# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>I. LIST OF FACULTY</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. NEWLY APPOINTED FACULTY AND PROMOTIONS</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photograph of Faculty</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. OVERVIEW</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7-11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. INDIVIDUAL FACULTY REPORTS</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12-175</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>V. PROGRAMS AND SECTIONS REPORTS</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Administrative/Financial Affairs (Eugene J. Napolitan)</td>
<td>177-180</td>
</tr>
<tr>
<td>B. Division of Anatomic Pathology (Gerald D. Abrams, M.D.)</td>
<td>181</td>
</tr>
<tr>
<td>C. Clinical Biochemistry Section (David F. Keren, M.D.)</td>
<td>182-186</td>
</tr>
</tbody>
</table>

1. General Chemistry Laboratory (Donald Giachero, Ph.D.) 182
2. Drug Analysis and Toxicology Laboratory (Thomas Annesley, Ph.D.) 183
3. Ligand Assay Laboratory (Barry England, Ph.D.) 184
4. Clinical Immunopathology Laboratory (David F. Keren, M.D.) 184

<table>
<thead>
<tr>
<th>D. University Hospitals Blood Bank (Harold A. Oberman, M.D.)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>187-191</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Clinical Pathology Laboratories (Harold A. Oberman, M.D.)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>192</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F. Cytopathology Laboratory (Bernard Naylor, M.D.)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>193</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>G. Educational Activities (Joseph C. Fantone, M.D.)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>194-196</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H. Electron Microscopy Service (Kent J. Johnson, M.D.)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>197</td>
</tr>
</tbody>
</table>
I. Clinical Flow Cytometry Laboratory
   (Lloyd M. Stoolman, M.D., and Curtis Hanson, M.D.)

J. Clinical Hematology Section
   (Bertram Schnitzer, M.D.)

K. Medical Technology Program
   (Sandra M. Gluck, M.S., MT(ASCP)CLS)

L. Clinical Microbiology Laboratory
   (Kenneth D. McClatchey, M.D., D.D.S.)

M. Neuropathology Service
   (Paul E. McKeever, M.D., Ph.D.)

N. Pathology Data Systems
   (Bruce A. Friedman, M.D.)

O. Pediatric Pathology Service
   (Kathleen P. Heidelberger, M.D.)

P. Phlebotomy Services/Central Distribution
   (Bruce A. Friedman, M.D.)

Q. Resident Training Program
   (Andrew Flint, M.D.)

R. Surgical Pathology Service
   (Gerald D. Abrams, M.D.)

S. Veterans Administration Medical Center
   (Lee Weatherbee, M.D.)
LIST OF FACULTY
<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Institutional Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abell, Murray R.</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Abrams, Gerald D.</td>
<td>Professor and Director, Anatomic Pathology</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Annesley, Thomas M.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Appelman, Henry, D.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Barnes, Barbara A.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Barr Jr., Mason*</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Beals, Theodore F.</td>
<td>Assistant Professor</td>
<td>Veterans Administration Medical Center</td>
</tr>
<tr>
<td>Blaivas, Mila I.</td>
<td>Clinical Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Burkholder, Peter M.</td>
<td>Professor</td>
<td>Veterans Administration Medical Center</td>
</tr>
<tr>
<td>Capps, Rodney D.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Courtney, Richard M.*</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>D’Amato, Constance J.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>de la Iglesia, Felix**</td>
<td>Adjunct Research Scientist</td>
<td>Warner-Lambert; Parke Davis</td>
</tr>
<tr>
<td>Dixit, Vishva M.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>England, Barry G.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Fantone, Joseph C.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Flint, Andrew</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Friedman, Bruce A.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Giacherio, Donald</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Gikas, Paul W.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Name</td>
<td>Rank</td>
<td>Institutional Affiliation</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Gluck, Sandra C.</td>
<td>Instructor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Hanks, Carl T.*</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Headington, John T.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Heidelberger, Kathleen P.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Hendrix, Robert C.</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Hicks, Samuel P.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Hinerman, Dorin L.</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Hudson, Jerry L.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Johnson, Kent J.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Judd, W. John</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Keren, David F.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Kincaid, Marilyn C.++</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Kunkel, Steven L.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Lloyd, Ricardo V.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Marasco, Wayne</td>
<td>Research Investigator</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>McClatchey, Kenneth D.</td>
<td>Associate Professor, Associate Chairman, Director, Clinical Laboratories</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>McKeever, Paul E.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Midgley, A. Rees*</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Naylor, Bernard</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Oberman, Harold A.</td>
<td>Professor and Associate Director, Clinical Laboratories</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Phan, Sem H.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Name</td>
<td>Rank</td>
<td>Institutional Affiliation</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Pierson, Carl L.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Regezi, Joseph A.*</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Remick, Daniel G.</td>
<td>Instructor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Robinson, J. Paul</td>
<td>Research Scientist</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Rowe, Nathaniel H.*</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Schmidt, Robert W.</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Schnitzer, Bertram</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Shope, Thomas C.⁺</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Silverman, Eugene M.</td>
<td>Clinical Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Smolen, James E.⁺</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Stoolman, Lloyd</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Till, Gerd O.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Varani, James</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Ward, Peter A.</td>
<td>Professor and Chairman</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Weatherbee, Lee</td>
<td>Associate Professor</td>
<td>Veterans Administration Medical Center</td>
</tr>
<tr>
<td>Wolter, J. Reimer⁺⁺</td>
<td>Professor</td>
<td>The University of Michigan</td>
</tr>
</tbody>
</table>

* Joint Appointment, Dental School
** Clinical Appointment, Warner-Lambert, Parke Davis
⁺ Joint Appointment, Department of Pediatrics and Communicable Diseases
++ Joint Appointment, Department of Ophthalmology
**NEWLY APPOINTED FACULTY DURING FISCAL YEAR 1987**

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Former Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonadio, Jeffrey F.</td>
<td>Assistant Professor</td>
<td>University of Washington</td>
</tr>
<tr>
<td>Chensue, Stephen</td>
<td>Assistant Professor*</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>Hanson, Curtis J.</td>
<td>Assistant Professor</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Killen, Paul D.</td>
<td>Assistant Professor</td>
<td>NIDR-Bethesda, Maryland</td>
</tr>
<tr>
<td>Lowe, John B.</td>
<td>Assistant Professor</td>
<td>Washington University</td>
</tr>
<tr>
<td>Nickoloff, Brian J.</td>
<td>Assistant Professor</td>
<td>Stanford University</td>
</tr>
<tr>
<td>Remick, Daniel G.</td>
<td>Instructor</td>
<td>University of Michigan</td>
</tr>
</tbody>
</table>

*Veterans Administration Medical Center

**FACULTY PROMOTIONS DURING FISCAL YEAR 1987**

<table>
<thead>
<tr>
<th>Name</th>
<th>Former Position</th>
<th>New Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flint, Andrew</td>
<td>Assistant Professor</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Keren, David F.</td>
<td>Associate Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Phan, Sem H.</td>
<td>Associate Professor</td>
<td>Granted Tenure</td>
</tr>
<tr>
<td>Warren, Jeffrey S.</td>
<td>Postdoctoral Fellow</td>
<td>Instructor</td>
</tr>
</tbody>
</table>
OVERVIEW
DEPARTMENTAL OVERVIEW

This is the completion of the seventh year of current leadership in the Department of Pathology since the retirement of Dr. A. James French. In this period of time there have been many important developments, new initiatives, program changes, and a continuous process of faculty recruitment. The Department has responded to a large number of changes driven both by internal forces as well as external pressures which emanate chiefly from changes in health care delivery and reimbursement. The continuing success of the M-Labs program and the development of a new clinical faculty sequence to accommodate to the changing environment of health care delivery are important indicators of our ability to respond to various demands.

In the Winter of 1986/87 the Internal Review Committee for the Department of Pathology completed its report and made a series of recommendations. The report was made available to all faculty members and was the basis for a faculty retreat at the Inglis House in early June, 1987. The review identified a series of concerns that required attention. These concerns were dealt with either before, during, and after the retreat. Resulting major initiatives include: (a) a clear (and revised) definition of Departmental Administrative structure; (b) changes to improve communication between the Chairman’s office and the Department; (c) revision of the Residency Training Program to strengthen it and make it more flexible to the needs of residents (including the reinstatement of four residency slots which will improve the educational environment of the program and will be funded by the Department of Pathology MSP); (d) changes in the Autopsy Service in order to bring about improvements in the service as well as the educational component of this important clinical activity; (e) attention to the increasing volume of service demands by the recruitment in July, 1987, of Dr. Curtis Hanson (see below) and the initiation of recruitment efforts for expansion of faculty positions in Anatomic (Surgical) Pathology and Clinical Pathology (Blood Banking).

During the academic year of 1986/87, the clinical sequence was instituted. The presence of this sequence acknowledges the important role of faculty (at both the M.D. and Ph.D. levels) who have substantial service responsibilities related to the Clinical Laboratories, the off-site clinics, the M-Care HMO, and the extramural medical facilities with which we have continuing professional obligations requiring frequent travel by faculty. The clinical sequence is restricted to a small number of faculty in the Department of Pathology with these special service obligations. Availability of the clinical sequence will permit us to reward faculty members whose service responsibilities require that they devote the majority of their time to clinical functions at both intramural and extramural sites.
The past few months have also witnessed the discontinuance of the Medical Technology Teaching and Training Program. This program was initiated in the 1940's and had a long, distinguished record in the training of Medical Technicians, many of whom accepted staff positions in the University Hospitals.

With regard to the service activities of the Department, in February we completed a service contract agreement with University Hospitals for a four year period (dating from July 1, 1986). This represents an immensely important achievement for the Department and for the University Hospitals, since it provides a sustained period of stability which will assure the smooth functioning of the clinical laboratories. The agreement is quite different from prior ones in that there is an incentive program requiring some reductions in revenue transfers to the Department but the agreement allows the Department of Pathology to offset these financial changes with incentive payments related to extramural laboratory business and by cost reductions in the current laboratory operations. The agreement with the Hospitals represents a partnership between the Department of Pathology and the University Hospitals. Already apparent from this relationship is the increasing success of the M-Labs, the upgrading and expansion of the Laboratory Computer System throughout the University Hospitals, the development of a directed-blood donor program, an upcoming operations review of the Clinical Laboratories, and final arrangements for laboratory functions at the off-site clinics. As a recognition of the continuously expanding volume of both anatomic (surgical) pathology and clinical (laboratory) pathology activities, the Department has recruited Dr. Curtis Hanson, who arrived July 1, 1987, from the University of Minnesota, and assumes function as Director of the Clinical Flow Cytometry Laboratory. In addition, he will have responsibilities in the Hematopathology Laboratory. The Department has also initiated recruitment for two service slots: general surgical pathology and an Assistant Director of the Blood Bank. Over the past several months the Clinical Immunology Laboratory, which is under Dr. Keren's supervision, now has the additional sign-out support of Dr. Jeffrey Warren and Dr. John Lowe. These personnel changes should improve our ability to meet the recent clinical service demands of the Department. It might also be noted that two important administrative changes in the Laboratories have been made: Dr. Kenneth D. McClatchey assumed the position as Director of the Division of Clinical Pathology. Dr. Harold Oberman now functions as Co-Director of the Division and the Laboratories in addition to his continuing role as Director of the Blood Bank. Dr. Daniel Remick has been appointed Director of the Autopsy Service (with Dr. Paul Gikas functioning as Co-Director) and has already begun to initiate changes in that service.

Educational programs in the Department continue to undergo change. Dr. Joseph Fantone is Director of the Undergraduate Medical Program in the Department of Pathology. He has devoted a substantial amount of time to monitor the quality of lectures presented to students, has modified scheduling to provide the smoothest and the most comprehensible format for the lectures, has carefully analyzed the
advantages and shortcomings of establishing a post-sophomore medical student preceptorship in Pathology, and has taken the leadership to develop a graduate level course in Pathology that will accommodate the needs of graduate students. As indicated above, other important changes in educational programs include substantial restructuring of the Residency Training Program resulting in block-type assignments of residents to Anatomic Pathology or Clinical Pathology with no crossing-over of assignments and call schedules during these blocks of time. Dr. Andrew Flint has accepted assignment as Coordinator of the Residency Training Program. In this position he represents a faculty member with close ties to the residents, being almost available, and he plays an important day-to-day role in coordinating recruitment of residents, clinical assignments of house officers, quarterly evaluations of residents, to name just a few of his duties.

Research programs in the Department continue to show continuous growth and productivity. The amount of grant support by the faculty is impressive as is the scholarly productivity as evidenced by publications and frequent invitations to faculty for participation in national and international symposia ranging from clinical forums to the most basic of investigative programs. The Department has a record number of postdoctoral fellows, 12 in the 1986/87 academic year. In each case these individuals bring their own support or are funded by research grants held by faculty members of the Department. Another important achievement has been the recruitment of four experts in the area of molecular biology/genetics during the academic year. Dr. Vishva Dixit, from Washington University (St. Louis), trained in Clinical Pathology, and is involved in the definition of biological and biochemical properties of the adhesive glycoprotein thrombospondin; Dr. John Lowe, also from Washington University (St. Louis), trained in Clinical Pathology, has been recruited under the aegis of the University of Michigan Howard Hughes Medical Institute, and works on the regulation of glycosylation of membrane proteins; Dr. Jeffrey Bonadio, from the University of Washington (Seattle), trained in Anatomic Pathology, has been recruited also under Hughes support, and studies the regulation of collagen synthesis; and Dr. Paul Killen, also from the University of Washington (Seattle) via the NIH, trained in Anatomic Pathology and is involved in the regulation and role of laminin and Type IV collagen. These young investigators represent an exciting and impressive nucleus of molecular biologists in the Department of Pathology. They are already involved in collaborations with other investigators in the Department and will be expected to have an increasing influence on the research programs of the Department as well as, ultimately, on the applications of the probes of molecular biology to clinical diseases.

All in all, the Department appears to be increasing its strengths in the areas of service, education and research. Completion of the Internal Review has provided us with the opportunity to initiate some important changes that will further strengthen our foundations. We can all take
pride in the accomplishment of the past year and look forward to continuing change and improvement in the new academic year.

Respectfully submitted,

Peter A. Ward, M.D.
Professor and Chairman
FACULTY REPORTS
I. **CLINICAL ACTIVITIES:**

A. Surgical Pathology Services - six months.
B. Necropsy Service - on call.
C. Pathologist, Cardiac Transplant Team - full time.
D. Consultant for Gastrointestinal Pathology - full time.
E. Consultant for Cardiovascular Pathology - full time.

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 Correlation - 1 contact hour.
B. Sophomore Medical Class:
   1. ICS 600 - Clinicopathologic conferences - 8 contact hours.
   2. Pathology 600 - Lecture - 10 contact hours.
C. Graduate School/Dental School/College of LS&A:
   1. Pathology 630 - Course Co-Director, Lecturer - 24 contact hours.
   2. Biology 262 - Lecturer - 2 contact hours.
D. Hospital:
   1. Cardiovascular Pathology Conference - monthly.
   2. Internal Medicine CPC - monthly.
   3. Internal Medicine Necropsy Review - monthly.
   4. Gynecologic Pathology, Non-oncologic - monthly.
E. House Officers:
   1. Training in Surgical and Necropsy Pathology.
F. Elizabeth Crosby Award - Teaching of Basic Sciences.
G. Sophomore Class - Excellence in Teaching Award.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. Pharmacologic studies on ischemic heart (B.R. Lucchesi, Principal Investigator).

**PROJECTS UNDER STUDY:**

A. Pathogenesis and modification of myocardial infarction (with B.R. Lucchesi et. al.).
B. Recovery from myocardial infarction - Anatomic and functional aspects (with K. Gallagher, et. al.).
C. Histopathologic aspects of coronary angioplasty (with W. O'Neil et. al.).
D. Toxicity of mitometh (with D.E.Schteinart).
E. Natural history of myocarditis (Multi-center myocarditis study).

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
A. Director, Division of Anatomic Pathology, Surgical Pathology.
B. Member, Medical Service Plan Executive Committee.

MEDICAL SCHOOL/HOSPITAL:
A. Member, Academic Affairs Council, Medical School.
B. Member, Inteflex Policy Committee, Medical School.
C. Member, Historical Collections Committee, Medical School.
D. Chair, Standing Committee for Investigation of Misconduct in Research, Medical School.
E. Member, Executive Committee on Clinical Affairs, Hospital.
F. Member, Ethics Committee, Hospital.
G. Member, General Surgery Search Committee.

REGIONAL AND NATIONAL:
A. Deputy Medical Examiner, Washtenaw County.
B. Member, Membership Committee, Gastrointestinal Pathology Club.
C. Member, Expert Panel, Performance Improvement Program, CAP.

V. OTHER RELEVANT ACTIVITIES:

   a. Institute of Basic Medical Sciences, Beijing.
   b. 4th Military Medical College, Xian.
   c. Shanghai Medical University, Shanghai.
   d. Hubei Medical College, Wuhan.
   e. Jinan University Medical College, Guanzhou.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


I. **CLINICAL ACTIVITIES:**

A. General surgical pathology - 6 months.
B. Gastrointestinal and hepatic pathology consultation services - full time.
C. Pediatric surgical pathology - 2 weeks.

II. **TEACHING ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITALS:**

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

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:** None.

**PROJECTS UNDER STUDY:**

A. Hepatic histopathologic changes in methotrexate - treated psoriatics, with A. Flint and members of the Gastroenterology Division.
B. DNA content in gastric stromal tumors, with A. Flint.
C. Superficial Grohn’s disease, with A. McQuillan.
D. Appendiceal epithelia neoplasia.
E. 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. Results accepted for publication in Hepatology.
F. Peptic-associated and Campylobacter-associated gastritis and duodenitis with Grace Elta. Results accepted for publication in Am. J. of Gastroenterol.
G. Cell markers in gastrointestinal stromal tumors with A. Pike and R. Lloyd, results submitted for publication.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Chairman, Advisory Committee on Appointments, Promotions and Titles.

MEDICAL SCHOOL/HOSPITALS:

A. Member, Cancer Work Group, University Hospital.
B. Member, Surgical and Procedural Case Review Committee, University Hospital.

REGIONAL AND NATIONAL:

A. Member, Program Committee, Michigan Society of Pathologists.
B. Reviewer of papers for Archives of Pathology and Laboratory Medicine, and Human Pathology.
C. Book reviewer, Gastroenterology.
D. Chairman, Publications Committee and Member, Executive Committee, Gastrointestinal Pathology Club.
E. Expert Pathologist, Large Bowel and Anal Canal Neoplasms and Gastric Neoplasms Panels, College of American Pathologists Performance Improvement Program.
G. Reviewer, Atlas of Tumor Pathology, Universities Associated for Research and Education in Pathology, Inc.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

5. Visiting Professor: Department of Pathology, Yale University School of Medicine, New Haven, CT, May 14, 1987: Lecture: General concepts in GI biopsy diagnosis.
   a. Introduction to the classification of esophageal neoplasms.
   b. The morphologic predictors of behavior of squamous cell carcinoma of the esophagus.
   c. The morphologic features of usual squamous cell carcinoma of the esophagus.
   d. Stromal and lymphoid tumors of the esophagus.
   e. The development of a malignancy index for squamous cell carcinoma of the esophagus.
   f. Differentiation between Barrett’s carcinoma of the esophagus and cardiac carcinoma of the stomach.
   g. High risk epithelium in Barrett’s esophagus.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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 1986 - 30 JUNE 1987

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.

II. TEACHING ACTIVITIES:

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. Medical Students.
   1. Course Instructor, Pathology 600.
C. Medical Technology.
   1. Course Instructor, Medical Technology Program (Pathology 410). Areas include thyroid physiology, general endocrinology, RIA/immunochemical methods.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Microbore Applications to the analysis of drugs.
B. Distribution of cyclosporine and metabolites in blood and tissues.
C. Lactate production during myocardial ischemia.

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. Chairman, American Association for Clinical Chemistry, Michigan Section.
D. Editorial Board, Toxicology and TDM Newsletter.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


NATIONAL AWARDS:

1. Recipient of the 12th American Association for Clinical Chemistry Award for outstanding achievements by a young investigator.
2. Recipient of the Clinical Chemist’s Recognition Award, American Association for Clinical Chemistry.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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

parenteral immunization with different preparation of carrier proteins conjugated to 2-

2. Annesley, T.M., Matz, K., and Giacherio, D.A.: Concomitant effect of hematocrit,
concentration, and temperature on the distribution of cyclosporine in blood. Proc.

normal donor population by a two-step dextran sulfate-Mg precipitation technique.

Toxicology Newsletter 1987;2:18.


C.N. and Vorhees, J.J.: Levels of Cyclosporine in epidermis of treated psoriasis

comparative study of the kineticcount-48 digoxin assay with three immunoassay
I. **CLINICAL ACTIVITIES:**

A. Coordinate quality assurance activities in Blood Bank Laboratory.

B. Coordinate training of Blood Bank Laboratory Staff.

II. **TEACHING ACTIVITIES:**

A. House Officers.
   2. Blood Bank Laboratory and Seminar Course for house officers, a nine session tutorial given three times. Planned, coordinated and taught.

B. Medical Technology Students.
   1. 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. Planned, coordinated and taught.
   2. Pathology 449. This course, which includes structured class assignments and clinical practicum, was repeated for nine groups of students. Planned, coordinated and taught.
   3. Pathology 410. Lecturer.

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:** None.

IV. **ADMINISTRATIVE ACTIVITIES:**

**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 two 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, 1987.

E. Interphase 1987, planned and taught at elective session on blood transfusion.

F. Designed and implemented Blood Bank orientation sessions for students and residents from other departments.
REGIONAL AND NATIONAL:

A. Inspector for the Inspection and Accreditation Program of the American Association of Blood Banks.
B. American Association of Blood Banks, District Advisory Group.
C. Michigan Technology Educators.
D. Michigan Association of Blood Banks, Education Committee.

IV. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

2. Lecture to Medical Technology Class, Eastern Michigan University.

VI. PUBLICATIONS: None.
I. CLINICAL ACTIVITIES:

A. Medical Director, Myelodysplasia Unit: inpatient and outpatient services for children with spina bifida.
B. Attending Physician Pediatrics Infant Ward: 3 months plus 1 month as backup attending.
C. Pediatric Genetics/Teratology Consultant for Holden and Women’s Hospitals - inpatient and outpatient consultations and parent counselling.
D. Teratology Unit (see Research Activities).

II. TEACHING ACTIVITIES:

A. Teratology-Obstetrics Conference: weekly case review meeting of Obstetrics, Teratology, Neonatology for planning management of fetuses with prenatally detected malformations.
B. Genetics Clinical Conference - weekly reviews of consultation cases and 4 times yearly didactic presentations.
C. Pediatrics-Pathology Conference: organize and present CPC-type conferences to the Department of Pediatrics; Five per year.
D. Neonatology Pathology Conference: quarterly review and discussion of neonatal deaths.
E. Malformations lecture, Embryology (M-1) Course.
F. Malformations lecture, Pathology (M-2) Course.
G. Drugs in pregnancy: OB-GYN House Officer core curriculum.
H. Pediatric section Sophomore Physical Diagnosis Course.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None.

TERATOLOGY UNIT (DIRECTOR):

A. Detailed postmortem investigations of abortuses, stillborns and selected neonatal deaths for morphologic, pathologic and growth characteristics, correlations with family and prenatal histories, and counselling for future reproductive decisions by the parents.
C. Quality control investigations for various prenatal diagnostic methodologies.
D. Teratology Unit Activities: 190 fetal examinations; 97 inborn + 93 outborn; Elective terminations 39, stillborns 93, liveborns 58; <22 weeks gestation 80; >22 weeks gestation 10.

COLLABORATIVE RESEARCH:

1. Collection and allocation of fetal tissues for research projects in the Departments of Pediatrics (4), Pathology, (1), Obstetrics (1), Anatomy (2), Orthopedics (1), Internal Medicine (1), Genetics (2), and Howard Hughes Institute (1). Loan of fetal material for research investigations in the Department of Radiology.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Departmental - Pathology: none.
B. Departmental - Pediatrics: Editorial Board, Pediatric Rounds; Ad hoc committee to review faculty evaluation procedures; Infant Care Review Committee.
C. Hospital: Quality Assurance Committee.

REGIONAL AND NATIONAL:

A. Reviewer for journals: Teratology, Pediatric Pathology, American Journal of Medical Genetics.
B. Section Editor (Clinical Teratology), Teratology.
C. Council, Teratology Society.
D. Publications Committee, Teratology Society.
E. Education Committee, Teratology Society.
F. Editorial Board, Birth Defects Encyclopedia.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


2. Barr, M.: Short rib-polydactyly syndrome type II is an autosomal recessive disorder. Presented to Teratology Society, July 7-10, 1986, Boston, Massachusetts, Teratology 1986;33:45C.


I. CLINICAL ACTIVITIES:

A. Director, Diagnostic Electron Microscopy Unit, Veterans Administration Medical Center.
B. Cytopathology, Veterans Administration Medical Center.
C. Coordinator of Decentralized Hospital Computer Program in Laboratory Service, Veterans Administration Medical Center.
D. Fine Needle Aspiration, Veterans Administration Medical Center.
E. Surgical/Autopsy Pathology, Veterans Administration Medical Center.
F. Tumor Board, Veterans Administration Medical Center.
G. Deputy Washtenaw County Medical Examiner.

II. TEACHING ACTIVITIES:

A. Pathology House Officer monthly elective: Diagnostic Electron Microscopy, 11 months.
B. Diagnostic Electron Microscopy Case Conference, bi-weekly.
C. Pathology House Officers, fine needle aspiration technique and interpretation.
D. Medical School Student Summer Research Project.

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: Adjuvant Chemotherapy in Laryngeal Cancer (G. Wolf, Principal Investigator).
D. Marijuana-Bronchoscopy Project (Fligiel/Gong/Tashkin).
E. A Prospective, Controlled, Randomized and Double-Blind Multi-Center Clinical Evaluation of Monoclonal Antibody 17.13.C1.10 for its Capability to Detect Head and Neck Squamous Cell Carcinoma in Primary Site Malignancies and Lymph Nodes. (Co-investigators: Baker, Beals, Carey, Krause, McClatchey, Wolf).

PROJECTS UNDER STUDY:

A. Clinical Relevance of Ultrastructural Characteristics of Small Cell Carcinoma (with R. Green, A. Forastiere).
C. Morphometric Analysis of Cells and Tissue using the Scanning Light Microscope.
D. Automatic Scanning Light Microscopy in Morphometric Analysis of Immunologically Labeled Cells.
E. Surface Markers for Antigen Localization in Scanning and Transmission Electron Microscopy.
F. Ultrastructural localization of Herpes Simplex and Cytomegalovirus Development in Cells using cDNA (with R. Wolber).
G. Bacteremia from indwelling catheters (with J. Gilsdorf).
H. Mechanism of Reactive Hyperemia in Coronary Arteries Following Angioplasty Induced Injury (with E. Bates).
I. Growth of Cells on Microcarriers (with J. Varani).
J. Transbronchial Fine Needle Aspiration in the Delineation of Pulmonary Neoplasms (with J. Hammersley).
K. Endothelial Cell Damage Caused by Oxidants (with D. Hinshaw).
L. Morphology of Lymphokine Activated Killing (LAK) and NK Cell Killing (with J. Hiserodt).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Electron Microscopy Committee.
B. Resident Selection Committee.

MEDICAL SCHOOL/HOSPITAL:
A. Surgical Case Review Committee, Veterans Administration Medical Center.
B. Electron Microscopy Committee, Chair, Veterans Administration Medical Center.
C. Medical Records Review Committee, Veterans Administration Medical Center.
D. Implementation and Evaluation Subcommittee of the Computer Services Committee, Veterans Administration Medical Center.
E. Ambulatory Care Task Force, Veterans Administration Medical Center.

REGIONAL AND NATIONAL:
B. Practice of Pathology Committee, Michigan Society of Pathology.

V. OTHER RELEVANT ACTIVITIES:
1. Aspiration Biopsy Cytology of Intrathoracic Lesions, American Society of Cytology (with B. Naylor).
2. Diagnostic Electron Microscopy, St. Johns Hospital.
3. Electron Microscopy as an Aid to Diagnostic Cytopathology, American Society of Cytology, Cyto teleconference.
VI.  PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

I. **CLINICAL ACTIVITIES:**
   
   A. 132 muscle biopsies and 52 nerve biopsies done.  
   B. Three months in Autopsy Service.  
   C. 3.5 weeks at Central Michigan Community Hospital in Mt. Pleasant.  
   D. Visits to the Chelsea Community Hospital Laboratory, Albion Community Hospital, and coverage of M-Labs surgical pathology at the University of Michigan Hospital.

II. **TEACHING ACTIVITIES:**
   
   A. Taught residents, fellows and staff in Neurology, Rheumatology and Pediatrics on muscle and nerve biopsies.  
   B. Taught pathology residents how to perform and read out autopsies.  
   C. Lectured on muscle and nerve pathology to residents in Pathology, Neurology and sophomore medical students.  
   D. Monthly conference on muscle and nerve cases with Neurology and Rheumatology department.  
   E. Biweekly muscle and nerve cases review with pathology residents.

III. **RESEARCH ACTIVITIES:**

   **PROJECTS UNDER STUDY:**
   
   A. Histology and histochemistry of orbicularis muscle.  
   B. Histochemistry of local anesthetic injection side in skeletal and ocular muscles.  
   C. Metabolic muscle diseases presented clinically as polymyositis.

IV. **ADMINISTRATIVE ACTIVITIES:**

   **DEPARTMENTAL:**
   
   A. Set up of nerve morphometry on a routine basis (with P.E. McKeever, M.D.).  
   B. Improving of interdepartmental coordination of muscle and nerve biopsy service.

   **REGIONAL AND NATIONAL:**
   
   A. Visits to Chelsea Laboratory.  
   B. Visits to Albion Community Hospital Laboratory.  
   C. Member, American Association of Neuropathologists.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Attended VI International Muscle Disease Conference in Los Angeles, California - 1 week.
2. Attended Peripheral Neuropathology Meeting - 1 week.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Staff Pathologist for Anatomic Pathology Services (Surgical Pathology and Autopsy Pathology) at the Ann Arbor VA Medical Center.
B. Chief, Microbiology Laboratory, Laboratory Medicine Service, Ann Arbor VA Medical Center.

II. TEACHING ACTIVITIES:

A. Supervised and trained residents in Surgical Pathology and Autopsy Service at the Ann Arbor VA Medical Center.
B. Pathology 631, Laboratory histopathology for dental students.
C. Presentation of pathology case material at Tumor Board, Medical Morbidity and Mortality Conferences, and Nephrology Conferences, the Ann Arbor VA Medical Center.

III. RESEARCH ACTIVITIES:

A. Consulting Pathologist and member of the Policy Board, Collaborative Study of Adult Glomerular Diseases, Peter Bent Brigham Hospital, Boston.

IV. ADMINISTRATIVE ACTIVITIES:

A. Chief, Microbiology Laboratory, Laboratory Medicine Service, Ann Arbor VA Medical Center.
B. Ad hoc reviewer for Laboratory Investigation, Archives of Pathology and Laboratory Medicine.

V. OTHER RELEVANT ACTIVITIES:

A. Continuing postgraduate medical education.
1. Managing People; Padgett-Thompson, Ann Arbor, MI.
3. Physicians in Management (PIM II); American Academy of Medical Directors, Clearwater, Florida.
4. Bold Initiatives for a New Era of Medicine and New Directions for Health Care Leadership and Management; American Academy of Medical Directors, Toronto, Canada.
INVITED LECTURES AND SEMINARS:

1. Fibronectin synthesis in cultured guinea pig glomerular epithelial cells infected with SV-40; VA Medical Center, Philadelphia, Pennsylvania.

VI. PUBLICATIONS:

BOOKS AND CHAPTERS IN BOOKS:

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).

   DDS 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: None.

   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:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED 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 demonstrations of diagnostic methods, and teaching, using selected cases in A and B.

E. Plan and present gross and microscopic Brain conference on alternate months for the Neurology Department.

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, 19 hours, lectures and brain cutting sessions. Sequence coordinator 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. USPHS application, "The Role of Glutamate in Alzheimer's Disease", (5% Effort, with Anne Young and John Penney, Department of Neurology).

PROJECTS UNDER STUDY:

A. Narrowing of the aqueduct in the fetal rat leading to prenatal hydrocephalus can be brought about in several ways. In one of our models, radiation (approx. 200 rads) destroys large numbers of primitive cells in the early (11th day) cephalic neural tube leading to local overgrowth that obstructs the aqueduct. In the other, a mutant gene, first morphologically expressed around the 11th day, initiates the same outcome, but there is no cell-killing. In both there is breakdown of the cephalic neuroepithelial basal lamina. We are exploring this disorder of the extracellular matrix (ECM) common to both models as an important initiating factor that leads to the hydrocephalus. Light microscopy and transmission and scanning electron microscopy, immunocytochemical and culture methods are being used. A goal is to determine why the ECM fails in the mutant and after 200 rads, but is not affected when 150 rads (also very destructive) is given and hydrocephalus does not occur. Preliminary results indicate that there is a lag in collagen IV formation in the mutant neuroepithelial basal lamina, compared with the normal, coincident with the breakdown of the latter. Also, mutant neuroepithelial cells in culture do not adhere to substrates containing collagen IV, which normals do.

In related work at other fetal stages, we have found that fetal brain macrophages produce the oxygen radical, superoxide anion. In other organs of adult subjects macrophage-produced oxygen radicals are harmful to normal tissues. It is not known yet whether the superoxide in fetuses is harmful to normal cells.

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. and Terry Hood, M.D., (Neurosurgery Department).
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. Sequence Coordinator for Neural and Behavioral Sciences 600 (Neuropathology).
D. Preprofessional Counselor, premedical and health-related students

**REGIONAL AND NATIONAL:**

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

VI. **PUBLICATIONS:**

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


7. O’Shea, K.S., Rheinheimer, J.S.T., D’Amato, C.J. and Hicks, S.P.: Alterations in the neuroepithelial basal lamina in a neurological mutant with prenatal hydrocephalus. (Submitted for publication, June 1987).
I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:
A. Supervised the following undergraduate students: Mary Tierney, Fred Wolf, Charles Yang.
B. Supervised Sheila Mane, a postdoctoral scientist.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. American Heart Association - "Role of Thrombospondin in Platelet and Vascular Biology" - 7/1/87-6/30/89, $90,000 (3 years), Principal Investigator.
B. NIH - R01 - "Structure and Regulation of Human Platelet Thrombospondin" - 7/1/87-6/30/92, $111,783, first year direct costs, Principal Investigator.
C. American Cancer Society - "Squamous Cell Carcinoma: Role for Thrombospondin" - 7/1/87-6/30/90, $333,090, Principal Investigator.
D. NIHHL - "Role of Endothelial Cell Proteins in Developmental Hemostasis" - 6/1/87-5/31/90, $104,950, Principal Investigator.
E. Phoenix Project - "Structure and Function of Thrombospondin" - $4,200, Principal Investigator.
F. Michigan Cancer Society - "Role of Thrombospondin (TSP) in Carcinoma Cells" - 11/1/86-10/31/87, $5,000, Principal Investigator.
G. Cancer Core - "Role of Thrombospondin" - 1/1/87-12/31/87, $15,000, Principal Investigator.
H. Rackham - "Genomic Structure of Thrombospondin" - 5/1/87-4/30/88, $8,000, Principal Investigator.
I. NIH-R01 - "Role of Thrombospondin in CNS Development" - 6/1/87-5/31/90, $110,000, Co-Principal Investigator.

PROJECTS UNDER STUDY:

A. Structure function relationships in thrombospondin.
B. Mechanisms of action of tumor necrosis factor.
C. Articles submitted for publication:


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Participate in undergraduate research programme.
B. Interview prospective faculty candidates.

MEDICAL SCHOOL/HOSPITAL:

A. Review BMRC grants.

REGIONAL AND NATIONAL:

A. Reviewer for the following journals: Journal of Biological Chemistry, Journal of Clinical Investigation.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNAL:


BOOKS AND CHAPTERS IN BOOKS: None.

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

BARRY G. ENGLAND
ASSOCIATE PROFESSOR OF REPRODUCTIVE BIOLOGY
DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1986 - 30 JUNE 1987

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 (2 week) on radioimmunoassay techniques.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

   B. USPHS (NIAMDD) AM20572: Michigan Diabetes Research and Training Center; Director, Ligand Assay Core Facility, $177,000/yr, 1983-1988.

PROJECTS UNDER STUDY:
   A. Examination of Circulating Levels of Estradiol and Estrone Following Buccal and Trans-Dermal Administration of Estradiol-17B. B.G. England.
   D. Determination of the role of steroid receptors in hormone dependent tumors and cultured cell lines derived from various tumors. S.J. Grenman, T.E. Carey and B.G. England.

IV. SERVICE 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.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREEED JOURNALS:


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


I. CLINICAL ACTIVITIES:
   A. Autopsy Service.
   B. Occasional Surgical Pathology Interpretation.

II. TEACHING ACTIVITIES:
   A. Course Director: Pathology 600.
   B. Coordinator: Senior Medical Student Clerkships.
   C. Sequence Coordinator and Lecturer - Sophomore Medical Students (ICS-600)
      Immunopathology.
   D. Pulmonary Pathology Conference (monthly to Pulmonary Division - Internal
      Medicine).
   E. Lecturer - Microbiology and Immunology 624.
   F. Panel Discussant - Department of Anesthesiology: Mechanisms of ARDS.
   G. Preceptor - Undergraduate and Medical Student Research.
   H. Graduate Student Ph.D. Thesis Committee.
   I. Preceptor for three Postdoctoral Fellows.

III. RESEARCH ACTIVITIES:
   A. Regulation of phagocytic cell-mediated tissue injury.
   B. Mechanisms of oxygen metabolite-mediated tissue injury.

SPONSORED SUPPORT:
   A. Principal Investigator: Modulation of Immune Complex Lung Injury (NIH-R01-
   B. Principal Investigator: Phagocytic Cells and Acute Lung Injury (American Heart
   C. Principal Investigator: Phagocytic Cell and Glomerular Injury. Section IV of Renal
   D. Co-Investigator: Mechanisms and Genetic Regulation of Pulmonary Fibrosis.
   E. Co-Investigator: Pharmacologic Studies on the Ischemic Heart. (B. Lucchesi,
      Principal Investigator)(NIH-R01-HL-19782).
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director - Educational Activities.
B. Interview Resident Applicants.
C. Resident Applicant Selection Committee.
D. Department of Pathology Seven Year Internal Review Committee.
E. Stobbe Funds Committee.
F. Residency Review Committee.
G. Committee on Evaluating Graduate Student Teaching (Chairman).
H. Department of Pathology Pre-Doctoral Fellowship Committee (Chairman).

V. **MEDICAL SCHOOL/HOSPITAL:**

A. Medical Student Advisor (3rd and 4th year).
B. ICS - Executive Committee.
C. Associate Director - Sophomore Medical Student ICS Course (ICS 600/601).
D. Basic Science Phase Committee (Chairman).
E. Clinical Phase Committee.
F. Medical Student Basic Science Academic Review Board.
G. Medical Student Clinical Phase Academic Review Board.
H. Academic Affairs Committee.
I. Clinical Science Phase Committee Retreat: Medical Education (November, 1986).
J. Curriculum Coordinating Group.

**REGIONAL AND NATIONAL:**

B. Reviewer, Medical Research Council of Canada Research Grants.
C. Reviewer, Veteran's Administration Research Grants.

VI. **INVITED LECTURES AND SEMINARS:**

1. Invited Seminar, Mechanisms of heme protein-dependent lipid peroxidation. Department of Internal Medicine, Ohio State University, Columbia, Ohio, 1986.
VII. 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:


ANDREW FLINT, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1986 - 30 JUNE 1987

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Rotation - 18 weeks.
   B. Hematology Rotation - 3 weeks.
   C. Hematopathology Consultations - 2 weeks.

II. TEACHING ACTIVITIES:
   A. Pathology 600 Lectures:
      1. Pulmonary Inflammation I.
      2. Pulmonary Inflammation II.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
A. Pathology Consultant, Morphologic Studies of Diffuse Interstitial Lung Disease, A Multi-Institution Project, Reuben M. Cherniak, M.D., National Jewish Hospital, Program Director.
B. Pathology Consultant, Prospective Investigation of Pulmonary Embolism Diagnosis, John G. Weg, M.D., Principal Investigator.
D. Intensive Continuous Infusion High Dose Cisplatin, 5-Fluorouracil, and Mitoguazone (MGBG) Induction Chemotherapy for Advanced Head and Neck cancer, Arlene A. Forastiere, M.D., (Study Coordinator), Andrew Flint, M.D., (Co-investigator).
E. Hormonal Synchronization Followed by Combination Chemotherapy for Locally Advanced Breast Cancer, Robert L. Cody (Principal Investigator), Andrew Flint, M.D., (Co-investigator).

PROJECTS UNDER STUDY:
A. Gastric stromal tumors: Correlation of biologic behavior with DNA analysis.
B. Metaplastic Carcinoma of the Breast: DNA analysis and correlation with biologic behavior.
C. Wegener’s Granulomatosis: Morphologic and Immunohistochemical analysis.
D. Pathologic Manifestations of Nasal Involvement by Wegener’s Granulomatosis.
E. Hamman Rich disease Revisited: A reappraisal of the pathologic features of the original cases.
F. Estrogen Receptors, Nuclear roundness, and DNA content of prostatic carcinoma nuclei: Correlation with biologic behavior.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Coordinator, Residency Training Program.
B. Member, Residency Candidates Selection Committee.
C. Coordinator, Senior Staff Service Rotation.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

3. Pulmonary Pathologic Didactic Seminars - Department of Pathology, University of Michigan, 1986.
4. Interstitial Lung Disease, Seminar, Division of Pulmonary Medicine, Department of Internal Medicine, University of Michigan, November, 1986.
5. Fine Needle Aspiration, Port Huron Hospital, November, 1986.

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. Director, Pathology Data Systems.
   1. Supervised all PDS activities for the year including the search for a new Laboratory Information System and the successful negotiation of a contract with the Cerner Corporation.
   2. Supervised the participation of PDS in the rapid expansion of the Local Area network serving the hospital complex to the present activity level of more than 3,000 patient inquiries per day into the laboratory data base.

B. Director, Phlebotomy Services/Central Distribution.
C. Staff supervision of the autopsy service.
D. Staff supervision of the Blood Bank/Donor Room and Apheresis Service.

II. **TEACHING ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITALS:**

A. Laboratory instructor for the Pathology 600 sophomore pathology course.
B. Organizer of Docnet, an on-line computer conference for house officers and staff physicians in the hospital.
C. Program director of the Fifth Annual Clinical Laboratory Computer Symposium at the Towsley Center for Continuing Medical Education in June, 1987.
   1. Symposium attracted 140 registrants and 13 system vendors and laboratory consultants.

III. **RESEARCH ACTIVITIES:**

A. Development of an organizational model for information systems in hospital.
B. Analysis of the transfusion of blood and blood products by DRG at the University of Michigan.

IV. **SERVICE ACTIVITIES:**

**DEPARTMENTAL:**

A. Special project to review of the integration of M-Labs activity into the teaching program of the Department.
B. Microcomputer Steering Committee (Chairman).
C. Ad Hoc Committee on Quality Assurance.
D. Editor of two intradepartmental publications (Pathology Electronic News and Spectrum).
MEDICAL SCHOOL/HOSPITAL:
A. Medical Informatics Task Force (Chairman).
B. Physicians’ Liaison Council (Chairman).
C. Hospital Information Systems Advisory Committee.
D. Ad Hoc Committee for the IAIMS Grant Proposal.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

CONSULTATION:
1. Advisory Panel for the Office of Technology Assessment, U.S. Congress (Study of Veterans’ Administration Hospital Information Systems).

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
3. Friedman, B.A., Dieterle, R.C.: The impact of the installation of a local area network on physicians and the laboratory information system in a large teaching hospital. (Accepted for publication in the Proceedings of the 11th Annual Symposium on Computer Applications in Medical Care).

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
DONALD A. GIACHERIO  
ASSISTANT PROFESSOR OF PATHOLOGY  
DEPARTMENT OF PATHOLOGY  

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1986 - 30 JUNE 1987  

I. CLINICAL ACTIVITIES:  
A. Director, General Chemistry Laboratory. 
B. Daily sign-out and interpretation of electrophoresis results. 
C. Implementation of tests from the consolidation of Special Function Laboratories. 
D. Chairman, Replacement Instrumentation Selection Committee, Biochemistry Section.  

II. TEACHING ACTIVITIES:  

MEDICAL SCHOOL/HOSPITAL:  
A. House Officers. 
1. Lecturer, Clinical Pathology Rounds, "Pediatric Cases" and "Assessment of Risk for Coronary Heart Disease". 
2. Lecturer, Clinical Pathology Didactic Lecture Series, "Core Lectures in Clinical Chemistry", 6 contact hours. 
3. Coordinator, Pathology House Officer Rotation through General Chemistry Lab. 
5. Review of selected topics in Clinical Chemistry. 
B. Medical Technology. 
1. Lecturer, Path 410. 3 hours on adrenal and gonadal steroid chemistry. 
2. 3 contact hours per week during lab rotation on electrophoresis and centrifugal analyzers. 
3. Program Director, Continuing Education Series for Medical Technologists (biweekly).  

III. RESEARCH ACTIVITIES:  
A. Factors influencing the distribution of cyclosporine and its metabolites in blood. 
B. Adaptation of immunoassays for Apolipoproteins A and B to the Cobas-Bio centrifugal analyzer. 
C. Comparison of Apolipoprotein B immunoassays in patients with hyperlipidemias. 
D. Evaluation and validation of a two stage precipitation assay for subclasses of High Density Lipoproteins. 
E. Determination of Creatine Kinase BB isoenzyme levels in the serum and CSF of anoxic neonates. 
F. Evaluation of affinity column method for the quantification of glycosylated hemoglobin. 
G. HPLC analysis of urinary catecholamines and their metabolites.
H. Development of colorimetric and HPLC assays for homovanillic acid (HVA) in patients with neuroblastoma.
I. Evaluation of new immunoassays for digoxin.
J. Development of assays for plasma oxalate in support of the treatment of a patient with Type I Primary Hyperoxaluria by combined hepatic and renal transplantation.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
A. Quality Assurance Committee.
C. Coordinator, Chemistry Lab Supervisors Meetings.
D. Biochemistry Section Directors Group.
E. Coordinator, Clinical Chemistry In-Service Education Program.

MEDICAL SCHOOL/HOSPITAL:

REGIONAL AND NATIONAL:
A. Coordinator, College of American Pathologists Clinical Chemistry Standards Assay Laboratory.
B. Program and Education Committees, Michigan Section, AACC.
C. Lipids and Lipoproteins Subgroup, AACC.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

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 - eight weeks.
B. Surgical Pathology - sixteen weeks.
C. Cytopathology - sporadic assignment to cover when regular staff is away.
D. Diagnostic EM - share nephropathology work with Dr. K. Johnson.
E. Consultation service for Uropathology.
F. Conduct monthly conference in Urologic Pathology with Urology Section.
G. Conduct monthly conference with Rheumatology Section.
H. Participate in weekly Renal Biopsy Conference with Dr. K. Johnson.

II. TEACHING ACTIVITIES:

A. Lectures to Sophomore Pathology Class:
   1. Tubulo-interstitial disease of Kidney.
   2. Prostatic and penile lesions.
   3. Testicular lesions.
   4. Death Certification and Forensic Pathology.
   5. Pathogenesis of highway injuries.
B. Lecture to N223 Personal Health and Wellness Course on Highway Injuries.
C. Lecture to Sports Management Class on drug testing of athletes.
D. Four lectures to HouseOfficers on Urologic Pathology, Medical Legal Autopsies, and Drug Testing of Athletes.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Collaborate with Urology Staff and General Surgery Staff on projects.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:


MEDICAL SCHOOL/HOSPITAL:

A. Hospital Medical-Legal Committee, Chairman.
B. Hospital Claims Control Committee.
C. Hospital Ethics Committee.
UNIVERSITY:

A. Faculty Representative to Big Ten Intercollegiate Conference and National Collegiate Athletic Association (NCAA).
B. Chairman, Big Ten Awareness Committee on Alcohol and Drug Abuse.
C. Board in Control of Intercollegiate Athletics.

REGIONAL AND NATIONAL:

A. Member, NCAA Drug Testing Committee.
B. Board of Directors, Physicians for Automotive Safety.
C. Board of Directors, Public Citizen, Inc. (Ralph Nader, initial Chairman and Founder).
D. Deputy Medical Examiner, County of Washtenaw.
E. Reviewer for Archives of Pathology and Laboratory Medicine.

V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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:** None.

IV. **SERVICE 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 picnic and laboratory staff party.

B. Liaison with LSA and Medical School.
   1. Managed all student records.
   2. Maintain contact with LSA and Medical School faculty and staff involved with program and students.

C. M-Labs.
   1. Participate in market planning, sales calls.
   2. Serve as Client Services Representative.

**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).
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).

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

III. **RESEARCH ACTIVITIES:**

   **SPONSORED SUPPORT:**
   
   


PENDING:

A. Multiple grants to NIH, NSF and Department of Energy, entitled: "Influence of Electromagnetic Fields on Cells In Vitro," W.C. Parkinson (Physics), (P.I.), C.T. Hanks, (Co-P.I.)


IV. ADMINISTRATIVE ACTIVITIES:

SCHOOL OF DENTISTRY AND DEPARTMENT OF ORAL PATHOLOGY:

A. Master's Degree Thesis Committee for Dr. Donald George, Department of Orthodontics (Chairman).

B. University Committee for Use and Care of Animals, (Vice-Chairman), University of Michigan (Vice-Chairman).

C. University Senate Assembly, University of Michigan, 1984-1987.


REGIONAL AND NATIONAL:

A. Committee on Standardization of Biocompatibility Testing for Pulp Biology, Group of International Association for Dental Research, Chair, 1987

B. ADA Subcommittee on Biological Evaluation of Dental Materials.

V. OTHER RELEVANT ACTIVITIES:

PROFESSIONAL ORGANIZATIONS:

A. International Association for Dental Research.

B. American Academy of Oral Pathology.

C. American Association for the Advancement of Science.

D. Omicron Kappa Upsilon.

E. Tissue Culture Association (National).

F. Michigan Biomedical Materials and Prosthetic Group.

G. New York Academy of Sciences.

H. Sigma Xi.

REVIEWER FOR JOURNALS:

A. Journal of Dental Research.

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. Clinical Dermatology.
B. Dermatopathology, private consultations.
C. Dermatopathology, M-Labs.
D. Dermatopathology, UMH.
E. Dermatopathology, tutorials.

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. Neurocristic melanomas.
C. Regressing atypical histiocytosis.
D. Cyclosporin and psoriasis.
E. Anti-melanoma mouse monoclonal antibodies for detection of lymph node metastases.
F. Retinoic acid and aging.
G. Articles submitted for publication:

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Pigmented Lesion Clinic.
MEDICAL SCHOOL/HOSPITAL:

A. Dermatopathology Unit.
B. Co-Director, Clinical Microbiology Laboratory.

REGIONAL AND NATIONAL:

A. Executive Board Member, The American Society of Dermatopathology.
B. Editorial Board, Archives of Dermatology.
C. Member, Task Force on Dermatopathology, The American Academy of Dermatology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED 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 Necropsy Service, 0.5 months.
E. Continued to organize and maintain the Michigan Cardiac Registry, twelve months.
F. Continued to direct and interpret the Lung Morphometric Program, twelve months.
G. Teratology Unit, histology, as necessary, approximately 30 cases per year.
H. Children’s Cancer Study Group, coordinate all pathological material and data necessary for all children registered in national tumor protocols.
I. Bone Consultation Cases, intermittent backup for Lee Weatherbee.

II. TEACHING ACTIVITIES:

A. M2: Pathology 600, three whole class lectures on Pediatric Pathology.
B. M4: Pediatric Surgical Pathology, twelve months, while they were on their pathology electives.
C. Supervised M4s on Pathology elective, one rotation (four weeks).
D. House Officers in Pathology, daily reading of pediatric surgicals, twelve months.
E. House Officers in Pathology, gross and microscopic supervision of most pediatric necropsies, twelve months and adult cases 0.5 months plus call weekends.
F. Surgical Pathology Conference, one hour/week, twelve months.
G. Lectures on Pediatric Autopsy Pathology in Core Curriculum Series for House Officers in Pathology.
H. Gross Autopsy Conference, one hour/week, twelve months.
I. Supervised Pediatric Hematology Fellows (three) 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.

PROJECTS UNDER STUDY:

A. Continued detailed study of the lethal neonatal chondrodysplasias and their morphologic characterization.
B. Histologic studies of myocardium in hypoplastic left heart syndrome.
C. Participant in 14 institution study of associated lethal defects in hypoplastic left heart syndrome. (See Abstracts).
D. Study of effects of reversible pulmonary artery band in dogs with pediatric cardiologists and thoracic surgeons.
E. Description of extra-corporeal membrane oxygenator in patients post cardiac transplant with cardiac and general surgeons.
F. Review of the effects of pulmonary artery banding on the lung biopsy findings in young children with complete atrioventricular septal defect with pediatric cardiologists and thoracic surgeons.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Departmental ACACT.

MEDICAL SCHOOL/HOSPITAL:

A. Executive Committee for Mott/Women’s/Holden Unit. Chairman, Pediatric Diagnostic Laboratories Review Committee. (Completed charge, Fall 1986).

REGIONAL AND NATIONAL:

A. Member, American Board of Pathology Test Committee for Pediatric Pathology.
B. Member of the Education Committee of the Society for Pediatric Pathology, Subcommitte I, charged with the documentation and position preparation for subspecialty qualification.

V. OTHER RELEVANT ACTIVITIES:

A. Participating Contributor to Workshop Sessions of Robert Anderson as Visiting Professor of Pediatric Cardiology, Ann Arbor, Michigan, 8-10 January 1987.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

1. Polley, T.Z., Coran, A.G., Heidelberger, K.P. and Wesley, J.R.:


ARTICLES SUBMITTED FOR PUBLICATION:


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

1. Bernstein, J. and members of the Society for Pediatric Pathology (including K.P. Heidelberger): Renal Cortical and Medullary Necrosis in Infants with the Hypoplastic Left Heart Syndrome: Presented at the Annual Meeting of the Society for Pediatric Research, Anaheim, California, April 1987.
I. **CLINICAL ACTIVITIES:**

A. Neuropathologic examination of brains from autopsies at University of Michigan and those sent to us from elsewhere.

II. **TEACHING ACTIVITIES:**

A. Lecture and laboratory instruction of medical students and house officers in Pathology and other disciplines. Neural and Behavioral Sciences 600 and Neuropathology 858.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. USPHS NS 19825, "Recovery or malformation after fetal injury", in collaboration with Constance J. D'Amato and K.Sue O'Shea (co-investigators), Thomas M. Annesley, Ricardo V. Lloyd, James Varani, and Kenneth J. Weeks (consultants).

**PROJECTS UNDER STUDY:**

A. Narrowing of the aqueduct in the fetal rat leading to prenatal hydrocephalus can be brought about in several ways. In one of our models, radiation (approx. 200 rads) destroys large numbers of primitive cells in the early (11th day) cephalic neural tube leading to local overgrowth that obstructs the aqueduct. In the other, a mutant gene, first morphologically expressed around the 11th day, initiates the same outcome, but there is no cell killing. In both there is breakdown of the cephalic neuroepithelial basal lamina. We are exploring this disorder of the extracellular matrix (ECM) common to both models as an important initiating factor that leads to the hydrocephalus. Light microscopy and transmission and scanning electron microscopy, immunocytochemical and culture methods are being used. A goal is to determine why the ECM fails in the mutant and after 200 rads, but is not affected when 150 rads (also very destructive) is given and hydrocephalus does not occur. Preliminary results indicate that there is a lag in collagen IV formation in the mutant neuroepithelial basal lamina, compared with the normal, coincident with the breakdown of the latter. Also, mutant neuroepithelial cells in culture do not adhere to substrate containing collagen IV, which normals do.

In related work at other fetal stages, we have found that fetal brain macrophages produce the oxygen radical, superoxide anion. In other organs of adult subjects macrophage-produced oxygen radicals are harmful to normal
tissues. It is not known yet whether the superoxide in fetuses is harmful to normal cells.

B. Examine neuropathologically the autopsy brains from patients with Alzheimer’s, Huntington’s and other dementias, which brains are being simultaneously studied biochemically in a project conducted by Anne B. Young and John B. Penney, Department of Neurology.

IV. SERVICE ACTIVITIES:

A. Help plan work in I, II, III.

MEDICAL SCHOOL/HOSPITAL:

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

REGIONAL AND NATIONAL:

A. Review journal manuscripts.

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:
   A. Cytometry Laboratories.

II. TEACHING ACTIVITIES:
   A. Lectures: Senior Medical Students: Automated Cytology - Clinical and Research Applications.
   B. Faculty Advisor: Undergraduate Junior/Senior Honors Projects.
   C. Lectures: Medical Technology Students: Cytometry.
   D. Lectures: Pathology Residents: Cytometry.
   E. Faculty Advisor: Biomedical Engineering Program.
   F. Faculty Advisor: Residents’ Research Projects (Departments of Surgery and Otolaryngology).
   G. Faculty Advisor: College Work-Study Program.
   H. Faculty Advisor: Postdoctoral Fellows.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Cytometry Research and Development Project, EPICS Division and Diagnostics Division, Coulter Corporation (J.L. Hudson, Ph.D., Principal Investigator, P.A. Ward, M.D., Co-investigator), 1984-present.


C. Inflammatory Cells and Lung Injury (Supplement) 5 P01H131963-0352, NHLBI, (P.A. Ward, M.D., Principal Investigator, J.L.Hudson, Ph.D., and J.P. Robinson, Ph.D., Co-investigators-[Cytometry Core]), July 1986 through February 1989, $659,717 direct costs.

D. Leukocyte Defects Associated with Thermal Injury (IR29GM38827-01), NIDR, J.P. Robinson, Ph.D., Principal Investigator, J.L. Hudson, Ph.D., Consultant, July 1986 through February 1989, $659,717, direct costs.

E. Cytometric Immunostatus Assessment, The Procter and Gamble Company, Miami Valley Laboratories, J.L. Hudson, Ph.D., Project Director, $30,000 per year research gift grant for post doctoral positions, 1987-.

F. Clinical Trials of CP-248 in Osteoarthritis, The Pfizer Company, B.C. Richardson, M.D., Ph.D., Principal Investigator, J. Fantone, M.D., S. Kunkel, Ph.D., and J.L. Hudson, Ph.D., Co-investigators, July 1987-.


I. Automated Image Analysis Development Project, Coulter Corporation, J.L. Hudson, Ph.D., Principal Investigator, 1984-present.

J. Cytometry Core Laboratories, University of Michigan Cancer Center, J.L. Hudson, Ph.D., Core Director, R.F. Todd III, M.D., Ph.D., Laboratory Director-Simpson Memorial Institute Cytometry Laboratory, 1987-present.

PROJECTS UNDER STUDY:

A. A series of studies are in progress involving research and development for clinical applications, genetic toxicity, 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 and activation analysis, cytochemical analysis, neoplastic cell screening, and diagnosis (immune system, breast, cervical, bladder, colon, endocrine and head and neck tissues), monitoring resultant of recombinant DNA/molecular biologic manipulation of cells, prototype instrumentation development, instrumentation/computer networking, and software development for cytometry data analysis and cytometry database systems.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Cytometry Laboratory.
B. M-Laboratories/Pathology Associates.

MEDICAL SCHOOL/HOSPITAL:

A. Cell Identification Center.
B. Faculty Senate Assembly.
C. Government Relations Committee/Senate Assembly.
D. Advisory Committee, Medical School Research Computing.
E. University of Michigan Cancer Center/Director-Cytometry Core.

REGIONAL AND NATIONAL:

A. Reviewer:
   1. Cytometry, 1983--.
   2. CRC Press, 1985--.
   3. Brain Research, 1986--.
   4. J. Leukocyte Biology, 1986--.
   5. J. Histochemistry and Cytochemistry, 1987--.
B. Member, National Immunotoxicology Discussion Group.
C. Steering Committee: Clinical Applications of Cytometry, Charleston, South Carolina, September 30 through October 3, 1986, 1987--.

D. Consultant:
1. Coulter Corporation.
2. The Pfizer Company.
3. Alcohol, Aging and Immunity Center, University of Michigan.
4. FDA/Immunotoxicology Projects, Office of Nutrition.
5. CDC/NIOSH, Clinical Biochemistry Branch, Center for Environmental Health.
6. Lovelace Medical Foundation.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Hudson, J.L.: Cytometric Immunostatus Profile, Department of Immunology/Microbiology, College of Veterinary Sciences, Oregon State University, Corvallis, Oregon, December 7, 1986.
2. Hudson, J.L.: Clinical Cytometric Immune Profile, Department of Pathology, University of Oregon Medical School, Portland, Oregon, December 9, 1986.
3. Hudson, J.L.: Clinical Cytometry, Good Samaritan Hospital, Department of Pathology, Portland, Oregon, December 10, 1987.

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. Renal Pathology Service.
   B. Immunopathological evaluation of skin biopsies.
   C. Director, Electron Microscopy Service.
   D. Autopsy coverage.

II. **TEACHING ACTIVITIES:**
   A. Lecturer Renal Pathology - Second year pathology course.
   B. Lectures on Renal Pathology - Nephrology Fellows.
   C. Lectures on Renal and Skin Immunopathology - Pathology Residents.
   D. Laboratory Instructor: Second year pathology course.

III. **RESEARCH ACTIVITIES:**

   **SPONSORED SUPPORT:**
   C. Effectors in Pulmonary Hypertension from Monocrotaline. National Institutes of Health, $246,183 for three years. Co-investigator with Bob Roth.
   D. Mediators in IgA and IgG Lung Injury. National Institutes of Health, $466,791 for five years.
   F. Renal Center Grant. National Institutes of Health. Principal Investigator Section V and Core II. $444,520 for five years. (Funded August, 1987).

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

IV. **ADMINISTRATIVE ACTIVITIES:**

   **DEPARTMENTAL:**
   A. Director, Immunopathology Fellowship Program.
   B. Renal Pathology Conference - Biweekly.
   C. Departmental Appointment and Promotions Committee.
D. Departmental Residency Evaluation Committee.
E. Stobbe Funds Committee.

V. OTHER RELEVANT ACTIVITIES:
A. Consultant on Dermatology and Nephrology training grants.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES ACCEPTED FOR PUBLICATION:


ARTICLES SUBMITTED FOR PUBLICATION:


80
BOOKS AND CHAPTERS IN BOOKS:


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


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

II. TEACHING ACTIVITIES:
A. Medical Technology 418.
B. Attended and participated in CP Grand Rounds Conferences.
C. Attended and participated in CP Case-Study Conferences.
D. Trained Pathology, Hematology and Oncology, and Pediatric Hematology Residents in Immunohematology.
E. Provided instruction to CP Residents during their Blood Bank Rotations.
F. Developed 1987 Orientation Lecture Series for Residents in Clinical Pathology.
G. Coordinated 1986-87 Clinical Pathology Grand Rounds Conferences.
H. Coordinated 1986-87 Anatomic Pathology Conferences.
I. Co-Director, Current Topics in Blood Banking Conference, Department of Post-Graduate Medicine, June 3-5, 1987:
   1. Workshop Director - Blood Group Biochemistry.
   2. Speaker - Problems with the Crossmatch.
J. Invited Lecturer, Specialist in Blood Banking Program, Wayne State University.

III. RESEARCH ACTIVITIES:
PROJECTS UNDER STUDY:
C. Annesley, T.M. and Judd, W.J.: Clorox and their admixture: potential hazards.
D. Solid phase serology.
IV. SERVICE 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.
   3. Associate Editor, AABB Technical Manual.
   4. Vice-Chairman, Scientific Section Coordinating Committee.

C. Michigan Association of Blood Banks:
   1. Past President.
   2. Annual Meeting Program Committee.

D. Referee of articles submitted to Transfusion, Vox Sanguinis and Laboratory Medicine.

V. OTHER RELEVANT ACTIVITIES:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

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. Participant, Clinical Pathology Grand Rounds.
   4. Immunology Journal Club, Weekly.
   5. Graduate Student Conference, 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. Cell Differentiation within the liver.

**SPONSORED SUPPORT:**

STUDENT AND FELLOW RESEARCH PROJECTS:

A.  Joseph Wassef - "Uptake of Shigella by M cells in the pathogenesis of dysentery".
B.  Lori Armstrong - "The cellular basis for enhanced mucosal IgA memory responses."
C.  Larry Silbart - "The detection of AAF adducts in rat hepatocytes by RIA".

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A.  Clinical Pathology Committee.
B.  Biochemistry Section Committee.
C.  Resident Counselor.
D.  Stobbe Fund Committee.
E.  Department Executive Committee.

REGIONAL AND NATIONAL:

A.  Immunopathology Council (ASCP), (Chairman, 1985-1987).
B.  Editorial Board - Infection and Immunity (ASM), Clinical Chemistry.
D.  Chairman, Mucosal Immunity (ASM).
E.  Chairman, Immunopathology Rounds (ASCP).
F.  Member, Strategic Planning Committee.
G.  Chairman, Surface Marker Assay Symposium, College of American Pathologists.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

4.  "Ontogeny of B lymphocytes", Presented as part of the surface marker workshop at ASCP, Orlando, FL, October, 1986.

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. Inflammation/Immunopathology Series ICS-600.
B. Biochemistry 522B.
C. Epidemiology 570.
D. Core lectures in Immunopathology.
E. Teaching/research seminars in various departments.
F. Supervised the following students and postdoctoral fellows: Dr. Robert Streiter, Dr. Robert Spengler, Dr. Wendy Scales, and Michael Jarrard.
G. Doctoral Committee Member for the following graduate students: Wendy Scales, Marjorie Minkoff, Mohammad Hata, Sandra Reynolds.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH - Macrophage/Monocyte Signals in Lung Granuloma Formation; HL-R01-35276; Principal Investigator.
B. NIH - Macrophage Function in Pulmonary Inflammation; HL-R01-31237; Principal Investigator.
C. NIH - Inflammatory Cells and Lung Injury; Program Project HL-31963; Principal Investigator for Section II and Core II.
D. American Heart Association Established Investigator - Regulation of Pulmonary Granuloma Formation by Macrophages; Principal Investigator.
E. NIH - Modulation of Immune Complex Lung Injury by Prostaglandins; Co-investigator.

PROJECTS UNDER STUDY:

A. Regulation of macrophage signals that dictate immune responsiveness.
   1. la antigen expression.
   2. Synthesis of arachidonic acid metabolites.
   3. Interleukin-1 production.
   4. Tumor necrosis factor production.
B. Role of macrophages - lymphocyte interactions in the initiation, maintenance, and resolution of chronic immune response.
C. Regulation of macrophage gene expression.
D. Techniques used to study the above projects:
   1. High pressure liquid chromatography.
   2. Spectrophometry.
3. Immunofluorescence.
4. Image analysis.
5. Proliferation assays (IL-1 and IL-2 assays).
6. Cytotoxicity assays.
7. Molecular probe assays.

E. Collaborative Research Outside of Pathology:
1. Dr. Gene Higashi.
2. Dr. Joseph Lynch.
3. Dr. Roger Wiggins.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Space Utilization Committee (Chairman).
B. Search Committee for Academic Pathologist (Chairman).
C. Conduct Research Seminar Series.
D. Interview Candidates for Residency Program.

MEDICAL SCHOOL/HOSPITAL:

A. Medical School Financial Aid Committee.
B. Committee on Medical Student Research.
C. Committee on Use and Care of Animals.
D. Reviewer for Biomedical Research Council Grants.
E. Reviewer for Dental Research Institute Grants.
F. Reviewer for Diabetes Research and Training Center Grants.
G. Member, Michigan Cancer Center.

REGIONAL AND NATIONAL:

A. Associate Editor, Journal of Immunology, 1987-1990.
C. American Heart Association Undergraduate Research Committee.
D. Research peer review committee of the American Heart Association (Michigan).
E. Consultant/grant reviewer for Veteran’s Administration.
F. Grant reviewer, United States Department of Agriculture.
G. Grant reviewer, The Arthritis Society.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. University of Pittsburgh, Visiting Professor - Pulmonary Division, 1986.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS AND CHAPTERS IN BOOKS:


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


I. CLINICAL ACTIVITIES:
   A. Surgical Pathology - 18 weeks.
   B. Necropsy Pathology - 2 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, Michigan.

II. TEACHING ACTIVITIES:
   A. Lectures to sophomore medical students - Pathology 600 Course.
   B. Fourth Year medical student rotation in Pathology - 1 month.
   C. Lectures in basic histology and pathology for histotechnologists - 3 lectures.
   D. Lectures to pathology house officers.
   E. Resident elective in endocrine and soft tissue pathology and Immunoperoxidase - 2 months.
   F. Thesis Committee for Graduate Student in Dental School.
   G. Immunoperoxidase Rounds - twice monthly - 9 months.
   H. Supervised undergraduate in Student Medical Research Program.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Regulation of Rat Pituitary Hyperplasia and Neoplasia. NIH Grant 1R23 CA 37238, 3/84 - 2/87 and NIH CA 37238, 5/87 - 6/91, (PI - R. Lloyd).
   B. Analysis of Rat Pituitary Neoplasms with Monoclonal Antibodies. CTR Grant 1850, 1/1/86 - 12/31/86 and 1/1/87 - 12/31/87 (PI - R. Lloyd).
   C. Studies of Normal and Neoplastic Human Pituitary Tissues. NIH Grant CA 42951, 7/86 - 6/90 (PI - R. Lloyd).
   D. Member of Immunochemistry Core in the Gastrointestinal Hormone Research Core Center Grant, NIH - NIADDKD, 10/84 - 9/89, (PI - T. Yamada).

PROJECTS UNDER STUDY:
   A. Dopamine and estrogen receptor analyses in rat and human pituitary tissues.
   B. In situ hybridization as a research and a diagnostic technique.
   C. Development of monoclonal antibodies as diagnostic aids in surgical pathology.
   D. Immunocytochemical techniques for light and electron microscopy.
   E. Development of a reverse hemolytic plaque assay to study hormone secretion.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director of Immunoperoxidase Service.
B. Coordinator of Anatomic Pathology Journal Club.
C. Resident Selection Committee.
D. Department of Pathology Internal Review Committee.
E. Stobbe Fund Committee
F. Revision of Pathology House Officer Training Program Brochure.

MEDICAL SCHOOL/HOSPITAL:

A. Thyroid Therapy Conference - monthly.
B. Pituitary Study Group - monthly.
C. University of Michigan Cancer Center - Director of Immunochemistry/Tissue Procurement Core.
D. Medical School Admissions Committee - August 1983 to present.

REGIONAL AND NATIONAL:

B. Presentation at the Endocrine Society 69th Annual Meeting, Indianapolis, IN, June 10-12, 1987.
C. Editorial Board - American Journal of Surgical Pathology.
E. Ad Hoc member of Pathology B Study Section, October 20-22, 1986.
F. Pathology B Study Section, National Cancer Institute, Member, 1987.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

3. International Academy of Pathology Course on Advances in the Application of Immunocytochemistry to Diagnostic Surgical Pathology, March 13, 1987.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


10. Dafoe, D.C., Riser, B.C., Lloyd, R.V.: Differences in susceptibility to EMC virus induced diabetes in two Balb/c mice colonies. (in press).


BOOKS/CHAPTERS IN BOOKS:

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


I. CLINICAL ACTIVITIES:

A. Clinical Immunology Diagnostic Service - sign out of serum and urine protein electrophoresis, immunofixation, and immunoelectrophoresis; terminal transferase immunofluorescence.

II. TEACHING ACTIVITIES:

A. Supervision of two postdoctoral fellows (Robert Larsen, Ph.D., and Jolanta Kukowska-Latallo, Ph.D.) and an undergraduate student (Todd Crissey).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "The Molecular Biology of Intracellular Lipid Transport", NIH DK-38482 (50% effort), $63,547/year direct cost ($317,737/five years), 8/1/86-7/31/91.


PROJECTS UNDER STUDY:

A. Structure and function of intracellular lipid transport proteins; liver and enterocyte fatty acid binding proteins. The major emphasis is on the analysis of the physiologic function(s) of these polypeptides. This involves the establishment and characterization of a system in which fatty acid binding protein cDNAs are expressed in a controlled fashion in fibroblasts, using eukaryotic expression vectors.

B. Structure and regulation of mammalian glycosyltransferase genes. Efforts are focused on the isolation of the gene(s) for the human ABO blood group glycosyltransferases, using mammalian gene transfer techniques.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL: None.

MEDICAL SCHOOL/HOSPITAL: None.
REGIONAL AND NATIONAL:

C. Member, American Board of Pathology Test Committee for Molecular Pathology.

V. OTHER RELEVANT ACTIVITIES:

A. Howard Hughes Medical Institute, Assistant Investigator.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1986 - 30 JUNE 1987

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.
E. Medical Director of Medical Technology Program; Eastern Michigan University.
F. Ann Arbor Veterans Administration Medical Center - monthly consultant.
G. Director, M-Labs, Department of Pathology, The University of Michigan.
H. Scientific Consultant, MDS Laboratories, Toronto, Canada.
I. Consulting Staff, Central Michigan Community Hospital, Mt. Pleasant, Michigan.
K. Consultant, The University of Michigan Cancer Center.

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. Oral Diagnosis 644; participant.
C. Pathology 600, Lecturer, Head and Neck Pathology.
D. Coordinator of resident teaching with Dr. Carl Pierson in the clinical laboratory under my direction (Microbiology).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. 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, 7/1/85 - 6/30/88.
C. Consultant, Principal Investigator, Thomas E. Carey, Ph.D., Department of Otorhinolaryngology, The University of Michigan. Human Squamous Cell Carcinoma: Culture and Serology, NIH R01-CA28564-06, $139,388/year, $815,326/project period, 1985-1990.


PROJECTS UNDER STUDY:


B. See laboratories under my direction.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

B. Director, Residency Program, Department of Pathology, 1982-present.

C. Chairman, Resident Selection Committee, Department of Pathology, 1982-present.

D. Director, M-Labs, Department of Pathology, 1986-present.

MEDICAL SCHOOL/HOSPITAL:

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


C. Advisor, Medical and Biological Illustration Program, The University of Michigan Medical School, 1986-1989.


REGIONAL AND NATIONAL:

A. College of American Pathologists, Fellow, 1975-.
   1. Board of Governors, 1986-.
   2. Budget Planning and Review Committee, 1986-.
   3. Credentials Committee, 1986-.
   4. Liaison, Standards Committee, 1986-.
   5. Liaison, Commission on Anatomic Pathology, 1986-.
   6. Micro-Fellowship Committee, 1987-.
   7. Building Committee, 1987-.
   8. Subcommittee on National Institute of Drug Abuse (NIDA), 1987-.
B. National Committee for Clinical Laboratory Standards - Corresponding Membership, 1987.
C. American Society of Clinical Pathologists, 1975.
F. Transilom Committee, The University of Michigan School of Dentistry, 1987-.
   1. Chairman, Operational Analysis Task Force.
   2. Chairman, Computer Committee.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


ARTICLES SUBMITTED FOR PUBLICATION:


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 autopsy neuropathologic material with house officers and faculty. The cases shared with other faculty members were from University Hospital, University Associated Hospitals, and State Institutions. Medical Examiner Cases.

B. Daily supervision of House Officer or Staff participation in diagnostic neuropathology and electron microscopic neuropathology. Responsible for final report and diagnosis in each category.

C. Consultations on diagnostic neuropathology from other hospitals and medical centers.

D. Ceroid Service, buffy coat division.

E. Primary substitute for nerve and muscle biopsy diagnostician.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

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 other faculty members.

2. Weekly brain cutting with pathology house officers.

3. Review all neurosurgically removed material in this hospital in CME-approved conference for Pathology, Neurology 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. 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.

7. Bi-weekly adult Brain Tumor Board 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. Teach laboratory techniques to our laboratory technologists.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Consultant on USPHS grant, #NS 19825 application, "Recovery or Malformation After Fetal Injury.; Dr. Samuel Hicks, Principal Investigator, 7/1/84 - 6/30/87.
B. National Institutes of Health Grant #1R01 CA33768-01A3, "Intra-arterial BUdR Radiosensitization of Malignant Gliomas", Co-investigator, 5/1/86 - 4/30/89.
C. National Institutes of Health Grant #R29, "Antigenic Instabilities and Clonal Heterogeneity in Human Gliomas", 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. Action pending.
D. American Cancer Society, Grant #PDT-44699, "Antigenic Instabilities and Clonal Heterogeneity in Human Gliomas", Principal Investigator. Action pending.
E. National Institutes of health, "Brain Tumor Imaging with Benzodizepine Analogs", Co-investigator. 1/1/87 - 1/1/90.
F. Infuse-Aid Corporation, "Treatment of an MPTP Primate Model of Parkinson’s Disease with Intraventricular Infused Dopamine", Co-investigator.
G. National Institutes of Health Program Project "Alzheimer’s Disease Patient Registry", Co-principal Investigator of Pathology Core Grant. Action pending.
H. National Institutes of Health Program Project PO CA, "Regional Advantage of Biochemical Response Modulators", Co-principal Investigator of Pathology Core Grant. Action pending.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Growth, spread and antigenicity of ENU-induced gliomas in rats, with Constance D’Amato and Terry Hood. Submitted to Neurooncology.
D. Extracellular matrix products of gliomas with Drs. James Varani and Suzanne Fligel.
IV. SERVICE 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 ultrastructural neuropathology.

REGIONAL AND NATIONAL:
A. Reviewer for Pathology, Neuropathology, Oncology and Neurooncology journals or texts.
B. Invited Contributor to ASCP Anatomic Pathology II Series: Rapid Lectin-DNA Staining of Pituitary Biopsies.
C. M-Lab Neuropathology services.

V. OTHER RELEVANT ACTIVITIES:
A. Faculty Advisory Committee for graduate student James Hopkins, Dr. Bernard Agranoff, Chairman.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

**BOOKS AND CHAPTERS IN BOOKS:**


I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

A. Taught major portion of Physiology 581, "Mammalian Reproductive Endocrinology", plus occasional other lectures.
B. Supervision of one postdoctoral fellow: Eleanor Sims.
C. Primary Supervision of 6 graduate students:
   1. Emilie Bell, CMB.
   2. Jane Wiesen, CMB.
   3. Hal Cantor, Bioengineering.
   4. Craig Halberstadt, Bioengineering.
   5. Rhonda Brand, Bioengineering.
   7. (also serving on several other dissertation committees).
D. Supervision of 2 undergraduate students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

B. Mellon Foundation Grant, 1985-88, $300,000 (total).
D. NIH-T32-HD-07048-12. "Training program in reproductive endocrinology" (6 predoc; 4 postdoc), 1985-90, $972,975 (direct cost), Principal Investigator.
H. NSF. "Efficient monoclonal antibody production", 9/1/87-8/31/90, $560,292 (total, amount pending final approval), Bernhard Palsson, P.I., (co-investigator).
SUBMITTED:

B. Submitted: NSF. Cluster research proposal for molecular biosensing, H.Wang, P.I., (Co-investigator).

PROJECTS UNDER STUDY:

A. Development of a computer-controlled perfusion 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 and analysis of data from scientific instruments.
E. Localization and regulation of mRNAs in rat granulosa cells.
F. Application of principles of cellular bioengineering to the growth and function of mammalian cells.
G. Articles submitted:

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Director, Consortium for Research in Developmental and Reproductive Biology.
B. Director, Reproductive Endocrinology Program.
C. Member, Review and Search Committee for Department of Anatomy and Cell Biology.
D. Member, Ad Hoc Committee on Classified Research.

REGIONAL AND NATIONAL:

A. Member, NICHD Population Research Committee, 1986-.
B. Ad Hoc Member, NIDDK Endocrinology Research Program Advisory Committee, 1986-.
C. Ad Hoc Member, NIDDK Hormone Distribution Program Subcommittee, 1986-.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


3. October 15-17, 1986, Site Visit, Boston.


7. December 10, 1986, Wayne State University, Lecture entitled, "Ovarian Inter cellular Communication".

8. January 7-9, 1987, Site Visit, Chapel Hill, NC.


11. April 14, 1987, Sixth Annual Confrence on Federal, State and Industry research and Development Opportunities, Novi, MI, participated in Biotechnology/ Biomedical Technology Panel Discussion/presentation.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

I. CLINICAL ACTIVITIES:

A. Cytopathology - 26 weeks.
B. Director, Cytopathology Laboratory - full time.
C. Consultation Service, Department of Pathology: Cytopathology, pulmonary pathology and gynecologic pathology - 12 months.
D. Necropsy service - on call coverage.
E. Consultant, Breast Care Center - 12 months.

II. TEACHING ACTIVITIES:

A. Pathology 600 - Sophomore Medical Students, class lectures - 5 contact hours.
B. Pathology 600 - Sophomore Medical Students, laboratory instructor - 39 contact hours.
C. Pathology residents - supervision and teaching during cytopathology rotations and when covering necropsies.
D. Pathology residents - biweekly cytopathology conferences.
E. Gynecology - Pathology - Radiation Oncology Conference-backup coverage.

III. RESEARCH ACTIVITIES:

A. Cytopathology, with particular reference to serous fluids and aspiration cytology.

PROJECTS UNDER STUDY:

A. Aspiration cytology with particular reference to pulmonary, mammary and adrenal lesions.
B. Cross contamination in the cytologic staining circuit.
C. Curschmann's spirals in serous fluids.
D. Cytologic manifestation of rheumatoid disease in serous fluids.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Cytopathology Laboratory.
B. Department of Pathology Review Committee, 1980-87.
C. Department of Pathology Medical Service Plan Executive Committee.
REGIONAL AND NATIONAL:

A. Secretary-Treasurer, American Society of Cytology.
D. Chairman, Editorial and Publications Committee, International Academy of Cytology.
E. Membership Committee, International Academy of Cytology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

2. Naylor, B.: Non-neoplastic entities manifested in non-gynecologic cytologic specimens. Lecture, Department of Pathology, Henry Ford Hospital, Detroit, Michigan, September, 1986.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


HONORS

1. Award in recognition of excellence in teaching, University of Michigan Medical School Class of 1989, April, 1987.
I. **CLINICAL ACTIVITIES:**

A. Dermatopathology, University of Michigan Hospitals.
B. Dermatopathology, M-Labs.
C. Dermatopathology, Private Consultations.
D. Dermatology, Melanoma Clinic.

II. **TEACHING ACTIVITIES:**

A. Pathology and Dermatology House Officers Lecture Series.
B. Clinical Pathology Orientation Lecture and Laboratory.
C. 5 Week Medical Student (Year 2) Research Elective.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

B. NIH First Award (60% effort: $90,000 Direct Costs; Aug 1987 - Aug 1989): Interaction of Gamma Interferon with Keratinocytes.
C. Consultant - NIH Mycosis Fungoides Epidemiology Study - Stanford University.

**PROJECTS UNDER STUDY:**

A. Role of Gamma Interferon in Modulating Adherence Reactions Between Resting and Activated Mononuclear Leukocytes and Keratinocytes.
B. Characterization of Gamma Interferon Receptor on Normal and Psoriatic Keratinocytes.
C. Gamma Interferon Activation of Protein Kinase C in benign and malignant keratinocytes.
D. Binding of lymphocytes to epidermis and vessels of frozen sections of psoriatic skin and other dermatoses.
E. Characterization of type of Beta Interferon produced by virally infected keratinocytes.
F. Interrelationship between gamma interferon, and Tumor necrosis factor and PGE$_2$ and IL-1 production by keratinocytes and monocytes.
G. Characterization and biological significance of Thrombospondin production by keratinocytes and melanocytes.
H. Role of Extracellular matrix in adherence reactions involving resting and activated mononuclear leukocytes.
I. Characterization of effect of Cyclosporin A on Phorbol ester induced cutaneous inflammation and hyperplasia.
J. Immunophenotypic analysis of response of psoriasis and 22 other dermatological conditions to Cyclosporin A.

IV. ADMINISTRATIVE ACTIVITIES:

REGIONAL AND NATIONAL:


V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

5. Self Assessment Course Faculty Participant, American Society of Dermatopathology, 4 December 1986, New Orleans, Louisiana.
6. Recent Advances in Dermatopathology From Stanford University, Grand Rounds, Department of Dermatology, University of California at San Francisco, 17 December, 1986, San Francisco, California.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

25. Nickoloff, B.J., Lewinsohn, D., Butcher, E., Krensky, A.M., Clayberger, C.: Recombinant gamma interferon increased binding of peripheral blood mononuclear leukocytes and a
malignant cutaneous squamous carcinoma cell line which is blocked by antibody against the LFA-1 Molecule. J. Investig. Derm. (in press).

BOOKS/CHAPTERS IN BOOKS:


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

I. CLINICAL ACTIVITIES:
   A. Head, Section of Clinical Pathology, University Hospitals.
   B. Director, Blood Bank, University Hospitals.
   C. Diagnosis of surgical specimens from University Hospitals patients.
   D. Diagnosis of surgical specimens from M-Labs.
   E. Diagnosis of consultation cases on surgical pathology of breast.
   F. Medical coverage of Transfusion Service.
   G. Medical coverage of Necropsy Service.
   H. Member, University of Michigan Breast Care Center.

II. TEACHING ACTIVITIES:

   MEDICAL SCHOOL/HOSPITALS:
   A. Lectures on breast pathology (two) and transfusion medicine (four) to sophomore class.
   B. Presentation on breast cancer to Interphase Programs.
   C. Presentation of monthly Conference on Surgical Pathology to Section of General Surgery (Aug-Dec, 1986).
   E. Course on Transfusion Medicine presented to Pathology and Hematology/Oncology House Officers.
   F. Seminars and lectures on Pathology of Breast to Pathology House Officers.
   G. Lecture on Posttransfusion AIDS to Department of Surgery, Grand Rounds.
   H. Lecture on blood component therapy to Department of Anesthesiology.
   J. Lecture on Posttransfusion AIDS to Section of Pediatric Cardiology.

III. RESEARCH ACTIVITIES:

   PROJECTS UNDER STUDY:
   A. Treatment of acute Guillain-Barre Syndrom with plasma exchange (in cooperation with Department of Neurology - Dr. J. Albers).
   B. The pathology of mammary hamartomas.
   C. Prognostic significance of intraductal carcinoma of breast.
   D. Clinicopathologic study of multiple papillomas of breast.
   E. Impact of prozone effect on ABO compatibility testing.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Head, Section of Clinical Pathology.
B. Executive Committee, Departmental Medical Service Plan.
C. Medical Director, Medical Technology Program.
D. Laboratory Communication Committee.
E. M-Labs Operations Committee.

MEDICAL SCHOOL/HOSPITAL:

A. Executive Committee, Medical School.
B. Faculty Committee on Search for President of University of Michigan.
C. Medical Center Clinical Priorities Committee.
D. Laboratories Committee, Chairman.
E. Transfusion Committee, Chairman.
F. Breast Care Center.
G. Multi-Organ Transplantation Committee (liver homotransplantation).
H. Ad Hoc Committee on HTLV-III testing in University Hospitals.
I. Bone Marrow Transplantation task force.

REGIONAL AND NATIONAL:

A. American Association of Blood Banks:
   1. Transfusion Transmitted Diseases (AIDS) Task Force, Vice Chairman.
   2. Nominations Committee.
   3. Liaison Committee on Circular of Information for Use With Human Blood and Components.
   4. Awards Committee.
   5. Scientific Program Committee.
B. American National Red Cross:
C. American Society of Clinical Pathologists:
   2. Director, Check Sample Program, Anatomical Pathology.
   4. Nominating committee.
D. Michigan Society of Pathologists:
   1. Medical Care Insurance Committee.
   2. Medical Legislation Committee.
E. American Medical Association:
   1. Advisory Panel on AIDS.
F. Arthur Purdy Stout Society of Surgical Pathologists:
   1. Program Chairman.
G. Detroit Red Cross:
   1. Medical Advisory Committee.
H. Consultant, Veterans Administration Hospital, Ann Arbor.
I. Test Committee on Blood Banking, American Board of Pathology.
V. OTHER RELEVANT 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 Annual Symposium.
G. Editor, Anatomical Pathology Check Sample Program, American Society of Clinical Pathologists.
H. Reviewer, Cancer.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


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

I. **CLINICAL ACTIVITIES:**
   A. Autopsy Service.
   B. Serum Angiotensin Converting Enzyme Assay.

II. **TEACHING ACTIVITIES:**
   A. Pathology Residents - Autopsy.
   B. Jean Ying - Undergraduate Honor Student.
   C. Gregg Downer, M.D. - Postdoctoral Fellow.
   D. Elizabeth Denholm, Ph.D. - Postdoctoral Fellow.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. Mechanisms and Genetic Regulation of Pulmonary fibrosis, R01-HL28737-04. Principal Investigator, S.H. Phan, Ph.D., M.D. 20% effort, $100,978.

B. Macrophage Function in Lung Injury and Fibrosis. P01-HL31963, Section IV. Principal Investigator, S.H. Pha, Ph.D., M.D., 35% effort, $75,490 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. Lung macrophage/monocyte and T-cell/T-cell subset kinetics, recruitment and activation during lung injury and fibrosis.

B. Fibroblast function - in terms of chemotaxis, collagen metabolism and proliferation during lung injury, and their regulation by inflammatory and immune cell-derived mediators.

C. The state of macrophage activation as determined by la antigen expression and its relationship to production of arachidonate metabolites active in fibroblast activation.

D. Fibroblast arachidonate metabolism in response to macrophage-derived mediators and their effects on fibroblast collagen synthesis and proliferation.

E. The effects of 5-lipoxygenase inhibitors on murine pulmonary fibrosis.

F. Regulation of macrophage and T-cell fibroblast growth factor production by arachidonate metabolites in normal and diseased states.
G. Leukotriene and tumor necrosis factor regulation of fibroblast collagen synthesis, and expression of receptors for these molecules.
H. Analysis of bleomycin receptors on alveolar macrophages and fibroblasts.
I. Comparative analysis of bleomycin hydrolase activities in murine strains and their relationship to resistance to bleomycin-induced pulmonary fibrosis.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Member, Research and Space Advisory Committee.

MEDICAL SCHOOL/HOSPITAL:
A. Reviewer, Biomedical Research Council Research Grant Application.

REGIONAL AND NATIONAL:
A. Member, Pathology A Study Section (Review research grant applications for National Institutes of Health) Public Health Service, NIH.
B. Reviewer for the following journals: Journal of Immunology, Laboratory Investigation, Journal of Clinical Investigation, American Review of Respiratory Diseases, Experimental Lung Research, Infection and Immunity, American Journal of Pathology, and Chest.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. Associate Director, Clinical Microbiology Laboratory.
B. Coordinator, Infectious Disease Laboratory Rounds.

II. TEACHING ACTIVITIES:

A. Pathology 411, sexually transmitted diseases, antimicrobial susceptibility testing.
B. Microbiology 505, clinical microbiology for graduate students.
C. Coordinator, Pathology house officer Microbiology Laboratory rotation.
D. Lecturer, Clinical Pathology Grand Rounds.
E. Lecturer, Clinical Pathology Core Lecture Series.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Antimicrobial susceptibility of Bacteriodes fragilis in the United States, Merck, Sharpe and Dohme; $4,000/yr.
B. Clinical evaluation of the "Candidate-Super" latex kit for Candida Vaginosis, Difco Labs, $500/3 months.
C. In vitro susceptibility of anaerobes to cefazizoxime and other selected B-lactam antibiotics, Smith, Kline and French; $1000/6 months.

PROJECTS UNDER STUDY:

A. Ofloxacin for the treatment of urinary tract infections - with Urology (Dr. Sonda).
B. Microtiter methods for group IV AFB susceptibility testing - with Sinai Hospital (Dr. Denys) and MDPH (Dr. Robinson).
C. Alternative methods for direct Chlamydia testing.
D. DNA probes for direct antigen detection in specimens.
E. Frequency and sequelae of contaminated vascular procedures - with Surgery (Drs. Wakefield and Stanley)
F. Application of gas-liquid chromatography for bacterial identification.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:

A. Clinical Pathology Laboratory Director’s Committee.
B. M-Labs Technical Advisory Committee.
C. Coordinator, Clinical Microbiology Senior Staff Meeting.
D. Coordinator, Clinical Microbiology Inservice Education Program.

MEDICAL SCHOOL/HOSPITAL:

A. Alternate, Hospital Infection Control Committee.

REGIONAL/NATIONAL:

A. Program committee, Tricounty Clinical Microbiology meeting (biannual).
B. Alternate, Technical Advisory Committee, Bureau of Laboratory and Epidemiological Services, Michigan Department of Public Health.

V. OTHER RELEVANT ACTIVITIES:

A. Reviewer, Journal of Clinical Microbiology (2nd year).

INVITED LECTURES/SEMINARS:

1. Oral Surgery Seminar: Efficient use of the Clinical Microbiology Laboratory.
2. Infectious Disease Seminar: Current blood culturing techniques.

IV. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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


I. **CLINICAL ACTIVITIES:**

A. Oral Pathology biopsy service: four months/year (5,000 biopsies/year).
B. Patient consultations: Oral Pathology/Dermatology Referral Service—Friday mornings.

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.
E. Revision of Clinical Oral Pathology for Dental Students.

III. **RESEARCH ACTIVITIES:**

**PROJECTS UNDER STUDY:**

A. Langerhans cells and "aberrant" HLA-DR expression in normal and inflamed gingiva.
B. Immunocytochemistry of gingival crevicular smears.
C. Immunoelectron microscopy (immunogold) of gingival differentiation antigens.

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Thesis Committee Chairman for Dr. D.E. Turunen, Department of Periodontics.

**DENTAL SCHOOL:**

A. Member of Transition Committee, 1987-1989.
B. Chairman, Dental School Financial Task Force.

**REGIONAL AND NATIONAL:**

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

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATIONS IN REFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. Responsible for biopsy service four months/year.
B. Responsible for clinical patient diagnostic problems, both in house and state-wide referral, and management thereof on an as needed basis eleven months per year.

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. Oral Pathology seminar to Graduate Students in Restorative Dentistry, Course 691.
D. Oral Pathology Seminar to Graduate Students in Periodontics, Course 781 (course director).
E. Dental Hygiene, Sophomore Students, Course 220.
F. Dental Hygiene, Course 313 Senior Seminar and preventive Dentistry, Course 362 to Senior Dental Hygiene Students.

III. RESEARCH ACTIVITIES:

SPONSORED RESEARCH:

A. 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.
B. Efficacy and safety of topical acyclovir cream versus placebo cream for the prevention of herpes simplex labialis experimentally induced with ultraviolet light. Principal Investigator. Sponsor: Burroughs Wellcome Co.

IV. ADMINISTRATIVE ACTIVITIES:

A. 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. Medical Director, National Board of Directors, American Cancer Society.
B. Member, Executive Committee, Michigan Division, American Cancer Society.
C. Member-at-Large, Board of Directors, Michigan Division, American Cancer Society.
D. Chairman, Public Issues Committee, American Cancer Society, Michigan Division.
E. Consultant, Committee on Cancer Control, Hospital and Institutional Dental Service, Michigan Dental Association.
F. Member, Science Information Committee, American Association for Dental Research.
G. Member, Board of Appeals, Commission on Accreditation, Graduate Specialty Education Programs, American Dental Association.
H. Consultant, Committee on Hospital and Institutional Dentistry, American Dental Association.
I. Consultant, Council on Dental Education, American Dental Association.
J. Consultant, Council on Dental Therapeutics, American Dental Association.
K. Civilian Professor and Consultant, Office of the Surgeon General, United States Army.
L. Consultant, Research Screening Committee, Delta Dental Fund.
M. Manuscript Consultant and Reviewer:

V. OTHER RELEVANT ACTIVITIES:

A. Vice President and Program Chairman, The Science Research Club of The University of Michigan.

INVITED LECTURES AND SEMINARS:

1. Testimony, Smokeless Tobacco Hearings in Grand Rapids, Traverse City and Detroit.
2. Trident Seminar, Cancun, Mexico.
3. Dallas Mid-winter meeting, Dallas, Texas.
4. International Association for Dental Research, Viral Diseases Symposium, Chairman, Chicago, Illinois.
5. Dental Research Institute-School of Dentistry Symposium on Dentofacial Pain, Chairman.
6. Genesee County Health Department, AIDS Conference, Flint.
7. National Health Service Corps Region V Clinical Conference on Transitions in Medicine, Lansing, Michigan.
10. Henry Ford Hospital, Dearborn, Michigan.
11. V.A. Hospital, Ann Arbor.
12. Miscellaneous component societies, civic clubs and study clubs.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

I. CLINICAL ACTIVITIES:
   A. Fine needle aspiration of superficial tumors, bedside or in clinic, full time (26 weeks) and backup (22 weeks).
   B. Gynecologic pathology consultation service, 12 months.
   C. Surgical Pathology - backup coverage.
   D. Cytopathology, full time (26 weeks) and backup coverage (22 weeks).

II. TEACHING ACTIVITIES:
   A. Gynecologic tumor conference, twice weekly.
   B. Sophomore pathology lectures (four): Diseases of: Cervix, Vagina, and Vulva; Uterus and Endometrium; Ovaries; Placenta and Trophoblastic Disease.
   C. Pathology residents, supervision and teaching during cytopathology rotation, for gynecologic surgical pathology cases, and when covering necropsies.
   D. Pathology Residents, gynecologic pathology (4) and parasitology lectures (2).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Radioimmunodiagnosis and Radiotherapy of Ovarian Carcinoma, Richard L. Wahl, M.D., Principal Investigator. NIH-sponsored.

PROJECTS UNDER STUDY:
   A. Carcinosarcoma and malignant mixed mesodermal tumors of the ovary. Submitted for publication.
   B. Cervical adenocarcinoma in situ (study based on 18 cases). Presented at Western Association of Gynecologists Meeting - 1986. Submitted and being revised for publication.
   C. Malignant nerve sheath tumor of the vulva. Submitted for publication.
   D. Adenocarcinoma and adenosquamous carcinomas of the uterine cervix.
   E. Coexistent endocervical adenocarcinoma and mucinous adenocarcinoma of the ovary: A clinicopathologic study of two cases.
   F. Endometrial adenocarcinoma and endometrioid adenocarcinoma of ovaries in a 27-year-old.
   G. Glassy cell carcinoma of the cervix.
BERTRAM SCHNITZER, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1986 - 30 JUNE 1987

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

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:
   A. Daily sign-out of bone marrow biopsies and aspirates.
   B. Daily review of blood smears and body fluids in Hematology Laboratory.
   C. Daily review of in-house and consultation hematopathology cases and correlation with flow cytometry data and immunoperoxidase studies.
   D. House Officer Conferences in Hematopathology.

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. L. Dabich.
   B. Southwest Oncology Group (SWOG). Combination chemotherapy of unfavorable histology non-Hodgkin’s lymphomas with alternating regimens of CHOPP and CVB, with Dr. L. Dabich.

SERVICE ACTIVITIES:

DEPARTMENTAL:
   A. Diagnostic Surgical Pathology, Hematopathology.
   B. Diagnostic Clinical Flow Cytometry.
MEDICAL SCHOOL/HOSPITALS:

A. Hematology Laboratory.
   1. During the first full year of consolidation of the Pediatric and Adult Hematology Laboratories with the Hematology Laboratory of the Department of Pathology, the Laboratory carried out a total of 454,604 tests which represents an increase of 15% over the previous year. The percentage of labor-intensive differential white blood cell counts increased by 14%. The labor-intensive phase platelet counts decreased because instrument counts down to $30 \times 10^9/L$ are now being reported. Microscopic examinations of urines has increased by 10%. The number of body fluids requiring review by the Hematopathologist has increased by 17% over last year when the increase was 22%.

   The satellite laboratory is located in the clinic area in the Taubman Outpatient Building services both Pediatric and Adult Hematology/Oncology Clinics as well as other clinics requiring hematologic studies. This arrangement has worked well for providing rapid patient care.

   2. A formal daily bone marrow sign-out has been initiated.

   3. Automated platelet count. The number of intensive manual phase-contrast platelet counts has been reduced by an automated method. This automation has resulted in a more rapid turnaround time in the Laboratory and in a faster reporting of results to the clinician without compromising patient safety.

   4. Revised and improved some of the cytochemistry procedures.

   5. Stopped carrying out bone marrow differential counts of pediatric bone marrows.

B. University of Michigan Health Service Laboratories.

REGIONAL AND NATIONAL:

A. Society of Hematopathology, Executive Committee.

B. Southwest Oncology Group:
   1. Lymphoma Subcommittee.
   2. Leukemia Subcommittee.

C. Regional Center Review Pathologist, Southwest Oncology Group.

D. Member, Executive Committee, National Panel for Lymphoma Clinical Studies.

E. Children’s Cancer Study Group: Review pathologist of lymphoma cases.
V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARD:

A. American Journal of Clinical Pathology.
B. Diagnostic Immunology.
C. Hematologic Pathology.

SITE VISITS:


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:

I. CLINICAL ACTIVITIES:

A. Surgical Pathology Coverage of M-Labs cases including all cases from:
   1. Albion Community Hospital, Albion, Michigan.
   5. Other various institutions.

B. Autopsy Coverage for Albion Community Hospital, Albion, Michigan.

C. On-site coverage at Central Michigan Community Hospital, Mount Pleasant, Michigan, for two months.

D. Clinical consultations and Hematology review at Chelsea Community Hospital, Chelsea, Michigan and Metric Medical Laboratories, Ann Arbor.

E. Rotation with other staff pathologists.
   1. Four weeks coverage at the University Hospital of evening frozen sections.
   2. Weekend autopsy call.

II. TEACHING ACTIVITIES:

A. Supervise residents in gross cutting of M-Labs cases and review microscopic material with residents in all interesting cases.

B. Read out all M-Labs autopsies with residents.

III. RESEARCH ACTIVITIES: None.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Associate Director, M-Labs.
   1. Participate in planning, marketing, and implementation of M-Labs programs.

B. Director, Laboratory at Albion Community Hospital, Albion, Michigan.

C. Chairman, Tissue/Transfusion Committee, Albion Community Hospital, Albion, Michigan.

D. Chairman, Infection Control Committee, Albion Community Hospital, Albion, Michigan.

E. Director of Laboratories, Chelsea Hospital, Chelsea, Michigan.

F. Tissue Committee, Chelsea Hospital, Chelsea, Michigan.

G. Laboratory Committee, Chelsea Hospital, Chelsea, Michigan.
H. Associate Laboratory Director, Metric Medical Laboratories, Ann Arbor, Michigan.

V. **OTHER RELEVANT ACTIVITIES:** None.

VI. **PUBLICATIONS:** None.
I. **CLINICAL ACTIVITIES:**
   
   A. Hematopathology Diagnostic Service - interpretation of peripheral smears, body fluid cytologies, bone marrow aspirates and biopsies, cytochemical stains.
   
   B. Flow Cytometry Diagnostic Service - 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:**

   A. Daily sign-out of cases in flow cytometry and hematopathology with pathology residents.
   
   B. Monthly seminars on the clinical applications of flow cytometry for the residents and fellows on the Hematology/Oncology Services.
   
   C. Lecturer, Hematopathology, Medical School.
   
   D. Laboratory seminar leader, General and organ Systems Pathology, Medical School.
   
   E. Lecturer, Clinical Applications of Flow Cytometry, Pathology Residents Core Lecture Series.
   
   F. Pediatric/Adult Leukemia Conferences.
   
   G. Adult Lymphoma Conferences.

III. **RESEARCH ACTIVITIES:**

   **SPONSORED RESEARCH:**

   A. NIH, NCI Physician Investigator Award, ($170,000; 3.5 years; 1 July 1984 through 31 December 1987): Lymphocyte migration and the metastatic process.
   
   B. American Cancer Society Research Award ($109,000; 4 years; 1 July 1984 through 30 June 1988): Lymphocyte migration and the metastatic process.
   
   C. Michigan Arthritis Foundation Research Award ($8,000; 1 year; 1 January through 31 December 1987): The role of lymphocyte migration in chronic inflammatory arthritis.
   
   D. University of Michigan Cancer Center Grant ($15,000; 1 year; 1 February 1987 through 31 January 1988): The role of lymphocytic phosphomannosyl receptors in mediating the attachment of lymphocytes to high endothelial venules (HEV).
PENDING:
A. NIH, NCI Physician Investigator Award, Competitive Renewal ($116,000; 2 years; 1 January 1988 through 31 December 1989): Lymphocyte Adhesion and the metastatic process.
B. American Cancer Society Research Grant, Competitive Renewal ($119,525; 2 years; 1 July 1988 through 30 July 1990): Human lymphocyte migration and the metastatic process.
C. NIH, Multipurpose Arthritis Center, Development and Feasibility Grant ($143,469; 3 years; 1 January 1988 through 31 December 1990): The role of lymphocyte migration in chronic inflammatory arthritis.

PROJECTS UNDER STUDY:
A. Trans-membrane signalling and the control of lymphocyte-endothelial adhesion during transvenular migration.
B. The role of the basement membrane and extracellular matrix in the modulation of lymphoid cell migration into tissues.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Medical Coordinator, Flow Cytometry Laboratory.
B. Associate Director, Hematopathology Laboratory.
C. Member, Microcomputer Steering Committee.
D. Member, Quality Assurance Committee.
E. Member, Resident Training Program Committee.

MEDICAL SCHOOL HOSPITAL:
A. Coordinator, Pathology Services (clinical) in UM Cancer Center.
B. Member, UM Cancer Center Clinical and Basic Research Implementation Committees.
C. Primary Reviewer, UM Cancer Center Grant Program.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:
1. The human lymphocytic phosphomannosyl receptor (PMR) involved in binding to high endothelial venules (HEV) is functionally distinct from the 215kD PMR mediating lysosomal sequestration of acid hydrolases. April 1987, Federation of American Societies for Experimental Biology, minisymposium.

MANUSCRIPT/GRANT REVIEWS:
1. National Science Foundation.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


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


GERD O. TILL, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1986 - 30 JUNE 1987

I. CLINICAL ACTIVITIES:
   A. Clinical Immunopathology Laboratory: Neutrophil Functions Assays.

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. Pathomechanisms of acute tissue injury following activation of complement and neutrophils in vivo.
   C. Protection from oxygen radical-induced tissue damage.
   D. Pathomechanism of thermal skin burns.

IV. ADMINISTRATIVE ACTIVITIES:

   DEPARTMENTAL: None.

   MEDICAL SCHOOL/HOSPITAL:
   A. Interviewed candidates for faculty positions.
   B. Interviewed candidates for Medical Scientist Training Program.
   C. Consultant, clinical research program.

   REGIONAL AND NATIONAL:

V. OTHER RELEVANT ACTIVITIES:

A. Member, Editorial Advisory Board, Immunobiology.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


151

BOOKS AND CHAPTERS IN BOOKS:


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


153


I. CLINICAL ACTIVITIES:
   A. Clinical Virology Laboratory - Isolation of herpes simplex virus specimens obtained from MDS Laboratories.

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

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Endogenous Laminin Expression and Metastasis. CA35132, Principal Investigator, 30% effort, $70,161 current annual direct costs, NIH.
B. Growth and Biological Properties of Fibroblasts and Epithelia Cells on Various Substrates. CA36656, Principal Investigator, 10% effort, $90,000 current annual direct costs, NIH.
C. Inhibition of Tumor Cell Chemotactic Responses by Prostaglandins. BC-512, Principal Investigator, $55,512 current annual direct cost, American Cancer Society.
D. Laminin/Laminin Receptors in NK/NC Cell Function. IM-432. Principal Investigator, $72,000 current direct cost, American Cancer Society.
E. Thrombospondin and Squamous Carcinoma Cell Behavior. PDT-324, Co-Principal Investigator, 25% effort, $70,000 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.
D. The role of laminin and laminin receptors in mediating NK/NC-tumor cell interactions.
E. The role of thrombospondin in the biology of human squamous carcinoma cells.
IV. SERVICE ACTIVITIES:

DEPARTMENTAL:

A. Member, Departmental Advisory Committee on Appointments, Promotion and Tenure.
B. Member, Departmental Review Committee.
C. Member, Departmental Advisory Committee on Space Allocation.

MEDICAL SCHOOL/HOSPITAL:

A. Director, Cancer Center Program on Tumor Cell Metastasis and the Extracellular Matrix.
B. Co-chairman of Katherine A. Laybourn's Doctoral Dissertation Committee.
C. Member, Kellogg Research Internship Program.

REGIONAL AND NATIONAL:

A. Editorial Board of Invasion and Metastasis.
C. Grant reviewer for the Medical Research Council of Canada and for the Veterans Administration.

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, LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. 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 (two four hour sessions).

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

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Thermal Injury, Complement, and Leukocyte Dysfunction", NIH GM-28499 (10%), $105,256/year ($577,063/five years), 1/1/86-12/31/90.

B. Principal Investigator, "Lung Immunopathology", NHLBI HL-07517 (5%), $257,122/year ($1,291,531/five years), 7/1/86-6/30/91.

C. Principal Investigator, "Leukocyte Chemotaxis", NIH HL-28442 (10%), $93,512/year ($505,936/five years), 7/1/86-6/30/91.

D. Principal Investigator, "Lung Injury Produced by Oxygen Metabolites", NIH GM-29507 (20%), $111,222/year ($507,078/five years), 7/1/82-6/30/87.

E. Principal Investigator, "Inflammatory Cells and Lung Injury", NHLBI HL-31963 (25%), $583,326/year ($2,149,597/five years), 3/1/84-2/28/89.
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. Dean’s Council of Clinical Chairmen, 1985--.

B. Director, Feasibility Study for Multifloor Medical Research Facility Attached to Medical Science II Committee.

C. Chairman, Medical Sciences Research Building (MSRB) Task Force.

D. Michigan Eye Bank Research Review Committee, 1980--.

E. Michigan Diabetes Research and Training Center Policy Committee, 1981--.

F. Main Hospitals Operations Committee, 1985--.

G. University Hospitals Executive Committee, 1985-1986.

H. National Task Force on Organ Transplantation, 1985--.

I. Professional Fee Policy Committee, 1984--.

J. Interdepartmental Coordinating Committee, 1984--.

K. Search Committee for the Chairmanship in Environmental and Industrial Health, April, 1985--.


M. Dean’s Advisory Council, 1985--.

N. Dean’s Advisory Committee on Clinical Affairs, May, 1985--.

O. Advisory Committee for the Howard Hughes Medical Institute, 1984--.

P. Pulmonary and Critical Medicine Division Chief Search, 1984--.

Q. Nuclear Medicine Division Chief Search, 1985--.

R. Internal Advisory Board Committee of the Michigan Gastrointestinal Peptide Research Center, 1985--.

S. Council of Operations and Quality Assurance, 1986--.

T. Board of Directors, M-Care, 1986--.

U. Member, Neuromuscular Program Policy Committee, The University of Michigan Medical School, 1987--.
V. Member, Center Advisory Committee for The University of Michigan Multipurpose Arthritis Center, 1987--.
W. Member, Medical Service Plan Executive Committee, 1987--.
X. Member, Gilford Upjohn Endowed Chair in Internal Medicine and Oncology, Department of Internal Medicine, Hematology and Oncology Unit, The University of Michigan, February, 1987--.
Y. Member, Presidential Initiatives Fund, The University of Michigan, March, 1987--.

REGIONAL AND NATIONAL:
A. American Society for Clinical Investigation.
B. American Association of Pathologists
   1. Member, Nominating Committee, 1985-present.
   2. Executive Committee, Intersociety Pathology Council and Universities Associated for Research and Education in Pathology, Inc.
C. American Board of Pathology
D. Member, American Association for Advancement of Science.
E. Member, American Association of Immunologists.
F. Member, American Pathology Foundation.
G. Member, Association of Pathology Chairmen.
H. Member, Michigan Society of Pathologists.
I. Member, Center for Alternatives to Animal Testing, Johns Hopkins University.
J. Member, International Academy of Pathology.
K. Member, The New York Academy of Sciences.
L. Member, Society of Medical Consultants to the Armed Forces.
M. Ann Arbor Veterans Administration Medical Center, Consultant, 1980--.
N. Board of Directors, Universities Associated for Research and Education in Pathology, Inc.
P. Schering Corporation, 1981--.
Q. The Upjohn Company, 1981--.
R. Cytogen, 1983--.
S. Mallinckrodt, Inc., Advisory Board, 1984--.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
A. American Journal of Pathology, Editorial Board, 1982--.
B. American Review of Respiratory Diseases, Consulting Editor, 1977--.
C. Archives of Pathology and Laboratory Medicine, Reviewer, 1973--.
D. Arthritis and Rheumatism, Consulting Editor, 1975--.
E. Cancer Research, Associate Editor, 1987--.
F. Clinical Immunology and Immunopathology, Consulting Editor, 1977--.
G. CRC Critical Reviews in Free Radical Research, Advisory Board, 1986-6--.
H. CRC Critical Reviews in Toxicology, Advisory Board, 1986--.
I. Experimental Cell Research, Consulting Editor, 1980--.
J. Experimental Lung Research, Consulting Editor, 1980--.
K. Human Pathology, Consulting Editor, 1980--.
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 Experimental Pathology, 1986--.
Q. Journal of the Reticuloendothelial Society, Consulting Editor.
R. Journal of Clinical Investigation, Consulting Editor.
S. Laboratory Investigation, Editorial Board, 1981--.
T. Nature, Consulting Editor, 1980--.
U. New England Journal of Medicine, Consulting Editor, 1980--.
V. Journal of Critical Care, Editorial Board.
W. Review Committee for new Editor-in-Chief, for Human Pathology, April 1987--.

INVITED LECTURES/SEMINARS:

1. Lecturer, "Leukocytic Oxygen Products and Their Diverse Biological Effects", Satellite Symposia in conjunction with the 6th International Congress of Immunology, L'Hôtel, Toronto, Ontario, Canada, July 5-6, 1986.
8. Visiting Professor, "Pathophysiology of Leukocytes", McGill University, Department of Surgery, Montreal, P.Q., Canada, November 5-6, 1986.
10. Distinguished Scientist Lecturer, "Oxygen Radicals and Acute and Progressive Lung Injury", Department of Biochemistry, University of South Alabama, College of Medicine, Mobile, Alabama, November 20, 1986.
11. Surgery Grand Rounds Lecturer, Neutrophil Mediated Pulmonary Injury", Department of Surgery, University of South Alabama, College of medicine, Mobile, Alabama, November 21, 1986.
12. Site Visitor, Medical Research Council of Canada, Dr. Henry Movat, University of Toronto, Toronto, Ontario, Canada, "Career Investigator Renewal", November 30-December 1, 1986.
21. Research Triangle Visiting Professor, "Lung Damaging Effects of Complement Activation Products", and "Recent Studies of the Role of Iron in Oxygen Radical Produced Lung Injury", Division of Allergy, Critical Care and Respiratory Medicine, Duke University Medical Center, Durham, North Carolina, April 7-9, 1987.
23. Visiting Professor, "Oxygen Radicals and Tissue Injury", Barbara Davis Center for Childhood Diabetes, University of Colorado Hospital, Denver, Colorado, May 31-June 1, 1987.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

Respiration 1986;50:5-12.
Ryan, U.S. and Ward, P.A.: Source of iron in neutrophil-mediated killing of endothelium
cells. Lab. Invest. 1987;57:37-44.
dulation of experimental phagoanaphylactic endophthalmitis with the antioxidants
complex mediated tissue injury by presence of polyionic substances. Amer. J. Pathol.
participation of reactive oxygen metabolites in the pathogenesis of experimental
dulation of experimental phacoanaphylactic endophthalmitis with the antioxidants
24. Till, G.O., Annesley, T., and Ward, P.A.: Lung Injury following thermal trauma to skin:
Role of hydroxyl radical and lipid peroxidation. Amer. J. Pathol., In press.
venom factor is required in neutrophil-mediated lung injury in the rat. Amer. J. Pathol.,
In press.

BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, 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 at VA Medical Center.

II. **TEACHING ACTIVITIES:**
   
   A. One 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 and Surgical Morbidity and Mortality conference at the Veterans Administration Medical Center.
   
   F. Lecture, Bone and Joint, Second Year Medical Students, three lectures.
   
   G. Journal Club, Bone and Joint Pathology, Pathology Residents.
   
   H. Participate in bi-weekly Oncology Review Board at VA Medical Center.

III. **RESEARCH ACTIVITIES:**

   **SPONSORED SUPPORT:** None.

   **PROJECTS UNDER STUDY:**

   A. Well-differentiated osteosarcoma.

IV. **ADMINISTRATIVE ACTIVITIES:**

   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. General responsibility for participation of VA Pathology staff in other medical center committees.
J. Quality Assurance Board, Chairm (VAMC).
K. Dean's Committee VA Representative.

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 Accrediatation Program.
B. Deputy Medical Examiner, Washtenaw County.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. **CLINICAL ACTIVITIES:**

A. Director, General Ophthalmology Service, Kellogg Eye Center, University of Michigan Medical Center, including direct patient care and surgery.

B. Associate Director, Veterans Administration Ophthalmology Service, Veterans Administration Medical Center, Ann Arbor, Michigan.

C. In charge of Ophthalmic Pathology Service, Departments of Ophthalmology and Pathology, University of Michigan Medical Center.

II. **TEACHING ACTIVITIES:**

A. Taking part in the regular teaching efforts for students, residents and fellows as well as the postgraduate programs in Ophthalmology and Ophthalmic Surgery.

B. In charge of teaching and representation of Ophthalmic Pathology in the Departments of Ophthalmology and Pathology as well as at national and international Meetings. Ophthalmic Pathology is one of the basic subspecialties of Ophthalmology - and it is an important part of the written and oral examination of the American Board of Ophthalmology.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. Research in Ophthalmic Pathology has had continuous support from the Research to Prevent Blindness, Inc., New York, New York for more than ten years.

B. Experts in both, the Ophthalmology and Pathology Departments, have continuously contributed the most valuable support and advice in the general research effort as well as in specific research projects in Ophthalmic Pathology. As a result of progressing integration of the Ophthalmic Pathology Service, the most modern technical facilities in both Departments have been available and have been utilized continuously with much success.

**PROJECTS UNDER STUDY:**

A. The place of cells of macrophage origin in ocular pathology.

B. The nature and significance of proteinaceous depositions on intraocular lens implants and similar devices.

C. The role of white clots in the control of massive arterial intraocular bleeding.

D. Pathology of intraocular lens implantation.

E. Stages in the development of malignant uveal melanomas.

F. Pathology of radial keratotomy.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Planning and organization of daily routine, teaching and research in Ophthalmic Pathology - including continuous publication and presentation of results on an international level.
B. Usual administrative function of a Professor in the Departments of Pathology and Ophthalmology.
C. Some administrative aspects of the Ophthalmology Service in the Ann Arbor Veterans Administration Medical Center.

MEDICAL SCHOOL/HOSPITAL:

A. Member, Medical Student Research Committee.
B. Member, Tissue Committee.
C. VA Hospital Surgery Committee.
D. Member, Medical Staff of University Hospital.
E. Member, Medical Staff of Ann Arbor VA Medical Center.
F. Director, General Ophthalmology Clinic, Kellogg Eye Center.

REGIONAL AND NATIONAL:

A. Member, AMA.
B. Member, American Ophthalmological Society.
C. Member, American Academy of Ophthalmology.
D. Member, German Ophthalmological Society.
E. Member, Association for Research in Ophthalmology.
F. Member, Detroit Ophthalmology Club.
G. Member, University of Michigan Ophthalmology Alumni Association.
H. Member, Contact Lens Association of America.
I. Member, Association of American Ophthalmic Pathologists.
J. Member, Theobald Society of Ophthalmic Pathology.
K. Member, Michigan Ophthalmological Society.
L. Honorary Member, Association of Pediatric Ophthalmology.

V. OTHER RELEVANT ACTIVITIES:

A. Seven presentations at meetings.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

11. 5 papers submitted for publication.
PROGRAM AND SECTION REPORTS
The Administrative and Financial Affairs Section, which is under the auspices of the Office of the Chairman and his designee, includes five subsections which are organized as follows:

A. Administrative Support Center - Pathology Laboratories:
   1. Thomas D. Morrow, Assistant Clinical Administrator.
   2. Nancy A. Coray, Administrative Associate.
   3. Anita Liberman-Lampear, Administrative Coordinator.
      a. Edith M. Gilchrist-Brayton, Office Manager, Surgical Pathology Clerical Unit.
      b. June Possley, Supervisor, Surgical Pathology Clerical Unit.

B. Intramural and Extramural Clinical Pathology Billing and Special Projects:
   1. Laura D. Blythe, Administrative Assistant.

C. Clinical Faculty Offices, University Hospitals:
   1. Marjorie Owens, Office Supervisor.

D. Medical Service Plan; Billing Office and Fiscal Affairs:
   1. Douglas M. Kennedy, Billing Manager.

E. Office of Grants and Contract Administration:

F. Office of the Chairman:
   1. Beverly J. Smith, Academic Secretary IV.
   2. Mary Anne Tishma, Medical Center Staff Assistant.

In addition to the management of daily activities, each of the units accomplished major projects. They are as follows:

**ADMINISTRATIVE SUPPORT CENTER-PATHOLOGY LABORATORIES**

1. The M-Labs programs experienced rapid growth in FY 1987. We currently have contracts with Albion Community Hospital, Central Michigan Community Hospital, Metric Medical Laboratories and Newman Clinical Laboratories, and serve as a reference laboratory to 30 physician/clinic clients. A new extramural billing system and price book was developed in May 1987.

2. The Pathology Laboratories Handbook and "Mini-Book" were published and distributed. A major change in these handbooks included the alphabetizing of all laboratory tests.

3. The Unified Requisition System (second edition) was completed in January 1987. This resulted in a decreased number of requisitions required by the Hospital, Clinics, and Laboratories.
4. The Pathology Laboratories have occupied space in the New University Hospitals for over 16 months. During this period we have submitted 10 minor alteration and renovation requests. As of 1 July 1987, four of these requests have been completed.

5. Spectrum has replaced the Clinical Pathology Consult as the publication informing the Hospital community regarding information and changes in the Department of Pathology.

6. The College of American Pathologists inspected our laboratories on 13 May 1987. Despite some minor deficiencies, we are confident that our accreditation will be renewed for the next two years.

7. The Surgical Transcription area was reorganized to enhance service, including scheduling of certain staff to provide service later in the day.

BILLING (INTRAMURAL AND EXTRAMURAL) AND SPECIAL PROJECTS

1. Assisted with the development of the new M-Labs Billing System.
2. Prepared the Departmental Space Inventory using a minicomputer and database software.
3. Served as Chairperson of Telephone Committee. Established an automated database for departmental telephones. Reviewed and revised telephone options reducing costs for the Hospitals and Department.

CLINICAL FACULTY OFFICES

1. Provided staff support for registration of M-Labs trademark in the counties of Livingston, Oakland, Washtenaw, and Wayne as well as the States of Ohio and Michigan and with the Federal Government.
2. Coordinated the conversion of an employee lounge to an office for House Officer staff.
3. Catalogued the AGH Library using automated records and reports.
4. Accepted the responsibility for the administrative affairs of the Department’s Residency Training Program.

MEDICAL SERVICE PLAN: BILLING OFFICE AND FISCAL AFFAIRS

1. Increased the financial position of our Medical Service Plan through increased collection, primarily Blue Shield and reduction of the number of days in receivables.
2. Developed and implemented procedures to process M-Lab related volume.
3. Separated Pathology Medicaid billings and payments from the University of Michigan Dermatology Associates to facilitate the implementation of tape to tape charges and payments with Medicaid.
4. Converted all Billing Office financial reports and supporting documents to software programs in compliance with departmental standards.
5. In addition to processing various forms of media to typed copy, the increased availability and use of PC word processing software has prompted the Word Processing Center staff to learn various software programs in order to accommodate all departmental word processing requirements.
OFFICE OF GRANTS AND CONTRACT ADMINISTRATION

1. Coordinated the transfer of four research grants from other universities including applications for the transfer of these grants, acting as liaison between sponsors, DRDA, and faculty members.
2. Processed 50 grant and contract applications to various sponsors and funding agencies.
3. Coordinated the procurement and installation of equipment for three research laboratories.
4. As Chairperson of a committee, developed the Pathology Telephone Directory, which includes the names and addresses of every employee in the Department of Pathology. Established procedures for updating this directory using a minicomputer and database software.
5. Coordinated the Flow Cytometry Research Billing which included processing transfer vouchers, obtaining account numbers from investigators, following up on delinquent accounts and monitoring the MSP Flow Cytometry account.
6. Initiated the development of procedure manuals for research secretarial staff.

GENERAL

1. Successfully negotiated a Medical Service Plan service agreement with University Hospitals through June 1990.
2. Enhanced computer facilities of the Department through the implementation of Personal Computers (PCs) and acquisition of new hardware (DEC) and software (Cerner) for the Pathology Laboratory System.
3. Completed the renovation and remodeling project which included rooms M5242, M4227, M3218, M2210, M4214, and M4233 at a cost of approximately $565,000.
4. Served as a member of a committee to review the Medical Service Plan Office and participated as a member of the Search Committee for a Director of the Medical Service Plan Office.
5. Participated with Medical Center faculty and staff in the development of proposals for M-Care HMO.
6. Coordinated administrative details for the discontinuation of the Medical Technology Teaching Program.
7. Assisted in the development of the A. James French Society of Pathologists. This non-profit organization in the State of Michigan, was founded in memory of A. James French, M.D.
8. Reorganized the structure of the administrative and fiscal affairs section to accommodate the departmental reorganization.
9. Initiated Pathology Newsletter by using electronic mail system to improve intradepartmental communication.
SUMMARY OF FINANCIAL DATA

A. Grants and Contracts

42 Active grants and contracts
   (Government and Non-Government sponsored)

Total Direct Expenditures $2,315,908
Total Indirect Expenditures $ 860,477
   TOTAL $3,176,385

B. Medical Service Plan

Average Number of Accounts 9,154
Total Number of Charge Entries 49,708
Gross Billings $5,220,822
Net Collections $2,853,968

C. Pathology Laboratories

Number of Fee Code Procedures 2,556,056
Number of Laboratory Test Results (Estimate) 10,000,000
Gross Revenue $54,464,555
Direct Expenses $20,620,283

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

Respectfully Submitted,

Eugene J. Napolitan
Administrator
DIVISION OF ANATOMIC PATHOLOGY
DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

For the Division of Anatomic Pathology, the 1986-1987 fiscal year has been marked by the evolution of an effective modus operandi within the new University Hospital. The staff have accommodated to the new facilities and have developed the modes of communication required by the continued presence of some of our laboratories and colleagues in buildings outside of the Hospital. The consensus within the Division is that the move from Medical Science I has led to a significant improvement in the interaction between members of our diagnostic team and colleagues from other clinical services. Our physical presence within the patient care milieu has promoted a frequency and intensity of communication which is of direct benefit both to patient care and House Officer education.

The increase in interaction between the Division and other clinical services inevitably carries with it certain demands in terms of staffing and facilities, e.g., for group consultation. Such demands in concert with the continuing increase in sheer volume of diagnostic work associated with the level of activity in the Hospital, will require careful monitoring and likely adjustments in staffing and space utilization in the near future.

The activities of several services of the Division are outlined below.

Gerald D. Abrams, M.D.
Director, Anatomic Pathology
SECTION OVERVIEW:

During the past year, the Clinical Biochemistry Section has been affected by several major events. All laboratories experienced an increase in test volume and requests for new procedures. By using newer methodologies, the laboratories in the Biochemistry Section have been able to handle this increase in volume while maintaining regional expertise in Clinical Biochemistry. Further, by developing newer, more efficient procedures, the section was able to respond to these needs with no increase in personnel. In addition, several limited special function laboratories have been incorporated into the Section. These have been accomplished with no increase in turn-around-time for testing, improved logistics of test availability, and, in general, with the good cooperation of the clinical staff. The incorporation has been accomplished with minimal incremental personnel resulting in a net savings of personnel for the institution.

While providing the basic services for the institution, the faculty in this section have been active in their respective areas of expertise. Their academic achievements are evident by the publication of several key manuscripts appended to this review. Lastly, the section has entered into a strategic planning initiative which will allow us to logically anticipate needs for the next five-seven years. Such planning will allow a more effective approach to laboratory utilization.

GENERAL CHEMISTRY LABORATORY - Donald Giacherio, Ph.D., Laboratory Director.

The Clinical Chemistry Laboratory has experienced an overall increase of 12% in test volume over the previous year. While the laboratory now performs 2 million analyte determinations, there has been no accompanying change in the overall laboratory operating budget.

Consolidation of the hypertension-plasma catecholamine laboratory resulted in both personnel (1.0 FTE) and commodity savings due to several major changes in assay methodologies. Both plasma and urine catecholamine and urine metanephrine assays are now performed by the HPLC-EC methodology. This has the advantage of greater precision, less technologist time and fewer interferences than the older colorimetric assays previously employed.

Urine assays for oxalate and citrate, previously performed in the nephrology laboratory, are now performed in General Chemistry with no increase in personnel. Further, through modifications developed in the laboratory, plasma oxalate determinations are now available for monitoring the management of patients with primary hyperoxalosis.
The most significant growth in the laboratory has been in the area of blood lipid analysis for the assessment of risk for coronary heart disease. The CHD profile offered by the lab (cholesterol, triglycerides, HDL-cholesterol and LDL-cholesterol) has been utilized at a constantly increasing rate by both inpatient and outpatient services. Current volume of this test is approximately 1,200 samples per month. In addition, the laboratory has developed assays for apolipoproteins A1 and B as a means to assess CHD risk. We are currently a participant in a Centers for Disease Control Project aimed at standardizing apolipoprotein determinations across the country.

To respond to requests for more rapid information about critical electrolytes during resuscitation efforts, we have initiated a "CODE STAT". This has significantly streamlined the workload for these critically ill patients.

For the large number of adult diabetic patients served by our institution, the laboratory has switched to an affinity column method for determining glycosylated hemoglobin. This assay more clearly distinguishes control of diet in diabetic patients than the former assay. A study is in progress to determine if this test will also be useful for the Pediatric patients.

In the coming year, the laboratory plans to broaden services in several areas: homovanillic acid for neuroblastoma patients, spot urine samples rather than 24 hour collections for HVA in pediatric patients, examination of newly regarded risk factors for coronary heart diseases including HDL subfractions HDL-2 and HDL-3, and the development of further assays for diabetic patients including those of glycosylated albumin and serum fructosamine levels. The latter will be of particular use in the gestational diabetic and the pediatric diabetic patients. Lastly, during the coming year this laboratory will review new instruments for a major instrumentation update for the laboratory. This is of key importance as the laboratory's ability to continue to meet significant increases in workload without significant increases in operating budget will hinge upon appropriate choices for chemistry analyzers.

**DRUG ANALYSIS AND TOXICOLOGY LABORATORY** - Thomas Annesley, Ph.D., Laboratory Director

Fee code statistics have revealed an increase of over 30% in the overall demand for services from this laboratory. Not surprisingly, the volume of cyclosporine analyses has risen over 53% as the organ transplant program within the Medical Center continues to expand. This increased workload has been successfully incorporated without any deterioration in laboratory service, or any increase in the number of personnel within the laboratory. A key element has been the ability of the technical staff to develop alternative analytic methodologies for existing assays, as well as the introduction of new clinical assays that can be successfully performed on existing laboratory equipment.

The laboratory continues to serve as a reference laboratory for specimens received from outside of the Medical Center. We now perform therapeutic drug monitoring, drug screening, and emergency toxicology for other centers such as Bronson Hospital, St. Joseph Mercy Hospital, Burns Clinic, and Metric Medical Laboratories. Additionally, Drs. Annesley and Patel have become actively involved at the regional and national levels in the NCAA Drug Testing Programs. The laboratory has also taken an aggressive and positive role in addressing community concerns related to drug testing programs. These activities have included scientific consultation as well as several lectures on drug abuse and drug detection.
Within the last year efforts have begun to expand laboratory services to include testing for heavy metals and trace element analysis. At the present time the laboratory is proceeding with the purchase of appropriate instrumentation and is setting the necessary framework for the introduction of these services within the Medical Center.

This report should not pass without noting the awarding of the 12th American Association for Clinical Chemistry Award for Outstanding Scientific Achievement by Young Investigator to Dr. Thomas M. Annesley. Dr. Annesley was cited for his research interests in several areas in therapeutic drug monitoring.

LIGAND ASSAY LABORATORY - Barry England, Ph.D., Laboratory Director.

Recent technical advancements have made possible the use of non-isotopic tracers which rival the sensitivity of methods that use radioactive tracers. This laboratory expended considerable effort evaluating and utilizing enzymes, fluorescent and chemiluminescent tracers for the analysis of proteins and viruses. Notably, we are currently evaluating a rapid and extremely sensitive chemiluminescent assay for thyrotropin (TSH) that provides an increase of sensitivity of approximately one order of magnitude over current methods. Because of this increase in sensitivity, the method promises to replace not only the current TSH assay but will also provide a better means of evaluating T3 and T4. Other advantages of the methods are the increase of speed and the ease with which the analysis can be performed.

Analysis of maternal serum and amniotic fluid levels of Alpha-Fetoprotein has proven to be the method of choice to screen for fetal well-being. The screening procedure permits the rapid detection of open neural tube defects and Down's syndrome between 15 and 20 weeks of gestation. In cooperation with the Department of Pediatrics and Obstetrics and Gynecology our laboratory has initiated a testing program with the intent of establishing a multi-departmental program for the evaluation of these disorders early in gestation.

As part of the ongoing program of laboratory consolidation, we have assumed the analysis of androstenedione, dehydroepiandrosterone (DHEA), DHEA sulfate, and urinary free cortisol. These tests were formerly performed by the Endocrine Diagnostic Laboratory in the Department of Internal Medicine. Only 0.3 technical positions were assumed in performing this transfer. Other changes in the laboratory repertoire includes the analysis of Hepatitis B Core Antibody on a daily basis, analysis of C-Terminal/Midmolecule portion of Parathormone (PTH) by the Cambridge Nuclear radioimmunoassay kit, and analysis of PTH will obviate the necessity of sending these specimens outside of our institution.

Our annual volume of samples increased from 57,941 last year to 80,820 for the same period this year. This is an increase of 39%. This increase was accomplished with the addition of only 0.3 technical transfer positions.

CLINICAL IMMUNOPATHOLOGY LABORATORY - David F. Keren, M.D., Laboratory Director.

Major personnel changes have occurred in this laboratory during the past year. Dr. John Carey has left the institution to accept a position at the Henry Ford Hospital. He has been replaced by part-time help from both Drs. Jeffrey Warren and John Lowe. They will help with signout, test development and clinician interaction. This arrangement has worked out extremely well.
There have been several changes in the laboratory during the past year. We have replaced the outdated Beckman ICS nephelometer with the new Beckman Array System. This system is faster, has a broader assay range, provides two cuvettes with a wide range of standardized tests which retain their curves for two weeks. The result is a more efficient use of technologist time and elimination of redundant sampling. This instrument is used to quantify IgG, IgA, IgM, K, L, C-reactive protein, alpha-1 antitrypsin, haptoglobin, C3, C4, and properdin factor B.

With the new monoclonal antibodies available this past year, we have developed immunoglobulin subclass analysis by ELISA. This assay is critically important in workup of immunodeficient patients who have normal total IgG values, and in patients with IgA deficiency. Another major assay established in the past year is that of microalbuminuria by ELISA. This procedure is strongly advocated to follow diabetic patients for evidence of early proteinuria. Another major advance is the development of our first autoantibody screen by microELISA methodology. We are now one of the major centers offering the microELISA test for anticardiolipin antibodies. As such, we are part of an international study on the reproducibility of these assay systems. These antibodies are found in patients with SLE and are key prognostic features for fetal survival in pregnant SLE patients. We have also established an indirect immunofluorescent test for Wegner's granulomatosis. The long range strategy initiated last year for curtailing inappropriate ordering of immunofixation testing has been successful. By combining high resolution electrophoresis with quantification of immunoglobulins, we have been able to reduce performance of immunofixation by 90%.

Planning for next year includes expansion of microalbuminuria testing, establishing the prealbumin test on the Beckman Array, and improving efficiency of rheumatoid factor screening.

Published Manuscripts


David F. Keren, M.D.
Head
Clinical Biochemistry Section
PATIENT CARE:

In spite of extensive national publicity regarding the need to reduce transfusions, as well as intensive local efforts to monitor blood usage, blood utilization continued to increase during the past year. Twenty-five per cent of all blood components provided to patients in University Hospitals related to cardiovascular procedures. This reflected an increase in activity in cardiac surgery. In addition, expansion of liver homotransplantation required considerable Blood Bank support. Finally, both Pediatric and Adult Hematology/Oncology services were responsible for considerable platelet utilization.

The autologous transfusion program manifested a striking increase during the past year, reflecting public concern regarding post-transfusion disease. In response to public pressure, plans for a directed donation program were initiated, with approval by the Executive Committee on Clinical Affairs and implementation to occur in the third quarter of 1987.

Therapeutic plasma exchange and outpatient transfusion activity continued to increase. As an extension of the outpatient transfusion program, provisions for home transfusion of patients were completed.

Brochures relating to home transfusion, autologous transfusion and an information document advising patients of the risks of blood transfusion were completed during the past year, as was a revised edition of Blood Transfusion Policies and Standard Practices. The latter is a compendium of all of the transfusion-related practices and procedures in University Hospitals. This booklet has served as a prototype for other hospitals throughout the country.

TEACHING ACTIVITIES (University of Michigan):

The annual core lecture series for Pathology and Hematology House Officers was held in July, 1986. Planning was completed for integration of these lectures into the revised House officer training program, beginning in July, 1987. During the rotation through the Blood Bank, House Officers continue to receive a two-week introductory course under the direction of Ms. Barnes. Hematology and Pediatric Fellows also participated in this program through rotations in the Laboratory. The 14th Annual Postgraduate Course, "Current Topics in Blood Banking" was held on June 3-5, 1987, and over 200 technologists and physicians from throughout the United States attended. Suzanne Butch, Chief Technologist of the Laboratory, was Program Director, assisted by Dr. Oberman and Mr. Judd. In addition, the medical, technical and nursing staff of the Laboratory provided a number of lectures to departments and services in the University Hospitals, including an ongoing inservice training program for nursing personnel. Such Continuing Education activities enhance patient care in the institution.
PROFESSIONAL ACTIVITIES:

Suzanne Butch, Chief Technologist of the Laboratory, served on the Board of directors of the American Association of Blood Banks, while John Judd, Associate Professor, served as a member of the Scientific Section of that organization. Ronald Salisbury, supervisory technologist, chaired the MedLab Blood User’s computer group, and participated extensively in implementation of the Cerner laboratory computer program. Louann Trudeau continued to serve as Editor of the Michigan Association of Blood Banks newsletter. Dallas Forshew, R.M., served on the board of Directors of the Society of Hemapheresis Specialists.

Other professional activities in the Laboratory are included in the annual reports of individual faculty and in the attached Appendix.

RESEARCH ACTIVITIES AND PUBLICATIONS:

The Laboratory implemented testing of blood products for Hepatitis core antibody and for alanine aminotransferase, procedures intended to reduce the incidence of NANB Hepatitis. In addition, two abstracts were accepted for presentation at the Annual Meeting of the American Association of Blood Banks in November, 1987, relating to blood group serology and cost containment in laboratory practice. The Laboratory has initiated a study of the safety of autologous donation for obstetrical patients.

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

INDIVIDUAL REPORTS

SUZANNE H. BUTCH, MT(ASCP)SBB

Presentations/Posters:


Publications:


Hospital Committees:

A. Transfusion Committee.
B. Disaster Committee.
C. Quality Assurance Committee.

Professional Organization Activities:

A. American Association of Blood Banks.
   1. Board of Directors.
   2. Committee on Pediatric Hemotherapy.
   3. Committee on Regional Education Alternatives.
   4. Inspector, I & A Program.
B. Michigan Association of Blood Banks.
   1. Program Committee.
   2. Seminar, Co-chair.
C. American Society for Medical Technology.
   1. Audit and Budget Committee.
D. ASMT Education and Research Fund, Inc.
   1. Trustee.
E. Planned Parenthood of Mid-Michigan.
   1. Consultant.
   2. Completed term on Board of Directors in Fall of 1986.
F. National Certifying Agency for Medical Laboratory Personnel.
   1. Question Reviewer.
G. Alpha Mu Tau.
   1. Scholarship Committee.
H. Hospital and Health Services Credit Union.
   1. Credit Committee.

JUDITH DOUVILLE, MT(ASCP)SSB

Presentations/Posters:
A. Changing role of the Hospital Donor Room. Current Topics in Blood Banking,
   Towsley Center, June 5, 1987.

Professional Organization Activities:
A. Michigan Association of Blood Banks.

DALLAS FORSHEW, RN:

Presentations/Posters:
A. Poster: Vascular access in therapeutic hemopheresis, 9th Annual Meeting of the
B. The Registered Nurse and the Medical Technologist lecture to Medical
   Technology Class of 1987.

Professional Activities:
A. Society of Hemopheresis Specialists.
   1. Board of Directors.
   2. Chairperson, Certification Committee.
B. American Association of Blood Banks.
   1. Committee on Nursing and Donor Room Personnel.

RON SALISBURY, CLS:

Professional Organization Activity:

Lectures:
A. Computers in the Blood Bank, Current Topics in Blood Banking, Towsley
   Center, June 6, 1987.
B. Autologous Transfusion, Or Nursing Inservice, U of M Hospitals, May, 1987.
C. Transfusion Reactions, Albion Hospital, June 10, 1987.

Hospital Committee:
A. Liver Transplant Committee.
E. ANN STEINER, MT(ASCP)SBB:

Professional Organization Activities:

A. Inspector, American Association of Blood Banks Inspection and Accreditation Program.

Publications:


LOUANN TRUDEAU, MT(ASCP)SBB:

Professional Organization Activity:

A. Michigan Association of Blood Banks, Newsletter Committee.

DEBORAH A. WILLIAMS, MT(ASCP)SBB:

Professional Organization Activities:

A. Michigan Association of Blood Banks.
The specific activities of the various Clinical Pathology Laboratories are detailed on the following pages. However, several additional comments are in order.

The Laboratories were inspected by the Joint Commission on Accreditation of Hospitals and by the College of American Pathologists. The comments of the JCAH focused upon several Limited Special Function Laboratories, and members of the Department of Pathology are working with the respective departments to rectify these problems. The CAP Inspection revealed very few deficits, and there should be no problem with attainment of accreditation.

Many members of the Department participated in the activities related to implementation of the new Cerner System for data management in the Clinical Laboratories. Full implementation of this system will occur during the fourth quarter of 1987. This should greatly enhance the flexibility of laboratory test result reporting to the various patient care services.

The Clinical Laboratories were faced with a multitude of problems related to the spread of AIDS. Testing for anti-HIV resulted in modification of specimen receipt in the Laboratories and in issuance of test results. Recognition of spread of HIV infection to health care workers resulted in reinforcement of guidelines for all laboratory personnel. Members of the Department participated in Hospital committee activities related to varying questions regarding AIDS, especially maintenance of confidentiality of test results.

The Clinical Pathology Residency Program was studied during the past year, and proposals for block rotations should enhance training. Proposed rotations in cytogenticics, coagulation and histocompatibility testing have enhanced the scope of the Program.

Finally, the extramural activities of the Laboratories increased, particularly in the area of Drug Analysis and Toxicology. Continued growth of this activity is anticipated during the coming year.

Harold A. Oberman, M.D.
Head, Section of Clinical Pathology
The trend, begun eight years ago, for non-gynecologic cytology specimens to increase in number every year has leveled off, with the number of such specimens received during the last year being virtually the same as in the previous year. However, gynecologic cytology specimens have increased by 18 percent with most of the increase coming from University Hospitals. The total number of cytologic specimens processed by the department during the last year was 20,710, an increase of 17 percent.

During the last year we had a Fifth Year Resident whose duties were divided between surgical pathology and cytopathology, mainly the latter. This was an innovation for the department and we consider it to have been an outstanding success. Apart from the resident’s gaining useful experience in cytopathology, her presence made it possible for the staff members to pursue other duties. It is an arrangement we would like to see continued. Such fifth year residency or, possibly, fellowship positions are highly sought after and will become even more sought after if the American Board of Pathology introduces a Certificate of Additional Qualification in Cytopathology, which it intends to do.

Bernard Naylor, M.D.
Director
Cytopathology Laboratory
EDUCATIONAL ACTIVITIES*

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

The Department of Pathology has continued to offer a number of diverse programs within the Medical School Dental School, School of Public Health, College of Literature, Science and the Arts, and the Rackham School of Graduate Studies. These include courses requiring formal lecture and laboratory exercises, as well as providing for senior medical student pathology elective clerkships. Many faculty continue to serve on graduate student thesis committees and supervise medical student research experiences. Within the Medical Center context, Departmental teaching activities extend not only to medical students, but also house officers and the staff of many clinical departments in the form of regularly scheduled formal conferences. Departmental teaching also extends to practitioners in the region and nation through courses given through Continuing Medical Education Programs of the University of Michigan and the International Association of Pathologists (IAP).

This represent the third year in which the Sophomore Pathology Course (Path 600) has been taught under a "revised" teaching format. The structure of the course is predicated on the students' acceptance of a significant responsibility for their own education, under faculty guidance. This is achieved through the use of focused faculty lectures, directed laboratory sessions, and more emphasis placed on student home study requiring text reading utilization of microscopes, slide sets and descriptive syllabi. Formal course evaluation indicated that the revised course format continued to function smoothly and was well accepted by the students. In addition, efforts to closely correlate the Introduction to Clinical Sciences Course (ICS-601) with the Sophomore Pathology Course functioned to enhance the students' educational experience and reinforce "core material".

The relevance of the content of the combined Dental/Graduate Student Course to the diverse needs of graduate students from multiple disciplines was reviewed. Subsequently, a separate graduate student section was formulated as an alternative to the teaching of systemic pathology during the second half of the course. The content of the graduate student section focuses on the study of the cellular and molecular basis of the inflammatory response and the role of the extracellular matrix in disease. It is anticipated that this will allow more indepth discussion of these topic areas in a small group seminar format.

*House Officer training, postdoctoral research training, and the Medical Technology program are discussed elsewhere.
Formal courses given within the Department include:

I. COURSES IN THE "STANDARD" MEDICAL CURRICULUM

A. ICS 500:
   1. Introductory Lectures on General Pathology (20 contact hours).

B. ICS 600/601:
   1. Immunopathology Sequence (15 contact hours).
   2. Clinicopathologic Conferences (10 contact hours).
   3. Selected Topics in Surgical Pathology.

C. NBS 600:
   1. Neuropathology (18 contact hours).

D. Pathology 600:
   1. 67 hours of whole-class lecture, 37 hours of laboratory (in each of four sections) (104 contact hours).

E. Pathology Clerkships:
   1. Elected by 35 students at University Hospitals.

II. COURSES IN THE DENTAL CURRICULUM GRADUATE SCHOOL LS&A ALLIED HEALTH/SCHOOL OF PUBLIC HEALTH:

A. Pathology 630:
   1. General Pathology Lectures (45 contact hours).

B. Pathology 631:
   1. Pathology Laboratory (90 contact hours) each of three sections (assisted by Oral Pathology staff).
   2. Graduate Student Section.

C. Pathology 858:
   1. Neuropathology (23 contact hours).

III. POSTGRADUATE MEDICINE/CONTINUING MEDICAL EDUCATION:

B. Clinical Laboratory Computers, June 10-12.

IV. CLINICAL CONFERENCES:

The Department of Pathology provides an important educational service to many other clinical departments through regular participation in interdepartmental working/teaching conference. The Department is involved in many such conferences on a weekly, bi-weekly, and monthly basis. The units served include:
Internal Medicine
- Gastroenterology
- Nephrology
- Hematology/Oncology
- Nuclear Medicine
- Pulmonary Medicine
- Arthritis
- Cardiology
- General (Necropsy Review, CPC)

Dermatology

Thoracic Surgery

Urology

Pediatrics
- Cardiology
- Oncology
- Gastroenterology
- General (Death Conference, CPC)

Obstetrics and Gynecology
  - Oncology

Oral Surgery

General Surgery (Breast, GI)

Otorhinolaryngology

Joseph C. Fantone, M.D.
Director
Educational Activities
ELECTRON MICROSCOPY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

During the period of 1 July 1986 - 30 June 1987, the Electron Microscopy Service in the Department of Pathology processed a total of 741 biopsies. Of this total, 330 biopsies were diagnostic clinical cases with the remainder being research. This number of cases is roughly the same as the previous 12 months when 722 specimens were processed.

The Electron Microscopy Service is now at a stable level in terms of number of personnel with two individuals assigned primarily to the diagnostic service and one individual assigned to the research service. Mr. Joseph Mailloux is supervisor of the clinical service and Ms. Robin Kunkel of the research service. This current level of staffing represents a decrease of two slots over the last two years and it is a tribute to the electron microscopy staff that the work is performed in a timely fashion with the same fast turnover time as before when the service had the additional staffing.

I would especially like to recognize the achievements of Mr. Joseph Mailloux, the supervisor of the clinical Electron Microscopy Service. This past year, Mr. Mailloux successfully completed the certification testing by the Electron Microscopy Society of America. I would like to commend Mr. Mailloux on this fine achievement which reflects well not only on him but also on the department as a whole.

We continue to work closely with the clinicians and researchers to provide greater and faster service. Virtually every department in the Medical School is represented by individuals using the Electron Microscopy Service for diagnosis and/or research.

Kent J. Johnson, M.D.
Director
Electron Microscopy Service
FY 86/87 has been a transitional year for the laboratory. Dr. Phillip McCoy, the laboratory director, and Dr. John Carey, an integral member of the physician staff, moved on to faculty posts at the University of Pittsburgh Cancer Center and Henry Ford Hospital, respectively. These two individuals made significant and enduring contributions to the laboratory - they will be missed.

Dr. Curtis Hanson, a product of the University of Minnesota's Hematopathology Fellowship Program, succeeds Dr. McCoy as the director of the laboratory. Dr. Hanson was selected as the outstanding candidate after a national search. Under his guidance an administratively distinct Clinical Flow Cytometry Laboratory will be established in the Clinical Pathology Division. In addition, a new generation of table-top flow cytometers will be evaluated in an effort to reduce costs and enhance productivity. Finally, new diagnostic procedures, utilizing DNA hybridization techniques, will be implemented in the area of hematopathology. These new directions reflect the pathology department’s strong commitment to the development of cost-effective, state-of-the-art diagnostic methodologies.

Despite the turnover in senior personnel, the laboratory has continued its active diagnostic service. A total of 1052 specimens were handled by the laboratory during the past year. 750 specimens were processed for cell surface markers or cellular DNA content studies. Hematopathology specimens (bone marrows, peripheral bloods, body fluids, lymph nodes, needle aspirates submitted for diagnosis of leukemia or lymphoma) constituted ~50% of the specimens while evaluation of transplant patients and individuals with primary or acquired immune deficiencies comprised the remainder. An additional 300 specimens were studied for neutrophil-specific autoantibodies and platelet-associated immunoglobulins. Each specimen requires from 10 to 30 individual staining, quantitation and analytic procedures. Quality control and calibration procedures further add to the specimen load. Thus the laboratory staff conducted ~22,000 individual marker studies in FY 86/87. The laboratory continues to provide 6-12 hour turnaround for studies on acute leukemia and selected organ transplant patients. The cost of maintaining staff sufficient to handle the demands of such STAT services are offset by cost savings resulting from shorter hospital stays. Finally, the laboratory was recertified by the College of American Pathologists thus making it one of a limited number of facilities with sufficiently rigorous quality control procedures to be so recognized. These accomplishments stand as a testament to the professionalism and dedication of the laboratory staff, both past and present.

Lloyd M. Stoolman, M.D.

Curtis Hanson, M.D.
LABORATORY ACTIVITIES:

1. During the first full year of consolidation of the Pediatric and Adult Hematology Laboratories with the Hematology Laboratory of the Department of Pathology, the Laboratory carried out a total of 454,604 tests which represents an increase of 15% over the previous year. The percentage of labor-intensive manual differential white blood cell counts increased by 14%. The labor-intensive phase platelet counts decreased because instrument counts down to 30 x 10^9 are now being reported. Microscopic examinations of urines has increased by 10%. The number of body fluids requiring review by the Hematopathologist has increased by 17% over last year when the increase was 22% over the previous year. The number of bone marrow aspirates prepared and stained was 1173.

   The satellite laboratory which is located in the clinic area in the Taubman Outpatient Building, services both Pediatric and Adult Hematology/Oncology Clinics as well as other clinics requiring hematologic studies. This arrangement has worked well for providing rapid patient care.

2. A formal daily bone marrow sign-out has been initiated.
3. Automated platelet count. The number of manual phase-contrast platelet counts has been reduced by an automated method. This automation has resulted in a more rapid turnaround time in the Laboratory and in a faster reporting of results to the clinician without compromising patient safety.
4. Revision and improvement of some of the cytochemistry procedures.
5. Ceased carrying out bone marrow differential counts of pediatric marrows for the pediatric staff.

TEACHING ACTIVITIES:

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

B. Medical Technology students participated in all laboratory activities during 6-week rotations in their internship year.
FY 87/88 GOALS:

A. Investigate the possibility of introducing the automated 5-part differential white blood cell count with the hope of further decreasing the number of manual white blood cell count differentials.
B. Developing an improved and more formal teaching program for the House Officers.
C. Instituting a Journal Club in Hematopathology.

Bertram Schnitzer, M.D.
Director
Clinical Hematology Laboratory
The final class of sixteen students in the Medical Technology program completed its clinical training on June 26, 1987. On June 17, the Department gave a Farewell Reception in Towsley Center to honor the program and all of those who have participated in the education of Medical Technology students over the years. Also, on June 26 the program staff, 1987 graduates, and some alumni working in UMMC laboratories enjoyed a final picnic at Gallup Park.

The program curriculum was maintained throughout its final year by our excellent teaching staff, all of whom remained with the program. Ten of the graduates have already found positions at University Hospital and elsewhere, with two of them also entering graduate school. Most of the remaining students have not yet begun to search for jobs in earnest. However, the job market is very good now, and all students should have no difficulty in finding positions.

The graduates recently participated in the Wayne State Comprehensive Examination for all MT graduates in the state. The mean score of our students was third highest and only four-tenths of a point lower than the second-ranked school. The mean score of the highest ranked school was 2.9 points higher than our score.

The Class of 1986 had ten students who took the ASCP Board of Registry Exam in August, 1986. Nine students passed, and the mean score (including the failing score) was a full 10% higher than the national mean. One student who, because of an accident, did not complete the program until December 1986, passed the Registry Exam in February 1987 with a mean score of 94%, compared to the national mean of 70%.

Provisions have been made to microfiche all student records and to notify alumni of this fact. Pertinent historical documents and Self-Study material will also be stored as suggested by NAACLS, our accreditation agency.

The staff and I wish to thank the Department of Pathology for the many years of support given to the Medical Technology degree-certificate program. Our graduates have served the profession well and are fine examples of the high quality education consistently offered by the Department, the Medical School, and the University.

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

During this period 118,884 tests were done in the Clinical Microbiology Laboratory, representing an increase of 6.2% over the 1985-1986 test volume. M-Labs testing in the Clinical Microbiology Laboratory included 2,927 tests representing a 54.2% increase over the volume of the previous year. The M-Labs volume represents 2.5% of the total lab volume.

Laboratory tests showing an increase of greater than 10%, in order of largest to smallest, include: Neisseria Screen, Chlamydia Test, Urealplasma Culture, Routine Sterile Culture, Rapid Antigen Test, Urine Culture and Strep Screen.

Other major Laboratory activities included a successfully completed College of American Pathologist inspection as well as JCAH and MDPH inspections. In addition, the Laboratory implemented new tests including Campylobacter Screen, Direct Antigen Panel, Fecal Leukocyte Smear, Staphylococcus Screen and Adult Torch Screen.

Specific rapid methods were evaluated and implemented in the Laboratory. The implementation of the Isolator for blood cultures which produced colony identification in 1-2 days versus 2-4 days using older methods was a relatively major undertaking. Direct antigen tests on supernatants of positive blood/CSF broth allows 1 hour detection versus 24 hours using older methods. An ALA test for identification of Hemophilus produces indentification in 1-4 hours versus 24 hours by older methods. Tween hydrolysis for presumptive identification of Mycobacteria terrae in 1-2 weeks versus 6-8 weeks identification using older methods was implemented. In addition to these new procedures, the Laboratory evaluated 18 other tests and procedures that were not implemented for various technical or operational reasons.

M-Lab activities, because of the increase in volume, have produced changes in the work of certain personnel within the Laboratory. One of the Supervisors has become the M-Labs technical representative and coordinator for all of the off-site laboratories and is the microbiology reference person for M-Labs activities in the M-Care sites. The M-Labs Technical Group, of which Microbiology staff are members, has been instrumental in standardization of all laboratory procedures and kits in the M-Care sites as well as developing specific requisitions and marketing information for the M-Labs program in the M-Care sites.

The Clinical Microbiology Laboratory with the Chief Technologist as the lead has been active in the computer evaluation and successful contract with the new vendor Cerner Corporation. The new system should be in the Microbiology Laboratory late Fall or early Winter of this year.
TEACHING AND EDUCATION:

A. Continuing Education Activities:
1. Daily adult and pediatric infectious disease rounds in the Laboratory including demonstration and mini-lectures.
2. Periodic microbiology journal reports.
3. Monthly Infectious Disease case reports.
4. Periodic Pathology Resident reports.
5. Introductory Pathology resident lectures.
7. Training of 16 new employees and 26 current employees into new or expanded laboratory work areas.

B. Meetings and Workshops Attended:
1. Tri-County Clinical Microbiology Meeting.
3. American Society for Microbiology Meeting.

C. Papers given:

Kenneth D. McClatchey, M.D., D.D.S.
Director, Clinical Microbiology Laboratory
NEUROPATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

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 on Active Emeritus status. Dr. Mila Blaivas spent 40% of her time in Neuropathology teaching and service programs.

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. Four hundred and fifty-two Neurosurgical cases were examined this year from Main, Mott and outside hospitals in consultation. Fifty-two cases were referrals from other institutions, a portion of which were part of the NIH funded study of BUDR radio-sensitization of gliomas 1R01CA33768-01A2.

2. Three hundred and ten brains were examined from 81% of all autopsies at this Medical Center, and fourteen from other institutions and hospitals. The latter represented a 156% increase over the previous year.

3. Nerve and muscle pathology service has increased over the year. There were 132 muscle biopsies, nearly all with histochemistry, some with electron microscopy. There were 52 peripheral nerve biopsies. This represents a 131% increase in muscle and 173% increase in nerve biopsies over the previous year. Teased fiber preparations and electron microscopy was performed on many nerve biopsies. Forty-one cases were referrals from other institutions.

Dr. Mila Blaivas, who was elected a full member of the American Association of Neuropathologists this year, provides quality diagnoses and consultations. The combination of nerve teasing, muscle histochemistry, electron microscopy and morphometry make the service regionally competitive for diagnostic consultation.

4. Ultrastructural neuropathology examined, interpreted and reported 66 cases in semithin section and electron micrographs of 39 cases.
TEACHING ACTIVITIES:

1. Medical Students: This year the faculty taught the regular Neuropathology sequence to our medical students (20 hours) in the Neural and Behavioral Sciences 600 curriculum. NBS Neuropathology consists of microscopic sections, handouts, posters, lectures and laboratories for all second year medical students. In response to her substantial contributions to NBS, Ms. Constance J. D'Amato has been appointed Director of the NBS program.

2. House Officers, Graduate students, Postgraduate and other students and faculty: All of the service activities are integrated appropriately into teaching. Specific exercises include a conference every other month where microscopic neuropathology is reviewed; twice monthly conferences where all biopsies are presented and interpreted; a brain cutting conference where all abnormal brains are examined with all clinicians invited weekly; two monthly nerve and muscle biopsy conferences; individual instruction on autopsies and biopsy material; Neuropathology 858, a 16-18 hour laboratory-lecture course; and elective periods for Neurology House Officers. Continuing Medical Education accreditation has been received for the biopsy conference.

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 fetus cephalic neural tube and their relation to malformation and recovery of the fetus in genetic and radiation induced injury; 2) development of the capacity of astrocytes to undergo gliosis and the role of astrocytes in development of neurons; and 3) 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, met and generated a number of project considerations from Neurosurgery, Nuclear Medicine, Neuropathology, Neurology and Neuroradiology collaborations.


5. Collaboration with the Upjohn Center and Unit for Laboratory Animal Medicine proposes to measure BUDR labeling indices in brain tumor specimens.

Paul E. McKeever, M.D., Ph.D.
Director
Neuropathology Service

205
PATHOLOGY DATA SYSTEMS

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

I. Search for a Laboratory Information System to replace the current Medlab system concluded by the successful negotiation and execution of a contract with the Cerner Corporation.

A. Initiation of training and data base development for the new Cerner PathNet system.
B. Cutover to the new system is anticipated during November, 1987.

II. Active participation by PDS personnel in the growth and development of the Local Area Network (LAN) in the hospital, culminating in an extremely heavy volume of patient inquiries entered directly into the laboratory data base via this route.

A. Current mean weekday volume of patient inquiries is estimated to exceed 3,000.
B. Easy and rapid access to laboratory results by physician end-users has greatly enhanced the efficiency of the patient care process in the hospital.

III. Changes in the hardcopy laboratory result reporting options.

A. Elimination of the morning edition of the interim report (ward summary report).
B. Conversion of the current green laboratory reports for ambulatory care patients to a throwaway physician copy (gray report) with the permanent report sent directly to the Medical Information Department.

IV. Rapid expansion of the use of All-in-One office systems, particularly electronic mail, running on the VAX 785.

A. Electronic mail has been accepted as an important communication tool and means for expediting the management process within the Department.
B. E-mail is also being used to distribute "copies" of the Pathology Electronic News (PEN).

V. Increasing use of Ingres, a data base manager running in the VMS environment for ad hoc reporting and the analysis of resource utilization within the Department.

A. Blood utilization by DRG now being analyzed.
B. "Overdue" (turnaround time reports) are also being generated using Ingres on a regular basis for Hematology and Immunology.
VI. Computer support of the Departmental research effort.
   A. Statistical and graphics package (RS/1) running on the VAX.

VII. Microcomputer hardware and software support.

VIII. Strategic planning for the word processing and other office support functions within the department.

IX. Added services to M-Care satellite sites and M-Labs clients with installation of remote terminals and printers for expediting laboratory reports.

Bruce A. Friedman, M.D.
Director
Pathology Data Systems
The activities of this service were carried out as in the past, primarily by Kathleen P. Heidelberger, M.D., and Mason Barr Jr., M.D.

Necropsy figures are as follows:

   Pediatric deaths (22 weeks gestation or any liveborn, to 18 years) = 208
   Necropsies on above = 138
   Necropsy % = 66.3

Of the 138 posts, 65 patients' bodies were released to Anatomy for study and disposal. These posts were performed by Mason Barr Jr., M.D. Seventy-three patients were posted by the residents and senior staff in pathology, primarily Dr. Heidelberger.

A total of 447 necropsies for UMMC hospitals patients were performed: 65 by Dr. Barr in the Teratology Unit and 382 by the Pathology Department Staff. Thus, 31% of the total posts at the UMMC were pediatric posts.

The Quarterly Pediatric Death List was restructured this year by Dr. Barr to be a better teaching instrument in correlating primary clinical and autopsy diagnoses. The list is distributed to all service chiefs and lists all deaths by service with their appropriate diagnoses.

The total number of pediatric surgical specimens (including placentas) examined is approximately 1,670. This represents an increase of approximately 10% from the previous academic year.

Kathleen P. Heidelberger, M.D.
Director
Pediatric Pathology Service
PHLEBOTOMY SERVICES/CENTRAL DISTRIBUTION

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

I. **Phlebotomy Services:**

A. Added phlebotomy services to the Geriatric Inpatient Unit and Kellogg/Turner Hospital on weekends and holidays at no incremental cost.

B. Added full-service phlebotomy services (6:30 am - 7:00 pm seven days per week) to the Burn Unit Rehabilitation Unit at no incremental cost.

C. All inpatient Phlebotomy Team members were certified in new methods for cardio-pulmonary resuscitation.

D. Initiation of a new program to teach the anatomy of limb vessels to Phlebotomy Team members with successful course completion by all current Team members.

E. Initiation of a phlebotomy services training program for personnel at M-Care sites.

II. **Central Distribution:**

A. Staff has been decreased in Central Distribution by 5.5 FTE’s by a process of attrition, despite an increase in specimen volume of about 55%.

B. Initiation of specimen processing and distribution activities for M-Lab clients and M-Care satellite sites.

C. Initiation of a program for distribution of supplies to M-Lab clients and M-Care satellite sites and microbiology supplies to inpatient units and clinics.

D. Implementation of new policies and procedures for handling send-out specimens.

   1. Experienced a 30% increase in the volume of such specimens.

E. Assumed responsibility for receiving, processing, and distributing urine and anatomic pathology specimens.

Bruce A. Friedman, M.D.
Director
Phlebotomy Services and Central Distribution
RESIDENT TRAINING PROGRAM

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1986 - 30 JUNE 1987

The Residency Training Program, in the last year, recruited seven excellent candidates:

1. Michael J. Caplan, M.D., University of Connecticut, School of Medicine, Farmington, Connecticut.

2. Elizabeth Ann Del Buono, M.D., University of Kentucky, School of Medicine, Lexington, Kentucky.

3. Cynthia Anne Hegg, M.D., University of Missouri, School of Medicine, Kansas City, Missouri.

4. Steven Howard Mandell, M.D., University of Michigan, School of Medicine, Ann Arbor, Michigan.

5. Paul Frank Mazzara, M.D., Wayne State University, School of Medicine, Detroit, Michigan.

6. Randall J. Shannon, M.D., Indiana University, School of Medicine, Indianapolis, Indiana.

7. Denise Ellul Sulavik, M.D., University of Michigan, School of Medicine, Ann Arbor, Michigan.

The Residency Training Program has recently been reviewed and certain modifications recommended. The training program and suggestions for modification were widely discussed at recent departmental meetings. Changes have been implemented and subsequent proposals are under consideration. Briefly, there will be more clear-cut responsibilities for residents in the Anatomical and Clinical Pathology areas. Service rotations in the Clinical Pathology area are organized into larger blocks of time. A rotation in coagulation has been established and a rotation in cytogenetics will begin this coming winter.

The Anatomic Pathology and Clinical Pathology core lectures continue as do special seminars and Grand Rounds.

The joint program with Beaumont Hospital remains unchanged, although there will be fewer residents available to participate in the exchange program.

Andrew Flint, M.D.
Coordinator
Residency Training Program
During the 1986-1987 fiscal year, the activities of the Surgical Pathology Service have continued to grow in volume and to increase in complexity. The total number of surgical specimens accessioned in University Hospital increased almost 15% over the prior year's total; and the increment in number of specimens referred in consultation by pathologists in other institutions showed a parallel increase. This increase in volume of specimens accessioned reflects not only the high volume of patient care activity in our hospital, but also the continuous growth in activities, such as organ transplantation, which require the close collaboration between Medical and Surgical units and the Surgical Pathology service in monitoring patients by means of serial biopsy.

In parallel with the increase in diagnostic case load, there has been an increasing need for exchange of information with clinical colleagues. In part this demand is being met by encouraging the Medical Staff to access our reports through the laboratory computer system. In addition, however, the amount of needed direct interaction with clinical colleagues seems to be increasing. Consultation with attending physicians and house staff from many services is a significant part of each day's activities for our surgical pathologists. In recognition of this need we have established a group viewing facility within the area.

During this fiscal year, the diagnostic and consultative activities have grown to such an extent that it has become necessary to add another diagnostic team to the existing ones. Henceforth, in addition to the existing services (operating room/frozen section, biopsy, pediatric, dermatologic) a separate service will handle the surgical specimens accompanying the patients referred to University Hospital from elsewhere.

Gerald D. Abrams, M.D.
Director
Surgical Pathology Service
INTRODUCTION:

The VA Medical Center Laboratory Service maintains a strong and close relationship with the University of Michigan Medical Center Department of Pathology. Pathology residents receive part of their training in surgical and autopsy pathology at the VA. Electives in electron microscopy are available at the VA. There are frequent mutual consultation activities and educational seminars are attended by both staffs. The VA staff members participate in teaching of medical students and residents. Research activities are frequently cooperative in nature.

ANATOMIC PATHOLOGY:

A. Surgical Pathology: 4,231 cases have been completed and nearly all were processed by a resident with close supervision of a staff pathologist. The resident acts as coordinator of the surgical pathology section and is particularly active in discussing cases with clinicians. The teaching activities are intense and involve all the staff. Interesting surgical cases are reviewed in a weekly conference with all staff in attendance.

B. Autopsy Pathology: 137 autopsies were done during this time, the majority dissected by a resident and completed microscopically by the resident with staff supervision. The autopsy rate of nearly 50% speaks to the clinical interest in the autopsy. A monthly autopsy conference reviews in depth a selection of cases with the internal medicine department.

C. Cytology: 2,453 cases were reported during this time. Although the resident does not directly serve in this section, this material is available to correlate with surgical and autopsy cases and is used for resident teaching on an ad hoc basis.

D. Electron Microscopy: An elective rotation is available in electron microscopy taught by Dr. Beals. In addition, the resident is instructed in the use of electron microscopy along with surgical pathology, autopsy and cytology.

CLINICAL PATHOLOGY:

A wide range of clinical pathology procedures is available in this laboratory. Over 1.5 million unweighted tests were done during this period in Chemistry, Microbiology, Hematology and Blood Bank. Although resident are not directly involved in these areas of the laboratory, they are free to observe procedures, obtain and use data and participate in activities that may relate to their official rotation schedules. Dr. Chensue has assumed the duties of clinical pathologist with particular emphasis in hematology and chemistry.
EDUCATION AND TEACHING:

All staff members devote a considerable amount of time in "on-the-job" teaching of residents. In addition, Dr. Beals has conducted bi-weekly conferences in electron microscopy for residents, Dr. Weatherbee gave lectures to medical students, Dr. Burkholder taught one of the dental student laboratories.

RESEARCH:

Dr. Beals continues as a member of the VA Research and Development Committee. Dr. Weatherbee serves on the Human Studies Committee. Dr. Beals continues his sponsored research and Dr. Chensue has received funding for his research from both the RAG system and VA Merit Review. All staff members have participated with other investigators in a number of studies usually clinically oriented.

SUMMARY:

The pathology staff at the VA are highly committed to the practice of high quality medicine in this Medical Center. Close cooperation with the University of Michigan is considered necessary to accomplish this goal. Every effort is made to improve and strengthen the professional interchange between the two institutions. Our aim is to assure that there are mutual benefits in this interaction.

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