THE UNIVERSITY OF MICHIGAN

Department of Pathology

ANNUAL REPORT

1 July 1984 - 30 June 1985
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<td>Appelman, Henry D.</td>
<td>Professor and Director, Anatomic Pathology</td>
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<td>Assistant Professor</td>
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<td>Beals, Theodore F.</td>
<td>Assistant Professor</td>
<td>Veterans Administration Medical Center</td>
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<td>Courtney, Richard M.☆</td>
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<td>de la Iglesia, Felix☆☆</td>
<td>Adjunct Research Scientist</td>
<td>Warner-Lambert; Parke Davis</td>
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<td>Fine, Gerald☆☆☆</td>
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<td>Giacherio, Donald</td>
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<td>Gikas, Paul W.</td>
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<td>Hicks, Samuel P.</td>
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<td>Judd, W. John</td>
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<td>McKeever, Paul E.</td>
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<td>Midgley, A. Rees</td>
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<td>Shope, Thomas C.</td>
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<td>Till, Gerd O.</td>
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<td>Varani, James</td>
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<td>Ward, Peter A.</td>
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<td>Weatherbee, Lee</td>
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<td>Wilson, Barry S.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Wolter, J. Reimer†</td>
<td>Professor</td>
<td>The University of Michigan</td>
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* Joint Appointment, Dental School
** Clinical Appointment, Warner-Lambert, Parke Davis
*** Clinical Appointment, Henry Ford Hospital
† Joint Appointment, Department of Pediatrics and Communicable Diseases
‡‡ Joint Appointment, Department of Ophthalmology
General Statement
THE UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
DEPARTMENT OF PATHOLOGY

ANNUAL REPORT FOR 1984/1985

It is now possible to view the past year's accomplishments as well as to look back on the past five years. In general, much has been accomplished and for that the entire faculty of the Department of Pathology can take pride. At the same time, changes in the Medical reimbursement area are occurring with great rapidity and momentum; it is now possible to discern a "ripple effect" of these changes on several aspects of Departmental activity, the consequences of which are briefly touched upon below.

The encouraging news is the progress the Department has made in achieving the chief goal established five years ago: to build a research program of excellence in the area of immunopathology with positive reinforcing impacts on the educational and service activities of the Department. The Department continues to develop strong research as well as clinical ties with other Clinical Departments in the Medical Center. Funded NIH research programs have close collaborative scientific ties with the Pulmonary Division (Department of Internal Medicine), the Department of Surgery, and the Pediatric Hematology/Oncology Division of the Department of Pediatrics and Communicable Disease. In early 1986, we will move into new, additional research space in the new Medical Science Research Building. As indicated in last year's Annual Report, a mark of success is the receipt of career development type awards by a substantial number of young faculty members: Research Career Development Award (NIH), Dr. B. Wilson; Clinical Investigator Awards, Drs. J.C. Fantone, K.J. Johnson and L. Stoolman; Established Investigator of the American Heart Association, Drs. S.L. Kunkel and S.H. Phan; and a New Investigator Award (NIH), Dr. R. Lloyd. This probably stands as a national record for an academic Department of Pathology. The substantial number of new research grant awards, together with already existing research grants (total direct and indirect cost for 1984-85, $2.3 million) are additional reflections of success in the burgeoning research activities in the Department of Pathology. Of special note is Dr. Ricardo Lloyd being named recipient of the Arthur Purdy Stout Award in Surgical Pathology, given yearly to a young surgical pathologist with the most outstanding evidence of productivity. It is a great honor for the Department to have one of its surgical pathologists (and NIH-funded research investigator) selected for this Award by the International Academy of Pathologists. It is also important to note that the research activities involving monoclonal technology and flow cytometric analysis have had direct and positive impacts in diagnostic service activities as reflected by publications involving both diagnostic pathologists as well as basic science research faculty of the Department. A research area which will unquestionably have secondary, positive impacts in diagnostic pathology and must be developed is molecular genetics. Using CDNA and other probes it will be possible to define the presence of certain gene products in cells and tissues. In the early Fall of 1985, the Department of Pathology will initiate recruitment efforts for the identification of well-trained investigators in the area of molecular genetics. Sources in this effort should position the Department for a tie with The University of Michigan Howard Hughes Medical Institute.
As part of the past strategy to gain a better perspective on the looming impacts of reimbursement changes, the Department has taken a highly conservative approach for replacements of retired or departed faculty. We have yet to replace the positions that were occupied by Drs. Hendrix, Hinerman, Zis and Kumar. With an increase in the past year in the volume of surgical pathology specimens of nearly 24%, a 7.5% increase in volume of clinical pathology tests, and the consolidation of many of the Special Limited Function Laboratory activities into the Pathology Laboratories, it is apparent that we will now have to cautiously renew recruitment activities. Consolidation of the Toxicology and Pediatric Laboratory functions now appears complete; over the Fall and Winter we expect to consolidate laboratory activities currently consigned to the Department of Internal Medicine. Despite the Hospitals' enforced Pathology Laboratories Expense Reduction Program of $500,000, the Pathology faculty have accommodated to these events and have increased the productivity and efficiency of their laboratories. The Pathology faculty have also initiated extramural activities with outside corporations; this began September 1st, 1984. For this, they deserve great credit.

Other aspects on service activities deserve note. The Aspiration Cytology Service, which is closely coordinated with other clinical departments, will increasingly become an important new diagnostic activity for the Department of Pathology. The availability of new monoclonal antibodies (from commercial sources as well as those developed in the Department's own research laboratories) has led to application of these antibodies to clinical biopsy specimens (as demonstrated by several publications of our surgical pathologists). Interestingly, this has resulted in a greatly reduced volume of electron microscopy (EM) specimens. Thus, the number of cases involving EM analysis of tumors has fallen significantly while the number of specimens subjected to immunoperoxidase analysis has increased sharply. Another case indicating shifts in the diagnostic approaches is related to the wide use of cyclosporin in transplant patients and the unexplained tendency of this drug to mask clinical signs of transplant rejection. This has led to a dramatic increase in the number of specimens processed by the Renal Biopsy Diagnostic Service. The changing technology and the clinical application of new drugs is accelerating this trend. With the expanding transplantation program and the commitment of the Department of Pathology to collaborative support for the Biological Response Modifiers Program, which is being developed by Drs. Foon and Wicha (Hematology/Oncology Division, Department of Internal Medicine), major new service and research demands will be placed upon our faculty.

In the educational area, the Department, under the leadership of Dr. Gerald Abrams, successfully revised teaching approaches in the Second Year Pathology Lecture and Laboratory series in order to make the process significantly more efficient. Utilizing the "team teaching" approach, subspecialty areas of pathology are taught by a small number of experts who provide instruction to all students. In addition, these individuals have the responsibility to develop common syllabus material and make kodachrome slides available to all instructors. This has greatly reduced the educational preparation time of faculty. Both students and faculty appear to be satisfied with these changes and there appears to be consensus that the quality of teaching has been improved. There has been substantial changes in the House Officer Program because of the sale of Wayne
County General Hospital to private industry and the change in administration. The Westland Medical Center has subcontracted its Pathology Services to a private corporation resulting in our termination of faculty and residency appointments at the facility. Dr. Robert Schmidt will return to the Department full-time in the Fall of 1985 and three clinical faculty were notified of their final year of appointment. In Spring of 1985, the Board of Regents voted for discontinuation of the Medical Technology Program, which was initiated by Dr. C.V. Weller in the early 1950's. Although this program has been of high quality, its dependence upon financial subsidy from the University Hospitals and the phasing out of this subsidy because of changes in medical reimbursement have led to the difficult conclusion that the program could not be maintained without a significant infusion of new support from the General Fund. Based on all of these considerations, program discontinuance was decided upon. The program will be phased out over the next 24 months.

Because of external forces, the Residency Training Program is an area of concern. With the drastic national impacts of reimbursement changes on revenue for pathology services, in the 1984-85 academic year there was nationally a 35% drop in the number of medical students applying for appointment in Pathology Residency Programs. For the 32 pathology residency slots in the State of Michigan listed in the National Residency Matching Program, only two slots were filled through the Matching Program. It has become evident that pathology is rapidly vanishing as an attractive career for medical graduates. In order to overcome these trends, the Department will more aggressively recruit and will emphasize the opportunities in the program for individuals interested in academic careers in Pathology. Based on last year's experience, it has also become apparent that we will have to guarantee applicants to our residency program a fifth year of training, since this is a new requirement recently imposed by the American Board of Pathology. Accommodation of this change will require reducing the number of slots available for entry-level residents.

The Postdoctoral Training Program in Immunopathology continues to be supported by a training grant from the NHLBI and is flourishing as a fellowship program. Currently there are ten postdoctoral fellows in the Department (four M.D.'s, four Ph.D.'s, and two D.V.M.'s) as well as approximately 12 undergraduate students involved in the research laboratories throughout the Department. Many of these undergraduate students (approximately half being medical students) are involved year-round in laboratory research activities.

We note with sadness the death on March 15, 1985, of Dr. A. James French, Professor-Emeritus of Pathology and Past Chairman. The Department dedicated the newly renovated A. James French Conference Room in October, 1984, before Dr. French became ill. Dr. French built the clinical clinical foundations of the Department, making progress of the past five years both feasible and possible. Accordingly, Dr. French's contributions will last long into the future.
Looking at what has been accomplished during the past five years, we can all be proud and look forward to the next five years with anticipation and eagerness.

Peter A. Ward, M.D.
Professor and Chairman
16 August 1985
Pathology Section
of the
Medical Science I Building
Faculty Reports
GERALD D. ABRAMS, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Services - 33 weeks.
   B. Necropsy Service - on call.
   C. Pathologist, Cardiac Transplant Team.
   D. Consultant For Gastrointestinal Pathology.
   E. Consultant For Cardiovascular Pathology.
   F. Consultant, Unit For Laboratory Animal Medicine.

II. TEACHING ACTIVITIES:
   A. Freshman Medical Class:
      1. ICS 500, Sequence Coordinator and Lecturer, "Basic Concepts of
         Disease" - 20 contact hours.
      2. Histology 501 - Clinical Correlations - two contact hours.
   B. Sophomore Medical Class:
      1. ICS 600, Clinico-pathologic Conferences - ten contact hours.
      2. Pathology 600, Lecture and Lab - 16 contact hours.
      3. Pathology 600 - Course Director.
   C. Senior Medical Class:
      Coordinator for Senior Clerkships.
   D. Hospital:
      1. Cardiovascular Pathology Conference - monthly.
      2. Gastrointestinal Surgical Pathology Conference - monthly.
      3. Internal Medicine CPC - monthly.
      4. Internal Medicine Necropsy Review - monthly.
   E. College of LS & A.
   F. Graduate School:
      1. Pathology 859, Lectures in General Pathology - 45 contact hours.
      2. Pathology 860, Laboratory in General Pathology - 30 contact hours.
   G. Postgraduate Education - Invited Lectures:
   H. House Officers:
      Training in Surgical and Necropsy Pathology.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Oxygen radicals in myocardial infarction (B.R. Lucchesi, Principal Investigator).
B. Pharmacologic studies on Ischemic Heart (B.R. Lucchesi, Principal Investigator).
C. Pharmacologic studies on Coronary Circulation (B.R. Lucchesi, Principal Investigator).
D. Pharmacologic/Toxicologic studies on Mitometh (D.E. Schteingart, Principal Investigator).

PROJECTS UNDER STUDY:

A. Pathogenesis and modification of myocardial infarction (with B.R. Lucchesi).
B. Nephrotoxicity of chemotherapeutic and antibiotic agents (with V. Schweitzer).
C. Histopathologic aspects of coronary angioplasty (with W. O'Neil, P. Lai, H. Glass).
D. Toxicity of Mitometh (with D.E. Schteingart).
E. Ascorbic acid and alcohol toxicity (with V. Zannoni).
F. Miscellaneous clinical-pathologic studies in cardiology and gastrointestinal pathology (in collaboration with Surgery, Radiology, and Internal Medicine).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Educational Coordinator and Course Director.
B. Chairman, Departmental Advisory Committee on Appointments, Promotions, and Titles.

MEDICAL SCHOOL/HOSPITAL:

A. Basic Science Phase Promotion Board.
B. Clinical Phase Promotion Board.
C. Senior Year Counselor.
D. Academic Affairs Committee.
E. Artwork Committee, R.H.P.
F. Review and Search Committee, Medical and Biological Illustration.
G. LS & A Medical School Task Force to Evaluate Pre-Medical and Medical Education.

V. OTHER RELEVANT ACTIVITIES:

A. Deputy Medical Examiner, Washtenaw County.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

   - Chapter 1. General Concepts of Disease
   - Chapter 2. Heredity, Environment and Disease
   - Chapter 3. Cellular Injury and Death
   - Chapter 4. Inflammation and Repair
   - Chapter 5. Immunologic Challenge
   - Chapter 6. Infectious Agents
   - Chapter 7. Disturbances of Circulation
   - Chapter 8. Disturbances of Growth


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

THOMAS M. ANNESLEY, PH.D.
ASSISTANT PROFESSOR OF CLINICAL CHEMISTRY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:

A. Director, Drug Analysis and Toxicology Laboratory.
B. Associate Director, Section of Biochemistry.
C. Consultant to Veterans Administration Hospital, Ann Arbor, Michigan.
D. Consultant, MDS Laboratories.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. House Officers:
   1. Participant, Clinical Pathology Rounds.
   2. Lecturer, Clinical Pathology Didactic Lecture Series.
   3. Daily Sign-out and Interpretation of Laboratory Results.
B. Postgraduate Teaching:
   1. Planning Committee, Towsley Continuing Education Series in Clinical Chemistry and Immunology.
   2. Lectures on High Resolution Electrophoresis.
C. Medical Technology:
   1. Course Instructor, Medical Technology Program (Pathology 410). Areas include thyroid physiology, general endocrinology, RIA/immunochemical methods.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-Investigator: Smokeless Tobacco Research Council. "Significance of Immune Responses to Oral Carcinogens". D. Keren, Principal Investigator; (10% effort).

PROJECTS UNDER STUDY:


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Drug Analysis and Toxicology Laboratory.

MEDICAL SCHOOL/HOSPITAL:

A. Standardization of Procedures Committee.

REGIONAL AND NATIONAL:

A. Executive Committee, Michigan Section, American Association for Clinical Chemistry.

B. Education Committee, Michigan Section, American Association for Clinical Chemistry.

C. Program Chairman, American Association for Clinical Chemistry.

V. OTHER RELEVANT ACTIVITIES:

AWARDS:

A. Clinical Chemist Recognition Award, American Association for Clinical Chemistry, 1985.

B. First Decade Award, Gustavus Adolphus College, 1985.

C. Outstanding Young Men of America Award, 1985.

INVITED LECTURES/SEMINARS:

1. "CK-MM Subisoenzymes". Research Medical Center, Kansas City Missouri, September, 1984


4. "High-Resolution Electrophoresis of Urine". Towsley Center, University of Michigan, Ann Arbor Michigan, April, 1985.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


HENRY D. APPELMAN, M.D.
PROFESSOR OF PATHOLOGY AND DIRECTOR OF ANATOMIC PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985
(Sabbatical leave, 1 July 84 - 31 December 84)

I. CLINICAL ACTIVITIES:

A. General surgical pathology two months.
B. Gastrointestinal and hepatic pathology consultation services - full time.
C. Dermatopathology - one month full time.
D. Pediatric surgical pathology - two weeks.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Medical Students:
   1. Pathology 600: 8 full class lectures, teaching laboratory - four months.
   2. Senior medical student electives: two months instruction in surgical pathology in the reading rooms.
   3. Senior medical student elective in pathology rotation supervisor, one month.
B. House Officers:
   1. Surgical Pathology Conference - one hour per week.
   2. Autopsy service tutoring - 5 to 6 weekends and gross autopsy conference, approximately three and one-half months, twice a year.
   3. Surgical pathology diagnosing room instruction for assigned house officer - three months.
   4. Gastrointestinal and hepatic pathology tutoring - full time.
   5. Mentor for six fourth-year house officers in gastrointestinal and liver pathology subspecialty - three months total.
C. Interdepartmental:
   1. Medical Gastrointestinal Pathology Conference, one and one-half hours weekly.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None

PROJECTS UNDER STUDY:

A. Lymphomas of the gastrointestinal tract, with S. Hirsch, B. Schnitzer, and W. Coon.
C. The effects of hyperalimentation on the infantile liver, with K.P. Heidelberger and members of the division of pediatric surgery.
D. Inflammatory fibroid polyps of the gastrointestinal tract, with David Sadler.
E. The rectal biopsy diagnosis of acute self-limited colitis and its distinction from first attack chronic ulcerative colitis with N. B. Kumar and T. T. Nostrant.
F. Appendiceal epithelial neoplasia.
G. The effects of prostaglandins on collagen deposition in livers of rats fed a cirrhogenic diet, with and without ethanol, with K. S. Henley and investigators from the Upjohn Company, Kalamazoo, Michigan.
H. Peptic-associated gastritis and duodenitis with Grace Elta.
I. Gastric mucosal changes in patient with hepatic arterial chemotherapy pumps with J. Rossett, T. Nostrant and G. Abrams.
J. The anatomy of the gastroenteric anastomosis with M. Blaivas.
K. Cell markers in gastrointestinal stromal tumors with A. Pike and R. Lloyd.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Division of Anatomic Pathology.
B. Member, Departmental Advisory committee on Appointments and Titles.
C. Member, Departmental Medical Service Plan Executive Committee.
D. Member, Departmental Executive Committee for Residency Training Program.

MEDICAL SCHOOL/HOSPITALS:

A. Member, Directors Advisory Council, University Hospital.
B. Member, Quality Assurance Committee, University Hospital.
C. Member, Cancer work Group, University Hospital.
D. Member, Surgical and Procedural Case Review Committee, University Hospital.

REGIONAL AND NATIONAL:

A. Co-editor of Newsletter, Gastrointestinal Pathology Club.
B. Member, Program Committee, Michigan Society of Pathologists.
C. Reviewer of papers for Archives of Pathology and Laboratory Medicine and Laboratory Investigation.
D. Book reviewer, Gastroenterology.
E. Chairman, Publications Committee, Gastrointestinal Pathology Club.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

   - Giant Folds and Polyps of the Stomach
   - Indeterminate Colitis
2. Appelman, H.D.: Giant folds and polyps of the stomach, including stump or gastroenterostomy changes, presented at the E.T. Bell Fall Pathology Symposium, Department of Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, November 9, 1984.
3. Appelman, H.D.: Indeterminate colitis, presented at the pathology seminar series, Department of Pathology, Henry Ford Hospital, Detroit, Michigan, December 5, 1984.
5. Appelman, H.D.: Indeterminate colitis, presented at Medical Grand Rounds, Creighton University School of Medicine, Omaha, Nebraska, April 17, 1985.
6. Appelman, H.D.: Gastric polyps and giant folds. Department of Pathology Creighton University School of Medicine, Omaha, Nebraska, April 17, 1985.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

Blood Banking Laboratory.
Coordinate Quality Assurance Activities.

II. TEACHING ACTIVITIES:

A. House Officers:
   2. Blood Bank Laboratory and Seminar Course for House Officers, a
      nine session tutorial.
B. Medical Technology Students:
   1. Taught a new course for senior year students, Pathology 418 -
      Introduction to Blood Transfusion. This course, is composed of
      twelve lectures given once, eight two-hour conference sessions
      held twice, and eight three-hour laboratory sessions held twice.
   2. Revised and directed Pathology 449 (formerly Pathology 409). This
      course, which includes structured class assignments and clinical
      paracticum, was repeated for nine groups of students. With the
      advice and consent of Blood Bank Medical Directors, supervisors
      and administrative technologists, identified staff technologists
      willing and able to serve as clinical preceptors, provided objec-
      tives and discussed their implementation with the clinical precep-
      tors on an ongoing basis.
   3. Taught a course for junior year students, Pathology 308 - Intro-
      duction to Immunohematology. This course consists of fourteen
      lectures given once and fourteen three-hour laboratory sessions
      taught twice.
   4. Lecture in Pathology 410.
C. Blood Bank Staff:
   1. Coordinate and present at weekly Continuing Education Conference.
   2. Instruct and supervise new employees in clinical laboratory.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None.

PROJECTS UNDER STUDY:

A. Predictive value of certain pre-transfusion test procedures.
B. Eliminating Nonmandatory Pretransfusion Tests: Autocontrol and/or
   Antiglobulin Crossmatch? Submitted for presentation at the 35th Annual
   Meeting of the American Association of Blood Banks, October, 1985
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. As a member of the Medical Technology Admissions Committee, make and implement policies, interview and evaluate applicants, and make recommendations for acceptance.

MEDICAL SCHOOL/HOSPITAL:

A. Participated in various committees responsible for communication and technical advice to the hospital Blood Bank.
B. Conducted individual courses of instruction for each of four new employees of the hospital Blood Bank.
C. Drafted and implemented a weekly schedule of in-service education for Blood Bank staff.
D. Designed and presented a preconference workshop at Towsley Center, June, 1985.

REGIONAL AND NATIONAL:

A. Inspector for the Inspection and Accreditation Program of the American Association of Blood Banks.
B. Immunology-Immunohematology Scientific Assembly Chairperson Michigan Society for Medical Technology.
C. Secretary of the Michigan Society for Medical Technology.
D. Member of the American Association of Blood Banks District Advisory Group.
E. Member of Michigan Technology Educator's Curriculum Task Force.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

   a. Workshop Director, "Up-to-Date Procedure Manuals"
   b. Session Moderator, "Technical Topics"
   c. Lecture to Medical Technology Class, Eastern Michigan University.
   d. Laboratory Professionals Spring Meeting
      1. Workshop Co-Director, "Nobody Likes Change"
      2. Judge, Advance medical Research Center Poster Competition

VI. PUBLICATIONS:

I. CLINICAL ACTIVITIES:

A. Director, Diagnostic Electron Microscopy Unit, Veterans Administration Medical Center.
B. Cytopathology, Veterans Administration Medical Center.
C. Fine Needle Aspiration, Veterans Administration Medical Center.
D. Surgical/Autopsy Pathology, Veterans Administration Medical Center.
E. Tumor Conference, Veterans Administration Medical Center.
F. Deputy County Medical Examiner.
G. Consultant on diagnostic electron microscopy.
H. Pathology/Medicine Conference, Veterans Administration Medical Center.

II. TEACHING ACTIVITIES:

A. Pathology House Officer monthly elective: Diagnostic Electron Microscopy, seven months.
B. Diagnostic EM Case Conference, bi-weekly.
C. Pathology 600, Laboratory.
D. Pathology House Officers, fine needle aspiration technique and interpretation.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator: Immunologically Active Cell Populations in First Set Liver Grafts, VAMC Merit Review ($81,300 annual) 1985-88.
B. Co-Investigator: In Vitro Chemotherapy Assays (R. Natale, principal investigator).
C. Co-Investigator: Adjuvant Chemotherapy in Laryngeal Cancer (G. Wolf, Principal Investigator).
D. Co-Investigator: Pharmacologic Modification of Vascular Graft Patency (J. Cronenwett, Principal Investigator).

PROJECTS UNDER STUDY:

A. Clinical Relevance of Ultrastructural Characteristics of Small Cell Carcinoma of Lung (with R. Green).
B. Evaluation of Monoclonal antibodies in the Diagnosis and Treatment of Small Cell Carcinoma of Lung (with M. Stya).
D. Paneth Cell Culture (with S. Kern).
E. Ultrastructure of Natural Killer Cell Function (with J. Hiserodt).
F. Morphometric Analysis of Cells using Scanning Light Microscopy (with R. Davenport).
G. Automatic Scanning Light Microscopy in Morphometric Analysis of Labeled Cells in Histological Sections.
J. Transbronchial Fine Needle Aspiration in the Deliniation of Pulmonary Neoplasms (with J. Hammersley).
K. Growth of Cells on Microcarriers (with J. Varani).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Electron Microscope Committee.

MEDICAL SCHOOL/HOSPITAL:

A. Tissue Committee, chair, Veterans Administration Medical Center.
B. Electron Microscopy Committee, chair, Veterans Administration Medical Center.
C. Human and Financial Resources Committee, Veterans Administration Medical Center.
D. Medical Records Review Committee, Veterans Administration Medical Center.
E. Coordinated introduction of Anatomic Pathology Automatic Data System, VAMC.

REGIONAL AND NATIONAL:

B. Practice of Pathology Committee, Michigan Society of Pathologists.

V. OTHER RELEVANT ACTIVITIES:

1. Electron Microscopy and Diagnostic Cytology, Guest Lecture, Pathological Society of Great Britain and Ireland, Leeds
2. Cases in Diagnostic Electron Microscopy, Seminar, Pathological Society of Great Britain and Ireland, Leeds
5. Aspiration Biopsy Cytology of Intrathoracic Lesions, American Society of Cytology, Workshop, (with N.B. Kumar and B. Naylor).

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFFERED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Clinical Laboratories Engineering Support, instrumentation and automated analytical equipment.
   1. Design.
   2. Modifications implementation.

II. TEACHING ACTIVITIES:

A. Instrumentation Lecture Series, Medical Technology Program.
B. Lecturer, Technicon Seminar, Pittsburgh, Pennsylvania.
C. Lecturer, Conference on Current Topics in Clinical Chemistry and Immunology.

III. RESEARCH ACTIVITIES:

A. Special device for centrifugal preparation of sweat chloride for direct analysis by Beckman ASTRA.
B. Reconfiguration of K+ ISE on Technicon SMAC II for improved sensitivity and flow characteristics.
C. Development of an airborne Emergency Analysis System.
D. Mechanization of ELISA techniques with moving film technology.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Assistant Director, Clinical Laboratories

MEDICAL SCHOOL/HOSPITAL:

A. Program Coordinator: Design and renovation of 2nd level Laboratories (Hematology and Chemical Pathology).

V. OTHER RELEVANT ACTIVITIES:

A. Advisor, Technicon RA1000 System Development.
B. Advisor, Macomb Instrument Development Division.

VI. PUBLICATIONS: None.
I. CLINICAL ACTIVITIES:

   A. Oral Pathology Biopsy Service, Dental School.
   B. Consultant in Oral Pathology for Veterans Administration Hospital.
   C. Consultant in Dentistry for patients with head and neck malignancies, The University of Michigan Hospitals.

II. TEACHING ACTIVITIES:

   GRADUATE DENTISTRY:

   A. Oral Pathology 690 - Seminar on current cases stressing clinical - microscopic characteristics (Fall and Winter terms) (one credit hour each term).
   B. Oral Pathology 691 - Seminar on diseases which affect the dental pulp and periapical tissues (Fall term - two sections) (one hour credit).
   C. Oral Pathology 694 - Lectures on head and neck pathology (Fall term) (two hours credit).
   D. Oral Pathology 697 - Seminar on diseases which involve the periodontium (Fall term) (one hour credit).
   E. Oral Pathology 698 - Advanced seminar for graduate students in oral pathology (Fall and Winter terms) (two hours each term).

D.D.S. PROGRAM:

   A. Pathology 631 - Microscopic general pathology for sophomore dental students (Fall term) (three hours credit).
   B. Oral Pathology 816 and 818 - Lectures and discussions on oral pathology for senior dental students (Fall and Winter terms) (one hour each term).

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:

   A. Evaluation of polymer dental implants in dogs. (Kerr-Sybron).
PROJECTS UNDER STUDY:
A. Odontogenic tumors and oral malignancies.

IV. ADMINISTRATIVE ACTIVITIES:

DENTAL SCHOOL:
A. Chairman, Department of Oral Pathology.
B. Departmental Chairmen Committee.
C. Graduate Studies Committee.
D. Member of several Master's degree thesis committees.

MEDICAL SCHOOL/HOSPITAL:
A. Hospital Dentistry Department.

REGIONAL AND NATIONAL:
A. Director, American Board of Oral Pathology.
B. Past President, American Academy of Oral Pathology.
C. Editorial Board, Journal of Dental Research.
D. Consultant to the American Dental Association on graduate oral pathology programs.
E. Consultant to the American Dental Association on Hospital Dentistry programs.

V. OTHER RELEVANT ACTIVITIES: None

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Work daily with house officers and staff in Pathology and other departments in their gross and microscopic examination and diagnosis of brains at the autopsy and from autopsies, at University Hospital.
B. Attend and participate in the removal of brains from all autopsies at University Hospital.
C. Work in a similar way with the people in "A" on autopsy brain material sent for consultative study from University-associated hospitals, other hospitals, and institutions.
D. Plan and participate in weekly Brain Cutting Conference with house officers, students and staff, for diagnosis and demonstration of diagnostic methods, and teaching, using selected cases in A and B.
E. Plan and participate in monthly Brain Cutting Conference for Neurology, Neurosurgery, and Neuroradiology Departments.
F. Continuous review of quality control of diagnostic techniques, autopsy and surgical neuropathology, and search for improved and new methods.

II. TEACHING ACTIVITIES:

A. Neural and Behavioral Sciences 600 (NBS 600), Neuropathology for second year medical students, 20 hours, lectures and brain cutting sessions. Sequence leader for NBS 600, Neuropathology: responsible for implementing general plan of course, selection of much of the teaching material, coordination and integration of the lectures and brain cutting sessions of the course with other instructors.
B. Neuropathology for Pathology house officers. This exercise is integrated with Clinical Activities A, C, D, and E.
C. Neuropathology 858. Intensive laboratory-lecture course for house officers in Pathology, and in the several clinical services concerned with the nervous system, graduate students, and faculty. Annual, 16 - 18 hours. One credit hour elective.
D. Neuropathology for house officers from the several clinical services concerned with the nervous system, and senior medical students who take an elective rotation in Neuropathology.
E. Teach laboratory techniques and basic neuroanatomy and neuropathology to our laboratory technologists.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. USPHS Grant NS 19825-01, "Recovery or Malformation After Fetal Injury."
B. Action of USPHS application, "The Role of Glutamate in Alzheimer's Disease", (5% Effort, with Anne Young and John Penney, Dept. of Neurology) pending.
PROJECTS UNDER STUDY:

A. Recovery or malformation after fetal radiation, mutant gene or other injuries of the developing nervous system.

Emphasis this year has been on basal lamina, and on oxygen free radical produced in phagocytes in the rat fetus cephalic neural tube and their relation to malformation and recovery of the fetus in genetic and radiation injury.

Early embryos from our recessive mutant, homozygous for hydrocephalus, and controls were used to find the optimal fixation conditions to show the ultrastructural appearance of the basal region of the neuroepithelium. Unlike the smooth appearance of the basal surface in the control embryo, the mutant neuroepithelial cells are highly disorganized and there is an incomplete and pulled-away basal lamina subjacent to the neuroepithelium. Immunocytochemical studies of the carbohydrate constituents of the neuroepithelial basal lamina, such as laminin, fibronectin or collagen IV were initiated. To date, interestingly, there is a delay in formation of collagen IV in the mutant hydrocephalic embryo.

A successful search for the optimal tissue culture media was found to grow neuroepithelial cells from normal, mutant hydrocephalic, and irradiated rat embryos for determining how they respond to discrete components of the basal lamina and mesenchymal extracellular matrix.

X-irradiation (200R) kills numerous primitive cells in rat fetuses early in development, and this is met within a few hours by myriad of macrophages in certain parts of the nervous system but not in others. Coinciding with the appearance of the macrophages which are engulfing dead cells 4 to 6 hours after irradiation, we found that cells form the fetal brains show a marked increase in production of superoxide anion compared with normals and this continues at least through 24 hours. These macrophages may add to damage that radiation and other agents produce, as they do in other tissues.

(This work was done in collaboration with K.S. O'Shea, J. Varani, K.J. Johnson, J.P. McCoy, P.E. McKeever, R.V. Lloyd, R.A. Glover, T.M. Amnesley, and S.P. Hicks).

B. The pathologic examination of human autopsy brains from patients with clinical diagnosis of Alzheimer's, Huntington's, Pick's and other dementing diseases is being done in collaboration with Drs. A.B. Young and J.B. Penney, who are examining the brains biochemically. The clinical diagnoses need to be confirmed by pathologic diagnosis.

C. Growth, spread and antigenicity of ENU-induced gliomas in rats, in collaboration with Paul E. McKeever, M.D., Ph.D.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Anatomic Pathology Committee.
**MEDICAL SCHOOL/HOSPITAL:**

A. Neural and Behavioral Sciences Curriculum Committee (Medical School).
B. Neural and Behavioral Sciences Examinations Committee.
C. Preprofessional Counselor, premedical and health-related students.

**REGIONAL AND NATIONAL:**

A. Reviewer of research grant applications for National Science Foundation Neurobiology Program.

V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

**ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:**


**ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:**

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

A. Graduate School:
   1. EIH 637, Advanced Topics in Toxicology: Xenobiotic Metabolism, Instructor.
   3. EIH 646, Advanced Topics in Toxicology, Instructor and Course Coordinator.
   4. EIH 610, Research in Toxicology, Instructor.
B. Co-Chairman, Doctoral Committee and Research Mentor, EIH.
C. Postgraduate Seminar, Department of Pharmacology and Toxicology, Michigan State University.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

My research activities are focused in three areas:
A. Quantitative morphologic and biochemical correlates of subcellular organelle injury:
   1. Quantitative microscopic changes within rat hepatocytes during the induction of hypertrophic hypofunctional smooth endoplasmic reticulum membranes.
   2. Progesterone derivative-induced changes in fatty acid from phosphatidylcholine and phosphatidylethanolamine fractions of the hepatic endoplasmic reticulum in the rat.
   3. Quantitative microscopic assessment of the hepatic endoplasmic reticulum and bile canalicus in rats given contraceptive steroids and protein-restricted diets.
   4. Acute alterations of tissue calcium and lethal tubular cell injury during HCC12 nephrotoxicity.
   5. The pathogenesis of trimethyltin chloride-induced nephrotoxicity: Neurotoxic implications.
B. Mechanisms of carcinogenesis and pharmacotoxic effects of antineoplastic agents:
   1. Mammary carcinomas and systemic toxicity in rats fed the fluorophenyl amino dimethyl pyrazole, FP-1.
   2. Induction of mammary gland neoplasia in rats with fluorophenyl amino dimethyl pyrazoles.
3. Mutagenic, chromosomal and carcinogenic effects of aziridinylbenzoquinone in genotoxicity assays and the strain A mouse lung adenoma bioassay.

C. Comprehensive toxicity testing of new pharmacologic agents for the development of safety evaluation standards for therapeutic use:
1. Experimental studies on reproduction with the lipid regulating agent Gemcadiol.
2. Parkinson-like syndrome in nonhuman primates receiving a tetrahydropyridine derivative.
3. Evaluation of chronic toxicity and carcinogenesis in rodents with the synthetic analgesic, Tilidine Fumarate.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Consultant to Drs. Ward and Johnson in quantitative microscopy applications.

REGIONAL AND NATIONAL:

A. Consultant, NIH-NIC.
B. External Consultant, Medical Research Council of Canada.
C. Member, Environmental Sciences Review Committee, NIEHS.
D. Official Expert, Ministry of Health (France).
E. Member, Pharmacology-Morphology Scientific Advisory and Fellowship Committee, PMA Foundation.
F. Council Executive Member, Society of Toxicologic Pathologists.
G. President, Michigan Chapter, Society of Toxicology.

V. OTHER RELEVANT ACTIVITIES:

A. Editor, Toxicologic Pathology.
B. Member, Editorial Board, Toxicology and Applied Pharmacology.
C. Member, Editorial Board, Toxicology.
D. Member, Editorial Board, Drug Metabolism Reviews.
E. Reviewed manuscripts for a variety of journals.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


43. Robertson, D.G., French, J., Gray, R.H. and de la Iglesia, F.A.: Cholinergic mechanism in trimethyltin chloride (TMT) toxicity to the hippocampus. The Toxicologist 5:85, 1985


I. CLINICAL ACTIVITIES:
   A. Clinical Immunopathology: three months.
   B. Surgical Pathology (Room 4): two weeks.
   C. Autopsy Service: five weeks.
   D. Flow Cytometry Laboratory: nine months.
   E. Consultant in Pathology, Chelsea Community Hospital: three weeks.

II. TEACHING ACTIVITIES:
   A. Pathology House Officers:
      2. Flow Cytometry/Hematopathology.
      3. Autopsy Service.
   B. Graduate Students:
      1. Graduate Student Research Projects (Advisor).
   C. Post-Doctoral Fellow:
      1. Dr. Paul Robinson.

III. RESEARCH ACTIVITIES:
   A. Development of and refinement of Flow Cytometric methodology to examine
      neutrophils from different compartments for the evaluation of their
      functional status.
   B. Application of the methods stated in IIIa to clinical screening of
      patients with disorders of neutrophil function.
   C. Development of methodology to detect the presence of antineutrophil and
      antimonocyte and antiplatelet antibodies by indirect immunofluorescence
      in Flow Cytometric Systems; clinical application of this test has been
      established.

SPONSORED SUPPORT:

A. Dental Research Institute, University of Michigan School of Dentistry;

PROJECTS UNDER STUDY:

A. Interactions Between Peiodontopathic Bacteria and Neutrophils. Co-
   Investigator, Dr. Walter Loesche.
B. Functional Kinetics of Circulating Neutrophils from Arterial and
   Coronary Sinus Blood in Myocardial Ischemia. Co-Investigator, Dr.
   Michael Shea.
C. Systemic Complement Activation, Neutrophils and Lung Injury. Co-
   Investigators, Drs. Peter A. Ward and Gerd O. Till.
ARTICLES SUBMITTED FOR PUBLICATION:


IV. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Director, Ligand Assay Laboratory.

II. TEACHING ACTIVITIES:

A. Pathology House Officers laboratory rotation.
B. Medical Technology Student laboratory rotation.
C. Medical Technology Student mini-course (two week) on radioimmunoassay techniques.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. New England Nuclear Corporation: Research Grant, Study of Reproductive Endocrinology and Ligand Assay Techniques; Principal Investigator, $15,000/yr, 1976 to present.
B. USPHA (NIAMDD) AM20572: Michigan Diabetes Research and Training Center; Director, Ligand Assay Core Facility, $117,000/yr, 1983-1988.
C. NICHD: Reproductive Endocrinology Program; Co-Director, Standards and Reagents Core Facility, $93,211/yr, 1979-1984.
C. NICHD: Training Program in Reproductive Endocrinology, Faculty Member, $150,914/yr, 1980-1985.
D. Ford Foundation: Training Program in Reproductive Endocrinology, Faculty Member, $120,000/yr, 1981-1984.

PROJECTS UNDER STUDY:

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Ligand Assay Laboratory.

MEDICAL SCHOOL/HOSPITAL:

A. Director, Ligand Assay Core Facility, Diabetes Research and Training Center.
B. Co-Director, Standards and Reagents Core Facility, Reproductive Endocrinology Center.

REGIONAL AND NATIONAL:

A. Society for the Study of Reproduction, National Education Committee Chairman.
B. Clinical Ligand Assay Society, National Awards Committee Chairman.
C. Midwest Radioassay Society, Nominations Committee Chairman.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/ACTIVITIES:

1. Invited Lecture, Scatchard Plot Analysis, Seminar at the Quarterly Meeting, Midwest Radioassay Society, October 18, 1984.
2. Participant, Site Visit of the Diabetes Research and Training Center, Vanderbilt University, April 24 - 26, 1985.

VI. PUBLICATIONS:

I. CLINICAL ACTIVITIES:
   A. Autopsy service.
   B. Occasional surgical pathology interpretation.

II. TEACHING ACTIVITIES:
   A. Sophomore medical student pathology laboratory (alternate years).
   B. Sequence Coordinator and Lecturer - Sophomore Medical Students (ICS-600) Immunopathology.
   C. Pulmonary Pathology Conference (monthly to Pulmonary Division - Internal Medicine).
   D. Lecturer - Clinical Immunology Series for House Officers.
   E. Lecturer - Microbiology and Immunology 624.
   F. Lecturer - Immunobiology 414.
   G. Lecturer - Medical Student Research Forum.
   H. Coordinator - Interphase lecture series on Immunopathology.
   I. Preceptor - Undergraduate and medical student research.
   J. Direct graduate student Ph.D. thesis.

III. RESEARCH ACTIVITIES:
   A. Regulation of neutrophil dependent tissue injury.
   B. Mechanisms of oxygen metabolite mediated tissue injury.

SPONSORED SUPPORT:
   A. Clinical Investigator Award - Lung Inflammation (NIH-HL-00905; 1981-1986).

IV. ADMINISTRATIVE ACTIVITIES:
   DEPARTMENTAL:
   A. Interview resident applicants.
   B. MSP Executive Committee.
MEDICAL SCHOOL/HOSPITAL:

A. Medical student advisor (3rd and 4th years).
B. MSTP Review Committee.
C. ICS - Executive Committee.
D. Associate Director of Sophomore Medical Student ICS Course (ICS-600-601).
E. Graduate Student(2) Ph.D. Thesis Committee.

REGIONAL AND NATIONAL:

A. NIH - Study Section: RFA on Atherosclerosis and Inflammation.

VI. PUBLICATIONS:


BOOKS AND CHAPTERS IN BOOKS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. Surgical Pathology Rotation: July (2/3), August (2/4), September (2/4), January-February (2/4), April (2/4), June (1/4).

II. TEACHING ACTIVITIES:

A. ICS Lectures:
   1. Diffuse Lung Disease (one hour).
   2. Inhalational and Occupational Lung Disease (one hour).

INVITED LECTURES/SEMINARS:

1. Fine Needle Biopsy Aspiration Cytology, Departments of Pathology and Otolaryngology, University of Western Ontario, June, 1985.
2. Flow Cytometric Analysis of DNA Content of Solid Tumors: Clinical Applications, Department of Pathology and Otolaryngology, University of Western Ontario, June, 1985.
3. Flow Cytometry, Basic Principles and Clinical Applications, Departments of Pathology and Otolaryngology, University of Western Ontario, June, 1985.
4. Fine Needle Biopsy Aspiration Cytology of Head and Neck Tumors, Grand Rounds, Department of Otolaryngology, University of Western Ontario, June, 1985.
5. Pulmonary Pathology Didactic Seminars - Department of Pathology, University of Michigan.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Flow Cytometric of Abnormal Cervical-Vaginal Epithelial Cells: Correlation with Morphological Findings. Cancer Research Committee Grant, Andrew Flint, M.D., Principal Investigator.
B. Pathology Consultant, Morphologic Studies of Diffuse Interstitial Lung Diseases, A Multi-institution Project, Rueben M. Cherniakm M.D., National Jewish Hospital, Program Director.
C. Pathology Consultant, A Comparative Study Using Conventional Radiography, Conventional Tomography, Computed Tomography, and Nuclear Magnetic Resonance Imaging, Gary N. Glazer, M.D., Principal Investigator.
D. Flow Cytometric Analysis of DNA Content of Basal Cell Carcinomas, J. Philip McCoy, Ph.D., Principal Investigator.
E. Pathology Consultant, Prospective Investigation of Pulmonary Embolism Diagnosis, John G. Weg, M.D., Principal Investigator.

PROJECTS UNDER STUDY:

A. Flow Cytometric DNA Analysis of Breast Carcinomas. A Prospective Study Correlating Ploidy Analysis with Subsequent Surgical Findings and Clinical Outcome.
B. Flow Cytometric DNA Analysis of Squamous Cell Carcinomas of Head and Neck: Does Ploidy Analysis Predict Tumor Recurrence?
C. Flow Cytometric DNA Analysis of Urinary Bladder Carcinomas: Correlation of Ploidy Analysis with Radioreponsiveness and Clinical Outcome.
D. Flow Cytometric DNA Analysis of Transitional Cell Carcinomas of the Urinary Bladder: Correlation of Ploidy Patterns and Histologic Grade and Clinical Outcome.
E. DNA Analysis of Ovarian Tumors of So-called Borderline Malignancy: Correlation with Clinical Behavior.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Member, Task Force for Alternate Revenue Sources.
B. Member, Executive Committee, MSP.
C. Pathology Consultant, MDS Laboratories.
D. Pathologist-in-Chief, Chelsea Medical Laboratories.
E. Coordinator, Senior Staff service rotations.
F. Coordinator for implementation of new technical/operating procedures for Surgical Pathology Laboratories.
G. Author, Anatomic Pathology Services Directory.
H. Residents' Teaching Conference Coordinator.

MEDICAL SCHOOL/HOSPITAL: None.

REGIONAL AND NATIONAL:

A. Member, Legislative Affairs Committee, Michigan Society of Pathologists.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

BRUCE A. FRIEDMAN, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Director, Pathology Data Systems.
      (LDC and DEC Systems)
   B. Director, Phlebotomy Team/Central Distribution
   C. Associate Director, Blood Bank

II. TEACHING ACTIVITIES:

   MEDICAL SCHOOL/HOSPITALS:
   A. Course Director of a postgraduate seminar held in the Towsley Center
      and entitled "Clinical Laboratory Computers: Symposium 1895"

III. RESEARCH ACTIVITIES:

   PROJECTS UNDER STUDY:
   A. The impact of prospective reimbursement systems on the quality of
      medical care in conjunction with faculty members of the Department of
      Medical Care Organization, School of Public Health.
   B. Friedman, B.A.: Some Personal Observations of Differing Goals and
      Objectives in the Planning of Hospital Information Systems. Accepted
      for presentation at the Symposium on Computer Applications in Medical
      Care, November 12, 1985.
      Presentation at a symposium in November 1985
   C. Friedman, B.A., Liberman-Lampar, A., and Morrow, T: Designing a Set
      of Laboratory Test Requisitions. Accepted for publication in the
      October issue of Medical Laboratory Observer.

IV. ADMINISTRATIVE ACTIVITIES:

   DEPARTMENTAL:
   A. Task Force to design and implement a new set of laboratory test
      requisitions.
   B. Director of RHP Activation for the Department of Pathology.
   C. Microcomputer Steering Committee (Chairman).
   D. Advisory Committee on Appointments, promotions, and Titles.
   E. Coordinator for the RHP Campaign.
MEDICAL SCHOOL/HOSPITAL:

A. Medical Record Work Group (Chairman).
B. Physicians' Committee on Medical Informatics (Chairman).
C. Physicians' Liaison Council (Chairman).
D. Hospital Information System Advisory Committee.
E. Quality Assurance Committee.
F. Quality Assurance Steering Committee.
G. Medical School Grievance Board.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

2. "Pathologists and the Laboratory Database." A lecture delivered to the Department of Pathology, Wayne State University Medical School, Detroit, Michigan, February 6, 1985.

VI. PUBLICATIONS:

DONALD A. GIACHERIO, PH.D.
INSTRUCTOR IN PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
A. Director, General Chemistry laboratory.
B. Consultant, MDS Laboratories.
C. Daily sign-out and interpretation of electrophoresis results.

II. TEACHING ACTIVITIES:
A. Medical Students:
   1. Two contact hours Path 600:
      a. Cyclosporine in organ transplantation.
      b. Liver function tests.
B. Pathology House Officers:
   1. Participant, Clinical Pathology Rounds.
   2. Lecturer, Clinical Pathology Didactic Lecture Series.
   3. Daily sign-out and interpretation of electrophoresis results.
   4. Review of selected topics in Clinical Chemistry.
C. Postgraduate Teaching:
   1. Course Faculty, Towsley Continuing Education Symposia on Electrophoresis and Immunofixation.
D. Medical Technology:
   1. Lecturer, Path 410, three hours on steroid chemistry.
   2. Three contact hours per week during lab rotation on electrophoresis and centrifugal analyzers.
   3. Program Director, Continuing Education Series for Medical Technologists (weekly).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-Investigator (10% effort): Smokeless Tobacco Research Council Grant, "Significance of Immune Response to Mucosal Carcinogens".

PROJECTS UNDER STUDY:


D. Adaptation of immunoassays for apolipoproteins A and B to the Cobas-Bio centrifugal analyzer.


F. Determination of CK-BB levels in the serum and CSF of anoxic neonates.

G. Abnormal levels of CK-MB in patients whose total CK activity is within the normal range: Case reports. D. Giacherio and R. Davenport. (In preparation).


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, General Chemistry Laboratory.

REGIONAL AND NATIONAL:

A. Coordinator, College of American Pathologists Clinical Chemistry Standards Assay Laboratory.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. "Electrophoresis vs. Immunoassay for Cardiac Enzymes". Towsley Center Symposia on Electrophoresis and Immunofixation.

2. "Laboratory to Cardiology: Confirming Earlier Diagnosis of Myocardial Infarction". Roche Diagnostic Systems Symposia, Kansas City, Missouri.

3. "Validity and Reliability of Laboratory Tests". Northville Regional Psychiatric Hospital CME Program, Northville, Michigan.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. Necropsy Service - four weeks.
B. Surgical Pathology - twenty-two weeks.
C. Cytopathology - two weeks plus sporadic assignment to cover when regular staff is away.
D. Diagnostic EM - share nephropathology work with Dr. Johnson - tumor diagnosis.
E. Consultation service for Uropathology.
F. Conduct monthly conference in Urologic Pathology with Urology Section.
G. Conduct monthly biopsy conference with Arthritis Section.
H. Participate in weekly Renal Biopsy Conference with Dr. Johnson.

II. TEACHING ACTIVITIES:

A. Lectures to Sophomore Pathology Class:
   1. Tubulo-interstitial renal disease.
   2. Prostatic and penile lesions.
   3. Testicular lesions.
   4. Death certification and forensic pathology.
   5. Pathogenesis of highway injuries.
B. Lectures to:
   1. Allergy Seminar, Department of Internal Medicine.
   2. Forensic Anthropology Course 567.
C. Guest Faculty for Evidence Seminar in Law School.
D. Faculty for Post Graduate Seminar of North Central Section of American Urologic Association.
E. Faculty for Post Graduate Medicine, Northern Michigan Summer Conference.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Collaborate with Urology Staff on projects from time to time.
B. Collaborate with Diagnostic Radiology Staff in correlation of imaging with pathologic findings in urologic lesions.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Director of Necropsy Service.

MEDICAL SCHOOL/HOSPITAL:
A. Hospital Medical-Legal Committee.

UNIVERSITY:
A. Faculty Representative to Big Ten Intercollegiate Conference and NCAA.
B. Chairman, Big Ten Intercollegiate Conference.

REGIONAL AND NATIONAL:
A. Board of Directors, Physicians for Automotive Safety.
B. Board of Directors, Public Citizen, Inc. (Ralph Nader, initial Chairman and Founder).
C. Deputy Medical Examiner, County of Washtenaw.

V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:
I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Planned, coordinated, and implemented Pathology 411, 431, and 441 lecture courses for Medical Technology students. Identified topics and scheduled guest lecturers. Carried sole responsibility for some topics and student exercises.

III. RESEARCH ACTIVITIES:

A. Submitted "Laboratory Hiring Trends and MT Education: Where Do We Go From Here?", MLO Journal.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Administration of Medical Technology program:
   1. Direct teaching staff, coordinate curriculum.
   2. Act as problem-solver with teaching staff and students.
   3. Identify program and curriculum needs and directions.
   4. Plan and implement graduation party and laboratory staff party.

B. Liaison with LSA and Medical School:
   1. Counseled all students interested in MT curriculum.
   2. Managed all student records; revised and updated all published program information.
   3. Maintain contact with Admissions Office, LSA, and Medical School faculty and staff involved with program and students.

C. Public relations:
   1. Recruitment, program publicity, and admission of students.
   2. Plan and implement laboratory tour program for undergraduates.
   3. Plan and implement Laboratory Week poster display in Hospital.
   4. Prepare defense and defend program in discontinuance procedures for University Executive Officers and Board of Regents. Handle student and parents' concerns related to discontinuance decision.
MEDICAL SCHOOL/HOSPITAL:

A. Participate in Hospital Allied Health Education Program Directors' meetings.
B. Participate in Laboratory Communications Committee meetings.

REGIONAL AND NATIONAL:

A. Critique self-studies of other Medical Technology programs for the National Accrediting Agency for Clinical Laboratory Science (NAACLS).
B. Program Committee for September 1984 Region IV ASMT meeting.

V. OTHER RELEVANT ACTIVITIES:

A. Participate in biannual meetings of Michigan Medical Technology program directors.
B. Attend regional and national professional meetings.
C. Participate in variety of continuing education programs.

VI. PUBLICATIONS: None.
I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

D.D.S. LEVEL

A. Oral Pathology 625. Oral Pathology Laboratory (one credit). (Laboratory teaching two afternoons per week, with one hour of lecture one of those afternoons). (Winter term, sophomore year).

B. Pathology 631. General Pathology Laboratory for Dental Students (three credits).

DENTAL HYGIENE

A. Oral Pathology 293. General and Oral Pathology Lectures (two credits). (Course director and principal lecturer - 28 of 32 lectures.) (Winter term, junior year.)

B. Oral Pathology 323. Clinical Oral Pathology Lectures (two credits). (Course director and principal lecturer - 16 out of 26 lectures.) (Fall term; senior year.)

GRADUATE LEVEL

A. Dental Hygiene 684. Seminars in General and Oral Pathology (one credit). (Course director; runs nine out of 13 seminars.) (Fall term.)

B. Oral Pathology 698. Graduate seminar in Oral Pathology (one credit). Histopathology seminar, two hours, participant.) (Fall and Winter term.)

C. Oral Pathology 694. Graduate Core course in Advanced Oral Pathology (two credits). (One or two, two hour lectures.) (Fall term.)

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

B. Biomedical Research Committee, The University of Michigan Dental School - "In Vitro Synthetic Bone Matrix for Repair of Alveolar Bone Defects." (C.T. Hanks and R. Fonseca, Chairman of Oral Surgery, Co-Investigators). This is funding for a pilot project for a longer grant application to the N.I.H. 1983-1985.


D. NIH Application (RO1), "Effects of Electromagnetic Fields on Cell Function". Submitted June 30, 1984. (Approved, but not funded; will be resubmitted.)

PROJECTS UNDER STUDY:

A. Morphogenesis, differentiation and function as it occurs and varies in embryogenesis, regeneration (and repair), hyperplasia and neoplasia. Tissues which have been studied in this respect are salivary glands, integumental epithelium, dermis and bone.

B. Biocompatibility of synthetic materials (prosthetic materials, bioengineered devices) with living tissue. This includes cytotoxicity testing in cell and organ culture, mutagenesis, carcinogenesis as well as inflammatory events such as chemotaxis, vasoactivity, and immune responses such as lymphocyte transformation.

C. Effects of Electromagnetic Stimulation Upon Cell Growth and Differentiation in Vitro and in Vivo.

IV. ADMINISTRATIVE ACTIVITIES:

SCHOOL OF DENTISTRY AND DEPARTMENT OF ORAL PATHOLOGY:

A. Master's Degree Thesis Committee for Dr. Byron Scott, Department of Orthodontics.

B. Master's Degree Thesis Committee for Dr. Bjorn Stephenson, Department of Periodontics.

C. Master's Degree Thesis Committee for Dr. Jeff Smith, Department of Periodontics.

D. Master's Degree Thesis Committee for Ann Rathbun, Department of Dental Materials.

E. Electron Microscope Facility Advisory Committee, School of Dentistry and Institute of Dental Research.

MEDICAL SCHOOL/HOSPITAL:

A. Library Advisory Council (SACUA).

B. Biomedical Research Council (BMRC).

C. Scientific Advisory Committee, Dental Research Institute.

D. University Senate Assembly.

E. University Committee on Use and Care of Animals.
V. OTHER RELEVANT ACTIVITIES:

PROFESSIONAL ORGANIZATIONS:

A. International Association for Dental Research.
B. American Academy of Oral Pathology.
C. American Association for Advancement of Science.
D. Omicron Kappa Upsilon.
E. Tissue Culture Association (Nation).
F. Michigan Biomedical Materials and Prosthetic Group.
G. Bioelectrical Repair and Growth Society.
H. New York Academy of Sciences.

REVIEWER FOR JOURNALS:

A. Journal of Dental Research.
B. Journal of the American Dental Association
C. Session organizer for International Workshop on Pulp Biology to be held at the University of North Carolina (Charlotte campus) in June, 1984. The session is entitled Cells and Extracellular Matrix of the Dental Pulp.

VI. PUBLICATIONS:

JOHN T. HEADINGTON, M.D.
PROFESSOR OF PATHOLOGY AND DERMATOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
A. Clinical Dermatology.
B. Dermatopathology, private consultations.
C. Dermatopathology, MDS.
D. Dermatopathology, UMH.
E. Dermatopathology, tuitorials.

II. TEACHING ACTIVITIES:
A. Medical Students: (second year):
   1. Dermatopathology lectures.
B. Pathology and Dermatology House Officers:
   1. Dermatopathology.
C. Dermatology House Officers:
   1. Clinical Dermatology.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
A. Androgenetic alopecia.
B. Dermal (collagen associated) dendritic cells.
C. Primary cutaneous lymphoma and pseudolymphomas.
D. Articles submitted for publication:
   1. Comparative Mitoses Counts in Spitz Nevus and Melanomas.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Pigmented Lesion Clinic.

MEDICAL SCHOOL/HOSPITAL:
A. Dermatopathology Unit.
B. Co-director, Clinical Microbiology Laboratory.
REGIONAL AND NATIONAL:

B. Director, Annual Dermatopathology Symposium, The International Academy of Pathology.
C. Executive Board Member, The American Society of Dermatopathology.
D. Editorial Board, Archives of Dermatology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFereED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Pediatric Surgical and Placental Pathology - daily, twelve months.
B. Pediatric Necropsies - daily, twelve months.
C. Pediatric Consultation Cases - daily, twelve months.
D. Adult Surgical Pathology - six weeks.
E. MDS Surgical Pathology - Eleven weeks.
F. Adult Necropsy Service - two weeks.
G. Continued to organize and maintain the Michigan Cardiac Registry - twelve months.
H. Continued to direct and interpret the Lung Morphometric Program - twelve months.
I. Teratology Unit - Histology, as necessary, approximately 30 cases per year.
J. Children's Cancer Study Group - coordinate all pathological material and data necessary for all children registered in national tumor protocols.
K. Bone Consultation Cases - intermittent backup for Lee Weatherbee.

II. TEACHING ACTIVITIES:

A. M2: Pathology 600, 16 weeks; laboratory instructor.
B. M2: Pathology 600, three whole class lectures on Pediatric Pathology.
C. M4: Pediatric Surgical Pathology, twelve months, while they were on their pathology electives.
D. Supervised M4s on Pathology elective, one rotation (four weeks).
E. House Officers in Pathology - daily reading of pediatric surgicals, twelve months.
F. House Officers in Pathology - Gross and microscopic supervision of most pediatric necropsies, twelve months and adult cases two weeks plus call weekends.
G. Surgical Pathology Conference - one hour/week, twelve months.
H. Gross Autopsy Conference - one hour/week, twelve months.
I. Supervised Pediatric Hematology Fellows (two) for AP elective period.
J. Conferences:
   1. Pediatric Cardiology Death Conference - monthly, all year.
   2. Pediatric Tumor Conference - twice monthly, all year.
   3. CPC/General Death Conference - approximately quarterly.
III. RESEARCH ACTIVITIES:

A. Multiphased, ongoing study with Pediatric cardiologists and Thoracic surgeons on effects of various congenital heart defects on the pulmonary vasculature.
B. Studies of regional variations in lung structure.
C. Compiling data base of morphometric characteristics of normal lungs at various ages.
D. Continued study of pulmonary vascularity in SIDS and respiratory distress of the newborn.

PROJECTS UNDER STUDY:

A. Long-term study with Dr. Appelman and the Pediatric surgeons on the effects of hyperalimentation on the neonatal liver.
B. Continued detailed study of the lethal neonatal chondrodysplasias and their morphologic characterization.
C. Histologic studies of myocardium in hypoplastic left heart syndrome.
D. Study with Drs. John Wesley and Michael DiPietro of various congenital lung masses in infancy and childhood. (See publications).
E. Study of embryological etiology of primitive CNS tumor causing congenital deformity, with Drs. Barr and Dorovini-Zis. Submitted.
G. Study of fetal/placental neuroblastoma, its causes and effects, with Drs. Barr and Sanders (see Abstracts).
H. Review of quantitative and qualitative patterns of lung metastases in osteosarcoma with an attempt to correlate them with survival (with Dr. Theo Polly).
I. Documentation of the validity of rectal suction biopsy in the diagnosis of Hirschprung's disease: A review of twelve years' experience (with Dr. Theo Polly).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Departmental ACAFT.

MEDICAL SCHOOL/HOSPITAL:

B. Executive Committee for Mott/Women's/Holden Unit.

REGIONAL AND NATIONAL:

A. Continued in three-year term as Councilor of the Society for Pediatric Pathology.
B. Member, American Board of Pathology Test Committee for Pediatric Pathology.
C. Member of the Education Committee of the Society for Pediatric Pathology, Subcommittee I, charged with the definition of a core curriculum for fellowship training in pediatric pathology.
V. OTHER RELEVANT ACTIVITIES:

A. Attended a three day course in cardiac pathology at Stanford University pursuant to the University of Michigan's transplantation program.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Microscopic examination of brains from autopsies at University Hospital, and brains sent from other hospitals from patients thought to have adult dementia, such as Alzheimer's or Huntington's Disease, or developmental brain diseases.

II. TEACHING ACTIVITIES:

A. Preparation of handouts, notes, and visual aid material for lectures and laboratories for second year Medical Students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:


1) Studies of ultrastructural technics best for preparation of rat embryos such as those irradiated in utero or having a genetic nervous system developmental disorder (hydrocephalus). 2) Immunocytochemical studies of carbohydrate constituents such as laminin, fibronectin, and collagen IV of the basal lamina of the neuroepithelium. There is a lag in formation of collagen IV in the early mutant hydrocephalic fetus mentioned in 1) above. 3) Successful search for appropriate tissue culture media for growing neuroepithelial cells from normal, mutant hydrocephalic, and irradiated rat embryos to determine how they respond to discrete components of the basal lamina and mesenchymal extracellular matrix. 4) X-irradiation (such as 150-200R) kills numerous primitive cells in rat fetus, and from the 12th to 22nd (term) fetal day this is met within a few hours by myriads of macrophages in certain parts of nervous system but not in others. Coinciding with the appearance of the macrophages which are engulfing dead cells 4 to 6 hours after irradiation, cells from the fetal brains show a marked increase in production of superoxide anion compared with normals and this continues at least through 24 hours. These macrophages may add to damage that radiation and other agents produce, as they do in other tissues. The source of the macrophages has been a puzzle. There is no evidence that they come from blood vessels or blood; in latent form they are already widely distributed in the neuroepithelium and primitive mesenchyme which have very high mitotic rates. Recognizing these cells in early stages before they have engulfed dead cells will be an interesting problem to solve.
B. The pathologic examination of human autopsy brains from patients with a clinical diagnosis of Alzheimer's, Huntington's, Pick's and other dementing diseases is being done in collaboration with Drs. A. B. Young and J. B. Penney, who are examining the brains biochemically. The clinical diagnoses need to be confirmed by pathologic diagnosis.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Plan laboratory work.

MEDICAL SCHOOL/HOSPITAL:

A. Neural and Behavioral Sciences Curriculum Committee (Medical School).
B. Neural and Behavioral Sciences Examinations Committee.

REGIONAL AND NATIONAL:


V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

JERRY L. HUDSON, PH.D.
ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Cell Identification Center.

II. TEACHING ACTIVITIES:

   MEDICAL SCHOOL/HOSPITALS:
   A. Lectures: Senior Medical Students: Automated Cytology - Clinical and Research Applications.
   B. Faculty Advisor: Medical Student Research Projects.
   C. Faculty Advisor: Undergraduate Senior Honors Projects
   D. Lectures: Medical Technology Students: Automated Cytology.
   E. Faculty Advisor: Residents' Research Projects (Departments of Allergy, Otolaryngology, Pathology and Surgery.
   F. Faculty Advisor: Biomedical Engineering Program.
   G. Faculty Advisor: College Work-Study Program.

   INVITED LECTURES/SEMINARS:

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   A. Cytometry Research and Development Project, EPICS Division, Coulter Corporation and Department of Pathology, University of Michigan (J.L. Hudson, Ph.D., Principal Investigator; P.W. Ward, M.D. Co-Investigator), 1 July, 1984 - Present.
   B. Immune Responses in Head and Neck Cancer Patients, Veterans Administration Hospital, Ann Arbor, Michigan, (G.T. Wolf, M.D. Principal Investigator, J.L. Hudson, Ph.D., Consultant), 1 July, 1984 - Present.
E. Flow Cytometric Immunotoxicology Profile Development in Rodents, Research Gift Grant, Biomedical Science Division, G.M. Research Laboratories, General Motors Corporation, (J.L. Hudson, Ph.D. and P.A. Ward, M.D., Co-Investigators).

F. Cellular Effects of Tricyclic Nucleotides, National Cancer Institute and the American Cancer Society, (L.L. Wotring, Ph.D., Principal Investigator, J.L. Hudson, Ph.D., Consultant), 1 July, 1984 - Present.

G. Automated Image Analysis Development Project, Coulter Corporation and the Department of Pathology, University of Michigan, (J.L. Hudson, Ph.D. Principal Investigator), 1 July, 1984 - Present.

H. Clinical Studies on Anti-T12 Therapy in Renal Transplant Patients, Immunology Division, Coulter Corporation, (L. Rochet, M.D., Principal Investigator; L.M. Stoolman, M.D., R.E. Duque, M.D., J.P. McCoy, Ph.D., and J.L. Hudson, Ph.D., Consultants), 1 July, 1984 - Present.


J. Flow Cytometric Analysis in Cancer Cell Detection, Biomedical Research Support Grant, University of Michigan Medical School, (A. Flint, M.D., Principal Investigator; J.L. Hudson, Ph.D., Consultant), 1 July, 1984 - Present.

PROJECTS UNDER STUDY:

A. A series of studies involving research and development for clinical applications and immunotoxicity assessment using automated cytology (flow cytometry and image analysis) including: Cell surface marker analysis, immune cell function, cell surface receptor analysis, cell cycle analysis, cell membrane electronic potential analysis, neoplastic cell screening and diagnosis (immune system, breast, cervical, bladder, colon, and head and neck tissues), prototype instrumentation development, instrumentation-computer networking, and software development for cytometry data analysis and cytometry data base systems.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Cell Identification Center.
B. M-Laboratories/Pathology Associates.

MEDICAL SCHOOL/HOSPITAL:

A. Cell Identification Center.
B. Medical Research Computer Advisory Committee.
C. Alternate, Faculty Senate.
REGIONAL AND NATIONAL:
A. Member, National Immunotoxicology Discussion Group.
B. Member, Flow Cytometry Standards Group, Society for Analytical Cytology.
C. Reviewer, Cytometry.
D. Consultant, Coulter Corporation.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
1. National Immunotoxicology Discussion Group, Uniformed Services Health Sciences Center, Bethesda, Maryland, 19-20 November, 1984.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:
   A. Staff pathologist and Director of Clinical Laboratories, Ann Arbor
      Veterans Administration Medical Center.
   B. Interpretive reporting and consultation in the areas of hemato-
      pathology, hemostasis, immunopathology, cell phenotyping, and diagno-
      stic enzymology, Ann Arbor Veterans Administration Medical Center.

II. TEACHING ACTIVITIES:
   A. Supervise monthly clinical pathology resident rotation, Ann Arbor
      Veterans Administration Medical Center.
   B. Clinical Associate, Eastern Michigan University Medical Technology
      Program.
   C. One day per week, surgical case sign-out with pathology resident, Ann
      Arbor Veterans Administration Medical Center.
   D. Participate in monthly Medicine-Pathology Conference, Ann Arbor
      Veterans Administration Medical Center.
   E. Participate in weekly Tumor Board Conference, Ann Arbor Veterans
      Administration Medical Center.
   F. Supervise pathology resident in performance of selected autopsies, Ann
      Arbor Veterans Administration Medical Center.
   G. Series of four coagulation lectures presented at clinical pathology
      grand rounds.
   H. Lecturer, Continuing Medical Education Program, Ann Arbor Veterans
      Administration Medical Center.
   I. Lectures (three) to third year medical students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Principal Investigator, Research Advisory Group grant, VA "Selective
      Removal of Circulating Immune Complexes in Chronic Nephritis".
   B. Collaborator, "Role of Surface Laminin in NK/NC Recognition of Tumor
      Cells". (Varani and Hiserodt, principal investigators.)
   C. Consultant, "Immunobiology of Head and Neck Tumors", (Wolf, principal
      investigator).

PROJECTS UNDER STUDY:
   A. Immunodysfunction in Hodgkin's disease (funding request submitted).
   B. Role of natural killer cells in control of tumor metastasis (funding
      request in preparation).
   C. Papers submitted or in preparation.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. General administrative responsibility for clinical laboratories section of the Ann Arbor Veterans Administration Medical Center and the Veterans Administration Outpatient Clinic in Toledo, Ohio.

**MEDICAL SCHOOL/HOSPITAL:**

A. Member, Automated Data Processing Committee, Ann Arbor Veterans Administration Medical Center.
B. Member, Drug Utilization Review Committee, Ann Arbor Veterans Administration Medical Center.
C. Member, Animal Research Committee, Ann Arbor Veterans Administration Medical Center.
D. Member, Equipment Committee, Ann Arbor Veterans Administration Medical Center.

**REGIONAL/NATIONAL:**

A. Chairman, MEDIPP High Technology Subcommittee, Veterans Administration District 14.

V. **PUBLICATIONS:**

**ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:**


**BOOKS AND CHAPTERS IN BOOKS:**

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

KENT J. JOHNSON, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Renal Pathology Service.
   B. Immunopathological evaluation of skin biopsies.
   C. Director - Electron Microscopy Service.
   D. Autopsy coverage - six weeks.

II. TEACHING ACTIVITIES:
   A. Lecturer Renal Pathology - Second year pathology course.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   C. Clinical Investigator Award, National Institutes of Health, $199,500 for five years.
   E. Effectors in Pulmonary Hypertension from Monocrotaline. National Institutes of Health, $264,183 for three years. Co-Investigator with Bob Roth.
   F. Mediator Systems in Experimental IgA Glomerulonephritis. National Kidney Foundation of Michigan, $14,775 for one year.

PROJECTS UNDER STUDY:
   A. Oxygen Free Radical Mediated Tissue Injury.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Director, Immunopathology Fellowship Program.
   B. Renal Pathology Conference - Bi-weekly.
   C. Residency Selection Committee.
V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


ASSOCIATE PROFESSOR OF MEDICAL TECHNOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Director, Blood Bank Reference Laboratory.
   B. Consultant, Veteran's Administration Medical Center, Ann Arbor.

II. TEACHING ACTIVITIES:
   A. Medical Technology 409.
   B. Presentations to Residents in Clinical Pathology.
   C. Trained House-Officers in Immunohematology.
   D. Developed Core Lecture Series for Residents in Clinical Pathology.
   E. Developed Core Lecture Series for Residents in Anatomic Pathology.
   F. Current Topics in Blood Banking, Department of Post-Graduate Medicine:
      1. Workshop Director: Cost-Containment in Blood Banking.
   G. Invited Lecturer, Specialist in Blood Banking Program, Wayne State University.
   H. Invited Lecturer, Specialist in Blood Banking Program, University of Cincinnati.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
      and Steiner, E.A. Immune hemolysis associated with an anti-Pr biphasic
      hemolysin. Transfusion (submitted).
   B. Localization of Erythrocyte ABH-active Glycolipids by Western Blotting
      (with T. Carey and B. Rosenblum).
   C. Xg<sup>α</sup>-linkage analysis (with S. Smalley, UCLA).

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
   A. Director, AABB Regional Reference Laboratory, University of Michigan Medical School.
REGIONAL AND NATIONAL:

A. National Committee for Clinical Laboratory Standards:
   1. Chairman, Subcommittee on Lectins
B. American Association of Blood Banks:
   1. Committee on Technical Workshops.
   2. Subcommittee on Regional Workshops.
   4. Scientific Section Coordinating Committee.
C. Michigan Association of Blood Banks:
   1. President-Elect.
   2. Chairman, Annual Meeting Program Committee.
D. Laboratory Medicine - member of editorial board.
E. Referee of articles submitted to Transfusion, Vox Sanguinis and Laboratory Medicine.

V. INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFFEREE JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFFEREE JOURNALS:


4. The Human Blood Groups, by Salmon et al. (reviewed for Diagnostic Medicine, in press.)
I. CLINICAL ACTIVITIES:

A. Head, Biochemistry Section.
B. Director, Clinical Immunopathology Laboratory.
C. Surgical Pathology - Consultant on Immunopathology and Gastrointestinal Pathology, MDS signout, on-call duties.
D. Autopsy Pathology - staff coverage and on-call duties.

II. TEACHING ACTIVITIES:

A. Medical Students and Graduate Students:
   2. Pathology Course - Lectures on myeloma and autoimmunity.
B. House Officers:
   1. Coordinator - Weekly Clinical Pathology Rounds.
   2. Coordinator - Clinical Pathology Grand Rounds.
   4. Immunology Journal Club - Weekly.

III. RESEARCH ACTIVITIES:

A. Studies on kinetics of the mucosal immune response to bacterial antigens.
B. Creation of carcinogen-protein conjugates to study systemic and mucosal immune response to carcinogens.
C. Clinical Immunopathology of gastrointestinal lymphomas.
D. Grant Support - Principle Investigator:
E. Grant Support - Co-Investigator:
F. Training Grant:
   1. National Institutes of Health. Lung Immunopathology, Project Director - P.A. Ward. Dr. Keren is a trainer with one fellow at present.
G. Student and Fellow Research Projects:
   1. Scott Kern - "In Vitro Culture of Paneth Cells from Isolated Ileal Loops".
   2. John Carey - "The cellular basis for enhanced mucosal IgA memory responses".

IV. ADMINISTRATIVE ACTIVITIES:

   DEPARTMENTAL:
   A. Clinical Pathology Committee.
   B. Resident Selection Committee.
   C. Resident Counselor.

   MEDICAL SCHOOL/HOSPITAL:
   A. Immunopathology Council (ASCP), (Chairman, 1985-1987).
   B. Editorial Board - Infection and Immunity (ASM).
   C. National Institutes of Health, Special Review Committee.
   D. Council on Continuing Education, (ASCP).

V. OTHER RELEVANT ACTIVITIES:

   INVITED LECTURES/SEMINARS:
   5. Laboratory Diagnosis of Monoclonal Gammonpathies by High Resolution Electrophoresis and Immunofixation, Indiana University, Richmond, Indiana, November, 1984.
14. Model for Mucosal Immunity, Visiting Professor, Case Western Reserve University, Department of Pathology, May, 1985.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

I. CLINICAL ACTIVITIES:
A. Cytopathology, ten weeks.
B. Surgical Pathology, eight weeks.
C. Gynecologic pathology consultations, 12 months.
D. Breast pathology consultations, sporadic (two-three months).
E. Cytopathology consultations, 12 months.
F. Gynecologic tumor conference, biweekly for 12 months.

II. TEACHING ACTIVITIES:
A. Sophomore pathology course for four months.
B. Gynecologic pathology lectures for the Pathology 600 (five hours).
C. Cytopathology Conference for the residents (every six weeks).
D. Gynecologic pathology teaching of the Gynecologic Oncology Fellows during their elective rotation in the Department of Pathology (two months).
E. Gynecology pathology teaching of the Pathology resident during the elective period (one month).
F. Department of Pathology House Officer Surgical Pathology Conference (weekly).
G. M-4 student's group leader, one month.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
A. Vulvar melanoma.
B. Esophageal herpes.
C. Borderline ovarian tumor.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Associate Director of the Cytopathology Laboratory, six months.
B. Quality Control Program in the cytopathology laboratory, six months.
C. Surgical Pathology coding system, six months.

MEDICAL SCHOOL/HOSPITAL:
A. Member of the Hospital Tissue Committee, (six months).
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Codirector of workshop, "Transthoracic Fine Needle Aspiration Cytology", at the Annual Scientific Meeting of the American Society of Cytology.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

II. TEACHING ACTIVITIES:

A. Inflammation/Immunopathology Series ICS-600.
B. Biochemistry 522B.
C. Pathology 630.
D. Core lectures in Immunopathology.
E. Teaching/research seminars in various departments.
F. Supervised the following medical students, residents, and fellows:
   Lori Quinlan, Guim Kwon, Denise Ellul, Dr. John Rediske, Dr. Dan
   Remick, Dr. Peter Bachwich.
G. Doctoral Committee member for the following graduate students: Wendy
   Scales, Paul Simpson, Mohammad Hata, Bruce Riser.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH - Macrophage Function in Pulmonary Inflammation HL31237 - Principal
   Investigator.
B. NIH - Inflammatory Cells and Lung Injury HL-31963 Principal Investigator
   for Section II and Core II.
C. American Heart Association Established Investigator - Regulation of
   pulmonary granuloma formation by macrophages - Principal Investigator.
D. NIH - Thermal Injury Complement and Leukocyte Dysfunction GM28499 - Co-
   Investigator.

PROJECTS UNDER STUDY:

A. Role of monocyte/macrophage signals in dictating immune responses:
   1. Ia antigen expression.
   2. Synthesis of arachidonic acid metabolites.
   3. Interleukin - 1 production.
B. Role of macrophages - lymphocyte interactions in the initiation, maintenance, and resolution of chronic immune response.
C. Techniques used to study the above projects:
   1. High pressure liquid chromatography.
   2. Spectrophotometry.
   3. Immunofluoresence.
   4. Image analysis.
   5. Proliferation assays (IL-1 and IL-2 assays).
D. Collaborative research outside of pathology:
   1. Dr. Darrell Cambell.
   2. Dr. Gene Higashi.
   3. Dr. Ben Lucchesi.
   4. Dr. Joseph Lynch.
   5. Dr. Roger Wiggins.

E. Articles submitted for publication:

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Conduct Research Seminar Series.
B. Interview Candidates for Residency Program.

MEDICAL SCHOOL/HOSPITAL:

A. Committee on Medical Student Research.
B. Committee on use and care of animals.
C. Reviewer for Biomedical Research Council grants.
D. Reviewer for Dental Research Institute grants.
E. Reviewer for Diabetes Research and Training Center grants.
F. Interviewer for Medical Scientist Training Program (MSTP).

REGIONAL AND NATIONAL:

B. Research peer review committee of the American Heart Association (Michigan).
C. Chairperson for symposium of the Physiologic, Metabolic, and Immunologic actions of interleukin-1.
D. Consultant/grant reviewer for Veteran's Administration.
E. National Institutes of Health study section member for the review of Academic Research Enhancement Award.
G. National Institute of Health study section consultant for the review of RFA-85-HL "Endothelial and smooth muscle cell interactions in the lung."
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Kitasato Institute, Tokyo, Japan - Arachidone metabolites and the immune response.
4. Symposium on the physiologic, metabolic, and immunologic actions of interleukin-1, Ann Arbor, Michigan, Arachidonic acid metabolites regulate interleukin-1, (IL-1) production.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. DIAGNOSTIC SERVICE ACTIVITIES: None.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Pharmacology 626: Anterior Pituitary Control.
B. Pharmacology 646: Graduate Student Seminar, Associate Course Director.
C. Anatomy/Physiology 581: Mammalian Reproductive Endocrinology (lectures).
D. Pharmacology 614: Endocrine Pharmacology and Biochemistry, Course Director.
E. Supervision of one postdoctoral fellow and one graduate student.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

C. Preceptor in four Training Grants:
   1. "Interdepartmental Training in Pharmacological Sciences".
   2. "Training in Cell and Molecular Biology".
   3. Reproductive Endocrinology Training Grant.
   4. Training in Endocrinology and Metabolism.

PROJECTS UNDER STUDY:

A. The research in my laboratory deals with the regulation and mechanisms involved in pituitary gonadotropin biosynthesis. Currently, recombinant DNA methods are being utilized to examine transcriptional events in this process. This research involves collaborative studies with Drs. Fred Karsch (Physiology) and John Marshall (Internal Medicine). In addition, collaborative efforts are ongoing with Dr. Ricardo Lloyd (Pathology) that involve in situ cDNA hybridization in rat pituitary tumors and a collaboration exists with Dr. A. Vinik (Internal Medicine) which involves the analysis of the insulin gene from patients exhibiting mutant insulins.
B. Manuscripts submitted:

IV. ADMINISTRATIVE ACTIVITIES:

    MEDICAL SCHOOL/HOSPITAL:
    A. Member, Cancer Research Committee.

    REGIONAL AND NATIONAL:
    A. Reviewer, Endocrinology journal.
    B. Reviewer, Biology of Reproduction.
    C. Reviewer, NSF grant proposals.
    D. Reviewer, MRC (Canada) grant proposals.

V. OTHER RELEVANT ACTIVITIES:

    A. Program Coordinator, Reproductive Endocrinology Training Program.
    B. Member, Molecular Genetics Faculty.

VI. PUBLICATIONS:

    ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

    3. Landefeld, T.D., Maurer, R.A. and Kepa, J.: Luteinizing hormone beta subunit in RNA amounts increase during the pre-ovulatory surge in the ewe: The highest levels are observed at the completion of the peak. DNA, in press.
ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


RICARDO V. LLOYD, M.D., PH.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
A. Surgical Pathology - six months.
B. Necropsy Pathology - two weeks.
C. Consultant for soft tissue lesions - 12 months.
D. Consultant for endocrine lesions - 12 months.
E. Consultant to Veterans Administration Medical Center, Ann Arbor.

II. TEACHING ACTIVITIES:
A. Lectures to Sophomore Medical Students in Pathology 600.
B. Fourth year medical student rotation in Pathology, one month.
C. Course in basic histology and pathology for histotechnologists, one month.
D. Lectures to Pathology House Officers.
E. Resident elective in endocrine and soft tissue pathology, one month.
F. Supervise medical student during summer research program - 5/84 - 8/84.
G. Thesis Committee for Graduate Students in Dental School
H. Immunoperoxidase Rounds - twice monthly - 9 months.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
C. Regulation of Differentiation and of Hormone Production in Normal and Neoplastic Human Pituitary Tissues: Biomedical Research Support Grant May, 1985 - April, 1986.
D. Member of Immunocytochemistry Care in the Gastrointestinal Hormone Research Core Center Grant (PI T. Yamada) NIH - NIADDKD 10/84 - September, 1989.

PROJECTS UNDER STUDY:
A. Dopamine receptor analysis and in situ cDNA hybridization in rat pituitary tumors and human pituitary tissues.
B. Development of monoclonal antibodies as diagnostic aids in surgical pathology.
C. Immunocytochemical techniques For light and electron microscopy.
D. Development of a reverse hemolytic plaque assay to study hormone secretion.

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IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director of Immunoperoxidase Service.
B. Coordinator of Anatomic Pathology Journal Club.
C. Residency Training Program Planning Committee.
D. MSP Executive Committee.
E. Activation Committee for Surgical Pathology in RHP.

**MEDICAL SCHOOL/HOSPITAL:**

A. Thyroid Therapy Conference - weekly.
B. Pituitary Study Group - monthly.

**REGIONAL AND NATIONAL:**

A. Michigan Thyroid Association.
C. Presentations at the International Academy of Pathology in March, 1985.
E. Editorial Board, American Journal of Surgical Pathology.
F. Reviewer of articles for Endocrinology and The American Journal of Pathology.

V. **OTHER RELEVANT ACTIVITIES:**

A. University Student Relations Committee - August 1982 to June 1985
B. Medical School Admissions Committee - August 1983 to Present.

**INVITED LECTURES/SEMINARS:**

1. Invited Lecturer to Michigan Society of Cytology on Immunocytochemistry, October 13, 1985
2. Invited seminar speaker, Henry Ford Hospital, Detroit, Michigan, on February 6, 1985.
3. Invited Lecturer to Department of Pathology University of South Florida College of Medicine, July 11 and 12, 1985.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNEFEEED JOURNALS:


VII. HONORS:

2. Recipient of Resident Teaching Award in Anatomic Pathology, June, 1985.
I. CLINICAL ACTIVITIES: None

II. TEACHING ACTIVITIES: None

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:


PENDING SUPPORT:

A. National Institutes of Health - Leukocyte Chemotaxis Receptors. Principal Investigator.

B. National Institutes of Health - Localization of Formyl Peptide Chemotaxis Receptors on PMN. Co-Principal Investigator.

PROJECTS UNDER STUDY:

A. The experimental research in my laboratory is aimed at achieving detailed structural knowledge about the receptor on leukocytes for the chemotactic N-formylated peptides, which have now been identified as the major peptide leukotactic agents produced by bacteria. We are using a wide combination of membrane receptor purification techniques to achieve this goal including subcellular fractionation and plasma membrane purification, detergent solubilization, photoaffinity labeling, selective enzymatic digestions, autoradiography, affinity chromatography and high-pressure liquid chromatography. We are also currently involved in the production of monoclonal antibodies directed against the receptor which will be used for immunoprecipitation of purified receptor material. Protein sequencing will be accomplished by using conventional sequencing techniques. Detailed molecular information about this chemotaxis receptor is of direct health-relatedness. The approaches we have used provide the tools for unraveling, not only the molecular structure of this receptor, but also the physiologic and pathophysiologic regulation of their function.

B. My laboratory is also involved in studies on the mechanisms of neutrophil activation primarily by understanding the events that follow
receptor-ligand binding. To this end, we have developed and implemented several computer programs to analyze ligand binding. Through the combined analysis of both equilibrium binding data and kinetic dissociation data, we have demonstrated the existence of negative cooperativity among the formyl peptide receptors. To further delineate the molecular mechanisms of the concave curvilinearity, we are currently investigating the role of guanine nucleotides and their regulatory proteins in the modulation of the formyl peptide chemotaxis receptor.

C. In the coming year, we plan to investigate whether the molecular basis of curvilinear, concave upward Scatchard plots can be determined using purified receptor protein incorporated into phospholipid vesicles with and without the addition of the purified guanine nucleotide regulatory proteins. We will also determine whether ligand binding stimulates GTPase activity in these purified regulatory proteins. We also plan to insert the purified receptors into phospholipid vesicles and to subsequently fuse these vesicles with a receptor-deficient cell with the intention of conveying formyl peptide responsiveness to the acceptor cell. This will be assayed by biological responses (i.e., f-Met-Leu-the induced chemotaxis) and biochemical activation pathways (i.e. 3H-arachidonate release, phosphoinositide metabolism). Furthermore, we will determine whether the formyl peptide receptor possesses intrinsic protein kinase activity for itself or other acceptor proteins. We will also determine whether GTP or ATP is required for kinase activity and whether tyrosine, threonine or serine residues are phosphorylated.

D. The following fellow, medical student and research assistant have been actively involved in these research efforts:

1. Dr. Richard Smith - postdoctoral fellow, Departments of Pathology and Microbiology/Immunology. Structural characterization of the rabbit neutrophil formyl peptide receptor.
2. Mr. Doug Feltner - medical student, Department of Pathology. Analysis of Neutrophil GTPase activity.
3. Mr. Todd Grey - Research Assistant - Purification of the Formyl Peptide Chemotaxis Receptors.

E. My laboratory has established collaborative ties with the faculty from the following departments:

1. Dr. Roderick Nairn - Department of Microbiology/Immunology. Study of Chemotaxis Receptor Structure and Function.
2. Dr. John E. Niederhuber - Departments of Surgery and Microbiology/Immunology. Influence of the Major Histocompatibility Complex on the Expression of Murine Neutrophil Formyl Peptide Receptors and on the Antibody Response to an N-formylated Chemotactic Peptide.

IV. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

ARTICLES SUBMITTED FOR PUBLICATION:

1. Walter, R.J. and Marasco, W.A.: Visualization of formylpeptide receptor recovery on the surface of rabbit neutrophils after down-regulation.
3. Walter, R.J. and Marasco, W.A.: Direct visualization of formylpeptide binding on human neutrophils. II. Asymmetric distribution on spontaneously polarized cells.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


KENNETH D. McCLATCHHEY, M.D., D.D.S.
ASSOCIATE PROFESSOR AND ASSOCIATE CHAIRMAN
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:

A. Surgical Pathology - consultant on all head and neck pathology cases.
B. Autopsy:
   1. Consultant on forensic odontology cases.
   2. Assistant Medical Examiner, Washtenaw County.
C. Associate Director of Clinical Laboratories.
D. Director of Clinical Microbiology Laboratory (which includes Adult
   Virology in the School of Public Health).
E. Medical Director of Clinical Toxicology Laboratory.
F. Medical Director of Medical Technology Program - Eastern Michigan
   University.
G. Ann Arbor Veterans Administration Medical Center - monthly consultant.
H. Coordinator of Cytometry Program - The University of Michigan, Depart-
   ment of Pathology.
I. MDS Laboratories, Inc., Ann Arbor, Michigan, Pathologist in Chief.
J. Medical Advisory Board, MDS Laboratories, Toronto, Canada.
K. Chief Consultant, MDS Laboratories, Michigan.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Pathology 630, 631 - Course Director:
   1. Six hours credit (M, W, F 1-4 pm).
   2. 155 Dental students, 20 medical technology and graduate students.
B. Pathology 856 - Otorhinolaryngology Pathology.
C. Oral Diagnosis 664 - participant.
D. Clinical Studies 510 (Inteflex) - Lecturer, Head and Neck Pathology.
E. Microbiology 521 Introductory Diagnostic Microbiology - participant.
F. Coordinator of resident teaching with Dr. Carl Pierson in the clinical
   laboratory under my direction (Microbiology).

INVITED LECTURES/SEMINARS:

1. Tumors of the Mandible: Head and Neck Oncology Course, Department of Oto-
   laryngology, Towsley Center.
2. Forensic Odontology in the Eyes of a General Pathologist: Hospital Dentistry
   550 Seminar Series.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-investigator with Carl L. Pierson, Ph.D., Thomas C. Shope, M.D., William H. Murphy, Jr., M.D., Rapid Diagnostic Techniques in Microbiology, Abbott Laboratories, Inc., $100,000, 1984-present.


C. Consultant, principal investigator Richard L. Wahl, M.D., Department of Internal Medicine, The University of Michigan. Radioimmunodiagnosis of Squamous Cell Carcinoma, Department of Health and Human Services, $608,579, 1984 (three years).

PROJECTS UNDER STUDY:


B. See laboratories under my direction.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Medical Service Plan Executive Committee, Department of Pathology, The University of Michigan, 1979-present.

B. Hospital Replacement Project (Pathology Group) Laboratory Planning Committee, 1980-present.

C. Director, Residency Program, Department of Pathology, The University of Michigan, 1982-present.

MEDICAL SCHOOL/HOSPITAL:


B. Laboratories Committee, The University of Michigan Hospitals, 1978-present.

D. Ambulatory Care Committee, The University of Michigan Hospitals, 1980-present.

E. Medical, Surgical and Psychiatric Hospital Planning Committee, 1982-present.

F. Committee on Sophomore Student Promotions, School of Dentistry, The University of Michigan, 1982-present.

G. Clinical Chairmen's Council, The University of Michigan Hospitals, 1982-present.
H. Dean's Advisory Committee, The University of Michigan Medical School, 1982-present.
I. Advisory Committee on Appointments, Promotions, and Titles (ACAPT), The University of Michigan Medical School, 1983-present.

REGIONAL AND NATIONAL:

A. American Academy of Oral Pathology, 1968-present.
B. American Medical Association, 1983-present.
C. American Society of Clinical Pathologists, 1975-present.
D. American Society of Microbiology, 1978-present.
E. College of American Pathologists:
   Commission on Scientific Resources, 1982-present.
   Chairman, Standards Committee, 1982-present.
   Council on Quality Assurance, 1982-84.
   Surveys Committee, 1982-present.
   Coordinator, Roger K. Gilbert Fellowship Program at the National Bureau of Standards, 1985-present.
   Coordinator, Reference Materials Program, 1985-present.
   National Committee for Clinical Laboratory Standards - Project on Cost Accounting, 1985-present.
F. American Association of Clinical Chemists, 1975-present.
G. Michigan Society of Pathologists:
   Secretary-Treasurer, 1984-present.
H. American Association of Pathologists, 1984-present.
I. Council of the National Reference System in Clinical Chemistry of the National Committee for Clinical Laboratory Standards, 1983-present.
J. Southwestern Oncology Group (SWOG), 1982-present.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES, SEMINARS AND PRESENTATIONS:


ARTICLES SUBMITTED FOR PUBLICATION:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:
   A. Laboratory Director - Clinical Flow Cytometry Laboratory.
   B. Administrative Director - Immunohistochemistry Laboratory.

II. TEACHING ACTIVITIES:
   A. Serving on a dissertation committee in the Neuroscience Program.

III. RESEARCH ACTIVITIES:
   A. During the previous year research projects have been conducted in conjunction with other members of the Department of Pathology and with members in the Departments of Anatomy and Cell Biology, Biochemistry, Dermatology, and Internal Medicine, and the Mental Health Research Institute.

SPONSORED SUPPORT:

   A. DNA Ploidy in Basal Cell Carcinoma, UM Cancer Research Institute, Principal Investigator, $5,000, May 1, 1985 - April 30, 1986.
   B. Endogenous Laminin Expression and Metastasis, NIH - National Cancer Institute, Co-investigator, $215,500, July 1, 1984 - June 30, 1897.
   C. Characterization of Immune Responses to Intradermal Implantation of Bovine Collagen, Dept. of Dermatology, $5,000, May 1, 1984 - June 30, 1985.

PROJECTS UNDER STUDY:

   A. Investigation of the mechanisms of metastasis.
   B. Study of immune responses induced in patients by intradermal injections of bovine collagen.
   C. Study of the role of laminin in the regeneration of crushed optic nerves.
   D. Determination of the specificity and diagnostic utility of a monoclonal antibody to cervical carcinoma antigen.
   E. Development of functionally monovalent lectins for use in flow cytometry.
   F. Examination of relationship of DNA ploidy to tumor aggressiveness and/or metastatic potential.
   G. Investigation of the reactivity of lectins with alveolar macrophages.
ARTICLES SUBMITTED FOR PUBLICATION:


IV. ADMINISTRATIVE ACTIVITIES: None.

V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. Gross and microscopic examination of human and animal autopsy neuropathologic material with house officers and faculty. The cases shared with another faculty member were from University Hospital, University Associated Hospitals, and State Institutions. Medical examiner cases.

B. Daily supervision of House Officer and Staff participation in diagnostic neuropathology, electron microscopic neuropathology, ceroid service, nerve and muscle biopsy. Responsible for final report and diagnosis in each category.

C. Necropsy Service gross and microscopic (one month).

D. Consultations on diagnostic neuropathology muscle and nerve biopsies from other hospitals and medical centers.

II. TEACHING ACTIVITIES:

A. Neural and Behavioral Sciences 600, Neuropathology for second year medical students. Lectures and laboratories. Twenty hours shared with other faculty.

B. Neuropathology 858. Intensive laboratory-lecture course for all beginning House Officers in Pathology, and in several clinical services concerned with the nervous system, graduate students and faculty. Annual, 16 hours shared with other faculty. One credit hour elective.

C. House Officers:
   1. Review of microscopic neuropathological postmortem material with Pathology House Officers, shared with another faculty member.
   2. Weekly brain cutting with pathology house officers.
   3. Reviews all neurosurgically removed material in this hospital in CME-approved conference for Pathology and Neurosurgery House Officers and Staff.
   4. Shared consultations with Pathology house officers.
   5. Invited presentations of neuropathologic observations at joint Pathology-Neurology-Neurosurgery and clinical conferences.
   6. Teach laboratory techniques to our Laboratory Technologists.
   7. Monthly conference for Neurology and Pathology House Officers and Staff (review of muscle and nerve biopsies).
   8. Runs monthly Brain Conference for Pathology, Neurology and Neurosurgery House Officers and Staff.
   9. Directs teaching of Neurology House Officers who take elective in Neuropathology. One month or longer rotation with teaching shared with other Pathology Faculty and with Neurohistologists. Two House Officers.
10. Weekly Brain Tumor Conference. Review of Neurosurgery, Nuclear Medicine, Neuroradiology, and Neuropathology in clinical research setting of brain tumor cases by Staff. Responsible for neuropathology segment of tumor review.

C. Supervise research project of one student (Mr. Evan Cohn).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Consultant on USPHS grant application, Recovery of Malformation After Fetal Injury, Dr. Samuel Hicks, Principal Investigator.
B. Grant #1RO1 CA33768-01A3, Co-investigator: Intra-arterial BUdR Radio-sensitization of Malignant Gliomas.
C. Rackham School of Graduate Studies Faculty Research Grant: Explantation Model of Glioma Antigen Instability, Principal Investigator. Changes in malignancy and resistance to treatment of human gliomas, the most common and devastating group of brain tumors, are thought to be related in part to antigenic instabilities of these cells. Antigenic instabilities will be followed upon explantation of human glioma cells in-vitro and correlated with studies designed to determine the mechanism of these instabilities. The extent of changes in antigens will be studied. Antigenic changes will be correlated with changes in cellular DNA over time intervals and correlated with changes in clones of cells from the gliomas of individual patients. 4/1/85 - 6/30/86.
D. Michigan Memorial-Phoenix Project #656: Explantation Model of Glioma Antigen Instability, Principal Investigator. 4/1/85 - 6/30/86.
E. American Cancer Society: Glioma Imaging Agents-Glutamine Synthetase Inhibitors, Neuropathologist, co-investigator. Action pending.
F. National Institutes of Health: Glioma Imaging Agents, Neuropathologist co-investigator. Action pending.
G. Infuse-Aid Corporation: Treatment of an MPTP Primate Model of Parkinson's Disease with Intraventricular Infused Dopamine, Co-investigator.

PROJECTS UNDER STUDY:

A. Growth, spread and antigenicity of ENU-induced gliomas in rats, with Ms. Constance D'Amato.
B. Quantitative analysis of DNA in fresh and cultured cells of brain tumors, with Dr. Jerry Hudson.
E. Extracellular matrix products of gliomas with Drs. James Varani and Suzanne Fligiel.
F. Biologic substrates for promotion of growth of type-specific cells from human gliomas, with Dr. Max Wicha.


I. Histologic features of high grade gliomas from patients with unusually long survival and correlation with treatment modality with Drs. William Beierwaltes and James Taren.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Chief, Section of Neuropathology.

MEDICAL SCHOOL/HOSPITAL:

A. Organization and scheduling of Pathology, Neurology and Neurosurgery House Officer Neuropathology teaching conferences, individual instruction and consultation review.

B. Organization of call logistics of specimen handling, and schedules for complete coverage of diagnostic and postmortem neuropathology by staff.

C. Supervision of neurohistologists and neuropathology laboratories, and quality control of histologic preparations.

D. Interaction with Chiefs and appointed Staff of other clinical services, particularly Neurosurgery, Neurology, Nuclear Medicine and Neuroradiology.

E. Quality control of muscle histochemistry, ultrastructural neuropathology and peripheral nerve teasing.

REGIONAL AND NATIONAL:

A. Reviewer for pathology, neuropathology oncology and neuro-oncology journals or texts.


D. M-Lab Neuropathology, Muscle and Nerve Biopsy services.

V. OTHER RELEVANT ACTIVITIES:

A. Faculty Advisory Committee for graduate student James Hopkins, Dr. Bernard Agranoff, Chairman.

INVITED LECTURES/SEMINARS:

1. Guest lecturer, "Cytologic Markers in Brain Tumors", at Wayne State University, Detroit, Michigan, in April, 1985.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

A. Occasional Lectures.
B. Supervision of one visiting professor: Fumihisa Miyauchi.
C. Supervision of one postdoctoral fellow: Eleanor Sims.
D. Primary supervision of 8 graduate students:
   1. Robert Milius, CMB
   2. Emilie Bell, CMB.
   3. Jane Wiesen, CMB.
   4. Hal Cantor, Bioengineering
   5. Craig Halberstadt, Bioengineering
   6. Rhonda Brand, Bioengineering
   7. Mahmoud Ghazzi, Bioengineering
   8. P. Bagavandoss, Anatomy
   9. (also serving on several other dissertation committees)

E. Supervision of 3 undergraduate students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

B. Mellon Foundation Grant, 1982-1985, $250,000 (total). Renewed as:
   Mellon Foundation Grant, 1985-1988, $300,000 (total).
   Replaced by:
   NIH-HD-18018-01 "Gonadotropin control of the ovary", 1985-1988, $331,663 (direct), Principal Investigator.
D. NIH-T32-HD-07048-10, "Training program in reproductive endocrinology" (6 pred; 4 postdoc), 1980-1985, $687,480 (direct), Principal Investigator.
   Renewed as:
   NIH-T32-HD-07048-11 1985-1990, $972,975 (direct), Principal Investigator.
E. Burroughs Corporation. Contract to develop a "Scientific Data System", $515,000, 1984-1986, (total), Principal Investigator.

G. NSF-BNS-8419007, "Hormones and psychosocial development in early adolescence". A pilot one year, multidisciplinary, interdisciplinary project, J. Eccles (Psychology), P.I., 1985-1986, $60,054 (total), Co-Principal Investigator.

PROJECTS UNDER STUDY:

A. Development of a computer-controlled perifusion system for on-line analysis of cellular responses to pulsatile and other controlled signalling.

B. Analysis of dynamic control of ovarian function by gonadotropins.

C. Non-invasive assessment of the normality and development of single, pre-gastrula mouse embryos.

D. Development of a computer-based system for collection, analysis and management of scientific information.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Director, Consortium for Research in Developmental and Reproductive Biology.

B. Director, Reproductive Endocrinology Program.

REGIONAL AND NATIONAL:

A. President and Past President, Society for the Study of Reproduction.

B. Member of Glycoprotein Hormone Subcommittee, National Hormone and Pituitary Program.

C. Chair, NIH Miniworkshop to explore potential utilization of recombinant DNA and monoclonal antibody to obtain supplies of monkey gonadotropins.


E. Member, NICHD Special Review Committee, August 14-17, 1985.

V. PUBLICATIONS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

(Note: During the past year and a half my laboratory has been engaged in the development of a new technology, the ability to deliver chemical signals in precise, controlled patterns to small numbers of living cells and then to detect the responses of the cells to the signals on-line, in real time, by monitoring changes in concentrations of selected ions, concentrations of electrochemically-detectable compounds, electrical activity and temperature. The efforts have involved the interests and technologies of chemists, chemical engineers, bioengineers, electrical engineers, computer scientists, biostatisticians and biologists. These activities have included the design and introduction of novel biosensors and new control systems. The work has been reviewed and funded, both by the NIH and elsewhere (see items III C, D, and F). We have recently obtained on-line data strongly supporting the feasibility of our approach. As a consequence we expect shortly to be able to begin using the integrated system to acquire publishable data concerning hitherto unexplored relationships.

VI. AWARDS:

I. CLINICAL ACTIVITIES:

A. Cytopathology - 25 weeks.
B. Director, Cytopathology Laboratory - full time.
C. Cytopathology, pulmonary pathology, and gynecologic pathology consultation service - 12 months.
D. Surgical Pathology - 6 weeks.

II. TEACHING ACTIVITIES:

A. Pathology 600 - Sophomore medical students, class lectures - 4 contact hours.
B. Pathology residents - supervision and teaching during cytopathology and surgical pathology rotations and when covering necropsies.
C. Pathology residents - biweekly cytopathology conferences.
D. Gynecology - Pathology - Radiation Therapy Conference-backup coverage.

III. RESEARCH ACTIVITIES:

Cytopathology, with particular reference to serous fluids.

SPONSORED SUPPORT:

None

PROJECTS UNDER STUDY:

A. Aspiration cytology of pulmonary Hodgkin's disease.
B. Cross contamination in the cytologic staining circuit.
C. Curschmann's spirals in serous fluids.
D. Efficiency of collaboration between Cytopathology and Radiology in fine needle aspiration cytology.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Pathologist in charge of Cytopathology Laboratory.
B. Department of Pathology Medical Servic Plan Executive Committee.

MEDICAL SCHOOL/HOSPITAL: None
REGIONAL AND NATIONAL:

A. President, American Society of Cytology.
B. Secretary-Treasurer, American Society of Cytology.

V. OTHER RELEVANT ACTIVITIES:

C. Editorial and Publications Committee, International Academy of Cytology.
D. Membership Committee, International Academy of Cytology.
E. U.S. Mesothelioma Reference Panel.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Director, Clinical Laboratories, University Hospitals.
B. Director, Blood Bank, University Hospitals.
C. Diagnosis of surgical specimens from University Hospitals patients.
D. Diagnosis of surgical specimens from MDS Laboratories.
E. Diagnosis of consultation cases from throughout the United States on surgical pathology of breast.
F. Medical coverage of Transfusion Service.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Lectures on breast pathology (2), transfusion medicine (4), and clinical laboratory diagnosis (2) to sophomore class.
B. Responsible for laboratory section of sophomore pathology course.
C. Lectures on breast cancer to Interphase Program.
D. Presentation of monthly Conference on Surgical Pathology to Section of General Surgery.
E. Postgraduate course - "Current Topics in Blood Banking" - Planning Committee.
F. Course on Transfusion Medicine presented to Pathology and Hematology/Oncology House Officers.

INVITED LECTURES/SEMINARS:

A. Seminars on Pathology of Breast to Pathology House Officers.
B. Lecture on breast cancer to Department of Surgery.
C. Lecture on massive transfusion to Section of Emergency Medicine.
D. Lecture on emergency transfusion to Department of Anesthesiology.
E. Lecture on use of plasma components to Department of Surgery.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Treatment of acute Guillain-Barre Syndrome with plasma exchange (in cooperation with Department of Neurology - Dr. J. Albers).
B. The pathology of metaplastic carcinoma of breast.
C. The pathology of mammary hamartomas.
D. Cooperative study of breast ultrasonic imaging.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Head, Section of Clinical Pathology.
B. Executive Committee, Departmental Medical Service Plan.
C. Resident Selection Committee.
D. Medical Director, Medical Technology Program.
E. Departmental Committee on Appointments, Promotions and Titles.
F. Limited Special Function Laboratories Consolidation Task Force.

MEDICAL SCHOOL/HOSPITAL:

A. Executive committee, Medical School.
B. Executive Committee on Clinical Affairs, University Hospitals.
C. University Hospitals Executive Committee.
D. New Hospital Planning Committee.
E. Medical Center Clinical Priorities Committee.
F. Laboratories Committee, Chairman.
G. Transfusion Committee, Chairman.
H. Joint Conference Committee.
I. Interdepartmental Communication Committee.
J. Breast Care Program Committee.
K. Admission Day Surgery Committee.
L. Multi-Organ Transplantation Committee (liver homotransplantation).
M. Ad Hoc Operating Rooms Committee on Transfusion (DRC strike).
N. Ad Hoc Committee on HTLV-III Testing in University Hospitals.

REGIONAL AND NATIONAL:

A. American Association of Blood Banks:
   2. Nominations Committee.
   3. Liaison Committee on Circular of Information for Use With Human Blood and Components.
   4. Award Committee.
B. American National Red Cross:
C. American Society of Clinical Pathologists:
   2. Director, Check Sample Program, Anatomical Pathology.
D. Michigan Society of Pathologists:
   1. Medical Care Insurance Committee.
E. American Medical Association:
   1. Advisory Panel on AIDS.
F. Arthur Purdy Stout Society of Surgical Pathologists:
   1. Program Chairman.
G. American Cancer Society:
   1. Task Force on Fibrocystic Disease of Breast.

-Page 131-
H. Detroit Red Cross:
   1. Medical Advisory Committee.
H. Breast Cancer Detection Demonstration Project, National Cancer Institute - Consultant.
I. Wayne County General Hospital - Consultant.
J. Veterans Administration Hospital, Ann Arbor - Consultant.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL ACTIVITIES:

A. Associate Editor, Transfusion.
B. Editorial Board, American Journal of Surgical Pathology.
C. Associate Editor, Critical Reviews in Clinical Laboratory Sciences.
D. Editor, General Principles of Blood Transfusion (AMA).
E. Editorial Board, Archives of Pathology (AMA).
F. Editor, Arthur Purdy Stout Society of Surgical Pathologists Centennial Symposium.
G. Editor, Anatomical Pathology Check Sample Program, American Society of Clinical Pathologists.

INVITED LECTURES/SEMINARS:

1. Visiting Professor, Cedars-Sinai Hospital, Los Angeles, California. Lectures on breast neoplasia, April, 1984.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

SEM H. PHAN, PH.D., M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Autopsy Service.
   B. Serum Angiotensin converting enzyme assay.

II. TEACHING ACTIVITIES:
   A. Pathology Residents - Autopsy
   B. John Feighan. Undergraduate Honor Student

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Mechanisms and Genetic Regulation of Pulmonary Fibrosis. R01-HL28737. Principal Investigator, S.H. Phan, Ph.D., M.D. 20% effort, $77,050 current annual direct cost. (NIH).
   B. Macrophage Function in Lung Injury and Fibrosis. POI-HL31963, Section IV. Principal Investigator, S.H. Phan, Ph.D., M.D., 35% effort, $63,382 current annual direct cost (NIH).
   C. Fibroblast Regulatory Factors in Pulmonary Fibrosis. 84-136. Established Investigator Award (American Heart Association), $32,000 current annual direct cost.
   D. Fibroblast Regulatory Factors. 84-1165. Grant-in-Aid (American Heart Association), Principal Investigator, S.H. Phan, Ph.D., M.D., $30,000 current annual direct cost.

PROJECTS UNDER STUDY:
   A. The influence of H-2 haplotype on a model of murine pulmonary fibrosis.
   B. Lung macrophage/monocyte kinetics and recruitment during lung injury and fibrosis.
   C. Fibroblast function - in terms of chemotaxis, collagen metabolism and proliferation during lung injury, and their regulation by inflammatory and immune cell-derived mediators.
   D. The roles of phospholipase A₂ and serine proteases/esterases in neutrophil activation.
   E. The state of macrophage activation as determined by Ia antigen expression and its relationship to production of arachidonate metabolites active in fibroblast activation.
   F. Fibroblast arachidonate metabolism in response to inflammatory cell and macrophage derived mediators, and their effects on fibroblast collagen synthesis and proliferation.
G. The effects of selective inhibitors of arachidonate metabolism on murine pulmonary fibrosis.
H. Regulation of macrophage and T-cell fibroblast growth factor production by arachidonate metabolites in normal and diseased states.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL: None.

MEDICAL SCHOOL/HOSPITAL:
A. Reviewer for BMRC research grant application.

REGIONAL AND NATIONAL:
A. Member, Pathology A Study Section (Reviews research grant applications for National Institutes of Health) Public Health Service, NIH.

V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. DIAGNOSTIC SERVICE ACTIVITIES:

A. Associate Director of Clinical Microbiology Laboratory.

II. TEACHING ACTIVITIES:

A. Pathology 600 - three lectures.
B. Pathology 630 - two lectures.
C. Pathology 410 - three lectures.
D. Microbiology 505 - two lectures
E. Pathology House Officers - four lectures.
F. Medical student project advisor for J. Purifoy.
G. Coordinator - House Officer rotation in Clinical Microbiology.
H. Epidemiology 560 - four lectures, School of Public Health
I. Project advisor for J. Alday in College of Pharmacy.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Aminocillin-B-Lactam Combination Study, Hoffmann-La Roche; $16,212/three months.
B. Laboratory Diagnosis of Chlamydia Infections, Abbott Laboratories; $108,402/one year.
C. Antimicrobial Susceptibility of Bacteroides fragilis in the United States, Lederle Laboratories; $3,000/one year.
D. Evaluation of the Staph Coagulase Latex Kit, Difco Laboratories; $900/two months.

PROJECTS UNDER STUDY:

A. Detection of Clostridium difficile toxin by ELISA.
B. Epidemiology and clinical significance of blood cultures positive for coagulase-negative staph.
C. Inducible B-lactamase activity in gram-negative bacteria.
D. Lysostaphin susceptibility of methicillin-resistant Staphylococcus aureus.
E. Evaluation of the Ramco Candida Antigen Latex Kit.
F. Phagocyte function using flow cytometry.
ARTICLES SUBMITTED FOR PUBLICATION:

1. Comparative pharmacokinetics of selected cephalosporins (submitted for publication).
3. Protothecal olecranon bursitis: Treatment with intrabursal amphotericin B (submitted for publication).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Serve on Clinical Laboratories Directors' Committee.
B. Coordinate Clinical Microbiology Senior Staff meeting (weekly).
C. Coordinate Clinical Microbiology in-service education program.

MEDICAL SCHOOL/HOSPITAL:

A. Alternate, Infection Control Committee.

REGIONAL AND NATIONAL:

A. Educational Program Planning Committee, Michigan State Department of Public Health.
B. Program Committee, Tricounty Clinical Microbiology Meeting (two per year).

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. The clinical role of new antibiotics: Drugs in search of a disease. South Bend Medical Foundation, South Bend, Indiana.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


JOSEPH A. REGEZI, D.D.S.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 – 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Oral Pathology biopsy service: four months/year (5,000 biopsies/year).
   B. Patient consultations: on call at the School throughout the year and
      scheduled consultations four months/year for one afternoon per week.

II. TEACHING ACTIVITIES:
   A. Course Director and Lecturer in Senior Oral Pathology 816 and 818.
   B. Course Director, Lecturer and Laboratory Instructor in Sophomore Oral
      Pathology 626 and 627.
   C. Lecturer, Graduate Oral Pathology and Diagnosis 695.
   D. Contributor, Graduate Seminars in Oral Pathology 698 and 699.

III. RESEARCH ACTIVITIES:
          PROJECTS UNDER STUDY:
   A. Osteosarcoma and chondrosarcoma of the head and neck - immunohisto-
      chemical markers.
   B. Immunohistochemical study of reactive and neoplastic giant cell
      lesions.
   C. Pemphigus and pemphigoid - immunologic diagnosis from paraffin embedded
      tissue.
   D. Langerhans cells and macrophages in cystic epithelium of the jaws.
   E. Antigenic markers in salivary gland tumors.

ARTICLES SUBMITTED FOR PUBLICATION:

   histochemical study of idiopathic histiocytosis of the jaws. Oral Surg.,
2. Zarbo, R.J., Regezi, J. and Batsakis, J.G.: Immunohistochemical staining of
3. Regezi, J.A., Ellis, C., Stewart, J., Giustina: Histologic changes associated
   with the topical use of isotretinoin on oral lichen planus with isotretin-

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Chairman, Thesis Committee for Dr. J. Stewart, Department of Oral
      Pathology.
   B. Thesis Committees for Drs. Gardner and Contos, Department of
      Endodontology.
DENTAL SCHOOL:
A. Member of Executive Committee, 1982-1985.
B. Dental School Budget Priority Committee.
C. Faculty Advisor, Student Council.

NATIONAL:
B. Member, Committee to Encourage Scholarly Activity, American Academy of Oral Pathology, 1985-1986.
C. Member of Editorial Board for Oral Surgery, Oral Medicine and Oral Pathology, C.V. Mosby, Publisher.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
I. CLINICAL ACTIVITIES:

A. Responsible for biopsy service four months/year.
B. Responsible for clinical patient diagnostic problems and management thereof four months/year on a regular basis, seven months/year on an as needed basis.

II. TEACHING ACTIVITIES:

A. Oral Pathology to Freshman Dental Students, Course 516 (course director).
B. Oral Pathology to Sophomore Dental Students, Course 624 and 625.
C. Pathology Lecture and Laboratory to Sophomore Dental Students, Course 631.
D. Oral Pathology to Senior Dental Students, Course 818.
E. Oral Pathology Seminar to Graduate Students in Operative Dentistry, Course #690.
F. Oral Pathology Lecture and Laboratory to Graduate Students, Course 695.
G. Oral Pathology Seminar to Graduate Students in Periodontics, Course #781 (course director).

III. RESEARCH ACTIVITIES:

SPONSORED RESEARCH:

A. Protocol to define the efficacy and tolerance of systemically administered acyclovir versus placebo in patients with herpes labialis. Principal Investigator. Sponsor: Burroughs Wellcome Co.
B. Tolerance and efficacy study comparing 15% 5-iodo-2'-deoxyuridine (IDU) in 80% dimethyl sulfoxide (DMSO) and 5% H₂O to control groups of 80% DMSO and 2% DMSO for the treatment of herpes simplex labialis. Principal Investigator. Sponsor: Research Medical, Inc.

PROJECTS UNDER STUDY:

A. Dental health manpower utilization in New Zealand, a pilot study with possible pertinence to the State of Michigan. Coprincipal Investigator.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL/DENTAL SCHOOL:

A. Acting Chairman, Department of Oral Pathology, School of Dentistry, January 1, 1985 - June 30, 1985.
B. Associate Director of the Dental Research Institute. Activities include:
   2. Participant in deliberation of various other committees such as the Scientific Advisory Committee and the Policy Committee of the Institute.

REGIONAL AND NATIONAL:

A. Member, Executive Committee, Michigan Division, American Cancer Society.
B. Member-at-Large, Board of Directors, Michigan Division, American Cancer Society.
C. Chairman, Committee on Cancer Control, Hospital and Institutional Dental Service, Michigan Dental Association.
D. Chairman, Annual Regional Oral Cancer Symposium to be held at Mt. Carmel Hospital, Detroit, Michigan, February 26, 1986.
E. Member, Board of Appeals, Commission on Accreditation, Graduate Specialty Education Programs, American Dental Association.
F. Consultant, Committee on Hospital and Institutional Dentistry, American Dental Association.
G. Consultant, Council on Dental Education, American Dental Association.
H. Consultant, Council on Dental Therapeutics, American Dental Association.
I. Manuscript Consultant and Reviewer:

V. OTHER RELEVANT ACTIVITIES:

A. Lecturer to various groups including:
   2. Periodontal Study Club for Dental Hygiene, Fall Meeting.
   5. Houston District Dental Hygienists' Society Annual Meeting.
   6. Saginaw Valley District Dental Hygiene Society and Delta College Community Services Program.
   7. Oral Cancer Symposia (one at Lansing Community College and one at Delta College, Bay City, Michigan).
   8. 1985 Annual Session, Michigan Dental Association, Open Workshop, "Hospital Dentistry -- Survival?", Chairman.
10. Ypsilanti Regional Psychiatric Hospital, Ypsilanti, Michigan.
11. Miscellaneous component dental societies, civic clubs and study clubs.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BERTRAM SCHNITZER, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985
(Sabbatical Leave 1 January 1985 through 30 June 1985)

I. CLINICAL ACTIVITIES:

A. Director, Clinical Hematology Laboratory.
B. Director, University of Michigan Health Services Laboratories.
C. Diagnostic Surgical Pathology, Hematopathology.
D. Diagnostic Surgical Pathology, Veterans Administration Hospital (weekly).
E. Diagnostic Hematopathology, Veterans Administration Hospital.
F. Diagnostic Clinical Flow Cytometry.
G. Consultant of Hematopathology cases.
H. Review of Southwest Oncology Group (SWOG) cases (circa 200/year).
I. Diagnostic electron microscopy of lymphoreticular and hematopathology cases.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Daily review of blood smears and body fluids in Hematology Laboratory.
B. Daily review of in-house and consultation hematopathology cases and correlation with flow cytometry data and immunoperoxidase studies.
C. House Officer Conference in Hematopathology

AFFILIATED HOSPITALS:

A. Veterans Administration Hospital.

INVITED LECTURES/SEMINARS:

1. Immunologic Aspects in Hematology, Department of Internal Medicine, St. Joseph Mercy Hospital, Pontiac, Michigan, 1984.
2. Immunologic Methods in the Diagnosis and Classification of Leukemias and Lymphomas, Bay Medical Center, Bay City, Michigan, March, 1985.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Southwest Oncology Group (SWOG). Combination chemotherapy of unfavorable histology non-Hodgkin's lymphomas with CHOPP and CBV (with Dr. V. Dabich).
B. Southwest Oncology Group (SWOG). Combination chemotherapy of unfavorable histology non-Hodgkin's lymphomas with alternating regimens of CHOPP and CVB (with Dr. V. Dabich).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Clinical Hematology Laboratory, Hospitals.

MEDICAL SCHOOL/HOSPITALS:

A. University of Michigan Health Services Laboratories.

REGIONAL AND NATIONAL:

A. Member, American Board of Pathology, Hematology Test Committee.
B. Society of Hematopathology, Executive Committee.
C. Southwest Oncology Group:
   1. Lymphoma Subcommittee.
   2. Leukemia Subcommittee.
D. Regional Center Review Pathologist, Southwest Oncology Group.
E. Member, Executive Committee, National Panel for Lymphoma Clinical Studies.
F. Children's Cancer Study Group: Review pathologist of lymphoma cases.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARD:

A. American Journal of Clinical Pathology.

INVITED LECTURES/SEMINARS:

2. Immunologic Aspects in Hematology. American Society of Medical Technology, Dearborn, Michigan, September, 1984


7. Current Concepts in the Diagnosis and Classification of Leukemias and Lymphomas. Sponsored by the Chinese Medical Association in: (1) Beijing; (2) Nanjing; (3) Suchou; and (4) Shanghai, China, April, 1985.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


B. BOOKS AND CHAPTERS IN BOOKS:


C. ABSTRACTS:


I. CLINICAL ACTIVITIES:

A. Hematopathology Diagnostic Service (seven months, 1200 cases) - interpretation of peripheral smears, body fluid cytologies, bone marrow aspirates and biopsies, cytotoxic stains.

B. Flow Cytometry Diagnostic Service (three months, 250 cases) - interpretation of cell surface marker studies and cellular DNA analyses in the evaluation of hematologic disorders, primary and secondary immune deficiencies and autoimmune processes.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Coordinator, core and elective rotations in flow cytometry.

B. Coordinator, core lecture series on hematopathology.

C. Daily sign-out of cases in flow cytometry and hematopathology with pathology residents.

D. Monthly seminars on the clinical applications of flow cytometry for the residents and fellows on the Hematology/Oncology Services.

E. Lecturer, Hematopathology, medical school.

F. Lecturer, Clinical Applications of Flow Cytometry, Medical Technologist Training Program.

G. Supervisor, undergraduate honors research project in cellular immunology.

H. Pediatric/Adult Leukemia Conferences.

I. Adult Lymphoma Conferences.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

These projects examine the molecular basis of migration across vessel walls for both normal and malignant lymphoid cells:

1. NIH, NCI Physician Investigator Award ($170,000; 3 years; 1 July 1984 through 30 June 1987): Lymphocyte migration and the metastatic process.

2. American Cancer Society Research Award ($109,000; 2 years; 1 July 1984 through 30 June 1986): Lymphocyte migration and the metastatic process.

3. Michigan Leukemia Society Research Award ($50,000; 2 years; 1 July 1984 through 30 June 1986): The role of extracellular matrix in the migration of lymphoid cells across vessel walls.
PROJECTS UNDER STUDY:

A. Monoclonal antibodies in the treatment of lymphoproliferative disease - hematopathology consultant; Kenneth Foon, M.D., Principle Investigator.
B. The role of the endothelium, basement membrane and extracellular matrix in the modulation of lymphoid cell migration into tissues - Principle Investigator.

ARTICLES SUBMITTED FOR PUBLICATION:


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Medical Director of the Flow Cytometry Laboratory.
B. Co-director of the Hematopathology Laboratory.
C. Member, Microcomputer Steering Committee

MEDICAL SCHOOL/HOSPITAL:

A. Planned and managed the consolidation of the Pediatric Hematology Laboratory with the Main Pathology Hematology Laboratory.
   1. Accomplished without reducing the spectrum of tests offered or increasing the turn-around time for results.
   2. Required novel solutions to problems in the ares of specimen procurement, specimen distribution, specimen processing and the reporting of results.
   3. Projected savings to Hospital of >$170,000/year (compared to the cost of maintaining two, independent laboratories).
B. Member, Medical Staff Implementation Work Group on Referring Physician Communications.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

2. Flow Cytometry in Diagnostic Hematopathology. Saint John Hospital, Detroit, Michigan.
3. The Clinical Applications of Flow Cytometry, American Red Cross, Fort Wayne, Indiana.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:
   A. Clinical Immunopathology Laboratory.

II. TEACHING ACTIVITIES:
   A. Resident training in immunology and immunopathology.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   B. Lung Injury Produced by Oxygen Metabolites (GM-29507). Co-investigator with Dr. Peter A. Ward.
   C. Immune Responses to Burns. Co-investigator with Dr. F. Whitehouse.

   PROJECTS UNDER STUDY:
   A. Experimental thermal injury, complement and leukocyte dysfunctions.
   B. Pathomechanism of acute tissue injury following activation of complement and neutrophils in vivo.
   C. Protection from oxygen radical-induced tissue damage.

   ARTICLES SUBMITTED FOR PUBLICATION:

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Associate Director, Immunopathology Laboratory.

MEDICAL SCHOOL/HOSPITAL:

A. Member, External Review and Search Committee, Department of Anatomy.
B. Interviewed candidates for faculty positions.
C. Interviewed candidates for Medical Scientist Training Program.
D. Consultant, clinical research programs.

REGIONAL AND NATIONAL: None.

V. OTHER RELEVANT ACTIVITIES:

A. Member Editorial Advisory Board, Immunobiology.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

JAMES VARANI, PH.D.
ASSOCIATE PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1984 - 30 JUNE 1985

I. CLINICAL ACTIVITIES:
   A. Clinical Virology Laboratory.

II. TEACHING ACTIVITIES:
   A. Two postdoctoral scholars, one graduate student, one visiting scientist and several undergraduate students work in my laboratory.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Endogenous laminin expression and metastasis. CA36132, Principal Investigator, 30% effort, $70,347 current annual direct costs, NIH.
B. Growth and biological properties of fibroblasts and epithelial cells on various substrates. CA36656, Principal Investigator, 30% effort, $75,000 current annual direct costs, NIH.
C. Inhibition of tumor cell chemotactic responses by prostaglandins. BC-512, Principal Investigator, 40% effort, $53,930 current annual direct costs, American Cancer Society.

PROJECTS UNDER STUDY:

A. The involvement of laminin and laminin receptors in mediating tumor cell behavior as it relates to metastatic activity.
B. Regulation of chemotactic responses in tumor cells by prostaglandins produced by the tumor cells and by other cells.
C. The development of substrates for optimum growth of cells in large-scale culture.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Isolation of herpes simplex virus from specimens obtained from MDS Laboratories.

REGIONAL AND NATIONAL:

A. Grant reviewer for the Medical Research Council of Canada.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREEED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

1. These have been limited to occasional involvement in immunopathology specimens.

II. TEACHING ACTIVITIES:

A. Medical students:
   1. Clinical Immunology - Two one hour sessions directed to medical students, house staff, and clinical faculty interested in Clinical Immunology.
   2. ICS 600 - One one hour session to Sophomore Medical Students.
   3. Lecture in the Sophomore Pathology Course.
   4. Lecture annually to medical students at the Medical College of Pennsylvania and Hospital.

B. Graduate students:
   1. Indirect supervision of six postdoctoral students.
   2. Indirect supervision of two Research Scientists.
   3. Lecture to faculty and students at the Hospital of the University of Pennsylvania.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Thermal Injury, Complement, and Leukocyte Dysfunction, NIH GM-28499; $76,188/year ($353,456/five years), Principal Investigator.
B. Lung Immunopathology (Training Grant), NHLBI HL-07517; $211,554/year ($612,684/five years), Principal Investigator.
C. Leukocyte Chemotaxis, NIH HL-28442; $73,773/year ($340,327/five years), Principal Investigator.
D. Pathogenesis of Targeted (Immunologic) Lung Injury, NHLBI HL-26498; $83,055/year ($204,145/three years).
E. Lung Injury Produced by Oxygen Metabolites NIH GM-29507; $107,796/year ($507,078/five years), Principal Investigator.
F. Oxygen-Derived Free Radicals, Immune Complexes and Tissue Injury, Tobacco Research Council Grant #155; $70,000/year ($140,000/two years), Principal Investigator.
G. Inflammatory Cells and Lung Injury (Program Project), NHLBI HL-31963; $385,687/year ($1,730,153/five years), Principal Investigator.

TOTAL DIRECT COSTS
(July 1, 1984 - June 30, 1985) $ 1,233,827.00

TOTAL DIRECT COSTS
(July 1, 1981 - June 30, 1985) $ 4,433,152.00
PROJECTS UNDER STUDY:

ARTICLES SUBMITTED FOR PUBLICATION:


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Chief, Section of General Pathology.
B. MSP Executive Committee.
C. Pathology Associates.

MEDICAL SCHOOL/HOSPITAL:

A. Interim Dean, Medical School, August 1, 1982 to May 31, 1985.
C. Executive Committee on Clinical Affairs, 1981-82.
D. Dean's Advisory Council, 1980-85.
E. Director's Advisory Council, 1980-85.
F. Director, Feasibility Study for Multifloor Medical Research Facility Attached to Medical Science II Committee.
G. Chairman, Medical Sciences Research Building (MSRB) Task Force.
H. Michigan Eye Bank Research Review Committee, 1980--.
I. Michigan Diabetes Research and Training Center Policy Committee, 1981--.
K. Wayne County General Hospital/University of Michigan Liaison Committee, 1982-85.
L. Chairman, Medical School Executive Committee, 1982-85.
M. Chairman, Joint Staff Committee, 1982-85.
N. Dental Research Institute Policy Committee, 1982-85.
O. Chairman, Henry Ford Hospital Liaison Committee, 1982-85.
P. St. Joseph Mercy Hospital Liaison Committee, 1982-85.
Q. Chairman, Inteflex Policy Committee, 1982-85.
R. Chairman, VA/Dean's Committee, 1982-85.
S. Clinical Laboratory Directors, 1982-85
T. Joint Conference Committee, 1982-85.
U. Hospital Executive Board, 1982-85.
V. Financial Development Committee, 1982-85.
W. Academic Affairs Advisory Council, 1982-85.
Y. Medical Service Plan Executive Board, 1982-85.
Z. Chairman, Expanded Medical School Task Force, 1982-85.
AA. Clinical Research Council Policy Committee, 1982-85.
AB. Chairman's Advisory Panel on Ambulance Services, 1982-85.
AC. Vice-Provost Advisory Board, 1984-85.
AD. Main Hospitals Operations Committee, 1985--.
AE. University Hospitals Executive Committee, 1985--.
AF. National Task Force on Organ Transplantation, 1985--.
AG. Professional Fee Policy Committee, 1984--.
AH. Interdepartmental Coordinating Committee, 1984--.
AI. Search Committee for the Chairmanship in Environmental and Industrial Health, April, 1985--.
AJ. Department of Surgery Review and Search Committee, May, 1985--.
AK. Dean's Advisory Council, 1985--.
AL. Dean's Advisory Committee on Clinical Affairs, May, 1985--.
AM. Chairman, Advisory Committee for the Howard Hughes Medical Institute, 1984--.

REGIONAL AND NATIONAL:

A. Member, Universities Associated for Research and Education in Pathology, Inc.
B. Member, Advisory Council, Johns Hopkins Center for Alternatives to Animal Experiments.
C. Immunopathology Test Committee, The American Board of Pathology.
D. Member, American Association of Pathologists.
E. Member, Association of American Physicians.
F. Member, American Society for Clinical Investigation.
G. Member, American Association for Advancement of Science
H. Member, American Association of Immunologists
I. Member, American Pathology Foundation
J. Member, Association of Pathology Chairmen
K. Member, Michigan Society of Pathology
L. Member, International Academy of Pathology
M. Member, Society of Medical Consultants to the Armed Forces
N. Consultant, Upjohn Company.
O. Consultant, Schering Corporation.
P. Consultant, Cytogen Corporation.
V. OTHER RELEVANT ACTIVITIES:

EDITORIAL ACTIVITIES:

A. American Journal of Pathology, Editorial Board, 1975-1980; 1982--.
B. American Review of Respiratory Diseases, Consulting Editor, 1977--.
C. Annals of Internal Medicine, Consulting Editor, 1976-81.
D. Archives of Pathology and Laboratory Medicine, Reviewer, 1973--.
E. Arthritis and Rheumatism, Consulting Editor, 1975--.
F. Clinical Immunology and Immunopathology, Consulting Editor, 1977--.
G. Experimental Cell Research, Consulting Editor, 1980--.
H. Experimental Lung Research, Consulting Editor, 1980--.
I. Human Pathology, Consulting Editor, 1980--.
K. Immunopharmacology, Associate Editor, 1977-82.
L. Infection and Immunity, Editorial Board, 1978--.
M. Journal of Clinical Investigation, 1982--.
N. Journal of Experimental Cell Research, Consulting Editor.
O. Journal of Experimental Lung Research, Consulting Editor.
P. Journal of the Reticuloendothelial Society, Consulting Editor.
Q. Journal of Clinical Investigation, Consulting Editor.
R. Journal of Immunology, Editorial Board, 1975-83.
S. Laboratory Investigation, Editorial Board, 1981--.
U. New England Journal of Medicine, Consulting Editor, 1980--.

INVITED LECTURES/SEMINARS:

1. Participant, Conference, Cell-Cell Interactions in Lung, sponsored by the National Heart, Lung and Blood Institute, National Institutes of Health, in St. Louis, Missouri, June 3-5, 1984.
5. Visiting Professor, Department of Pathology, Medical University of South Carolina School of Medicine, Charleston, South Carolina, August 26-28, 1984.
7. Participant, Tenth International Conference on Sarcoidosis and Other Granulomatous Disorders, sponsored by the Johns Hopkins University, in Baltimore, Maryland, September 17-22, 1984.
10. Participant, the Graduate Hospital Symposium, Mechanisms of Lung Injury, The Graduate Hospital in affiliation with the University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, October 1-2, 1984.


12. James C. Paterson Lecturer, University of Western Ontario, School of Medicine, London, Ontario, Canada, November 19-21, 1984.


18. Participant, Conference on Basic Sciences that Relate to Pulmonary Disorders of Cystic Fibrosis, sponsored by the National Heart, Lung, and Blood Institute, at the Heart House, American College of Cardiology, Bethesda, Maryland, March 6-8, 1985.

19. Participant, Course on "Diagnostic Cellular and Molecular Pathology", Special Course presented at the International Academy of Pathology Meeting, Toronto, Canada, March 15, 1985.

20. Visiting Professor, Cardiovascular Research Institute, University of California, San Francisco, April 1-2, 1985.

21. Lecturer, 1985 Mechanisms of Disease, Department of Veterinary Pathobiology, Ohio State University, April 18, 1985.

22. Lecturer, Santa Barbara Symposium, Reactive Airways Disease and Lung Inflammation - Etiologic, Mechanistic, and Therapeutic Considerations, in Santa Barbara, California, April 21-26, 1985.

23. Lecturer, Ninth Annual Hematopathology Course, American Registry of Pathology, Armed Forces Institute of Pathology, April 29-30, 1985.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS AND MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Chief, Laboratory Service, Ann Arbor Veterans Administration Medical Center and Veterans Administration Outpatient Clinic, Toledo, Ohio.
B. Consultant for referred orthopedic cases at University of Michigan.
C. Primary activities in anatomic pathology - surgical and autopsy.
D. General overview of clinical pathology.

II. TEACHING ACTIVITIES:

A. Two to three days per week read out surgical cases with resident on one to one basis.
B. Review and oversee review of all autopsies with residents.
C. Supervise autopsy conferences with residents.
D. Oversee surgical diagnosis teaching activities by staff and consultant pathologists.
E. Participate in monthly Medicine-Pathology Conference at the Veterans Administration Medical Center.
F. Lecture, Bone and Joint, Second year medical students, five lectures.
G. Seminar, Bone and Joint Pathology, Pathology Residents.
H. Taught Laboratory Section in Pathology, second year medical students.
I. Participate in bi-weekly Oncology Review Board.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None.

PROJECTS UNDER STUDY:

A. Well-differentiated osteosarcoma.

ARTICLES SUBMITTED FOR PUBLICATION:

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Resident Selection Committee.

MEDICAL SCHOOL/VA MEDICAL CENTER:

A. General administrative responsibility for Laboratory service at the Ann Arbor Veterans Administration Medical Center and the Veterans Administration Outpatient Clinic, Toledo, Ohio (FTE 56.025 and 3.0 residents in training).
B. Executive Faculty, The University of Michigan Medical School.
C. Professional Standards Board (VAMC). Major decision-making board advising Chief of Staff.
D. Clinical Executive Board. Review activities consisting of all service chiefs (VAMC).
E. Transfusion Committee. Chair (VAMC).
F. Medical Audit Committee (VAMC).
G. Radiation Safety Committee (VAMC).
H. Pharmacy and Therapeutics Committee (VAMC).
I. Library Committee (VAMC).
J. General responsibility for participation of VA Pathology staff in other medical center committees.
L. Quality Assurance Board, Chair, Veterans Administration Medical Center.
M. Resident Selection Committee.

REGIONAL AND NATIONAL:

A. Red Cross Medical Advisory Board, Southeastern Michigan Region.

V. OTHER RELEVANT ACTIVITIES:

A. Inspector for College of American Pathologists, Inspection and Accreditation Program.
B. Deputy Medical Examiner, Washtenaw County.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Provide monoclonal antibodies to the Flow Cytometry Laboratory and the Immunoperoxidase Laboratory.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Supervised a summer research project for David Huebner (M1 medical student).
B. Assisted in the research projects of two pathology residents, Scott E. Kern and Daniel G. Remick in regards to the production and analysis of monoclonal antibodies.

INVITED LECTURES/SEMINARS:

A. Lecturer, Immunobiology 414, "Immunotherapeutic Approaches to Cancer Diagnosis and Therapy".
B. Lecturer, Flow Cytometry Research Conference, "Monoclonal Antibodies".

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. USPHS - NCI Research Career Development Award, "Monoclonal Antibodies to Melanoma-Associated Antigens", $39,204/year, Principal Investigator.
B. Children's Leukemia Foundation of Michigan, "Studies of a Human B Lymphocyte and B Leukemic Cell Marker (C3d Receptor) Defined by Monoclonal Antibodies", $25,000/year, Principal Investigator.
D. NIH-NIADDKD, Gastrointestinal Hormone Research Core Center Grant, $485,00/year, Co-Investigator.
E. NIH, Monoclonal Antibody Lymphoscintography in Melanoma, $142,000/year, Co-Investigator.

PROJECTS UNDER STUDY:

A. Purification and characterization of the neuroendocrine marker, chromogranin, defined in humans by monoclonal antibodies.
B. Determination and analysis of B cell activation mediated by monoclonal antibodies to the complement fragment receptor C3d.
C. Analysis of HLA-DR antigens in thyroid disease using a monoclonal antibody applicable to immunohistochemical staining of formalin fixed and paraffin embedded tissues.
D. Production of monoclonal antibodies to neuroendocrine peptide hormones and enzymes.
E. Analysis of human endocrine oncogenes by DNA transfection.

ARTICLES SUBMITTED FOR PUBLICATION:

1. Perri, R.T., Wilson, B.S. and Kay, N.E.: Inhibition of B cell growth factor (BCGF) by monoclonal antibodies directed against the C3d receptor (CR2).
3. Lloyd, R.V., Schmidt, K., Coleman, K. and Wilson, B.S.: Hormone synthesis and cell proliferation in dissociated pituitary cells from normal, hyperplastic and neoplastic pituitaries.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL: None.

MEDICAL SCHOOL/HOSPITAL: None.

REGIONAL AND NATIONAL:

A. Member, American Association of Immunologists.
B. Member, American Association of Pathologists.
C. Invited Lecturer, Department of Pathology, University of Washington, Seattle, Washington.
D. Outside reviewer for Laboratory Investigation.

V. OTHER RELEVANT ACTIVITIES:

A. Attended a course on recombinant DNA technology held at the Center for Advanced Training in Cellular and Molecular Biology, Catholic University of America, Bethesda, Maryland.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


-Page 171-


I. CLINICAL ACTIVITIES:

A. Director, General Ophthalmology Service, Kellogg Eye Center, including direct patient care and surgery.
B. Director, Veterans Administration Ophthalmology Service, Veterans Administration Medical Center, Ann Arbor, Michigan.
C. In charge of Eye Pathology Laboratory, Departments of Ophthalmology and Pathology. Number of cases examined in the period of this report, 870 cases.

II. TEACHING ACTIVITIES:

A. Taking part in the general teaching effort for students, residents, and fellows in Ophthalmology and Ophthalmic Surgery of the Department of Ophthalmology. Also in charge of teaching and representing Ophthalmic Pathology to students, residents and staff of this University. Ophthalmic Pathology is one of the basic subspecialties in our field and it is an important part of the written and oral examination of the American Board of Ophthalmology.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. The Ophthalmic Pathology Laboratory has had continuous support from The Research to Prevent Blindness, Inc., New York, New York for more than ten years.
B. Experts of several fields in the Pathology Department, as well as clinicians in the Ophthalmology Department have been of continuous and very valuable help and support of the research effort in this Laboratory.

PROJECTS UNDER STUDY:

A. The Functions of Cells of Macrophage Origin in the Eye.
B. Cytopathology of Intraocular Lens Implantation.
C. The involvement of corneal endothelium and central retina in intraocular lens implantation.
D. Stages in the development of uveal malignant melanomas.
E. Nature and cause of expulsive hemorrhage.
F. The actions of bee venom in the inner eye.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. In charge of organization and daily routine in Ophthalmic Pathology Laboratory as well as for the continuous research and teaching process in Ophthalmic Pathology.

B. Usual administrative function of a professor in the Departments of Ophthalmology and Pathology.

C. Responsible for some administrative aspects of the Ophthalmology Service of the Ann Arbor Veterans Administration Medical Center.

MEDICAL SCHOOL/HOSPITAL:

A. Member, Medical Student Research Committee.

B. Member, Tissue Committee.

C. Member, VA Hospital Surgery Committee.

D. Member, Medical Staff of the University Hospital.

E. Member, Medical Staff, Ann Arbor Veterans Administration Medical Center.

F. Director, General Ophthalmology Clinic.

G. Chief, Ann Arbor Veterans Administration Medical Center Eye Service.

REGIONAL AND NATIONAL:

A. Member, AMA.

B. Member, American Ophthalmological Society.

C. Member, American Academy of Ophthalmology.

D. Member, German Ophthalmological Society.

E. Member, Michigan Ophthalmological Society

F. Member, Association for Research in Ophthalmology.

G. Member, Detroit Ophthalmology Club.

H. Member, University of Michigan Ophthalmology Alumni Association.

I. Member, Contact Lens Association of America.

J. Honorary Member, Association of Pediatric Ophthalmologists.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

Program and Section Reports
EDUCATIONAL ACTIVITIES*

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1984 - 30 JUNE 1985

The educational mission of the Department of Pathology is unique in its breadth, involving not only the Medical School and University Hospitals, but several other schools within the University as well. Formal lecture and laboratory courses offered by the Department are required features of diverse programs within the College of Literature, Science and the Arts, the Dental School, the School of Public Health, and the Rackham School of Graduate Studies. Within the Medical Center context, departmental teaching activities reach not only medical students, but also house officers and staff of many clinical departments in the form of regularly scheduled, formal conferences. Departmental teaching also extends to practitioners in the region and the nation through courses given in the Towsley Center.

During the past year, a major departmental project was the revision of the Sophomore Pathology Course (Path 600). The outlines of this revision were drawn at a departmental teaching retreat in response to changing conditions within the Medical School, affecting students and staff alike. The revised course was predicated on the students' acceptance of a significant responsibility for their own education, under faculty guidance. To this end, students were provided with microscopes, slide sets, and descriptive syllabi for home study. Accordingly, laboratory sessions, previously much more intensive, were shortened and streamlined; while the lecture series, intended to direct and supplement study of the text, was redesigned and expanded. As judged by the results of a formal course evaluation, the revision appears to have been successful and well accepted.

Formal courses given within the Department include:

I. Courses in the "Standard" Medical Curriculum

1. ICS 500:
   a. Introductory Lectures on General Pathology (20 contact hours)
2. ICS 600:
   a. Immunopathology Sequence (12 contact hours).
   b. Clinicopathologic Conferences (10 contact hours).
   c. Selected Topics in Surgical Pathology.
3. NBS 600:
   a. Neuropathology (18 contact hours).
4. Pathology 600:
   a. 75 hours of whole-class lecture, 45 hours of laboratory (in each of five sections) (120 contact hours).
5. Pathology Clerkships:
   a. Elected by 32 students at University Hospitals and four additional students elsewhere.

*House Officer training, postdoctoral research training, and the Medical Technology program are discussed elsewhere.
II. Courses in the Dental Curriculum

1. Pathology 630:
   a. General Pathology lectures (45 contact hours).

2. Pathology 631:
   a. Pathology Laboratory (90 contact hours) each of three sections (assisted by Oral Pathology staff).

III. Courses for Graduate School/Allied Health/School of Public Health/LS&A

1. Pathology 859:
   a. General Pathology for Biological Scientists, lecture (42 contact hours).

2. Pathology 860:
   a. General Pathology Laboratory (28 contact hours).

3. Pathology 858:
   a. Neuropathology (23 contact hours).

IV. Postgraduate Medicine/Continuing Medical Education

1. Clinical Chemistry and Immunology, April 10.

V. Clinical Conferences

The Department of Pathology provides an important educational service to many other clinical departments through regular participation in interdepartmental working/teaching conferences. The Department is involved in many such conferences on a weekly, bi-weekly, and monthly basis. The units served include:

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<th>Internal Medicine</th>
<th>Pediatrics</th>
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<td>- Gastroenterology</td>
<td>- Cardiology</td>
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<td>- Nephrology</td>
<td>- Oncology</td>
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<tr>
<td>- Hematology/Oncology</td>
<td>- Gastroenterology</td>
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<td>- Nuclear Medicine</td>
<td>- General (Death Conference, CPC)</td>
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<td>- Pulmonary Medicine</td>
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<td>- Arthritis</td>
<td><strong>Obstetrics and Gynecology</strong></td>
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<tr>
<td>- Cardiology</td>
<td>- Oncology</td>
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<td>- General (Necropsy Review, CPC)</td>
<td><strong>Oral Surgery</strong></td>
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<td><strong>General Surgery (Breast, GI)</strong></td>
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Gerald D. Abrams, M.D.
Director
Educational Activities
DIVISION OF ANATOMIC PATHOLOGY

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

1 JULY 1984 - 30 JUNE 1985

1984/1985 marks the end of the first five years under the Chairmanship of Dr. Peter A. Ward. During this time, some notable accomplishments have occurred in the Division of Anatomic Pathology, all of which have resulted in impressive expansions of functional and administrative capabilities. These accomplishments include the following:

At the beginning of this period, the Histopathology Laboratory was split into two diverse administrative units with two supervisors, two groups of technical personnel and two sets of performance standards. The first major change was the unification of the laboratory administratively with a single supervisor, Mrs. Frances Pullen, a single budget and a single set of technical requirements and standards. At the same time, the laboratory equipment was upgraded to the level expected for a mid-1980's operation. Thus, there was gradual conversion to new state-of-the-art microtome, an entirely new paraffin embedding system was instituted, the first of two computerized tissue processors was put into operation, and there was remodeling and refurbishing of the old processors and stainers. At the same time, an entirely new, enlarged laboratory dedicated to histochemistry was equipped and made operative and there was constant monitoring and updating of techniques so that this laboratory is now as capable as any comparable laboratory in the country. Furthermore, an entire plastic processing system was put into operation for routine use with bone marrows and bone biopsies so as to avoid the distortion inherent with decalcification procedures. This processing system for routine analysis was one of the first such operations to be established in the country. These technical activities resulted both in better preparations for diagnosis and in considerable streamlining of laboratory functions, so that an increased workload could be handled by the same number of laboratory personnel, culminating in a 30% increase in the case load without any increase in technical support during the past fiscal year.

The accessioning and gross dissection area was remodeled so that there would be much more efficient use of space and a better flow of specimens. This area was also designed to accommodate an accessioning computer terminal which was installed and functioning in January, 1984. The first detailed gross dissection manual for this Department was developed utilizing the expertise of the surgical pathologists in their specific subspecialty areas. This manual is currently being edited and updated.

The entire surgical pathology space was redesigned so as to cluster the diagnostic rooms about the tissue typists and to give the surgical pathologist easy access to the accessioning and dissection areas, the area was designed to accommodate the offices of many of the surgical pathologists so that departmental experts would be readily available for diagnostic consultations. These designs have produced a surgical pathology suite that is one of the most efficiently functioning operations of its kind in the country.
To improve efficiency even more, a computer package became operational in January, 1984. This program was specially designed for surgical pathology and allows for word processing typing into the system, rapid corrections, extremely quick generation of final reports, and almost instantaneous retrieval of previous diagnoses for individual patients and of cases of comparable type based upon the SNOMED pathology coding system.

There are a number of changes involving faculty which also occurred during this five year period. First, there was formal designation of subspecialty areas to individual faculty members, based upon their interest, level of known expertise, and national reputations. Each individual was thus designated as the specific consultant in the specific area, and all consultation cases sent to the Department were distributed according to such subspecialties, to ensure that the most accurate interpretations would be rendered only by the most knowledgeable consultants. Furthermore, this subspecialization was incorporated into a program of diagnostic quality control, in which the subspecialists are now responsible for evaluating pathology report in their area of expertise, ensuring accuracy of diagnosis for in-house cases, detecting errors that may have evolved, and improving the education of colleagues and house officers in general surgical pathology diagnosis. This is a unique system of quality control, but, fortunately, the Pathology Department of The University of Michigan possesses such an outstanding group of surgical pathology subspecialists, that such a program is not only possible but has functioned admirably over the past several years. To continue this program, recruitment of two young surgical pathologists, based upon specific subspecialty needs resulted in even greater departmental capabilities. It is the plan of this Division to continue the pattern of recruitment based upon subspecialization requirements.

A number of financial changes were made. A per-case charge schedule, incorporating the combination of professional, clerical, and technical aspects of each type of case, was instituted for in-house cases. In addition, for the first time, charges were established for consultation services. This was necessary because the Department could not afford to maintain a consultation service unless it became self-supporting, and it has become self-supporting in the past three years.

Finally, a questionnaire regarding frozen section services was sent to almost all academic institutions of comparable size and activities to ours. This has generated unusual interest at the national level by leaders in surgical pathology. Data is still being generated and a summary will be available within the next year. It appears that the frozen section service in this Department is comparable to virtually any other in the country.

All in all, it can be said that Surgical Pathology at The University of Michigan is one of the most effectively functioning and diagnostically sophisticated activities of its kind in the United States and Canada and is ready to continue in this role as it moves into the Replacement Hospital in January, 1986.

Henry D. Appelman, M.D.
Acting Director
Anatomic Pathology
NECROPSY SERVICE

DEPARTMENT OF PATHOLOGY

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During the past year 328 necropsies were performed compared to 326 necropsies during the previous year. Sixty eight (20%) were performed as Medical Examiner cases. This is the same percentage of Medical Examiner cases as last year. Eighteen Departmental staff members served as attending staff for the Necropsy Service during the past year, either as a regular duty assignment and/or an on-call assignment. Following the death of Mr. Jonas Crudup, the senior member of the autopsy technician staff, the service is now staffed by two full-time technicians.

In addition to the above mentioned necropsies performed in our Department, there are a significant number of necropsies performed on Teratology Unit cases and stillborn infants by Dr. Mason Barr of the Department of Pediatrics.

I am particularly pleased to report that during this past year the backlog of incomplete necropsies was eliminated.

Paul W. Gikas, M.D.
Director
Necropsy Service
During the twelve month period of July 1, 1984 - June 30, 1985 a total of 496 specimens were processed by the electron microscopy service. Of this total 273 cases were clinical biopsies with the majority of these being renal biopsies. The remaining clinical specimens were almost entirely tumors.

The remaining 223 specimens processed were for research studies. The nature of the research projects varied widely. Some examples included evaluation of neutrophil function including the degree of phagocytosis of bacteria, the ultrastructural study of endothelial cell injury, repair to the patellar tendon, as well as the ultrastructural characterization of many types of experimentally induced neoplasms. However, most of the research projects have centered on the morphology of experimental lung and renal injury. For many of these projects, besides using traditional transmission electron microscopy, morphometric evaluation was also performed. This is accomplished by the use of two computerized analytical systems. When analysis of experimental granulomas was done, the size (diameter) of the granulomas was assessed by the use of an electronic wand attached to an Omicron Alpha Analyzer. Another type of analysis routinely carried out was that of particle counting as well as measuring the length and area of a particular tissue component in question such as the percentage of damaged endothelial cells in the section. These precise studies use ultrastructural prints quantitatively assessed by the use of a Zeiss Videoplan attached to a computer. By the use of these techniques it has been possible, in a systematic fashion, to assess the exact cell type involved in the injury and the efficiency of various therapeutic interventions in preventing this injury.

The electron microscopy service will continue to work closely with all the investigators to ensure prompt morphologic interpretation of their studies. During the coming year efforts will also be made to apply the techniques of morphometry to the analysis of clinical biopsies, particularly renal biopsies.

Kent J. Johnson, M.D.
Director
Electron Microscopy Service
NEUROPATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY

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The laboratory of Neuropathology continues to have three interrelated functions: Laboratory diagnostic service, teaching, and research in experimental animal work and human disease.

Full time faculty continuing this year were Constance J. D'Amato, B.S., Assistant Professor, and Paul E. McKeever, M.D., Ph.D., Associate Professor. Dr. Samuel P. Hicks was unable to continue his active status due to illness. Dr. Katerina Dorovini-Zis was on the faculty through 1984. Dr. Mila Blaivas will join the Department of Pathology in July, 1985, and spend 40% of her time in Neuropathology teaching and service programs.

I. Clinical Activities:

Clinical services are the examination and diagnosis of disease conditions, and their correlation with the clinical findings, in nervous system tissues, muscle, and other tissues and body components.

1. Over 350 Neurosurgical cases were examined this year from Main, Mott and outside hospitals in consultation. The increase in cases is due in part to new and returning Neurosurgery staff and in part to consultations from clinical colleagues and the Brain Tumor Study Group.

2. Two hundred and sixty-six brains were examined from this Medical Center, and three from other institutions and hospitals.

3. Nerve and muscle pathology service has increased over the year. There were 12 muscle biopsies, ten with histochemistry, one with electron microscopy, two peripheral nerve biopsies and three outside consultations in the last month. This represented more than a two-fold monthly increase over 1984 and will mean over 100 cases per year if the service continues at this level. Nerve teasing and morphometry will be offered.

4. Ultrastructural neuropathology examined, interpreted and reported 53 cases in semi-thin section and electron micrographs of 44 cases.

II. Teaching Activities:

1. Medical students. This year the faculty taught the regular Neuropathology sequence to our medical students (20 hr) in the Neural and Behavioral Sciences 600 curriculum. NBS Neuropathology consists of microscopic sections, handouts, posters, lectures and laboratories for all 215 second year medical students.

2. House officers, graduate students, postgraduate and other students, and faculty. All of the Service Activities are integrated appropriately into teaching. Specific exercises include twice monthly conferences where all biopsies are presented and interpreted; a weekly brain cutting conference; monthly muscle biopsy conference; individual instruction on autopsies and biopsy material; Neuropathology 858, a 16-18 hour laboratory-lecture course; and informal elective periods for
house officers and others. Continuing Medical Education accreditation has been received for the biopsy conference.

3. Strong clinical interest for a combined clinical-pathology brain conference has encouraged a new Brain CPC with Pathology, Neurology, Neuroradiology and Neurosurgery House Officer and Staff participation during the past year.

III. Research Activities:

1. The research of Dr. Hicks and Ms. D'Amato (see their respective personal reports for details) concerns 1.) the study of the basal lamina and the study of oxygen free radicals produced in phagocytes in the rat fetus cephalic neural tube and their relation to malformation and recovery of the fetus in genetic and radiation induced injury. 2.) A collaborative biochemical study of the autopsy brains of patients with Alzheimer's disease and other dementias with Drs. Anne Young and John Penney, in which Dr. Hicks and Ms. D'Amato examine the brains morphologically.

2. Dr. McKeever is interested in determining the extent and cause of differences in antigens in brain tumor tissue versus cells in culture. These differences may result from a separate population of cells within brain tumors or from instability of antigen expression by neoplastic cells.

3. The Brain Tumor Study Group, faculty and staff with clinical research interests in brain tumors, was formed this year through the collaboration of Neurosurgery, Nuclear Medicine, Neuropathology, Neurology and Neuroradiology.

Paul E. McKeever, M.D., Ph.D.
Director
Neuropathology Service
The reports of the Clinical Pathology Laboratories are attached, and reflect continued enhancement of service provision for patients in University Hospitals. Moreover, the exemplary performance of the Laboratories is reflected by the national recognition achieved by members of their medical and technical staffs. Several activities of the Laboratories during the past year warrant emphasis.

The successful consolidation of all of the activities of the Pediatrics departmental laboratories into the Clinical Pathology Laboratories was achieved through outstanding interdepartmental cooperation. This merger of activities will result in maintenance and, in some instances improvement, of patient care, with conservation of personnel, space and equipment. This will result in considerable cost reduction for the institution. The Urine Catecholamine Laboratory of the Department of Surgery also was consolidated into the Chemical Pathology Laboratory.

The Clinical Laboratories were inspected by the College of American Pathologists and received the maximum two-year accreditation. Similarly, the Laboratories were accredited by the Inspection Program of the State of New York.

Testing for anti-HTLV-III was initiated through the Ligand Assay Laboratory. Because of the uniquely sensitive nature of the results of this test, implementation required cooperation between several laboratories of the Department of Pathology and the Infectious Disease Section of the Department of Internal Medicine.

Considerable efforts have been expended to prepare for activation of the RHP. These efforts, naturally, will accelerate during the second half of 1985, culminating in relocation.

Finally, the educational activities of the Laboratories were augmented by the Visiting Professorship of Dr. Diane Arthur, a national leader in cytogenetic diagnosis, from the Department of Pathology of the University of Minnesota. In addition, Clinical Pathology faculty initiated a series of presentations for the M-2 class.

Harold A. Oberman, M.D.
Director
Clinical Pathology Laboratories
PATIENT CARE

The Blood Bank focused its attention on cost containment. It was found that elimination of the pretransfusion Direct Antiglobulin Test could be safely accomplished without compromising patient safety. This study, published during the year, has received nationwide attention and undoubtedly will lead to similar action in other hospital Blood Banks. Similarly, the Blood Bank is evaluating elimination of the antiglobulin phase of the major crossmatch. This would result in cost savings, primarily in terms of reagents. The provision of partial units of blood in syringes for patients in Mott/Holden was expanded after its inception during the previous year. Finally, the popularity of the Out-patient Transfusion Program continued to increase. This provides patients with the opportunity to receive transfusions of blood and components without the need for hospitalization.

A major effort of the Blood Bank staff related to preparation for the liver homotransplantation program. Members of the staff visited the program at the University of Pittsburgh, and protocols were designed for support of the planned program at this Hospital. The staff also actively participated in development of Admission Day Surgery program.

Finally, considerable effort was devoted to planning for the move of the Blood Bank to the RHP. Because of the intimate relationship between provision of blood and components to care of the acutely ill patient, it is likely that the Blood Bank will be one of the last laboratories to move into the RHP, in relation to the move of in-patients and Operating Rooms.

TEACHING ACTIVITIES: (University of Michigan)

A variety of lectures were provided to departments and services in University Hospitals. The annual course for House Officers in Pathology and Hematology/Oncology was provided in July, and the in-house educational program for nurses throughout the Hospitals, consisting of monthly and bi-monthly lectures, was continued. The 12th Annual Postgraduate Course, "Current Topics in Blood Banking", was held on June 5-7, 1985. Approximately 250 medical technologists and physicians throughout the United States attended this program. Suzanne Butch, Chief Technologist of the laboratory, was Program Director, and seven technologists and faculty members of the Department of Pathology participated as course faculty.

PROFESSIONAL ACTIVITIES:

Blood Bank technologists are represented on several University Hospitals committees, as well as on a variety of regional and national organizational committees. These are summarized in the attached Appendix. Four technologists inspected other hospital blood banks for the Inspection and Accreditation Program of the American Association of Blood Banks. Mr. Salisbury, supervisory
technologist, served as Chairman of the Medlab Blood User's group, and Ms. Butch, Chief Technologist, and Mr. Judd, Associate Professor, were widely sought as speakers by blood bank groups across the country.

RESEARCH ACTIVITIES AND PUBLICATIONS:

Members of the faculty and staff presented papers at state, regional and national meetings as indicated in their individual reports and in the attached Appendix. In addition, members of the staff participated in applied research related to computer applications in the Blood Bank, especially involving usefulness of the routine Direct Antiglobulin Test in pretransfusion testing and the usefulness of the antiglobulin phase of the (major) crossmatch.

PUBLICATIONS:

(See individual reports of Barbara A. Barnes, MT(ASCP)SBB, W. John Judd, F.I.M.L.S. MIBiol., Bruce A. Friedman, M.D. and Harold A. Oberman, M.D.)


[Signature]

Harold A. Oberman, M.D.
Director
Blood Bank
APPENDIX

INDIVIDUAL REPORTS

DALLAS FORSHEW, R.N.:

1. Board of Trustees, Society of Hemapheresis Specialists.
2. In-house Educational Programs for the Department of Nursing, including bi-monthly lectures to all newly-hired nurses in University Hospitals, participation in mandatory nursing educational update program and provision of annual lecture to senior nursing students.
3. Other invited lectures:

DEBORAH WILLIAMS:


RON SALISBURY:

2. Liver homotransplantation committee.
3. Invited lectures:

E. ANN STEINER:

1. Inspector for AABB I&A Program.
2. Invited lectures:
JUDY DOUVILLE:

1. Inspector for AABB I&A Program.

LOUANN TRUEAU:

1. Editor, Michigan Association of Blood Banks Newsletter.

SUZANNE BUTCH:

1. University Hospital Committees:
   a. Transfusion committee.
   b. Quality assurance committee.
   c. Disaster committee.
2. American Association of Blood Banks Committees:
   a. Committee on pediatric hemotherapy.
   b. Scientific/technical workshops committee.
   c. Ad hoc committee on teleconferencing.
   d. Inspector for I&A program.
   e. Co-Chairman, chief technologists forum.
3. American Society for Medical Technology:
   a. Trustee, ASMT education and research fund.
   b. Delegate and elections committee member.
4. Michigan society for medical technology:
   a. Annual meeting planning committee.
   b. Newsletter editor.
   c. Regional meeting planning committee.
   d. Student bowl judge.
   e. Handbook chairman.
5. Clinical laboratory educational consortium, board member.
6. Board of directors, Planned Parenthood of Michigan and member, Medical advisory committee.
7. Invited lectures:
A wide variety of research projects are in effect in the Flow Cytometry Laboratory ranging from neuron cell sorting to development of special flow cytometric assays for immune cell function. The experiments are conducted by staff members of the Laboratory in collaboration with faculty, residents, students, and fellows in Pathology, Anatomy and Cell Biology, Dermatology, Human Genetics, Internal Medicine (Divisions of Allergy, Cardiology, Hematology and Oncology, Microbiology and Immunology, Otolaryngology, Surgery, and Pediatrics; the Dental School; the College of Pharmacy; and the Ann Arbor Veterans Administration Medical Center. In addition, the laboratory is pursuing collaborative ventures with several industrial partners including: The Coulter Corporation, General Motors Corporation, the Pfizer Company, the Procter and Gamble Company, and the Warner Lambert/Parke Davis Company.

The staff of the Cell Identification Center is engaged in a series of studies concerning research and development for clinical applications and immunotoxicity assessment using automated cytology (flow cytometry and image analysis) including: Cell surface marker analysis, cytoplasmic immunoglobulin analysis, immune cell function, cell surface receptor analysis, cell cycle analysis, cell membrane electronic potential analysis, neoplastic screening and diagnosis (immune system, breast, cervical, bladder, neural, colon, and head and neck tissues), calibration aids and flow cytometric standards, prototype instrumentation development, instrumentation computer networking, and software development for cytometry data analysis and cytometry database systems.

Several improvements in the physical capacity of the Flow Cytometry Laboratory were instituted during the past year, these include: An EPICS 541 multiparameter cell sorter/flow cytometer; a Coulter E.A.S.Y 88 data analysis system; new operating systems and data analysis software revisions; and an EPINET/ETHERNET communications system linking the flow cytometers and the E.A.S.Y computer system. We will shortly receive a new EPICS 753 dye laser cell sorter/flow cytometer system (which will allow three color multiparameter cytometric studies) and another E.A.S.Y computer. Eventually, all flow cytometers and analytic microcomputers will be linked to a VAX minicomputer (via ETHERNET). This will enable the development of new analysis and database software.

The cell Identification Center has hosted and provided consultation services to a number of medical centers either operating or attempting to establish flow cytometry laboratories. These include:

1. Barnes Hospital, St. Louis, Missouri.
2. University of Arkansas for Medical Sciences, Little Rock, Arkansas.
3. Brooks Army Hospital, San Antonio, Texas.
4. University of South Carolina, Charleston, S. Carolina
5. West Virginia University, Morgantown, West Virginia.
6. St. Jude's Hospital, Memphis, Tennessee.
7. Baylor University, Houston, Texas.
8. Tulane University, New Orleans, Louisiana.
9. Medical College of Georgia, Augusta, Georgia.
10. Dana Farber Cancer Center, Boston, Massachusetts.
14. University of California at San Francisco, California.
15. Toronto Hospital, Toronto, Ontario.
17. Northwestern University, Chicago, Illinois.
18. University of Indiana Medical School, Indianapolis, Indiana.
19. St. Vincent's Hospital, Sydney, Australia.
20. Creighton University/St. Joseph's Hospital, Omaha, Nebraska.

SPONSORED SUPPORT:

1. Cytometry Research and Development Project, EPICS Division, Coulter Corporation and Department of Pathology, University of Michigan, (J.L. Hudson, Ph.D., Principal Investigator, P.A. Ward, M.D. Co-Investigator), 1 July 1984 - Present.
2. Immune Responses in Head and Neck Cancer Patients, Veterans Administration Hospital, Ann Arbor, Michigan, (G.T. Wolf, M.D. Principal Investigator, J.L. Hudson, Ph.D., Consultant), 1 July 1984 - Present.
5. Flow Cytometric Immunotoxicology Profile Development in Rodents, Research Gift Grant, Biomedical Science Division, G.M. Research Laboratories, General Motors Corporation, J.L. Hudson, Ph.D. and P.A. Ward, Co-Investigators).
6. Lymphocyte Migration and the Metastatic Process, American Cancer Society and the National Cancer Institute, (L.M. Stoolman, M.D., Principal Investigator), 1 July 1984 - Present.
7. Cellular Effects of Tricyclic Nucleosides, National Cancer Institute and the American Cancer Society, (L.L. Wotring, Ph.D., Principal Investigator, J.L. Hudson, Ph.D., Consultant), 1 July 1984 - Present.
8. Automated Image Analysis Development Project, Coulter Corporation and the Department of Pathology, University of Michigan, (J.L. Hudson, Ph.D. Principal Investigator), 1 July 1984 - Present.
9. Clinical Studies on Anti-T12 Therapy in Renal Transplant Patients, Immunology Division, Coulter Corporation, (L. Rochet, M.D., Principal Investigator; L.M. Stoolman, M.D., R.E. Duque, M.D., J.P. McCoy, Ph.D., and J.L. Hudson, Ph.D., Consultants), 1 July 1984 - Present.

11. Flow Cytometric Analysis in Cancer Cell Detection, Biomedical Research Support Grant, University of Michigan Medical School, (A. Flint, M.D., Principal Investigator; J.L. Hudson, Ph.D., Consultant), 1 July 1984 - Present.

12. DNA Ploidy in Basal Cell Carcinoma, University of Michigan Cancer Research Institute, (J.P. McCoy, Ph.D., Principal Investigator; N.A. Swanson, M.D., A. Flint, M.D., R. Grekin, M.D., and J.T. Headington, M.D., Co-Investigators), 1 May 1985 - Present.


14. Functional Kinetics of Circulating Neutrophils from Arterial Coronary Sinus Blood in Myocardial Ischemia, University of Michigan Medical School, Departments of Internal Medicine (Division of Cardiology) and Pathology, (Investigators: Michael Shea, M.D. and Ricardo E. Duque, M.D.).

ARTICLES SUBMITTED FOR PUBLICATION:


8. Greenwood, J.H. and Schultz, J.S.: Genetic Control of Differential Effects of Nitrous Oxide on Lectin Stimulated Lymphocyte Proliferative Responses in InBred Rat Strains. (Submitted to Cellular Immunology).

J.L. Hudson, Ph.D.
R.E. Duque, M.D.
J.P. McCoy, Ph.D.
L.M. Stoolman, Ph.D.
Directors
Cell Identification Center
CLINICAL BIOCHEMISTRY SECTION
DEPARTMENT OF PATHOLOGY
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General Chemistry Laboratory--Donald Giacherio, Ph.D., Laboratory Director.

During the past year, there has been a considerable savings of commodities (over $100,000), and a personnel reduction of 1.5 FTE plus 40 hours/week of temporary personnel. These were achieved largely by closing the redundant STAT laboratory and incorporating all functions into the main General Chemistry laboratory. These changes were implemented with no increase of turn-around time for specimens and in cooperation with the clinical staff.

New equipment was acquired during the past year with the goal of achieving more efficient laboratory operation and providing for a further reduction in the commodities budget for the upcoming year. Two RA 1000's were purchased to upgrade the SMACs to an SRA 2000 configuration. This provides for faster, more economical processing of repeats on the SMAC and reduces the down time for problems with a single channel. Further, the nephelometric capabilities of this instrument will allow it to entirely replace the Beckman Nephelometer used in the Clinical Immunology laboratory (see below). Two Beckman Astra IDEAL systems were purchased to allow us to perform assays on small sample volumes (such as those received from Pediatrics) and to decrease by as much as five-fold reagent costs from those formerly used on the DuPont ACA.

The General Chemistry laboratory has also implemented off-hour STAT coverage for Theophylline, dilantin, and digoxin which will reduce both the turn-around time and helps to eliminate wasteful on-call time by both the Ligand Assay laboratory and the Special Chemistry/Toxicology laboratories (see below).

While significantly decreasing our costs, the efficiencies built into the laboratory allowed us to expand our workload from outside sources and we became a reference laboratory for the College of American Pathologists Clinical Chemistry Standards program. This makes us one of only four such reference laboratories in the country.

Special Chemistry/Toxicology Laboratory--Thomas Annesley, Ph.D., Laboratory Director.

In October, 1984, the services of the Drug Analysis and Toxicology Laboratory were transferred from the Pharmacy Department to the Department of Pathology. Since that time, several significant changes have occurred.

Following the acquisition of an IBM computer, all laboratory procedures have been rewritten, reformatted, and stored on computer disks. Software programs have been written that are being used to record workload and specimen volumes. Quality control has been modified to a graphing format that allows for rapid inspection and troubleshooting when necessary.
Following these changes, this laboratory has passed three major inspections: Internal University of Michigan Medical Center inspection, College of American Pathologists, and the New York State Laboratory inspections.

The workload of this laboratory is increasing at the fastest rate for any clinical laboratory. Compared to the previous year, the test volume has increased over 50%. The labor-intensive Cyclosporine assay alone has increased from the 115/month (when initiated) to over 330/month currently. To handle this volume, with needs for new assay development, this laboratory is cooperating with the Ligand Assay Laboratory in the development of an RIA for Cyclosporine (see below).

Lastly, the laboratory has had a significant increment in the reference work performed. During the past year, approximately 2400 tests have been performed on a reference bases. This number will likely double in the coming year.

**Ligand Assay Laboratory**—Barry England, Ph.D., Laboratory Director.

Cost savings have been achieved in this laboratory largely through continued efficient use of reagents and by eliminating the on-call personnel expenses (see above).

A number of new assays have been instituted during the past year including: Parathormone, N-terminal, Parathormone, mid-molecule, and HTLV-III. Further, there has been a significant increase in the volume of assays for: Thyroid stimulating hormone, amikacin, cortisol, folic acid, and vitamin B12. In addition, as with other laboratories, the Ligand Assay Laboratory has functioned as a major resource for the Ann Arbor Veterans Administration Hospital and for MDS clinical laboratories.

Plans for the coming year include the evaluation of a semiautomated RIA instrument which will increase the availability of ligand assay procedures while decreasing the technical skill required for their performance and developing a RIA for cyclosporine to increase the efficiency by which this test is performed and to increase its availability for our transplant patients.

**Clinical Immunology Laboratory**—David F. Keren, M.D., Laboratory Director.

By changing from a cellulose acetate electrophoresis method to high resolution agarose, this laboratory has increased its diagnostic capabilities while decreasing its overall operating costs. The greater information available from the high resolution electrophoresis techniques allows us to cancel unnecessary immunofixation analysis.

In addition, the laboratory has developed the ability to assay for Kappa and Lambda chains in the serum which will allow us to diagnose monoclonal gammopathies in most patients within one day rather that the 2-3 days previously needed. This will help to decrease hospital stay and has been accomplished while we have decreased the cost of performing this assay (compared to the previous immunoelectrophoresis).
Further efficiency has been achieved by using commercial sources for the substrates for our autoantibody testing. New commercial sources provide excellent reagents which save both technologist time and animal expense.

Lastly, we are in the process of developing all our nephelometric assays for the RA-1000. This will allow us to eliminate our Beckman Nephelometer contract while incurring no additional instrument cost (the RA-1000 is available in our General Chemistry Laboratory). Due to its convenient location in the replacement hospital, we will be able to use it for these assays.

**Overall Summary:**

The incorporation of the General Chemistry, Special Chemistry/Toxicology, Ligand Assay and Clinical Immunology Laboratories into a common Section of Biochemistry has resulted in a productive interaction between these laboratories. They have complementary techniques and by reviewing common interests and projects on a weekly basis, we have been able to improve efficiencies in all laboratories while enhancing our developmental programs to meet the expanding diagnostic needs of the institution.

David F. Keren, M.D.
Director
Clinical Biochemistry Section
CLINICAL HEMATOLOGY LABORATORY

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LABORATORY ACTIVITIES:

1. For the 10 month period ending 30 March 1985, the Laboratory handled a total of 278,338 specimens (a 6.9% increase over the previous year) without incrementing either the number of employees or commodity expenditures. As a result, productivity for the period increased approximately 16% relative to FY 84/85.

2. The most spectacular accomplishment of the Laboratory is its consolidation with the Pediatric Hematology Laboratory under the management of the Department of Pathology. The Pediatric Laboratory analyzed 32,301 specimens in FY 83/84, operated a STAT outpatient laboratory 5 days per week, procured all hematology specimens for both Inpatient and Outpatient Pediatric Services and performed a variety of specialized hematology procedures, including bone marrow examinations, cytochemical staining procedures, bleeding times and osmotic fragilities. Thus, consolidation of hematology services involved both absorbing an increased load of familiar procedures and the implementation of new methodologies. Furthermore, neither turn-around time nor the spectrum of tests offered would be allowed to deteriorate. Through the joint efforts of Main Hematology, the Phlebotomy Service and the Laboratory Data Center, this goal has been realized. We project a net reduction of approximately 13% ($170,000/year) over the combined expenses of the Main and Pediatric laboratories if operated independently.

3. The second major organizational effort has been the final stages of planning for the move to the replacement hospital. The assimilation of pediatric hematology services involved increases in both personnel and equipment which needed to be factored in to the plans. Finally, sign-out and teaching facilities have been added to the Laboratory as part of a plan to create a section of Hematopathology within the Pathology Department.

4. Additional tests and technical changes made in the Laboratory include:
   a. Cytochemistry. Leukocyte alkaline phosphatase stain was implemented for MDS peripheral blood smears along with Sudan black B, chloroacetate esterase, nonspecific esterase and acid phosphatase.
   b. Urinalysis. The routine use of Chemstrip 9 has been instituted, resulting in a decrease in microscopic examination of urine sediment by 35 per cent.

TEACHING ACTIVITIES:

1. Pathology House Officers participated in the following activities:
   a. Daily review of abnormal blood smears, body fluids, bone marrow aspirates, bone marrow biopsies, and lymph node biopsies.
   b. Review of consultation cases in hematopathology (lymph node biopsies, bone marrow biopsies, fine-needle-aspirates and splenectomy specimens).
c. Correlation of morphology with special studies (cytochemistry, flow cytometry, immunoperoxidase and electron microscopy).
d. Daily review of cases submitted to the Flow Cytometry Laboratory (hematopathology, transplant immunology, and the evaluation of primary and secondary immune deficiencies).

2. Medical technology students participated in all laboratory activities during 6-week rotations in their internship year.

RESEARCH:

1. Ongoing studies examining the diagnostic utility of flow cytometry in the evaluation of suspected leukemias and lymphomas.
2. Evaluation of the automated, 3-part differential as a substitute for manual differentials in a tertiary-care hospital.

FY 85/86 GOALS:

1. Creation of a Hematopathology Section within the Department of Pathology in an effort to improve the teaching experience for house-staff and to improve the coordination of diagnostic activities between Pathology and the Clinical Hematology/Oncology Services.
2. Accomplish the move to the Replacement Hospital.
3. Enhance services provided to the Ambulatory Care Facility in an effort to minimize delays due to specimen handling, turn-around time in the laboratory and the delivery of results to the clinics.

Bertram Schnitzer, M.D.

Lloyd M. Stoolman, M.D.
Directors
Clinical Hematology Laboratory
LABORATORY ACTIVITIES:

Work volume continued to increase over the previous year (approximately 4.0%) to a total volume of approximately 92,897 tests. Marked volume increases were noted for anaerobes, chlamydia, routine "pyogen" cultures, mycoplasma respiratory cultures and urine cultures. Also noted were decreased specimens for cryptococcal screening, rubella screening and fungal immunodiffusion.

The laboratory also instituted the MDS reference laboratory program with a panel of 26 tests offered. In concert with the MDS reference laboratory program the laboratory successfully completed the College of American Pathologists and New York State inspections.

After two months of effort involving the entire laboratory staff the pediatric laboratory consolidation was completed having solved the following problems: new test acquisition, work flow, computer modifications, new positions, media inventory merger, outpatient report, billing, and requisition merger as well as sensitivity testing merger. During all of the aforementioned endeavors the laboratory procedure manuals were upgraded to a new computerized system.

Other computer activities and accomplishments in the laboratory included: 1) computerized billing; 2) blood culture data management interfaced with the Medlab system. (Statistics from the interface were used to eliminate the anaerobe "resin bottle" thus saving the hospital budget $54,000/yr); 3) statistics program developed on DEC equipment for CAP workload recording; 4) pathology laboratory inventory program developed; 5) chief technologist chaired Medlab Users Microbiology Committee.

REPLACEMENT HOSPITAL ACTIVITIES:

Involved were: 1) capital equipment bid pack specifications established and ultimately reviewed; 2) computer requirements established; 3) telephone proposal established; 4) casework and office furniture requirements established.

RESEARCH AND DEVELOPMENTAL ACTIVITIES:

Numerous new test kits and methodologies including rapid urine screening, organism identification and direct detection of microbial antigens have been evaluated by comparative trials resulting in the implementation of several new procedures in the clinical laboratory. Many of these new methods are rapid (same day) tests resulting in decreased specimen turn-around time and cost. Rapid methodologies established included:
1) Chlamydia FA - 2 hours vs. 48 hours for positives
2) "Rapid E." - 5 hours vs. 24 hours for enteric G-Rods
3) Urine Screen - 30 min. vs. 24 hours for negatives
4) Beta Strep Ag - 1 hour vs. 24 hours for strep screens
5) "Rubascan" Screen - 15 min. vs. 2 hours for rubella screen
6) "AnaIdent" - 4 hours vs. 48 hours for some anaerobic bacteria

Basic and applied research activities involving the participation of investigators from several medical services and institutions continue to have their focus in clinical microbiology. The efficacy of new antimicrobics, development of flap models, and the application of flow cytometry can be cited as examples. These investigations have resulted in the publication of six journal articles and four abstracts during the fiscal year. The investigative focus for the coming year will be on the development and testing of non-culture or limited culture methods to rapidly detect the presence and quantity of pathogenic microorganisms directly from patient specimens using latex agglutination, gas-liquid chromatography, ELISA and DNA probes.

CONTINUING MEDICAL EDUCATION:

MEETINGS AND WORKSHOPS ATTENDED:

1. Advances in Anaerobe Lab workshop - J. Polomski, July, 1984
5. Clinical Lab Managers Association, September, 1984

WORKSHOPS PRESENTED:

LOCAL AND NATIONAL:


PRESENTATIONS:


Kenneth D. McClatchey, M.D., D.D.S.
Director
Clinical Microbiology Laboratory
FLOW CYTOMETRY FACILITY
CLINICAL SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1984 - 30 JUNE 1985

The Diagnostic Service of the Clinical Flow Cytometry Laboratory consults and provides diagnostic services in the areas of hematology, organ-transplant immunology, the evaluation of immunologic deficiency and autoimmune disease. In an effort to assure the most effective application of this new technology, the medical staff supervise the selection and interpretation of all procedures. After correlation with pertinent clinical, laboratory and morphologic data, a formal report, containing specific measurements, interpretation and diagnosis, is prepared. Over the past year, the Medical Attendings on this service were Dr. Ricardo Duque (9 months) and Dr. Lloyd Stoolman (3 months). Assisting in this operation were Drs. J. Carey, A. Flint, and B. Schnitzer.

June 30, 1985 marked the end of the first full year that the Clinical Flow Cytometry Laboratory has operated as a hospital-based facility. This year has been a period of growth and change for the Laboratory. Several key personnel turnovers occurred, with Dr. Philip McCoy becoming laboratory director in October, 1984 and Mr. Jay Greenwood becoming laboratory supervisor in May, 1985. Both personnel transitions were accomplished in a smooth and orderly fashion, without loss of productivity or turnaround time.

Key to the successful first year was the ability of the laboratory to pass accreditation inspections by both the CAP and the New York State Health Department. In doing so, significant strides were made in quality assurance programs and continuing education records.

A potentially disastrous water leak totally destroyed one of the three flow cytometers. Clinical service, however, was not significantly affected and the damaged cytometer was replaced in relatively short order.

The number of clinical specimens increased significantly in the past year. The clinical load rose from 689 specimens for the year ending June 30, 1984 to 988 specimens for the year ending June 30, 1985, an increase of 43%. Of the 988 clinical specimens, 467 were transplant-related specimens, 401 were hematology specimens, and 120 were immunodeficiency or immune status specimens. Fee-for-service research, conducted by the staff of the flow cytometry laboratory, showed a similar increase, with the number of samples run increasing from 1096 in 1983-84 to 1497 in 1984-85; an increase of 36%.

In addition to the personal research of the faculty associated with the flow cytometry laboratory, flow cytometry lab staff were involved in numerous research projects designed to improve existing assays or to develop new assays for the clinical service. Dr. Ricardo Duque was instrumental in developing cytometer-based assays for antineutrophil antibodies and neutrophil function. Additionally, sufficient work has been done to now offer simultaneous two-color analyses for certain clinical applications, and a method for concomitantly measuring DNA and cell surface markers is being explored. Furthermore, a major clinical research project examining the effects of a monoclonal antibody in ameliorating

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kidney transplant rejection is being conducted in conjunction with faculty members from Internal Medicine.

Finally, for the benefit of both faculty and staff, a series of noon seminars concerning various aspects of flow cytometry have been initiated and will continue throughout the academic year.

In summary, this past year has shown continued growth and development of the Flow Cytometry Laboratory. Clinical services and fee-for-service research demonstrated strong increases and allowed a balanced revenue flow. Continued growth is anticipated, particularly in the area of grant-sponsored research by Departmental Faculty.

Lloyd M. Stoolman, M.D.

J. Philip McCoy, Jr., Ph.D.
Directors,
Flow Cytometry Laboratory - Clinical Service
LABORATORY DATA CENTER

DEPARTMENT OF PATHOLOGY
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1 JULY 1984 - 30 JUNE 1985

During the past year, the staff of Pathology Data Systems has participated in the following projects:

A. Installation of "remote send" software and hardware for transmitting laboratory results generated within the Department to the Ann Arbor VAMC and to the MDS central laboratory.

B. Planning for the installation of a broadband cable and Local Area Network (LAN) in the RHP/ACF; this LAN will facilitate the move of the clinical laboratories to the new facility and also allow communication between clinicians and the laboratory database after the move.

C. Planning for the move of Medlab hardware and software to the RHP without major disruptions of data processing services to the clinical laboratories.

D. Planning and implementation of the separation of Central Distribution from LDC and its consolidation with Phlebotomy Services.

E. Incorporation of the Virology Laboratory and the MHRI Laboratory into the computerized laboratory information system.

F. Planning for the consolidation of the Pediatric Hematology, Microbiology, and Neurology clinical laboratories with the Central Laboratories including the enhancement of results reporting to remote pediatric stations.

G. Integration of the DEC and Medlab systems under the aegis of Pathology Data Systems with initial cross-training of computer operators.

H. Initiation of a detailed review of the quality and utility of all hardcopy reports generated by the Medlab system with frequent feedback to the various Chief Technologists about how to refine the Patient Cumulative Report.

I. Refinement of the system for assigning priority ratings to new applications and hardware requests submitted to Pathology Data Systems.

J. Initiation of a monthly PDS Forum consisting of personnel from the various clinical laboratories in which matters of common interest are discussed.

K. Planning and hosting the third annual symposium on clinical laboratory computers at the Towsley Center.

L. Initiation of a Microcomputer Steering Committee for the Department of Pathology to oversee all microcomputer applications for the Department.

M. Installation of the Plato-Pathlab system on the second level of the Main Hospital in LDC to allow clinicians to obtain plots of laboratory data across time. Adjacent to this terminal is a standard Medlab terminal so that physicians can also have access to the entire laboratory database in tabular form.

N. Planning for a hardware upgrade of the Medlab system with the installation of Powerpacks on Maize and Blue which will increase the efficiency of the CPU's by approximately 20% and also for an upgrade of the DEC system to a VAX785 which will allow PDS personnel to bring up the entire laboratory database on the DEC system.
O. Generation of a billing tape for the DEC system in order to implement MDS billing.

P. Implementation of workload recording for Clinical Microbiology.

Q. Design and implementation of PC terminal emulation software which will allow the use of microcomputers as Medlab workstations.

Bruce A. Friedman, M.D.
Director
Laboratory Data Center
Activities of the Phlebotomy Service for the academic year July 1984 - June 1985 consisted primarily of adding to the range of service offered to UMH inpatients and outpatients without any incremental personnel. Listed below is a list of new services offered during the year:

1. Added service for all pediatric patients ages 0-5 years except Hematology-Oncology patients in the Test Panel Blood Drawing Clinic; added service for newly admitted 6th level Mott Sports Medicine patients on Sunday afternoon (August 1984).
2. Added service for 4th level Women's Hospital adult patients for morning sweeps on weekends (October 1984).
3. Added service for all patients on the 4th and 5th levels of CPH on Tuesday and Thursday morning sweeps (February 1985).

Bruce A. Friedman, M.D.
Director
Phlebotomy Service
ADMINISTRATIVE/FINANCIAL AFFAIRS SECTION

DEPARTMENT OF PATHOLOGY
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1 JULY 1984 - 30 JUNE 1985

The Administrative and Financial Affairs Section, which is under the auspices of the Office of the Chairman and his designee, includes four subsections which are organized as follows:

A. Administrative Support Center:
   1. Thomas D. Morrow
   2. Anita Liberman-Lampear
   3. Laura Blythe
   4. Nancy Coray
B. Grants and Contract Administration Office:
   1. Maria Ceo
C. Medical Service Plan, Billing Office and Fiscal Affairs:
   1. Douglas M. Kennedy
   2. Douglas Harris
D. Surgical Pathology, Clerical Support Staff:
   1. Edith M. Gilchrist-Brayton
   2. June Possley

MAJOR ACCOMPLISHMENTS

A. Implemented the Hospital/Pathology MSP agreement which required major administrative effort due to complex funding arrangements - September, 1984.
B. Provided assistance in the consolidation of several SLFL:
   1. Toxicology Laboratories, Department of Pharmacy, October, 1984;
   2. Pediatric Laboratory, Department of Pediatrics June, 1985;
   3. Urinary Catecholamine Laboratory, Department of Surgery, June, 1985.
C. Managed and coordinated the completion of the remodeling and renovation projects (Phase I) in the Pathology Building to accommodate the ever-growing Immunopathology Research Program. Laboratory space on the 3rd level (M-3240) and 4th level (M-4235 and M-4237) were completed. Completion of the A. James French Conference Room (M4242) occurred in September, 1984, with dedication ceremonies held in October, 1984.
D. Completed an agreement with MDS Laboratories, Inc. (Michigan) to provide them with service in the areas of Surgical Pathology, esoteric Clinical Pathology and physician/pathologist professional services - September, 1984. Gross revenue amounted to approximately $300,000 in FY 1985.
E. Completed an analysis to accommodate a budget/expense reduction program in the Pathology Laboratories amounting to $500,000 annually - March, 1985.
F. Developed the MLABS logo for the purpose of marketing our laboratory services to non-University of Michigan patients - March, 1985.
G. Developed a system using the IBM, PC and software provided by the LS&A School titled "SponRES" to monitor grant and contract expenditures - January, 1985. Coupled with this, we began to use the computerized ordering system offered by University Stores.

H. Coordinated the submission of 51 grant and contract applications to 12 different funding agencies.


J. Completed a major revision of all Laboratory Requisitions used in our Medical Center. The Unified Requisition System, initiated in July, 1983, was completed in November, 1984 and supplemented our efforts in automated billing which was completed in February, 1984.

K. AGH/RHP
   1. Construction: Space for the Laboratory is near completion with a target move date of December, 1985.
   2. Activation: Administrative staff have developed, with the assistance of the faculty and laboratory staff, a comprehensive plan to ensure a smooth transition from the "old" Hospital to the "new" Hospital.
   3. Capital Equipment: all medical equipment has been ordered, non-medical equipment specifications are being developed.

L. Consolidated and unified the billing services of all Anatomic Pathology physician charges including consultation and other non-patient activities using the Medical School's IDS system - August, 1984.

M. Developed, through a major commitment of effort, the operational policies and procedures of the MSP Billing Office to maximize 3rd party and patient payments for all Anatomic Pathology services. This major effort increased cash collections by approximately 40% over targeted budget for fiscal year 1985.

N. Reorganized the Surgical Transcription Unit with reassignment of two clerical staff positions, and eliminating another position to meet the cost reduction program. This was accomplished due to the implementation of an automated Surgical Pathology reporting system (computer-generated) - January, 1985.

O. Continued to consolidate valuable medical files and records (autopsy protocols, CG, CH, CI, CJ years) and the numeric diagnostic card file for the fiscal years 1983-1984 (CI and CJ) through the use of microfilm - April/May, 1985.

**SUMMARY OF FINANCIAL DATA**

A. Medical Service Plan

<table>
<thead>
<tr>
<th>Description</th>
<th>Fiscal Year 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Number of Accounts</td>
<td>5,576</td>
</tr>
<tr>
<td>Total Number of Charges</td>
<td>36,488</td>
</tr>
</tbody>
</table>

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Gross Billings $2,691,183
Net Collections $1,302,827

B. Grants and Contracts

48 Active research, grant, contract and gift accounts

Direct Cost Expenditures $1,658,362
Indirect Cost Expenditures $665,135
TOTAL $2,323,497

C. Pathology Laboratories

Number of Fee Code Procedures 2,118,001
Number of Laboratory Test Results (Estimated) 6,482,353
Gross Revenue $36,280,075
Direct Expenses $17,601,443

Details regarding the financial data are available in the Office of the Chairman.

Eugene J. Napolitan
Departmental Administrator

1 Includes company (non-patient) accounts
RESIDENCY TRAINING PROGRAM

THE DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
30 JUNE 1984 - 1 JULY 1985

The Residency Training Program, in the last year, recruited three excellent candidates. One resident was from the "match program"; one from an internal medicine training program; and one from a surgery training program. The total complement of residents stands at thirteen.

New teaching objectives added to the program include core lectures in anatomic and clinical pathology for junior residents as well as a revised schedule of grand round topics in anatomic and clinical pathology.

Further, the Department is instituting, in the coming year, fifth year programs in cytology, surgical pathology, immunology, hematology/immunology/flow cytometry, dermatology, and blood banking. Such programs will be established as fellowships for those individuals who have already satisfied the American Board of Pathology's fifth year requirement.

Kenneth D. McClatchey, M.D., D.D.S.
Director
Residency Training Program
MEDICAL TECHNOLOGY PROGRAM

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1984 - 30 JUNE 1985

In April the Board of Regents voted to discontinue the program effective with the Class of 1987, primarily because of budgetary constraints. Vice-President Frye, the Executive Officers, and the Regents attested to the high quality of the program, its staff, and students but reiterated that cost constraints at both the Hospital and the University prevent continued financial support of the program.

Of major concern in the next two years is the possible loss of instructors and/or director leaving for other positions. The department and program need to develop a specific plan to ensure continued educational excellence for the last two classes.

A class of seventeen, most of whom completed the program on June 28, plans to take the national certification exam in August. Two students will complete their last clinical rotation in October and take the certification exam in February. All students are aware of the numerous forces operating on the health care system and the impact of those forces on the laboratory job market.

The Class of 1984 scored well above the national mean on the Board of Registry examination last August, with all students passing and seven students scoring more than one SD above the national mean. All students in this class successfully found jobs and are working in many different geographical locations, in addition to University Hospital.

The Class of 1986 has thirteen students just beginning their clinical education. Because this group will be in clinical rotations at the time of the move to the new hospital, the program deliberately chose not to recruit a larger class.

The class roster for the last class of 1986-87 has not been finalized, but will probably have 14-15 students. Although program applications for this class increased significantly, a review of applicants' winter term grades led to rejection of some students by the Medical Technology Admissions Committee. A few students with borderline GPA's will be reviewed again for possible admission after fall term grades are received.

No further curriculum or schedule changes are planned for the program during its last two years. Program graduates are expected to continue to be highly competitive in the laboratory job market, but are also being encouraged to consider furthering their education in the many areas for which a Medical Technology degree provides a solid base.

Sandra C. Gluck

Sandra C. Gluck, M.S., MT(ASCP)CLS
Director
Medical Technology Program
INTRODUCTION:

The VA Medical Center has a strong and close relationship with the University of Michigan Medical Center. Pathology Residents rotate through the VA in surgical and autopsy pathology.

ANATOMIC PATHOLOGY:

A. Surgical Pathology: 4,069 cases have been completed and nearly all were processed by a resident closely supervised by a staff pathologist. The teaching activities are close and intense. The resident performs the frozen sections supervised by the staff pathologist.

B. Autopsies: 102 autopsies were done. A rate of approximately 45% has been maintained. The autopsies are generally done by a resident with staff supervision and review at a conference of all staff and assigned residents the following work day.

C. Cytology: 2,902 cases have been reported. Since most of these are sputums, urines and body fluids the positive rate is high and correlation with surgical pathology is clear. Fine needle aspiration is used with increasing frequency. All of these activities are available for resident teaching on an ad hoc basis.

D. Electron Microscopy: Dr. Beals directs this section and makes an effort to discuss with the residents the use of electron microscopy in the every day practice of surgical and autopsy pathology. Both transmission and scanning microscopes are used and there is a high degree of correlation with other modalities including cytology.

CLINICAL PATHOLOGY:

Dr. Hyder directs clinical pathology and is very active in teaching as residents express interest. He specializes in hematopathology and reads out bone marrows with the hematology-oncology fellows as well as pathology residents.

TEACHING:

Each staff member participates in teaching residents and medical students as needed. During the past year Dr. Hyder gave a number of lectures on coagulation, Dr. Beals gave bi-weekly conferences at U of M on clinical electron microscopy and Dr. Weatherbee taught a second year medical student pathology laboratory. Two conferences were given by Dr. Weatherbee and Dr. Beals on gross identification of disease by the use of kodachromes. Dr. Burkholder participated in the sophomore laboratory.
RESEARCH:

Dr. Beals and Dr. Hyder are involved in sponsored research as noted on their individual activity reports and all staff members have participated with other investigators in a number of studies. Dr. Beals has been appointed to the VAMC Research Committee.

SUMMARY:

The close ties with the University of Michigan are considered to be of considerable value to the practice of high quality medicine at VAMC. Every attempt is made to assure that there are mutual benefits in all the areas discussed above. Our goal is to continually improve and strengthen the professional interchange that has been so well-grounded over the years.

Lee Weatherbee, M.D.
Chief, Laboratory Service
Ann Arbor VA Medical Center