symptomatic Patients with Severe Esophagitis

PRINCIPAL INVESTIGATOR(S): Steven S. Shay LTC

ASSOCIATE INVESTIGATOR(S): Lawrence F. Johnson COL

FACILITY: WRAMC   DEPT/SVC: Gastroenterology

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<th>ACCUMULATIVE SUPPLY COST: $100.00</th>
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STUDY OBJECTIVE: Objective improvement on measured reflux by 24 hour pH monitoring in patients treated with domperidone

TECHNICAL APPROACH: Step 1: Clinically indicate tests for reflux show severe esophagitis; Step 2: Treatment with Domperidone for 24 hours during pH monitoring

PROGRESS DURING FY-82: First 6 patients accrued and studies completed

NUMBER OF SUBJECTS TO BE STUDIED BEFORE COMPLETION OF STUDY: 15

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT:

CONCLUSIONS: None to date

PUBLICATIONS OR ABSTRACTS, FY-82: None
To determine whether hydrocortisone is beneficial as compared to placebo in the treatment of severe acute pancreatitis.

Technical Approach: Patients with severe acute pancreatitis will be randomized to hydrocortisone or to placebo at entry into the study. The clinical course of patients on hydrocortisone treatment will be compared (see below).

Progress During FY-82 continued: from the various institutions will be held in October 1982 to work out final plans for the conduct of this protocol.
To attempt to develop a simple, reliable technique to obtain intestinal biopsies, and compare the new method with standard techniques.

**TECHNICAL APPROACH:** The patient swallows a weighted string which intestinal peristaltic activity advances to the jejunum; a modified Rubin tube biopsy capsule is advanced over the string, allowing rapid advancement to the biopsy site.

**PROGRESS DURING FY-82:** One patient was admitted to the study and randomized to receive the standard biopsy technique.

**NUMBER OF SUBJECTS STUDIED:**

- **FY-82:** 1
- **TOTAL (to date):** 1
- **BEFORE COMPLETION OF STUDY:** 15

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** None

**CONCLUSIONS:** It is hoped that 4 or 5 more patients may be accrued before the above completion date, such that if early results show benefit to the new technique, an extension of the trial completion date may be requested.
Key Words:
Title of Project: 99mTc - Tagged Chicken Liver Gastric Emptying in Patients with GER

Principal Investigator(s): Steven S. Shay, LTC, MC
Associate Investigator(s): Lawrence F. Johnson, COL, MC

Facility: WAVE X  Dept/Svc: GI

Accumulative PECASE Cost: None  Accumulative Contract Cost: $300.00  Accumulative Supply Cost: None

FY-83 PECASE: Contract Cost: $300.00  Supply Cost: None  Date of Committee Approval of Annual Progress Report: FEB 25 1982

Study Objective: Contribution of abnormal gastric emptying to GER.

Technical Approach: Patients classified into different GER groups. Then gastric emptying assessed.

Progress During FY-82: Studied 20 subjects including 6 controls

Number of Subjects Studied:
FY-82: 20  Total (to date):  Before Completion of Study:

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None

Conclusions:
Incomplete

Publications or Abstracts, FY-82:

140
Study Objective: Study the effects of Diltazem on improving esophageal emptying.

Technical Approach: Diltazem given post operative, followed by manometric evaluation of sphincter pressure and esophageal emptying studies.

Progress During FY-82: One patient placed into protocol.

Number of Subjects Studied:
FY-82: 1
Total (to date): 1
Before Completion of Study: 9

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):
None

Conclusions:
None, await further studies.

Publications or Abstracts, FY-82:
None
DATE: 2/16/83  WORK UNIT NO.: 1448  STATUS: INTERIM

STARTING DATE: 24 August 1982  DATE OF COMPLETION: August 1983

KEY WORDS: Rats, Salicylic Acid, Gastric Mucosa

TITLE OF PROJECT: EFFECTS OF SEMI-CHRONIC INGESTION OF LITHIUM AND ACETYLSALICYCLIC ACID ON RAT GASTRIC MUCOSA AND KIDNEY.

PRINCIPAL INVESTIGATOR(s): Roy Wong, MD
ASSOCIATE INVESTIGATOR(s): L.F. Johnson, MD

FACILITY: H/RVC  DEPT/SVC: GI Clinic

ACUMULATIVE PREDIAGE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST: $7,125

FY-83 PREDIAGE:  CONTRACT COST:  SUPPLY COST: $7,125

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: Study GI blood loss via GI tract -- after injury with ASA and protection with lithium chloride.

TECHNICAL APPROACH: Lithium chloride given sub cutaneously, ASA given post operative; labelled RBC's -- given IV -- measuring of fecal blood loss measured in stool.

PROGRESS DURING FY-82: Approximately 40 animals studied with many improvement in methodology, injecting rat tails with ASA.

NUMBER OF SUBJECTS STUDIED:
FY-82: 40  TOTAL (TO DATE): 40  BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NONE SO STATE):

CONCLUSIONS:
None thus far.

PUBLICATIONS OR ABSTRACTS, FY-82:
None
Cranial Radiation Therapy

**Title of Protocol:** CALGB # 7411 - Combination In Childhood Acute Lymphocytic Leukemia

**Principal Investigator(s):** Raymond B. Weiss, M.D.

**Facility:** NCI

**Department/Section:** Hematology/Oncology - Dept. Of Med.

**Study Description:**

**Protocol:** Standard risk patients were randomized to Reg. 1: Vincristine, Prednisone, Methotrexate, intratheca L-Asparaginase. Reg 2: Same plus cranial radiation. High risk patients were randomized to regimen II, regimen III identical to Reg. II but includes Daunorubicin.

Protocol has been closed to patient entry since 1976. 4 patients remain in complete remission, 2 are lost to follow-up.

**Protocol Status:**

- **Total Subjects:** 6
- **Number of Survival:** 4
- **Reason of Survival:** Closed

Continuous or severe side effects in subjects remaining in protocol have not been observed. NONE

**Reference:** See 78-79 Annual Report.
Combination Chemotherapy Hodgkin's Disease

CALGB # 7451 - Combination Chemotherapy and Radiotherapy of Stage III Hodgkin's Disease (Phase III)

Raymond B. Weiss, M.D.

Facility: WRAMC

Hematology/Oncology - Dept. of Med.

Study Objective:
Primary: To determine if combination induction chemotherapy followed by single agent maintenance therapy produces different frequencies of response, duration of remission and survival from treatment with a total over.

Technique:
Vincristine 1.4 mg/m² IV X 2 - Procarbazine 100 mg/m² day 1-14 DC
Prednisone 10 mg/m² po/day 1-14 - RT. Total nodal irradiation ten our of 15 achieved

FY-82

1. WRAMC no longer enters patients on this study.
2. CALGB entered 14 patients from 4/28 to 10-22-80

Number of Subjects Studied:
FY-82 0

Total (to date) 14

Before completion of study: None

Surveys, restricted side effects in subjects participating in Phase I, II, III, or IV trials:
None at WRAMC. See below.

Chemotherapy followed by Radiotherapy had EM toxicity in initially symptomologic patient. Combined RT + CT had higher CR note but the same survival note.

Publications or Abstracts FY-82:

None

Study Objective, continued: nodal irradiation, total nodal RT followed by Chemo and Chemo followed by nodal RT.
STUDY OBJECTIVE: To determine whether Mer Immunotherapy increases remission rate or duration. To compare monthly maintenance with ARA-C and 6mg with alternating cycles of ARA-C and 6mg with vincristine, prednisone, and ARA-C.

TECHNICAL APPROACH: Standard induction with ARA-C 100mg/m²/day by continuous infusion for 10 days + daunomycin 45mg/m²/day push on day 1-2-3 three maintenance arms, 2 including Mer 1 of three with cycling VCR and dexamethasone.

PROGRESS DURING FY-82: The 5 patients at risk for relapse in 1981-82 continue in complete remission.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (to date): 35  BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): Patient with bone marrow transplant (off study) has radiation induced Cypermethrin disease.

CONCLUSIONS: Immunotherapy of no-benefit with Acute Leukemia maintenance therapy. Discontinued after 3 years does not increase risk for relapse. Study closed for 3 years.

To compare combination chemotherapy with or without immunotherapy in treatment of stage II Breast Cancer.

CMF VS CMFVP VS CMFVP with MER

Of the 42 patients entered on this study, 6 have been lost to follow-up, 7 have died, 29 are alive and being followed. Of these 29, 25 patients have no evidence of disease, and 4 patients are alive with disease.
DATE: 10-2-82 | WORK UNIT NO.: 1537 | STATUS: INTERIM X. FIELD:
STARTING DATE: 8/5/75 | DATE OF COMPLETION: Closed

Key Words: Combination Chemotherapy Hodgkin's disease Stage IV.

TITLE OF PROJECT: CALGB: + 7551 - Combination Chemotherapy and Radiotherapy for Stage IV and III B Hodgkin's Disease.

PRINCIPAL INVESTIGATOR(S): Raymond B. Weiss, M.D.
ASSOCIATE INVESTIGATOR(S):

FACILITY: WRAMC | DEPT/SVC: Hematology/Oncology-Dept. of Med.

ACCUMULATIVE FEDCASE COST: 00 | ACCUMULATIVE CONTRACT COST: 00 | ACCUMULATIVE SUPPLY COST: 00

FY-83 FEDCASE: 00 | CONTRACT COST: 00 | SUPPLY COST: 00 | DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25, 1983

STUDY OBJECTIVE: Compare remission frequency and duration of 12 vs. 6 monthly cycles of CVPP. To determine if radiotherapy augments efficacy of 6 monthly cycles of CVPP to determine if radiotherapy given between cycles 3 and 4 is preferable to that given after 6 cycles.

TECHNICAL APPROACH: Chemotherapy CCNM: 75mg/m2 plo. day 1, Vinblastine 4mg/m2 iv/day 1 and 8, Proabial 100mg/m2 po/day 1-14. Prednisone 41mg/m2 pedal 1-14, Radiotherapy 2500 rads.

PROGRESS DURING FY-82: In 4 weeks to gross disease. WRAMC no longer enters patients on this study. CALGB entered 22 patients from 4/28/80 to 10/22/80. Prior to its closure we entered 7 pts. 5/7 are in CR.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0 | TOTAL (TO DATE): 22 | BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

NONE

CONCLUSIONS: There is no difference among the treatment arms in patients of relapse on CR. Younger patients (age less than 50) have significantly higher CR rate than older patients (age 50).

PUBLICATIONS OR ABSTRACTS. FY-82:

NONE
DATE: 10/21/82

DATE: 7/28/75

KEY WORDS: Hodgkin's Disease

TITLE OF PROJECT: CALGB: #7552 - Combination Chemotherapy and Immunotherapy for previously treated Stage III B & IV Hodgkin's Disease.

PRINCIPAL INVESTIGATOR(S): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(S):

FACILITY: MARYC


ACCUmulative PEdCASE COST: 00

ACCUmulative CONTRACT COST: 00

ACCUmulative SUPPLY COST: 00

FY-83 PEdCASE: 00

CONTRACT COST: 00

SUPPLY COST: 00

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25, 1983

STUDY OBJECTIVE: Comparison of two different four drug regimens. To explore alternating regimens. Examine contribution of MER.

TECHNICAL APPROACH: Reference appended schema. Note addendum #5 (discontinued Mainsengne Chlorambucil. Addendum #6 discontinued. MER (Methanal extractable residue BCG) CCNU, USN, P-50, PRED, (IMER) compared to BLEO, ADRIA, VCN, Streo-

PROGRESS DURING FY-82: (tozoticin (IMER) exam of contribution of MER.

Study closed 12/81. 6 pt's. were entered prior to this date, 5/6 are in CR. 1/6 developed AML & expired.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0

TOTAL (TO DATE): 6

BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

one patient developed AML

CONCLUSIONS: preliminary analysis of dat indicates no significant difference between chemotherapy regimens.

PUBLICATIONS OR ABSTRACTS. FY-82:

NONE
TITLE OF PROJECT: CALGB: 7541: Combination Chemotherapy and Immunotherapy in previously untreated Stage III and IV Neuroblastoma. A phase III study.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(s):

FACILITY: WRAMC


ACCUMULATIVE PREDICTION COST: 00

ACCUMULATIVE CONTRACT COST: 00

ACCUMULATIVE SUPPLY COST: 00

FY-83 PREDICTION: CONTRACT COST: 00

SUPPLY COST: 00

DATE OF COMMITTEE APPROVAL: ANNUAL PROGRESS REPORT FEB 25 1982

STUDY OBJECTIVE: To evaluate the role of triple drugs, Vincristine, Cyclophosphamide, and Adriamycin combination chemotherapy in previously untreated Stage III and IV Neuroblastoma. To evaluate the immunological responsiveness of SEE TECHNICAL APPROACH: Vincristine, Cyclophosphamide, Adriamycin, Vs. Vincristine below) Cyclophosphamide, Adriamycin, And MER.

PROGRESS DURING FY-82: Only 5 patients have been entered 1 was ineligible because of prior therapy and therefore taken off study. the remaining 4 have all expired. This is now closed. WRAMC has no patients being followed.

NUMBER OF SUBJECTS STUDIED: This is a finalized report.

FY-82: 0 TOTAL (to date): BEFORE COMPLETION OF STUDY: CLOSED

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: WRAMC data too sparse to formulate any conclusions. CALGB data shows both regimens to be effective.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE

Study Objective continued: Patients with disseminated neuroblastoma, both prior to and during therapy.
DATE: 10-2-82 | WORK UNIT NO.: 1543 | STATUS: INTERIM X FINISH:
STARTING DATE: 1/2/0/81 | DATE OF COMPLETION: 10/79

KEY WORDS: Lymphocytic Lymphoma

TITLE OF PROJECT: CALGB: # 7651 - Combination Chemotherapy for Stages III and IV Lymphocytic Lymphoma in Adults with or without Radiotherapy

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D.
ASSOCIATE INVESTIGATOR(s):


ACCUMULATIVE FEDCASE COST: | ACCUMULATIVE CONTRACT COST: | ACCUMULATIVE SUPPLY COST: | 00 | 00 | 00

FY-83 FEDCASE: | CONTRACT COST: | SUPPLY COST: | Date of Committee Approval: 02/15/1983

STUDY OBJECTIVE: To confirm improvement in remission induction of Lymphocytic Lymphoma by adding Streptinigrinto Vincristine, and Prednisone. To examine the role of radiotherapy to bulky disease sites in improving remission rate.

TECHNICAL APPROACH: Chemotherapy to all patients. Strept and duration tenrigin 1mg/m2/ wk/ po/ x 6 wks., Vincristine 1mg/m2/iv/6 wks., Prednisone 40/mg/m2/po/x6 wks. Maintenance RT. 3000-4000 rads to bulky sites followed by (CVP).

PROGRESS DURING FY-82: [Cytoxan, Vincristine, and Prednisone or only CVB.

15 patients entered at WRAMC in the past. This protocol has been closed to patient entry since 10/79. 3 pt's. are alive with no evidence of disease. 9 have expired.

NUMBER OF SUBJECTS STUDIED: 2 are lost to follow-up. I has been taken off study due to logistical problems.

FY-82: O TOTAL (TO DATE): 15 BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
Radiation Hepatitis

CONCLUSIONS: At WRAMC, there is a 50% remission response rate with this therapy. Radiation therapy has proven to be of significant toxicity following chemotherapy.

PUBLICATIONS OR ABSTRACTS, FY-82:
None
DATE: 10/2/82  Work Unit No.: 1546  Status: INTERIM x FINAL
STARTING DATE: 7/27/77  DATE OF COMPLETION: 7/16/79

KEY WORDS: Acute Lymphocytic Leukemia

TITLE OF PROJECT: CALGB: # 7611 - Treatment of Acute Lymphocytic Leukemia in patients under twenty.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D.
ASSOCIATE INVESTIGATOR(s):


ACCRUAMATIVE PECASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST:


STUDY OBJECTIVE: To test whether High dose Methotrexate can substitute for cranial irradiation in decreasing the incidence of CNS Leukemia. To test whether consolidation with high dose Metho can increase the duration of PR.

TECHNICAL APPROACH: Induction with Vincristine and prednisone and L-Asparaginase 50% of patients will receive high dose Methotrexate 500mg/m2x3 during consolidation.

PROGRESS DURING FY-82: No patients entered in 1982. Of the 4 patients one remains in CR and is followed at WRAMC, two patients in CR were transferred to other institutions and are lost to follow-up; the last patient voluntarily stopped.

NUMBER OF SUBJECTS STUDIED: 1 maintenance therapy and went off study and subsequently relapse.

FY-82: 0  TOTAL (TO DATE): 7  BEFORE COMPLETION OF STUDY CLOSED

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
Severe Mucositis 20 to MTX

CONCLUSIONS: Protocol is closed. Conclusions same as 79-80-81.

**TITLE OF PROJECT:** CALGB # 7682 - Combination Chemotherapy or Chemotherapy Immunotherapy For Metastatic Recurrent Or Inoperable Carcinoma of The Breast.

**PRINCIPAL INVESTIGATOR(S):** Raymond B. Weiss, M.D.

**FACILITY:** WRAMC  
**Dept/Sub: Hematology/Oncology - Dept. Of Med.**

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**FY-83 INCIDENCE: 0**  
**CONTRACT COST: 0**  
**SUPPLY COST: 0**  
**DATE OF COMMITTEE APPROVAL: FEB 25 1983**

**STUDY OBJECTIVE:** To compare remission induction frequencies and duration of the CAF, CMF, and CA-FVP combinations.

**TECHNICAL APPROACH:** Prior to randomization for treatment, patients will be stratified according to dominance of metastatic area, visceral Osseous soft tissue which develop either less than one year from diagnosis or equal to or greater than one year from diagnosis.

Of the 12 patients entered at WRAMC, one still remains free of disease, 1 is progressing, 10 have expired.

**NUMBER OF SUBJECTS STUDIED:**
- **FY-82:** 2  
- **Total (to date):** 12  
- **Before completion of study:** 20

**SERIOUS/EXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** NONE

**CONCLUSIONS:** CAF and CA-FVP prolonged survival as compared to CMF. No difference between CAF and CA-FVP arms. MER was of no benefit.

**PUBLICATIONS OR ABSTRACTS, FY-82:**
Aisner, J. et al., Frequency and Duration of Response with Combination Chemotherapy for metastatic Breast Cancer.

**Study Objective:** To determine whether adding Daunomycin to Vincristine and Prednisone followed by Asparaginase will improve frequency and duration of response. To determine if MER will increase remission duration.

**Technical Approach:** Regimen 1: Vincristine 2mg/IV week x 3, Prednisone 40mg/m2 po x 21 day, L-Asparaginase 500mg/m2 IV daily x 3 orally (day 1-3).

**Progress During FY-82:** Study Closed Sept. 1980. Total of 16 patients entered, 12 have expired, 2 pts. lost ot follow-up and 2 pts. remain in complete remission.

**Number of Subjects Studied:**
- FY-82: 0
- Total (to date): 16
- Before Completion of Study: Closed

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):**

**Conclusions:** MER immunotherapy of no benefit. Addition of Antracycline (Daunomycin) superior to Vincristine/Prednisone alone. Median survival 16 months with optimum therapy.

**Publications or Abstracts, FY-82:**

NONE
Study Objective: To determine if chemotherapy with Chlorambucil in indolent CLL will prolong survival.

Technical Approach: After initial 12 week observation period patients are randomized to Regimen I: No treatment, or regimen II: intermittent Chlorambucil 0.5 mg/kg po q 28 days.

Progress During FY-82: To date 3 patients have been entered. 1 patient experienced progressive disease and was removed from protocol. The remaining 2 patients are alive with stable disease.

Number of Subjects Studied:
FY-82: 0  Total (to date): 3  Before Completion of Study: unk

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
NONE

Conclusions: Too early for this indolent disease.

Publications or Abstracts FY-82:
NONE
Primary treatment of Multiple Myeloma

PROJECT: CALGB + 7761 - A study to determine the effectiveness of single vs. multiple alkylating agents with or without Adriamycin in the primary treatment of multiple Myeloma.

STUDY OBJECTIVE: To test the hypothesis that three alkylating agents given sequentially produce, higher frequency of good response and longer duration of disease control, than the same alkylating agents given in comb., that addition of Adriamycin to a comb. of three alkylating agents, increases the frequency of good response and the duration of disease control are the same after treatment with intravenous L-Pam as after treatment with triple alkylating agent.

PROGRESS DURING FY-82: 15 patients put on study before its closure 12-30-L-Pam as alkylating agent.

2 complete remission, 5 partial remission, 4 stable disease, 4 deaths.

Number of subjects studied:
FY-82: 0
Total (to date): 15
Before completion of study: 15

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): None

Conclusions: None at this time.

Technical Approach: Combination alkylating agents plus prednisone; L-Pam, Cyclophosphamide, and BCNU versus sequential alkylating agents plus prednisone; L-Pam, Cyclophosphamide, and BCNU versus combination alkylating agents plus Adriamycin plus prednisone: L-Pam, Cyclophosphamide and BCNU versus L-Pam plus prednisone: L-Pam
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<td>Date of Committee Approval of Annual Progress Report: Feb 25, 1983</td>
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**Study Objective:** To determine whether CCV/AV plus radiotherapy (RT) gives a greater remission rate and duration than MACC plus RT. To determine if MER immunostimulation increases response and duration of response.

**Technical Approach:**
- Regimen 1: Methotrexate 30mg/m²/IV plus Adriamycin 35mg/m² VS. CCNU 30mg/m² plus Cyclophosphamide 4000 mg/m²/IV.
- Regimen 2: Cyclophosphamide 700mg/m²/IV plus Vincristine 1.0mg/m² with Adriamycin 50mg/m²/IV day 21 with vincristine 1.0mg/m²/IV. Both regimens include 4500 rads to primary lung tumor plus 3000 rads.

*WRAMC has entered 21 pts., whole brain.*

*To date, this protocol was closed 6/81. All pts. at this point have expired except 2, who are alive and show no evidence of disease and 2 who are lost to follow-up and assumed expired due to their advanced disease.*

**Progress During FY-82:**
- Total (to date): 21
- Before completion of study, cases in state.

**Serious/Unexpected Side Effects in Subjects Participating in Project (none so state):**

**Conclusions:** Complete remissions can be attained but in a very small percentage of cases. MER does not seem to be of value.

**Publications or Abstracts: FY-82:**

None
TITLE OF PROJECT: CALGB # 7782 - Small Cell Carcinoma of Lung in Extensive Disease.

STUDY OBJECTIVE: To determine whether alternating chemotherapy increases response rate or duration. To determine whether radiotherapy to primary tumor increases response rate over MACC chemotherapy alone.

TECHNICAL APPROACH: MACC + RT. Versus MACC - versus COACC.

PROGRESS DURING FY-82: To date a total of 14 patients have been entered. Of those 14 patients all have expired. This protocol is now closed. No further patients are being followed. This is a finalized report.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0
TOTAL (TO DATE): 14
BEFORE COMPLETION OF STUDY: CLOSED

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NONE SO STATE):

None

CONCLUSIONS: Survival of these patients is not significantly different with different treatment arms. Survival of this group is less than 1%.

PUBLICATIONS O: ABSTRACTS, FY-82:

None
TITLE OF PROJECT: CALGB 7751 - The comparative Effectiveness of Combination Chemotherapy alone and with Radiation therapy by involved field or extended field, in poor risk patients with Stage I or II Hodgkin’s disease.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(s):

FACILITY: WRAMC


ACCUMULATIVE PREDIAGNOSIS COST: 00
ACCUMULATIVE CONTRACT COST: 00
ACCUMULATIVE SUPPLY COST: 00

FY-83 PREDIAGNOSIS: 00
CONTRACT COST: 00
SUPPLY COST: 00

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1982

STUDY OBJECTIVE: To determine if combination chemotherapy alone is as effective and less toxic than chemotherapy plus involved field radiation.

TECHNICAL APPROACH: Regimen 1: Involved field RT followed by six cycles of CCNU, Vinblastine, Procarbazine, and Prednisone. Regimen II: Chemotherapy alone. Addendum 11 (2/12/72) deleted the arm with extended field RT.

PROGRESS DURING FY-82: WRAMC does not enter patients on this study, CALGB entered 13 patients in 1980.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0
TOTAL (to date): 13
BEFORE COMPLETION OF STUDY: None at WRAMC

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: Too early for analysis.

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE
DATE: 10/2/82  WORK UNIT NO.: 1564  STATUS: INTERIM  FINAL: X

STARTING DATE: 7/78  DATE OF COMPLETION: 7/81

KEY WORDS: Chlorozotocin

TITLE OF PROJECT: CALGB # : 7772 - Phase II study for Chlorozotocin

PRINCIPAL INVESTIGATOR(S): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(S):

FACILITY: WRAMC  DEPT/SVC: Hematology/Oncology - Dept. of Med.

ACCUMULATIVE PEDCASE COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 PEDCASE: 00  CONTRACT COST: 00  SUPPLY COST: 00  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25, 1983

STUDY OBJECTIVE: Yield information concerning the efficacy and safety of this agent. See evidence of activity in tumors of interest to the group.

TECHNICAL APPROACH: Chlorozotocin 120mg/m2 q 6 weeks. The drug will be administered in bolus over a period of 30 seconds via the tubing of a running intravenous infusion. The failure to achieve a response following the administration of three doses of the drug, will be cause for removal from the study.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (TO DATE): 18  BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

NONE

CONCLUSIONS: To date, none of the patients responded. All have expired. CALGB experience is that Chlorozotocin is questionable.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE

Progress during FY-82: Protocol closed 7/81. WRAMC entered 3 patients this year. Of the total number of patients entered to date (18) all have expired. One patient was transferred to Ft. Benning and is now lost to follow-up and assumed expired also due to extent of his disease. This is a finalized report.
Study Objective: Test whether the addition of continuous Bleomycin infusions increase the response rate and duration of cyclophosphamide, Vincristine, Adriamycin and Prednisone (Chop) test contribution of high dose Methotrexate to above program, in particular whether it is prophylactic against central nervous system relapse.

Progress During FY-82: 5 pt.'s have been entered at WRAMC all three are doing well, either in good partial remission or complete remission.

Number of Subjects Studied:
FY-82: 2 Total (to date): 5 Before Completion of Study: 320

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State): NONE

Conclusions: To date, it appears that treatment with CHOP and Bleomycin is adequate therapy in that remission are induced and toxicity is minimal.

Publications or Abstracts, FY-82:
NONE

Technical Approach: Treatment categories expanded to other poor histology lymphomas. CHOP therapy with and without continuous Bleomycin infusion X 3 courses with randomization followed by standard or high dose Methotrexate.
Date: 10/2/82

Title of Project: CALGB #7971 - Phase II Study of M-AMSA, (NSC 249992) Treatment for Melanoma, Ovarian Carcinoma, Breast Carcinoma, Hypernephroma, and Hepatoma.

Principal Investigator(s): Raymond B. Weiss, M.D.

Associate Investigator(s):

Facility: WRAMC

Department/Specialty: Hematology/Oncology - Dept. Of Med.

Study Objective: This phase II study of M-AMSA is designed to determine the complete or partial response frequencies of the various selected tumors to treatment with M-AMSA. Determine the duration of response in those patients responding.

Technical Approach: Continue M-AMSA administration. The first treatment dose will be 10mg/m2. Every three weeks, the dose will be increased by 20mg over the previous dose until 160mg/m2 is reached, or until myelosuppression is encountered.

Progress During FY-82: 8 patients have been entered at WRAMC, 4 patients have expired, 2 are alive with disease and 2 are lost to follow-up.

Number of Subjects Studied:
FY-82: 0  Total (to date): 8  Before Completion of Study: 162

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):

Conclusions: Data is sparse. 50% of patient entries have died within a year of RX.

Publications or Abstracts, FY-82:

None
Study Objective: 1. To determine whether intensified induction therapy with a two drug combination, excluding 5-Fluorouracil will prolong the time to disease progression when compared to therapy with FAM in the treatment of (see Technical Approach: Regimen A-5-Fluorouracil, Mitomycin-C and Adriamycin Regimen B-Mitomycin-C and Adriamycin).

Progress During FY-82: Four patients have been entered on this study. All 4 have expired. This protocol has been closed; this is a finalized report.

Number of Subjects Studied:
FY-82: 0 Total (to date): 4 Before Completion of Study: Closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):

Two patients developed transient significant Pancytopenias.

Conclusions: No conclusions too few patients entered.

Publications or Abstracts, FY-82:

NONE

Study Objective: (continued) patients, 2. to determine partial and complete response frequency, and the duration of response and survival of patients with measurable, locally advanced, or with metastatic gastric cancer, when the patients are treated with MA versus FAM and both regimens are followed by a common maintenance therapy employing Mitomycin-C and 5-Fluorouracil.
DATE: 10-2-82  WORK UNIT No.: 1575  STATUS: INTERIM  X FINISH

STARTING DATE: 1979  DATE OF COMPLETION:

KEY WORDS: Reaeatory Hodgkin Disease

TITLE OF PROJECT: CALGB: 7972 - A phase II trial of AMSA for refractory Hodgkin disease diffuse Histiocytic Lymphoma and diffuse poorly differentiated Lymphocytic Lymphoma.

PRINCIPAL INVESTIGATOR(s): Raymond R. Weiss, M.D.

ASSOCIATE INVESTIGATOR(s):

FACILITY: NIAH  DEPT/SVCS: Hematology/Oncology - Dept. of Med.

ACCUMULATIVE PECASE COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 PECASE: 00  CONTRACT COST: 00  SUPPLY COST: 00  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25, 1982

STUDY OBJECTIVE: This phase II study of M-AMSA is designed to determine the complete or partial response frequency of refractory Hodgkin disease, diffuse Histiocytic Lymphoma and poorly differentiated Lymphocytic Lymphoma.

TECHNICAL APPROACH: The first treatment dose will be 120mg/m2, although patients previously heavily treated with chemotherapy, especially nitro-soureas or radiotherapy or with Hepatic dysfunction, may start at 60mg/m2 until 160mg/m2 is reached, or until myelosuppression is encountered.

Only 8 patients have been entered. 4 patients have expired, 3 are alive with disease and 1 is lost to follow-up. Study is closed to patient entry on 12/81.

Number of Subjects Studied:

FY-82: 0  TOTAL (TO DATE): 8  BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE NO STATE):

Increased interval or STT were seen in 2 Pts.

CONCLUSIONS: Data too sparse for formulation of any conclusions.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
DATE: 10/2/82  WORK UNIT NO.: 1576  STATUS: INTERIM  FINA. X

STARTING DATE: 8/79  DATE OF COMPLETION: 9/81

KEY WORDS: Pancreatic Cancer

TITLE OF PROJECT: CALGB:# 7982 - Chemotherapy of Advanced Pancreatic Cancer.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(s):


ACCUMULATIVE PEDCASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST: 0.00 0.00 0.00

FY-83 PEDCASE: 0  CONTRACT COST: 0.00  SUPPLY COST: 0.00  DATE OF COMMITTEE APPROVAL OR ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: Establish activity of SMF vs. 5-Fam against advanced Pancreatic Cancer.

TECHNICAL APPROACH: Reg. 1 5FU Streptozotocin and Mitomycin C.
Reg. 2: 5FU Adriamycin and Mitomycin C

PROGRESS DURING FY-82: 3 Patients had been entered prior to protocol closure. All three have expired. This is a finalized report.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 3  BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SAY STATE): NONE

CONCLUSIONS: Data too sparse to formulate any conclusions.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
**Principal Investigator(s):** Raymond B. Weiss, M.D.

**Facility:** MGH/Dept/Suc: Hematology/Oncology - Dept. of Med.

**Accumulative PEDECASE Cost:**

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**Study Objective:** 1. To determine if increasing intensity of induction therapy will increase the remission rate. 2. To determine if Clotrimoxazole will decrease infection rate during remission induction.

**Technical Approach:** Randomized: Regimen A with CO Trimoxazole po during induction. Regimen B without CO Trimoxazole. Randomize between regimen 1 (e.g., Daunomycin (DNR) 45 mg/m2 IV days 1, 2, 3 and ARA-C 100 mg/m2 IV by continuous infusion) and regimen 2 (IV day 1, 2, 3 + ARA-C 100 mg/m2 by continuous infusion plus 6 thioguanine 100 mg/m2 days 1-7).

**Progress during FY-82:** To date a total of 13 patients, 8/13 relapsed and died. 5/13 in CR and being actively followed.

**Number of Subjects Studied:**

- FY-82: 3
- Total (to date): 13
- Before completion of study: 550 CALGB

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**

One patient developed actual Hepatitis/Cirrhosis due to chemotherapy.

**Conclusions:** After 230 patients entered have been evaluated, no trend toward treatment and opinion exists.

**Publications or Abstracts:** FY-82: None
DATE: 10-2-82  WORK UNIT NO.: 1578  STATUS: INTERIM

STARTING DATE: 7-80  DATE OF COMPLETION: 1983

KEY WORDS: Chemotherapy - Metastatic Breast Cancer

TITLE OF PROJECT: CALGB # 8081 A Randomized Study Comparing The Combination of Hormonal Therapy and Chemotherapy with Chemotherapy alone For The Treatment of Advanced Breast Cancer.

PRINCIPAL INVESTIGATOR(S): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(S):


ACCUMULATIVE FEDCASE COST: 0  ACCUMULATIVE CONTRACT COST: 0  ACCUMULATIVE SUPPLY COST: 0

FY-83 FEDCASE: 0  CONTRACT COST: 0  SUPPLY COST: 0  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: to determine effectiveness of combination chemotherapy versus combination chemotherapy plus Hormonal therapy in patients with advanced breast Cancer.

TECHNICAL APPROACH: Reg 1: CAF + Tamoxifen
Reg 2: CAF

PROGRESS DURING FY-82: A total of 13 patients now entered. 2 have expired with progressive disease. 7 are alive with progressive disease and off study. 2 are partial responses and 2 are complete responses.

NUMBER OF SUBJECTS STUDIED:
FY-82: 5  TOTAL (TO DATE): 13  BEFORE COMPLETION OF STUDY CALGB -300  WRANG - 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

NONE

CONCLUSIONS: Study is open, active and accruing patients. No Conclusions so far.

PUBLICATIONS OR ABSTRACTS. FY-82:

NONE
KEY WORDS: Gastric Adenocarcinoma

TITLE OF PROJECT: CALGB # 7983: Surgical Adjuvant Systemic Chemotherapy with 5-FU, Adriamycin, and Mitomycin-C vs. observation only in Gastric Adenocarcinoma.

PRINCIPAL INVESTIGATOR(S): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(S): ________________________


ACCUMULATIVE PEDCASE COST: 0 | ACCUMULATIVE CONTRACT COST: 0 | ACCUMULATIVE SUPPLY COST: 0

FY-83 PEDCASE: 0 | CONTRACT COST: 0 | SUPPLY COST: 0 | DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT ________________________

STUDY OBJECTIVE: The specific aim of this study is to ascertain if 6 two monthly cycles of Fluouracil, Adriamycin and Mitomycin-C following potentially curative surgery for Adenocarcinoma of the stomach produces a longer disease free survival in comparison to observation alone.

TECHNICAL APPROACH: Regimen II: Observation only. Regimen I: Adjuvant Chemotherapy 5-Fluouracil, Adriamycin and Mitomycin-C following potentially curative surgery for adenocarcinoma of the stomach produces a longer survival in comparison to surgery alone.

No patients were entered on this study at WRAMC.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0 | TOTAL (TO DATE): 0 | BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: NONE

PUBLICATIONS OR ABSTRACTS, FY-82: NONE
DATE: 10-2-82  WORK UNIT NO.: 1581  STATUS: INTERIM X  FINAL

STARTING DATE: 3/79  DATE OF COMPLETION:

KEY WORDS: Lymphocytic Lymphoma Combination Chemotherapy.

TITLE OF PROJECT: CALGB: + 7951 - The Management of Stage III and IV Nodal poorly Differentiated Lymphocytic Lymphoma.

PRINCIPAL INVESTIGATOR(S): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(S):

FACILITY: NIAHE


ACCUMULATIVE FEDCASE COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 FEDCASE: 00  CONTRACT COST: 00  SUPPLY COST: 00

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25, 1983

STUDY OBJECTIVE: To compare efficacy of combination chemotherapy vs. single agent therapy and combination therapy chemotherapy. To compare response in patients treated with single agent comb. Chemo. in induction.

TECHNICAL APPROACH: Regimen 1: Cytoxin 100mg/m2/day continuously. Regimen 2: Cytoxin 750mg/m2/iv day 1. Adria/ymycin 50mg/m2/iv day 1. Vincristine 1.4mg/m2/iv/day 1. Bleomycin 10mg/m2/im/day 1. Prednisone 60 mg/m2/po/day 1-5

PROGRESS DURING FY-82: 5 patients have been entered. All in good partial remission. Possibly complete remission.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (TO DATE): 5  BEFORE COMPLETION OF STUDY: 75

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: Not a great deal of data but, 5 of the 5 patients have experienced partial remission. Therefore, this treatment plan may be of significant value.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
DAEN- STATUS INERI-

STi.T. DATe: 5/80
ADTE O ACL-LETIOI: 9/81

KEY WORDS: Spirogermanium in Advanced Colorectal Carcinoma

TITLE OF PROJECT: CALGB: # 8075 Spirogermanium in patients with Advanced or Recurrent Colorectal Carcinoma.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(s):

FACILITY: VAMC


ACCUMULATIVE PEDCASE COST: 00
ACCUMULATIVE CONTRACT COST: 00
ACCUMULATIVE SUPPLY COST: 00

FY-83 PEDCASE: 00
CONTRACT COST: 00
SUPPLY COST: 00

Date of Committee Approval Or Annual Progress Report: 7/5/82

STUDY OBJECTIVE: Determine efficacy of Spirogermanium in patients with unresectable metastatic Adenocarcinoma. Provide data regarding toxicity of Spirogermanium.

TECHNICAL APPROACH: Spirogermanium 50mg/m2/IV g.o.d. for 3 doses each week for 2 weeks, then 50mg/m2/IV 2x weeks; then 50mg/m2/IV weekly.

PROGRESS DURING FY-82: 3 Patients entered. All three have expired. Protocol closed. This is a finalized report.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0
TOTAL (TO DATE): 3
BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: Data too sparse to formulate conclusions.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
DATE: 10-02-82 | WORK UNIT NO.: 1584 | STATUS: INTERIM | FUND: X

STARTING DATE: 3/80 | DATE OF COMPLETION: 4/81

Key Words: Multiple Myeloma resistant to Melphalm and Prednisone
Title of Project: CALGB: # 8074 - A phase II trial of AMSA in Multiple Myeloma resistance to Melphalm and Prednisone.

Principal Investigator(s): Raymond B. Weiss, M.D.
Associate Investigator(s):
Facility: WRAIR
Dept/Svc: Hematology/Oncology - Dept. of Med.

Accumulative PEDCASE Cost: 00
Accumulative Contract Cost: 00
Accumulative Supply Cost: 00

FY-83 PEDCASE: 00
Contract Cost: 00
Supply Cost: 00

Date of Committee Approval: 0

Study Objective: Determine response rate of multiple Myeloma resistance to Melphalm, and Prednisone other alkylating agents.

Technical Approach: Provide data regarding toxicity of AMSA - 120-mg/m2/IV - G 3 weeks

Progress During FY-82: This protocol was activated and subsequently closed. No patients were ever entered. This is a finalized report.

Number of Subjects Studied:
FY-82: 0
Total (to date): 0
Before Completion of Study: closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):
NONE

Conclusions:
NONE

Publications or Abstracts, FY-82:
NONE
Study objective:

Determine efficacy of AZQ in treatment of locally advanced or extensive cancer of the lung other than small cell. Provide data regarding toxicity of AZQ.

Technical approach:

AZQ 30mg/m² IV initially. If on Day 7-14 (after 1st dose of AZQ) there is no significant myelosuppression second and subsequent 3 wks. cycles will be 35mg/m² IV.

Progress during FY-82: this protocol was closed 9-81. During the time period for pt. entry, a total of 10 patients were entered. to date all have expired. 9 patients averaged approximately 5 month survival form dx to rx. this is a finalized report.

Number of subjects studied:

FY-82: 0  Total (to date): 10  Before completion of study: closed

Serious/Unexpected side effects in subjects participating in project (if none so state):

None

Conclusions:

Group wide experience was that the drug had some activity but we did not see any.

Publications or Abstracts, FY-82:

None
DATE: 10/2/82   WORK UNIT NO.: 1586   STATUS: INTERIM X Final

STARTING DATE: 9/18/80   DATE OF COMPLETION:

KEY WORDS: Acute Lymphocytic Leukemia

TITLE OF PROJECT: Calgb # 8011 - A study of the effectiveness of intensification with two courses of Cytosine Arabinoside and Daunorubicin following remission induction in adults with Acute Lymphocytic Leukemia.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weiss, M.D

ASSOCIATE INVESTIGATOR(s):

FACILITY: WRAC


ACUMULATIVE PEDCASE COST:

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SUPPLY COST:

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25, 1983

STUDY OBJECTIVE: Determine if early intensification with Ara-C and DNR after induction with Vincristine, Daunorubicin, and Prednisone, L-T. MTX, and I-ASP will increase duration of C.R. and survival in adults with ALL. Correlate below

TECHNICAL APPROACH: Induction: VCR 2mg/m2 IV weekly x 3 day 1-8 and 15, Pred. 40mg/m2 po daily x 21, DNR 45mg/m2/IV daily x 3, Lasp 500 IU/kg/IV daily, MTX 12mg/m2 day 1, Leukovorin 12mg/m2/IV and 2, 24, and 48hrs. Post-MTX. Intensification below

PROGRESS DURING FY-82: Only 2 patients entered this year. 1 in CR 1 relapsed and put on phase II trial.

NUMBER OF SUBJECTS STUDIED:

FY-82: 2   TOTAL (TO DATE): 2   BEFORE COMPLETION OF STUDY: 800

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

NONE

CONCLUSIONS: We expect 6 patients to be entered in 1 year

PUBLICATIONS OR ABSTRACTS, FY-82: NONE

Study Objective, continued: various studies with response frequency and remission duration in order to identify subsets of ALL.

Technical Approach, continued: fication, maintenance, and prophylactic CNS rx regime A = 6mp 200 mg/m2/d x 5 Mtx, 7.5 mg/m2/d x 5, regimen B = DNR 45 mg/m2/IV x 3, AR-C 100 mg/m2 x 7.
To compare efficacy of 2 different CMFUP regimens with or without Adriamycin in treatment of Breast Cancer. To determine axillary node, menopause, and estrogen receptor statuses in survival.

**REGULAR DRUGS:**
- Reg 1: CMFUP monthly
- Reg 2: CMFUP q 6 weeks / with or without later Adriamycin

**NUMBER OF SUBJECTS STUDIED:**
- FY-82: 13
- TOTAL (TO DATE): 17
- BEFORE COMPLETION OF STUDY: CALGB = 300
- WRANG = 30

**SIGNIFICANT UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT:**
- NONE

**CONCLUSION:**
Study is open and actively accruing patients. Too soon to formulate conclusions.

**PUBLICATION OR ABSTRACTS, FY-82:**
- NONE
Localized small cell carcinoma of the lung.

CALGB # 8083 - Localized Small Cell Carcinoma Of The Lung.
A Phase II Study. Simultaneous Chemotherapy and Radiotherapy VS. Sequential Therapy (Chemotherapy, Radiotherapy, Chemotherapy) VS. Chemotherapy Alone.

Raymond B. Weiss, M.D.
Hematology/Oncology- Dept. Of Med.

To test whether chemotherapy and radiation to primary tumor and mediastinum is superior to chemotherapy alone in patients with limited small cell lung cancer.

Regimen 1: Vincristine 1.4mg/m2/IV -Cytoxan 100mg/m2 IV - VP-16 80mg/m2 - Radiation RX to Primary Tumor +CNS

To date only 8 patients have been entered. 3 are in complete remission, 3 are in partial remission, and 2 have refused further therapy, and have been taken off protocol.

Severe Myelosuppression with chemotherapy following radiotherapy.

WRAMC experience indicates good rates of remission with above listed therapy. Toxicity from this can however, be prohibitive.
DATE: 10/2/82  Work Unit No.: 1589  STATUS: INTERIM  FINAL X

STARTING DATE: 11/80  DATE OF COMPLETION: 10/82

Key Words: Cisplatin in patients with Gastric Cancer

TITLE OF PROJECT: CALGB:# 8078 - Cisplatin in patients with Gastric Cancer. A phase II study.

Principal Investigator(s): Raymond B. Weiss, M.D.

Associate Investigator(s):


ACCUMULATIVE PREDICTED COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 PREDICT: 00  CONTRACT COST: 00  SUPPLY COST: 00  Date of Committee Approval of Annual Progress Report: FEB 25 1983

STUDY OBJECTIVE: Study anti-tumor activity of single agent therapy in advanced unresectable or metastatic Gastric Adenocarcinoma.

TECHNICAL APPROACH: CIS PLATINUM 75mg/m2/IV g 3 weeks

PROGRESS DURING FY-82: Protocol closed 1982. Only one patient had been entered while study was active. Pt. expired 3 months later. This is a finalized report.

Number of Subjects Studied:

FY-82: 0  Total (to date): 1  Before Completion of Study: closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):

Significant nausea and vomiting.

CONCLUSIONS:

NONE

Publications or Abstracts, FY-82:

NONE
Study Objective: To establish probable remission for previously treated ALL who are in remission. To test L-Asp/MTX in addition to Ara-C and 6MP.

Technical Approach: Induction = Vincristine, Prednisone, MTX and L-Asparaginase at ml; maintenance = Methotrexate and L-Asparaginase.

Number of Subjects Studied:
FY-82: 1
Total (to date): 1
Before Completion of Study: 75

Serious/Unexpected Side Effects in Subjects Participating in Project (if any, state):
NONE

Conclusions: To early for conclusion on 1 patient entered. We expect to enter 4-5 patient per year in this very promising Modality.

Publications or Abstracts, FY-82:
NONE
**Title of Project:** CALGB: 8172: A phase II study for advanced unresectable or recurrent Renal cell Carcinoma with Spirogermanium.

**Principal Investigator(s):** Raymond B. Weiss, M.D.

**Associate Investigator(s):**

**Facility:** WRAMC

**Department/Svc:** Hematology/Oncology - Dept. Of Med.

**Study Objective:** Evaluate anti-tumor activity of single agent for advanced unresectable or metastatic adenocarcinoma of Kidney.

**Technical Approach:** Spirogermamium 80mg/m2/IV good for 3 dosesx2 weeks, then 80 mg/m2/Iv 2x weeks /2 weeks, then 80 mg/m2/Iv Weekly.

**Protocol Status as of 12/81:** This protocol is now closed as of 12/81. This is a finalized report.

**Number of Subjects Studied:**

**FY-82:** 0  **Total (to date):** 0  **Before Completion of Study:** Closed

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):** None

**Conclusions:** No data accrued, therefore no conclusions.

**Publications or Abstracts, FY-82:**

NONE

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**Date:** 10/2/82  **Work Unit No.:** 1592  **Status:** Interim  **Final X**

**Starting Date:** 4/81  **Date of Completion:** 12/81

**Key Words:** Advanced unresectable recurrent Renal Cell Cancer.

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**Date of Committee Approval of Annual Progress Report:** FEB 25 1987
**Key Words:** Recurrent Metstatic Breast Carcinoma

**Title of Project:** CALGB:8175 - A phase II trial of Aclacinomycin -A in the treatment of Recurrent/Metstatic Breast Cancer Refractory or Conventional therapy.

**Principal Investigator(s):** Raymond B. Weiss, M.D.

**Facility:** WWC

**Department/Section:** Hematology/Oncology - Dept. Of Med.

**Starting Date:** 6/81

**Date of Completion:**

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**Study Objective:** Evaluate anti-tumor activity of single agent therapy in treatment of inoperable advanced or recurrent carcinoma of the Breast failing conventional therapy.

**Technical Approach:** Depending on performance score and extent of prior treatment, Aclacinomycin 100mg/m2 or 80mg/m2/IV g 3 weeks.

**Progress During FY-82:** To date only 3 patients have been entered on this study. All had progressive disease, 1 has expired, the remaining 2 are alive with disease.

**Number of Subjects Studied:**

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**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):**

- Transient EKG abnormalities, Phlebitis.

**Conclusions:** Data too sparse to make any conclusions.

**Publications or Abstracts, FY-82:**

**NONE**
TITLE OF PROJECT: CALGB # 8176 - AZQ in treatment of patients with previously treated Myeloma.

Principal Investigator(s): Raymond B. Weiss, M.D.

Associate Investigator(s):

Facility: VRMC


Accumulative PEDCASE Cost: 00
Accumulative Contract Cost: 00
Accumulative Supply Cost: 00

FY-83 PEDCASE: 00
Contract Cost: 00
Supply Cost: 00

Date of Committee Approval of Annual Progress Report: FEB 25, 1983

STUDY OBJECTIVE: Evaluate single agent for activity in previously treated patients with Multiple Myeloma.

TECHNICAL APPROACH: AZQ 30-mg/m2/IV g 3 weeks, if no immunosuppression on day 14: AZQ 35mg/m2/IV.

PROGRESS DURING FY-82: No patient were ever entered on this study. Study closed. This is a finalized report.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0 Total (to date): 0 Before Completion of Study: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
none

CONCLUSIONS:
None

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
STUDY OBJECTIVE: Evaluate single agent chemotherapy in advanced non-resectable or metastatic Adenocarcinoma of Colon or Rectum.

TECHNICAL APPROACH: ADC 260mg/m2/IV q 3 weeks. If no immunosuppression on day 14, ADC 280mg/m2/IV.

PROGRESS DURING FY-82: this protocol was closed 11/81. 6 patients have been entered at WRAMC. 5 of the 6 have expired. 1 of the 6 is alive with disease and is being followed off post.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 6  BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: ADC has shown little if any efficacy in patients with advanced Colorectal Cancer.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
TITLE OF PROJECT: CALGB + 8084 Small cell carcinoma of the lung extensive disease a comparison of MACC plus warfarin to MEPA alternating with MACC.

STUDY OBJECTIVE: Evaluate whether addition of warfarin to MACC will prolong disease control. Determine if alternating combination MEPA/MACC will prolong disease control. Evaluate neuropathy levels before, during, and after chemotherapy.

TECHNICAL APPROACH: MACC vs. MACC + warfarin vs. MEPA/MACC; reg 1: Methotrexate 30mg/m² IV, Adriamycin 40mg/m² IV, Cytoxan 400mg/m² IV, CCNU 30mg/m² PO. Reg 2: same as regimen 1. + warfarin sodium. Reg: 3 Mitomycin-C 7mg/m² IV, Cisplatin 50mg/m² IV, VP-16 40mg/m² IV

PROGRESS DURING FY-82: To date only 9 patients have been entered. Of these 9 patients, 6 have expired. The remaining 3 patients are in good PR's and possibly in CR.

NUMBER OF SUBJECTS STUDIED:
FY-82: 3  Total (to date): 9  Before Completion of Study: 75

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: WRAMC experience is about 33% success in achieving good remission with the above listed chemotherapeutic regimens.

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE
Title of Project: CALGB # 8174 - Aziridinylbenzoquinone in the treatment of patients with refractory Acute Myelocytic Leukemia in adults.

Principal Investigator(s): Raymond B. Weiss, M.D.

Facility: WRAMC Dept/Svc: Hematology / Oncology - Dept. of Med.

Study Objective: Evaluate anti-Leukemic activity of single agent or combination chemotherapy in treatment of refractory adult AML.

Technical Approach: AZQ 24mg/m2/dx7 as induction
AZQ 24mg/m2/dx5 as maintenance

Progress During FY-82: No patients were ever entered on this study at WRAMC. This protocol was closed 12/81. This is a finalized report.

Number of Subjects Studied:
FY-82: 0  Total (to date): 0  Before Completion of Study: closed

Serious/Unexpected Side Effects in Subjects Participating in Project (if none state):
NONE

Conclusions: No conclusions as no data was gathered.

Publications or Abstracts, FY-82:
None
To determine efficacy of DHAD in patients with resectable or metastatic primary liver cancer.

DHAD 12mg/m² IV q 3 weeks.

1 patient entered. Had 2 cycles of drug and showed no response. Is alive with progressive disease.
Refractory Hodgkin's Disease

CALGB # 8171 - Treatment of Refractory Hodgkin's Disease

Resistance to Standard Chemotherapy.

Studied to develop a non-cross resistance combination of cytotoxic agents active in advanced, previously treated Refractory Hodgkin's Disease.

VM - 26 - 60mg/m² IV day 1 - Cisplatin 40mg/m² IV day 1
Hexamethylmelamine 100mg/m² po day 2-8 and Prednisone 32mg/m² po day 2-8. Repeated q 21 days.

To date 1 patient has been entered, had no reaction to therapy.

Data too sparse to formulate any conclusions.
ARA-C L. Asparaginase Acute Myelocytic Leukemia
CALGB# 8121 - A Comparative Study Of High Dose ARA-C Alone or Given Sequentially With L-Asparaginase for Remission Induction in Patients With AML After Failure or In Relapse.

Raymond B. Weiss, M.D.

To determine efficacy of high dose ARA-C with or without L-Asparaginase for remission induction in patients with AML refractory to 1st line therapy.

Reg 1: ARA-C 3gm/m2 IV + L-Asp. 6000 IV /M2 IM
Reg 2: ARA-C 3gm/m2 IV.

To date 6 previously treated AML patients have been entered of the patients never achieved remission and have since expired. 2 of the Pt's did achieve remission and are alive and still being treated according to Protocol.

WP=6
PD (Tumor) 6

Data too sparse to formulate any conclusions. Low patient accrual to date.
Advanced Carcinoma of the Lung Other Than Small Cell.

PROTOCOL INVESTIGATOR(S): Raymond B. Weiss, M.D.

ASSOCIATE INVESTIGATOR(S):


ACCUMULATIVE FATALITY COST: | ACCUMULATIVE CONTRACT COST: | ACCUMULATIVE SUPPLY COST:
0 | 0 | 0

FY-82 INCOME: CONTRACT COST: STUDY COST: Date of Completing Terminal Of

STUDY OBJECTIVE: To determine the efficacy of ADC in locally advanced and or metastatic lung cancer other than small cell.

DATA: ADC 260mg/m² IV q 21 days.

PROGRESS REPORT (FY-82): 6 patients have been entered so far. 2 pts. had progressive disease and have expired. 1 pt. refused further RX. 1 pt. has stable disease. 1 pt. has progressive, but is alive. 1 pt. was just put on study 9/92.

NUMBERS OF SUBJECTS STUDIED:

FY-82: 6 | TOTAL (TODAY): 6 | BEFORE COMPLETION OF STUDY CANCELED

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, SKIP):

Phlebitis in vessel where IV Drug was infused.

CONCLUSION: Data too sparse for conclusion at this time.
Vinblastine, Dacarbazine, and Cisplatin in The Treatment Of Advanced Or Recurrent Metastatic Melanoma.

Principal Investigator(s): Raymond B. Weiss, M.D.

Associate Investigators:


Accumulative PRECASE Cost: 0
Accumulative CONTRACT Cost: 0
Accumulative Supply Cost: 0

Date of Committee Approval: FEB 25 1987

Annual Progress Report

Study Objective: to establish tolerability of VDP, to establish CR or PR frequencies in patients with advanced melanoma treated with VDP.

Technique/Procedure: Vinblastine 5 mg/m2 IV day 1 and 2
Dacarbazine 150mg/m2 IV day 1-2-and 3
Cisplatin 50mg/m2 IV day 3

Patients treated FY-82: 5 patients have been entered. 3 of the 5 had no response to therapy and progressed. 2 of the 5 have shown good PR and are still being treated every month.

Number of Subjects Studied:

FY-82: 5

Total (to date): 5

Before Completion of Study: 60

No unexpected side effects in subjects participating in project (if none so state):
none

Completion: none

Related Abstracts, FY-82:

none
Superfractionation Radiotherapy - Small Cell Lung

CALGB #8177 - Superfractionation Radiotherapy and Chemotherapy for Patients with Small Cell Carcinoma of the Lung Who Fail Locally after Chemotherapy on CALGB 8083

**Raymond B. Weiss, M.D.**

**Dept. of Med.**

- **Number of Patients:** 1

- **Number of Treatments:** 30

- **Treatment Schedule:** 2 A day chemotherapy of MTX, Adria, CCNU, and Cytoxan.

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<th>FY-83</th>
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<th>Contract Cost</th>
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**Study Objective:** To determine the tolerability of Superfractionation Radiotherapy on patients with limited small cell carcinoma of the lung.

**Treatment:** Radiation RX. to tumor, Mediastinum, and supraclavicular areas, 30 treatments in 3 weeks (2 A day) chemotherapy of MTX, Adria, CCNU, and Cytoxan.
CALGB # 8142 - Phase II Trial of Anthracenedicarboxaldehyde for Advanced Breast Cancer.

PI (Principal Investigator): Raymond B. Weiss, M.D.


Objectives: To evaluate efficacy of ADC for significant anti-tumor activity in the treatment of inoperable, advanced or recurrent carcinoma of the breast.

Dosage: ADC 260mg/m² IV q 21 days.

So far only 2 patients have been entered. 1 had progression after 2 doses. The other has only been on study 1 month.

Concurrent and Dose Effects: None.

Data too sparse for formulation of any conclusions.

NONE
To compare efficacy and toxicity of 3 treatment regimens for patients with stage III2A and IV Hodgkin's Disease.

Regimen 1: MOPP every 28 days - Regimen 2: ABVD every 28 days.
Regimen III - MOPP every 28 days alternating with ABVD the next 28 days.

To date only 3 patients have been entered.
Study Objective: To determine therapeutic efficacy of BCG given by scarification to patients with lung carcinoma. To determine if allogenic tumor cells benefit. Correlation of in vivo and in vitro cellular immunity with clinical status.

Technical Approach: Stage I (A) patients were randomized between BCG, tumor cells and BCG of follow-up alone. Stage I1-debulked surgically received 5000 rads plus randomization vs. above. They also received cytoxan 500mg/m2 Methotrexate 40mg/z.

Protocol closed since 2/79. All stage B patients have expired. The stage A patients (7) are either off study due to the logistics of following them off post or are lost to follow up all together.

Number of Subjects Studied: None closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If None, So State): No serious /unexpected side effects.

Conclusions: Immunotherapy appears to be of minimal value in prolonging life span periods of remission in patients with lung cancer.
STUDY OBJECTIVE: To investigate the therapeutic efficacy of BCG by dermal scarification in patients with carcinoma of the Colon or Rectum when combined with 5-FU combination with 5-FU/ MMC.

TECHNICAL APPROACH: All patients are classified according to Duke's C classification: Type II (Stage B) - extension into but not through muscularis. (Stage B2) - extension to or through serosa; negative nodes. III (Stage C1 below)

This study closed to patient entry May 1978. Total of 20 patients entered to date all have expired or are lost to follow-up.

STUDY OBJECTIVE: To investigate the therapeutic efficacy of BCG by dermal scarification in patients with carcinoma of the Colon or Rectum when combined with 5-FU combination with 5-FU/ MMC.

TECHNICAL APPROACH: All patients are classified according to Duke's C classification: Type II (Stage B) - extension into but not through muscularis. (Stage B2) - extension to or through serosa; negative nodes. III (Stage C1 below)

This study closed to patient entry May 1978. Total of 20 patients entered to date all have expired or are lost to follow-up.

Number of Subjects Studied:

FY-83: 0 Total (to date): 20 BEFORE COMPLETION OF STUDY: Closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):

NONE

Publications or Abstracts: FY-82:

Technical Approach, continued: limited to serosa; positive nodes. IV - Locally metastatic disease beyond lymphatics, the bulk of which can be removed, but with some tumor remaining, cannot tolerate surgery. Tumor of such size, or fixed so that surgery would not be undertaken, V (stage D) distance metastases.
Tamoxifen, Fluoxymesterone, Metastatic Breast Cancer

WRAMC # 7408 - Comparative trial of Tamoxifen and Fluoxymesterone plus Tamoxifen in Metastatic Breast Cancer.

Raymond B. Weiss, M.D.

Response rates and durations will be compared to assess the relative therapeutic benefit of the two regimens.

Regimen A: Tamoxifen 2mg/m² po bid.
Regimen B: Fluoxymesterone 7 mg/m² po bid and Tamoxifen 2 mg/m² po bid

Study has been closed this year. Of the patients previously entered 4 are lost to follow-up, 2 are not evaluable, and all the others have progressed.

Number of Subjects Studied

Total (to date): 40
Before completion of study: 20

Pending completion of review.
to study the efficacy of the combination of Cyclophosphamide and 5- Fluorouracil with and without BCG immunotherapy in the treatment of advanced Stage D Carcinoma of the Prostate.

Regimen A: Cyclophosphamide 1000 mg/m2 IV on days 1 and 8: BCG 6 x 10^6 viable units on days 14 and 21. 5-Flourouracil 600 mg/m2 IV on days 1 and 8. Regimen B: Cyclophosphamide 1000 mg/m2 IV day 1 -5-Flourouracil 600 mg/m2 IV on days 1 and 8.

20 patients have been accumulated. Assigned reviewer (below) did not complete evaluation prior to departing service in FY 81.

Pending completion of review
Technical Approach: To compare the efficacy of radiation therapy alone versus the combination of radiation therapy plus chemotherapy in the treatment of patients with operatively-staged and histologically proven stage D1 Prostatic Carcinoma.

Regimen A: Whole pelvic irradiation to a total dose of 4600 rads, with an additional 2000 rads to the prostate bed. Regimen B: Radiation therapy as above. Adriamycin 60 mg/m² IV day 1 every 28 days. Cis-Platinum 60 mg/m² IV day 1-

Progress during FY-82: No patients entered for FY 81. 2 patients entered previously.

Number of Subjects Studied: FY-82: 0  Total (to date): 2  BEFORE COMPLETION OF STUDY

Serious/Unrelated Side Effects in Subjects Participating in Project (if none to state): NONE

Conclusion: Close study because of poor patient accrual.

Technical Approach (continued): 28 days. Addendum #1 increased type of patients eligible for this protocol. Addendum #2 modified administration of CIS-Platinum to decrease toxic side effects.
STUDY OBJECTIVE: To test the therapeutic efficacy of Chlorambucil and Methotrexate in patients with advanced Gastrointestinal tumors.

TECHNICAL APPROACH: Chlorambucil 6.0 mg/m2 days 1-14 - Methotrexate 10mg/m2 days 1-4-8-12 (po) this course is repeated every 28 days. For patients who have had prior chemotherapy or radiotherapy, 75% of the dosage is given for the first cycle.

PROGRESS DURING FY-82: WRAMC has entered no patients on this study during the past year. We can obtain no further information on previously entered patients as they are either dead or lost to follow-up. Study was closed 10/82.

NUMBER OF SUBJECTS STUDIED: This is a finalized report.

FY-82: 0 TOTAL (to date): 19 BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NONE SO STATE): NONE

CONCLUSIONS: NONE AT THIS TIME: STUDY IS CLOSED.

PUBLICATIONS OR ABSTRACTS, FY-82: NONE
Study Objective: To perform a detailed immune evaluation in patients with tumor present and tumor entirely resected, following immunization, with C. Parvum -SEE TECHNICAL APPROACH: As per outlined submitted for FY 80 and detailed in original below protocol.

Progress During FY-82: Study closed 10-81. At this time, all patients placed on this protocol have expired. This is a finalized report.

Number of Subjects Studied:
FY-82: 0 Total (to date): 7 Before Completion of Study: Closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):
NONE

Conclusions: Data too sparse and patient follow-up too poor to formulate any conclusions protocol is closed and no further data will be forthcoming.

Publications or Abstracts, FY-82:
NONE

Study Objective: (continued) in an attempt to ascertain changes in cytotoxicity induced by immune agents, and to determine if immune depression in cancer patients can be reversed.
Study Objective: To evaluate response rates, mean to duration of response and survival in 2 patient populations with Breast Cancer.

TECHNICAL APPROACH: Regimen 1: BCNU, Cytoxan, Vincristine, Methotrexate  
Regimen 2: BCNU, Vincristine, Methotrexate

ENROLLMENT: FY-82: NONE - Study is closed as no patients are being followed.

NUMBER OF SUBJECTS STUDIED:

FY-78: 0  
TOTAL (TO DATE): 14  
BEFORE COMPLETION OF STUDY: 14

SYMPTOMS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, SO STATE):

NONE

CONCLUSIONS:

NONE

FUNDAMENTAL OBSERVATIONS, FY-82:

NONE
Study Objective: The aim of this study is to seek evidence for an increase in the disease-free period (or survival) in patients with Duke's B2 or C colorectal cancer when treated for prolonged periods with a platelet inhibitory agent—aspirin.

Technical Approach: A coagulation screen, factor VIII complex, Salicylate level and platelet function tests (aggregation and membrane analysis) will be done prior to treatment and one month post treatment. The patients will then be followed below:

Progress During FY-82:
- Slow accrual, with only 11 patients entered to date, follow-up adequate on 10 of these. One patient died of progressive disease and one has advanced disease but is still living.
- No Toxicity reported in the past year. Study Closed 10/81-2/11 have expired; 8/11 have stable disease and 1/11 is lost to follow-up.

FY-82: 0
- Total (to date): 11
- Before completion of study: closed

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
- None

Conclusions: Inadequate number of entries and follow-up interval for assessment.

Publications or Abstracts, FY-82:
- None

Technical Approach: (continued) according to the protocol with subsequent coagulation studies at 4-month intervals or whenever bleeding or thrombosis appears.
### Study Objective
1. Compare the disease-free survival and overall survival for surgery alone versus surgery plus early adjuvant chemotherapy in patients with resectable Stage II testicular Carcinoma.  
2. To register and follow-up over another year.

### Technical Approach
All stage I patients will be registered then followed by monthly markers and chest X-rays for 1 year and then every 2 months for another year. All Stage II patients will be randomized to no adjuvant—see back.

### Progress During FY-82
To date 15 patients have been entered. 5 patients are Stage I and 4 have now completed their 2 year period of observation, and, are without disease. 10 patients are Stage II, and of those, 3 who were over.

### Number of subjects studied:

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### Serious/Unexpected Side Effects in Subjects Participating in Project (IF NONE, NO STATE):  
NONE

### Conclusion
It appears that for those patients with Stage II Disease, adjuvant chemotherapy is necessary in order to prevent the possibility of progressive disease.

### Publications or Abstracts, FY-82:
None
Study Objectives: patients with non-seminoma, non-Choriocarcinoma
Stage I testicular cancer to define prognostic variables which may predict recurrence in this stage group.
3. To define differences in disease free rates and patterns of recurrence based on histologic subtypes.
4. Evaluate role of marker substances I.E., BHCG, AFP, and LDH in the early detection and management of recurrences.
5. Evaluate accuracy of Lymphangiograms, CT scans, and ultrasound studies for staging of retroperitoneal nodal involvement.

Tech; Approach cont'd.: chemotherapy or to adjuvant chemotherapy. Those receiving adjuvant chemotherapy will receive Cytoxan, Actinomycin, Vinblastine on day 11 Bleomycin on days 1 through 6, and lastly, Cis-Platinum on day 7. This cycle of therapy will be repeated at 28 days. Two cycles only will be given then follow-up monthly for one year, then bi-monthly for the next year.

Progress cont'd: randomized to no adjuvant chemotherapy, subsequently developed progressive disease and according to protocol were started on adjuvant chemotherapy. The remaining 6 stage II patients were randomized to adjuvant chemotherapy, have completed their chemotherapy, and are currently being followed here or off post. They are all well and free of disease.
TITLE OF PROJECT: WRAMC # 7808A: Effect of Indocyanine Green Clearance on Plasma levels of Adriamycin

ASSOCIATE INVESTIGATOR(S): Raymond B. Weiss, M.D.

FACILITY: WRAMC

DEPT/SD: Hematology/Oncology - Dept. of Med.

STUDY OBJECTIVE: Correlate Indocyanine Green (ICG) Clearance in each patient with plasma levels of Adriamycin.

TECHNICAL APPROACH: Indocyanine Green clearance obtained prior to first administration of Adriamycin. A total of 50 Indocyanine analyses should allow for all permutations of liver dysfunction, dosages of Adriamycin, and clinical toxicity. Protocol closed to patient entry. Accural rate was very slow due to fact that only patients with liver disease who received Adriamycin were eligible. To date 15 pts' were entered at WRAMC. All experienced progressive disease and have since expired. No further patients entered FY82. This is a final report.

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT if none to state):

CONCLUSIONS: Patient accrual too low, disease status too progressive to formulate any definitive conclusions. Protocol is closed to entry and more data is not forthcoming. No conclusion can be drawn from this study.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE

201
STUDY OBJECTIVE: To evaluate the efficacy of Hepatic Artery infusion of Adriamycin in patients with metastatic liver disease. To evaluate the Pharmacokinetics of Adriamycin and its metabolites. To correlate the dose response with clinical.

TECHNICAL APPROACH: Special diagnostics will place Hepatic Artery catheter via axillary artery and hepatic vein catheter via femoral vein. Patient is sent to nuclear medicine for 99 mtc sulfur colloid infusion into the hepatic artery to evaluate initial.

PROGRESS DURING FY-82: No additional patients entered in FY 82. Study was closed 10/82. This is a finialized report.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0
TOTAL (TO DATE): 2
BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: Not enough patients entered, without further accrual study being closed.

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE

Study Objective: (continued) toxicity. To evaluate radiouclide scan, angiogram, and liver-spleen seen as parameters of liver dysfunction.

Technical Approach: (continued) catheter placement and hepatic blood flow distribution.
**TITLE OF PROJECT/FRANCIS # 7904 - Evaluation of Carcinoembryonic Antigen and Second Look Surgery in Colon Carcinoma.**

**PRINCIPAL INVESTIGATOR(s):** Raymond B. Weiss, M.D.  
**ASSOCIATE INVESTIGATOR(s):**

**FACILITY:** IRAYC  
**DEPT/SVC:** Hematology/Oncology - Dept. Of Med.

**STUDY OBJECTIVE:** Evaluate Serial serum CEA levels and second look exploratory laparotomy as a method of detecting recurrent disease early.

**TECHNICAL APPROACH:** Patients at high risk of recurrence following surgery for colorectal carcinoma are followed by clinical exam, routine blood chemistries, and CEA every 3 months. When CEA rises complete re-evaluation for recurrence is indicated.

**PROGRESS REPORT FY-82:** Total of 18 patients entered before Protocol closure 10/81. 2 pts. have had pd and have expired. 2 pts. underwent exploratory laparotomy.

**NUMBER OF SUBJECTS STUDIED:**

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**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):**

**CONCLUSIONS:** Inadequate follow-up time and number of entries to analyze data.

**PUBLICATIONS OR ABSTRACTS, FY-82:**

**NONE**

**Technical Approach: (continued)** Including Paparotomy is undertaken to determine respectability of recurrence.
KEY WORDS: Acute Leukemia

TITLE OF PROJECT: WRANC # 7905 - Therapy of Acute Leukemia with low dose Adriamycin infusion.

PRINCIPAL INVESTIGATOR(s): Raymond R. Weiss, M.D.

ASSOCIATE INVESTIGATOR(s):

FACILITY: WRANC

TITLE: Hematology/Oncology - Dept. Of Med.

STUDY OBJECTIVE: To determine if kinetic alteration of the administration of Adriamycin would change its efficacy in advanced Leukemia patients previously failing Anthracycline therapy.

TECHNICAL APPROACH: TRN dose infusions of Adriamycin 10mg/m2/day x 10d with possible escalation if tolerated. With measurement of Adriakinetics and cell cycle kinetics of leukemia cells by FACS.

PROGRESS DURING FY-82: Total accrual of 5 patients. Study closed 10-81. No further patient accrual. To date all 5 pts. have expired. This is a finalized report.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (TO DATE): 5  BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF MORE THAN 5 TOTAL): Severe Mucositis

CONCLUSIONS: Date too sparse - no conclusion.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
STUDY OBJECTIVE: To investigate therapeutic efficacy of Mof-Streptozotocin in Advanced measurable Colo-Rectal Carcinoma.

TECHNICAL APPROACH: 5-Flourouracil 300mg/m²/IV daily for 5 consecutive days, beginning on day 1. Repeat every 35 days. Methyl CCNU 30mg/m² po daily for 5 consecutive days beginning on day 2. Repeat every 72 days. Vincristine 1mg/IV push day 1, (be-

PROGRESS REPORT FY-82: Protocol Closed, 10/81. 53 patients entered, 50 evaluable low)

5 patients alive, 48 patients dead.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0 Total (to date): 53 Before Completion of Study: 53

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: 2/50 (4%) CR, 9/50 (18%) PR. CR+ PR = 22%. Of 40 patients previously untreated with chemotherapy, 10/40 (25%) responded. Median duration PR 122 days (42 - 490) CR 169 +466 days. Median survival responders 424 days, non-responders 141 days (P=0.03, log rank, moderately severe toxicity. About the same response rate and more toxic than 5FU alone. Need randomized study to better assess efficacy.

PUBLICATIONS OR ABSTRACTS, FY-82:

Submitted for publication to Journal of Clinical Oncology

Funds needed for reprints, 250.00.

Technical Approach: (continued) repeat every 35 days. Streptozotocin 500 mg/m² IV weekly beginning on day 1. Two complete courses should be given to fully evaluate efficacy of regimen. If there is progression of measurable disease after 2 courses or any time thereafter, the patient is removed from protocol and followed for survival information.
Study Objective: The Nitrosoureas (BCNU, CCNU, Methyl CCNU) are a group of rationally synthesized anticancer agents. Their mechanism of action is unknown although they possess some biologic properties of alkylating agents. (See below.)

Technical Approach: Methyl CCNU (Semustine): 200 mg/m2 po every 6-8 weeks.

Progress During FY-82: To date 6 patients have been entered. 3 have expired and 3 still have stable disease. Protocol was closed 10/81.

Number of Subjects Studied:
FY-82: 6 Total (to date): 6 Before Completion of Study: Closed

Serious/Unexpected Side Effects in Subjects Participating in Project (If None, So State):
NONE

Conclusions: Methyl CCNU has some efficacy in patients previously refractory to other agents.

Publications or Abstracts, FY-82:
NONE

Study Objective: (continued) they have high lipid solubility and are known to cross the blood-brain barrier. They are highly active cytotoxic agents in a number of animal tumor systems. Clinical studies with Methyl CCNU have been ongoing since 1971. Methyl CCNU has shown activity as a single agent in the treatment of Melanoma. Minimal activity in colon and gastric cancer has been seen with Methyl CCNU as a single agent, but in combination with 3-FU some trials reported the efficacy is increased.
Study Objective: Streptozotocin has shown a great degree of effectiveness in metastatic islet cell carcinoma of the pancreas and metastatic carcinoid. Clinical evidence below.

Technical Approach: Streptozotocin is available for intravenous administration only. Both a five day intensive course regimen and a weekly regimen have been widely employed using this drug, with current favor given to a schedule of 500mg/m2 IV over 207

Study Objective: (continued) responses have been reported in patients with malignant islet cell tumors. Streptozotocin yields an overall response rate of approximately 70%. Even if an objective response does not occur.

Technical Approach: (continued) Bolus dose u x 5 every 6 weeks; the weekly schedule has usually been 1 mg/m2 x 4 weeks.
WRAMC Protocol #7908 was a "convenience" protocol for use of the drug streptozocin which was one of the group C drugs supplied by the NCI. This drug has now been approved by the FDA for marketing and thus there is no longer any need for a protocol #7908 is now officially closed.

RAYMOND B. WEISS
Chief
Section of Medical Oncology

Title of Protocol: WRAMC #7908, Use of Streptozotocin in the Treatment of Metastatic Islet Cell Carcinoma (Group C Drug).
STUDY OBJECTIVE: Danuomycin is known by several other names. For information purposes they include Danuorubicine, Rubidomycin, C, Cerutidine and NSC 82151.

TECHNICAL APPROACH: the currently recommended dosage of Danuomycin when it is used as a single agent is 60mg/m2 day 1 IV for three Days. the course is usually repeated at intervals of three to six weeks, depending on the status of bone marrow and periphera

Number of SUBJECTS STUDIED: [Proteinuria] 6 patients entered in 1980-81 - 4 died/1 patient is too early: 1 patient is alive with M2 marrow (Partial Response). Study closed 10/81. Prior to its closure, a total of 6 pts. were entered. to date all expired (expired)

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT IF NONE SO STATE: NONE

CONCLUSIONS: This agent DNR is of proven efficacy for Acute Leukemia. It provides availability in those patients refusing or ineligible for CALGB studies.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
STUDY OBJECTIVE: At this point in time, 5-azacytidine has demonstrated clinical effectiveness for the induction of remission in Acute Granulocytic Leukemia of adults and children previously refractory to other active anti-Leukemia drugs.

TECHNICAL APPROACH: Response rates in solid tumors and other types of leukemia have not been great enough to warrant the use of 5-Azacytidine. (below)

PROGRESS DURING FY-82: No patients entered. Study remains open, but no further patients have been entered. Both of the patients previously entered have expired.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 2  BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: 5-Azacytidine is effective in 30% of leukemia, no response documented in 2 patients here. It remains an effective agent it should be available for refractory patients.

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE

Technical Approach: (continued) 150-200 mg/m²/day intravenously for 5 days as a rapid injection. This drug course can be repeated every day 14-15 days, depending upon recovery from myelosuppression and the bone marrow findings.
**L-Asparaginase in treatment of Leukemia in Adults and Children**

**Title of Project:** WRAMC # 7911 - Use of L-Asparaginase in the treatment of Acute Lymphoblastic Leukemia in Adults and Children

**Principal Investigator(s):** Howard Tarshio, M.D.

**Associate Investigator(s):** Raymond B. Weiss, M.D., Chief of Medical Oncology

**Facility:** WRAMC

**Department/Service:** Hematology/Oncology

**Date:** 10-2-82

**Start Date:** 10-79

**Date of Completion:** 10-82

**Key Words:** L-Asparaginase in treatment of Leukemia in Adults and Children

**Accumulative PEDECASE Cost:** 0

**Accumulative Contract Cost:** 0

**Accumulative Supply Cost:** 0

**FY-83 PEDECASE:** 0

**Contract Cost:** 0

**Supply Cost:** 0

**Date of Committee Approval of Annual Progress Report:** FEB 25 1983

**Study Objective:** Erwina Cartovora Asparaginase is an antigenically non-cross-reactive Asparaginase. It has activity comparable to that of the E. Coli preparation in both animal tumor systems and in human ALL. Compare with E. Coli Asparaginase its toxicity is qualitatively and quantitatively the same. Therefore this drug represents an alternative to E. Coli Asparaginase in those situations where repeat course therapy are required or where allergic reactions force the discontinuance of the E. Coli preparation.

**Number of Subjects Studied:**

**FY-82:** 0

**Total (to date):** 0

**Before Completion of Study:** Closed

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):**

**Conclusions:**

**Publications or Abstracts: FY-82:**

**None**

**Technical Approach:** (continued) Intravenously 1,000 IU/m2 per day x 10-20 days. Intramuscularly 6,000 IU/m2 T.I.W. x 3 weeks (9 doses).

**Progress During FY-82:** No patients entered at WRAMC since this protocol was opened. It was subsequently closed 10/81. This is a finalized report.
**Study Objective:**
Cancer of the ovary is the tumor in which HMM has been shown to have a definite antitumor activity.

**Technical Approach:**
21 days (8mg/kg day) on and 21 days off drug.

**Progress During FY-82:**
Therapy should be stopped in the presence of severe leukopenia (less than 2,000/mm³) or severe thromcytopenia (less than 75,000/mm³), until marrow function has recovered. Closed 10/82. This is a finalized report.

**Number of Subjects Studied:**
FY-82: 0  
Total (to date): 0  
Before Completion of Study: Closed

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):**
NONE

**Publications or Abstracts, FY-82:**
NONE
### Study Objective:
VP-16-213 has produced partial responses in previously treated patients with a frequency ranging from 0-58% in the treatment of small cell carcinoma of the lung. Although the current recommendation is that its use below should be limited to patients refractory to "standard therapy" for this disease. Experimental data suggest that the response rates produced in previously untreated patients may be considerably higher.

### Technical Approach:
VP-16 213 should be administered intravenously over a 30-minute period. Two dose schedules have been used successfully. 60mg/m2/day x 5 (below every 2-3 weeks or 125mg/m2/day 1,3,5, every 4-5 weeks. The exact interval between subsequent courses is modified depending upon the time required from toxic manifestations.

### Study During FY-82:
6 patients have been entered and all 6 have expired.

### Conclusions:
Inadequate number of entries for evaluation. Recommend protocol be kept open for future patient entry.

### Publications or Abstracts, FY-82:
NONE

Study Objective: (continued) should be limited to patients refractory to "standard therapy" for this disease. Experimental data suggest that the response rates produced in previously untreated patients may be considerably higher.

Technical Approach: (continued) subsequent courses are modified depending upon the time required from toxic manifestations.
DATE: 10-2 82  WORK UNIT NO.: 1686  STATUS: INTERIM  FISCAL x

STARTING DATE: 81  DATE OF COMPLETION: 81

KEY WORDS: Hodgkin's disease or NHL

TITLE OF PROJECT: WRAMC # 7915 - Prevention of Gonadal Damage in Women treated with combination Chemotherapy for Hodgkin's Disease or NHL.

PRINCIPAL INVESTIGATOR(s): Raymond B. Weisse, M.D.

ASSOCIATE INVESTIGATOR(s):


ACCUMULATIVE PEDCASE COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 PEDCASE: 00  CONTRACT COST: 00  SUPPLY COST: 00  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 106:

STUDY OBJECTIVE: To protect women from Ovarian failure to chemotherapy for Hodgkin's Disease or non-HD Lymphoma.

TECHNICAL APPROACH: Randomize to receive combined oral contraceptives or serve as a control with no hormonal agents during chemotherapy.

PROGRESS DURING FY-82: Study closed. No patients entered. This is a Finalized report.

NUMBER OF SUBJECTS STUDIED:

FY-82: 0  TOTAL (TO DATE): BEFORE COMPLETION OF STUDY: closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: Principal Investigator was reassigned. Study will no longer be continued here at WRAMC.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
DATE: 10-2082  WORK UNIT NO.: 1687  STATUS: INTERIM X FINAL

STARTING DATE: 2/80  DATE OF COMPLETION:

Key Words: Methyl G for Head and Neck Carcinoma

TITLE OF PROJECT: WRAMC #8002 - Phase II evaluation of Methyl Glyoxal, Bis-Guanyl Hydrazone (Methyl -GAG) in advanced Esophageal Carcinoma, Head and Neck.

PRINCIPAL INVESTIGATOR(S): David Perry, M.D

ASSOCIATE INVESTIGATOR(S): Raymond B. Weiss, M.D. Chief, Medical Oncology

FACILITY: WRAMC


ACCUMULATIVE FEDCASE COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 FEDCASE: 00  CONTRACT COST: 00  SUPPLY COST: 00  Date of Committee Approval Of Annual Progress Report: FEB 25 1987

STUDY OBJECTIVE: To define the response rate and remission duration utilizing a weekly schedule of Methyl-GAG in patients with advanced Esophageal Carcinoma. Head and Neck cancer or cervix.

TECHNICAL APPROACH: Methyl G 500mg/m2, to be given as an intravenous infusion in d5w or normal saline over no less than 30 minutes, into a freely running IV.

PROGRESS DURING FY-82: 26 patients entered total. 9 during 82. Head and Neck (22 evaluable patients), 2/22 CR, 8/22 PR, CR+PR = 60% median duration of remission (107 days median survival). 230 day moderately severe nausea and vomiting and anemia, improved with 82 week schedule. Patients with lung cancer (2) and esophageal cancer (2) did not respond.

NUMBER OF SUBJECTS STUDIED: 22

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO State):

NONE

CONCLUSIONS: Methyl G has activity in head and neck cancer. The study is closed.

PUBLICATIONS OR ABSTRACTS: FY-82: Presented in abstract form at Army - Hematology - Oncology meeting Feb. 82. Paper submitted for publication to Cancer Treatment Reports

Need $150.00 for reprints.
**Principal Investigator(s):** Raymond R. Weiss, M.D.

**Associate Investigator(s):** H. Grant Taylor, M.D.

**Facility:** WRAMC

**Dept/Svc:** Hematology/Oncology - Dept. of Med.

**Accumulative RECOURSE Cost:** 0

**Accumulative Contract Cost:** 0

**Accumulative Supply Cost:** 0

**Date of Committee Approval of Annual Progress Report:** FEB 25 1983

**Study Objective:** Evaluate activity of Combo/Chemotherapy in RX of Advanced non-seminomatous germ cell neoplasmas.

**Technical Approach:** Cytoxan, Velban, Actino-D, Bleo, DDP, VP-16, VCR, IV q 6 weeks.

**Progress during FY-82:** 24 patients entered on study, one of whom was a protocol violation. All patients have achieved a partial response. There are 11 complete responders, 6 of whom required surgery after response to chemo. There have been 2 deaths in patients with advanced disease.

**Publications or Abstracts, FY-82:**

**Conclusion:** Too early for conclusions.

Progress during FY-82 continued: been 2 deaths in patients with advanced disease.
STUDY OBJECTIVES:
1. Demonstrate methods of evaluating peripheral blood monocyte activation.
2. Demonstrate relationship between BM phagocytosis and monocyte function.

TECHNICAL APPROACH: Numerical evaluation of phagocytic activity in bone marrow aspirates to be correlated with Mitogen transformation potential of peripheral blood monocytes.

PROGRESS DURING FY-82:
No further patients have been entered. Study has been closed to patient entry 10-81.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0  TOTAL (TO DATE): 5  BEFORE COMPLETION OF STUDY: Closed

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS:
The technician involved in assessing monocyte activation was transferred to another area and no data was gathered on monocyte activation. A retrospective review was made of bone marrow specimens performed on patients with sarcoidosis. Bone marrow phagocytic activity is increased in some patients with early stage disease.

PUBLICATIONS OR ABSTRACTS, FY-82:
DATE: 10/2/82  WORK UNIT NO.: 1692  STATUS: INTERIM X FINAL

STARTING DATE: April, 1980                DATE OF COMPLETION:

KEY WORDS: Sodium Salt of Allopurinol to Control Hyperuricemia.

TITLE OF PROJECT: WRAMC#: 8005 - Use of Sodium Salt of Allopurinol to control Hyperuricemia in patients with no therapeutic Alternative. (Burroughs Wellcome Protocol No. 78-099).

PRINCIPAL INVESTIGATOR(s): James Wilson, M.D., M.S.C

ASSOCIATE INVESTIGATOR(s): Raymond B. Weiss, M.D., Chief, Medical Oncology Service


ACCUMULATIVE FEDCASE COST: 00  ACCUMULATIVE CONTRACT COST: 00  ACCUMULATIVE SUPPLY COST: 00

FY-83 FEDCASE: 00  CONTRACT COST: 00  SUPPLY COST: 00  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: Determine efficacy of Sodium Salt of Allopurinol in the RX of Hyperuricemia patient's for whom Allopurinol is required and for whom oral intake is restricted.

TECHNICAL APPROACH:

IV Allopurinol 40-150mg/m2 every 8 hrs.

PROGRESS DURING FY-82: Three patients entered on study. Drug was effective in three patients.

NUMBER OF SUBJECTS STUDIED:

FY-82: 2    TOTAL (TO DATE): 8    BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, SO STATE):

No serious/ unexpected side effects.

CONCLUSIONS: A treatment protocol to make available an investigational drug, the use of the drug was effective in all cases.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
TITLE OF PROJECT: WRAMC: # 8006 – Clotrimazole Prophylaxis of Oral Candidiasis.

PRINCIPAL INVESTIGATOR(s): James Wilson, M.A.I., M.S.C.
ASSOCIATE INVESTIGATOR(s): Raymond R. Weiser, M.D., Chief, Medical Oncology


STUDY OBJECTIVE: 1. Determine the efficacy of Clotrimazole as a prophylactic RX for oral Candidiasis.

TECHNICAL APPROACH: Double Blind study: Clotrimazole troches 10mg vs. placebo troches.

PROGRESS DURING FY-82: 13 patients entered on study to date, and 1 in 82.

NUMBER OF SUBJECTS STUDIED:
FY-82: 1 | TOTAL (TO DATE): 14 | BEFORE COMPLETION OF STUDY: 50

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, SO STATE): NONE

CONCLUSIONS: Too few patients entered to date to evaluate results. Also, code not broken on drug identity. Another protocol had higher priority for these patients. Expect to resume protocol 9/1/82

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE
**DATE**: 10/2/82  
**KEY WORDS**: Oral Candidiasis Treatment Clotrimazole  
**TITLE OF PROJECT**: WRAMC;# 8008 - Treatment of Oral Candidiasis with Clotrimazole

**PRINCIPAL INVESTIGATOR(s)**: James Wilson, MAJ, MSC  
**ASSOCIATE INVESTIGATOR(s)**: Raymond B. Weiss, M.D., Chief Medical Oncology Ser.  
**FACILITY**: WRAMC  
**DEPT/SVC**: Hematology/ONCOLOGY, Dept of MED.

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**STUDY OBJECTIVE**: Determine efficacy of Clotrimazole in the treatment of Oropharyngeal Candidiasis.

**TECHNICAL APPROACH**: Clotrimazole troches 10mgm 5 x day/14 days

**PROGRESS DURING FY-82**: Four patients entered in FY-82. Three successfully treated. One patient withdrew on day two of study, due to Physician pressure, not to participate in unknown research. Data collection incomplete on 1 patient.

**NUMBER OF SUBJECTS STUDIED**:  
FY-82: 4  
Total (to date): 4  
Before Completion of Study: 50

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE STATE)**: NONE

**CONCLUSIONS**: Too few patients entered to date to evaluate results.

**PUBLICATIONS OR ABSTRACTS, FY-82**:  
NONE
TITLE OF PROJECT: WRAMC#8007 - Clotrimazole treatment of Oral Candidiasis in patients who fail the Clotrimazole Prophylaxis Study.

PRINCIPAL INVESTIGATOR(s): James Wilson, MAJ, MSC

ASSOCIATE INVESTIGATOR(s): Raymond B. Weiss, M.D., Chief Oncology Medical

FACILITY: WRAMC

DEPT/SVC: HEMATOLOGY Oncology - Dept. of Med.

ACCUMULATIVE PEDCASE COST: 00
ACCUMULATIVE CONTRACT COST: 00
ACCUMULATIVE SUPPLY COST: 00

FY-82 PEDCASE: 00
CONTRACT COST: 00
SUPPLY COST: 00

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: Evaluate efficacy of Clotrimazole RX of Oral Candidiasis in patients who fail Clotrimazole prophylaxis study.

TECHNICAL APPROACH: Clotrimazole troches 10mg 5x da/14 days.

PROGRESS DURING FY-82:
3 patients were entered in FY 81. No patients entered for FY 82.

NUMBER OF SUBJECTS STUDIED:
FY-82: 0
TOTAL (to date): 3
BEFORE COMPLETION OF STUDY: 50

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): NONE

CONCLUSIONS: Too few patients entered to date to evaluate.

PUBLICATIONS OR ABSTRACTS, FY-82:
NONE
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**Key Words:** Fertility and Sexual Function Study

**Title of Project:** WRAMC # 8009: Evaluation of Fertility and Sexual function in men with non-lymphomatous malignancies, non-malignant chronic illness and normal health.

**Principal Investigator(s):** Raymond B. Weiss, M.D.

**Associate Investigator(s):**

**Facility:** WRAMC  
**Dept/Svc:** Hematology/Oncology - Dept. Of Med.

**Accumulative PEDCASE Cost:** 00  
**Accumulative Contract Cost:** 00  
**Accumulative Supply Cost:** 00  

**FY-83 PEDCASE:** 00  
**Contract Cost:** 00  
**Supply Cost:** 00  
**Date of Committee Approval of Annual Progress Report:** FEB 25, 1983

**Study Objective:** Determine presence or absence of sexual fertility dysfunction in men with untreated H.D.

**Technical Approach:** Semen analysis prior to HCG stimulation testing.

**Progress During FY-82:** Study was closed 10/81. No patients were ever entered on this study. This is a finalized report.

**Number of Subjects Studied:**
- FY-82: 0  
- Total (to date): 0  
- Before Completion of Study: Closed

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**

**None**

**Conclusions:**

None

**Publications or Abstracts, FY-82:**

None
Study Objective: This study will determine the presence, degree and etiology of the low hematocrit seen in long distance runners.

Technical Approach: The presence and degree of anemia will be determined by measuring the HB, BILI, LDH, heptoglobin and serum free hemoglobin in long distance runners during a marathon. The etiology will be studied by examining the membrane for missing or abnormal proteins. This study was completed on the first 8 subjects.

Number of Subjects Studied:

FY-82: 8  Total (to date): 9  Before Completion of Study: 15

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):

NONE

Conclusions:

Publications or Abstracts, FY-82:

NONE
1. Maj Rinke requested to know why we have not closed the study after the completion of 8 subjects (WRAMC # 1697 - Hemolytic Anemia in Marathon Runners). The reason the study has remained open is related to the findings in the first eight subjects. It was found that there is a decrease in band 4.1 of the RBC membrane. Since we are investigating the cause of RBC destruction and since this band has been implicated in RBC membrane stability, it is correlated. We are now investigating the reproducibility of this phenomenon in the test tube. Because the laboratory portion of the study is still ongoing, we have elected to continue the study.

Louis F. Diehl, MD
MAJ, MC
Hematology-Oncology Service
The use of Delta-9-Tetrahydrocannabinol for nausea and vomiting induced by antineoplastic chemotherapy.

Principal Investigator(s): James Wilson, MAJ. MSC

Associate Investigator(s): Raymond B. Weiss, M.D. Chief, Medical Oncology Ser.

Facility: WRAMC

Study Objective: To evaluate efficacy of THC in control of nausea and vomiting induced by antineoplastic chemotherapy.

Technical Approach: Administration of oral capsules of Delta-9-Tetrahydrocannabinol as supplied by the National Cancer Institute under Class "C" guideline.

Progress During FY-82: Drug not effective clinically in any patients to date (preliminary observation). All data not reviewed to date. 2 patients entered.

Number of Subjects Studied:

FY-82: 2

Total (to date): 2

Before Completion of Study: Open study

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): None

Conclusions: Too few patients entered to date. Oral dose in protocol may be too low to achieve desired antiemetic effects.

Publications or Abstracts, FY-82:

None
Study Objective: To evaluate activity of combination chemotherapy in locally advanced Head and Neck Cancer. To define eligibility, toxicity, response and resectability criteria in patients with Stage III and IV head and Neck Cancer.

Technical Approach: Vinblastine 4.0mg/m2 IV day 1, Bleomycin 15um day 1, Cisplatin 60mg/m2 IV day 8 g21days x 4 course 1 month after achieving complete remission from surgery and/or radiation.

Progress During FY-82: If in complete remission following surgery and radiation, combination Chemo. (Velban, Bleo, And Cis-Plat) g 21 days for 4 cycles.

Number of Subjects Studied:
FY-82: 1 Total (to date): 1 Before Completion of Study: closed

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None

Conclusions: Entry in 11 months. Study is closed due to poor accrual.

Publications or Abstracts, FY-82:
None
STARTING DATE: 1/81
DATE OF COMPLETION:

KEY WORDS: Chemotherapy Squamous Cell Carcinoma of Head and Neck

TITLE OF PROJECT: WRAMC # 8101 - Induction Chemotherapy, Surgery, Radiation and Subsequent Adjuvant Chemotherapy for stage III and IV Squamous Cell Carcinoma of the Head and Neck.

PRINCIPAL INVESTIGATOR(s): David Perry, M.D.
ASSOCIATE INVESTIGATOR(s): Raymond B. Weiss, M.D. Chief, Oncology Service

FACILITY: WRAMC
DEPT/SVC: Hematology/Oncology, Dept. of Med.

ACCUMULATIVE FEDERAL COST: 00
ACCUMULATIVE CONTRACT COST: 00
ACCUMULATIVE SUPPLY COST: 00

FY-83 FEDERAL: 00
Contract Cost: 00
Supply Cost: 00

FEDERAL COMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

STUDY OBJECTIVE: To evaluate activity of combination chemotherapy regimens in locally unresectable or advanced head and neck cancer. To define eligibility toxicity, response and resectability criteria for patients with Stage III and IV Head & Neck Cancer

TECHNICAL APPROACH: Medium dose MTX and 5u intil partial or complete response followed by surgery or radiation at week 8-4 wks, later, combination chemotherapy (Velban, Bleo, and Cis-PLAT) q 21 days for 4 cycles.

PROGRESS DURING FY-82: 7 patients were entered to date. 1 Had Lymphoma on final path., 5/6 have responded to therapy. Study to remain open to Accural of total 30 pts.

NUMBER OF SUBJECTS STUDIED:
FY-82: 3
TOTAL (TO DATE): 7
BEFORE COMPLETION OF STUDY: 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE DO STATE):
NONE

CONCLUSIONS:
Only 5 patients from which to generate data. Not enough information to make conclusion as yet.

PUBLICATIONS OR ABSTRACTS. FY-82:
NONE
STARTING DATE: July 1981
DATE OF COMPLETION: June 1984

Key Words: Bone Marrow Granulocytes disorders

TITLE OF PROJECT: WRAMC: Regulation of Granulopoiesis in Vitro—Incorporation of "C-Glucosamine in normal human bone marrow, granulocytes with patients sera with primary and secondary B.M. granulocyte disorders.

Principal Investigator(s): Howard Terebelo, M.D.
Associate Investigator(s):

Facility: WRAMC

Accumulative PECASE Cost: 00
Accumulative Contract Cost: 00
Accumulative Supply Cost: 00

FY-83 PECASE: 00
Contract Cost: 00
Supply Cost: 00

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB 25 1983

Study Objective: 1. Purification of stimulators and inhibitors that are responsible for the regulation of Granulopoiesis. 2. to study the rate of Bone marrow granulocyte maturation in primary bone marrow disorders and secondary TECHNICAL APPROACH: [reactive disorders.]

Serum will be collected and evaluated for rate of normal BM maturation, biochemical characteristics, inhibition of Glycosylation. Substances to be analyzed

Progress During FY-82: [will be inhibitors and stimulators.

We are nearing the end of this study as we have identified a repetitive pattern of granulocyte proliferation with inflammatory serum confirmed by HPLC analysis.

Number of Subjects Studied:
FY-82: 10
TOTAL (TO DATE): 60
BEFORE COMPLETION OF STUDY: 60

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): NONE

Conclusions: Serum from patients with inflammatory conditions (Septic) dramatically increases "C-Glucosamine incorporated in immature granulocytes. This rate of incorporation corresponds with the granulocyte turnover and decreases over a period of 72 hours.

Publications or Abstracts, FY-82:


Manuscript in preparation.
DATE: 10/21/82  WORK UNIT NO.: 1603-81  STATUS: INTERIM X  FINAL
STARTING DATE: 30 JUNE 81  DATE OF COMPLETION:

KEY WORDS: Delta-9-Tetrahydrocannabinol plasma levels and Pharmacokinetics.
TITLE OF PROJECT: WRAC #: 8104- Delta-9-tetrahydrocannabinol Plasma Levels and Pharmacokinetics.

PRINCIPAL INVESTIGATOR(S): James P. Wilson, MAJ. MSC
ASSOCIATE INVESTIGATOR(S): Raymond B. Weiss, M.D. Chief Medical Oncology Ser.

STUDY OBJECTIVE: To determine if an antinausea/antivomiting effect of Delta-9-Tetrahydrocannabinol is directly related to plasma levels.

TECHNICAL APPROACH: Plasma assay by radioimmunassay and GLC.

PROGRESS DURING FY-82: Two patients entered on study.

NUMBER OF SUBJECTS STUDIED:
FY-82: 2  TOTAL (TO DATE): 2  BEFORE COMPLETION OF STUDY: 24

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, SO STATE):
NONE

CONCLUSIONS: Additional patients needed for study.

PUBLICATIONS OR ABSTRACTS, FY-82:

NONE
Adenocarcinoma - Undifferentiated Ca.

Title of Project: WRAMC # 8103 - Pilot Study of VAB-6 Chemotherapy of Adenocarcinoma and undifferentiated Carcinoma of Unknown Primary.

Principal Investigator(s): Bruce Booth, M.D.

Associate Investigator(s): Raymond B. Weiss, M.D.

Facility: IRCMC

Date of Committee Approval of Annual Progress Report: FEB 25 1983

Study Objective: To determine the efficacy of VAB-6 in the treatment of Adenocarcinoma or undiff. carcinoma of unknown primary.

Technical Approach:
Cytoxan 600 mg/m^2 IV day 1 — Vinblastine 4mg/m^2 IV day 1
Actinomycin D 1mg/m^2 IV day 1 — Bleomycin 30 mg/m^2 IV day 1,20mg/m^2 IM Day 263.
Oncovin 120 mg/m^2 IV day 4.

Patients Enrolled: 4

Outcome: 4 Patients have been entered. 3 have progressed and died of their disease. 1 pt. just entered.

Conclusion: Data too sparse at this time.
Collaborative Phase II Study of AZQ in patients with Malignant Glioma and Metastatic Brain Tumors.

PRINCIPAL INVESTIGATOR(S): Raymond H. Weiss, M.D.
ASSOCIATE INVESTIGATOR(S): H. Grant Taylor, M.D.

TECHNICAL APPROACH: AZQ - 20mg/m2 in 150-ML of NSS over 20 minutes.

Progress During FY-82: Entered only one patient. Had tumor progression after 4 cycles. Has expired.

Number of Subjects Studied:
FY-82: 1  Total (to date): 1  Before completion of study: 15

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state): NONE

Conclusions: Data is too sparse to formulate any conclusions.

Publications or Abstracts, FY-82:
NONE
STUDY OBJECTIVE: To identify predisposing predictive tests for development of thrombotic tendency in patients receiving adjuvant chemotherapy.

TECHNICAL APPROACH: Samples of plasma will be obtained prior to 1st dose of induction therapy, days 2, 3, and 4 of induction, day 8, 15, 29, and 43 of induction cycle. Day 85 (maintenance) and q 3 months for last year.

PROGRESS DURING FY-82: Plasma samples have been collected on 7 entered patients, no thrombotic episodes have been observed. No data analysis has been made to date.

NUMBER OF SUBJECTS STUDIED:
FY-82: 7
TOTAL (TO DATE): 7
BEFORE COMPLETION OF STUDY: 20

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
NONE

CONCLUSIONS: Accrual continues slightly below the projected rate.
To determine toxicity and efficacy of CBDCA in treating patients with metastatic carcinoma refractory to conventional therapy.

CBDCA 320 mg/m² q 28 days.

6 patients were entered on study. 3 patients have had disease progression and expired. 2 have essentially stable disease and are still being treated. 1 patient was treated 2 x then taken off study because of hematological toxicity.

1 patient experienced severe hematological toxicity.

NONE
To evaluate four areas of RBC structural protein abnormalities in the pre and post splenectomy situation.

Obtain blood by the standard venipuncture, separate whole blood into cellular fractions and do specific tests on RBC's.

Acquired all techniques to perform study.

We will be able to utilize laboratory techniques that we perfected over last 12 months.
To determine if the GL-13-BC Leukemia is an effective in vitro model for human CML blast crisis.

See abstract attached.

Have finished 80% of drug work. Are now doing animal data.

GL-13-BC Leukemia is a unique cell line providing a valuable tool in the investigation of CML in blastic transformation.

Blood Supplement NOV. 1982
Droperidol HPLC Method

WRAMC # 8206 – The Development of a High Pressure Liquid Chromatographic (HPLC) Method to Assay Droperidol.

James P. Wilson, Pharmacist – Maj., MC


FEB 25 1983

To develop an assay for Droperidol

Modify a currently available assay for Haldol and make it applicable for Droperidol.
To study the rate of decay of Droperidol in various IV fields.

Use the HPLC assay developed in WRAMC # 8206 and determine stability of Droperidol in IV fields.
THC - Chemotherapy, Nausea and Vomiting

Title of Project: WRAMC # 8201 - the Use of Delta-9-Tetra-Hydrocannabinol (THC) for Chemotherapy induced Nausea and Vomiting.

Principal Investigator(s): James P. Wilson, Pharmacist, D.

Associate Investigator(s):

Facility: WRAMC

Department/Study: Hematology/Oncology - Dept. Of Med.

Study Objective: To determine the efficacy of THC as an antiemetic for use in Cancer chemotherapy patients.

Therapeutic Product: THC 10mg/m2 PO 4 to 6 hours prior to administration of Chemotherapy - every 4 to 6 hours for duration of chemotherapy and for 12 hours thereafter.

Study Dates: Fy-82: Only 1 patient has been entered.

Number of Subjects Studied:

FY-82: 1

Total (to date): 1

Before Completion of Study: 15

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): NONE

Conclusions: WRAMC experience thus far too limited to formulate any conclusions.

Publications or Abstracts: FY-82: NONE
DATE: 10-2-82  WORK UNIT No.: 1613 -82  STATUS: INTERIM X FINAL

STARTING DATE: 4-82  DATE OF COMPLETION:

Key Words: Recurrent Of Metastatic Squamous Cell Carcinoma - Head and Neck

TITLE OF PROJECT: WRAMC # 8205 - Master Section For Phase II Studies For Recurrent Or Metastatic Squamous Cell Carcinoma to The Head and Neck.

Principal Investigator(s): David J. Perry, M.D.

Associate Investigator(s):

Facility: WRAV


ACCUMULATIVE FEDCASE COST: 0  ACCUMULATIVE CONTRACT COST: 0  ACCUMULATIVE SUPPLY COST: 0

FY-83 FEDCASE: 0  CONTRACT COST: 0  SUPPLY COST: 0  Date of Committee Approval of Annual Progress Report: FEB 25 1983

Study Objective: to outline procedure for Phase II studies to screen single agents or combination of agents for significant activity in recurrent or metastatic Head and Neck Cancer.

Technical Approach:
Bisantrane 260 mg/m2/ IV q 21 days.

Progress During FY-82: 1 patient has been entered to date.

Number of Subjects Studied:
FY-82: 1  Total (to date): 1  Before Completion of Study: 30

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
NONE

Conclusions:
NONE

Publications or Abstracts: FY-82:
NONE

239
To determine whether fertility has been preserved after treatment with an intensive regimen of chemotherapy drugs.

Mailing a questionnaire and consent form to patients treated with VAB III. Data from questionnaire will then be collected, analyzed and prepared for publication.

As of this report, protocol has not been approved and therefore has not been implemented.
**Study Objective:** 1. To determine response and survival in patients with Refractory Non-Hodgkins Lymphoma treated with VAB. 2. To determine toxicity of VAB in previously treated patients.

**Technical Approach:** Cytoscan 600 mg/m2 IV day 1; Vinblastine 4 mg/m2 IV day 1; Bleomycin 30U IV day 1, 20 U/m2 IV day 1-3, Actinomycin D 1 mg/m2 day 1 and Cisplatin 120mg/m2 IV day 4.

**Progress During FY-82:** No patients have been entered to date.

**Number of Subjects Studied:**
- FY-82: 0
- Total (to date): 0
- Before completion of study: 14

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):** None

**Conclusions:** Too Soon

**Publications or Abstracts, FY-82:** None
### Study Objective:
To demonstrate and better define period of apnea during sleep in hypothyroid patients.

### Technical Approach:
Using standard polysomnographic techniques patients will be monitored during sleep and the records analyzed for the relative frequency and type of apnea.

### Progress During FY-82:
Three additional patients with hypothyroidism have been studied and apneas during sleep noted in this group. Because of the difficulty in obtaining patients with hypothyroidism without treatment it is anticipated that this project will be completed in cooperation with another institution. (below)

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### Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):
None

### Conclusions:
Satisfactory progress.

### Publications or Abstracts, FY-82:
None

**Progress During FY-82:** (continued) Patients with hypothyroidism and apnea have been identified at the University of Colorado, Denver, and it is proposed that patients from both Medical Centers be reported simultaneously in one publication. Dr. Clifford W. Zwillich has agreed to a collaborative publication.
DATE: 26 Jan 83  WORK UNIT NO.: 1701  STATUS: INTERIM X FINAL

STARTING DATE: December 1980  DATE OF COMPLETION: December 1983

KEY WORDS: Medroxy Progesterone Acetate, Apnea

TITLE OF PROJECT: Medroxy Progesterone Acetate, (MPA) in the Sleep Apnea Syndrome (SAS)

PRINCIPAL INVESTIGATOR(s): Krishnan R. Rajagopal, MAJ, MC
ASSOCIATE INVESTIGATOR(s): Bahman Jabbari, LTC, MC, Claude J. Tellis, LTC, MC

FACILITY: WRAMC  DEPT/SVC: Medicine/Pulmonary

ACCUMULATIVE PDCASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST:


STUDY OBJECTIVE: To determine the efficacy of Medroxy Progesterone Acetate in the Sleep Apnea Syndrome. Changes in frequency and duration of apneic episodes would be evaluated and improved chemoresponsiveness as a possible mode of action will be investigated.

TECHNICAL APPROACH: Nocturnal polysomnography, hypercapnic and loading responses will be performed prior to, during and after a 4 week treatment period with 20mg t.i.d. of medroxy progesterone acetate.

PROGRESS DURING FY-82: Three additional patients were studied and the necessary data obtained. Excellent sleep recordings have been obtained and tests of respiratory control well tolerated. The large amount of data that has been accumulated thus far is now

NUMBER OF SUBJECTS STUDIED:
FY-82:  TOTAL (TO DATE):  BEFORE COMPLETION OF STUDY: 15-20

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF HAVE SO STATE):
no patient in this study has had any side effects.

CONCLUSIONS: Excellent progress has been achieved and the study is near completion. The tremendous amount of data that has been obtained has to be critically analyzed and is this is being done with computer help at the medical school.


Progress During FY-82: (continued) being analyzed with computer programming available at the Uniformed Services Medical School.

243
STUDY OBJECTIVE: To test respiratory control mechanisms in presenile dementia to test the hypothesis that load compensation is manifested only in the presence of intact cerebral cortical function.

TECHNICAL APPROACH: Ventilatory and loading responses to hypercapnia will be assessed in 10 subjects and compared to results obtained by similar techniques in volunteer controls.

PROGRESS DURING FY-82: After final approval was obtained from HSC, Ft. Samm, two patients were tested on the ventilatory hypercapnic response circuit. Patient attention span has been small and there has been technical difficulties (below RM-Wil OF SUBJECTS STUDIED:

<table>
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<th>FY-82</th>
<th>TOTAL (TO DATE)</th>
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</table>

CONCLUSIONS: It has been difficult to find patients that adequately meet the criteria for the protocol, however, it is anticipated that over a 2 year span the study can be completed.

PUBLICATIONS OR ABSTRACTS, FY-82:

Progress During FY-82: (continued) in performing the test in the group. Subsequently, it was decided to attempt the test only on non psychotic presenile dementia patients. It has been difficult to find such patients, however, it is anticipated that over the span of two years enough patients will be obtained to complete the trial.
DATE: 27 Jan 83  WORK UNIT NO.: 1703  STATUS: INTERIM  X  F:\1\R
START\\ DATE: July 1980  DATE OF COMPLETION: December 1984

KEY WORDS:
TITLE OF PROJECT: Comparison of daily vs alternate day Prednisone therapy in pulmonary sarcoidosis.

B. Lynn Feaster, M.D. MAJ, MC

PRINCIPAL INVESTIGATOR(s):
ASSOCIATE INVESTIGATOR(s): Larry Spratling, M.D., Claude J. Tellis, LTC, MC

FACILITY: WRAMC  DEPT/SVC: Medicine/Pulmonary

ACCUMULATIVE FEDCASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST:

FY-83 FEDCASE:  CONTRACT COST:  SUPPLY COST:  DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT

Study Objective: To determine if alternate day Prednisone therapy is as effective as daily therapy in the treatment of pulmonary sarcoidosis

TECHNICAL APPROACH: Patients with Stage II sarcoid will be randomly assigned to every day or alternate day therapy for 6 months. Clinical status, CXR, pulmonary functions and serum chemistries will be followed.

PROGRESS DURING FY-82: Few additional patients have been studied. Patients from other medical centers are also being included and hopefully the project will be completed on time.

NUMBER OF SUBJECTS STUDIED:
FY-82: 10  TOTAL (TO DATE): 25  BEFORE COMPLETION OF STUDY: 50-100

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):
None

CONCLUSIONS: Progress has been satisfactory and hopefully protocol will be completed on time.

PUBLICATIONS OR ABSTRACTS, FY-82:

245
**DATE:** 28 Jan 83  
**Work Unit No.:** 1704  
**Status:** Intern x  

<table>
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<tr>
<th>START Date:</th>
<th>October 1980</th>
<th>DATE OF COMPLETION:</th>
<th>December 1984</th>
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**KEY WORDS:** high frequency ventilation, ARDS

**TITLE OF PROJECT:** High frequency positive pressure ventilation (HFPPV) in patients with respiratory failure

**PRINCIPAL INVESTIGATOR(s):** James J. Bombenger, MAJ, MC

**ASSOCIATE INVESTIGATOR(s):** S.S. Derderian, MAJ, MC, Krishnan R. Rajagopal, MAJ, MC

**FACILITY:** KEMC  
**DEPT/SVC:** Medicine/Pulmonary

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<tr>
<th>FY-83 PEDCASE Cost</th>
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**STUDY OBJECTIVE:** To test hypothesis that HFPPV may be life-saving in patients with respiratory failure who cannot be supported by conventional means.

**TECHNICAL APPROACH:** In patients with respiratory failure who meet the preset criteria for failure to improve on conventional ventilation HFPPV will be initiated and physiologic and hemodynamic measurements made. Each patient will be his/her own control and there will be no random selection.

**PROGRESS DURING FY-82:** Because of the lack of equipment support this protocol could not be initiated on patients with respiratory failure in the Intensive Care Unit during this fiscal year. It is anticipated the when equipment becomes available this year an average of 5-10 patients should be studied over a 6 month period.

**NUMBER OF SUBJECTS STUDIED:**

- FY-82: 0  
- TOTAL (to date): 1  
- BEFORE COMPLETION OF STUDY: 20

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** None

**CONCLUSIONS:** Lack of the necessary equipment support has resulted in inadequate progress on this protocol. As the equipment becomes available the study will hopefully be completed on time.

**PUBLICATIONS OR ABSTRACTS, FY-82:**

**Associate Investigator(s):** (continued)

- Claude J. Tellis, LTC MC
- Keith K. Hunt, Jr., COL MC
- Peter H. Abbrecht

246
**Title of Project:** Determinants of resistive loaded breathing

**Principal Investigator(s):** Peter H. Abbrecht

**Associate Investigator(s):** Krishnan R. Rajagopal, MAJ, MC

**Facility:** IMAE

**Department/Specialty:** Medicine/Pulmonary

**Cumulative PEDCASE Cost:**

**Cumulative Contract Cost:**

**Cumulative Supply Cost:**

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<td><strong>FEB 25 1983</strong></td>
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**Study Objective:** To define the mechanisms that determine the performance of respiratory control systems, to determine the relationships among flow, resistance, and respiratory drive in normal subjects and patients with chronic obstructive pulmonary disease.

**Technical Approach:** Hypercapnic responses during rebreathing without and after the addition of three levels of loads. Exercise ventilatory and drive responses without and after the addition of three levels of loads. Maximum ventilation during loading. Responses to threshold loading.

**Progress During FY-82:** Four normal volunteers have been tested successfully using the above protocol. Each test run is an extensive, often 4-5 day, duration. However, excellent progress has been achieved. Computer deduction of data has been satisfactory thus far.

**Number of Subjects Studied:**

FY-82: 4

Total (to date): 4

Before Completion of Study: 18

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):**

N/a

**Conclusions:** With continued progress it is anticipated that this study will be completed by the expected date.

**Publications or Abstracts, FY-82:**

247
DATE: 27 Jan 83  WORK UNIT NO.: 1707  STATUS: INTERIM  X  FINAL
STARTING DATE: May 1981  DATE OF COMPLETION: 30 June 1984

KEY WORDS: pulmonary fibrosis, nocturnal desaturation

TITLE OF PROJECT: Relationship between respiratory control mechanisms and nocturnal desaturation in diffuse pulmonary fibrosis

PRINCIPAL INVESTIGATOR(s): Krishnan R. Rajagopal, MAJ, MC
ASSOCIATE INVESTIGATOR(s): Warren L. Tamamoto, Maj, MC
FACILITY: WRAMC

ACCUMULATIVE PEDCASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST:


STUDY OBJECTIVE: To evaluate the relationship between respiratory control mechanisms assessed in the awake state and nocturnal desaturation in a well-defined group with pulmonary fibrosis.

TECHNICAL APPROACH: To study subjects with pulmonary fibrosis with standard nocturnal polysomnographic techniques and identify the frequency and severity of desaturation. Respiratory control will be assessed by hypercapnia and loading responses and the relationship between nocturnal desaturation and respiratory control will be assessed and compared to data obtained by similar techniques in controls.

PROGRESS DURING FY-82: The equipment necessary for the start of this protocol is as yet unavailable. Preliminary EEG recordings obtained on the Hewlett-Packard system were found to be consistently unsatisfactory. Subsequently a Branca-Dynograph (a multichannel polysomnographic recorder) has been requested.

NUMBER OF SUBJECTS STUDIED:

FY-82: TOTAL (to date): 20 Patients  BEFORE COMPLETION OF STUDY: 20 controls

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE 50 STATE):

N/A

CONCLUSIONS: The capnometer which is initially not available is currently being used in the laboratory. However, a reliable polysomnograph is not available and until such equipment is available this and other related protocols cannot be initiated.

PUBLICATIONS OR ABSTRACTS: FY-82:

Technical Approach: (continued) assessed and compared to data obtained by similar techniques in controls.

Progress During FY-82: (continued) Progress with this protocol is possible only if the recorder becomes available. Currently in our laboratory a capnometer which is necessary for recording transcutaneous carbon dioxide measurements during sleep is available. The only hold-up is the lack of the polysomnograph.
### Study Objective
To study respiratory control in palatal myclonus. This will test the hypothesis that ventilatory response to hypercapnia is depressed in central lesions of the brainstem.

### Technical Approach
Ventilatory and respiratory drive responses will be assessed during hypercapnic and loading responses and compared to data obtained in volunteer subjects using similar techniques.

### Progress During FY-82
One additional patient with palatal myoclonus has been studied. Even though this is an extremely rare disorder we have already studied four subjects. It is conceivable that within the time of the protocol the required number of patients will be studied.

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### Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):
N/A

### Conclusions
Satisfactory progress and the protocol should be completed on time.

### Publications or Abstracts: FY-82

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249
STUDY OBJECTIVE: To evaluate abnormalities and pulmonary functions in untreated and treated patients with mixed connective tissue disease.

TECHNICAL APPROACH: To include a history and physical examination and routine and sophisticated tests of pulmonary functions. Such tests would include lung volumes, flow, and tests of respiratory mechanics to include compliance. Tests of distributional (below) concentration will also be assessed. Balloon type catheters will be used for measurement of compliance and transdiaphragmatic pressure.

CONCLUSIONS: Fairly adequate progress has been made with this protocol and because of the limited number of patients with mixed connective tissue disease that are available for study it has been difficult to increase the number of subjects studied. It is however, anticipated that the study could be completed on time.

PUBLICATIONS OR ABSTRACTS, FY-82:

Technical Approach: (continued) ventilation including nitrogen washout, and tests of airways resistance and small airways function will also be assessed. Balloon type catheters will be used for measurement of compliance and transdiaphragmatic pressure.
TITLE OF PROJECT: Relationship between respiratory control mechanisms and nocturnal desaturation in obese subjects

PRINCIPAL INVESTIGATOR(s): Warren I. Tanimoto, CPT, MC; Krishnan R. Rajagopali, MAJ, MC

ASSOCIATE INVESTIGATOR(s): Keith K. Hunt, Jr., COL, MC; Kenneth D. Burmelyn, LTC, MC

FACILITY: WRAMC

DEPT/SVC: Medicine/Pulmonary

ACCUMULATIVE FDCASE COST: $0

ACCUMULATIVE CONTRACT COST: $0

ACCUMULATIVE SUPPLY COST: $0

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: Feb 25, 1983

STUDY OBJECTIVE: Assess the frequency and severity of nocturnal desaturation in asymptomatic obese subjects and to assess the relationship between respiratory control mechanisms and nocturnal desaturation in obese pts vs non-obese control.

TECHNICAL APPROACH: Respiratory control mechanisms will be assessed using hypercapnic and flow resistive loading responses. Standard nocturnal polysomnographic techniques will be used to assess the frequency and severity of nocturnal desaturation. The relationship between chemical control mechanisms and frequency and severity of desaturation will be assessed.

PROGRESS DURING FY-82: The Hewlett-Packard capnometer with transcutaneous monitoring capability of arterial CO2 is currently available in the laboratory. However, as mentioned in the annual report of yet another protocol the lack of availability of a polysomnograph has been an major obstacle. Until a polysomnograph is available (below) number of subjects studied: 20 subjects

FY-82: Total (to date): 20 controls

Serious/Unexpected Side Effects in Subjects Participating in Project (If More than One State): N/A

CONCLUSIONS: The study will begin when multi-channel recording capability is available in this laboratory.

PUBLICATIONS OR ABSTRACTS, FY-82:

Technical Approach: (continued) nocturnal desaturation episodes will be analyzed using appropriate statistical methods.

Progress During FY-82: (continued) for multichannel recording is available this protocol cannot be initiated.
Study Objective: To determine the incidence of lung dysfunction in patients with psoriatic arthritis.

Technical Approach: To obtain complete pulmonary function testing, arterial blood gases, lung compliance and related measurements of lung mechanics of patients with psoriatic arthritis.

Progress During FY-82: Equipment that is necessary has been obtained. About 10 patients have been studied using this protocol and abnormalities in pulmonary function have been observed in a few.

Number of Subjects Studied:

FY-82: 10  Total (to date): 10  Before Completion of Study: 20

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): None

Conclusions: Adequate progress has been made.

Publications or Abstracts, FY-82:

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DATE: 27 Jan 83  WORK UNIT NO.: 1711  STATUS: INTERIM  X  FINAL

STARTING DATE: 29 May 1981  DATE OF COMPLETION: December 1983

KEY WORDS: Psoriatic arthritis, pulmonary function testing

TITLE OF PROJECT: Pulmonary Function in Psoriatic Arthritis

PRINCIPAL INVESTIGATOR(s): B. Lynn Feaster, MAJ, MC

ASSOCIATE INVESTIGATOR(s): Krishnan R. Rajagopal, MAJ, MC, R. Raskin, MC

 FACILITY: WRAoC  DEPT/SCI: Medicine/Pulmonary

ACCUMULATIVE PEDICASE COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST:


252
START DATE: 1 Jul 82
DATE OF COMPLETION: 1 Jul 83

TITLE OF PROJECT: Investigation of abnormalities of Somato-Sensory Evoked Responses in patients with chronic pulmonary disease

PRINCIPAL INVESTIGATOR(S): Bahman Jabbari, LTC, MC  Krish Rajabopal MAJ, MC
ASSOCIATE INVESTIGATOR(S): Carl H. Gunderson COL MC

FACILITY: MVE Evoked Lab  DEPT/SVC: Neurology

STUDY OBJECTIVE: To determine presence or absence of dysfunction of central sensory pathway in COPD.

TECHNICAL APPROACH: Patients with established COPD are tested by the somatosensom and peripheral conduction velocity studies—Peripheral and central conduction velocities are measured.

PROGRESS DURING FY-82: One patient with CPD was tested. The central conduction time was normal. The peripheral sensory conduction was delayed.

NUMBER OF SUBJECTS STUDIED:
FY-82: 1  TOTAL (TO DATE): 1

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NICE 50 STATE):
None

CONCLUSIONS: This study showed presence of a peripheral neuropathy. The central sensory conduction was normal.

PUBLICATIONS OR ABSTRACTS, FY-82:
None.
TITLE OF PROJECT:
FAMILY WITH HEREDITARY MYXO-VASCULAR FIBROMAS

PRINCIPAL INVESTIGATOR(S): JOHN L. PETERSON, MAJ. MC (He is no longer at WRAMC)
ASSOCIATE INVESTIGATOR(S):

FACILITY: WRAMC
DEPT/SVC: DERMATOLOGY SERVICE

ACCUMULATIVE PEDCASE COST: ____________________________ ACCUMULATIVE CONTRACT COST: ____________________________ ACCUMULATIVE SUPPLY COST: ____________________________

FY-83 PEDCASE: ____________________________ CONTRACT COST: ____________________________ SUPPLY COST: ____________________________

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT: FEB. 25, 1982

STUDY OBJECTIVE:

TECHNICAL APPROACH:

PROGRESS DURING FY-82:

NUMBER OF SUBJECTS STUDIED:
FY-82: ____________________________ TOTAL (TO DATE): ____________________________ BEFORE COMPLETION OF STUDY: ____________________________

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

CONCLUSIONS:

PUBLICATIONS OR ABSTRACTS, FY-82:

254
Study Objective:
Double-blind test of whether intralesional bleomycin is an effective treatment for previously treatment-resistant warts.

Technical Approach:
Use patient as their own control by injecting one wart with bleomycin and another wart with diluent.

Progress During FY-82:
Code not broken, but in double-blinded patients, one wart has shown resolution, while the other one injected had no change.

Number of Subjects Studied:
FY-82: three  Total (to date): three  Before completion of study: 100

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state): none

Conclusions:
Preliminary results look promising.

Publications or Abstracts, FY-82: none
DATE: Oct 1982  WORK UNIT No.: 1905  STATUS: INTERIM X  FINAL
STARTING DATE: 27 Sep 1977  DATE OF COMPLETION: 1983
KEY WORDS: Neisseria gonorrhoeae, local immunity
TITLE OF PROJECT: Local Immune Response to Neisseria gonorrhoeae in Humans

PRINCIPAL INVESTIGATOR(s): EDMUND C. TRAMONT, COL, MC
ASSOCIATE INVESTIGATOR(s): John W. Boslego, MAJ, MC
Jennie Ciak, GS-12

TITLE OF PROJECT: Local Immune Response to Neisseria gonorrhoeae in Humans

ACCUMULATIVE FEDCASE COST: $20,000.00  ACCUMULATIVE CONTRACT COST: $1,000.00  ACCUMULATIVE SUPPLY COST: $15,000.00

FY-83 FEDCASE: CONTRACT COST: SUPPLY COST: $1,000.00  DATE OF COUNTRY APPROVAL OF ANNUAL PROGRESS REPORT FEB 25 1983

STUDY OBJECTIVE: To study the local immune response to mucosal infection with N. gonorrhoeae or to immunization with a gonococcal vaccine.

TECHNICAL APPROACH: Male and female local secretions are collected following natural infection or immunization. Antibody levels are measured by ELISA or SPRIA. Functional antibodies are measured via the inhibition of attachment assay.

PROGRESS DURING FY-82:
(See attached sheet)

NUMBER OF SUBJECTS STUDIED: All human subjects immunized under separate protocol
FY-82: Total (to date): BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NONE 90 STATE):
NONE

CONCLUSIONS: These findings suggest that a gonococcal pilus vaccine may be efficacious in preventing gonorrhea.

PUBLICATIONS OR ABSTRACTS, FY-82: 256
Progress during FY-82:

1. Monoclonal antibodies were raised which are specific against *N. gonorrheae* pili (the gonococcal vaccine). These antibodies are to be used to study the antigenic heterogeneity of gonococcal pili.

2. Local antibodies induced by the gonococcal pilus vaccine were further evaluated and found to bind to heterologous pili. These antibodies also inhibit the binding of homologous and heterologous strains of *N. gonorrheae* to epithelial cells.

3. The "functional" antibody which inhibits binding of heterologous strains to human epithelial cells can be absorbed by a single heterologous strain. This suggests there is a common determinant shared by many gonococcal pili which reacts with a functional antibody induced by a single pilus strain.
DATE: 25 Jan 81  WORK UNIT NO.: 1908  STATUS: INTERIM X FINAL

STARTED: Date: 4 April 1978  DATE OF COMPLETION: 1983

Key Words: Leishmaniasis; treatment; pentavalent antimony; Pentostam

Title of Project: Evaluation of sodium stibogluconate (Pentostam) in the treatment of cutaneous leishmaniasis.

Principal Investigator(s): Charles N. Oster, M.D., LTC, MC
Associate Investigator(s): Ramont, E.C., Canfield, C.O., Hendricks, L.D., Pamplin, C., Chulay, J.

Facility: WRAMC  Dept/Svc: Medicine/Infectious Disease

Accumulative R&D Case Cost: $0  Accumulative Contract Cost: $0  Accumulative Supply Cost: $4,000.00

FY-83 R&D Case Cost: $0  Contract Cost: $0  Supply Cost: $2,000.00  Date of Committee Approval: 0

Annual Progress Report: 26 Jan 1982

Study Objective: (a) To evaluate the efficacy of different regimens of sodium stibogluconate (Pentostam) for the treatment of cutaneous leishmaniasis. (b) To observe for long term sequelae of leishmaniasis and its treatment in mil. personne

Technical Approach: Unchanged

Progress During FY-82:

Number of Subjects Studied:

FY-82: ___________ Total (to date): ___________ Before Completion of Study: ___________

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):

None

Conclusions:

See inclosed write-up

Publications or Abstracts. FY-82:

See inclosed write-up

258
Work Unit #1908


Investigators: Charles N. Oster, M.D., LTC, MC
Jeffrey D. Chulay, M.D., LTC, MC
Jonathan D. Berman, M.D., MAJ, MC
W. Ripley Ballou, M.D., MAJ, MC

Since 1978 we have seen 59 patients with cutaneous leishmaniasis. 55 had American cutaneous leishmaniasis: 50 of these acquired their disease in Panama. Among 34 patients with a short period of exposure, the incubation period ranged from 4-81 days. Diagnosis was delayed an average of 90 days after onset, due to a combination of the patients' delays in seeking medical attention (36 days), physicians' delays in suspecting the right diagnosis (38 days) and delays due to difficulties in laboratory confirmation of this diagnosis (16 days). Fifteen patients had atypical, non-ulcerative lesions that would not have been recognized if leishmanial cultures had not been obtained. Only 30 of 54 patients (56%) were cured with the initial course of sodium stibogluconate. Lesions larger than 2 cm diameter were less likely to respond than smaller lesions (40% vs 89%, P=0.018).

Pharmacokinetic studies of our patients (Pamplin, et al) demonstrated very rapid clearance of sodium stibogluconate. Therefore, when giving this drug on the standard once daily schedule, measurable blood levels are present only for the first 6 hours of each day. On the basis of this data, we speculated that the poor rate of response to treatment was due to the administration schedule. We tested this hypothesis by randomly assigning patients with leishmaniasis to receive sodium stibogluconate by three schedules: A-once daily, B-continuous infusion, and C-eight hourly. All patients received 10 mg/kg/d, to a maximum daily dose of 600 mg, for 10 days. 36 patients were treated under this protocol. The overall response rate to the first course of therapy was 63%, but was better for schedule A (100%) than B (50%) or C(42%) (P=0.006). Seven additional patients were treated concurrently with the standard, once daily, sodium stibogluconate schedule; only 4(57%) of these responded to the first course.

We are unable to explain the difference in the rates of response between the identical, once-daily schedules, A and standard. Patients with lesions larger than 2 cm diameter were equally distributed between the groups. We have speciated the parasites isolated from 20 of these patients using isoenzyme technics: 9 were L. braziliensis, 7 L. mexicana, 3 L. chagasi, and 1 unique, as yet unidentified organism. The response to treatment was lower for patients infected with L. braziliensis than with the other species (2 of 9 vs 10 of 11, P=0.003). L. braziliensis lesions were also larger (3.6 ± 1.4 cm vs 1.7 ± 1.1, P 0.003). Therefore, it is not clear whether the lower response rate of the L. braziliensis lesions is due to their larger size, or to some other property of this species. L. braziliensis patients were equally distributed among the treatment groups; therefore, chance assignment of fewer L. braziliensis patients to group A does not explain its better response rate. Also, clinical treatment failures do not appear to be due to parasitic resistance to sodium stibogluconate (Berman et al).
Our experience with patients with cutaneous leishmaniasis has identified several problems which we will investigate:

1) Diagnosis: The lesions of American cutaneous leishmaniasis often contain few parasites. Consequently, demonstrating the organism by the currently available technics (histopathology and culture) is a laborious, frequently unrewarding task. We will investigate newer technics of hopefully greater sensitivity: monoclonal antibodies, K-DNA probes, and Western blot analysis of antibody response to specific antigens.

2) Treatment: Our overall success rate of 60% with one course of sodium stibogluconate is inadequate. We will investigate whether higher doses of sodium stibogluconate can improve the response. Furthermore, using the technics mentioned above, it may be possible to rapidly identify the infecting species and thus prospectively study the relationship between the species and the response to treatment.

Abstracts and Publications:


260
STUDY OBJECTIVE: To determine the in vitro inhibitory activity of a series of 2-acetylpyridine thiosemicarbazones and related compounds toward a collection of clinically significant bacterial organisms.

TECHNICAL APPROACH: The minimum inhibitory concentrations (MICs) of the 62 compounds tested have already been reported in the FY 81 annual progress report.

PROGRESS DURING FY-82: The serious illness of one coauthor (DLK) has interrupted the completion of a report for publication, specifically that aspect concerning the interpretation and significance of the chemical structures as related to their MICs. In the meantime a request for a time extension of this protocol has been submitted and approved so that the MICs of classes of water-soluble thiosemicarbazones can be determined.

NUMBER OF SUBJECTS TO BE STUDIED BEFORE COMPLETION OF STUDY: N/A

CONCLUSIONS: 1. Completion of the report for publication will be accomplished as soon as it is feasible. 2. The water-soluble thiosemicarbazones are being chemically synthesized and will then be tested in vitro.

PUBLICATIONS OR ABSTRACTS, FY-82: Abstract was published and data presented at the annual meeting of the American Society for Microbiology, Atlanta, Georgia, Mar 7-12, 1982. Abstract title: Inhibition of Clinically Significant Bacterial Organisms In Vitro by 2-Acylpyridine, 2-Acetylquinoline and 1- and 3-Isoquinoline Thiosemicarbazones. A.S. Dobek, D.L. Klayman, E.T. Dickson, Jr. and J.P. Scovill.
**DATE:** 16 Dec 84  
**WORK UNIT NO.:** 1913  
**STATUS:** INTERIM  
**FINAL:** X

**START DATE:** 22 Jan 1980  
**DATE OF COMPLETION:** Dec 82

**KEY WORDS:** Antibiotics/bacterial susceptibility/resistance mechanisms

**TITLE OF PROJECT:** Laboratory investigation of new antibiotics

**PRINCIPAL INVESTIGATOR(S):** Charles N. Oster, LTC, MC; Alan S. Cross, LTC, MC

**ASSOCIATE INVESTIGATOR(S):** Edmund C. Tramont, MD; Arthur S. Dobek, Ph.D.; John F. Keiser, MD; Dennis Kopecko, Ph.D.; Ronald K. Poropatich, M.S.

**FACILITY:** WRAIC  
**DEPT/SVC:** Medicine/Infectious Disease Service

**ACUMULATIVE PERIOD COST:** 0  
**ACUMULATIVE CONTRACT COST:** 0  
**ACUMULATIVE SUPPLY COST:** $13,500.00

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**STUDY OBJECTIVE:**
1. To investigate the in vitro antibacterial activities of new antibiotics against bacteria isolated from patients at WRAMC.
2. To investigate the mechanisms of bacterial antibiotic resistance.

**TECHNICAL APPROACH:** In vitro antibacterial activities of antibiotics are determined using standard agar-dilution techniques.

**PROGRESS DURING FY-82:** See final report inclosed, which is in the form of a manuscript entitled "Susceptibility of antibiotic resistant Gram-negative bacteria to beta-lactamase-stable cephalosporins" which we have submitted to the Annals of Internal Medicine.

**NUMBER OF SUBJECTS STUDIED:** N/A

**FY-82:**  
**TOTAL (TO DATE):**  
**BEFORE COMPLETION OF STUDY:**

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):**

**CONCLUSIONS:** Based on in vitro susceptibility testing ceftazidime and cefoperazone may be useful for the treatment of antibiotic-resistant Pseudomonase aeruginosa infections; ceftazidime and ceftizoxime may be useful for antibiotic-resistant Enterobacteriaceae infections.

**PUBLICATIONS OR ABSTRACTS, FY-82:**

262
**Key Words:** Prophylaxis; antibiotics; joint arthroplasties

**Title of Project:** The evaluation of Ceforanide (IND 12762) vs Cephalothin, administered by the intravenous route, as prophylactic agents in patients undergoing hip or knee arthroplasty.

**Principal Investigator(s):** Edmund C. Tramont, COL, MC

**Associate Investigator(s):** MD Tremaine, CN Oster, JW Boslego, WM Berger, ER McKinstry

**Facility:** KMC

**Dept/Svc:** Med/IDS & Surgery/Orthopedics

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**Study Objective:** To compare the effectiveness of ceforanide and cephalothin in preventing infection at the operative site in patients undergoing hip or knee arthroplasty.

**Technical Approach:** A prospective, double-blind comparative study of antibiotic prophylaxis.

**Progress Rating FY-82:** A total of 87 patients were enrolled. The study has been completed. Data analysis is underway.

**Number of Subjects Studied:**

| FY-82: | Total (to date): 87 | Before Completion of Study: 87 |

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none box state):** None

**Conclusions:** Overall infection rates between the ceforanide and cephalothin groups were similar. A final report will be submitted when data analysis is completed.

**Publications or Abstracts, FY-82:** None
STUDY OBJECTIVE: To determine the role of the level of fibronectin in critically ill patients as a predictor of survival or complication, and its relation to various conditions including transfusions and sepsis, by prospective collection of sera.

TECHNICAL APPROACH: Unchanged from original protocol.

PROGRESS DURING FY-82: No progress has occurred during FY 82 because of a combination of personnel problems combined with more immediate obligations of WRAIR duties. We anticipate completion of protocol in FY 84.

NUMBER OF SUBJECTS STUDIED:

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SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):

None

CONCLUSIONS: Pending

PUBLICATIONS OR ABSTRACTS: FY-82:

None
**Title of Project:** Prophylactic antibiotics in neurosurgery: a prospective, randomized, double-blind, and placebo controlled study.

**Principal Investigator(s):** WJ Morris and CN Oster

**Associate Investigator(s):** ED George, OE McDowell, AS Dobek, EC Tramont, ER McKinstry

**Facility:** VAMC

**Dept/Svc:** Med/IDS Surgery/Neurosurgery

---

**Study Objective:** To determine the effectiveness of prophylactic antibiotics in preventing infections at the operative site in patients undergoing neurological surgery.

**Technical Approach:** Prospective, double-blind placebo-controlled trial of prophylactic antibiotics.

**Progress During FY-82:** 200 patients enrolled in the study. Overall infection rates were similar between antibiotic and placebo groups.

**Number of Subjects Studied:**

FY-82: 116

Total (to date): 200

Before completion of study: 220

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none, so state):**

None

**Conclusions:** The study will be terminated after 220 patients have been enrolled. Data will then be analyzed and a final report submitted by July 1983.

**Publications or Abstracts, FY-82:**

None
S. aureus colonization, nosocomial infections

Title of Project: Colonization of newly arrived housestaff members with S. aureus and its role in the development of Staph septicemia.

Principal Investigator: Ballou, W.R.

Associate Investigator: Cross, Alan

Facility: Infectious Disease

Objectives: To determine rate of S. aureus colonization among newly arrived housestaff members and by phage typing to identify kinetics of introduction with specifics.

Methodology: Phage type into population.

nasal swabs - culture - phage type - analysis of data.

Funding: Received 500.00

FEB 25 1983

Cultures completed, analysis of data underway

Number of Studies Initiated: 56

Total (no. completed) 56

Number Completed or Study: 56

Number of Subjects Expected to Participate in Each of the Three Study Groups: None

Results: 35% carriage rate by phage typing, several identifiable types are predominant, have a possible role in serious nosocomial illness.

None so far.
**PROJECT:** Ability of Monoclonal Antibody against E. coli K1 to Kill K1-Positive E. coli in the Presence of Neonatal Neutrophils, Using Neonatal Sera or Cerebrospinal Fluid as a Complement Source

**PRINCIPAL INVESTIGATOR(s):** ALAN S. CROSS, MD, LTC, MC

**ASSOCIATE INVESTIGATOR(s):** W. HENRY WOOLDRIDGE, MD, LTC, MC

**FACILITY:** WRAC, XXX
**DEPT/Svc:** Medicine, (ID) and Pediatrics

**ACCUMULATIVE PECASE COST:** 0  
**ACCUMULATIVE CONTRACT COST:** 0  
**ACCUMULATIVE SUPPLY COST:** 0

**FY-83 PECASE:** 0  
**CONTRACT COST:** 0  
**SUPPLY COST:** 0  
**DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT:** FEB 9-5-1983

**STUDY OBJECTIVE:** To see if monoclonal antibody against important neonatal antigen would work in vitro with components of neonatal immune system.

**TECHNICAL APPROACH:** In vitro phagocytosis with PMN from adults and cord blood, with adult and neonatal complement sources. Use monoclonal prepared by Dr. Wendell Zollinger, WRAIR.

**PROGRESS DURING FY-82:** Essentially have shown that the monoclonal antibody works with cord sera and cord polys, but not with spinal fluid as a complement source.

**NUMBER OF SUBJECTS STUDIED:**

**FY-82:** 15  
**TOTAL (TO DATE):** 15  
**BEFORE COMPLETION OF STUDY:** ~17-18

**SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE):** NONE

**CONCLUSIONS:** This monoclonal antibody, if it is to be effective in the treatment of K1 E. coli disease, must work at the bacteremic phase.

**PUBLICATIONS OR ABSTRACTS, FY-82:**

To determine if environmental cooling has a good or bad effect on infection in rabbits.

Technical Approach: We are exposing infected rabbits to cool environments and measuring survival.

Findings/Evaluation: Please see attached sheet.

Conclusions: We have developed a rabbit model which shows trends that seem to indicate that environmental cooling may increase the mortality of infected animals.

Publications on Animal: HY-81: None
Work Unit: 1920

1. In the last twelve months operative procedures were performed on 26 rabbits. Three rabbits died in the perioperative period probably as a result of the surgical procedure.

2. Nine animals were used developing the correct inoculum for an LD-50.

3. Seventeen rabbits were used in a pilot study of the model to adjust the temperature of the environment and the inoculum for the correct LD-50.

4. The survival data from the Pilot study:

<table>
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<tr>
<th>Conditions</th>
<th># of Animals</th>
<th>Survival Time</th>
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<tbody>
<tr>
<td>Cooled (9°C)</td>
<td>3</td>
<td>74 hours</td>
</tr>
<tr>
<td>Infected (10^7-bugs)</td>
<td>5</td>
<td>80 hours</td>
</tr>
<tr>
<td>Infected &amp; Cool (10^7-bugs + 9°C)</td>
<td>5</td>
<td>37 hours</td>
</tr>
<tr>
<td>Neither</td>
<td>2</td>
<td>96 hours</td>
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5. The study was interrupted by difficulty obtaining approval from the Animal use committee at WRAIR. We have amended our protocol and upon receiving authorization will proceed with the rabbit study.

6. Funding - In FY 82 the following expenditures were made in support of the protocol:
   a) Disposable supplies (tape, sutures, etc.) Cost - $801.00
   b) Capital items - Recorder, Recording thermometers. Cost - $2744.00

7. Animals used in the original pilot study were obtained free from an expired protocol at WRAIR.
DATE: 26 Jan 83  WORK UNIT No.: 1921  STATUS: INTERIM X FINAL
STARTING DATE: 1982  DATE OF COMPLETION: 1985

Key Words: Macrophage, Leishmania; lymphokines; intracellular infections.

TITLE OF PROJECT: Human macrophage activation for the killing of Leishmania donovani.

PRINCIPAL INVESTIGATOR(s): David L. Hoover and Charles N. Oster

ASSOCIATE INVESTIGATOR(s):

FACILITY: UNVC  DEPT/LOC: Medicine/Infectious Disease

ACCRULATIVE PREDIAGNOSTIC COST:  ACCUMULATIVE CONTRACT COST:  ACCUMULATIVE SUPPLY COST:

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Study Objective: 1) To investigate macrophage-parasite interactions using Leishmania as a model for intracellular infections. 2) To learn how to activate human macrophages for intracellular killing.

TECHNICAL APPROACH:

PROGRESS DURING FY-82:

NUMBER OF SUBJECTS STUDIED:

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SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE DO STATE): None

CONCLUSIONS: See Attachment

PUBLICATIONS OR ABSTRACTS, FY-82:

See Attachment

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Prior work performed in Dr Carol's Nacy's laboratory has characterized the interaction between leishmanial amastigotes and murine macrophages. To test the applicability to a human system of concepts of intracellular killing of *Leishmania* by murine macrophages, we have initiated a program to examine parasite-macrophage interactions using human cells.

Initial efforts have been directed toward locating appropriate sources of human mononuclear phagocytic cells and establishing systems to investigate infection of macrophages or monocytes and subsequent intracellular replication of parasites. We were interested in obtaining purified monocytes for use in suspension cultures, since the large number of lymphocytes in Ficoll-Hypaque-separated mononuclear cell preparations interferes with accurate light microscopic evaluation of infected cultures. In the first series of experiments, monocytes were purified by counterflow centrifugation-elutriation of Ficoll-Hypaque-separated mononuclear cells obtained from volunteers undergoing leukapheresis. This procedure resulted in a preparation containing about $10^8$ monocytes, approximately 85% pure, with some lymphocyte and neutrophil contamination, but required 10-14 hours for cell collection and separation. Moreover, cells could not be separated without contamination by potentially endotoxin-containing fluids. Although cell viability was excellent, monocytes had deformed...
membranes and were sticky. We therefore investigated methods of separating monocytes from Ficoll-Hypaque mononuclear cell preparations using continuous Percoll gradients. This technique resulted in 4-15 x 10^6 monocytes from 50 ml of blood, with purity of 60-85%.

Using either elutriated monocytes or Percoll-separated monocytes, we have defined the kinetics of infection and intracellular replication of the parasite, demonstrating that organisms are rapidly taken up during the first 4 hr. Log-phase replication then occurs for the next 60 hr. In order to determine conditions that optimize the growth of parasites in our system and to provide a basis for further studies of lymphokine-mediated intracellular killing of the parasite, we have also begun to examine the effect of normal and immune serum on uptake and subsequent intracellular fate of parasites in macrophages in suspension culture. Fresh human serum has been shown to kill promastigotes but not amastigotes of *L. donovani*; the effect of fresh serum on amastigotes and promastigotes of *L. tropica* is not known. Also not known is whether immune serum influences the interaction of human monocytes or macrophages with parasites.

Preliminary studies have also been performed on the mechanisms of activation of human monocytes for the killing of *Leishmania*. These results have not been encouraging, although others have demonstrated that *L. donovani* can be killed by monocyte-derived macrophages exposed to lymphokine-rich supernatants of lymphocyte cultures. A number of sources of mediators must be examined before we can conclude that monocytes are refractory to lymphokine-mediated intracellular killing; studies in the murine system, however, suggest that young mononuclear phagocytes, including blood monocytes, respond poorly to lymphokines.
To overcome the potential problem of unresponsiveness of human monocytes to lymphokines that mediate intracellular killing, we have also initiated studies on human peritoneal cells. Macrophages have been collected from women undergoing diagnostic laparoscopy. Preliminary data indicate that these cells will support the growth of *L. tropica*. Characterization of these macrophage populations, however, suggests that most samples represent a mixture of resident and inflammatory macrophages, even in women who appear normal at operation. As previously noted for murine cells, peroxidase positive human macrophages are more susceptible to leishmanial infection than are peroxidase negative cells. The ability of these cells to respond to lymphokines for intracellular killing is currently being examined.

Our efforts are currently being directed toward continued survey of cytokines for activities that enhance microbicidal activity of human monocytes and peritoneal macrophages. Once such mediators have been detected, we also intend to investigate the mechanisms of their effect and potential modulating effects of antibody in intracellular killing by lymphokine-treated macrophages and monocytes. Such studies may have considerable relevance to the development of immunotherapeutic regimens or vaccines.

Unpublished abstract:
Principal Investigator(s): J. Bruce McClain, A. Dobek
Associate Investigator(s):

Facility: Infectious Disease Service

Accumulative Budget Cost: $1,600.00

FY-83 Budget: $2,500 (projected)

Progress Report: FEB 25, 1983

Summary of Project: To develop an ELISA for Lyme organism.

Expected Outcome: See attached sheet.

Methodology: We have developed Immunofluorescent technique and ELISA for detection of antibodies to Lyme Arthritis organism.

Funding of Supporting Studies:

Funding: 2

Total (Includes: 2

Bone marrow from Study Group 2002

Summary of Supporting Studies in Study Group

Committee: None

Page: 274
1. We have received the Lyme Arthritis organism and have been able to propagate it in vitro.

2. We have inoculated 12 rabbits with Lyme organism and adjuvant and have been able to demonstrate seroconversion of the rabbits by use of Indirect Immunofluorescent Technique. We have performed blinded tests on the same rabbit sera and have been able to detect pre and post immunization sera in a blinded fashion.

3. We have received serum from Dr. Jorge Benash in New York who has documented a positive serologic reaction by indirect immunofluorescence in a patient with a compatible clinical syndrome for Lyme disease. Using that sera we have developed a sensitive enzyme linked assay which can detect antibody out to 1:20,000 using whole spirochete as the antigen. We have tested two sera from patients and found one of them to be positive by our assay.

4. We plan to perform the assay on the sera of 300 recruits from Fort Dix New Jersey to develop a standard curve of the amount of antibodies present.

5. We plan to develop a fluorescent assay for the Lyme arthritis organism.
Trimeprin - Sulfisoxazole, rifampin synergy in resistant gram negative bacteria.

To determine if there is frequent synergy between TMP/SMX and Rifampin.

Synergy between TMP/SMX and Rifampin in a library of resistant organisms at this hospital is not common.

Progress During FY-82:

1. We have examined using the methods described in the protocol around 600 organisms for synergy between TMP/SMX and Rifampin. We found synergy in 5% of isolates in the therapeutic range of the agents being examined. This combination may occasionally be useful but it is so infrequent that the phenomenon is not reportable.

2. We would like to close out this protocol.
**Date:** 8 Oct 82  |  **Work Unit No.:** 2000  |  **Status:** INTERIM  |  **Final**

**Starting Date:** 1978  |  **Date of Completion:** Indefinite

**Key Words:** Stomach, Surgery, Gastrointestinal peptides

**Title of Project:** The effects of gastric surgery on the release of pancreatic polypeptide

**Principal Investigator(s):** John W. Harmon, LTC, MC, USA

**Associate Investigator(s):** Lawrence Johnson, COL, MC, Ian Taylor

**Facility:** WRAMC  |  **Dep't/Svc:** Surgery - Medicine

**Accumulative PEDCASE Cost:** None  |  **Accumulative Contract Cost:** None  |  **Accumulative Supply Cost:** None

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**Study Objective:** To determine the roles of the pancreas, the gastric antrum and the vagus in the release of gastrointestinal peptides

**Technical Approach:** To compare serum levels of GI peptides in response to a meal, before and after gastrointestinal surgery.

**Progress During FY-82:** 6 additional patients were studied. 4 of these patients had Zollinger Ellison syndrome which adds another potentially important aspect to this study.

**Number of Subjects Studied:** Indefinite

**FY-82:** Total (to date): Before Completion of Study:

**Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):** None

**Conclusions:** Satisfactory progress

**Publications or Abstracts, FY-82:** 277
**Title of Project:**

PANCREATIC ISLET PRESERVATION

**Principal Investigator(s):**

John W. Harmon

**Associate Investigator(s):**

unknown

**Facility:**

U.S. Army DAMD

**Date of Completion:**

Indefinite

**Key Words:**

Pancreatic Surgery, insulin

**Study Objective:**

To develop methodology to preserve pancreatic islets for transplantation.

**Technical Approach:**

To cryopreserve pancreatic islet tissue obtained from surgical specimens.

**Progress During FY-82:**

No progress was made on this protocol because the original principal investigator left the army and no one is now available to carry out the work.

**Number of Subjects Studied:**

FY-82: none  Total (to date): none  Before Completion of Study:

**Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State):**

none

**Conclusions:**

none

**Publications or Abstracts, FY-82:**

none

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278
DATE: 5 Oct 82 | Work Unit No.: 2003 | Status: INTERIM X FINAL
Starting Date: 1980 | Date of Completion: Indefinite

Key Words: Neogut, short bowel syndrome, gastrointestinal surgery
Title of Project: Use of copolymer as a lattice for growth of neogut

Principal Investigator(s): John W. Harmon, LTC
Associate Investigator(s): Barbara Bass, CPT, MC
Facility: WRAMC | Dept/Svc: Surgery

Accumulative PEDCASE Cost: | Accumulative Contract Cost: | Accumulative Supply Cost:
FY-83 PEDCASE: | CONTRACT COST: | SUPPLY COST: | Date of Committee Approval Of
FY-82: | | | ANNUAL PROGRESS REPORT FEB 25 1983

Study Objective:
To expand the surface of the small intestine

Technical Approach:
To develop techniques in rabbits to grow small bowel mucosa

Progress During FY-82: A method was developed to grow small bowel mucosa on abdominal wall pedicle flaps. Studies using this technique were published in Surgery 91:293-300, 1982

Number of Subjects Studied: N/A
FY-82: _______ Total (to date): _______ Before completion of study:

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):

N/A

Conclusions:
Satisfactory progress

Publications or Abstracts: FY-82:
1. Surgery 91: 293-300, 1982

279
Explanation for changes in the budget for CIS Project #2003

Use of a Copolymer as a Lattice for Growth of Neogut.

PI John W. Harmon, LTC, MC

The project for growth of neogut is directed at developing a strategy for expanding the surface area of the small bowel to allow adequate absorption of nutrients in individuals who have "short bowel syndrome". Short bowel syndrome can result from trauma, vascular compromise, or intrinsic bowel disease such as Crohn's disease.

We were directed by BG Garrison Rapmund to seek CIS funding for this project in 1979. Accordingly we submitted a CIS proposal and it was approved. In FY 1981 and 82 we were authorized $4600 per year for this project, but for administrative reasons we did not spend the money. In 1981 we also attempted to hire a technician for this project, but again were unable to accomplish this goal.

In August of 1982 CPT Barbara Bass arrived at WRAIR and she has started work on the neogut project. For her work we are ordering consumable supplies and animals with CIS funds. With the assistance of WRAMC CIS the administrative approach to purchasing through CIS is now working very well.

The approach to growing neogut has developed over time and now includes 2 basic thrusts. The first is to disperse rat small bowel mucosal cells, grow them briefly in tissue culture, and then implant them in Gelfoam squares in allogeneic hosts. The second is to transplant whole fetal small bowel into allogeneic adult hosts.

Two publications emanating from this project are attached.
DATE: 20 Jan    WORK UNIT NO.: 2004    STATUS: INTERIM    FY 83
STARTING DATE: July 1980    DATE OF COMPLETION: Dec 1980

Key Words: Analgesics: morphine, anesthetic techniques, epidural narcotics

TITLE OF PROJECT: Epidural Morphine and Ventilatory Drive in Man

PRINCIPAL INVESTIGATOR(s): ROBERT L. WATSON, COL MC
ASSOCIATE INVESTIGATOR(s): Dennis D. Doblar, CPT MC, Abbrecht, Reynolds

FACILITY: KHKM & Muldoo

ACCUMULATIVE FEDCASE COST: 0
ACCUMULATIVE CONTRACT COST: 0
ACCUMULATIVE SUPPLY COST: 0.

FY-83 FEDCASE: 0
CONTRACT COST: 0
SUPPLY COST: 0

DATE OF COMMITTEE APPROVAL OF
ANNUAL PROGRESS REPORT: Apr 83

STUDY OBJECTIVE: To measure changes in ventilatory control in man, produced by the administration of Epidural Morphine for the relief of post-operative pain.

TECHNICAL APPROACH: Open study using patients as their own control. After epidural local anesthesia, 1 hr and 6 hrs post epidural morphine injection.

PROGRESS DURING FY-82:

Study completed December 1980.

NUMBER OF SUBJECTS STUDIED:
FY-82: 10
TOTAL (TO DATE): _______ BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE, MD STATE):

CONCLUSIONS: Ventilatory response blunting occurs one and six hours post epidural morphine injection without correlation to the serum morphine levels. Response is not significantly different from that of parenteral morphine, although analgesic persists for 8 - 25.5 hrs.

PUBLICATIONS OR ABSTRACTS: FY-82: Study won Young Investigators Award at Annual Postgraduate Assembly of Anestesiologists in New York City, Dec 1980.
1. The initial letter to Jay Miller of Hoffman-LaRoche, Inc., dated the week of termination of our study on 8 March 1962.

2. A signed notice of Investigational Drug Disposition was signed by the institutional review board by the Institution of the Nursing Service (E. C., R. F. B. C.) on 17 Feb 1962 and was verified by the Institutional Review Board. The notice was signed by the pharmacist and was certified by the Institutional Review Board. The pharmacist was informed of the serious adverse reactions.

3. Part of the study was blind (intravascular penetration) and part of the study was open (intravenous injection).

Only six completed patients were reported. In all of the patients, no unexpected side effects were noted, and in the open part where Hoffman-LaRoche was administered. In the blinded part, there was marked sedation of the diaphragm type, but without signs of acute irritation and with no significant changes in cardiovascular response.

None of the patients receiving the blinded intravascular penicillin evidenced any sign of tissue (skin or muscle) irritation than followed up to 48 hours after injection.

In summary, the open part of the study revealed Hoffman-LaRoche to be a very useful drug not only as an intravenous agent or as an intravenous needleush agent, but also as a subcutaneous agent. The blinded patients all have to be judged on the basis of adverse reactions; however, patient acceptance of the drug penetration was good, with no reactants or pain on injection and without signs of tissue irritation.

L. W. Watson
Chief, Anaes & OP Srg

Copy available by phone. Permit fully legible. Please sign.
DEPARTMENT OF THE ARMY
WATERLOO, ARMY MEDICAL CENTER,
WASHINGTON, D.C. 20307-5000

RESP-SA0

8 March 1982

Joy D. Miller
Clinical Research Coordinator
Department of Medical Research
Hoffman-LaRoche Inc.
Nutley, NJ 07110

Dear Mr. Miller:

Thank you for your phone call of 6 March 1982 and notification that all Midosol studies were halted. Discontinuation was initiated from the final collection of statistical data prior to filling out FDA with the conclusion of the studies on Midosol.

I hope that the few patients (8, 257, etc.) in our C.S. will be of help to you in guiding favorable consideration for use of the very useful drug, Midosol.

In all of our patients we noted no paracorial side effects, but in the open part where we administered Midosol intra-cavity as well, there was evidence to suggest a definite and in all cases type, but without signs of venous irritation and with no objective changes in color or color response.

None of the patients received the blinded intramuscular placebo, therefore, I do not know any signs of tissue (skin or muscle) irritation for up to 48 hours post-injection.

In summary, the open part of the study revealed Midosol to be a very useful drug to use either as an injectable agent or as an intravenous additive adjacent to projected regional anesthetic procedures. The clinical protocol will have to be judged on statistical merit when the code is broken; however, patient acceptance of the blinded injections was good, with no evidence of pain or signs of tissue irritation for up to 48 hours following injection.

The remaining drug is being shipped back to you under separate cover and by Federal Express.

The following is a list of the drugs used and returned:

[List of drugs]
**BOX LABEL** | **USED** | **QUANTITY RETURNED**
---|---|---
1. Study - 1  
Protocol 2198  
PT 1-10 | 1-1 (1 amp)  
2-1 (1 amp)  
3-1 (1 amp)  
4-1 (1 amp)  
5-1 (1 amp)  
6-1 (1 amp)  
7-1 (1 amp)  
8-1 (1 amp) | 1-1 (1 amp)  
2-1 (1 amp)  
3-1 (1 amp)  
4-1 (1 amp)  
5-1 (1 amp)  
6-1 (1 amp)  
7-1 (1 amp)  
8-1 (1 amp)  
9-1 (2 amp)  
10-1 (2 amp)  
**TOTAL** | **8 amps** | **12 amps**

2. Study - 1  
Protocol 2198  
PT 11-20  
Label unbroken | None | **TOTAL** | **20 amps (2 ml)**

3. Study - 1  
Protocol 2198  
PT 21-30  
Label unbroken | None | **TOTAL** | **20 amps (2 ml)**

4. Study - 1  
Protocol 2198  
PT 31-40  
Label unbroken | None | **TOTAL** | **20 amps (2 ml)**

5. Study - 1  
Protocol 2198  
PT 41-58  
Label unbroken | None | **TOTAL** | **16 amps (2 ml)**

**GRAND TOTAL** | **8 amps used** | **84 amps returned**

6. Midazolam 50 mgm  
(When given)  
10 ml - 50 mgm  
F 13  
G111760-01 | 2 vials (partial)  
16 unbroken vials  
2 partial vials | **GRAND TOTAL** | **16 vials returned**

The Investigational Drug Disposition (N914) is also enclosed in this letter and a copy will accompany the shipment of drug.

I assume that the records I have in my file are my copies; however, if this belongs to you, then please inform me and they will also be forwarded.
I believe that upon receipt of the enclosed letter, investigational drug disposition form and shipment of unused drug, that study protocol No. 217-1 "An Evaluation of Intramuscular Midazolam as a Premedication Indication and as an Adjunct to Intravenous Midazolam, Thiopental and Ketamine Anesthesia Induction" will be closed.

Enclosures

Robert L. Watson
ROBERT L. WATSON, MD
COL, MC
Chief, Anesthesia & Operation Sec

[Signature]

OCT 19 1989 0001612
NOTICE OF INVESTIGATIONAL DRUG DISPOSITION

Date: February 17, 1982

TO: Hoffmann-La Roche Inc.
340 Kingsland Street
Nutley, New Jersey 07110

FROM: Investigator's Name: Robert Watson, M.D.
Chief of Anesthesiology
Address: Walter Reed Army Hospital
P.O. Box 376
Washington, DC 20014

RE: Protocol No.: 21986
Test Drug: Midazolam 48-ml ampul, Midazolam 5mg/ml; 48-ml ampul, Placebo
Number of bottles shipped: 100 bottles, 100 bottles, 100 bottles
Number of bottles used: 88 ampuls (1, 1, 1, 1, 1, 1, 1, 1), 2 bottles
Number of bottles returned: 88 ampuls, 2 bottles

☐ I am returning to you all of my remaining supplies of the above-named drug.
☐ I certify that I have exhausted all of my supplies of the above-named drug.

[Signature]
Robert Watson, MD

2086

PHARMACEUTICALS • FINE CHEMICALS • VITAMINS • MEDICAL ELECTRONICS • DIAGNOSTICS
Title of Project:
Eutoprophoph (StudIol) Study No. 300-02-1

Principal Investigator(s): Robert Naito, MD
Associate Investigator(s): Cleon T. Markarian, CRNA

Facility: Navy X

Recruiting Phase Costs: None

FY-81 RECRUIT: Contract Costs: None

Study Objective: An open study evaluating eutoprophoph: (1) as a preoperative co-  

perister with diaphoresis and ptyalism, and (2) as a supplement to balanced  

administration of a postoperative narcotic.

Technical Procedure:
Global evaluation in each of the three areas

Protocol Follow-up FY-82:

Number of Subjects Studied:

FY-82: Total: (in bold): 25 Return Completion of Study:

Serious/Unusual Side Effects in Subjects Participating in this Study in Total FY-82:

None

Exclusions: (1) Preoperative evaluation was satisfactory: (2) patient's anesthetic  
agent provided generally smooth intraoperative course with occasional episode  
of hypotension due to decreased blood level based on poor prior medical report,  
and (3) post-op analgesic was generally very good.

Publications or Presentations FY-82:
See attached Bristol Statistical Review.
**Study Objective:** To determine response of normal skeletal muscle to drugs, caffeine & halothane. This will be compared with response of individuals who have experienced malignant hyperthermia.

**Technical Approach:** Isometric tension measuring apparatus at U.S.U.H.S. is used for basic determination, collaboration with Bethesda Naval MC and histochemistry section AFIP continues.

**Progress During FY-82:** Study expanded to include subjects from outside WRAMC. Total studied contracture tests is now 32 subjects. Parallel studies on dog muscle O_2 consumption initiated.

**Number of Subjects Studied:**
- FY-82: 4
- Total (to date): 9
- Before completion of study:

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**
None

**Conclusions:** Strong correlation of halothane induced contracture and clinical history of MH appears to be present. Halothane caffeine contracture test appears to be sensitive but with a high false positive rate.

**Publications or Abstracts, FY-82:** None
### Venous Sequelae Following Intravenous Lorazepam and Diazepam

**Title:** Venous Sequelae Following Intravenous Lorazepam and Diazepam

**Principal Investigator(s):** Patricia A. Stipetich, CPT, ANC

**Associate Investigator(s):** Tom Fusco, CPT, ANC

**Facility:** WMC

**Dept/Svc:** Dept of Surg - Anes & Oper Svc

**Study Objective:**

**Technical Approach:**

**Progress During FY-82:**

**Number of Subjects Studied:**

**FY-82:**

**Total (to date):**

**Before Completion of Study:**

**Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):**

**Conclusions:**

PROJECT WAS NEVER STARTED.

**Publications or Abstracts, FY-82:**

---

**DATE:** 8 Apr 83  **Work Unit No.:** 2009  **Status:** INTERIM  **FHM:** XXX

**STARTING DATE:**

**DATE OF COMPLETION:** Never completed, Investigators PCS'd.
APPLICATION FOR CLINICAL INVESTIGATION PROJECT

1. PRINCIPAL INVESTIGATORS:
   Patricia A. Stipetich, CPT, ANC, Student, School of Anesthesiology Nursing, WRAMC.
   Tom Fusco, CPT, ANC, Student, School of Anesthesiology Nursing, WRAMC.

2. PROJECT TITLE: Venous Sequelae Following Intravenous Lorazepam and Diazepam

3. OBJECTIVE: To compare lorazepam and diazepam in terms of incidence of venous sequelae following intravenous injection.

4. MEDICAL APPLICATION: Previous studies have thus far indicated a lesser degree of patient discomfort when receiving lorazepam than with diazepam. Lorazepam additionally appears to provide a longer duration of action and a greater degree of perioperative amnesia.

5. STATUS: Refer to attached Research Proposal, section titled Review of Literature.

6. PLAN: Refer to attached Research Proposal, section titled Methodology.

7. BIBLIOGRAPHY: Refer to attached Research Proposal, section titled Bibliography.

8. FACILITIES TO BE USED: Will conduct preoperative and postoperative patient anesthesia interviews on clinical wards. The administration of the drugs will occur within the Operating Room facilities.

9. TIME REQUIRED TO COMPLETE: Anticipate beginning and completion of research project in November 1981 and August 1982 respectively.

10. PERSONNEL TO CONDUCT PROJECT: Principal investigators as above.

11. FUNDING IMPLICATIONS: NA
Title of Project: A Study of Humidified Anesthetic Gases and Postoperative Vital Capacity Measurements

Principal Investigator(s): CPT ANC; Remington, Kenneth CPT ANC; Young-

Associate Investigator(s): Lotero, Frances CPT ANC.

Facility: WRAC

Department/Specialty: Dept. of Nursing/Anesthesia Svc.

Study Objective: To determine any significant difference between dry and humidified anesthetic gases.

Technical Approach: Measurement of vital capacities preop and postop at 30, 60, 90, 120 mins. post extubation of two groups of pts. (one group with dry anesthetic gases and the other with humidified.

Progress during FY-82: study completed, final paper being written.

Number of Subjects Studied:

FY-82: 15 Total (to date): 15 Before Completion of Study: 0

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State): NONE

Conclusions: Final conclusions being written and will be presented in paper. Preliminary conclusions find no significant difference between patients' vital capacities whether dry or humidified gases administered intraop.

Publications or Abstracts, FY-82: NONE presently
DATE: 3 Jan 83 | Work Unit No.: 2111 | Status: INTERIM | Fnal

STARTING DATE: March 1982 | Date of Completion: December 1983

Key Words: Stroke/Carotid Endarterectomy

Title of Project: Subclinical Stroke Following Carotid Endarterectomy.

Principal Investigator(s):

Associate Investigator(s): G.P Clagett, Jeffery Black, William Smith

Facility: VAMC | Dept/Svc: PVS (Neurology/Radiology)

Accumulative PEDCASE Cost | Accumulative Contract Cost | Accumulative Supply Cost:

FY-83 PEDCASE: | Contract Cost: | Supply Cost:

Study Objective: To determine the incidence of subclinical stroke following carotid endarterectomy.

Technical Approach: Pre and post carotid endarterectomy neurologic examinations and CT scans.

Progress During FY-82: Poor, frequent scheduling problems in OR + CT scans.

Number of Subjects Studied:

<table>
<thead>
<tr>
<th>Calendar yr</th>
<th>Total (to date)</th>
<th>Before Completion of Study:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY-82: 8</td>
<td>8</td>
<td>50</td>
</tr>
</tbody>
</table>

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):

None

Conclusions:

None to date.

Publications or Abstracts, FY-82:

283
Title of Project: Management of the Hemodynamically Significant, Asymptomatic Carotid Bruit

Investigators:

Principal: LTC G. Patrick Clagett

Objectives: (1) To determine the most appropriate management of patients with asymptomatic, hemodynamically significant carotid bruits, (2) to determine the natural history of asymptomatic extracranial vascular disease, (3) to determine the role of non-invasive diagnostic techniques in the management of patients with asymptomatic extracranial vascular disease.

Technical Approach: Consent ing patients who are asymptomatic for cerebrovascular disease who have hemodynamically significant carotid stenoses (as determined by non-invasive studies) are eligible for randomization into two groups. Patients ineligible for randomization include those who have had carotid endarterectomy on the side in question, those judged too frail to undergo carotid endarterectomy, and those who don't consent. Patients randomized into the surgical group will undergo arteriography and carotid endarterectomy if an operable lesion is found. Patients randomized into the second group will be treated with aspirin, 650 mg twice daily, and followed closely (every 3 months). If patients in the second group develop symptoms, they will then undergo arteriography and carotid endarterectomy.

Progress and Results: Since April 1979, 50 patients eligible for entry into the study have been identified. Of these, 27 consented to join and 23 have refused. Of those entered, 13 were randomly assigned to the aspirin group and 14 assigned to the surgical group. Of those on medical therapy, five have become symptomatic for cerebrovascular insufficiency on aspirin and have required arteriography. On arteriography, two patients were inoperable; one had an occluded internal carotid artery and the other had diffuse intracranial disease. The remaining three patients had tightly stenotic lesions at the carotid bifurcation and underwent uneventful carotid endarterectomy.

In the surgical group of the 14 patients assigned to this group, one patient refused arteriography and subsequently died. The other 13 patients underwent arteriography. One of these suffered anaphylaxis during arteriography and secondary myocardial infarction. He is currently considered unfit for surgery. The remaining 12 patients have undergone carotid endarterectomy. With the exception of one case in which the patient suffered postoperative subendocardial myocardial infarction, these operations have been uncomplicated. On follow-up, two patients in the surgical group have died. Both deaths were unrelated to cerebrovascular disease.

Conclusion: The number of patients remains too small and the follow-up period too brief to draw firm conclusions. We continue to enter patients into this trial and will continue to do so for at least another year.
Title of Project: Etiologic Factors for Recurrent Carotid Stenosis

Investigators: Principal: LTC G. Patrick Clagett

Objectives: (1) To determine risk factors for the development of recurrent carotid stenosis following successful carotid endarterectomy

Technical Approach: Patients with surgically or angiographically proven carotid restenosis comprise the study group. These patients are age and sex matched with patients who underwent carotid endarterectomy during the same year. The second group of patients comprises the control group. On all patients, the following information is obtained: symptoms and other indications mandating first procedure, angiographic findings, operative details, immediate postoperative morbidity and mortality, histopathologic findings, and presence of atherosclerotic risk factors. In addition to these data, study patients and control patients will have blood drawn for determination of cholesterol and triglyceride levels as well as lipid fractionation studies to determine the relative amounts of HDL, LDL and VLDL cholesterol. Furthermore, both groups of patients will undergo threshold dose response platelet aggregometry to ADP epinephrine and collagen.

Progress and Results: 35 patients have been identified with recurrent carotid stenosis following successful carotid endarterectomy. A case-control study has been completed in which 21 patients with recurrent stenosis were age and sex matched with control patients who underwent carotid endarterectomy the same year but who did not have evidence of recurrence. The data were analyzed and the conclusions are listed below.

The next phase of this study is to analyze the histopathologic material. The plan as outlined in the original protocol is to compare the histopathology of the original carotid endarterectomy specimens with the recurrent lesions. In addition, we wish to compare the characteristics of the original specimens with the control patients' specimens to detect any differences in the original atherosclerotic plaques. The co-investigator for this portion of the study is Dr. Max Robinowitz from the Cardiovascular Service of the Armed Forces Institute of Pathology. We are currently retrieving the original slides and paraffin blocks on these patients. To date, we have retrieved material on approximately 20 of the study patients and 10 of the control patients. Microscopic analysis of this material will be in progress during the next year.

Conclusions: To date our studies have led to the following conclusions: (1) Cigarette smoking following carotid endarterectomy is an important risk factor for recurrent carotid stenosis, (2) other atherosclerotic risk factors and hyperlipidemia are common in all patients undergoing carotid endarterectomy.
endarterectomy and are not predictive of recurrent carotid stenosis, (3) females are not higher risk of recurrent carotid stenosis and, (4) aspirin and other antiplatelet agents do not appear effective in protecting against recurrent carotid stenosis. These findings were presented in a paper entitled, "Etiologic Factors for Recurrent Carotid Stenosis: A Case-Control Study", at the annual meeting of the International Society for Cardiovascular Surgery and Society for Vascular Surgery, 19 June 1982, in Boston, MA. Abstracts detailing these findings have also been submitted for consideration for presentation at the American Heart Association's 8th International Joint Conference on Stroke and Cerebral Circulation in February 1983. An abstract has also been submitted for consideration for presentation at the annual meeting of the Southern Association for Vascular Surgery in January 1983.

Funding Requirements: To date there has been one travel requirement for presentation of a paper which cost $300.00


Type of Report: Interim
Study Objective:
Evaluation of St. Jude Valvular Prosthesis in selective patients.

Technical Approach:
As per St. Jude protocol.

Number of Subjects Studied:
FY-82: 1
Total (to date): 12
Before completion of study: 12

Serious/Unexpected Side Effects in Subjects Participating in Project (if none so state):
None related to valve.

Conclusions: Twelve St. Jude valvular prostheses were inserted from 7 Jan 79 until the present time, the last one having been implanted on 29 Mar 82. These implants were usually chosen in high-risk cases in which this valve offered favorable flow characteristics in comparison to any other available prostheses.

Three patients died at operation, none of them prosthetic related. Two late deaths have occurred, both from other causes. Seven patients are living, all without prosthetic complications at last follow-up. We do not plan to use the St. Jude Valve until it is approved by FDA. Thus, we terminate the investigation of this valve.
Study Objective: Evaluation of St. Jude Valvular Prosthesis in selective patients.

Method Approach: As per St. Jude protocol.

Number of Subjects Studied:
FY-82: 1  Total (to date): 12  Before completion of study: 12

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state):
None related to valve.

Conclusions: Twelve St. Jude valvular prostheses were inserted from 7 Jan 79 until the present time, the last one having been implanted on 29 Mar 82. These implants were usually chosen in high-risk cases in which this valve offered favorable flow characteristics in comparison to any other available prostheses.

Three patients died at operation, none of them prosthetic related. Two late deaths have occurred, both from other causes. Seven patients are living, all without prosthetic complications at last follow-up. We do not plan to use the St. Jude Valve until it is approved by FDA. Thus, we terminate the investigation of this valve.
STUDY OBJECTIVE: To either obliterate neuroradiologically or make surgical resectable otherwise inoperable or extremely difficult vascular lesions and tumors of the brain.

TECHNICAL APPROACH: Use of Isobutyl 2-Cyanoacrylate in small amounts delivered either percutaneously via a mini-balloon catheter or delivered directly intraoperably via injection under direct visualization.

PROGRESS DURING FY-82:
See enclosed sheet.

NUMBER OF SUBJECTS STUDIED:
FY-82: 35 clippings in Total (to date); 28 patients Before Completion of Study; 50 patients 10 patients

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF MORE SO STATE):
See enclosed sheet.

CONCLUSIONS:
See 'enclosed sheet.'
CONTINUATION OF WORK UNIT NO. 2207 - Treatment of Vascular Lesions by Mini-Balloon Catheterization and Isobutyl 2-Cyanoacrylate.

PROGRESS DURING FY-82: We treated a total of 28 patients either surgically or via gluing. During the year, there were no deaths. Thirty-five (35) embolizations on ten (10) patients. One patient seemingly had total obliteration of a mandibular arteriovenous malformation. Again, almost all other patients had subsequent surgical therapy carried out. One patient developed a severe brain stem infarction following a repeat attempt at gluing in an AVM which had reoccurred. This patient was subsequently admitted to a nursing home, but she is now slowing improving. A similar patient complication from last year recovered sufficiently to allow surgical resection of his massive AVM, a procedure from which he recovered well. The percentage of patients developing even minor complications has seemingly improved this year, possibly resulting from increased experience and knowledge regarding use of the techniques. (See publications from Walter Reed discussing this.)

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT: See above regarding serious side effects or death. All of these complications would be expected in dealing with these serious and high risk patients. It should be noted that our overall mortality and morbidity rate is far below nationally published series in treating patients with these lesions.

CONCLUSIONS: The use of Isobutyl 2-Cyanoacrylate as an intravascular agent, delivered either percutaneously via mini-balloon catheter techniques or interopertatively via direct intravascular injection, is a useful surgical adjunct in the treatment of otherwise untreatable high risk vascular lesions. Probably in most situations, IBCA alone is not the sole answer to the treatment of intracranial vascular lesions, since we have had at least one recurrence following seemingly total obliteration.

PUBLICATIONS OR ABSTRACTS, FY-82: (1) Combined Neurosurgical-Neuroradiological Therapy for Cerebral Arteriovenous Malformations—The Walter Reed Protocol, edited by Smith, Haerer and Russell, Raven Press, NY 1982. (2) Presentations of results and associated findings, American Association of Neurologic Surgeon's Meeting in April 1982. (3) Review Article in Neurosurgery, March 1982, "Interventional Radiology Polymer Update — Acrylic". (4) Several exhibits accepted for current pending AANS in April 1983. (5) Publication pending for two articles previously accepted by the American Journal of Neuroradiology. (6) Dr. George was officially invited to present review of Walter Reed work and present his recommendations on current management of these problems to Intracranial Vascular Surgery Session at AANS. (This invitation was based on the reputation being obtained by this study at Walter Reed).

ADDENDUM: Would like to add as additional co-investigator or associate investigator Joan T. Zajtchuk, Colonel, MC, Chief, Otolaryngology-Head and Neck Surgery.
Date: 5 Oct 82  Work Unit No.: 2309  Status: Interim X  Final

Starting Date: 27 Dec 1977  Date of Completion: June 1980

Key Words: Vitreous Surgery, Ocular Trauma

Title of Project: A Study of Eye Trauma and Treatment in the Military

Principal Investigator(s): Howard P. Cupples, MD, CPT, MC, USN

Associate Investigator(s): Paul V. Whitmore, MD, COL, MC, USA

Facility: WRAMC  Dept/Svc: Ophthalmology Service, Dept of Surgery

Accumulative Fed Case Cost: 0  Accumulative Contract Cost: 0  Accumulative Supply Cost: 0

FY-83 Fed Case: 0  Contract Cost: 0  Supply Cost: 0  Date of Committee Approval Of Annual Progress Report Feb 25 1983

Study Objective: To determine the role of vitreous surgery in the management of ocular trauma. To compare results of ocular trauma cases managed by vitreous surgery with the results of ocular trauma cases managed in the past by conventional methods. To develop plans for efficient management of ocular (cont'd)*

Technical Approach: A series of cases of ocular trauma managed by vitreous surgery techniques will be compared with a similar series drawn retrospectively from records of NNNC and WRAMC during the Vietnam era and managed by conventional surgical techniques. A computer terminal has been made available (cont'd)#

Progress During FY-82: All prospective cases done by vitrectomy techniques have been completed and the results of this series are the subject of the paper to be presented at the American Academy of Ophthalmology annual meeting 4 Nov 82.

Number of Subjects Studied:

FY-82: Total (to date): Before Completion of Study: 100

Serious/Unexpected Side Effects in Subjects Participating in Project (If none so state): No serious unexpected side effects to vitreous surgery have been found in the management.

Conclusions: The results of the prospective series suggest that more than 50% of such severely injured eyes can be salvaged with vitreous surgical techniques and these results compare almost identically with results from other institutions. Loss of eyes with certain types of injuries treated by previous methods have historically run greater than 75%. In our study, comparison with cases matched for type of injury will be made upon completion of the review of the retrospective series.

Publications or Abstracts, FY-82:
"Vitrectomy - Surgical Techniques In the Management of Intracocular Foreign Bodies" - presented at the 9th Biennial Walter Reed Ophthalmology Postgraduate Course 27 April 1982.

* Study Objective (cont'd): combat injuries based upon the analysis of data collected during the study.

# Technical Approach (cont'd): in the Eye Clinic, NNNC and we are currently gathering and tabulating the retrospective cases.
STUDY OBJECTIVE: To evaluate intraocular lenses with regard to safety in the treatment of aphakia.

TECHNICAL APPROACH: Intraocular lenses will be implanted in selected patients either at the time of cataract extraction or in a second operation following cataract extraction. This is a part of a nationwide collaborative study to determine the incidence of adverse effects.

PROGRESS DURING FY-82: 46 patients had implants with no adverse effects directly to the lens.

NUMBER OF SUBJECTS STUDIED:
FY-82: 46  TOTAL (TO DATE): 134  BEFORE COMPLETION OF STUDY: unknown

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF ANY DO STATE):
None

CONCLUSIONS:
Excellent results indicate sufficient value to continue with this protocol.

PUBLICATIONS OR ABSTRACTS, FY-82:
None.
1. Reference above Work Unit, one additional case has been performed at Walter Reed Hospital. Patient's name is Bainbridge, Charity, dependent ssn: 170-44-2751.

2. Diagnosis: congenital ptosis, bilateral frontalis sling using lyophilized fascia lata was performed without complications. At this time, patient is still being followed.

3. Dr. Broughton has published the initial report of the fascia lata study.

4. The technical approach has not been modified currently and no serious and unexpected side effects and complications have been met with.

5. The study at present is continuing under the same director.

Norman N.K. Katz, MD
COLONEL, MC US ARMY
Ophthalmology Svc, WRAMC
1. CPT Raysor has left Walter Reed Army Medical Center and did not work on this project.

2. Since CPT Raysor has left WRAMC, with no one to take his place, this study can be terminated for the present time.

THOM S. THOMASSEN, MD
MAJ, MC, US ARMY
Ophthalmology Service
Walter Reed Army Medical Center
DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL


TO C, Dep Clin Invest FROM CPT Charles S. Tressler, MC 17 Jan 83

Ophthalmology Svc

Shortly after receiving the first notification last autumn (1982), I went to the Office of Clinical Investigation and asked to have my project placed on an inactive status. There were several reasons for this action.

For a good portion of last year (June through November 1982) I was either on TDY orders or working at a clinic away from Walter Reed Army Medical Center. Furthermore, to date I have not had any subjects involved in my study. Part of the reason for this is that I had not clearly defined how I intended to randomize my study. In addition, there was some question as to whether other surgeons would comply with the protocol as outlined.

When I approached the Clinical Investigation Department last autumn it was my understanding that by placing my study, which clinically had not started, on an inactive list I would not have to file an annual report.

I apologize for my misunderstanding and any inconvenience this may have caused. I do intend to reactivate my study with the necessary changes this spring via the proper channels as outlined by the Department of Clinical Investigation.

Thank you.

Charles S. Tressler MD, CPT MC
DATE: 15 NOV 82 WORK UNIT NO.: 2314 STATUS: INTERIM FINAL X
STARTING DATE: JULY 1981 DATE OF COMPLETION: N/A

Key Words:

Title of Project: Comparison of External Measurements In Normal, Entropic, and Ectropic Lids

PRINCIPAL INVESTIGATOR(S): Kevin G. Maguire, CPT, MC
ASSOCIATE INVESTIGATOR(S): N/A

FACILITY: WRAMC
DEPT/Svc: OPHTHALMOLOGY

ACCUMULATIVE PEPCASE Cost: 0 ACCUMULATIVE CONTRACT Cost: 0 ACCUMULATIVE SUPPLY Cost: 0
FY-83 PEPCASE: CONTRACT Cost: SUPPLY Cost: Date of Committee Approval Of Annual Progress Report N/A

STUDY OBJECTIVE:

TECHNICAL APPROACH:

PROGRESS DURING FY-82:

NUMBER OF SUBJECTS STUDIED:
FY-82: _____ TOTAL (TO DATE): _____ BEFORE COMPLETION OF STUDY:

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT(IF NONE SO STATE):

CONCLUSIONS:
Protocol terminated, investigator is no longer assigned to WRAMC.

PUBLICATIONS OR ABSTRACTS, FY-82:

296
1. Reference the above Work Unit, the clinical investigation project was completed 30 June, 1982. The results were reported at the Biennial Walter Reed Alumni Meeting and Post-Graduate Ophthalmology Course. The results are being prepared in paper form for publication.

2. The manuscript when completed will be forwarded to the Clinical Investigation Department for approval prior to sending for publication.

3. The accumulative MEDCASE, contract, supply, cost and items J,K,L,M,N,O,P, & Q are not applicable.

Norman N.K. Katz, MD
COL, MC US ARMY
Ophthalmology Svc, Dept Surg, WRAMC
Date: 26 Jan 83  Work Unit No.: 2400  Status: INTERIM X Final

Start Date: October 1980  Date of Completion: 1st Phase by Jan 84

Title of Project:
Clinical and Biomechanical Investigation of Knee Ligament Laxity

Principal Investigator(s): Dr. Myron D. Tremaine
Associate Investigator(s): Dr. Youngil Youn

Facility: MRCV
Dept/Serv: Dept of Surgery, Orthopaedic Service

Accumulative PEDECASE Cost: $2000 (approx.)

FY-83 PEDECASE: $2000 (approx.)

Date of Committee Approval: Dec

Study Objective: Complete knee stress machine, complete psychological testing profile, complete computerization of Cybex Isokinetic machine

Technical Approach:
No modifications to original protocol

Progress During FY-82: No subjects studied, but knee stress machine and computerization of Cybex machine almost completed. Ready for testing in next few months. Psychological testing started. Not completed.

Number of Subjects Studied:
FY-82: Total (to date): Approx 50  Before Completion of Study:

Serious/Unexpected Side Effects in Subjects Participating in Project (If None Do State):
No serious side effects

Conclusions:

Publications or Abstracts: FY-82:
One abstract submitted to Engineering Journal describing knee stress machine. Anticipate a patent, and probably another abstract concerning Cybex Computerization
DATE: 30 Sep 82 WORK UNIT NO.: 2517 STATUS: INTERIM FINAL X

STARTING DATE: August 1977 DATE OF COMPLETION: September 1982

KEY WORDS: aural rehabilitation, rehabilitation, lipreading, auditory-visual integration

TITLE OF PROJECT: Evaluation of a Specialized Technique for Training Audio-Visual Integration

PRINCIPAL INVESTIGATOR(S): Allen A. Montgomery

ASSOCIATE INVESTIGATOR(S): Brian E. Waldis, Daniel M. Schwartz, Robert A. Prosek, Earl Wilkinson

FACILITY: WRAMC DEPT/SVC: Dept. of Surgery/Otolaryngology Service


FY-83 MEDCASE: CONTRACT COST: SUPPLY COST: DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT

STUDY OBJECTIVE: This study is designed to evaluate the effectiveness of a newly-developed training procedure for improving patients' ability to use the audible and visible aspects of speech simultaneously [audio-visual integration (AVI)].

TECHNICAL APPROACH: Twenty-four hard-of-hearing patients were divided into control and experimental groups and tested before and after receiving either traditional rehabilitation or the AVI technique. The AVI training was done individually in 10 one-hour sessions by trained rehabilitationists. The before and after testing consisted of a 100-item sentence test presented audiovisually in noise, and the data were analyzed with parametric statistics (t-tests and ANACOVA). In addition, a group of 12 normally-hearing people were tested at a similar interval to assess the learning effects of the test.

PROGRESS DURING FY-82: The data were reanalyzed and the manuscript was revised to address the important issue of the effect of guessing on pre- and post-testing performance. This issue was raised by a recent study and reflects directly on our data. The issue has been resolved in our favor, and the study has been strengthened by the additional analysis.
Annual Progress Report (cont.) - Work Unit #2517

NUMBER OF SUBJECTS STUDIED:
FY-82: 0        TOTAL (TO DATE): 24        BEFORE COMPLETION OF STUDY: 24

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None.

CONCLUSIONS: The technique appears to be a useful and efficient way to improve new hearing aid users' ability to use the visual (lipreading) component and the auditory component of speech simultaneously.

PUBLICATIONS OR ABSTRACTS, FY-82: A manuscript is in preparation for submission to *Ear and Hearing*. 
STUDY OBJECTIVE: To determine the relationship between various perceptual dimensions and the physical characteristics of hearing aids in judging the sound quality of hearing aid processed speech.

TECHNICAL APPROACH: A single 20 second tape recorded passage consisting of an interpretive reading from "The Adventure of Tom Sawyer" was hearing aid processed through each of 20 commercially available hearing aids in a paired comparison format. The recording procedure was accomplished using KEMAR equipped with Zwislocki-type ear simulators.

For the playback phase 10 normal hearers, 10 subjects with high frequency hearing loss, and 10 with flat loss were each instructed to furnish two types of responses; ratings of similarity and judgments of preference based on the quality of the hearing aid processed speech. Similarity ratings were made on a 7-point equal appearing interval scale, where 1 represented very similar and 7 dissimilar. Preference judgments consisted of identifying the aid within each pair which had preferable sound quality.

PROGRESS DURING FY-82: None.
NUMBER OF SUBJECTS STUDIED:
FY-82: 0 TOTAL (TO DATE): 20 BEFORE COMPLETION OF STUDY: 20

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None.

CONCLUSIONS: The finding that low-frequency cutoff dominates listener judgments of hearing aid sound quality is in direct contrast to the amplification needs of hearing impaired patients. That is, an extensive body of research literature suggests that amplification of low frequency speech sounds and noise may create an upward spread of masking and thus degrade the intelligibility of speech. Hence, the data of the present study reveals that the electroacoustic characteristic that results in the best sound quality, i.e., low low-cutoff frequency, may not be the one that results in improved speech understanding with a hearing aid.

PUBLICATIONS OR ABSTRACTS, FY-82: A manuscript is being prepared for submission to the Journal of Speech and Hearing Research.

NOTE: The Principal Investigator on this protocol has resigned his position effective 1 October 1982.
DATE: 30 Sep 82 WORK UNIT NO.: 2525 STATUS: INTERIM X FINAL

STARTING DATE: August 1978 DATE OF COMPLETION: February 1983

KEY WORDS: lipreading, synthetic speech, computer graphics, aural rehabilitation

TITLE OF PROJECT: Generation and Evaluation of Synthetic Facial Images for Studying and Training Lipreading

PRINCIPAL INVESTIGATOR(S): Allen A. Montgomery

ASSOCIATE INVESTIGATOR(S): Brian E. Walden, Robert A. Prosek, Daniel M. Schwartz, Kweon I. Stanbaugh

FACILITY: WRAMC DEPT/SVC: Dept. of Surgery/Otolaryngology Service

ACCUMULATIVE MEDCASE COST: $7,595.00
ACCUMULATIVE CONTRACT COST: $692.60
ACCUMULATIVE SUPPLY COST: $692.60

FY-83 MEDCASE: CONTRACT COST: SUPPLY COST:

DATE OF COMMITTEE APPROVAL OF ANNUAL PROGRESS REPORT
FEB 23 1983

STUDY OBJECTIVE: This study is designed to evaluate the feasibility of simulating on a computer graphics system, the information-bearing elements of the talker's mouth and face during speech, for the purpose of studying lipreading in hard-of-hearing patients.

TECHNICAL APPROACH: The final phase of this project involves the incorporation of phoneme-timing information into the model, the development of realistic standards for forward and backward coarticulation, the software revision to allow direct phoneme-to-image translation, and the evaluation of the system with hearing impaired subjects.

PROGRESS DURING FY-82: The timing information has been gathered from several sources and is available for incorporation into the computer-based model. Standards for the exact amount of coarticulation that is needed to produce natural-appearing visual images have been developed, but seem to be unnecessarily complex and dependent on the specific consonants and vowels involved. The software has been revised to permit approximately a 10:1 reduction of the time required to convert phoneme information to animated images. However, when the timing subroutine is incorporated in final form, we anticipate another significant reduction in the conversion time. Evaluation of the system is scheduled to begin in mid-October.
NUMBER OF SUBJECTS STUDIED:
FY-82: 0 TOTAL (TO DATE): 20 BEFORE COMPLETION OF STUDY: 30

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None.

CONCLUSIONS: Technical refinements and software modifications dominated the research effort during FY-82. The animated images that the system produces now are, in general, quite realistic and a successful evaluation is anticipated.

PUBLICATIONS OR ABSTRACTS, FY-82:

STUDY OBJECTIVE: The objective of this project is to develop a communication self-assessment inventory to be used in the inpatient Aural Rehabilitation Program of the Army Audiology and Speech Center, WRAMC. The specific purposes of this inventory are:

a. To assess progress in environmental control, and in emotional, social, familial, and vocational adjustment to the handicap as a result of the Aural Rehabilitation Program (i.e., a quantitative index of improvement provided by pre- and post-program scores).

b. To establish a baseline for planning a patient's environmental control training and adjustment counseling in the Aural Rehabilitation Program.

c. To provide prognostic indicators of short-term success in communication (pre-program administration).

d. To provide prognostic indicators of long-term success in communication after returning to duty station (post-program administration).

TECHNICAL APPROACH: Having determined during FY-80 that the Hearing Performance Inventory (T.C. Giolas et al., JSHD, 1979) would not fulfill the Army's needs for a communication inventory (see FY-80 APR), we undertook to develop our own inventory. A large pool of items was developed and administered to a large number of patients. Responses to the inventory were subjected to statistical analysis. A revised version of 155 items is currently being tested as a final phase of inventory development.
PROGRESS DURING FY-82: The original form consisting of 215 items was modified following statistical analyses. The revised form is comprised of 155 items. On the basis of clinical observations and factor analyses, the scales and subscales were also revised to provide more specific information to the clinician. The scales include revisions of Communication Performance, Communication Environment, Behavioral Adjustment, and Personal Adjustment. The Communication Information scale was deleted. A new scale was included to address Communication Strategies. (Additional information regarding the revised scales and subscales can be obtained from the Audiology Section upon request.)

The attempt to automate the testing process utilizing the laboratory computer system was unsuccessful. At this time efforts are being made to evaluate an optical scanner system for processing patient responses.

NUMBER OF SUBJECTS STUDIED:
FY-82: 300  TOTAL (TO DATE): 407  BEFORE COMPLETION OF STUDY: 700

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None.

CONCLUSIONS: Not applicable at this time.

PUBLICATIONS OR ABSTRACTS, FY-82: Not applicable at the present time.
The following information/explanation is furnished at your request for clarification of budget changes in Work Unit #2526.

2. It has been proposed that Dr. Marilyn Demorest (formerly Wang) return to WRAMC on a full-time basis for work on this project during the summer of 1983. Final statistical analysis and publication of the Communication Profile for the Hearing Impaired in test manual form (in compliance with APA guidelines) can be accomplished within this time frame if she extends her work here to a full-time basis for a two-month period. She will have worked on this project for nearly two years as a Red Cross Volunteer following her initial year here (1980) on temporary hire. Data analyses during the summer of 1983 will involve results from nearly 1000 subjects, two revised forms of the questionnaire in addition to audiometric data for the relevant subjects.

3. Our current time and staff constraints would preclude accomplishing these goals within the desired time frame. Inability to fund the remaining work on this project could necessitate relinquishing the project to another facility or significant delays in the completion of the study, publication of the results and the test materials in manuscript and/or manual form.

Sue Ann Erdman, M.A.
Audiologist
AA&SC, WRAMC
Principal Investigator
Study Objective: To examine the effects of high frequency hearing loss and the role of mathematical correction factors on the ABR.

Technical Approach: Auditory brainstem responses were recorded monaurally with disc electrodes attached to the vertex and earlobes. Responses were recorded to alternating condensation and rarefaction clicks at 65, 75 and 85 dB NHL.

Progress During FY-82: 48 sensorineural hearing loss subjects have been run.

Number of Subjects Studied:
FY-82: 8  Total (to date): 48  Before completion of study: 48

Serious/Unexpected Side Effects in Subjects Participating in Project (If None So State): None.

Conclusions: Click polarity was found to effect wave I such that percent of absence of wave I was found to increase considerably when using condensation and alternating clicks. For alternating clicks wave I was absent in 56% of the cases at 65 dB NHL and 38% at the two higher intensities. Wave I was
absent least often (16%) for rarefaction clicks at 85 dB NHL. High frequency hearing loss at 6000 Hz tended to correlate best with wave V latency delay such that a delay of 0.1 msec was shown to occur with every 10 dB of hearing loss. Analysis of the individual scatter of data, however, showed the error that would occur if such a correction factor was used. Not only did statistical analysis reveal that only 17% of the variance was accounted for solely on the basis of hearing loss, but scatter plots of the data showed that over or underestimates of latency delay will occur if one uses a correction factor.

What proved valuable, however, was to use a single index of seven milliseconds for wave V latency and 4.6 msec for the I-V inter-peak latency to demarcate between cochlear and VIII\textsuperscript{th} nerve tumor ears.

PUBLICATIONS OR ABSTRACTS, FY-82: Manuscript in preparation for submission to a scientific journal.

NOTE: The Principal Investigator on this protocol has resigned his position effective 1 October 1982.
STUDY OBJECTIVE: The purpose of this research is to test the assumptions which underlie the comparative hearing aid evaluation (CHAE). Among the questions to be answered are: a) Do clinically and statistically significant performance differences exist among hearing aids preselected to be appropriate to the patient’s hearing loss? b) Does the same instrument tend to be best for all patients? c) Are available test materials sufficiently reliable for use in hearing aid selection? d) Are the results of a CHAE stable over time? e) Do the results of a CHAE predict patient performance in the real world?

TECHNICAL APPROACH: Hearing-impaired subjects selected from the Aural Rehabilitation Program of the Army Audiology and Speech Center are administered a modified comparative hearing aid evaluation (CHAE) using three behind-the-ear instruments. The binomial model (at .95 confidence) is used to determine if significant differences exist among the aided monosyllabic word recognition in noise scores. In those cases where the interaid differences exceeded chance performance, two additional steps were taken. First, the patient was allowed to wear each of the three instruments for an extended period of time during the week following the initial CHAE. At the end of this trial use period, the patient indicated which aid was most acceptable and which was least acceptable. Second, following the trial use period, the CHAE was repeated.
PROGRESS DURING FY-82: Data acquisition was completed on a total of 45 hearing impaired subjects. Data reduction and statistical analysis were completed. A manuscript was prepared based on the findings of this investigation and was submitted for publication in the *Journal of Speech and Hearing Disorders*. Currently, it is under editorial review.

NUMBER OF SUBJECTS STUDIED:
FY-82: _____ TOTAL (TO DATE): 45 BEFORE COMPLETION OF STUDY: 45

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): There were no serious/unexpected side effects in subjects participating in this project.

CONCLUSIONS: When the hearing aids preselected for evaluation with a patient are relatively homogeneous electroacoustically, significant interaid performance differences on the hearing aid evaluation are not likely to occur very often. In contrast, when the aids are very different electroacoustically, significant interaid differences may occur frequently. In such cases, however, interactions between hearing aids and patient performance will be relatively rare. Further, unless there are fairly large electroacoustic differences among the instruments being evaluated, the test-retest reliability of standard monosyllabic word lists may not be adequate to detect typical interaid differences that occur in a comparative hearing aid evaluation. This appears to be the case even when 100-item test lists are used. The problem becomes greater, the shorter the test lists employed. The data also suggest that the performance hierarchy on the clinical evaluation can be expected to change for many patients as the new hearing aid user adjusts to amplification. Finally, the instrument which scores highest on the clinical evaluation is not necessarily the aid that would be judge most beneficial by the patient based on trial use in daily living unless relatively large interaid difference scores are obtained.

PUBLICATIONS OR ABSTRACTS, FY-82: A manuscript has been prepared and is currently under editorial review by the *Journal of Speech and Hearing Disorders*. 

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STUDY OBJECTIVE: To determine the extent to which fluency improvement is maintained by adult stutterers participating in the Precision Fluency Shaping Program during a nine-month period following release from treatment.

TECHNICAL APPROACH: Forty-seven stutterers who are participating in the Precision Fluency Shaping Program at Walter Reed will be the subjects for this study. Tape-recorded telephone monologues will be obtained from each subject on five occasions: 1) prior to the initiation of therapy (baseline), 2) immediately after completing the program (four weeks after baseline), 3) three months post-therapy, 4) six months post-therapy, and 5) nine months post-therapy. After giving permission to record the monologue, the subject will be instructed to speak for five minutes about his speech, or his hobbies, or about any topic that interests him (the specific content of the monologue is not important).

Two general measures of fluency, percent syllables stuttered (%SS) and syllables per minute (SPM), will be obtained for each of the 150 monologues. The improvement in each of these measurements relative to the baseline session will be calculated for each subject for each post-therapy recording. Appropriate statistics will be applied to these data to determine if the fluency gains made by the program are retained when the subject finishes treatment.
PROGRESS DURING FY-82: During FY-82 progress has occurred in data acquisition and data reduction. Forty-seven patients have been recorded in the pre-therapy condition. Forty-three subjects have been recorded in the pre-therapy and immediate post-therapy condition. Of these, 28 have also been recorded at 3 months post-therapy; 23 at 6 months post-therapy; and 20 at 9 months post-therapy. Fifteen subjects have been recorded in all five conditions. Data reduction has begun in terms of transcribing each tape recorded session, counts of disfluencies, and measurement of monologue duration. To date, 50 taped sessions have been completed. This represents approximately one-third of the data reduction needed to begin data analysis. Follow-up recordings have not been obtained from some subjects due to difficulty locating the subject and/or contacting the subject via telephone, particularly when the subject is in a duty location outside CONUS. The number of subjects has been increased from 41 to 47 for the above reasons. Estimated completion date for data acquisition is November 1982.

NUMBER OF SUBJECTS STUDIED:
FY-82: 7 TOTAL (TO DATE): 47 BEFORE COMPLETION OF STUDY: 47

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None.

CONCLUSIONS: Not applicable at the present time.

PUBLICATIONS OR ABSTRACTS, FY-82: Not applicable at the present time.
STUDY OBJECTIVE: The purpose was to study the effect of monaural hearing aid use on dichotic listening task longitudinally in patients with predominantly high frequency sensorineural hearing loss.

TECHNICAL APPROACH: Twenty subjects with symmetrical high-frequency sensorineural hearing loss judged to be good hearing aid candidates were divided into two groups. One group was fitted with an aid for the right ear and the other for the left ear. Monotic and dichotic syllable discrimination tests were administered prior to the hearing aid use and then after one and six months of use. These data then would permit us to determine if monaural hearing aid use leads to an ear advantage (i.e., favoring one ear over the other for processing speech information) as has been suggested by Jacobsen (1979) on a flat hearing loss population.

PROGRESS DURING FY-82: All data have been collected and the analysis is in progress. A paper based on the preliminary analysis of these data was submitted and accepted for presentation at the Annual Convention of the American Speech-Language-Hearing Association, November, 1982, in Toronto, Canada.
Annual Progress Report (cont., - Work Unit #2533

NUMBER OF SUBJECTS STUDIED:
FY-82: 10  TOTAL (TO DATE): 20  BEFORE COMPLETION OF STUDY: 20

SERIOUS/UNEXPECTED SIDE EFFECTS IN SUBJECTS PARTICIPATING IN PROJECT (IF NONE SO STATE): None

CONCLUSIONS: The data analysis is not complete enough to permit conclusions at this date.

PUBLICATIONS OR ABSTRACTS, FY-82: None