The University of Michigan Department of Pathology Annual Report

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Technical Consultants: Jon Van Oast Tom Peterson

Coordinated by: Mary Anne Tishma

PC & NS
PERSONAL COMPUTER & NETWORK SYSTEMS
Department of Pathology
1301 E. Catherine Rd.
Medical Science I 2249
Ann Arbor, MI 48109-0602
LIST OF FACULTY
<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Institutional Affiliation</th>
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<tbody>
<tr>
<td>Abell, Murray R.</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
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<td>Abrams, Gerald D.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Annesley, Thomas M.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<td>Appelman, Henry, D.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Barnes, Barbara A.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Barr Jr., Mason+</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Beals, Theodore F.</td>
<td>Assistant Professor</td>
<td>Veterans Administration Medical Center</td>
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<td>Blaivas, Mila I.</td>
<td>Clinical Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Bonadio, Jeffrey</td>
<td>Assistant Professor</td>
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<td>Capps, Rodney D.</td>
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<td>Chensue, Stephen W.</td>
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<td>Courtney, Richard M.*</td>
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<td>D'Amato, Constance J.</td>
<td>Assistant Professor</td>
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<td>Davenport, Robertson</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>de la Iglesia, Felix**</td>
<td>Adjunct Research Scientist</td>
<td>Warner-Lambert; Parke Davis</td>
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<tr>
<td>Dixit, Vishva M.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Elner, Victor M.+++</td>
<td>Assistant Professor</td>
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<td>England, Barry G.</td>
<td>Associate Professor</td>
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<td>Fantone, Joseph C.</td>
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<td>Flint, Andrew</td>
<td>Associate Professor</td>
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<td>Frank, Thomas S.</td>
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<td>Friedman, Bruce A.</td>
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<td>Giacherio, Donald</td>
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<td>Headington, John T.</td>
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<td>Hicks, Samuel P.</td>
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<td>Hinerman, Dorin L.</td>
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<td>Judd, W. John</td>
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<td>McClatchey, Kenneth D.</td>
<td>Associate Professor, Associate Chairman,</td>
<td>The University of Michigan</td>
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<td></td>
<td>Director, Clinical Laboratories</td>
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<td>McKeever, Paul E.</td>
<td>Associate Professor</td>
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<td>Midgley, A. Rees*</td>
<td>Professor</td>
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<td>Mitra, Raj S.</td>
<td>Assistant Research Scientist</td>
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<td>Nickoloff, Brian J.</td>
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<td>Oberman, Harold A.</td>
<td>Professor and Associate Director, Clinical Laboratories</td>
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<td>Shanberge, Jacob N.</td>
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<td>Sheldon, Susan</td>
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<td>Shope, Thomas C. +</td>
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<td>Shu, Suyu+++</td>
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<td>Silverman, Eugene M.</td>
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<td>Weiss, Sharon W.</td>
<td>Professor and Director, Anatomic Pathology</td>
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<td>Wolter, J. Reimer++</td>
<td>Professor</td>
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* Joint Appointment, Dental School
** Clinical Appointment, Warner-Lambert, Parke Davis
+ Joint Appointment, Department of Pediatrics and Communicable Diseases
++ Joint Appointment, Department of Ophthalmology
+++ Joint Appointment, Department of Surgery
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<td>2.</td>
<td>Bernard Naylor</td>
<td>17.</td>
<td>Eric Hsi</td>
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<td>Eric Kaldjian</td>
<td>47.</td>
<td>Curtis Hanson</td>
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2. Cytopathology Laboratory
   (Bernard Naylor, M.D.)

3. Dermatopathology Service
   (John T. Headington, M.D.)

4. Electron Microscopy Service
   (Kent J. Johnson, M.D.)

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

6. Pediatric Pathology Service
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E. Educational Activities  
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G. Resident Training Program  
(Joseph C. Fantone, M.D.)  

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(Lee Weatherbee, M.D.)
DEPARTMENTAL OVERVIEW
DEPARTMENTAL OVERVIEW
1989/90

During the past academic year several important events and changes have occurred, underscoring the constant evolution in the Department of Pathology. Perhaps the most visible change is related to the Surgical Pathology Service, in which Dr. Sharon Weiss assumed the position as Director of the Division of Anatomic Pathology and Head of Surgical Pathology in August, 1989. Under her leadership recruitment of new faculty has occurred as well as initiation of a Fellowship Program in Surgical Pathology. The aim of this Fellowship Program is to provide training for individuals destined for careers in surgical pathology. We hope that this program will become the most competitive training program in surgical pathology in the country. In the past year Dr. Thomas Frank was recruited as a surgical pathologist. Faculty recruitment efforts continue for another newly established position in surgical pathology. With Dr. Robert Schmidt's plans to retire during the new academic year, Dr. Suzanne Selvaggi has been recruited as a cytopathologist from Hutzel Hospital in Detroit.

The volume of clinical pathology and surgical pathology specimens continues to increase annually, due both to the growth of intramural activities as well as the MLabs program. Under serious discussion with Hospital administration is the need for additional clinical laboratory space (both for anatomic pathology and clinical pathology operations of the Department). These considerations will also be linked to the urgent institutional need to define expansion plans for ambulatory care services. Related to this are the requirements for clinical departments such as Internal Medicine to expand educational training for third and fourth year medical students into the ambulatory care setting, all of which represents part of a national trend towards fundamental changes in medical education.

Clinical Pathology is the current departmental target for intensified recruitment efforts. We continue to search for an academic clinical pathologist for the position vacated by Dr. David Keren. As of January, 1991, Dr. Gabriel Nunez will join the Department to establish his own research program in molecular biology and to serve as a key resource, together with Dr. Curtis A. Hanson and Thomas Frank, in expanding the Molecular Diagnostic Program in the Department of Pathology. Dr. Nunez, who is trained in anatomic pathology, immunopathology and molecular biology, will join us after completing a three year research fellowship in molecular biology with Dr. Stanley Korsmeyer at the Hughes Medical Institute at Washington University (St. Louis) School of Medicine.

The most significant accomplishment relating to our administrative efforts has been the successful negotiation with Hospital Administration for a long-term (four year) agreement for administrative laboratory clinical services provided by Pathology Associates. Other important aspects of administration within the Department include the development of comprehensive quality assurance and quality control programs affecting every aspect of clinical service. The requirement for these programs is significantly driven by the Health Care Financing Agency (Medicare). Our efforts in this area are being supervised by Dr. Kenneth D. McClatchey, who has assumed the title of Associate Chief for Clinical Affairs and will work with Dr. Robert Kelch (Chief of Clinical Affairs) in hospital-wide quality assurance programs. On other administrative issues, it should also be noted that we are inaugurating Department-wide a new word-processing system which no longer is linked to a highly centralized, main-frame computer type of system. Conversion to a PC-based system should significantly improve word processing activities at all levels in the Department.

Research programs continue to flourish within the Department, in spite of the current, difficult environment for obtaining and retaining research grant support from the federal government and from private foundations. At present our total research income per year is approximately $6,178,411, compared to $4,925,000 one year ago. We are reassured by the fact that most of these research grants in the Department are allocated as individual (RO1) grants, reflecting a broad, solid foundation of research activities in the Department.
The educational enterprise of the Department continues in its tradition of excellence, especially with respect to medical students and pathology residents. The reputation for departmental excellence in teaching is underscored by the annual teaching awards presented to our faculty members. A landmark in educational accomplishments of the Department was achieved in the Summer of 1990 when we inaugurated our graduate (Ph.D.) program in Experimental Pathology. Three excellent candidates were accepted into this program, which will gradually expand to a level of twelve to fifteen trainees. The early success of this program is in large part attributable to the efforts of Dr. Joseph C. Fantone, with the help of Dr. Sem H. Phan and many others. It is our hope to attract into this program M.D./Ph.D. (MSTP) students from the Medical School. The research environment of the Department, namely a focus on the application of basic biology to disease processes, provides many opportunities for graduate students, especially those with a background in medicine and biology. Other important changes in the educational area include the codifying of evaluation of faculty performance at all levels (e.g., medical students, graduate students, residents and postdoctoral fellows). Through Dr. Fantone's efforts we now have in place mechanisms that permit annual evaluations of the quality of individual faculty teaching efforts. In the Residency Training Program in Pathology, we are pleased at the high quality of physicians being recruited into this program; the performance of our residents is exceptional. In Summer of 1990, Dr. Fantone assumed the position of Director of the Residency Training Program in Pathology. This change in directorship followed the many years of successful leadership provided by Dr. McClatchey, who was assisted by Dr. Andrew Flint.

In general, the Department of Pathology is strong and healthy. It is hard to believe that this is my tenth overview for the annual departmental report. There is still much to be done and there are many additional changes that need to be made. On the basis of success and progress over the past ten years, there is every reason to believe that the coming year will be highly productive, that the Department will continue to be strengthened, and that we will ultimately achieve our objective to be among the three top ranked academic Departments of Pathology in the United States.

Respectfully Submitted,

[Signature]

Peter A. Ward, M.D.
Godfrey D. Stobbe,
Professor of Pathology
Professor and Chairman
INDIVIDUAL FACULTY REPORTS
GERALD D. ABRAMS, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Surgical Pathology Services - 2 1/2 months (sabbatical leave - 6 mos.).
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, 501 Sequence Coordinator and Lecturer, "Basic Concepts of Disease"
      CPC’s - 26 contact hours.
B. Sophomore Medical Class:
   1. ICS 600, 601 - CPC’s - 7 contact hours.
   2. Pathology 600 lectures - 7 contact hours.
C. Senior Medical Class:
   1. Pathology Clerkship Mentor.
D. Graduate School/Dental School/College of LS&A:
   1. Pathology 580 (Graduate School), Course Director, Lecturer - 18 contact hours.
   2. Pathology 630 (Dental School), Lecturer - 2 contact hours.
   3. Environmental and Industrial Health 518 (SPH) - Lecturer 1 1/2 contact hours.
   4. Biology 224 - (LS&A) Lecturer - 1 1/2 contact hours.
E. Hospital Conferences:
   1. Cardiovascular Pathology Conference - monthly.
   2. Internal Medicine CPC - monthly.
   3. Internal Medicine Necropsy Review - monthly.
   4. Gynecologic Pathology, Non-oncologic - monthly.
F. House Officers:
   1. Training in Surgical and Necropsy Pathology.
G. Invited Lectures:
   1. ASCP/CAP Performance Improvement Program Seminar on Gastrointestinal Pathology, October 30, 1989, Washington, D.C.
H. Medical Class of 1992 - Outstanding Lectureship Award.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. University of Michigan Cancer Center, Tissue Procurement Core - NIH 1 - P30 CA 46592.
B. National Collaborative Diagnostic Imaging Trial - NIH 1 - U01 CA 49077.

PROJECTS UNDER STUDY:
A. Director - Tissue Procurement Core - U of M Cancer Center.
B. Pathologic-Radiologic Correlation in Pancreatic Neoplasms (with I. Francis).
C. Toxicity of Mitometh (with D.E. Schteingart).
D. Natural History of Myocarditis (multicenter study).
E. Laser Ablation of Accessory Atioventricular Pathways (with C.D. Schuger, Wayne State University).
F. Reinnervation of Transplanted Human Heart (with M. Schwaiger).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
1. Member, Pathology Doctoral Program Committee.
2. Member, Pathology House Officer Selection Committee.

MEDICAL SCHOOL/HOSPITAL:
1. Member, Historical Center for the Health Sciences Liaison Committee.
2. Member, Hospital Ethics Committee.
3. Member, Inteflex Policy Committee.

REGIONAL AND NATIONAL:
1. President, Gastrointestinal Pathology Society.
2. Editorial Board, "Modern Pathology".
3. Reviewer, "Ophthalmology".
4. Reviewer, "Archives of Pathology and Lab Medicine".
5. Deputy Medical Examiner, Washtenaw County.

V. PUBLICATIONS:

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


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


   - Chapter 1 - Introduction to General Pathology.
   - Chapter 2 - Heredity, Environment, and Disease.
   - Chapter 3 - Cellular Injury and Death.
   - Chapter 4 - Inflammation and Repair.
   - Chapter 5 - Response of the Body to Immunological Challenge.
   - Chapter 6 - Response of the Body to Infectious Agents.
   - Chapter 7 - Disturbances of Circulation.
   - Chapter 8 - Disturbances of Growth, Cellular Proliferation, and Differentiation.
THOMAS M. ANNESLEY, PH.D.
ASSOCIATE PROFESSOR OF CLINICAL CHEMISTRY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Director, Drug Analysis and Toxicology Laboratory.
   B. Section Head, Biochemistry Laboratories.
   C. Consultant to Veterans Administration Hospital, Ann Arbor, Michigan.

II. TEACHING ACTIVITIES:

   MEDICAL SCHOOL/HOSPITALS:
   A. Medical Students:
      1. Lecturer, Pathology 600 Course.
   B. House Officers:
      1. Lecturer, Clinical Pathology Grand Rounds.
      2. Lecturer, Clinical Pathology Didactic Lecture Series.
      3. Daily sign-out and interpretation of Laboratory Results.
   C. Graduate Students:
      1. Thesis Committee, Biomedical Engineering.

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. Measurement of therapeutic drugs using alternative fluids beyond serum.
   D. Esoteric analysis of drugs by gas chromatography/mass spectrometry.
   E. Measurement of cyclosporine by radioimmunoassay.

IV. ADMINISTRATIVE ACTIVITIES:

   DEPARTMENTAL:
   A. Director, Drug Analysis an Toxicology Laboratory.
   B. M-Labs Technical Group.
   C. Pathology Associates
MEDICAL SCHOOL/HOSPITAL:
A. Standardization of Procedures Committee.

REGIONAL AND NATIONAL:
A. Executive Committee, National Therapeutic Drug Monitoring and Clinical Toxicology Division American Association for Clinical Chemistry.
B. National Awards Committee, American Association for Clinical Chemistry.
C. National Abstracts Committee, American Association for Clinical Chemistry.
E. Education Committee, Michigan Section, American Association for Clinical Chemistry.
F. College of American Pathologists Chemistry Reference Laboratory.
G. Member, NCA Drug Testing Team.
H. ETS Advisory Board, Syva Corporation.
I. Member, Academy of Clinical Laboratory Physicians and Scientists.
J. Member, American Association of Pathologists.
K. Member, American Association for Advancement of Science.
L. Member, Clinical Ligand Society.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
A. Therapeutic Drug Monitoring Editorial Board.
B. Biomedical Chromatography, Editorial Board.
C. Therapeutic Drug Monitoring and Clinical Toxicology Newsletter, Editorial Board.

OTHER
A. Clinical Chemistry, Reviewer.
B. Mayo Clinic Proceedings, Reviewer.
C. Journal of Clinical Immunoassay, Reviewer.
E. Biomedical Chromatography, Reviewer.

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:

HENRY D. APPELMAN, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. **CLINICAL ACTIVITIES:**

A. General surgical pathology - 3 1/2 months.
B. Gastrointestinal and hepatic pathology consultation services - full time.

II. **TEACHING ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITALS:**

A. Medical Students:
   1. Pathology 600 - 9 full class lectures.
   2. Lab Instructor Pathology 600 - 1 semester.
   3. Pathology 630 (dental) - 3 full class lectures.
   4. Senior medical student electives - 3 1/2 month instruction in surgical pathology in the reading room.
   5. 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 - 3 1/2 months.
   4. Gastrointestinal and hepatic pathology tutoring - full time.
   5. Mentor for one house officer in gastrointestinal and liver pathology subspecialty - 1 month total.
   6. Formal Lectures on GI and Liver Pathology - 7 hours.

C. Interdepartmental:
   1. Medical Gastrointestinal Pathology Conference - 2nd and 4th Wednesday of each month.
   2. G-I Tumor Conference - 4th Tuesday of each month.
   3. Liver Transplant Conference - Every other Thursday.
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. Appendiceal epithelial neoplasia.
D. Interactive Computer Based Diagnostic Program in Colorectal, Appendiceal and Anal Pathology with Bharat Nathwani at USC, plus Intellipath.
E. Thymosin Treatment of Chronic Hepatitis B with Milton Mutchnick.
F. Liver Transplantation for Hepatitis B Disease with Mike Lucey, Keith Henley, Bob Merion and David Graham.

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, Tissue and Invasive Procedure Committee, University Hospital.

REGIONAL AND NATIONAL:

A. Member, Program Committee, Michigan Society of Pathologists.
B. Reviewer of manuscripts for Archives of Pathology and Laboratory Medicine, Cancer, Human Pathology, Gastroenterology, and Am J Gastroenterology.
C. Chairman, Publications Committee and Member, Executive Committee, Gastrointestinal Pathology Society.
E. Visiting Pathologist for Regional Workshops on Pathologic Diagnosis in Inflammatory Bowel Disease, sponsored by the National Foundation for Ileitis and Colitis.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

4. Visiting Professor of Pathology, Department of Pathology, Jacksonville Division of the Health Science Center, University of Florida, Jacksonville, Florida. Lecture: Gastritis.

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. Coordinate quality assurance activities in Blood Bank Laboratory.
    B. Coordinate training of Blood Bank Laboratory Staff.

II. TEACHING ACTIVITIES:
    A. House Officers
       2. Coordinator, Blood Bank/Coagulation Rotation for Pediatric Hematology Fellows.
    B. Blood Bank Technical Staff.
       1. Coordinator, Continuing Education Weekly Conferences in Blood Banking.
       2. Coordinator, Orientation Training for New Employees in Blood Banking.

III. RESEARCH ACTIVITIES:
    Project Under Study
    Reducing pretransfusion medication on pediatric hematology-oncology service.

IV. ADMINISTRATIVE ACTIVITIES:
    MEDICAL SCHOOL/HOSPITAL:
    A. Blood Bank Communication Committee.
    B. Conducted individual courses of instruction for each new employee of the hospital Blood Bank.
    C. Drafted and implemented a weekly schedule of in-service education for Blood Bank staff.
    D. Coordinated Blood Bank/Coagulation experience for each Pediatric Hematology Fellow.
    E. 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.
V. **OTHER RELEVANT ACTIVITIES:**

**WORKSHOP:**


VI. **PUBLICATIONS:**


MAISON BARR, JR., M.D.
PROFESSOR OF TERATOLOGY
DEPARTMENT OF PATHOLOGY;
PROFESSOR OF PEDIATRICS
DEPARTMENT OF PEDIATRICS;
PROFESSOR OF OBSTETRICS AND GYNECOLOGY
DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
A. Medical Director, Myelodysplasia Unit: inpatient and outpatient services for children with spina bifida, 322 Clinic Visits.
B. Attending Physician Pediatrics Infant Ward: 3 months
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; Four per year.
D. Neonatology Pathology Conference: quarterly review and discussion of neonatal deaths.
E. Malformations lecture, Embryology (M-1) Course.
F. Perinatal Pathology Conference: quarterly review and discussion of perinatal deaths (OB-GYN)

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: 162 fetal/neonatal examinations (77 from UMMC, 85 referred from outside hospitals)
COLLABORATIVE RESEARCH:

1. Collection and allocation of fetal tissues for research projects in the Departments of Pediatrics, Pathology, Obstetrics, Anatomy, Genetics, and Howard Hughes Institute. Loan of fetal material for research investigations in the Department of Radiology.
2. Collaborative research with Central Laboratory for Embryology at the University of Washington (T.H. Shepard, M.D.) and the Department of Pathology at the University of South Alabama (W.R. Blackburn, M.D.) on standards for normal fetal morphometrics.
3. Research with Wayne State University (M.P. Johnson, M.D.) on fetal growth assessment in aneuploid fetuses.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Departmental - Pathology: none.
B. Departmental - Pediatrics: Editorial Board, Pediatric Rounds; House Officer Selection Committee.
C. Steering Committee for DSCC-funded Cost of Comprehensive Care Study.
D. Standardization and product evaluation committee, member; Infant care review committee, co-chair.

REGIONAL AND NATIONAL:

A. Reviewer for journals: Teratology, Pediatric Pathology.
B. Public Affairs Committee, Teratology Society.
C. Michigan Department of Public Health, Task Force on Provider Approval System.
D. 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:

THEODORE F. BEALS, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Diagnostic Electron Microscopy, Veterans Affairs Medical Center.
B. Director of Electron Microscopy Center of Excellence.
B. Cytopathology, Veterans Affairs Medical Center.
C. Coordinator of Decentralized Hospital Computer Program in Laboratory Service,
   Veterans Affairs Medical Center.
D. Fine Needle Aspiration, Veterans Affairs Medical Center.
E. Surgical/Autopsy Pathology, Veterans Affairs Medical Center.
F. Tumor Board, Veterans Affairs Medical Center.
G. Deputy Washtenaw County Medical Examiner.
H. Consultant: Diagnostic Electron Microscopy, Allen Park, VAMC and Danville, VAMC.

II. TEACHING ACTIVITIES:

A. Pathology House Officer monthly elective: Diagnostic Electron Microscopy, 10 months.
B. Diagnostic Electron Microscopy Case Conference, bi-weekly.
C. Pathology House Officers, fine needle aspiration technique and interpretation.
D. Pathology 600 Lab Section.
E. M4 elective in Pathology, Diagnostic EM and Cytopathology.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Pathologist for: VA Cooperative Study #268. A New Strategy to Preserve the Larynx in
   the Treatment of Advanced Laryngeal Cancer.(G. Wolf, Principal Investigator)
B. Marijuana-Bronchoscopy Project (Fligiel/Gong/Tashkin).NIH
C. 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-
D. Crescentic Nephritis -Core B- NIH Program Project, Consultant (Wiggins, Johnson)

PROJECTS UNDER STUDY:

A. Clinical Relevance of Ultrastructural Characteristics of Small Cell Carcinoma (with R.
   Green).
C. Morphometric Analysis of Cells and Tissue using the Scanning Light Microscope.
D. Surface Markers for Antigen Localization in Scanning and Transmission Electron Microscopy (with S. Chensue and with D. Remick).
E. Growth of Cells on Microcarriers (with J. Varani).
F. Endothelial Cell Damage Caused by Oxidants (with D. Hinshaw).
G. Changes in Alveolar Macrophages in Monkeys smoking Marijuana (with S. Fligiel).
H. DNA Cytomorphometry of Laryngeal Squamous Carcinoma (with G. Wolf and J. Truelson).
I. Differentiation of Isolated Renal Tubular Cells in Culture (with D. Humes).
J. Ultrastructural Changes in Fuchs' Heterochromic Cyclitis (with B. Cohan).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

MEDICAL SCHOOL/HOSPITAL:

A. Surgical Case Review Committee, Veterans Affairs Medical Center.
B. Electron Microscopy Committee, chair, Veterans Affairs Medical Center.
C. Medical Records Review Committee, Veterans Affairs Medical Center.
D. Information Resources Management Oversight Committee Veterans Affairs Center.
E. Medical School Admissions Committee.
F. Executive Admissions Committee, Medical School.

REGIONAL AND NATIONAL:

A. Association of Veterans Affairs Pathologists
   Secretary-Treasurer.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Pulmonary Neoplasm: Diagnostic Problems and Ultrastructural Characteristics (Department of Internal Medicine, Pulmonary Conference).
2. Electron Microscopy as an Aid to Diagnostic Cytopathology. Henry Ford Medical Center
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


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

MILA BLAIVAS, M.D., PH.D.
CLINICAL ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. M-LABS AP/CP coverage at Lapeer Community Hospital, Albion community Hospital, Thorn Hospital, and The University of Michigan Hospital.
B. Muscle biopsies and nerve biopsies done for the University of Michigan and other hospitals in and out of state.
C. Six rotations in Autopsy Service.
D. Neuropathology service coverage during Dr. Paul E. McKeever's absences.
E. Consultations on brain biopsies and rheumatology cases.

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 departments.
E. Biweekly muscle and nerve cases review with pathology residents.
F. Weekly conference with Neuromuscular staff.
G. Bimonthly conference with Neuroradiology and Pediatric Neurology.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Histology and histochemistry of orbicularis muscle (coinvestigator on the MI Eye-bank and Transplantation Center Grant: 1988-1989; $10,000).
B. Peripheral nerve grafting.
C. Pelvic floor muscles.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Continuing improvement of interdepartmental coordination of muscle and nerve biopsy service.
MEDICAL SCHOOL:
A. Member of the Admission Committee

REGIONAL AND NATIONAL:
A. Worked at Lapeer Community Hospital.
B. Visits to Albion Community Hospital Laboratory.
C. Member, American Association of Neuropathologists, IAP, and AMA.

V. OTHER RELEVANT ACTIVITIES:
A. Participated in weekly brain cutting conference.
B. Participated in conferences for neurosurgeons and brain tumor boards

INVITED LECTURES/SEMINARS:
1. Attend ASCP intensive Neuropathology course at Loma Lind University, California - 3 days.
2. Attended American Association of Neuropathologists meeting and presented 2 posters in San Francisco - 4 days.

VI. PUBLICATIONS:

ARTICLES SUBMITTED:

ABSTRACTS, BOOK REVIEWS PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
JEFFREY BONADIO, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Inherited Connective Tissue Disease Diagnostic Service (Biochemical Analysis of Skin Biopsy Material).
B. Attending Staff, University of Michigan Autopsy Service.

II. TEACHING ACTIVITIES:

A. Graduate Student thesis Co-Chairman with Steven Goldstein: Ms. Monique Mansoura (Bioengineering).
   Graduate student thesis Co-Chairman with Steven Goldstein: Mr. John Germiller (MSTP).
   Graduate Student thesis committee: Mr. Karl Jepsen (Bioengineering).
   Graduate Student thesis committee: Ms. Patricia Sherman (Human Genetics).
   Graduate Student thesis committee: Ms. Elizabeth Allen (Human Genetics).
B. Supervision of four postdoctoral fellows: (Eric Patterson, Ph.D., David Bole, Ph.D.,
   Loretta Register, M.D., and Gopa Majmudar, Ph.D.).
C. Mentor, Summer Medical Research Program, University of Michigan, 1989 and 1990
   (1990 Summer Students - John Germiller, Claudia McQueen, and Andy Pasternak).
D. Courses:
   1. Lecturer, Pathology 600.
   2. Lecturer, Pathology 580.
   3. Lecturer, Biochemistry 501.
   4. Course Co-Director, Pathology 581.
   5. Pathophysiology, Fifth Block, Baylor College of Medicine (Invited lecturer,
      Inherited Connective Tissue Disease).
E. Continuing Medical Education:
   2. Biomedical Research Council Forum on Transgenic Animal Models of Disease,
      The University of Michigan, 1989.
   3. Internal Medicine, Renal Division Seminar Series, University of Michigan, 1989.
   5. Rheumatology, Department of Medicine, University of Michigan, 1990.
   6. Laboratory Medicine, Department of Pathology, University of Michigan, 1990.
F. Invited Presentations:
   1. European Molecular Biology Laboratory Mouse Molecular Genetics Meeting,
      1989.
   2. Seminar Series, Molecular Biophysics Program, Center for Advanced Biotechnology and Medicine, the State University of New Jersey, 1989.
   3. Seminar Series, Department of Pathology, University of Wisconsin, 1989.
   5. Seminar Series, Molecular Genetics, Baylor College of Medicine, 1989.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Molecular Basis of Osteogenesis Imperfecta Type II, NIH-DK, AR38473-04 (50% effort), $44,520.00/year direct costs, ($194,771.00/5 years).
B. Office of the Vice President for Research, ($10,000.00) (1/1/90-12/31/90).

PROJECTS UNDER STUDY:

A. We are interested in the relationship between structure and function for type I collagen, a fibrous protein that resides in the extracellular matrix (ECM) of most tissues. Type I collagen was chosen in part because of a larger interest in the contribution of the ECM to tissue assembly during development. By focusing on a major ECM component, our goal is to define this contribution in molecular terms.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL:

A. Member, Planning Committee, University of Michigan Skeletal Dysplasia Clinic.
B. Member, Preclinical Advisory Program, University of Michigan Medical School.
C. Biomechanics Core Steering Committee, University of Michigan Multipurpose Arthritis and Musculoskeletal Diseases Center.

DEPARTMENTAL:

A. Oversight Committee, Graduate Program, Department of Pathology, University of Michigan.

V. OTHER RELEVANT ACTIVITIES:

A. Invited Reviewer, American Journal of Human Genetics.
D. Invited Reviewer, The March of Dimes, Grants Program.
E. Member, Multipurpose Arthritis Center.
F. Member, Michigan Cancer Center.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:


STEPHEN W. CHENSUE, M.D., PH.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Director, Clinical Laboratories, Veterans Affairs Medical Center
B. Hematology/Coagulation, Veterans Affairs Medical Center
C. Surgical/Autopsy Pathology, Veterans Affairs Medical Center
D. Special Chemistry/Immunology, Veterans Affairs Medical Center

II. TEACHING ACTIVITIES:

A. Sophomore medical students, Pathology 600 laboratory course.
B. Pathology house officers, Surgical Pathology/Autopsy supervision and instruction.
C. Technologists and technicians, ongoing inservice instruction on clinical laboratory topics.
D. Physicians, educational lectures regarding aspects of clinical pathology.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator: Production and Regulation of Granuloma Macrophage Mediators, VAMC Merit Review ($49,000 annual).
B. Principal Investigator: Cytokine Cascades in Granuloma Formation, VAMC Merit Review (55,000 annual) 1990-1993.
C. Consultant on NIH-HL-R01-31237, Macrophage Function in Pulmonary Inflammation, Dr. S. Kunkel, Principal Investigator.

PROJECTS UNDER STUDY:

A. Role of cytokines in Schistosoma mansoni egg-induced granulomatous inflammation.
B. Immunolocalization of interleukin 1 and tumor necrosis factor mouse and human inflammatory lesions.
C. Regulation and orchestration of cytokine production during granulomatous inflammation.
D. In situ hybridization to demonstrate local cytokine induction and synthesis of monokine mRNA in cultured cells and tissue sections.
E. In vivo analysis of cytokine cascades in experimental endotoxemia.
F. Analysis of neutrophil and monocyte chemoattractants by immunolocalization in cultured cells and tissue sections.

IV. ADMINISTRATIVE ACTIVITIES:
DEPARTMENTAL: None.

MEDICAL SCHOOL/HOSPITAL:
A. Blood Utilization Review Committee, VAMC, Chairman
B. Research and Development Committee, VAMC, voting member
C. Ambulatory Care Committee, VAMC, voting member
D. Hospital Quality Assurance Investigations, ad hoc committee
E. Personnel employment and evaluation
F. Clinical laboratory equipment evaluation
G. Editor, "VALABS Interface Laboratory News", Laboratory Newsletter

REGIONAL AND NATIONAL:
A. Editorial Review
   American Journal of Pathology
   Journal of Immunology
   Clinical Immunology and Immunopathology
   American Journal of Respiratory Cell and Molecular Biology
   Agents and Actions
B. Inspector, College of American Pathologists
C. Reviewer and on site inspection for Merit Review Board

V. OTHER RELEVANT ACTIVITIES:
A. Case presentations at GI and Hematology Conferences
B. Case presentations at Morbidity and Mortality Conferences
C. Tissue evaluation for clinical researchers
D. Invited lecture, Upjohn Company

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


SUBMITTED ARTICLES


BOOKS AND CHAPTERS IN BOOKS:


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

CONSTANCE J. D'AMATO, B.S.
ASSISTANT PROFESSOR OF NEUROBIOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Work daily with house officers and staff in Pathology and other departments in the gross
and microscopic examination of brains from autopsies at University Hospital.
B. Attend and participate in the removal and gross examination of brains from nearly 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 conduct weekly Brain Cutting Conference for house officers, students and staff,
for gross diagnosis and demonstrations of diagnostic methods, and teaching.
E. Plan and present gross and microscopic Neuropathology Conference on alternate months
for the Neurology Department, and participate occasionally in their Grand Rounds.
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. 5 hours of lectures and 12 hours of 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-D.
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; implement general plan of course. Annual, 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:

None
PROJECTS UNDER STUDY:

A. With S.P. Hicks in three areas in collaboration with colleagues.

1. A mutant rat in which a transient failure of basement membrane formation in the cephalic neural tube leads to local overgrowth with stenosis of the aqueduct and prenatal hydrocephalus, many affected animals surviving to adulthood. Previous studies had shown that in situ the mutant neuroepithelium transiently failed to produce collagen IV. With K. Sue O'Shea, we have shown that cultured neurons from mutant embryos fail to extend neurites on tissue culture dishes coated with laminin, fibronectin, or type IV collagen, or on culture medium alone, whereas controls formed elaborate neurites. In a related study Sue O'Shea and Paul Killien have shown that there is no preferential localization of a metalloprotease (TIMP) in regions in the mutant where the basement membrane breaks down.

2. Studies continue with James Varani and others to determine whether the phagocytes that appear in certain parts of the embryo in response to cell-killing by radiation add to the malformation that radiation produces, or lessen it by promoting regeneration. For example, the most severe malformation occurs in the mantle of the 16th day embryo where no phagocytes appear.

3. Thrombospondin (TSP), a glycoprotein of extracellular matrices is associated with migrating cells and neurite outgrowth from neurons and is synthesized by neurons and glia. Its possible role in astrocytic hypertrophy (gliosis) following injury is unknown. With Vishva Dixit and Sue O'Shea we have shown preliminarily that TSP appears in association with the hypertrophy of astrocytes in the third week after surgical injury of the rat cerebral cortex but not in the earlier stages.

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.

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..

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Anatomic Pathology Committee.

MEDICAL SCHOOL/HOSPITAL:

A. Director of the Neural and Behavioral Sciences Program.
B. Basic Science Phase Committee.
C. Basic Science Academic Review Board.
D. Neural and Behavioral Sciences Curriculum Committee.
E. Neural and Behavioral Sciences Examinations Committee.
F. Sequence Coordinator for Neural and Behavioral Sciences 600 (Neuropathology).
G. Admissions Committee, U of M Medical School.
H. Executive Committee of the Admissions Committee.
I. Preprofessional Counselor, premedical and health-related students.
REGIONAL AND NATIONAL:
A. American Association of Neuropathologists.
B. Reviewer of research grant applications for National Science Foundation Neurobiology Program.

V. OTHER RELEVANT ACTIVITIES:
A. Presentation: Alzheimer's Disease and other dementias, at Eastern Michigan University, June 1990.
B. Chairman, Cost Analysis Panel of the Postmortem Examination Work group of the Dementia Subcommittee of the Chronic Disease Advisory Committee (Michigan Department of Public Health).
C. Executive Committee of the Postmortem Examination Work group (Michigan Department of Health).

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
ROBERTSON D. DAVENPORT, M. D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Fellow in Blood Banking, University Hospitals.
   B. Medical coverage of Transfusion Service.
   C. Diagnosis of surgical specimens from M-Labs.
   D. Diagnosis of cytologic specimens from University Hospital patients.
   E. Medical coverage of Necropsy Service.
   F. Deputy Medical Examiner.

II. TEACHING ACTIVITIES:
   A. Course on Transfusion Medicine for Pathology House Officers.
   B. Postgraduate Course, "Current Topics in Blood Banking"
      Workshop: "Component Therapy in Coagulation Disorders."
      Lecture: "How Should Transfusion Reactions be Evaluated?"
   C. Continuing education presentations for Blood Bank technologists.
   D. Daily teaching rounds for Pathology House Officers assigned to the Blood Bank.

III. ADMINISTRATIVE ACTIVITIES:

PROJECTS UNDER STUDY
   A. Cytokine production in hemolytic transfusion reactions.
   B. Value of prophylactic plasma transfusion before percutaneous liver biopsy.
   C. Clinical characteristics of delayed hemolytic transfusion reactions.
   D. Histopathology of hemolytic transfusion reactions.
   E. Hemolytic transfusion reactions due to Anti-i.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL
   A. Transfusion Committee.

V. OTHER RELEVANT ACTIVITIES:
   A. Reviewer, Transfusion.
   B. Reviewer, American Journal of Clinical Pathology.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


ABSTRACTS:

VISHVA M. DIXIT, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:
A. Supervised the following undergraduate students: Mark Burt, Kara Reynolds
B. Supervised the following graduate students: Carol Laherty, Tony Opipari, Ron Katz, Cameron Scarlet
C. Supervised the following post doctoral fellows: Larry Holzman, Vidya Sarma, Rachel Yabkowitz, Theresa Bacon-Baguey, Valarie Castle
D. Graduate School Pathology Course. Lectures on Extracellular Matrix.
E. Cell and Molecular Biology course to clinical fellows.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

1. NIH-R01-39037-01 - "Structure and Regulation of Human Platelet Thrombospondin". Period 07/01/87 - 06/30/92. Budget - $101,554, Principal Investigator, 40% effort.
2. NIH-R01-HD23867 - "Role of Thrombospondin in CNS Development". Period 02/01/88 - 01/31/91. Budget - $101,022, Co-Investigator, 10% effort.
3. American Heart Association Established Investigatorship Award. #89-217 - "Structure and Function of Thrombospondin", Period 07/01/89-06/31/94, Budget $35,000 annually, Principal Investigator.
4. DK39255-03 - "Mechanisms of Glomerular and Tubular Injury", Period 09/01/87-07/31/92, first year direct costs $40,000, Co-Investigator, Roger C. Wiggins, Program Director.
5. Grant-in-Aid, American Heart Association, "Thrombospondin Heparin Binding Domain and Platelet Function", Period 07/01/90-06/30/93, $35,000 per year, Principal Investigator.
6. American Cancer Society - "Novel Thrombospondin Receptors on Squamous Carcinoma Cells", Period 07/01/90 - 06/30/93, Budget- $85,000, Principal Investigator.
7. NIH-45351 - "Cytokine Modulation of Endothelial Gene Expression", Period 07/01/90 - 06/30/93, Budget $116,327, Principal Investigator.

PENDING GRANTS:

1. NIH-CA51888, "Novel Thrombospondin Receptors on Squamous Carcinoma Cells", 12/01/90 - 11/30/93, Budget $108,282, Principal Investigator.
PROJECTS UNDER STUDY:

A. Structure/function relationships in thrombospondin.
B. Mechanisms of action of tumor necrosis factor.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Interview prospective graduate students for a) Molecular and Cell Biology Program, and b) Medical Scientist Training Program.
B. Taught a graduate school course on Extracellular Matrix.
C. Taught a pathology resident course on molecular biology.
D. Participated in graduate school pathology program.

MEDICAL SCHOOL/HOSPITAL:

A. Review BMRC grants.
B. Taught in Cell and Molecular Biology course for fellows.
C. Committee on Cell and Molecular Biology.

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:

1. Invited Speaker, University of Minnesota, Minneapolis, Minnesota, 1989
2. Lecture, University of Michigan, Department of Internal Medicine, Nephrology Division, 1989
3. Invited Speaker, Glycomed, Alameda, CA, 1989
4. Invited Speaker, Cytogen, Princeton, NJ, 1989
5. Lecture, University of Michigan, Department of Biology, 1989
6. Lecture, University of Michigan, Department of Internal Medicine, Nephrology Division, 1989
7. Invited Speaker, University of Wisconsin, Madison, WI, 1989
8. Invited Speaker, University of South Carolina, Charleston, South Carolina, 1990
10. Invited Speaker, Cleveland Clinic Foundation, Cleveland, OH, 1990
11. Invited Speaker, Scripps Clinic, La Jolla, California, 1990

VI. PUBLICATIONS:
ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION


VICTOR M. ELNER, M.D., PH.D.
ASSISTANT PROFESSOR OF OPHTHALMOLOGY AND PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Ophthalmic Surgery Pathology

II. TEACHING ACTIVITIES:

A. Instruction of Pathology Residents in Ocular Pathology (regularly until 2/90 then as asked, e.g., cases for teaching conferences, review of specific cases)
B. Ophthalmic Pathology Lectures (2 - 2 hour lectures)
C. Ophthalmic Pathology Grossing Manual
D. Preceptor: Ophthalmic Pathology Resident Research (Drs. Pavilack, Wu, Dutt)
E. Visiting Lecturer: Mount Sinai Hospital, Detroit, MI; Michigan State University, East Lansing, MI

III. RESEARCH ACTIVITIES:

A. Retinal Pigment Epithelial Cell Biology
B. Corneal Cell Biology
C. Anatomic and Pathologic Correlations in Ophthalmic Plastic and Orbital Surgery
D. Collaborative Ocular Melanoma Study: Pathologist
E. Selected topics in Ophthalmic Surgical Pathology and Experimental Ophthalmic Pathology (e.g. glaucoma)
F. Sponsored Research - Co-Investigator: Ultrastructural and Immunohistochemical Analysis of Mechanically-Induced Retinal Pigment Epithelial Fibrous Metaplasia (SG Elner; Principal Investigator - Michigan Eye Bank 1989-1990)

IV. AWARDS

IV. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


BARRY G. ENGLAND
ASSOCIATE PROFESSOR OF REPRODUCTIVE BIOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Director, Ligand Assay Laboratory.

II. TEACHING ACTIVITIES:
   A. Instructor for Pathology House Officers Laboratory Rotation.
   B. Instructor for Nuclear Medicine Residents Laboratory Rotation.
   C. Thesis Committee Member for Hamed Benghuzzi, University of Dayton.
   D. Participant, Clinical Pathology Grand Rounds.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   C. Protocol to evaluate the transdermal delivery of estradiol-17B in postmenopausal women. Sponsor: Ciba-Geigy Corp.

IV. SERVICE ACTIVITIES:

   DEPARTMENTAL:
   A. Director, Central 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 Sciences Program.
   C. Member, Selection Committee, Reproductive Sciences Program.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


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


JOSEPH C. FANTONE, M.D.  
ASSOCIATE PROFESSOR OF PATHOLOGY  
DEPARTMENT OF PATHOLOGY  

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1989 - 30 JUNE 1990

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

II. TEACHING ACTIVITIES:
   A. Director, Resident Training Program  
   B. Graduate Program Committee (Chairman).  
   C. Course Director - Pathology 600.  
   D. Laboratory Instructor - Pathology 600.  
   E. Coordinator - Senior Medical Student Clerkships.  
   F. Sequence Coordinator and Lecturer - Sophomore Medical Students (ICS-600) 
      Immunopathology.  
   G. Associate Director - Sophomore Medical Student ICS Course (600/601).  
   H. Pulmonary Pathology Conference (monthly to Pulmonary Division - Internal Medicine).  
   I. Lecturer - Microbiology and Immunology 624.  
   J. Lecturer - Pathology 580.  
   K. Preceptor - Undergraduate and Medical Student Research (3).  
   L. Graduate Student Ph.D. Thesis Committee (3).  
   M. Preceptor for one Postdoctoral Fellow.  

III. RESEARCH ACTIVITIES:
   A. Regulation of phagocytic cell-mediated tissue injury.  
   B. Signal transduction pathways of phagocytic cells.  

SPONSORED SUPPORT:
   A. Principal Investigator: Modulation of Immune Complex Lung Injury (NIH-R01-HL-32024).  
   B. Principal Investigator: Mechanisms of Myocardial Ischemia/Reperfusion Injury (NIH-R01-HL44085).  
   C. Principal Investigator: Phagocytic Cell and Glomerular Injury. Section IV of Renal Center Grant (NIH-P50-R01-K39255).  
   D. Co-Investigator: Mechanisms and Genetic Regulation of Pulmonary Fibrosis. (S.H. Phan; Principal Investigator) (NIH-5-R01-HL-28737).  
   E. Co-Investigator: Pharmacologic Studies on the Ischemic Heart (B. Lucchesi, Principal Investigator) (NIH-R01-HL-19782).
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Chairman's Advisory Committee  
B. Coordinator - Educational Activities.  
C. Department ACAPT Committee  
D. Research Space Advisory Committee  
E. Department Computer Committee  
F. Department Photography Committee

MEDICAL SCHOOL/HOSPITAL:

A. Medical Student Advisor (3rd and 4th year).  
B. ICS - Executive Committee.  
C. Basic Science Phase Committee (Chairman).  
D. Clinical Phase Committee.  
E. Medical Student Basic Science Academic Review Board.  
F. Medical Student Clinical Phase Academic Review Board.  
G. Academic Affairs Council.  
I. External Review Committee (Chairman), Department of Post-Graduate Medicine and Health Professions Education.  
J. Medical School Admissions Committee.  
K. LCME Review: Subcommittee for Educational Programs.

REGIONAL AND NATIONAL:

A. NIH Site Visit, Program Project: Physical Properties and Biologic Functions of Lipids, Hormel Institute, Austin, Minnesota, 1990.  
B. NIH Site Visit, Program Project: Ether Lipids, Eicosanoids, and Lung Pathophysiology, National Jewish Hospital, Denver, Colorado, 1990.  
C. Editorial Board, Laboratory Investigation.  
D. Reviewer, Veteran's Administration Research Grants.  

V. INVITED LECTURES AND SEMINARS:

1. Visiting Professor, Department of Surgery, University of Hawaii Medical School, 1990.  

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


CHAPTERS IN BOOKS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:


II. TEACHING ACTIVITIES:

A. Pathology 600 Lectures:
   1. Pulmonary Pathology I - January, 1990
   2. Pulmonary Pathology II - January, 1990
   4. Pulmonary Pathology IV - January, 1990
   5. Pulmonary Pathology V - January, 1990
   7. Gyn Pathology II - March, 1990
   9. Pathology 600 Laboratory Instructor, January - April, 1990

B. Pathology 630:
   1. Respiratory Disease I - October, 1989
   2. Respiratory Disease II - October, 1989

C. Residency Training:
   1. Diseases of the Chest I - April, 1990
   2. Diseases of the Chest II - April, 1990

D. Other educational activities:
   1. M4 student elective mentor, September, 1989
   2. Clinicopathologic Conference, Department of Internal Medicine, January, 1990
   3. Clinicopathologic Conference, Department of Internal Medicine, February, 1990
   4. Clinicopathologic Conference, Department of Internal Medicine, March, 1990
   5. Clinicopathologic Conference, Department of Internal Medicine, April, 1990
   6. Clinicopathologic Conference, Department of Internal Medicine, June, 1990
   7. Autopsy Review Conference, Department of Internal Medicine, June, 1990
   8. Pulmonary Pathology - Radiology Conference, Department of Radiology, February, 1990
   10. Pulmonary Pathology - Radiology Conference, Department of Radiology, April, 1990
   12. Department of Internal Medicine Seminar, "Pathology of Lymphoid Pulmonary Disorders", October, 1989
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Pathology Consultant, Morphologic Studies of Diffuse Interstitial Lung Diseases, A Multi-Institution Project, Reuben M. Cherniak, M.D., National Jewish Hospital, Program Director.
B. Monoclonal Antibodies to Bladder Tumor Antigens, H. Barton Grossman, M.D. (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).
C. Pathology Consultant, Prospective Investigation of Pulmonary Embolism Diagnosis, John G. Weg, M.D., Principal Investigator.

PROJECTS UNDER STUDY:

A. The pathologic manifestations of nasal involvment by Wegener's Granulomatosis
B. Wegener's Granulomatosis: morphologic and immunohistochemical analysis
C. Methotrexate-induced hepatic disease: an analysis of sequential liver biopsy samples
D. Papillary adenoma of the lung: morphologic and immuno-chemical analysis
E. Morphometric analysis and quantitation of peroxidase staining intensity of cultured urinary bladder carcinoma cells.
F. Interstitial lung disease: the influence of biopsy site on diagnosis.
G. The morphologic manifestations of metastatic renal cell carcinoma to the lung
H. The specificity of a monoclonal antibody to a colon-specific CEA epitope: an aid in detecting metastatic colon carcinoma to the lung?
I. Tall cell papillary carcinoma of the thyroid: DNA analysis and comparison to other forms of thyroid carcinoma.
J. DNA analysis of preoperative esophageal biopsy samples: can ploidy analysis predict prognosis?

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

B. Chairman, Residency Candidates Selection Committee (July, 1989 - April, 1990).
   1. Interviewed 33/36 candidates
   2. Revision of recruitment brochures
C. Design of Surgical Pathology Fellowship Program, in collaboration with Ricardo V. Lloyd, M.D., Ph. D.
D. Coordinator, Senior Staff Service Rotation
E. Chairman, Pathology Residency Advisory Committee (July, 1989 - April, 1990).

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:


SUBMITTED PUBLICATIONS:

1. Flint A, Davenport RD, Lloyd RV: The Tall Cell variant of papillary carcinoma of the Thyroid gland: Comparison to the common form of papillary carcinoma by DNA and morphometric analysis. (Archives of Pathology and Laboratory Medicine).

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

1. Flint A, Davenport, RD, Lloyd RV: The Tall Cell variant of papillary carcinoma of the Thyroid gland: Comparison to the common form of papillary carcinoma by DNA and morphometric analysis. International Academy of Pathology, Boston, Mass., 1990.
THOMAS FRANK, M.D.
ASSISTANT PROFESSOR OF CLINICAL CHEMISTRY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology - three months
   B. Necropsy Service - on call
   C. Consultant for Breast Pathology - two weeks

II. TEACHING ACTIVITIES:
   A. Medical Students
      1. Lecturer, Pathology 600 Course
      2. Lecturer, Introduction to Clinical Sciences 601 Course
   B. House Officers
      1. Lecturer, Anatomic Pathology Didactic Conference

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Development of a novel strategy for determining the clonal origin of cells from prepared
      histologic sections. A. P. Feinberg, M.D., M.P.H., Howard Hughes Medical Institute,
      Principal Investigator.

PROJECTS UNDER STUDY:
   A. Genetic analysis of drug-resistant ovarian carcinoma, with M.S. Sklar, M.D.
   B. Multiinstitutional clinicopathologic study of stage IB mixed adenosquamous carcinoma
   C. Pathologic-radiologic correlation of atypical hyperplasia of the breast, with M.A. Helvie,
      M.D.; results presented at La Societe Suisse de Senologie.
   D. Morphologic assessment of renal injury during vascular surgery, with L.G.D'Alecy, M.D.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Member, Quality Assurance/Quality Control Committee
   B. Consultant for Computer Issues for Surgical Pathology
REGIONAL AND NATIONAL:

A. Member, American Association for the Advancement of Science  
B. Member, United States & Canadian Academy of Pathology (US-CAP)  
C. Member, American Medical Association (AMA)  
D. Member, American Society of Clinical Pathologists

V. OTHER RELEVANT ACTIVITIES:

A. Visiting Professor, Department of Pathology, Massachusetts General Hospital, Boston, MA, December 1989. Sponsored by Robert A. Sculley, M.D.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Director, Pathology Data Systems.
   B. Director, Phlebotomy Services and Central Distribution.
   C. Staff supervision of the Autopsy Service.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

III. WORK IN PROGRESS:

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
   A. Computer Advisory Committee (Chairman).
   B. Quality Assurance Committee.
   C. Editor, Pathology Electronic News (PEN).
   D. Clinical Pathology Faculty Committee.

HOSPITAL COMMITTEES:
   A. Task Force for the Integration of Hospital Information Systems (Chairman).
   B. Physicians' Computer Advisory Committee (Chairman).
   C. Steering Committee for ISIHS (Information Systems Integration for the Health Sciences).

REGIONAL AND NATIONAL:
   A. Council on Medical Informatics of the American Society of Clinical Pathologists.
   B. Professional Advisory Board of the Cerner Corporation
C. Chairman-Elect of the Cerner Users' Group.
D. Editorial Advisory Board, Clinical Laboratory Management Review.

V. OTHER RELEVANT ACTIVITIES:

SABBATICAL LEAVE (January-June, 1990):

A. Visiting Professor with Andersen Consulting. Assisted in the design and implementation the "Hospital of the Future" at the Infomart, Dallas, Texas.

INVITED LECTURES AND SEMINARS:

1. The laboratory information system as a tool for implementing a strategic plan. An evening workshop presented at the Thirteenth Annual Symposium on Computer Applications in Medical Care, Washington, D.C., November 6, 1989.

2. Panel discussion on the use of the laboratory information system to support hospital quality assurance activities. Annual Meeting of the Cerner Users' Group, Kansas City, Missouri, April 10, 1990.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


I. **CLINICAL ACTIVITIES:**

A. Director, General Chemistry Laboratory.
B. Daily sign-out and interpretation of electrophoresis results.
C. Direct operation of blood gas-electrolyte analyzers in operating rooms of Main and Mott Hospitals.

II. **TEACHING ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITAL:**

A. Pathology House Officers  
   1. Lecturer, Clinical Pathology Rounds.  
   2. Coordinator, Pathology House Officer rotation through General Chemistry Lab.  
   3. Review daily sign-out and interpretation of electrophoresis results.  
   4. Review of selected topics in Clinical Chemistry.
B. Medical Technologists  
   1. Program Director, Continuing Education Series for Medical Technologists.

III. **RESEARCH ACTIVITIES:**

A. Comparison of Apolipoprotein A-I and B concentrations with lipoprotein fractions in heart transplant patients.
B. Evaluation of whole blood analyzers for blood gases and electrolytes.
C. Intracellular magnesium as an indicator of magnesium status in patients with congestive heart failure on long term diuretic therapy. (with J Nicklas)
D. Evaluation of instruments for the measurement of blood glucose at the patients bedside.
G. Changes in serum levels of Apolipoproteins A1 and B, and Lipoprotein (a) in hypercholesterolemic patients following dietary therapy. (with C. Orringer)
IV. **ADMINISTRATIVE 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:**

A. Pathology representative to the "Standardization and Product Evaluation Committee".

**REGIONAL AND NATIONAL:**

A. Coordinator, College of American Pathologists Clinical Chemistry Standards Assay Laboratory.
B. Education Committee, Michigan Section, AACC.
C. Program Committee Chairman, Michigan Section, AACC.
D. Lipids and Lipoproteins Subgroup, AACC.

V. **INVITED LECTURES:**


VI. **PUBLICATIONS:**

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


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


PAUL W. GIKAS, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology - Room I and Room II, 14 weeks
   B. M-Lab rotations when needed
   C. Diagnostic electron microscopy - share nephropathology work with Dr. K. Johnson
   D. Consultation service for Uropathology
   E. Conduct monthly conference in Urologic Pathology with Urology Section
   F. Participate in weekly Renal Biopsy Conference for Nephrology Section with Dr. K. Johnson
   G. Autopsy and Frozen Section "on call" Rotation.

II. TEACHING ACTIVITIES:
   A. Lectures to sophomore Pathology 600 students:
      1. Death certification and forensic pathology
      2. Pathogenesis of highway injuries
      3. Renal neoplasms and renal allograft rejection
      4. Diseases of prostate and external genitalia
      5. Testicular disease
   B. Lab instructor for Pathology 600
   C. Lecture on Urologic Pathology and Pathogenesis of Highway Injury to Dental Pathology 630 students
   D. Monitor for M-4 clerks during Elective Pathology Rotation, March 26-April 20
   E. Pathology Resident Teaching
   F. Faculty UM Northern Michigan Conference, June 18-22, 1990

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Collaborate with Urology Staff and Radiology Staff on projects
   B. Radiological Diagnostic Oncology Group Prostate Study correlating imaging techniques with morphologic findings. This specific project is funded by the National Cancer Institute and is a cooperative study with three other institutions.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:

Member Advisory Committee on Appointments, Promotion and Tenure
MEDICAL SCHOOL/HOSPITAL:
A. Hospital Claims Control Committee

UNIVERSITY:
None

REGIONAL AND NATIONAL:
A. National Collegiate Athletic Association (NCAA) Drug Testing Appeals Committee
B. NCAA Special Planning Committee for Drug Testing
C. NCAA Drug Testing Crew Chief
E. Deputy Medical Examiner, County of Washtenaw
F. Board of Directors, Public Citizen, Inc. (Ralph Nader, Initial Chairman and Founder)

V. OTHER RELEVANT ACTIVITIES:
None

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS

BOOK REVIEW

ABSTRACT
2. Prostate Cancer Tumor Volumes: MRI/Pathological Correlation. JS Van Erp, BS, LE Quint, MD, PH Bland, PhD, SH Mandell, MD, EA DelBuono, MD, HB Grossman, MD, PW Gikas, MD, GM Glazer, MD.
CARL T. HANKS, D.D.S.
PROFESSOR OF DENTISTRY
DEPARTMENT OF ORAL PATHOLOGY
ASSOCIATE PROFESSOR OF ORAL PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. **CLINICAL ACTIVITIES:** None.

II. **TEACHING ACTIVITIES:**

A. **D.D.S. Level:**
   - Oral Pathology 625. 9 Hours (Lecture and Laboratory)
   - General Pathology 631. 2 Hours (Laboratory)

B. **Dental Hygiene:**
   - General/Oral Pathology 293. 36 Hours (Lecture)

C. **Graduate Level:**
   - Dental Materials 566/567. 2 Hours (Lecture)

D. **Graduate Level Advisement:**
   - John Watch - Ph.D. Program (Biomaterials) - 2 years.
   - Celeste Swamidoss - MSD Program (Oral Pathology) - 6 months.
   - Rod Parsell - Undergraduate Research - 3 years
   - Fawzi El Shefei - MSD Program (Biomaterials) - 3 months.
   - John C. Fat - MSD Program (Endodontics) - 3 months.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**


IV. **ADMINISTRATIVE ACTIVITIES:**

**SCHOOL OF DENTISTRY AND DEPARTMENT OF ORAL PATHOLOGY:**

A. Admissions Committee, School of Dentistry, 1985-1990
C. Hazardous Waste Committee, School of Dentistry, 1987-1990 (Chairman).
D. Table Clinics Committee (1989-1991)
F. Director of Research School of Dentistry 1989-1990.
G. Research Dean's Committee (OVPR U/M), 1989-1990.
H. Medical Affairs Advisory Committee to Vice Provost Zwidema, 1989-1990.

REGIONAL AND NATIONAL:

A. President of Pulp Biology Group, International Association for Dental Research, 1989-1990.

V. OTHER RELEVANT ACTIVITIES:

A. Consultant: W. R. Grace Co.
B. Consultant: Kerr Manufacturing Co.
C. Consultant: Paladin Medical (Baxter).
D. Special Study Sections, NIDR, 1988-1990.

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.

EDITORIAL BOARDS:

A. Journal of Dental Research.

INVITED LECTURES/SEMINARS:

1. July, 1989 - Invited Speaker at Gordon Conference on Biocompatibility and Biomaterials. Lecture was Entitled "Cytotoxicity of Biomaterials".

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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

CURTIS A. HANSON, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Clinical Flow Cytometry Laboratory
B. Clinical Hematology Laboratory
C. Diagnostic Surgical Pathology, Hematopathology
D. Consultant for Hematopathology cases.
E. Clinical Molecular Diagnostics Laboratory

II. TEACHING ACTIVITIES:

A. Medical Students and Graduate Students.
   1. Three lectures, Hematopathology - Pathology 600 course
   2. Laboratory Instructor (2 sessions), Hematopathology - Pathology 600 course
   3. M4 Clerkship, Hematology portion of Clinical Pathology Rotation
   4. Dental students, One Lecture on Hematologic Disorders.
   5. Preliminary planning for M4 elective in Laboratory Medicine
B. House Officers
   1. Sign-out of bone marrow biopsies and aspirates
   2. Review of blood smears and body fluids in Hematology Laboratory
C. Hematopathology teaching.
   1. Hematopathology Lectures/Weekly.
   2. Hematopathology unknown conferences/biweekly.
D. Clinical Pathology Grand Rounds (three lectures).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None

PROJECTS UNDER STUDY:

A. S100-Positive Chronic Lymphoproliferative Disorders: Association with HHV-6
B. Leu8 expression in Hematologic Disorders
C. Biphenotypic Leukemias
D. Immunophenotyping in Chronic Lymphoproliferative Disorders
E. CD34 Expression in Acute Leukemia
F. Aberrant Antigen Expression in Acute Leukemia
G. CD2-Positive Acute Myeloid Leukemia
H. Detection of EBV Genomes by Polymerase Chain Reaction
I. Evaluation of bcr-abl in Hematologic Disease

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Clinical Flow Cytometry Laboratory
B. Associate Director, Clinical Hematology Laboratory
C. Leukemia Conference, biweekly
D. Chairman's Advisory Committee
E. Director, Hematopathology Fellowship Program
F. Residency Advisory Committee

REGIONAL AND NATIONAL:

A. Associate Editor of Pathology Patterns (American Journal of Clinical Pathology, Supplement).
B. Editorial Board, American Journal of Clinical Pathology
C. Council for New Scientific Technology in Clinical Pathology, American Society of Clinical Pathologists.
D. Reviewer of articles for Blood, American Journal of Pathology, American Journal of Clinical Pathology, Laboratory Medicine and Clinical Immunology and Immunopathology.
E. Review of Southwest Oncology Group (SWOG) leukemia cases

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Invited Lecturer, S100-Positive Chronic Lymphoproliferative Disease, University of Nebraska, September 29, 1989.
2. Lecturer, Flow Cytometry in Diagnostic Hematopathology, Department of Pediatrics, University of Michigan, October 18, 1989.
3. Lecturer, Acute Lymphoproliferative Diseases, Course presented at American Society of Clinical Pathologists (ASCP), October 31, 1989.
4. Lecturer, Flow Cytometry and Southern Blotting in the Diagnosis of Leukemia and Lymphoma, Course presented at American Society of Clinical Pathologists (ASCP), November 1, 1989.
5. Invited Lecturer, Chronic Lymphoproliferative Disorders, Wayne State University, February 21, 1990.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION


2. Reardon, D.A., Roskos, R., Hanson, C.A.: Viral-associated hemophagocytic syndrome in bone marrow transplantation.


4. Ross, C.W., Schnitzer, B., Weston, B., Hanson, C.A.: Chronic-active Epstein-Barr virus infection and viral-associated hemophagocytic syndrome.


BOOKS AND CHAPTERS IN BOOKS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Clinical Dermatology.
   B. Dermatopathology, private consultations.
   C. Dermatopathology, M-Labs.
   D. Dermatopathology, UMHI.
   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. Immunologic responses in the dermis in tryptophan-related sclerosis
   B. Unclassified malignant cutaneous neoplasms of neural crest origin.
   C. The histologic of the alopecia of secondary syphilis.
   D. Textbook: The Pathology of the Hair Follicle.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Director, Pigmented Lesion Clinic.

MEDICAL SCHOOL/HOSPITAL:
   A. Director, Dermatopathology Unit.
REGIONAL AND NATIONAL:
A. Editorial Board, Archives of Dermatology. American Board of Pathology.
B. Chairman, Task Force on Dermatopathology, The American Academy of Dermatology.
C. Test Commitee For Dermatopathology.
D. Member, Council on Clinical and Laboratory Services, American Academy of Dermatology.

V. OTHER RELEVANT ACTIVITIES:

Honors: Docteur Honoris Causa, University of Bordeaux
Honorary Member, South African Dermatological Society.
William B. Taylor Teaching Award, Department of Dermatology.

INVITED LECTURES AND SEMINARS:

5. Visiting Professor, Groote Schuur Hospital, Capetown, South Africa.
   a. Diagnostic Patterns in the Histopathology of Skin Disease.
   b. The Clinical Diagnosis of Alopecia I.
   c. The Clinical Diagnosis of Alopecia II.
   d. Benign Fat Cell Tumors.
   e. The Dermal Dendrocyte.
6. The University of Stellenbosch. Tygerberg, South Africa
   a. The Use of Polarized light in the Diagnosis of Skin Disease.
   b. A Histologic Algorithm for the Diagnosis of Vasculitis.
7. Congress of the Dermatological Society of South Africa, Summerset West, South Africa:
   a. Primary Squamous Cell of the Skin.
   b. Paget's and Extramammary Paget's Disease.
   c. Uncommon lymphoproliferative Disorders.
   d. Uncommon Angioproliferative lesions.
   e. Selected Soft Tissue Tumors.
   f. Langerhans Cell Syndromes.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


KATHLEEN P. HEIDELBERGER, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

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 40 cases per year.
H. Children's Cancer Study Group, coordinate all pathological material and data necessary for all children registered in national tumor protocols. (Collaborating investigator, NCI #2-U10-CA-02971-33, CCSG, R. Hutchinson, M.D., P.I.)
I. Cardiac transplantation pathologist, adults and children, during colleague's sabbatical.
J. Bone consultation cases, 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 on-call weekends.
F. Surgical Pathology Conference, one hour/week, twelve months.
G. Lectures on Pediatric Necropsy Pathology in Core Curriculum Series for House Officers in Pathology.
H. Gross Necropsy Conference, one hour/week, twelve months.
I. Core curriculum lectures, two, on general peds path to House Officers.
J. Supervised Pediatric Hematology Fellows (one) for AP elective period.
K. Conferences:
   1. Pediatric Cardiology Death Conference, monthly, all year.
   2. Pediatric Tumor Conference, twice monthly, all year.
   3. CPC/General Death Conference, quarterly.

III. RESEARCH ACTIVITIES:
A. Multiphased, ongoing study with pediatric cardiologists and thoracic surgeons of 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. Histologic studies of myocardium in hypoplastic left heart syndrome.
B. Review of the effects of pulmonary artery banding on the lung biopsy findings in young children with complete atroventricular septal defect with pediatric cardiologists and thoracic surgeons.
C. Continued long term study of aneurysm formation of repaired coarctation with pediatric cardiologists (see abstracts).
D. Review with clinicians of familial diabetes in infants.
E. Study of correlation, if any, of ECHO study of heart transplant patients with the histologic findings on simultaneous heart biopsy.
F. Review of neoplasms in post transplant patients with the pediatric cardiologists.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Departmental ACAPT.
B. Interviewing House Officer candidates.

MEDICAL SCHOOL/HOSPITAL:
A. Executive Committee for Mott/Women's/Holden Unit.
B. Executive Committee of the Medical School, 1987-.

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, Subcommittee I, charged with the documentation and position preparation for subspecialty qualification.
C. Appointed Women's Liaison officer for UMMC to AAMC.

V. OTHER RELEVANT ACTIVITIES: None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION: None.

ABSTRACTS:


SAMUEL P. HICKS, M.D.
PROFESSOR EMERITUS OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
July 1, 1989 - June 1, 1990

I. CLINICAL ACTIVITIES

A. With C.J. D'Amato prepare microscopic descriptions of most UM autopsy brains and those sent here for consultation. In UM cases, house officers compare them with their findings and incorporate them into final autopsy reports. In consultations they become part of the final report together with gross findings.

II. TEACHING ACTIVITIES

A. Review some of these autopsy brains with Pathology, and other house officers spending time in Pathology, and with students and staff as needed.
B. Neural and Behavioral Sciences 600 for second year medical students: 3 hours.
C. Neuropathology 858 for house officers in Pathology, Neurology, Neurosurgery and other departments, and graduate students. 18 hours including 3 lectures.

III RESEARCH ACTIVITIES

With C.J. D'Amato in three areas in collaboration with colleagues.

A. A mutant rat in which a transient failure of basement membrane formation in the cephalic neural tube leads to local overgrowth with stenosis of the aqueduct and prenatal hydrocephalus, many affected animals surviving to adulthood. Previous studies had shown that in situ the mutant neuroepithelium transiently failed to produce collagen IV. With K. Sue O'Shea, we have shown that cultured neurons from mutant embryos fail to extend neurites on tissue culture dishes coated with laminin, fibronectin, or type IV collagen, or on culture medium alone, whereas controls formed elaborate neurites. In a related study Sue O'Shea and Paul Killen have shown that there is no preferential localization of a metalloprotease (TIMP) in regions in the mutant where the basement membrane breaks down.

B. Studies continue with James Varani and others to determine whether the phagocytes that appear in certain parts of the embryo in response to cell-killing by radiation add to the malformation that radiation produces, or lessen it by promoting regeneration. For example, the most severe malformation occurs in the mantle of the 16th day embryo where no phagocytes appear.

C. Thrombospondin (TSP), a glycoprotein of extracellular matrices is associated with migrating cells and neurite outgrowth from neurons and is synthesized by neurons and glia. Its possible role in astrocytic hypertrophy (gliosis) following injury is unknown. With Vishva Dixit and Sue O'Shea we have shown preliminarily that TSP appears in association with the hypertrophy of astrocytes in the third week after surgical injury of the rat cerebral cortex but not in the earlier stages.
VI PUBLICATIONS

ABSTRACTS

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

A. Immunopathological evaluation of skin and renal biopsies.
B. Director, Electron Microscopy Service.
C. Renal pathology.
D. Autopsy coverage.

II. TEACHING ACTIVITIES:

A. Laboratory instructor - Second year pathology course.
B. Lecturer Genitourinary Pathology - Second year pathology course.
C. Lectures on Renal Pathology - Nephrology Fellows.
D. Lectures on Renal and Skin Immunopathology - Pathology Residents.
E. Lectures on Genitourinary pathology-Dental Pathology Course.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

C. Mediators in IgA and IgG Lung Injury. National Institutes of Health, Principal Investigator $466,791 for five years.
E. Renal Center Grant. National Institutes of Health. Principal Investigator, Section V and Core II. $444,520 for five years.

PENDING SUPPORT:

A. Anesthetic and Viral Pulmonary Immunopathology. National Institutes of Health. Co-investigator with Paul Knight (Anesthesiology) and Daniel Remick. $1,052,949.00 for five years. (Submitted March 1, 1990).

PROJECTS UNDER STUDY:

A. Pathogenesis of IgG and IgA Immune Complex Lung Injury.
   1. Role of oxygen radicals.
2. Role of proteases.
3. Role of terminal components of the complement system.
B. Oxidant and protease interaction in inflammation.
C. Pathogenesis of aspiration pneumonitis.
D. Pathogenesis of viral pneumonitis.
E. Pathogenesis of pancreatitis and pancreatitis Induced ARDS.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Immunopathology Fellowship Program.
B. Renal Pathology Conference - Biweekly.
C. Space Utilization Committee.
D. Stobbe Funds Committee.
E. Chairman's Advisory Committee.

REGIONAL AND NATIONAL:

A. Associate Editor - Laboratory Investigation
B. Reviewer for the following journals:
   1. American Journal of Pathology
   2. American Review of Respiratory Diseases
C. Consultant/Grant reviewer for the Veteran's Administration.

V. OTHER RELEVANT ACTIVITIES:

A. Consultant on Dermatology and Nephrology training grants.

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS:


ARTICLES ACCEPTED FOR PUBLICATION:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS AND CHAPTERS IN BOOKS


ABSTRACTS, PRELIMINARY COMMUNICATIONS, PANEL DISCUSSIONS


W. JOHN JUDD, F.I.M.L.S., M.L.BIOL.
ASSOCIATE PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENT REPORT
1 JULY, 1989 - 30 JUNE, 1990

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

II. TEACHING ACTIVITIES:
   A. Directed weekly 1989-90 Clinical Pathology Grand Rounds.
   B. Coordinated weekly 1989-90 Anatomical Pathology Conferences.
   C. Coordinated Core-Lecture Series in Blood Banking for 1st-year Pathology House Officers.
   D. Attended and participated in weekly Clinical Pathology Case Study Conferences.
   E. Presentations at Clinical Pathology Grand Rounds:
      1. The Rh Blood Group System
      2. Immune Hemolysis
   F. Trained Pathology and Pediatric Hematology Residents in Immunohematology.
   G. Provided instruction to Pathology Residents during their Blood Bank Rotation.
   H. Provided instruction to Blood Bank Fellow throughout the academic year.
   I. Director, Current Topics in Blood Banking Conference, Towsley Center for Continuing Medical Education:
      3. Presented talk entitled: When the Urine is Red.
   J. Visiting Lecturer, Specialist in Blood Banking Program, Wayne State University.

III. RESEARCH ACTIVITIES:
   C. Dectection of unexpected antibodies using fluorescent-labeled erythrocytes; evaluation of semi-automated module developed by SYVA Corporation, Palo Alto, CA.
IV. SERVICE ACTIVITIES:

DEPARTMENTAL:

A. Blood Bank Daily Rounds
B. Monthly Clinical Pathology Faculty Meetings.

REGIONAL/NATIONAL:

A. Michigan Association of Blood Banks:
   1. Chairman, Nominating Committee.
   2. Program Committee.
B. American Association of Blood Banks:
   1. Board of Directors, North Central District Representative.
      a. authored chapter on pretransfusion testing.
      b. authored chapter on antibody identification.
      c. authored chapter on direct antiglobulin testing.
      d. edited and compiled special methods section.
C. Reviewer of articles submitted for publication in Transfusion.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES:

5. Mid-Atlantic Association of Blood Banks Annual Meeting, Hunt Valley, Maryland, April, 1990: Antibody Identification - How Much is Enough?

WORKSHOPS/PANEL DISCUSSIONS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:


CHAPTERS IN BOOKS:


ABSTRACTS/LETTERS:

I. **CLINICAL ACTIVITIES:** Autopsy Pathology.

II. **TEACHING ACTIVITIES:**

A. Pathology 631 - Pathology Laboratory for Dental Student. Approximately 60 contact hours.
B. Pathology 580 - 2 contact hours.
C. Gross Pathology Conference
D. Renal Pathology Conference
E. Resident Teaching Conference
F. Post Doctoral Fellows (2)
G. Graduate Students (2)

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. NIH-P01-HL31963, Principal Investigator, Project VI "Molecular Biology of Alveolar Wall Injury", (40%) $87,140/year, 3/1/89 - 2/28/94.
B. NIH-DC39225 Principal Investigator, Project XI "Monokine-Mediated Matrix Biosynthesis by Mesangial Cells." (10%) $39,110/year.
C. AHA of MI, Principal Investigator, "Mesangial Cell Expression of Collagen IV Genes". (5%) $24,500/year $49,000/2 years, 07/01/89-06/30/91.
D. MDRTC-Pilot and Feasibility, Principal Investigator, "Collagen IV Metabolism by Human Retinal Pigment Epithelial Cells in Vitro". (5%) $25,000/year, 12/01/89-11/30/90.

**PENDING SUPPORT:**

A. NIH-1R01-CA51806-01, Principal Investigator, "Regulation of Collagen IV Gene Transcription" (25%) 12/01/90-11/30/95 (pending).
B. AHA-Established Investigatorship Award, "Collagen IV Gene Regulation During Renal Development". $35,000/year, 07/01/91-06/30/96 (pending).
C. NIH-3-P01-HL18575-14, Co-Investigator on Project 3, "Altered Ion Metabolism in Hypertension", $319,641 total, 01/01/91-12/31/95 (pending).
D. NIH-RO1-DK37448, Co-Investigator, "Cellular Function of the Juxtaglomerular Complex", $913,156 total, 07/01/91-06/30/94 (pending).
E. AHA-Grant-in-Aid, Principal Investigator, "Collagen IV Gene Regulation During Renal Development", $120,000 total, 07/01/91-06/30/94 (pending).
PROJECTS UNDER STUDY:
A. Basement membrane gene expression by alveolar wall cells.
B. Regulation of collagen IV gene expression during development.
C. Regulation of basement membrane gene expression by glomerular cells in culture.
D. Localization of nephron segment-specific genes by PCR.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL: None

MEDICAL SCHOOL/HOSPITAL:
A. Interviewed candidates for faculty positions.
B. Interviewed candidates for research fellowships.

REGIONAL AND NATIONAL:
A. Ad hoc reviewer, Division of Extramural Activities, NIDDK, NIH
B. Reviewer, Laboratory Investigation, American Journal of Pathology, Journal of Clinical Investigation
C. Ad hoc Reviewer, Juvenile Diabetes Foundation

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:


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

STEVEN L. KUNKEL, PH.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

A. Inflammation/Immunopathology Series ICS-600.
B. Pathology 580.
C. Epidemiology 570.
D. Clinical Pathology Grand Rounds.
E. Teaching/Research Seminars in various departments.
F. Department of Postgraduate medicine - "The practice of clinical nutrition: Science and application for the future".
G. Supervised the following postdoctoral fellows, residents, and students: Dr. Robert Spengler, Dr. Amanda Thornton, Dr. Lynn Abruzzo, Dr. Ted Standiford, Dr. Charles Gibb, Dr. Andy Metinko, Dr. Wendy Scales, Dr. Kieta Kasahara, Dr. John Ham, and Mark Milia.
H. Doctoral Committee Member/Oral Presentation Committee for the following graduate students: Nancy Long, Lin LeMay, Ron Allen, Cindy Hoor and Paul Bohjanen.
I. Development of "Cellular and Molecular Basis of Disease" Course (with Dr. Jeffrey Bonadio)

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH - Macrophage/Monocyte Signals in Lung Granuloma Formation; HL-R01-35276; Principal Investigator.
B. NIH - Monokine Gene Expression/Regulation in Lung Injury; 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 - Crescentic Nephritis; Program Project P01-DK38149; Principal Investigator - Section II.
F. NIH - Fibroblast Heterogeneity in Pulmonary Fibrosis; HL-39925; Co-investigator.
G. Tobacco Research Institute - Principal Investigator.

PROJECTS UNDER STUDY:

A. Regulation of macrophage signals that dictate immune responsiveness.
   1. Tumor necrosis factor production.
2. Interleukin-8 production.
3. Chemotactic cytokines.

B. Role of macrophages - lymphocyte interactions in the initiation, maintenance, and resolution of chronic immune response.
C. Regulation of macrophage gene expression.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Space Utilization and Research committee (Chairman).
B. Graduate Program Committee.
C. Conduct Research Seminar Series.
D. Interview Candidates for Residency Program/Graduate Program.

MEDICAL SCHOOL/HOSPITAL:

A. Medical School Financial Aid Committee.
B. Committee on Medical Student Research.
C. Medical School Admission Interviewer Committee.
D. Admission Executive Committee.
E. Medical Scientist Training Program Admission Committee.
F. Biomedical Research Council Committee.
G. Reviewer for Diabetes Research and Training Center Grants.
H. Member, Michigan Cancer Center.

REGIONAL AND NATIONAL:

A. Associate Editor, Journal of Immunology.
B. Section Editor, Journal of Immunology.
C. Associate Editor, American Journal of Respiratory Cell and Molecular Biology.
D. Associate Editor, Pathobiology.
E. Organizing Committee, Second International Workshop on Non-lymphocytic Cytokines.
F. Organizer, Second International Symposium on Chemotactic Cytokines.
G. Member, American Association of Pathology Program Committee.
I. Research Peer Review Committee of the American Heart Association (Michigan).
J. Grant Reviewer, United States Department of Agriculture.
K. Grant Reviewer, The Arthritis Society.
L. Grant Reviewer, Veterans' Administration
M. Session Chair, Second International Symposium on Chemotactic Cytokines.
N. Session Chair, Drug Modulation of Cytokine Production, International Association of Inflammatory Societies.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

2. Visiting Pulmonary Scholar/Lecturer, NIEHA, Duke University, University of North Carolina, October, 1989
4. Invited Speaker, Molecular and Cellular Biology of IL-1, TNF, and Lipocortins in Inflammation and Differentiation, Siena, Italy, October, 1989
5. Invited Speaker, Leukocytes and Endothelial Cells in Inflammation, Napa Valley, California, January, 1990
6. Visiting Professor, Department of Internal Medicine, Universita di Padova, Padova, Italy, February, 1990
8. Visiting Professor/Lecturer, Hunterian Institute, Royal College of Surgeons, London, United Kingdom, February, 1990
9. Invited Lecturer, Division of Pulmonary Medicine, Henry Ford Hospital, Detroit, Michigan, March, 1990
10. Visiting Professor, Center for Lung Research, Vanderbilt University, Memphis, Tennessee, April, 1990
12. Invited Speaker, American Society Microbiology, Symposium on Molecular and Cellular Aspects of Chronic Inflammation, Anaheim, California, May, 1990
13. Invited Speaker, Department of Pathology, University California, Irvine, California, May, 1990
15. Visiting Professor, Department of Pharmacology, Michigan State University May 1990
16. Invited Faculty/Lecturer, Second Wiggers-Bernard Conference on Sepsis, Shock, and Multiple Organ Injury, Vienna, Austria: June, 1990
17. Invited Speaker, Imperial Chemical Industries, Manchester, England, June, 1990
19. Invited Speaker, Pasteur Institute, Division of Cellular Pharmacology, Paris, France, June, 1990

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES

A. Surgical pathology - 16 weeks.
B. Consultant for endocrine lesions.
C. Consultant to Veterans Administration Medical Center, Ann Arbor, Michigan.

II. TEACHING ACTIVITIES:

A. Lectures to sophomore medical students - Pathology 600
B. Fourth Year medical student rotation in Pathology - 1 month.
C. Lecture to dental students - Pathology 630.
D. Lectures to pathology house officers.
E. Immunoperoxidase Rounds - twice monthly.
F. Supervision of three postdoctoral fellows in research laboratory.
G. Honors Elective Course for undergraduate students - 1 semester.

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. Studies of Normal and Neoplastic Human Pituitary Tissues. NIH Grant CA 42951, 7/86 - 6/95 (PI - R. Lloyd). Competing Renewal Score - 5.7 percentile!

PROJECTS UNDER STUDY:

A. Regulation of pituitary growth and differentiation.
B. Applications of molecular biological techniques to diagnostic pathology.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director of Immunoperoxidase Service.
B. Coordinator of Anatomic Pathology Journal Club.
C. Resident Selection Committee.
D. Residency Advisory Committee.
E. Pathology Graduate Training Program Committee.
F. Space Utilization Committee.

**MEDICAL SCHOOL/HOSPITAL:**

A. Thyroid Therapy Conference.
B. Endocrine Surgery Conference.
C. Pituitary Study Group.
D. Medical School Admissions Committee.
E. Pathology presentations at General Endocrine Conference.
F. Search Committee for Medical School Dean.

**REGIONAL AND NATIONAL:**

B. Editorial Board - Endocrine Pathology.
C. Editorial Board - American Journal of Surgical Pathology.
E. Review Committee for International Academy of Pathology Abstracts.
F. Pathology B Study Section, National Cancer Institute, Member 1987 - 1991.
G. College of Pathologist - Cell Markers Committee.

**V. OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURE AND SEMINARS**

1. Thyroid Club of Bologna, Italy. October 5, 1989. Chromogranins in Analysis by Immunohistochemistry and *in situ* hybridization.

**VI. PUBLICATIONS:**

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


ARTICLES SUBMITTED FOR PUBLICATION

BOOKS/CHAPTERS IN BOOKS

BOOKS:
1. Endocrine Pathology, Springer Verlag, New York, March 1990.

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 four postdoctoral fellows (Robert Larsen, Ph.D., Jolanta Kukowska-Latallo, Ph.D., Nozomi Hiraia, M.D., Ph.D., and Brent Weston, M.D.)

B. Lecturer - Graduate School - Pathology 630 (2 lectures: The Atherosclerotic Process I and II).

C. Clinical Pathology Grand Rounds - Clinical use of the TdT assay.

D. Clinical Pathology Grand Rounds - Molecular genetics concepts and tools.

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.

B. Co-investigator, "Fatty acid binding proteins - ligand specificity", NIH DK-41402 (F. Schroeder, University of Cincinnati Medical Center, Principal Investigator). (5% effort) $10,672/year direct cost, ($21,344/2 years), 4/1/89-3/31/91.

**PROJECTS UNDER STUDY:**

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

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:** None.

**REGIONAL AND NATIONAL:** None.
V. OTHER RELEVANT ACTIVITIES:

A. Howard Hughes Medical Institute, Assistant Investigator.

INVITED LECTURES AND SEMINARS:

2. Isolation and analysis of mammalian genes that determine terminal glycosylation events. Massachusetts Institute of Technology, Boston, Massachusetts, October, 1989.
6. Expression cloning of human blood group glycosyltransferase genes. Emory University Medical School, Department of Pathology, Atlanta, Georgia, March, 1990.
10. The molecular genetics of human fucosyltransferase genes. Albert Einstein College of Medicine, Department of Cell Biology, Bronx, New York, May, 1990.
11. Molecular cloning of mammalian glycosyltransferase cDNAs by gene transfer. Washington University Medical School, Department of Pathology, St. Louis, Missouri, May, 1990.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


ARTICLES SUBMITTED OR IN PREPARATION:


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


7. Gersten, K.M. and Lowe, J.B. The mouse genome contains multiple sequences similar to a human a1(1,3/1,4)fucosyltransferase (a1,3/1,4-FT) cDNA. FASEB J. 1990;4:A1930.

8. Kukowska-Latallo, J.F., Larsen, R.D., Rajan, V.P. and Lowe, J.B. Structure and function of a cloned cDNA encoding a a1(1,3/1,4)fucosyltransferase (a1,3/1,4-FT) analogous to the Lewis blood group a1(3,1,4-FT). FASEB J. 1990;4:A1930.

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. 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.

II. **TEACHING ACTIVITIES** (Medical School/Hospitals)

A. Pathology 630/631; Course Director
   1) Five hours credit (M & W, 2-4:00 p.m.)
   2) 100 dental students, 20 medical technology and graduate students.

B. Oral Diagnosis 644; participant.

C. Pathology 600; lecturer, head and neck pathology.

III. **RESEARCH ACTIVITIES**

A. 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, 1985-90.


C. Consultant, Impact of Follow-Up on Control of High Blood Pressure and Cholesterol. Principal Investigator: Andrea Foote, Ph.D., Institute of Labor and Industrial Relations, The University of Michigan, 1988-

IV. ADMINISTRATIVE ACTIVITIES

DEPARTMENTAL

A. Medical Service Plan Executive Committee, Department of Pathology, 1979-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-present.
E. Chairman, Laboratories Committee of the Medical Staff, The University of Michigan Hospitals, 1987-present.
F. Chairman, Quality Assurance Committee, The University of Michigan Hospitals, 1989-present.
G. Member, Claims Control Committee, The University of Michigan Hospitals, 1990-

REGIONAL AND NATIONAL

A. College of American Pathologists, Fellow, 1975-
   1) Board of Governors, 1986-
   2) Liaison, Standards Committee, 1986-
   3) Chairman, Commission on Anatomic Pathology, 1986-
   4) Council on Government Relations, 1987-
B. National Committee for Clinical Laboratory Standards, Corresponding Membership, 1987-
   1) Council of the National Reference System for the Clinical Laboratory, 1987-
   2) Subcommittee on Cost Accounting, member, 1986-90.
   3) Chairman, Area Committee on General Laboratory Practice, 1986-
   4) International Relations Committee, member, 1988-
C. American Society of Clinical Pathologists, 1975-
   1) ASCP Advisory Council, 1984-
   2) ASCP Advisory Council, State Councilor, 1987-
D. Michigan Society of Pathologists, 1982-
   1) Chairman, Program Committee, 1988-
   2) Editor, Newsletter, 1988-
E. Technical Advisory Committee, State of Michigan Department of Health, Bureau of Laboratory and Epidemiological Services, 1987-
F. American Society for Testing Materials (ASTM)
   1) Committee F31 on Health Care Services, member, 1988-

INTERNATIONAL

A. Secretariat, Commission on World Standards of World Association of Societies of Pathology, 1987-

V. OTHER RELEVANT ACTIVITIES

INVITED LECTURES/SEMINARS

VI. PUBLICATIONS

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


ARTICLES SUBMITTED FOR PUBLICATION

BOOKS AND CHAPTERS IN BOOKS


CHAPTERS IN PREPARATION


BOOKS OR JOURNALS EDITED

1. Laboratory Medicine, Williams & Wilkins (in preparation), 1989-90.

ABSTRACTS, PRELIMINARY COMMUNICATIONS, PANEL DISCUSSIONS


PAMPHLETS
PAUL E. MCKEEVER, M.D., PH.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

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 Hospitals and other hospitals.

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

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

D. Ceroid Service, bufty coat division.

E. Primary substitute for nerve and muscle biopsy diagnostiant.

F. Weekly adult Brain Tumor Board Review of Neurosurgery, Nuclear Medicine, Neuroradiology, and Neuropathology in clinical research setting of brain tumor cases by staff. Shared responsibility for neuropathology segment of tumor review and clinical-pathologic correlation.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Neural and Behavioral Sciences 600, Neuropathology for Second Year Medical Students. Lectures 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 of attendance, presentation and individual instruction.

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 biweekly conference for Pathology, Neurology and Neurosurgery House Officers and Staff.
   4. Shared consultations with Pathology House Officers and staff.
   5. Invited presentations of neuropathologic observations at joint Pathology-Neurology-Neurosurgery and clinical conferences.
   6. Participated in teaching House Officers and Fellows who took electives in Neuropathology. One month or longer rotation with teaching shared with other Pathology Faculty and with Neurohistologists.

D. Medical Student:
   Primary research advisor of Mr. Kam Pillai in Oncology and brain tumor research projects.

E. Teach laboratory techniques to our Neurohistologists.
F. Individual daily instruction of Pathology House Officers over microscope.

**REGIONAL AND NATIONAL:**

Instructor of diagnostic neuropathology for visiting pathologist Song Wong, M.D. from University of Alabama, Mobile, 1989.

**III. RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. National Institutes of Health Grant NIH CA-47558, "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. 5/1/88 - 4/30/93.

B. National Institutes of Health Program Project NIH CA-42761,"Antimetabolite Selectivity: Regional Treatment and Modulation", Principal Investigator of Pathology Core Grant. 8/1/88 - 7/31/91.

C. National Institutes of Health Grant NIH CA43863, "Brain Tumor Imaging with Benzodiazepine Analogs", Co-investigator. 1/1/87 - 1/1/90.

D. National Institute of Health Program Project NS-15655, "PET Study of Biochemistry and Metabolism of the CNS" (Program Title). "Glioma Imaging with Benzodiazepine Analogs" (Section Title), Co-investigator. 12/1/89-11/30/94.

**PROJECTS UNDER STUDY:**

A. Growth, spread and antigenicity of ENU-induced gliomas in rats, with Constance D'Amato and Terry Hood. Submitted to Neurooncology.

B. Quantitative analysis of DNA in fresh and cultured cells of brain tumors, with Drs. Robertson Davenport, Curtis Hanson, William Ensminger, William Chandler, and James Varani.


D. Extracellular matrix products of gliomas with Drs. James Varani and Suzanne Fligiel.

E. Distribution of microspheres in tumor and normal tissues with Dr. William Ensminger.

F. Predictive value of bromodeoxyuridine uptake and other nuclear parameters on glioma prognosis (NIH grant submitted with Dr. Larry Junck).

G. Monoclonal anti-EGF receptor antibodies to diagnose and treat human gliomas (FDA grant submitted with Dr. Harry Greenberg).
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Chief, Section of Neuropathology.
B. Member, Photography Committee.

**MEDICAL SCHOOL/HOSPITAL:**

A. Organization and scheduling of Pathology, Neurology, Neuroradiology and Neurosurgery House Officer Neuropathology teaching conferences, individual instruction and consultation review.
B. Organization of call logistics, specimen handling, and schedules for 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 staff of other clinical services, particularly Neurosurgery, Neurology, Nuclear medicine and Neuroradiology.
E. Quality control of ultrastructural and immunodiagnostic neuropathology.

**REGIONAL AND NATIONAL:**

A. Editorial Board, Critical Reviews in Neurobiology.
B. M-Lab Neuropathology Services.
C. Reviewer of NASA Program Project Grant application.
D. International Editorial Board, Cellular and Molecular Biology.
E. Primary Review Pathologist, Children’s Cancer Study Group CCG 9891 nation wide study of childhood low grade gliomas.
F. Reviewer, American Journal of Surgical Pathology.
G. Reviewer, Archives of Pathology & Laboratory Medicine.
H. Reviewer, American Journal of Pathology.
J. Reviewer, Neurosurgery.
K. Reviewer, Laboratory Investigation.

V. **OTHER RELEVANT ACTIVITIES:**

A. Faculty of Graduate Program of Department of Pathology.
B. Member of the University of Michigan Cancer Center.
C. Pathology Committee, Children’s Cancer Study Group, Columbus, Ohio.
D. Member, International Academy of Pathology, 1972 -
E. Member, Alpha Omega Alpha, Eta Chapter, 1972 -
F. Member, American Association of Neuropathologists, 1978 -
G. Member, New York Academy of Science, 1983 -
H. Member, Society of Neuroscience, 1983 -
I. Member, American Association of Pathologists, 1984 -
J. Member, Children’s Cancer Study Group, 1985 -
K. Member, Histochemical Society, 1989 -
L. Member, Constitution Committee, American Association of Neuropathologists, 1990 -
INVITED LECTURES AND SEMINARS


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


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


A. REES MIDGLEY, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

A. Taught portion of Physiology 581, "Mammalian Reproductive Endocrinology", plus occasional other lectures.
B. Primary Supervision of five graduate students:
   1. Mahmoud Ghazzi, Bioengineering (recipient of an NIH Physician Scientist Award; presented at the Society for the Study of Reproduction; invited.)
   2. Hal Cantor, Bioengineering (invited to address the Consortium for the Scientific and Industrial Use of the Macintosh; presented at the Society for the Study of Reproduction; presenting at the Third International Meeting on Chemical Sensors.)
   3. Rhonda Brand, Bioengineering (presented at the Society for the Study of Reproduction.)
   4. Jane Wiesen, CMB
   5. Craig Halberstadt, Bioengineering.
C. Served on several other dissertation committees.
   1. Sadedin Ozturk, Ph.D. 1990
   2. Kevin Ferreri (current)
   3. Gyun Min Lee (current)
   4. Joanne Savinell (current)
   5. Seung Kwak (current)

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH, P30 HD18258, "Center for the Study of Reproduction", $388,380 TDC year #1, 3/1/89-2/28/94, Principal Investigator, 10% effort.
B. NIH, T32 HD-07048, "Training Program in Reproductive Endocrinology", $186,439 direct and stipends year #05, 7/1/85-6/30/90, Principal Investigator, 5% effort (renewed for 5 years).
C. Mellon Foundation "Mellon Young Investigator Program in Reproductive Endocrinology", $300,000 Total for 4 years, 7/1/85-6/30/89, 5% effort.
D. W.K. Kellogg Foundation, Presidential Initiatives Fund, "Cellular Bioengineering: Positioning The University of Michigan for the 1990s and Beyond", 7/1/87-6/30/90, $270,000 Total for 3 years, $83,500 TDC year #3, 8% effort, Principal Investigator: M. Savageau, (Department of Microbiology).
E. NSF EET-871256, Cluster research proposal for molecular biosensing, "Efficient Monoclonal Antibody Production", 9/15/87-9/14/90, $167,192 year #3, TDC, 8% effort, Principal Investigator: B. Palsson, (Department of Chemical Engineering).

F. NIH, R01 HD 18018-04, "Gonadotropin Control of the Ovary", $101,894 TDC year #1, 12/1/88-11/30/91, Principal Investigator, 10% effort.

G. NIH K11 HD00828-02, "Nutritional influence on hypothalamic control of reproduction", $62,258 TDC year #2, 9/30/87-8/31/92, 5% effort (sponsor), PI: Mahmoud Ghazzi (Physician Scientist Award).


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: the role of intercellular signalling.

C. Localization and regulation of mRNAs in rat granulosa cells.

D. Application of principles of cellular bioengineering to the growth and function of mammalian cells.

E. Development of novel biosensors, especially immunosensors.

F. Examination of the relationships between changes in hormones, behavior and peer reactions during pre-adolescent development of children.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Director, Reproductive Sciences Program.

B. Director, Center for Study of Reproduction.

C. Director, Mellon New Investigator Grant.

D. Director, NIH Training Grant.

REGIONAL AND NATIONAL:


B. Member, NIDDK Endocrinology Research Program Advisory Committee, 1986-.

C. Member, NIDDK Hormone Distribution Program Subcommittee, 1986-.

D. Member, NIH Reviewers Reserve, 1989-.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


OTHER ACTIVITIES

1. Developing an immunoassay analysis system to meet the needs of the Ligand Assay Laboratory.
2. Prepared data and organized a meeting with Representative Carl Pursell regarding the funding crisis being faced by individual investigators and the unique problems of the NICHD (meeting held on April 11, 1990).
3. Implementing ELISA assays in Standards and Reagents Core as a partial replacement for radioimmunoassays (and thereby reduction in usage of radioactive isotopes).

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED:


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

RAJ S. MITRA, PH.D.
ASSISTANT RESEARCH SCIENTIST IN PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES: None

II. TEACHING ACTIVITIES:
A. Member Ph.D. Thesis Committee
B. Supervised Ph.D. Dissertation

III. RESEARCH ACTIVITIES:
SPONSORED SUPPORT: Principal Investigator: B.J. Nickoloff
                          Co-investigator: R.S. Mitra
A. Role of adhesion molecules in Psoriasis  1-R01-AR40065
B. Interaction of gamma interferon with keratinocytes  AR 38957-03
PENDING: Principal Investigator: B.J. Nickoloff
          Co-investigator: R.S. Mitra
A. Dermal dendrocytes and AID-related Psoriasis  1 R01 AR40488-01A1

IV. ADMINISTRATIVE ACTIVITIES:
DEPARTMENTAL:
A. Responsible for smooth and productive daily operation of Dr. Nickoloff's laboratories.
B. Responsible for teaching theoretical as well as technical new comers to the laboratory.

MEDICAL SCHOOL/HOSPITAL: None

REGIONAL AND NATIONAL: None
V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


ABSTRACTS, BOOK REVIEWS, PUBLISHED 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 residents - supervision and teaching during cytopathology rotation and when covering necropsies.
   B. Pathology residents - biweekly cytopathology conferences.
   C. Gynecology - Pathology - Radiation Oncology Conference-backup coverage.
   D. Senior medical students during pathology electives.
   E. Sophomore medical students: class lectures and laboratory.

III. RESEARCH ACTIVITIES:
   A. Cytopathology, with particular reference to serous fluids, cytologic technique, and aspiration cytology.

PROJECTS UNDER STUDY:
   A. Cross contamination in the cytologic staining circuit.
   B. Cytologic manifestation of systemic lupus erythematosus.
   C. The use of stained wet films in cytologic diagnosis.

IV. ADMINISTRATIVE ACTIVITIES:
   DEPARTMENTAL:
   A. Director, Cytopathology Laboratory.
   B. Chairman's Advisory Committee.
   C. Advisory Committee on Appointments and Promotions.
D. Department of Pathology Medical Service Plan Executive Committee.

REGIONAL AND NATIONAL:

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

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:

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.
D. Year 1 Medical Student Dermatopathology Lecture Series.
E. Dermatology Grand Rounds - Dermatopathology Presentations.
F. 10 Week Undergraduate Student Research Elective

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
C. NIH RCDA (50% effort: $40,000 Direct Costs; July 1990-June 1991). Role of Adhesion Molecules in Skin Diseases.

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 PGE2 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 epidermal growth factor receptor on normal and psoriatic keratinocytes.

J. Influence of retinoids on keratinocyte, melanocyte, and fibroblast function in-vitro and in-vivo.

K. Characterization of effect of Cyclosporin A on phorbol ester induced cutaneous inflammation and hyperplasia.

L. Role of endothelial cell adhesion molecules (ICAM-1, ELAM-1, VCAM-1) on cutaneous leukocyte trafficking.

IV. ADMINISTRATIVE ACTIVITIES:

REGIONAL AND NATIONAL:


C. Ad-hoc Review Committee - NIH Study Section - Skin Disease Research Center Grant Applications.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


2. Identification of Dermal Dendrocytes (macrophages) as the spindle-shaped cells in Kaposi's Sarcoma, Invited participant-Annual Meeting of The Laboratory of Tumor Cell Biology, Dr. Robert Gallo, National Cancer Institute, August 24, 1989, Bethesda, Maryland.


4. First International Parapsoriasis Symposium-Organizing Co-Chairman; Mayo Clinic, September 7-8, 1989, Rochester, Minnesota.


7. Role of Dermal Dendrocytes in AIDS-Related Skin Diseases, Visiting Professor, The Oregon Health Sciences University, Dept of Dermatology, September 28, 1989, Portland, Oregon.

9. Adhesion Molecules and Skin Diseases. Visiting Professor, Department of Dermatology, Free University of Amsterdam, October 10, 1989, The Netherlands.


15. The Use of Immunomodulating Drugs in Dermatologic Disease, Invited Speaker-Modulating the Immune Response to Benefit the Patient Symposium. St. Louis University Medical Center, December 2, 1989, St. Louis, Missouri.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR, ARTICLES PUBLISHED IN UNREFEREED JOURNALS:
17. Barker JNWN, Griffiths CEM, Mitra RJ, Elder JT, Dixit V, Kunkle S, Nickoloff BJ: Keratinocyte-derived interleukin-8: Regulation by TPA and urushiol and detection in inflamed skin. ESDR Abstract.
I. CLINICAL ACTIVITIES:

A. Co-Director, Section of Clinical Pathology, University Hospitals.
B. Director, Blood Bank, University Hospitals.
C. Diagnosis of surgical specimens from University Hospital 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. Instruction of sophomore (M-2) pathology laboratory, Pathology 600.
C. Postgraduate course, "Current Topics in Blood Banking", Planning Committee.
D. Course on Transfusion Medicine presented to Pathology and Hematology/Oncology House Officers.
E. Seminars and lectures on Pathology of Breast to Pathology House Officers.
F. Responsible for senior student (M-4) elective in pathology (Nov-Dec, 1988).

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Transfusional requirements in extracorporeal membrane oxygenator treatment.
B. Detection of source of blood in percutaneous umbilical blood sampling procedures.
C. Significance of intraductal carcinoma and lobular carcinoma in-situ presenting in adenofibromas or in sclerosing adenosis.
D. Adenomyoepithelial neoplasms of breast.
E. Pleomorphic adenomas of breast.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Co-Director, Division of Clinical Pathology.
B. Laboratory Communication Committee.
C. M-Labs Operation Committee.
D. Chairman's Advisory Committee.
E. Director, Fellowship program in Blood Banking/Transfusion Medicine.

MEDICAL SCHOOL/HOSPITAL:

A. Transfusion Committee, Chairman
B. Breast Care Center
C. Liver homotransplantation task force
D. Bone marrow homotransplantation task force
E. AIDS task force
F. Advisory Committee on Appointments, Promotions and Titles of Medical School
G. Mentor, M-1 students

REGIONAL AND NATIONAL:

A. American Association of Blood Banks:
   1. Awards Committee, Chairman.
   2. Publications Committee.
B. American Society of Clinical Pathologists:
   2. Chairman, Check Sample Program, Anatomical Pathology.
C. Michigan Society of Pathologists:
   1. Medical Legislation Committee.
   2. Medical Care Insurance Committee.
D. Southeastern Michigan Red Cross Blood Program:
   2. Medical Advisory Committee.
E. Consultant, Veterans Administration Hospital, Ann Arbor.
F. Test Committee on Blood Banking/Transfusion Medicine, American Board of Pathology.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Associate Editor, TRANSFUSION.
B. Editorial Board, American Journal of Surgical Pathology.
C. Editorial Board, American Journal of Clinical Pathology.
D. Editorial Board, Archives of Pathology and Laboratory Medicine.
E. Associate Editor, Critical Reviews in Clinical Laboratory Sciences.
F. Editor, Anatomical Pathology Check Sample Program, American Society of Clinical Pathologists.
G. Reviewer, Cancer.

INVITED LECTURES/SEMINARS:


HONORS AND AWARDS:

2. Commission on Education Distinguished Service Award, American Society of Clinical Pathologists.

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:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Autopsy Service

II. TEACHING ACTIVITIES:
   A. Course Director, Pathology 650.
   B. Soverin Karmiol, Ph.D. - Postdoctoral Fellow.
   C. Terezila Coimbra, M.D., - Postdoctoral Fellow.
   D. Jung Woo Noh, M.D., - Postdoctoral Fellow
   E. Masud Malik, Undergraduate/Research

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.
   B. Macrophage Function in Lung Injury and Fibrosis. P01-HL31963, Section IV. Principal Investigator, S.H. Phan, Ph.D., M.D.
   C. Fibroblast Heterogeneity in Pulmonary Fibrosis, R01-HL39925. Principal Investigator, S.H. Phan, Ph.D., M.D.
   D. Crescentic Nephritis. P01DK38149, Section IV, P.I. S.H. Phan, Ph.D., M.D.

PROJECTS UNDER STUDY:

   A. Lung macrophage/macrophage, recruitment and activation during lung injury and fibrosis.
   B. Cytokine regulation of fibroblast function - in terms of chemotaxis, collagen metabolism and proliferation during lung injury.
   C. Isolation and characterization of lung fibroblast clones from normal and fibrotic lung to examine extent of and mechanistic basis for heterogeneity.
   D. Regulation of mesangial cell proliferation and collagen gene expression by mediators from diseased renal tissue.
   E. Regulation of production of fibrogenic mediators and cytokines by pulmonary endothelial cells.
   F. Analysis of bleomycin receptors on alveolar macrophages and fibroblasts.
   G. Production of monocyte chemotactic factors by alveolar macrophages and fibroblasts and endothelial cells, and its regulation by bleomycin and cytokines.
   H. Mechanisms of xanthine dehydrogenase to oxidase conversion in rat pulmonary endothelial cells.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Member, Departmental Research and Space Advisory Committee.
B. Member, Graduate Program Committee

**MEDICAL SCHOOL/HOSPITAL:**

A. Member, Ann Arbor VA Hospital Research & Development Committee.
B. Member, Medical Scientist Training Program Operating Committee.

**REGIONAL AND NATIONAL:**

A. 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, Chest.
B. Ad hoc member, NIH Respiratory and Applied Physiology Study Section.
C. Member, Site Visit Team for NIH program project grant.

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:

CARL L. PIERSON, PH.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

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

II. TEACHING ACTIVITIES:

A. Coordinator, Pathology House Officer Microbiology Laboratory rotation.
B. Lecturer, Clinical Pathology Ground Rounds
C. Lecturer, Microbiology 201
D. Coordinator, Microbiology Laboratory Inservice

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. "National survey of the susceptibility of the Bacteroides fragilis group", Merck, Sharp & Dohme and Beecham Laboratories
B. "Nasal spray stability study," Eli Lilly
C. "Prevention of antibiotic-associated colitis with Saccharomyces boulardii administration," Biocodex
D. "Evaluation of CDTOX Immunocube," Difco Labs

PROJECTS UNDER STUDY:

A. Application of gas-liquid chromatography for rapid identification of microorganisms
B. In vitro evaluation of meropenem
C. In vitro evaluation of cefmetazole
D. In vitro evaluation of sparflaxacin, CI-960 and PD 131638-2b
E. Antibiotic synergy studies with Enterococcus spp using time-kill kinetics
F. Epidemiology of antimicrobial resistance patterns in intensive care units, Lederle Labs and Symedco
IV. **SERVICE ACTIVITIES:**

**DEPARTMENTAL:**

A. Clinical Pathology Laboratory Director's Committee  
B. M-Labs Technical Advisory Committee (Chairperson)  
C. Clinical Microbiology Senior Staff Meeting (Chair)  
D. Clinical Microbiology Inservice Program (Coordinator)

**MEDICAL SCHOOL/HOSPITAL:**

A. Hospital Infection Control Committee  
B. Task Force on AIDS (alternate)

**REGIONAL/NATIONAL:**

A. Co-chair, TriCounty Clinical Microbiology Association.  
B. Alternate, Technical Advisory Committee, Bureau of Laboratory and Epidemiological Services, Michigan Department of Public Health.  
C. College of American Pathologists site inspection team member at U. of Cincinnati.  
D. Coordinator, Clinical Microbiology Laboratory Directors of Michigan Group meetings.

V. **OTHER RELEVANT ACTIVITIES:**

A. Reviewer, Journal of Clinical Microbiology.  
C. Lecturer, Roche Pharmaceutical Training series.

**INVITED LECTURES/SEMINARS:**

3. Michigan branch meeting of the American Society for Microbiology, Annual meeting, Flint, Michigan, "Infections in transplant patients."

IV. **PUBLICATIONS:**

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


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

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. Laboratory section director for General Pathology for Dental Students 631.

III. RESEARCH ACTIVITIES:
PROJECTS UNDER STUDY:
A. Histologic and immunohistologic study of mucoepidermoid carcinomas.
B. Immunohistochemical differentiation of adenocystic carcinoma from terminal duct carcinoma.
C. Immunohistochemical study of oral lymphoid lesions.
D. Development of vehicles for delivery of topical drugs to oral mucous membranes.

IV. ADMINISTRATIVE ACTIVITIES:
DEPARTMENTAL:
A. Thesis Committee Chairman for Dr. D.E. Turunen, Department of Periodontics.
B. Coordinator of oral pathology clinical consultative services.

DENTAL SCHOOL:
A. Member of Transition Committee, 1987-1989.
B. Interim Director of Graduate Studies.

REGIONAL AND NATIONAL:
A. Member of Editorial Board for Oral Surgery, Oral Medicine and Oral Pathology.
B. Member of the Task Force to Plan the Future of Oral Pathology.
V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATIONS IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:


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

I. CLINICAL ACTIVITIES:
   A. Director of Autopsy Service.
   B. Supervision of Autopsies (4.5 months)
   C. Coordinator of Senior Staff Autopsy Call Schedule
   D. Surgical Pathology (heart biopsies)

II. TEACHING ACTIVITIES:
   A. Course Director - Pathology 631
   B. Urology Conference.
   C. Morbidity and Mortality Conference.
   D. Coordinator - Pathology Gross Conference.
   E. Mentor - Fourth Year Medical Student Clerkship Rotation.
   F. Lectures to Pathology House Officers.
   G. Lecturer, Pathology 600 Course

III. RESEARCH ACTIVITIES:
   A. Regulation of Soluble Mediators of Inflammation.
   B. Toxic Effects of Immunomodulators.
   C. Pathophysiology of Septic Shock

SPONSORED SUPPORT:

Current:
A. National Institutes of Health - Granulomatous Inflammation and Interleukin-2 - Principal Investigator, 5 years, $350,000
B. National Institutes of Health - The Role of Cytokines in Sepsis and Trauma - Principal Investigator, 5 years, $906,182
C. American Heart Association of Michigan - The Role of TNF and PAF in Septic Shock, Principal Investigator, 1 year, $24,500
D. National Institutes of Health - Monokine Gene Expression/Regulation in Lung Injury - Co-investigator - 5 years
E. National Institutes of Health - Inflammatory Cells and Lung Injury - Co-Investigator on Core II of Program Project, 5 years,

Pending:
A. National Institutes of Health - Hepatic Ischemia-Induced TNF and Multi-Organ Injury - Principal Investigator
B. National Institutes of Health - Anesthetics and Viral Pulmonary Immunopathy - Co-Investigator
C. National Institutes of Health - Mechanisms of Pulmonary Fibrosis - Co-Investigator.
D. National Institutes of Health - Myocardial Preconditioning in Conscious Dogs and Pigs - Co-Investigator
E. National Institutes of Health - Regional Function in Ischemic and Infarcted Myocardium - Co-Principal Investigator

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director - Autopsy Service.
B. Member - Quality Assurance Committee
C. Member - Microcomputer Advisory Committee

MEDICAL SCHOOL/HOSPITAL:

A. Medical School Admissions Committee

REGIONAL AND NATIONAL:

A. Member - Dementia Subcommittee, Other Chronic Disease. Advisory Committee to the Michigan Department of Public Health.
B. Deputy Medical Examiner for Washtenaw County (16 cases).
C. Member, Michigan Association of Medical Examiners.
D. Member, Shock Society.
E. Member, American Association of Immunologists.
F. Member, Adam James French Society.
G. Member, American Association of Pathologists.
H. Member, United States-Canadian Academy of Pathology.
I. Reviewer, American Review of Respiratory Diseases.
J. Reviewer, Laboratory Investigation.
K. Reviewer, Journal of Immunology.
L. Reviewer, American Journal of Applied Physiology.
M. Reviewer, Journal Immunopharmacology
N. Reviewer, Journal Leukocyte Biology
O. Reviewer, American Journal of Pathology

INVITED LECTURES/SEMINARS:

2. Invited Lecturer, Department of Surgery, Michigan State University, East Lansing, Michigan, May, 1990.
V. 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. Diagnostic Surgical Pathology, Hematopathology
   B. Clinical Flow Cytometry Laboratory
   C. Clinical Hematology Laboratory
   D. Hematopathology Consultation Cases

II. **TEACHING ACTIVITIES:**
   A. Medical Students
      1. Laboratory Instructor (2 sessions), Hematopathology - Pathology 600 course
      2. M4 Clerkship, Hematology portion of Clinical Pathology Rotation
   B. House Officers
      1. Sign-out of bone marrow biopsies, aspirates, blood smears, and body fluids in Hematology Laboratory
      2. Sign-out of lymph node biopsies and review of hematopathology consultation material
      3. Flow Cytometry sign-out
   C. Hematopathology teaching
      1. Hematopathology unknown conferences/biweekly
      2. Leukemia conference/biweekly
      3. Lymphoma conference/weekly
   D. Clinical Pathology Grand Rounds (one lecture)

III. **RESEARCH ACTIVITIES:**

   **SPONSORED SUPPORT:** None

   **PROJECTS UNDER STUDY:**
   A. Aberrant Antigen Expression in Acute Leukemia
   B. Immunophenotyping in Chronic Lymphoproliferative Disorders
   C. Detection of EBV Genomes by Polymerase Chain Reaction
   D. EBV Infection-Associated Hemophagocytic Syndrome

IV. **ADMINISTRATIVE ACTIVITIES:**

   **MEDICAL SCHOOL/HOSPITAL:**
   Hospital Laboratories Committee
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

1. Ross, C.W., Schnitzer, B., Weston, B. and Hanson, C.A.: Chronic active Epstein-Barr virus infection and viral-associated hemophagocytic syndrome.

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

NATHANIEL H. ROWE, D.D.S., M.S.D.
PROFESSOR OF PATHOLOGY, DENTISTRY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

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 at U.M. Hospital) and management thereof on an as needed basis eleven months
      per year.

II. TEACHING ACTIVITIES:
   A. Oral Pathology, Course 516, to Freshmen Dental Students (course director).
   B. Graduate Oral Pathology Seminar in Periodontics, Course 781 (course director).
   C. General Pathology, Course 630, to Sophomore Dental Students.
   D. Oral Pathology, Course 624, to Sophomore Dental Students.
   E. Oral Pathology Elective, course 818, to Senior Dental Students.
   F. Dental Hygiene, Course 220, to Freshmen Students.
   G. Dental Hygiene, Course 321, Senior Seminar.
   H. Graduate Oral Pathology, Course 694.
   I. Advanced Pathology Seminar, Course 698, to Graduate Students.
   J. Journal Club, Course 699, to Graduate Students.

III. RESEARCH ACTIVITIES:

SPONSORED RESEARCH:
   A. Oral Zovirax for the Treatment of Recurrent HSV Labialis. Project Director. 3% Effort.
      Burroughs Wellcome Company. 09/01/89 - 08/31/91. Total Direct Costs: $39,600.00.

UNDER CURRENT NEGOTIATION:
   A. Prevention of Ultraviolet-Induced Recurrent Herpetic Labialis. Squibb Co. 5% Effort.
      Project Director. (Amount approximately $100,000.00, 2 years).

IV. ADMINISTRATIVE ACTIVITIES:
   A. Director of Diagnostic Laboratory and Consultative Services, Department of Oral
      Medicine, Pathology, Surgery. Activities include:
      1. Plan and supervise all activities of the various laboratories and consultative
         services. These include: the Research Services, C.T. Hanks, Director, Patient
         Consultative Services, J.A. Regezi, Director, Anatomic Pathology Services, R.M.
Courtney, Director, and Clinical Pathology Services, N.H. Rowe and J.C.B. Stewart, Co-Directors.
2. Supervision and duty assignment of 7 support staff.
3. Responsible for fiscal management and accounting.

B. Co-Director: Clinical Pathology Services, Department of Oral Medicine, Pathology, Surgery. Activities include:
   1. Provide Clinical Laboratory tests requisite to the needs of the intramural diagnostic and surgical program.
   2. Provide infection control monitoring services for the School of Dentistry.
   3. Provide, on a fee-for-service basis, infection control monitoring services for dental health care practitioners in the State of Michigan.

C. School of Dentistry Committees include:
   1. Department of Oral Medicine/Pathology/Surgery Advisory Committee.
   2. Guest Relations Task Force Committee, Chairman.
   3. Infection Control Committee, School of Dentistry.

REGIONAL AND NATIONAL:

STATE OF MICHIGAN

A. Member, AIDS Speaker's Bureau, Michigan State Medical Society.
B. State of Michigan, Department of Health, Tobacco Use Reduction. Associate Co-Chairman, Committee on Legislation.
C. Member, Executive Committee, American Cancer Society, Michigan Division.
D. Member, Board of Directors, American Cancer Society, Michigan Division.
E. Area Delegate Director, American Cancer Society, Michigan Division.
F. Member, Public Issues Committee, American Cancer Society, Michigan Division.
G. Consultant, Committee on Cancer and Infection Control, Michigan Dental Association.
H. Member, Research Screening Committee, Delta Dental Fund.
I. Member, Michigan Coalition on Smoking or Health.
J. Member, Special Committee on Health and Hazard Regulation, Michigan Dental Association.
K. Member, Coalition for Access to Health Care.

NATIONAL

A. Civilian Professor and Consultant, Office of the Surgeon General, United States Army.
B. National Board of Directors, American Cancer Society, Medical Delegate.
C. Member, National Public Issues Committee, American Cancer Society.
D. Member, National Credentials Committee, American Cancer Society.
E. Member, Science Information Committee, American Association for Dental Research.
F. Member, Appeals Board, Commission on Dental Accreditation, American Dental Association.
G. Consultant, Council on Dental Therapeutics, American Dental Association.

INTERNATIONAL

A. External examiner in Oral Pathology, University of Malaysia, Kuala Lumpur, Malaysia.
V. OTHER RELEVANT ACTIVITIES:

A. Clinical and Patient Care
   1. Intradepartmental
      a. Oral Pathology Service Clinic, University Hospitals, Department of
         Dentistry and Oral Surgery.
      b. Oral Pathology Biopsy Service Rotation.
      c. Clinical Pathology Service, Co-Director.
   2. Interdepartmental
      a. Oral Pathology, clinical consultations on an as needed basis, The
         University of Michigan Medical School of Dentistry Clinics.
      b. Consultant to VA Hospital, Ann Arbor.

B. Continuing Education
   1. University
   2. Other: Lecturer to various groups including:
      a. West Detroit Dental Society, "Is There a Rational Approach to Infection
      b. Oakland County Dental Society, "Is There a Rational Approach to
      c. President's Week-end, "How to Protect Your Smile, Your Speech, and
         Your Vitality from Becoming Casualties of Old Age", the University of
         Michigan, October 6, 1989.
      d. Detroit Clinic Club, Perio. Section, Orchard Lake, Michigan, October 17,
         1989.
      e. Press Conference - Tobacco Reduction Task force, Department of Public
      f. Trident Seminar, "Diagnosis and Management of Oral Disease", Cancun,
         Mexico, January 24 - February 4, 1990.
      g. Muskegon Dental Society, "Update on AIDS, Hepatitis and Relevant

C. Manuscript Consultant and Reviewer
   a. BARRIER, Infection Control in Dental Practice (Consulting Editor)
   b. Journal of the American Medical Association
   c. Journal of Oral Pathology
   d. Journal of the American Dental Association
   e. Cancer
   f. Journal of the Academy of General Dentistry

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED
JOURNALS:

1. Spruance, S.L., Stewart, J.C.B., Rowe, N.H., McKeough, M., Wenerstrom, G. and Freeman, D.: 


BOOKS AND CHAPTERS IN BOOKS:


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


ARTICLE SUBMITTED FOR PUBLICATION

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

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 Hematopathology of M-Lab clients.
F. Consultant for External and Transfer Hematopathology cases.
G. Review of Southwest Oncology Group (SWOG) cases (circa 200/year).
H. Review of lymphoma cases entered into Children's Cancer Study Group protocols.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:
A. Daily sign-out of bone marrow biopsies and aspirates.
B. Daily review of blood smears and body cavity and joint fluids in the Hematology Laboratory.
C. Daily review of in-house and consultation hematopathology cases and correlation with flow cytometry data and immunoperoxidase studies.
D. Daily review of outside consultation cases.
E. House Officer Conferences in Hematopathology. (Clinical Pathology Grand Rounds).
F. Biweekly House Office Hematopathology conference.
G. Monthly lectures to house officers on acute leukemias and lymphomas.
H. Dental student lecture in Hematopathology.
I. Sophomore Medical student lectures in Hematopathology.
J. Sophomore Medical student laboratory sessions 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.
C. Pathology Coordinator, SWOG studies numbers 8515 and 8516.
SERVICE ACTIVITIES:

DEPARTMENTAL:
A. Diagnostic Surgical Pathology, Hematopathology.
B. Diagnostic Clinical Pathology, Hematology.

MEDICAL SCHOOL/HOSPITALS:
A. Hematology Laboratory.
   1. During the past fiscal year, there was an overall increase in the total number of
      tests from 463,000 to 475,000.
   2. The increase in labor-intensive tests included: a) a 5 per cent increase in
      differential white blood cell counts from 118,000 to 124,000; b) a 22 per cent
      increase of microscopic examinations by hematopathologists of blood smears and
      body cavity fluids.
   3. Reticulocyte counting was transferred to the Flow Cytometry Laboratory in
      February, 1990.
   4. The Rapimat semi-automated dip stick reader for urinalysis was put into routine
      laboratory use in March, 1990.
   5. Daily in-house, transfer cases, cases from UM clients, and outside consultations
      are reviewed and signed out with house officers and fellows. When immunologic
      data (flow cytometry and/or immunohistochemistry) are generated, they are
      correlated with morphologic findings.
B. University of Michigan Health Service Laboratories.

REGIONAL AND NATIONAL:
A. President, Society for Hematopathology.
B. Society for Hematopathology, Executive Committee.
C. Southwest Oncology Group:
   1. Lymphoma Subcommittee.
   2. Leukemia Subcommittee.
D. Children's Cancer Study Group: Review of in house cases of lymphoma cases.
E. Regional Center Review Pathologist, Southwest Oncology Group.
F. Review Panel for Lymphomas, Southwest Oncology Group.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARD:
A. American Journal of Clinical Pathology.
B. Human Pathology.
C. Hematologic Pathology. Designated reviewer.

INVITED LECTURES/SEMINARS:
1. "A Practical Approach to Diagnostic Hematological Problems", ASCP Educational Course, St.
   Petersburg, FL, November, 1989: Lectures given included: a) Non-Hodgkin's Lymphomas; b)
   Hodgkin's Disease; c) A Practical Approach to the Diagnosis and Classification of Lymphomas
and Leukemias by Flow Cytometry, and Electron Microscopy; d) Extranodal lymphomas; e) Immunologic Classification of Acute Lymphoblastic Leukemias.
7. Diagnosis and Classifications of Leukemias. Dept of Medicine, Hurley Hospital, Flint, MI, April 1990.

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:

LUCIA SCHUGER, M.D.
RESEARCH INVESTIGATOR IN PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

None

II. TEACHING ACTIVITIES:

A. Mentor of undergraduate student who has worked in our laboratory over the Summer of 1989.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. "Role of laminin and other basement membrane-related glycoproteins in mouse lung development." The Council for the Tobacco Research, 1/1/90-1/31/90.

PENDING:

None

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

None

MEDICAL SCHOOL/HOSPITAL:

None

REGIONAL AND NATIONAL:

None

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

None
INVITED LECTURES/SEMINARS:

None

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


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

SUSAN SHELDON, Ph.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   Clinical Cytogenetics Laboratory.

II. TEACHING ACTIVITIES:
   A. Pathology house officers
      1. Instruction in genetics and cytogenetics.
      2. Weekly review of bone marrow and relevant peripheral blood cases with house
         officers on Hematopathology rotation.
   B. Medical Genetics fellows and medical students.
      Instruction in cytogenetics as it relates to both genetic and acquired disease.
   C. Hematology/Oncology fellows.
      Instruction in cytogenetics as it relates to hematologic disease.
   D. Clinical Pathology Grand Rapids.
   E. Medical Genetics Rounds, weekly participant, two lectures.
   F. Leukemia Conference, biweekly.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Role of the use of growth factors and mitogens for cytogenetic examination of
      hematologic malignancies in a clinical laboratory.
   B. Use of growth factors to elaborate expression of a Philadelphia chromosome.
   C. Use of intercalating agents to enhance resolution of chromosome bands.
   D. Correlation of ploidy with expression of differentiated function.
   E. Role of deletions of 12p in eosinophilia.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   Assistant director, Clinical Cytogenetics Laboratory

REGIONAL AND NATIONAL:
   Planning committee, Cytogenetics Technologist Program, Eastern Michigan University.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. The Role of Cytogenetics and Molecular Genetics in Hematology; lecture to medical technology students at Eastern Michigan University, Ypsilanti, Michigan, October, 1989.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

1. Hanson, C.A., Holbrook, E.A., Roth, M.S., Sheldon, S., Schnitzer, B.: Detection of Philadelphia chromosome (Ph') positive cells from glass slide smears and paraffin sections using the polymerase chain reaction (PCR) IAP, March 1990.

SUUY SHU, PH.D.
ASSOCIATE PROFESSOR OF SURGERY
DEPARTMENT OF SURGERY
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Director, Oncology Laboratory
   B. Establishment of a clinical laboratory for culture and immunologically stimulated human T lymphocytes for cancer treatment.

II. TEACHING ACTIVITIES:
   A. Supervision of two postdoctoral fellows.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   A. Principal Investigator, "Generation of Therapeutic T Cells from Tumor-Bearing Hosts", American Cancer Society, IM-494 (20%), $135,000/year (270,000/2 years), 1/1/88 - 12/31/90.
   B. Principal Investigator, "Adaptive T Cell Immunotherapy of Nonimmunogenic Tumors", NIH Grant 1 R01 CA47285 (50%), $151,921/year ($796,763/5 years), 6/1/88 - 5/31/93.

   PENDING:
   A. Co-Principal Investigator, "T Cell Therapy of Human Cancer with IVS Lymphocytes", NIH, R01 (15%), $197,601/year ($1,083,756/5 years), 12/1/89 - 11/30/94.
   B. Co-Investigator, "Multidisciplinary Treatment of Esophageal Cancer", NIH, R01 (5%), $204,999/year ($718,984/3 years), 12/1/89 - 11/30/92.
   C. Co-Principal Investigator, "Adaptive Cellular Therapy of Cancer with Vaccine-Primed Lymphocytes Secondarily sensitized to Autologous Tumor and Expanded in INterleukin-2 In Vitro", American Cancer Society (20%) ($626,531/3 years), 1/1/90 - 12/31/93.

IV. ADMINISTRATIVE ACTIVITIES:

   DEPARTMENTAL:
   A. Interview candidates for faculty positions in Division of Surgical Oncology.
B. Participate in surgical resident research program.

**MEDICAL SCHOOL/HOSPITAL:**

A. Member, Cancer Center of the University of Michigan.

**REGIONAL AND NATIONAL:**

A. Reviewer for the following journals: Cancer Research, Journal of Immunology, Cancer Immunology and Immunotherapy and Journal of Biological Response Modifiers.

**V. OTHER RELEVANT ACTIVITIES:**

A. Member, Experimental Therapeutics II Study Section, NCI, NIH, 1989-.
B. Special reviewer, Small Business Innovation Research (SBIR) Study Section, NIH, July 26, 1988 and April 4, 1989.

**INVITED LECTURES AND SEMINARS:**

1. Department of Pathology, University of Kansas, "Therapy of Cancer with Sensitized Lymphocytes", November 30, 1988.
2. Department of Microbiology, Medical College of Ohio, "Principles and Potential for Cancer Therapy with Immune T Lymphocytes", June 7, 1989.

**VI. PUBLICATIONS:**

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


**BOOKS/CHAPTERS IN BOOKS:**

ABSTRACTS, BOOK REVIEWS, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


LAURENCE SILBART, PH.D.
RESEARCH INVESTIGATOR IN PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. None

II. TEACHING ACTIVITIES:
   A. Eastern Michigan University
      1. Immunotoxicology lecture, 2/19/90 for Chem 412 (Toxicology II).

III. RESEARCH ACTIVITIES:
    SPONSORED SUPPORT:
    A. The Smokeless Tobacco Research Council, Inc. "Optimizing the Secretory IgA
       Responses to Carcinogens Absorbed by Mucosa." Funded from 1/1/90 to 12/31/90. Total
       Costs, $31,197.00.
    B. The Department of Health and Human Services, Public Health Service, National
       Institutes of Health, National Cancer Institute. "The Mucosal Immune Response to
       Aflatoxin B1." Funded 5/1/89 to 4/31/92. Total Costs, $276,367.00.
    C. The University of Michigan Cancer Center Grant from the American Cancer Society.
       "Development of Anti-idiotypic Vaccines as Mucosal Immunogens for Reduction of
       Carcinogen Absorption." Funded 10/1/89 to 9/30/90. Total Costs, $6968.00.
    D. The Smokeless Tobacco Research Council, Inc. "Continued Development of Mucosal
       Vaccines for Carcinogens." Funding period; 7/1/90 to 6/31/93. Total Costs Requested,
       $274,989.00.

PENDING: None

IV. ADMINISTRATIVE ACTIVITIES:
   DEPARTMENTAL: None
   MEDICAL SCHOOL/HOSPITAL: None
   REGIONAL AND NATIONAL: None
V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS: None

INVITED LECTURES/SEMINARS:

2. The University of Michigan-Immunology Colloquium, "Development of Vaccines to Block Mucosal Absorption of Chemical Carcinogens." January 24, 1990.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

2. Silbart L.K., R.A. McDonald, P.M. Lincoln, L. Goslinoski, and D.F. Keren. Elicitation of a secretory immune response to the carcinogen 2-acetylaminofluorene (2-AAF) is enhanced by conjugation to the mucosal immunogen cholera toxin.

BOOKS/CHAPTERS IN BOOKS:

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


EUGENE M. SILVERMAN, M.D.
CLINICAL ASSOCIATE PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
A. Surgical Pathology Coverage of M-Labs cases including most cases from:
   1. Albion Community Hospital, Albion, Michigan.
   2. Thorn Hospital
   4. Falzone Laboratories.
   5. Perry Health Net.
   6. Other various institutions.
B. Autopsy Coverage for Albion Community Hospital, Albion, Michigan, and Thorn Hospital.
C. Rotation with other staff pathologists.
   1. Five weeks coverage at the University Hospital of weekend autopsy call.
D. September 1989 through January 1990-Surgical and Clinical Pathology coverage at Lapeer Regional Hospital, Lapeer, Michigan, 2-3 days per week.

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 some M-Labs autopsies and some University of Michigan autopsies with residents.

III. RESEARCH ACTIVITIES:
A. Investigation of hepatic fatty change in exogenous obesity and following gastric exclusion surgery.
B. Investigation of malacoplakia of the endometrium.

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. Member of Surgery and Pharmacy and Therapeutics Committees, Albion Community Hospital.
F. Director of Laboratories, Thorn Hospital, Hudson, Michigan.
G. Chairman, Tissue/Transfusion Committee, Thorn Hospital, Hudson, Michigan.
H. Chairman, Infection Control Committee, Thorn Hospital, Hudson, Michigan.
I. Director of Laboratories, Lapeer Regional Hospital, Lapeer, Michigan.
J. Member, Tissue/Transfusion Committee, Infection Control Committee, Lapeer Regional Hospital, Lapeer, Michigan.

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

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

A. 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.

B. Hematopathology Diagnostic Service - interpretation of peripheral smears, body fluid cytologies, bone marrow aspirates and biopsies, cytochemical stains.

II. TEACHING ACTIVITIES:

A. Research supervisor for undergraduate, graduate and post-doctoral investigators:

1. Jim Grober, M.D., Rheumatology Fellow, Department of Internal Medicine, University of Michigan, School of Medicine - recipient of NIH post-doctoral fellowship to study the adhesion molecules mediating attachment of leukocytes to the endothelium of rheumatoid synovium.

2. Tai-Ling Wang, M.D. Chairwomen, Department of Pathology, Japanese-Chinese Friendship Hospital, Beijing, China- visiting scholar studying the expression of receptors for the extracellular matrix in cultured human T-lymphoblastic leukemias.

3. Zhiwei Song, M.S., Graduate student, University of Michigan, School of Medicine, Department of Biochemistry - (1) distribution and functional significance of leukocytic glycoconjugates containing terminal mannose residues recognized by the Snow Drop lectin and (2) characterization of the endogenous carbohydrate ligand for the peripheral lymph node homing receptor of normal and malignant lymphoid cells.

4. Praveen Reidy, Undergraduate student, University of Michigan, School of Arts and Sciences, Departments of Archeology and Psychology- co-investigator with Dr. Jim Grober in the study of adhesive interactions between leukocytes and endothelium in rheumatoid synovium.

B. Daily sign-out of cases in flow cytometry and hematopathology with pathology residents and medical students (3-4 months).

C. Weekly case-studies/seminars on the clinical applications of flow cytometry for the residents, fellows and medical students.

D. Lecturer, Hematopathology, Medical School.

E. Preceptor, Senior medical student (M4) elective in Pathology.

F. Lecturer, Clinical Applications of Flow Cytometry, Pathology Residents Core Lecture Series.

G. Pediatric/Adult Leukemia Conferences.

H. Adult Lymphoma Conferences.

I. Speaker, Rheumatology, Hematology/Oncology and Cancer Center Research Seminars.
III. RESEARCH ACTIVITIES:

SPONSORED RESEARCH:

FUNDED:
A. NIH, R01 ($425,000; 3 years; 30 September 1989 through 31 August 1992): Endothelial Binding Lectins of Lymphoid Malignancies.
B. NIH, NCI Physician Investigator Award, competitive renewal ($136,000; 2 years; 1 April 1988 through 31 May 1990): Lymphocyte migration and the metastatic process.
C. NIH, Multipurpose Arthritis Center, Development and Feasibility Grant ($143,469; 3 years; 1 February 1988 through 31 January 1991): The role of lymphocyte migration in chronic inflammatory arthritis.

IN PREPARATION:
A. NIH, R01: Leukocyte-endothelial interactions in chronic rheumatoid synovitis.

PROJECTS UNDER STUDY:
A. Transmembrane signalling and the control of endothelial adhesion receptors during lymphocytic migration and activation. Specifically, the detection of transmembrane signals initiated by the organ-selective attachment of lymphocytes to the high endothelial venules of lymph nodes.
B. Characterization of the endogenous carbohydrate ligand for the lymph node homing receptor of normal and malignant lymphocytes. Recently purified lectins specific for sialic acid in the 2,3 and 2,6 linkages will be used to confirm the role of endothelial sialic acid in the lymphocyte-endothelial adhesive interaction, establish the linkage of the endogenous carbohydrate ligand and attempt purification.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Coordinator, M4 clerkship in clinical pathology.
B. Member, Quality Assurance Committee.
C. Member, Equipment and Space Allocation Committee.

MEDICAL SCHOOL HOSPITAL:
A. Coordinator, Pathology Services (clinical) in The University of Michigan Cancer Center.
B. Member, The University of Michigan Cancer Center Clinical and Basic Research Implementation Committees.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:
1. Miles Pharmaceuticals, Inc. Research Laboratories, invited speaker, 1988
2. Genentech, Inc., invited speaker, 1989
3. University of Wisconsin Department of Pathology, invited speaker 1989
4. University of California at San Francisco Department of Laboratory Medicine, invited speaker, 1989
5. Federation of American Societies for Experimental Biology, workshop, chairman, 1989
6. Federation of American Societies for Experimental Biology, minisymposium speaker, 1989
8. American Society of Clinical Pathologists, workshop, invited speaker, 1989
10. FASEB Summer Symposium Series, invited speaker, 1989

MANUSCRIPT/GRANT REVIEWS:
A. Journal of Clinical Investigation.
B. Journal of Laboratory Investigation.
C. American Journal of Pathology.
D. Journal of Cell Biology.
E. Journal of Biological Chemistry.
F. Journal of Leukocyte Biology.
G. Journal of Immunology.
H. Immunology Today.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:
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 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Functional tests of neutrophils isolated from patient blood samples

II. TEACHING ACTIVITIES:
   A. Medical students (ICS 600 Immunopathology, one one hour session)
   B. Dental students (Dental Course 630, seven one hour sessions)
   C. Postdoctoral fellows, residents, undergraduate students

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   C. Lung Injury Produced by Oxygen Metabolites (GM-29507). Co-Principal Investigator with Dr. P.A. Ward.

PROJECTS UNDER STUDY:
   A. Pathophysiology of acute pulmonary injury: Role of complement, neutrophils, histamine, xanthine oxidase, and toxic oxygen species.
   B. Experimental thermal injury: Role of complement, leukocytes, mast cells, xanthine oxidase, and oxygen radicals in the pathophysiology of edema formation and secondary organ injury.
   C. Mechanisms of ischemia-reperfusion injury of the eye.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Interviewed candidates for faculty positions
   B. Participation in undergraduate research program

MEDICAL SCHOOL/HOSPITAL:
   A. Interviewed candidates for faculty positions
   B. Consultant for clinical research programs
C. Reviewer of intra-departmental grant proposals

REGIONAL AND NATIONAL:

A. Reviewer for the following scientific journals: American Journal of Pathology, American Journal of Physiology, American Review of Respiratory Disease, Immunobiology, Infection and Immunity, International Archives of Allergy and Applied Immunology, Journal of Applied Physiology

V. OTHER RELEVANT ACTIVITIES:

Member Editorial Advisory Board Immunobiology.

INVITED LECTURES/SEMINARS:

1. Session Chair/Speaker, Workshop on "Leukocyte Migration" 7th International Conference of Immunology, August, 1989, West Berlin.
2. University of Freiburg, Department of Experimental Dermatology, West Germany, August, 1989, Invited Speaker
3. University of Homburg, Department of Trauma Surgery, West Germany, August, 1989, Invited Speaker
5. Seminar on Oxygen Free Radicals, Dallas, Texas, November, 1989, Invited Speaker
6. 53rd Annual Conference of the German Society for Trauma Surgery, West Berlin, Germany, November, 1989, Invited Speaker
7. 2nd International Conference on Bio-Oxidative Medicine, Dallas, Texas, March, 1990, Invited Speaker
8. Visiting Professor, University of Homburg, Department of Trauma Surgery, Germany, May, 1990, Seminar
9. Institute of Immunology, University of Heidelberg, Germany, May, 1990, Invited Speaker

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


**BOOKS AND CHAPTERS IN BOOKS:**


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


JAMES VARANI, PH.D.
ASSOCIATE PROFESSOR OF MICROBIOLOGY AND IMMUNOLOGY
DEPARTMENT OF PATHOLOGY
UNIVERSITY OF MICHIGAN

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Implementation of Clostridium difficile toxin B test for diagnosis of Cl. difficile.

II. TEACHING ACTIVITIES:
   A. Lecturer, Pathology 580.
   B. Course Director, Pathology 850.
   C. Member, Dissertation Committee of Mr. Todd Kroll.
   D. Mentor for various students who have worked in my laboratory over the past year; includes 5 post-doctoral students, 1 medical student, 2 graduate students, 5 undergraduate students and 1 high school teacher through Kellogg Fellowship Program.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   B. Biochemical control of microcarrier culture. NIH CA33052. Principal Investigator.

PROJECTS UNDER STUDY:
   A. The development of substrates for optimum growth of cells in large-scale culture.
   B. The role of laminin and laminin receptors in mediating NK/NC-tumor cell interactions.
   C. The role of thrombospondin in the biology of human squamous carcinoma cells.
   D. Influence of retinoic acid on proliferation and matrix production by dermal fibroblasts and epidermal keratinocytes.
   E. Mechanisms of endothelial injury in lung inflammation.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
   A. Member, Departmental Advisory Committee on Appointments, Promotions and Tenure.
   B. Member, Departmental Space and Research Committee.
C. Member, Department of Pathology Graduate Program Committee.

MEDICAL SCHOOL/HOSPITAL:
A. Member, University Committee on Use and Care of Animals.
B. Member, Jody C. Ungeleiter Award Selection Committee.
C. Chairman, Jody C. Ungeleiter Award Selection Committee.
D. Member, Medical School Committee on Summer Research Opportunities.
E. Program Director, University of Michigan Cancer Center Program on Tumor Cell Metastasis and the Extracellular Matrix.
F. Member, University of Michigan Cancer Center Basic Research Committee.

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.
D. NIH Study Section Member: National Drug Development Cooperative Grants review panel.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
1. Invited Lecturer, Department of Pathology; VAMC - Wayne State University, Allen Park, Michigan.
2. Invited Lecturer, Department of Physiology; Wayne State University, Detroit, Michigan, March 13, 1990.
3. Invited Lecturer, Department of Pharmacology; Baylor College of Medicine, Houston, Texas.
4. Invited Lecturer, Department of Internal Medicine; University of Vermont, Burlington, Vermont, January 10, 1990.
5. Invited Lecturer, Engineering Foundation Symposium on Large-Scale Cell Cultivation; Santa Barbara, California, December 5, 1989.
8. Invited Lecturer, Department of Pathology; Southern Maine Medical Center, Portland, Maine, December, 12, 1989.

PATENTS:
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:


PETER A WARD, M.D.
PROFESSOR AND CHAIRMAN
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. These have been chiefly related to administrative responsibility for all clinical service functions of the Department.
   B. Autopsy Service.

II. TEACHING ACTIVITIES:
   A. Graduate students:
      1. Responsible during the current academic year for teaching activities for the following:
         a. Blair A.Walker, M.D., Postdoctoral Fellow.
         b. Rory A. Marks, M.D., Postdoctoral Fellow.
         c. Cheryl Swenson, D.V.M., Ph.D. Postdoctoral Fellow
         d. Michael M. Mandell, 3rd Year Medical School.
         e. Gordon Yu, M.D., Postdoctoral Fellow.
         f. Jonathon W. Honeister, Ph.D. Dissertation Committee member.
      2. Indirect supervision of four Research Scientists.

   B. Undergraduate students:
      a. Lawrence E. Stern, research mentor for Honors Project.
      b. Lecture, ICS 600, two hours.
      c. Two hour lecture to Alpha Omega Alpha members, April, 1990.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Thermal Injury, Complement, and Leukocyte Dysfunction", NIH GM-28499 (10%), $111,434/year ($577,063/five years), 1/1/86-12/31/90.
B. Principal Investigator, "Lung Immunopathology", NHLBI HL-07517 (5%), $257,166/year ($1,291,531/five years), 7/1/86-6/30/91.
C. Principal Investigator, "Leukocyte Chemotaxis", NIH HL-28442 (10%), $93,628/year ($505,936/five years), 7/1/86-6/30/91.
D. Principal Investigator, "Lung Injury Produced by Oxygen Metabolites", NIH GM-29507 (20%), $116,376/year ($507,078/five years), 7/1/82-6/30/87
E. Principal Investigator, "Inflammatory Cells and Lung Injury", NHLBI HL-31963 (35%), $619,303/year ($3,876,003/five years), 3/1/84-2/28/94.
F. Co-Investigator, "Mechanisms of Glomerular and Tubular Injury", NIH-DK39255 (5%), $40,524 (Project V only), 9/1/87-8/31/92.
PENDING:
A. Principal Investigator, "Lung Immunopathology", NHLBI-HL07517 (5%), $280,508 ($1,462,151/5 years), 6/1/91-5/31/96.

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. Michigan Eye Bank Research Review Committee, 1980--.
C. Michigan Diabetes Research and Training Center Policy Committee, 1981--.
D. National Task Force on Organ Transplantation, 1985--.
E. Professional Fee Policy Committee, 1984--.
F. Interdepartmental Coordinating Committee, 1984--.
G. Dean's Advisory Council, 1985--.
H. Dean's Advisory Committee on Clinical Affairs, May, 1985--.
I. Advisory Committee for the Howard Hughes Medical Institute, 1984--.
J. Internal Advisory Board Committee of the Michigan Gastrointestinal Peptide Research Center, 1985--.
K. Council of Operations and Quality Assurance, 1986--.
L. Board of Directors, M-Care, 1986--.
M. Member, Neuromuscular Program Policy Committee, The University of Michigan Medical School, 1987--.
N. Member, Center Advisory Committee for The University of Michigan Multipurpose Arthritis Center, 1987--.
O. Member, Medical Service Plan Advisory Committee, 1987--
P. Member, Medical Service Plan Executive Committee, 1987--
Q. Member, Gilford Upjohn Endowed Chair in Internal Medicine and Oncology, Department of Internal Medicine, Hematology and Oncology Unit, The University of Michigan, February, 1987--.
R. Member, Presidential Initiatives Fund, The University of Michigan, March, 1987--.
S. Member, Hospitals Advisory Group, 1988--
T. Member, University of Michigan Multipurpose Arthritis and Musculoskeletal Diseases Center, 1989--
U. Member, Committee to Review VA FTE's, The University of Michigan Medical School, October, 1988--

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.
3. Representative to the Universities Associated for Research and Education in Pathology, 1988-89.
C. Trustee, American Board of Pathology, effective January 1, 1988.
D. Member, Advisory Committee, Health Policy Agenda for the American People.
E. Member, American Association for Advancement of Science.
F. Member, American Association of Immunologists.
G. Member, American Pathology Foundation.
H. Member, Association of Pathology Chairmen.
I. Charter Member, A. James French Society of Pathologists, 1988--.
J. Member, Michigan Society of Pathologists.
K. Member, Center for Alternatives to Animal Testing, Johns Hopkins University.
L. Member, International Academy of Pathology.
M. Member, The New York Academy of Sciences.
N. Member, Society of Medical Consultants to the Armed Forces.
O. Member, Michigan Thoracic Society, 1988--.
Q. Member, The Oxygen Society, 1988--
   1. President, 1988
R. Ann Arbor Veterans Administration Medical Center, Consultant, 1980--.
S. Board of Directors, Universities Associated for Research and Education in Pathology, Inc.
T. Phi Rho Sigma, President, The University of Michigan Chapter, September, 1988
U. Cytogen, 1983--.
V. Mallinckrodt, Inc., Advisory Board, 1984--.
W. Member, Institute of Medicine, July 1, 1990

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--.
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, Human Pathology, April 1987--.
X. Toxicologic Pathology, Editorial Board, 1988--.

**INVITED LECTURES/SEMINARS:**

1. Cochair Workshop, "Mediators of Immediate-Type Hypersensitivity, at the 7th International Congress of Immunology, Berlin, German, September 8, 1989.
2. Invited Lecturer, "The Role of Reactive Oxygen Species in Inflammatory and Allergic Processes", XIVth Congress of the European Academy for Allergology and Clinical Immunology, Berlin, West Germany, September 18, 1989.
8. Invited Lecturer, "Inflammation and Vascular Injury", Department of Medicine, Michigan State University College of Human Medicine, Lansing, Michigan, November 22, 1989.
10. Invited Lecturer, "Thermal Trauma, Oxygen Radicals and Tissue Injury", Thermal Trauma, Oxygen Radicals and Tissue Injury Research Conference, sponsored by the University of Utah School of Medicine, Department of Surgery, Snowbird, Utah, January 25, 1990.
14. Special Review Committee (Chairman), Department of Pathology Site Visit, Duke University, Durham, North Carolina, May 1-2, 1990.
15. Program Project Advisory Board Meeting, Section of Pulmonary and Critical Care Medicine, New England Deaconess Hospital, Harvard Medical School, Boston, Massachusetts, May 13-14, 1990.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:

15. Ward, P.A.: Oxidant damage. Submitted to Task Force on Allergy and Immunology.


BOOKS/CHAPTERS IN BOOKS:


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


JEFFREY S. WARREN, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Director, Clinical Immunopathology Laboratory
   B. Autopsy pathology, staff coverage (2 weeks)

II. TEACHING ACTIVITIES:
   A. Pathology 631 (60 contact hours)
   B. Microbiology 505 - lecture: "The acute inflammatory response"
   C. Clinical Pathology Grand Rounds:
      "Granulocyte function testing" (11/3/90),
      "Anti-neutrophil cytoplasmic antibody" (11/17/90)
   D. Immunopathology journal clubs (biweekly)
   E. Immunopathology signout: Pathology residents, M-4 medical students, EMU medical technology students (daily; every other week)
   F. Supervision of research activities for:
      1. David M. Mandel (M-2); (6/1/89 - 8/30/89)
      2. Kevin Matrosic (M-2); (5/15/89 - 8/15/89); sponsored in student Biomedical Research Program.
      3. Michael L. Jones, Ph.D. candidate - postdoctoral fellow; (4/1/89-present); recipient of AHA-Michigan Fellowship (salary support).

III. RESEARCH ACTIVITIES:
   A. Role of cytokines (tumor necrosis factor, interleukin 1) in immune complex lung injury.
   B. Platelet-activating factor in immune complex alveolitis.
   C. Rat homolog of monocyte chemotactic and activating factor (MCAF): role in post-acute inflammatory lung injury.

SPONSORED SUPPORT:
   A. NIH (R29 - HL40526), Principal Investigator (50% effort), "Monocyte-Macrophage Cytokines in Immune Complex Lung Injury": 4/1/89 - 3/31/94 ($350,000; direct costs).
   B. American Heart Association of Michigan Grant-in-Aid, Principal Investigator (10% effort), "Platelet-Activating Factor in Immune Alveolitis": 7/1/89 - 6/30/91 ($44,400; direct costs).
IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL:

A. Medical school admissions committee

DEPARTMENTAL:

A. Members search committee for biochemistry section director
B. Interviewer, graduate pathology program applicants
C. Interviewer, pathology residency applicants

REGIONAL AND NATIONAL:

A. Ad hoc referee for following journals: American Journal of Pathology; Laboratory Investigation; Journal of Applied Physiology; Blood; Journal of Leukocyte Biology; Pediatric Research; Chest; American Review of Respiratory Disease; American Journal of Respiratory Cell and Molecular Biology; Journal of Pharmacology and Experimental Therapeutics; Lung; Human Pathology; Journal of Laboratory and Clinical Medicine; Circulation; Ophthalmology.

V. INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


SUBMITTED FOR PUBLICATION:

BOOKS/CHAPTERS IN BOOKS:


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

LEE WEATHERBEE, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Chief, Laboratory Service, VA Medical Center, Ann Arbor, Michigan and VA Outpatient
      Clinic, Toledo, Ohio.
   B. Consultant for referred bone pathology cases at University of Michigan.
   C. Primary activities in surgical and autopsy pathology.

II. TEACHING ACTIVITIES:
   A. Three days per week read out surgical cases with the resident on an individual basis.
   B. Reviewed autopsy gross and microscopic material with the residents for forty-two
      autopsies.
   C. Participated regularly in VA autopsy and surgical pathology conferences with assigned
      residents.
   D. Assumed primary responsibility for coordinating interdepartmental conferences including
      the monthly Medicine Morbidity and Mortality Conference.
   E. Gave two lectures in bone pathology for the dental students and for the second year
      medical students.
   F. Participated in the pathology laboratory for second year medical students.
   G. Coordinated the fourth year medical student rotation at the VA Medical Center.
   H. Informally consulted on bone and joint cases primarily at the University of Michigan and
      reviewed material with the residents involved.

III. RESEARCH ACTIVITIES:

COOPERATIVE STUDIES: Ongoing:
With Richard Turnage, study of hepatic changes in intestinal ischemia - reperfusion.

SPONSORED SUPPORT: None.

IV. ADMINISTRATIVE ACTIVITIES:

LOCAL:
   A. Overall responsibility for VA Medical Center Laboratory Service and for Laboratory at
      VA Outpatient Clinic, Toledo, Ohio.
   B. Executive Faculty, The University of Michigan.
   C. Admissions Committee, The University of Michigan Medical School.
   D. Clinical Executive Board, VA Medical Center. Major advisory board to the Chief of
      Staff and Director, VA Medical Center, regarding clinical affairs.
   E. Dean's committee, VA representative.
F. Quality Assurance Board, VA Medical Center.
G. Professional Standards Board, VA Medical Center.
H. Radiation Safety Committee, VA Medical Center.
I. Acting Chief of Staff, VA Medical Center. Serve in the role of Chief of Staff in his absence.
J. General responsibility for Laboratory Service management, budget, staffing and personnel activities, quality assurance, establishment of resource needs and coordination with other clinical services.
K. Responsible for Laboratory Service representation in other major committees and hospital activities such as Blood Utilization, Surgical Case Review, Ambulatory Care and Infection Committees, as well as ad hoc review boards and special studies.

REGIONAL AND NATIONAL:

A. Red Cross Medical Advisory Board, Southeastern Michigan Region.
B. Clinical and Programs Advisory Council to Chief Medical Director, VA Central Office. 1987 to present.

V. OTHER RELEVANT ACTIVITIES:

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

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

BERNARD WEISS, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Co-organizer and lecturer, short course on DNA Repair, sponsored by Human Genetics.
Department.
B. Supervised research of postdoctoral fellow, Jie Wu, and medical student, Vernon
Stevenson.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. American Cancer Society, Mutants for DNA Enzymes; MV-205

PROJECTS UNDER STUDY:

A. The consequences of replacing thymine with uracil in DNA.
B. A gene of *Escherichia coli* affecting DNA and pantothenate synthesis.
C. A superoxide response regulation of *Escherichia coli*.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Co-director, Graduate Training Program in Pathology.

REGIONAL AND NATIONAL:

A. Ad hoc grant reviewer, National Science Foundation, Genetics Study Section.
B. Reviewer for the following journals:
   1. Proceedings of the National Academy of Sciences, U.S.A.;
   2. Journal of Bacteriology;
   3. Biochemistry; and
C. Session convener, UCLA Symposium on Mammalian DNA repair.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. UCLA Symposium on Mammalian DNA Repair, Lake Tahoe, Nevada, Invited Speaker.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

SHARON W. WEISS, M.D.
PROFESSOR OF PATHOLOGY
DIRECTOR OF ANATOMIC PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Service - 3 1/2 months
   B. Consultant for Bone and Soft Tissue - 12 months
   C. Secondary Consultant for Breast Pathology - 12 months
   D. Necropsy Service - on call
   E. M-Lab Surgical Pathology Service - as needed

II. TEACHING ACTIVITIES
   A. Sophomore Medical Class
      Pathology 600 - lecture - 1 contact hour
   B. House Officers
      1. Training in Surgical Pathology
      2. Lectures, slide seminar, and journal club - 7 hours
   C. Hospital Conferences
      1. Sarcoma Conference - monthly
   D. Graduate Student
      Responsible for training of Dr. Mark Smith, Imperial Cancer Research Fund, London
      England - 11/89-11/90

III. RESEARCH ACTIVITIES

SPONSORED SUPPORT:
   A. Southwest Oncology Group, SWOG study 9055 ($3,197).

PROJECTS UNDER STUDY:
   A. Immunophenotype of angiomatoid malignant fibrous histiocytoma.
   B. Dedifferentiation in low grade liposarcoma.
   C. Epithelioid malignant Schwannoma.
   D. Angiomatosis.
   E. Prognostic factors in retroperitoneal sarcoma.

IV. SERVICE ACTIVITIES

DEPARTMENTAL:
   A. Director, Division of Anatomic Pathology, Surgical Pathology.
B. Member, Chairman's Advisory Committee.
C. Member, Photography Committee.
D. Member, Program Committee, Residency Training Program.
E. Director, Surgical Pathology Fellowship Program.
F. Member, Tissue and Invasive Procedures Committee.

REGIONAL AND NATIONAL

A. Chairman, WHO Committee for Classification of Soft Tissue Tumors.
B. US-Canadian Academy of Pathology.
   1. Councillor
   2. Benjamin Castleman Award Committee.
C. American Society of Clinical Pathology.
   1. Anatomic Pathology Council
   2. Editor, Check Sample APII
D. Association of Directors of Anatomic Pathology.
   1. Organizing Committee
   2. Program Chairman
E. Chairman, Sarcoma Pathology Subcommittee, Southwest Oncology Group.
F. Editorial Board, American Journal of Surgical Pathology.
G. Editorial Board, American Journal of Dermatopathology.
H. Editorial Board, American Journal of Clinical Pathology.
I. Editorial Board, Seminars Diagnostic Pathology.
J. Editorial Board, Journal of the National Cancer Institute.
K. Editorial Board, AFIP Fascicles (3rd Series).
L. Consultant in Pathology, National Institutes of Health.
M. Member, Michigan Society of Pathologists.
N. Member, Arthur Purdy Stout Society of Surgical Pathologists.

V. INVITED LECTURES

6. 10th Annual Slide Seminar, Florida West Coast Association of Pathologists, Long Boat Key, Florida, June 1990.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


BOOKS AND CHAPTERS IN BOOKS


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

J. REIMER WOLTER, M.D.
PROFESSOR OF OPHTHALMOLOGY
DEPARTMENTS OF OPHTHALMOLOGY AND PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

I. CLINICAL ACTIVITIES:

B. Phasing out of functions in Ophthalmic Pathology Service, Departments of Ophthalmology and Pathology with continuation of examination of complicated lens implants removed surgically from the human eyes.

II. TEACHING ACTIVITIES:

A. Taking part in regular teaching rounds in the Kellogg Eye Center intended for students, residents, fellows, and staff - as well as in the postgraduate programs in Ophthalmology.
B. Orderly completion of my functions of representing Ophthalmic Pathology at this University - locally and at national or international meetings.

III. RESEARCH ACTIVITIES:

A. Experts in both, the Pathology and Ophthalmology Departments, have continuously contributed very valuable support and advice to the research effort in Ophthalmic Pathology.

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.

PROJECTS UNDER STUDY:

A. Reactions of the inner eye to lens implants.
B. Pathology of granulomatous ocular reactions of the inner eye to foreign substances like cotton, cardboard, displaced hair, mechanical oil, or old blood, fungus and bacteria, for example.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Handing on of planning and organization of daily routine, teaching and research in Ophthalmic Pathology in the two Departments to successor in addition to the usual functions of a professor.

MEDICAL SCHOOL/HOSPITAL:

A. Completion of memberships in Medical Student Research Committee and Tissue Committee.
B. Change to Emeritus Member of Medical Staff of University Hospital.

REGIONAL AND NATIONAL:

A. Member, AMA.
B. Member, American Academy of Ophthalmology.
C. Emeritus member, American Ophthalmological Society
D. Member, German Ophthalmological Society.
E. Member, Association for Research in Ophthalmology.
F. Member, Michigan Ophthalmological Society.
G. Member, Detroit Ophthalmology Club.
H. Member, Association of American Ophthalmic Pathologists.
I. Member, Theobald Society of Ophthalmic Pathology.
J. Honorary Member, Association of Pediatric Ophthalmology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

3. Wolter, J.R.: One week of invited lectures on ophthalmic pathology to residents at University of California, San Diego, 2. 16-24, 1990.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

SECTION REPORTS
DIVISION OF ANATOMIC PATHOLOGY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1989 - 30 JUNE 1990

My first year as director of this division has passed swiftly and was marked by a variety of challenges and changes. Our professional staff was expanded with the addition of Dr. Thomas Frank and myself last summer to the surgical pathology service, and we look with anticipation to the arrival of Dr. Anders Sima this summer. His expertise in the area of neuromuscular disease will complement our already strong and active neuropathology service. Dr. Reimer Wolter officially retired this year, but we will continue to avail ourselves of his expertise in ophthalmic pathology in his capacity of Emeritus Professor.

Several administrative and programmatic changes have been effected in order to improve the quality of medical care and our educational programs. The supervision of all of the anatomic pathology laboratories has been consolidated under the capable direction of Lizabeth Binns. The Ophthalmic Pathology service has been fully integrated into our Surgical Pathology service in order to ensure the timely process of specimens as well as to afford our residents training in this subspecialty area. With the advent of Belinda Davis, the new Cytology supervisor, we anticipate an enhancement of the level of training and co-operation among our cytotechnologists. Our surgical pathology fellowship program will open its doors on July 1, 1990 to two of our own residents, Drs. DelBuono and Graham. This fellowship is an important stride to making our residency training program highly competitive. A "Residents' Visiting Professorship" was initiated this year as an opportunity for the housestaff to select a distinguished pathologist of their choice with whom they might interact over a two day period. Dr. Lauren Ackerman graciously accepted our invitation to become our first visiting professor and provided us with his typical blend of erudition and wit. We have striven to involve a greater number of staff at all levels in the autopsy service to emphasize our commitment to this important teaching service. Lastly, a systematic QA/QC program was put in place, thereby culminating the efforts begun by my predecessor, Dr. Gerald Abrams.

Over the next year we look to a completion of our recruitment activities in surgical and cytopathology and to a closer interaction between the Molecular Diagnostic Laboratory and the service and research activities of this division.

On a personal note, I would like to conclude by saying that the past year has been an exhilarating and satisfying experience. I could not have wished for a department abounding in more good will and collegiality. I thank my predecessors Drs. Abrams and Appelman for the wisdom of their counsel, my colleagues for their support, and the residents for their uplifting humor. Finally, I want to acknowledge Dr. Ward for the sense of purpose and excellence with which he has imbued the department.

Sharon W. Weiss, M.D.
Director, Anatomic Pathology
AUTOPSY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The Autopsy Service of the University of Michigan continues to perform autopsies on University of Michigan patients. There has been significant activity on three fronts of the Autopsy Service:

I. Alzheimer's Disease

Public Act 441 of Michigan (1988) has directed the Department of Public Health to study Alzheimer's disease in the State of Michigan. It is anticipated that there will be an increase in the number of "brain only" autopsies performed at The University of Michigan on patients with dementing illnesses. If these patients are former University of Michigan patients, the autopsies are conducted without charge. If, however, the patients belong to the Alzheimer's Disease Related Disorders Association (ADRDA), the brain only autopsy may be performed and the patient's family billed for the procedure. It is difficult to predict the total number of cases this will involved, although the State would like to target for 1,500 autopsies performed yearly on a State-wide basis. The Department of Pathology actively participates in this program, however, we have been careful to delineate our responsibilities, especially in regards adequate reimbursement for our professional services.

II. Medical Examiner Cases

House Bill 4416 is legislation which would allow counties to return bodies to the county of injury for autopsy. This bill, in its present form, has passed the House but there is strong opposition from certain members of the Michigan Association for Medical Examiners (MAME). Currently, this bill is effectively blocked in the Senate Subcommittee and most likely will not be passed into law this year. After negotiations with the University of Michigan and MAME, compromise legislation was written to replace House Bill 4416. This new legislation, if approved, would allow the following:

A. By mutual agreement, the county of death may return the body to the county of injury at any time. Discussions with medical examiners from neighboring counties show strong support for this procedure and hopefully will allow the Service to return bodies to the county of injury.

B. If death occurs within 48 hours of the injury, the body may be sent back to the county of injury or may be autopsied in the county where the death occurred. If the autopsy is performed in the county of death, the county of injury MUST pay for the cost of the autopsy.

The Executive Committee of MAME has endorsed this policy, and it is anticipated that if this new legislation is re-introduced this Fall, it will easily pass both the House and Senate and become law. This law would allow us to send the bodies back to the county of injury, or submit a reasonable bill to the county of injury which must then pay.

III. Improved Turn-Around Time
The turn-around time for completion of autopsy cases continues to be unacceptably slow. There are a number of factors which account for this, two primary reasons being slow return on neuropathology slides and slow return on typed protocols. To correct these deficiencies, the following procedures will be initiated:

A. Assistance in typing of autopsy protocols. Workloads have been re-adjusted within the Department, such that there will be additional assistance available for typing of protocols. This support will be provided by an experienced transcriptionist (Ms. Peggy Otto).

B. Weekly monitoring of turn-around time. Every Tuesday morning, the turn-around time for both histology and neuropathology slides will be evaluated. A list of all cases where histology is older than two weeks, or neuropathology older then three weeks, will be prepared.

**AUTOPSY STATISTICS**

1989/90

<table>
<thead>
<tr>
<th></th>
<th>1989/90</th>
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<tbody>
<tr>
<td>Total U of M Autopsies</td>
<td>389</td>
</tr>
<tr>
<td>M-Labs Cases</td>
<td>11</td>
</tr>
<tr>
<td>Medical Examiner Cases</td>
<td>39</td>
</tr>
<tr>
<td>In-Hospital Deaths</td>
<td>17</td>
</tr>
<tr>
<td>Outside Cases</td>
<td>22</td>
</tr>
<tr>
<td>Percent of U of M Deaths Autopsied (includes Tetralogy Cases)</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th></th>
<th>85/86</th>
<th>86/87</th>
<th>87/88</th>
<th>88/89</th>
<th>89/90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Autopsies</td>
<td>394</td>
<td>381</td>
<td>385</td>
<td>383</td>
<td>389</td>
</tr>
<tr>
<td>Autopsy Rate, U of M</td>
<td>38%</td>
<td>36%</td>
<td>35%</td>
<td>40%</td>
<td>38%</td>
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<tr>
<td>Medical Examiner Cases</td>
<td>70</td>
<td>62</td>
<td>35</td>
<td>49</td>
<td>39</td>
</tr>
<tr>
<td>Number of Attending Staff</td>
<td>16</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>19</td>
</tr>
</tbody>
</table>
As predicted one year ago, the workload in the cytopathology laboratory has increased dramatically during the last twelve months due to the influx of gynecologic cytology specimens from M-Labs. We are now dealing with approximately 40,000 gynecologic cytology specimens per year, twice as many as we dealt with two years ago. The number of non-gynecologic specimens, 7,188, decreased slightly, probably due to the nursing strike in July, 1989. With the streamlining of laboratory operations, we have generally managed to keep up with the increased workload, but it has deprived the cytotechnologists of all activities apart from routine screening.

We live in an era of extreme shortage of cytotechnologists and have experienced a complete turnover of our cytotechnologist staff during the past six months. As a result, we have been forced to send gynecologic cytology specimens to other laboratories for staining, examination and reporting. Not all of the cytotechnologists have been replaced, and competition to obtain any available cytotechnologists is severe.

As in surgical pathology, we are experiencing an increased number of cases that are complex and which require more than just the routine examination. Most of the patients requiring this additional attention are immunosuppressed, and the specimens from these patients bring their own particular type of problems, especially the need to identify opportunistic microorganisms and to type complicating neoplasms.

With the impending retirement of Dr. Schmidt, we have been fortunate to be able to recruit Dr. Suzanne M. Selvaggi of Wayne State University.

Bernard Naylor, M.D.
Director
Cytopathology Laboratory
DERMATOPATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The Dermatopathology Service receives case material from four different sources: (1) UMMC (ID) cases; (2) outside contractual (MD) cases; (3) personal consultations (HE) cases and; (4) cases from outside sources reviewed for patients referred to UMMC for additional care and management, (TD) cases. During 1989-1990, the total number of cases received for personal consultations declined slightly, while there was a 10% increase in total volume to 6433 cases.

Correlative activities included regular participation in Melanoma Clinics, and Cutaneous Lymphoma Conferences.

Teaching included scheduled presentations to medical and dental students, Dermatopathology conferences and seminars as well as Dermatopathology tutorials.

1990-1991 promises to continue to show an increase in cases for diagnoses with the recruitment of two new dermatologic surgeons.

John T. Headington, M.D.

Brian J. Nickoloff, M.D., Ph.D.
ELECTRON MICROSCOPY SERVICE
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The electron microscopy laboratory continues to provide an important service function for both the clinical and research programs in the Department of Pathology as well as the Medical Center as a whole. During this past year, 391 clinical biopsy specimens were processed by the electron microscopy service. Of this total, 122 were renal biopsies. Many of these renal biopsies are submitted by outside hospitals continuing a long standing tradition of service to these institutions. The remaining clinical specimens submitted include tumors of varying types as well as sural nerve biopsies to assess for peripheral neuropathies. Tumor ultrastructure provides an important tool for the diagnosis of many types of tumors when used in conjunction with light microscopy and immunoperoxidase.

The research use of the laboratory continues to expand dramatically. Most of this material comes from the Department of Pathology but virtually every department of the Medical School utilizes the core laboratory. Over 800 specimens were submitted to the laboratory from research projects. Most of these specimens did not require complete EM processing but rather were processed to the level of thick sections and used for histology and morphometric analysis. However, 73 research specimens were completely processed to the level of ultrastructure. Many of the research specimens were not only processed but were also assessed morphometrically which requires large numbers of sections but does allow for precise quantitation of histologic abnormalities. Immuno-electron microscopy is now being offered as a service to the research community and this, in conjunction with in-situ hybridization, studies should allow for precise localization of proteins in tissues.

In summary, the electron microscopy service continues to provide an important clinical and research function for the Department and the Medical Center. It is anticipated that demand for services from this core facility will continue to increase in the future particularly in the area of research.

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

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The Laboratory of Neuropathology continues to have three interrelated functions: Laboratory diagnostic service, teaching and research. Dr. Samuel P. Hicks was on Active Emeritus status. Constance J. D'Amato, B.S., Assistant Professor and Mila Blaivas, M.D., Ph.D., Clinical Assistant Professor, spent 60% of their time on the Neuropathology Service. Full time faculty was Paul E. McKeever, M.D., Ph.D., Associate Professor.

CLINICAL ACTIVITIES:

The following examinations were completed with the cooperation of our excellent neurohistology, electron microscopic, general histology, immunohistology, and secretarial staff.

1. There were 543 neurosurgical cases examined this year from Main, Mott and outside hospitals in consultation. 54 cases (a 20% increase over the previous year) were referrals from other institutions, a portion of which were part of the NIH funded study of BUDR radio-sensitization of gliomas CA33768. Ninety surgical specimens required special neurohistologic procedures.

2. There were 298 brains examined out of 372 autopsies which is 80% of all autopsies at this Medical Center. 32 were from other institutions and hospitals. Drs. Blaivas and McKeever, in collaboration with Ms. D'Amato interpreted macroscopic neuropathology at the University Hospital. While all neuropathology faculty have participated, Dr. Hicks and Ms. D'Amato collaborated to prepare macroscopic and microscopic descriptions of most UM autopsy brains, and other brains referred for consultation. These are given to the house officer prosectors to compare with their findings, and to facilitate completion of the autopsy reports; in consultation they become the report.

3. There were 145 muscle biopsies (a 9% increase), nearly all with histochemistry, some with electron microscopy. There were 60 peripheral nerve biopsies. Teased fiber preparations and electron microscopy were performed on appropriate nerve biopsies. 79 cases were referrals from other institutions. Dr. Mila Blaivas 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. Drs. Blaivas and McKeever examined, interpreted and reported 134 cases in semithin section and electron micrographs of 85 cases. The majority were nerve, ceroid and neurosurgical biopsy cases.

5. The ceroid service, buffy coat division, reported 9 cases.

6. The Brain Tumor Board of the University of Michigan Cancer Center and Hospitals reviewed neuropathology and clinical aspects of more than 100 difficult neurooncology cases.

TEACHING ACTIVITIES:

1. Medical Students: This year the faculty taught the regular Neuropathology sequence to our medical students (13 hours) in the Neural and Behavioral Sciences (NBS) 600
curriculum. NBS Neuropathology consists of lectures, handouts, and posters for all second year medical students. In addition to being Director of the NBS Program for 40% of her time, Ms. D'Amato conducted 12 hours of brain cutting sessions for small groups of the second year students. She also again received "The Excellence in Teaching Award" from the 2nd year medical student class.

2. House Officers, Graduate students, Postgraduate and other students and faculty: These include a conference every other month where neuropathology is reviewed; twice monthly Continuing Medical Education (CME) accredited conferences where all biopsies are presented and interpreted; a conference where abnormal brains are examined with all clinicians invited weekly; three types of nerve and muscle biopsy conferences (one weekly, one twice a month and one monthly accredited for CME); individual instruction on autopsies and biopsy material; Neuropathology 858, an 18 hour laboratory-lecture course; and bimonthly conferences with Neuroradiology and Pediatric Neurology.

3. Electives: Dr. Lynne Abruzzo and two Neurology House Officers chose elective rotations on the Neuropathology Service.

4. Dr. James S. Nelson, Head of Neuropathology at Henry Ford Hospital, was appointed Clinical Professor I in the Department of Pathology. Dr. Nelson contributed to neuropathology teaching including Neuropathology 858.

RESEARCH ACTIVITIES:

1. Dr. Hicks' and Ms. D'Amato's research has centered principally on the development of the nervous system in mammals, mechanisms of malformation and recovery from injury caused by radiation, mutant genes or other agents. They also provide neuropathologic support for a biochemical study of Alzheimer's and other dementias conducted by Anne B. Young and John B. Penney, Department of Neurology.

2. Dr. Blaivas and associates continue to investigate ocular muscle (normal and pathology), peripheral nerve grafting and mitochondrial disorders.

3. Dr. McKeever and associates are 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. They are measuring DNA content and BUdR labeling indices in tumor specimens in vivo and in vitro.

4. The Tumor Immunology, Extracellular Matrix and Neurooncology Groups of the University of Michigan Cancer Center faculty and staff with clinical research interests in brain tumors, met and generated a number of project considerations from Pathology, Neurosurgery, Nuclear Medicine, Neuropathology, Neurology and Neuroradiology collaborations.

5. Collaboration with Neurology, and Epidemiology Departments, Eastern Michigan University, the State of Michigan Department of Public Health, the Alzheimer's Disease and Related Disorders Association and Henry Ford Hospital proposes to establish a registry for dementias and Alzheimer's disease.

Paul E. McKeever, M.D., Ph.D.
Director
Neuropathology Service
PEDiatric PATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1989 - 30 JUNE 1990

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:

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/W/H Unit Deaths (20 weeks gestation or any liveborn, to 18 years)</td>
<td>194</td>
</tr>
<tr>
<td>Necropsies on Above</td>
<td>117</td>
</tr>
<tr>
<td>Necropsy Percentage</td>
<td>60%</td>
</tr>
</tbody>
</table>

Of the 117 posts, 48 patients' bodies were released to Anatomy for study and disposal. These posts were performed by Mason Barr, Jr., M.D. Sixty-nine patients were posted by the residents and senior staff in Pathology, primarily Dr. Heidelberger. Necropsies categorized in the general hospital statistics as "Medical Legal" posts included six additional posts on pediatric patients including SIDS cases and emergency room trauma cases.

A total of 426 necropsies for UMMC Hospitals patients was performed (including the six pediatric "Medical Legals"): 48 by Dr. Barr in the Teratology Unit and 378 by the Pathology Department Staff. Thus, 28% of the total posts at the UMMC were pediatric posts.

It should be noted that as a regional center, with a wide range of subspecialities, the total number of cases performed in the Teratology Unit was 171 - including both all referred fetuses and infants and inborn fetal losses at least than 20 weeks gestational age.

The total number of pediatric surgical specimens (including placentas) examined is almost 2300. This represents an increase of 9.5% from the previous academic year, in spite of the lengthy nurses' strike in Summer - Fall, 1989.

Kathleen P. Heidelberger, M.D.
Director
Pediatric Pathology Service
SURGICAL PATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1989 - 30 JUNE 1990

The surgical pathology service continues to be one of the most active services within the clinical laboratory system. Despite the nursing strike in July of 1989, the annual work volume of this service increased slightly over that of the previous fiscal year. The nearly 4000 cases referred to the staff for expert consultation, an increase of 29% over the previous year, brought the total annual accessions to 27,000. We continue to witness a growing complexity of our case material, as reflected in the fact that 5-10% of cases require additional studies and a supplementary report. The increasing activities of our clinical transplant teams have been reflected in a need for more immediate diagnoses and 24-hour availability of our surgical pathologists for interpretation of these biopsies.

For the moment these growing demands have been met by the recruitment of two surgical pathologists this past year and within the next year a third. The institution of a "surgical pathology fellowship" experience for selected senior residents offers the staff additional support while at the same time providing an in-depth experience to our house officers in the handling of all types of diagnostic material. Under appropriate supervision surgical pathology fellows handle all frozen sections and diagnostic biopsies and have sufficient elective time to pursue research activities.

Over the next year we anticipate a close and enhanced working relationship with the Flow Cytometry and Molecular Diagnostic Laboratory with the expectation this will result in a more sophisticated evaluation of certain cases with the generation of an integrated report. Finally, we are making a concerted effort to update our capital equipment in the histopathology laboratory.

Sharon W. Weiss, M.D.
Chief, Surgical Pathology
Clinical laboratory personnel were extremely busy in the past year with increased volume, in addition to consolidation of laboratories and new initiatives in the areas of quality assurance and cost effective management. Additionally, the M-Labs program continued to develop. Specific laboratory activities can be found on the following pages, yet certain activities of the clinical laboratories are worthy of special mention.

In the face of ever-increasing laboratory volume, the clinical laboratory staff met the challenge of further consolidation of special limited function laboratories, including the consolidation of the Gyn/Endocrine Laboratory. Laboratory personnel have demonstrated a profound commitment to high quality laboratory medicine in their approach to the consolidation and the numerous issues that have to be addressed in a smooth transition.

In the process of the consolidation, a College of American Pathologists (CAP) inspection was carried out. The inspection was passed with only a few minor deficiencies. In addition, the Clinical Toxicology Laboratory is now a CAP certified forensic drug testing lab.

The Quality Assurance Committee, made up of members of the laboratory staff and chaired for Dr. McClatchey by Suzanne Butch, Chief Technologist for the Blood Bank, has demonstrated a visionary approach to quality assurance in the clinical laboratories. The quality assurance program that the laboratory professionals now have in place is exemplary, with both intralaboratory and interlaboratory indicators established.

The M-Labs program in the clinical laboratories is continuing to grow and mature, becoming part of the daily routine. It is important to note that the M-Labs program is constantly monitored by the M-Labs Technical Group, which is made up of laboratory personnel, insuring the quality performance of the M-Labs program. One of the many positive outcomes of the M-Labs programs has been a stronger commitment by laboratory professionals to a high quality, extremely efficient, cost effective laboratory system. The continual monitoring of our M-Labs program, and ultimately, our laboratory program in general, has led to changes in our system that have produced a high quality product, not only for M-Labs clients but University Hospitals in general.

Kenneth D. McClatchey, M.D., D.D.S.
Director, Clinical Pathology Division
UNIVERSITY HOSPITALS BLOOD BANK AND TRANSFUSION SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1989 - 30 JUNE 1990

PATIENT CARE:

Blood utilization in University Hospitals continued to increase, although there was some evidence of reduced utilization during the last half of the fiscal year. The increased utilization related primarily to workload in cardiac surgery and in liver transplantation. In an effort to reduce blood utilization, a number of educational programs were provided to those clinical services which transfuse blood. In addition, the appropriateness of Red Blood Cell transfusion was audited between January and June, 1990, by requesting justification of seemingly inappropriate transfusions from the patient’s attending physician. During the coming year these efforts will be intensified, and will focus on those clinical services which transfuse the largest proportion of blood.

The laboratory's Transfusion and Apheresis Service was extremely active, and continued its program of harvesting autologous peripheral blood stem cells for subsequent bone marrow transplantation. Whereas the previous collection method required 8-10 apheresis procedures on each prospective bone marrow recipient, a procedural modification implemented during the past year provided for collection of the same number of cells in 5-7 collections. While this had a positive effect on utilization of the laboratory, it required overtime effort on the part of the nurses.

Testing for anti-hepatitis C virus was implemented in May, 1990. The entire inventory was converted to a "tested" one within one week. During the months leading up to implementation of this test, surgeons were counseled to postpone elective operations which might require transfusion, or, at the very least counsel their patients accordingly.

TEACHING ACTIVITIES:

For the first time, the Fellowship position in Blood Banking/Transfusion Medicine was filled, Dr. Robertson Davenport completed his training program on June 30, and will join the faculty as Assistant Professor. His presence will permit expansion of both clinical consultative and instructional activities. In addition, the Fellowship Program received accreditation, following inspection by the Licensing Committee on Graduate Medical Education.

Members of the laboratory were involved in a number of teaching activities. The 17th annual postgraduate Course, "Current Topics in Blood Banking" was held on June 4-6, 1990, with over 320 attendees. This was the largest postgraduate course presented in the Towsley Center during the past year. Mr. John Judd and Ms. Dianna McCoy-Pardingting were program directors, assisted by Ms. Suzanne Butch and Dr. Oberman.

Training for Pathology House Officers was enhanced by the implementation of a daily "morning report" conference. This allowed review of all current patient-related problems, as well as discussion of a variety of topics which might not otherwise have been covered in the program.

Members of the laboratory provided a large number of local, regional, and national lectures and courses. These are reflected in the annual reports of faculty (Dr. Oberman, Ms. Barnes, Mr. Judd). In addition, Suzanne Butch, Chief Technologist of the Blood Bank and Transfusion service provided lectures to the National Institutes of Health Blood Bank Symposium; Northwest Medical Laboratory
Symposium in Portland, Oregon; American Association of Blood Banks (AABB) Annual Meeting in New Orleans, Louisiana; Virginia Society for Medical technology in Williamsburg, Virginia; and the Colorado Association for Continuing Medical Laboratory Education in Denver. In addition, She was a participant in the AABB Conference on Compliance with Federal Regulations and Inspections as well as providing a Workshop and two lectures for programs at the Towsley Center.

Ms. Smitka and Mr Meade provide bi-weekly orientation lectures on Blood Product Administration, and bi-monthly lectures on Adverse Reactions to Transfusion to the Nursing Services. In addition, Mr. Meade and Ms. McIvor presented a paper, "Quality Assurance in Automated Hemapheresis" to the Annual Meeting of the American Society for Apheresis in San Francisco in March, 1990. Mr Meade also presented a Workshop on Quality Assurance in the Blood Bank during the postgraduate course, "Current Topics in Blood Banking".

Ann Steiner presented Invited Lectures at the Annual Meeting of the AABB on Percutaneous Umbilical Blood Sampling. She also lectured to the Indiana Association of Blood Banks, the Michigan Association of Blood Banks, and was responsible for a Research in Progress session at the Annual Meeting of the AABB. Finally, she provided a lecture during the postgraduate Course, "Current Topics in Blood Banking".

Margaret Stowe provided a Workshop on "Problem-solving in the Blood Bank" at the Towsley Center postgraduate Course. Deborah Williams chaired the Membership Committee of the Michigan Association of Blood Banks.

PROFESSIONAL ACTIVITIES:

Suzanne Butch, Chief Technologists of the Blood Bank, is a member of the Committee on Standards of the AABB, participates as an inspector for the AABB, serves on the Educational Committee of the Michigan Association of Blood Banks and is on the Examination Council of the National Certification Agency for Clinical Laboratory Science. Finally, she reviews manuscripts for the Journal, TRANSFUSION, and co-edits the Journal, "Clinical Laboratory Science".

Dr. Oberman is Associate Editor of TRANSFUSION, the most prestigious Journal in the field, and as Chairman of the Committee on Awards of the AABB. Mr Judd serves on the Board of Directors of the AABB and was Associate Editor of the Technical Manual of the AABB.

Dianna McCoy-Pardington, Ann Steiner, and Margaret Stoe are inspectors for the AABB, and Ms. McCoy-Pardington is a member of the Workshop Committee of the Michigan Association of Blood Banks.

RESEARCH ACTIVITIES:

Faculty and staff of the Blood Bank and Transfusion Service published original papers on extracorporeal membrane oxygenation, percutaneous umbilical blood sampling, prenatal and perinatal immunohematology and transfusion, directed and limited-exposure blood donation and blood component therapy for neonatal patients. In addition, a paper on pretransfusional testing was presented at the Annual Meeting of the AABB in New Orleans, LA. Dr. Davenport began an investigational program related to the pathogenesis of the febrile response in hemolytic transfusion reactions.

Harold A. Oberman, M.D.
Director, Blood Bank
SECTION OVERVIEW:

During the past year, the Clinical Biochemistry Section experienced increases in laboratory test volumes, the acquisition of major instrumentation, and a change in the actual structure of the laboratory group itself. During the fall of 1989, the Clinical Immunology Laboratory was officially removed from the formal structure of the Division. Nonetheless, Dr. Warren continues to participate in the weekly Director's Meeting and provides valuable input into problem solving strategies. This loss of the Clinical Immunology Laboratory was partly offset by the new addition of the Gynecologic Endocrine Laboratory into the section.

Despite the potential impact of the nurses' strike in 1989, the overall volume of testing performed in the laboratories continued to increase over the last 12 months. The minimal impact of the strike can be attributed to the high volume of outpatient testing, as well as the volume of M-Labs activity performed within the Clinical Biochemistry Section. This group of laboratories continues to be a major contributor to the success of the M-Labs program.

Although detailed further in the individual laboratory reports, several accomplishments deserve special notation. First, the Chemical Pathology Laboratory acquired and integrated five Kodak Ektachem analyzers during the last year. This arduous task could not have been successfully accomplished without the efforts of the supervisory and technical staff of Chemical Pathology. Second, the Gynecologic Endocrine Laboratory has been successfully folded into the section. The staff of this laboratory have devoted special effort to satisfying CAP accreditation standards and were inspected during the last midcycle internal inspection. Third, the Ligand Laboratory has continued to expand its technology to include more automated, non-isotopic immunoassay analyzers. Fourth, the Drug Analysis and Toxicology Laboratory has successfully been recertified by the CAP Forensic Drug Testing Program. The staff of this laboratory deserve special credit for achieving and maintaining this difficult certification.

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

The last year saw dramatic changes in the organization and operation of the Chemistry Laboratory. In August 1989, the laboratory began performing the majority of its high volume tests on Kodak Ektachem 700 analyzers. This allowed for considerable consolidation of work areas and enhanced the lab's capabilities of providing rapid turnaround times for lab testing 24 hours a day. During the past year, the lab experienced an approximate 5% increase in the number of tests performed, to slightly over 2.7 million tests. The efficiencies afforded by the changes described above allowed the Chemistry lab to absorb this increase in testing and still manage to decrease its overall operating budget from the previous year.

During the past year, the Chemistry Lab implemented off-shift and week-end STAT serum beta-HCG testing to supplement the services of the Gyn-Endocrine Lab. In addition, the lab staff have completed the development and evaluation of two soon to be offered new tests, Urine Homovanillic acid (HVA), and Lipoprotein (a).
Alternate site testing was an area of greatly increased activity for the Chemistry Lab. The lab remained very active in cholesterol screening programs, supplying instrumentation and technologists for an increasing number of health fairs and mass screenings. These were performed in conjunction with the U of M MedSport Clinic and the M-Care sites. The lab has also evaluated glucose meters for bedside testing and submitted a proposal for the establishment of a quality assurance program for all bedside glucose testing done within University Hospitals. Finally, the lab evaluated three whole blood analyzers for combined blood gas and electrolyte testing. Recommendations were made for the placement of such an analyzer in Mott and Holden ICUs, and for the acquisition of a third analyzer by the Chemistry Lab to supplement the lab functions located in the operating room suites of Main and Mott Hospitals.

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

During the last year, the volume of testing performed in the laboratory increased slightly greater than 9%. Although this increase was smaller than prior years, the volume of the labor intensive speciality and reference testing has increased substantially. The volume of aluminum assays using graphite furnace increased, special cardiac drugs up 32%, drug screens up over 8%, and the volume of cyclosporine assays increased 28%. Cyclosporine analyses, which are vital to the success of the medical center organ transplant program, now total in excess of 16,000 assays per year.

The laboratory underwent a rigorous inspection and was recertified by the College of American Pathologists for its forensic drug testing program. Very few laboratories have successfully passed initial certification, with even fewer recertified, which places the Drug Analysis and Toxicology Laboratory in a very select group of laboratories.

As part of the quality assurance projects undertaken during the last year, the laboratory has revised personnel scheduling times to provide better coverage throughout the entire day. Part of this improvement has included opening the laboratory one hour earlier.

The laboratory was well represented at both the local and national levels. The staff were actively involved in the training of House Officers and also training students from the laboratory science training program coordinated between Eastern Michigan University and the University of Michigan. The research and development efforts of the staff resulted in several abstracts and presentations at a regional scientific symposium, as well as a manuscript that has been accepted for publication in a peer reviewed international journal. The laboratory has been involved in collaborative research with the Departments of Surgery, Dermatology, and Pharmacology, in addition to research projects for two outside corporations. Dr. Patel has also been active locally through presentations at schools about drugs and drug testing. Both Drs. Annesley and Patel have been actively involved in the NCAA Drug Testing Program.

**GYNECOLOGIC ENDOCRINE LABORATORY** - K.M.J. Menon, Ph.D., Laboratory Director

In 1989 - 90, the Gynecologic Endocrine Laboratory experienced a 12.2% increase in activity compared to the same period in the previous year. The services of the laboratory continue to support the special needs for treatment of infertility/pregnancy related disorders and the in vitro fertilization program of the University Hospital. In October 1989, the laboratory formally became a unit of the Department of Pathology. Duplication of the three laboratory tests which were also offered by the Ligand Laboratory was eliminated. Serum estradiol and progesterone determinations were transferred to the Gyn/Endocrine Laboratory and dehydroepiandrosterone sulfate assay was transferred to the Ligand Laboratory. This resulted in improved efficiency and reduction in the overall cost of running these procedures. Serum b subunit HCG assay has been converted to a non-isotopic assay.
The laboratory provides training opportunities for pathology residents in the area of Gynecologic Endocrinology and attempts to familiarize them with the special tests needed for the treatment of infertility/pregnancy related disorders.

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

The number of specimens processed in Ligand during the past year increased approximately 17% over the previous year's volume to a new high of 150,000 samples. This increase represents the initiation of ACTH and serum aldosterone as "in-house" assays, the consolidation of DHEA sulfate specimens into Ligand and the transfer of estradiol and progesterone to the OB-GYN laboratory and in addition, reflects an increased utilization of the previously existing Ligand test repertoire.

Efforts to convert radioimmunoassay procedures to the more efficient non-isotopic immunoassay methods continued throughout the past year with the conversion of ferritin, free T₄ and T₃ from the radioimmunoassay technique to the chemiluminescence (CLIA) method of CIBA-Corning. Evaluation for the conversion of the T₃ uptake from a radioisotopic methodology to that of CLIA is continuing. The laboratory also obtained a fluorescence analyzer from Abbott Laboratories that is capable of analyzing large and small molecules. This represents an advance over the TD₅₅ based methods that are suitable only for use with small molecules. During the past fiscal year, evaluations were completed for the inclusion of LH, FSH, B₁₂-microglobulin, IgE and B-hCG on the Abbott IMX early in fiscal year 1990-91. These changes bring to a total of 13 radioimmunoassay methods that have been converted to fluorescence polarization or chemiluminescence methods, with the imminent addition of 5 more within the next month. The non-radioisotopic assay procedures have decreased assay turnaround time and reduced the technical time required to complete the assay procedures.

Work is continuing on the migration of the laboratory data analysis system from the Digital Electronics Corporation PDP 11/44 to a Macintosh II computer based data analysis, storage and retrieval system. This project is scheduled for completion during the 1990-91 fiscal year.

Thomas M. Annesley, Ph.D.
Interim Director
Clinical Biochemistry Laboratory
Kenneth D. McClatchey, M.D., D.D.S.
Director
Clinical Pathology Division
CLINICAL CYTOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
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ORGANIZATION:

The Department of Pathology assumed administration of the clinical cytogenetics laboratory one year ago. During this period, we have seen a number of changes.

The laboratory made two moves during the past year. First, the entire laboratory moved from Mott Hospital to the second floor of Med Sci II. This space was inadequate from the beginning. This additional space was made available in the Pathology portion of MSI. About one-half of the service was moved to this space last month. While having the lab split is inconvenient and not the most efficient way for me to keep on top of things, the new space is very much welcomed by all of us. Overcrowding is, for the first time perhaps in the history of the lab, not presently an issue. Once the lab is completely staffed with new technologists, this new space will, however, be filled.

STAFFING:

The cytogenetics laboratory has been severely hurt by chronic understaffing. Not only was keeping up with routine specimens difficult but the lab could not properly keep on top of new demands and new technologies. As a result, the lab was not able to keep up with expectations for decreased turn around time (base don national trends) and meet the demands of a large increase in the complexity of tests.

I am now pleased to say that new staff has and will be added to the lab. Dr. Susan Sheldon joined us as Assistant Director. Her experience in the area of cytogenetics of hematological disorders will be a boon to the lab. In addition, we have recently been given the "OK" to hire two new cytogenetic technologists and a full time lab aid. This will bring our total number to techs to 8 with one supervisor (1/2 at scope). This will bring our staffing level to a point where each tech is expected to perform less than 200 analyses per year based on our current load of 1600 specimens per year. This is (finally) where we should be to meet current demands. The national expectation from labs like ours (full service and in an academic setting with training demands, etc.) is 175-200 samples per tech per year.

OTHER:

Our shift to Pathnet computer system has begun. This will make sign-outs and reporting faster and more efficient. I am, so far, very impressed with the system.

Thomas W. Glover, Ph.D.
Acting Director,
Clinical Cytogenetics Laboratory
The Clinical Flow Cytometry Laboratory has enjoyed a stable year without the major changes that have characterized the recent past. The Laboratory has continued its active role in Diagnostic Clinical Pathology. A total of 1,500 specimens were handled by the laboratory during the past twelve months, which is an increase of 25% over the previous year. Approximately 600 specimens were processed for cell surface markers or cellular DNA content studies. Approximately 50% of these latter specimens were evaluated for hematologic disorders while the remainder of the specimens were for the evaluation of transplant patients or individuals with primary or acquired immune deficiencies. A sizeable proportion of the latter group is in the area of cellular monitoring of transplant patients receiving OKT3 monoclonal antibody therapy. Approximately 600 specimens were studied for platelet-associated immunoglobulins and neutrophil-specific antibodies. Each specimen requires from 10-30 individual staining, quantitation and analytic procedures. Quality control and calibration procedures further add to the specimen load. Thus, the laboratory staff conducted approximately 28,000 individual marker studies in Fiscal Year 88/89. The laboratory continues to provide 12-24 hour turnaround studies on acute leukemia and selected transplant patients. Overall, patient revenue continues to climb and the significant reduction in commodity expenses seen last year has continued through this year as well. This again has led to a gross margin that is 300% better than the gross margin expected by budget.

The Flow Cytometry Laboratory has undergone a major change in how many of the specimens are processed. All primary and acquired immunodeficiencies along with the immune monitoring of post-transplantation patients are now evaluated by direct, 2-color immunofluorescent analysis. In addition, a flow cytometric accessory from Coulter Corporation (Q-prep) has substantially reduced the processing time required for immunofluorescent analysis. Together, these two steps have enhanced our efficiency as a laboratory and decreased the turnaround time for results. In addition, these method changes have allowed us to evaluate lymphopenic patients who could not be consistently analyzed by previous preparation methods.

The Flow Cytometry Laboratory also underwent a major change in its quality control and quality assurance programs. The entire procedure manual was rewritten and a more exhaustive quality control program instituted. This was done in preparation for the recent CAP inspection, which the laboratory passed with deserved accolades. These changes have enabled the laboratory to become a truly "clinical" pathology laboratory.

The molecular diagnostic aspect of the laboratory has been implemented with the use of technologists currently in the laboratory. We have successfully implemented immunoglobulin and T-cell receptor gene rearrangement studies with over 300 assays evaluated during the previous year. Detection of bcr gene rearrangements in chronic myeloproliferative disorders and acute leukemia is also being analyzed in the laboratory. The use of restriction fragment length polymorphisms (RFLP) studies to evaluate allogenic post-bone marrow transplantation patients for evidence of either engraftment of normal marrow or recurrence of disease will be implemented as soon as the allogenic bone marrow transplant program begins here at the University.

New developments in the flow cytometry area in the upcoming year will include further implementation of direct and two-color staining with monoclonal antibodies. Reticulocyte analysis by flow cytometry will also be evaluated as a means of providing the laboratory with a routine, clinical assay. Future developments in the molecular diagnostic area will depend on the clinical demand for the studies and the technical skills that are required. The polymerase chain reaction (PCR) is being
evaluated as a possible technique that may enhance the implementation of DNA studies into the clinical laboratory. Also, a semi-automated DNA instrument is being evaluated that may aid in these assays becoming a more routine procedure. A limited number of biotinylated probes are being used on a trial basis to assess the possibility of moving away from $^{32}$P radioactive probes. Investigative work will continue in the area of hematologic and genotypic markers in acute and chronic leukemias and malignant lymphoma, as well as studying the role of adhesion molecules and homing receptors in various benign and malignant hematopoietic diseases.

Curtis A. Hanson, M.D.
Lloyd M. Stoolman, M.D.

Directors
Clinical Flow Cytometry Laboratory
CLINICAL HEMATOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

LABORATORY ACTIVITIES:

A. There was an overall increase in the total number of tests from 427,000 in 1987-1988 to 463,000 in 1988-1989 and to 475,000 in 1989-1990.

B. The increase in labor-intensive tests is as follows: a) a 5% increase in differential white blood cell counts; b) reticulocyte counts rose by 8 per cent; c) the number of microscopic fluid examinations and abnormal peripheral blood smears requiring review by the hematopathologist rose by 30 per cent despite the fact that the criteria for reviewing fluids were not as stringent as in previous years.

C. New instrument: Two Coulter STKS instruments were installed. These latest state-of-the-art hematology counters employ the VCS technology for automated differential counts. Preliminary studies indicate that at minimum 40% of the differentials currently performed manually will be successfully analyzed by the STKS. This should lead to better utilization of technologists' time and higher efficiency within the laboratory.

D. New instrument: A Rapimat urinalysis instrument was also integrated into the laboratory this year. The Rapimat is a semi-automated urine dipstick reader that has eliminated virtually all manual dipstick evaluations previously performed. This has led to increased efficiency within the urinalysis station in the laboratory and higher reproducibility of results.

E. Daily bone marrow signout.

F. Daily signout of in-house and UM clients' cases, abnormal blood smears and body and joint fluids takes place 7 days per week.

G. A quality assurance program has been implemented in the area of bone marrow cytochemical stains for leukemia and other labor-intensive "specialty" tests within the laboratory. The House Officer assigned to the Hematology Service reviews all cytochemistry requests as well as requests for all other special tests to determine the appropriateness of the test. This has led to a substantial decrease in the number of special tests and cytochemical stains performed, resulting in improved utilization of resources.

TEACHING ACTIVITIES:

A. Pathology House Officers participated in the following activities:
   1. Daily review of abnormal blood smears, body fluids, joint fluids for crystals, bone marrow aspirates and bone marrow biopsies.
   2. Daily review of in-house and transfer consultation cases in hematopathology (lymph node biopsies, bone marrow biopsies, aspirates, splenectomy specimens, etc.).
   3. Daily review of outside consultation cases of Drs. Schnizer and Hanson.
   4. Correlation of morphology with special studies (cytochemistry, flow cytometry, immunoperoxidase and occasionally electron microscopy).
   5. Daily review of abnormal blood smears from M-Lab clients.
   6. A formal teaching conference for House Officers has been implemented.
   7. Review of SWOG cases.
   8. Weekly Interdepartmental Lymphoma Conference.
   10. Pediatric Hematology/Oncology Fellows participate in signouts.

B. Hematopathology Fellowship Program
FY 89/90 GOALS:

A. Continuation of Fellowship program in Hematopathology as of July 1, 1989.
B. Begin to monitor test utilization within the laboratory as a quality assurance function.

Bertram Schnitzer, M.D.

Curtis A. Hanson, M.D.

Directors
Clinical Hematology Laboratory
CLINICAL MICROBIOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

CLINICAL ACTIVITIES:

The specimen volume increased 11.4% compared to last year's volume; we currently process over 12,000 specimens/month. M-Labs specimen volume increased 19.8% and accounted for 8.5% of the total laboratory volume.

New tests implemented by the laboratory were: Clostridium difficile culture and toxin assay, Sputum Quality Gram stain procedure, Leptospira culture, E. coli K1 antigen test for neonates and Antimicrobial Synergy testing.

Under the direction of Patricia Shalis, numerous microbiology software changes were made to the Cerner program to enhance specimen handling and reporting. She also participated in 13 site visits by laboratory personnel interested in our system.

Laboratory quality and safety issues continued to receive attention as exemplified by the implementation of new quality assurance programs and the introduction of "Q-Probe" sponsored by the College of American Pathologists (CAP). The laboratory successfully completed a CAP inspection this spring. A "Body Substance Precaution" procedure was instituted in compliance with federal guidelines to enhance employee safety while handling potentially infectious material.

DEVELOPMENTAL ACTIVITIES:

Commercially prepared DNA probe kits were valuated for:
- the direct detection of Mycobacterium spp. in sputum
- the combined detection of the Mycobacterium avium complex organisms from culture
- the direct detection on Chlamydia using a chemoluminescent labelled probe.

New antibiotic and antibiotic combination studies were sponsored by various pharmaceutical companies to test for effectiveness against clinical isolates. The Laboratory continues to be participants in a multicenter Bacteroides fragilis group study and recently began contributing information for a multicenter mycology study.

Several cooperative studies with other departments are on-going:
- Two clinical trials with investigational antibiotics are being performed with Pulmonary Medicine.
- Clinical isolates of C. difficile, Enterococcus and Lactobacillus are being isolated and provided to the Infectious Disease section.
- IV catheter contamination studies were conducted with the Pharmacy Department and a PEN team procedure is currently being conducted in the laboratory.
- A vascular graft infection study with the Vascular Surgery section was completed and the results accepted for publication.
- Granulocyte bactericidal function studies for CGD patients are being done for Pediatric Hematology.
- A vaginosis study is underway with the Ob/Gyn section.
EDUCATIONAL ACTIVITIES:

A. PRESENTATIONS AT NATIONAL MEETINGS:


B. PRESENTATIONS AT REGIONAL MEETINGS:

Pierson, C.: "Detecting Tuberculosis with DNA Probes- Is it prudent and practical?", and "Impact of Transplants on the Microbiology Laboratory", 1988 Region IV annual meeting of American Society for Medical Technology, Detroit, Michigan.

C. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERED JOURNALS:


D. PATHOLOGY HOUSEOFFICER TRAINING PROGRAM:

All Senior Technologists presented an introductory lecture and conducted a laboratory session for the first year houseofficers.

The laboratory provided 19 months of training for 12 Pathology houseofficers. In addition, 16 Pediatric houseofficers and students were rotated through all areas of the laboratory.

E. OTHER EDUCATION ACTIVITIES:

Four technologist were sent to regional and national meetings or workshops.

Assistance was given to two senior medical residents by providing data and advice for their assigned projects leading to departmental presentations:

- "Pseudomonas sepsis"
- "Anaerobic sepsis"

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

Carl L. Pierson, Ph.D.
Associate Director
Clinical Microbiology Laboratory
MOLECULAR DIAGNOSIS/FLOW CYTOMETRY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The Molecular Diagnosis/Clinical Flow Cytometry Laboratory has enjoyed a stable year without the major changes that have characterized the recent past. The Laboratory has continued its active role in Diagnostic Clinical Pathology. A total of 1,500 specimens were handled by the laboratory during the past twelve months, which is an increase of 25% over the previous year. Approximately 600 specimens were processed for cell surface markers or cellular DNA content studies. Approximately 50% of these latter specimens were evaluated for hematologic disorders while the remainder of the specimens were for the evaluation of transplant patients or individuals with primary or acquired immune deficiencies. A sizeable proportion of the latter group is in the area of cellular monitoring of transplant patients receiving OKT3 monoclonal antibody therapy. Approximately 600 specimens were studied for platelet-associated immunoglobulins and neutrophil-specific antibodies. Each specimen requires from 10-30 individual staining, quantitation and analytic procedures. Quality control and calibration procedures further add to the specimen load. Thus, the laboratory staff conducted approximately 28,000 individual marker studies in Fiscal Year 88/89. The laboratory continues to provide 12-24 hour turnaround studies on acute leukemia and selected transplant patients. Overall, patient revenue continues to climb and the significant reduction in commodity expenses seen last year has continued through this year as well. This again has led to a gross margin that is 300% better than the gross margin expected by budget.

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evaluated as a possible technique that may enhance the implementation of DNA studies into the clinical laboratory. Also, a semi-automated DNA instrument is being evaluated that may aid in these assays becoming a more routine procedure. A limited number of biotinylated probes are being used on a trial basis to assess the possibility of moving away from P\textsuperscript{32} radioactive probes. Investigative work will continue in the area of hematologic and genotypic markers in acute and chronic leukemias and malignant lymphoma, as well as studying the role of adhesion molecules and homing receptors in various benign and malignant hematopoietic diseases.

Curtis A. Hanson, M.D.
Lloyd M. Stoolman, M.D.

Directors
Clinical Flow Cytometry Laboratory
PATHOLOGY DATA SYSTEMS

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The activities of Pathology Data Systems for the past year can be divided into four distinct categories: (1) personnel and organizational changes; (2) hardware and software upgrades; (3) new system features to help system users; and (4) educational activities.

One of the major events in PDS during the last year was a significant personnel turnover -- five individuals resigned last Fall, including the manager of the unit. Rebuilding of the personnel team was accomplished very rapidly, starting with the appointment of Bruce Barnes in October, 1989, as the new manager of PDS. Bruce, a former and highly valued employee of PDS, was recruited from Hospital Information Services at the University of Michigan Hospitals where he had been employed for a total of five years, three as a network system programmer and two as the manager of systems support. PDS has now been reorganized with a more hierarchical personnel structure and divided into four teams: operations headed by Ron Salisbury, user support headed by Kathy Davis, systems and communications headed by Ken Thurman, and Personal Computer and Network Systems headed by Tom Peterson. These new team leaders combine many years of experience with medical information systems with a commitment to meet the increasingly sophisticated demands of system users.

With regard to hardware and software upgrades, Version 3.03 of the PathNet software was installed in the late Fall. This new version provided a number of advantages over the previous version and new features for users, including the conversion to a standard software release, enhanced security, enhancements to the test order entry program, an infection control application, and a blood bank donor package. The following interfaces between the PathNet system and automated testing devices in the clinical laboratories were also deployed during the year: the Ektachem in Chemistry; the Coulter Stacker Plus and Rapimat in Hematology.

Due to the growth of the on-line pathology data base and the need for more rapid response time, four additional disk drives (RA-90s) were purchased and installed on the VAX cluster. A Novell microcomputer network was installed to support the Tissue Typing Laboratory. This network will be the prototype for handling distributed information processing in other laboratories such as the Ligand Laboratory. A fully functional "test system" for evaluating new software in a controlled environment before it is brought up live on the production system was installed. Oracle relational data base software and some of the associated networking data bases were installed on one of the CPUs in the VAX cluster. This software will be the basis for the future integration of the laboratory data base into other clinical data bases in the hospital in order to provide a "patient view" of information for physicians.

With regard to new system features, a program for use by physicians and nurses when retrieving patient laboratory results was developed by PDS personnel and installed on PathNet. This program is more user-friendly than Patient Result Inquiry (PRI), the standard Cerner application, in that it has a command line on the bottom of the screen like many popular microcomputer programs. This software also supports patient list management by house officers so that they do not have to repeatedly enter patient registration numbers into the system to retrieve laboratory results. Other user support features which have been introduced during the year include on-line help and access to an electronic version of the pathology laboratory manual. A Help Desk has also been established within Pathology Data Systems for user account management, problem reporting, and problem solving via telephone. A detailed plan is
also being developed to provide detailed laboratory information, extracted from the very large pathology database, for analysis on microcomputers by authorized users.

Finally and with regard to educational activities, PDS personnel were very active participants in the recently completed three-day eighth annual symposium on laboratory information systems held at the Towsley Center. The meeting attracted 220 registrants from 30 states and Canada, as well as 20 system vendors, and is considered the premiere meeting of its kind in the country. Ron Salisbury and Kathy Davis were invited speakers at the Cerner Users' Group meeting in Kansas City in the Spring. Bruce Friedman was selected as the Chairman-Elect of the Users' Group at that time. PDS personnel have also participated in an intensive training course for new house officers in pathology on PathNet.

Bruce A. Friedman, M.D.
Director
Pathology Data Systems
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:
   - Thomas D. Morrow, Assistant Administrator for Finance and Operations
   - Deborah Day Jansen, Administrative Coordinator for Pathology Laboratories
   - Beverly J. Smith, Administrative Assistant, Personnel and Payroll functions
   - Nancy A. Coray, Financial Analyst and Billing Coordinator

Surgical Pathology Transcription:
   - Edith M. Brayton, Office Manager
   - June M. Possley, Office Supervisor

B. CLINICAL FACULTY OFFICES, UNIVERSITY HOSPITALS:
   - Holly A. Wagner, Office Supervisor

C. MEDICAL SERVICE PLAN BILLING OFFICE:
   - Douglas M. Kennedy, Manager
   - John J. Gilbert, Financial Analyst

D. OFFICE OF RESEARCH AND EDUCATION ADMINISTRATION:
   - Maria A. Ceo, Administrative Associate
   - Kathleen L. Atkins, Student Services Assistant

E. OFFICE OF THE CHAIRMAN:
   - Laura Blythe, Staff Assistant
   - Mary Anne Tishma, Staff Assistant
In addition to the management of daily activities, each of the units completed major projects. They are as follows:

**ADMINISTRATIVE SUPPORT CENTER:**

1. The M-Labs Program has continued to expand and this year we have initiated clinical and anatomic pathology services to Thorn Hospital in Hudson, Michigan and Lapeer Regional Hospital in Lapeer, Michigan. Additionally we have initiated service with several other extramural clients.
2. The Pathology Laboratories Handbook intramural and extramural versions (and mini-book) have been placed into an online database resident in Pathology Data Systems, allowing Hospital staff to access this information through its network.
3. The implementation of a Quality Assurance Program has been completed at the M-Care Satellite Clinics.
4. Renovations have been completed for a Anatomic Pathology Fellows room. Renovation and expansion of the Pathology Data Systems Unit should be completed in the Fall of 1990.
5. The training of new medical assistants and radiographers for the UMMC Satellite clinics continues as required. All sites have now been enrolled in the CAP Proficiency Testing Program. Since the Microbiology module was not suitable to the testing performed at these sites, our Microbiology staff developed a modified module for use.

**CLINICAL FACULTY OFFICES:**

1. A new Director of Anatomic Pathology was appointed in August 1989 and is housed in the Faculty Office Suite. This necessitated the appointment of a secretary to support the Director.
2. The addition of two FAX machines has reduced the time committed to long distance calls and significantly reduced overnight carrier costs associated with Pathology extramural consult cases.
3. Training programs for Word Perfect and Microsoft Word have been initiated for secretarial support staff with a goal of replacing use of the IBM5520 word processing system by the Fall of 1990.

**MEDICAL SERVICE PLAN OFFICE:**

1. The Billing Office developed a special report with the assistance of PDS and began using the APB report to initiate the professional charges. Use of this report has produced accurate results through the capture and billing record of every report that is verified by our Pathologist. Operational savings have been produced in personnel time, paper and print time.
2. The initiation of patient registration for our MLabs Program by the Billing Office Staff has expedited the charge entry process and has resulted in more timely, accurate and updated registrations.
3. In March 1990, we recorded the largest month of collections, exceeding $500,000, and in FY1990 we experienced a record year in cash collections of approximately $4,000,000. In addition, we were able to reduce the number of days in receivables from approximately 100 to 75 days.
4. A paperless collection system implemented this past year has allowed groups of claim forms to be queued for revision prior to submission. This has produced a savings in both staff time and paper.
5. The preparation of an All Funds Budget, as requested by the Medical School, was completed in April 1990.
6. With the addition of Lapeer Regional Hospital as an MLabs client, the Billing Office began client billing in September 1989 and patient billing in February 1990.

MSP OFFICE - OTHER ACTIVITIES:
1. With the addition of a research faculty member, Dr. Bernard Weiss, renovation of space including a laboratory and office, (M4214) was completed.
2. Space assigned to the MLabs Program and Administrative Support Staff was redesigned and renovation completed in February 1990.
3. Co-authored the Category II Risk proposal for the Department of Pathology which has been placed in abeyance.

OFFICE OF RESEARCH AND EDUCATION ADMINISTRATION:
1. Coordinated the establishment of the Pathology Education Office in December 1989 to manage all departmental teaching activities. Implementation of the Graduate Program in Pathology. Sixteen applications were received and four offers extended, of which three were accepted. Three students will begin the Program in the Fall of 1990.
2. Supervision of the Photography Laboratory including monitoring expenses in addition to the personnel functions. Served as a member of the Photography Laboratory Committee which develops and implements policies for this unit.
3. Assisted with the revision of the five year MSP forecast; the development of an All Funds Budget and the gathering of documentation for the Medicare/CME Audit.
4. Jointly conducted the Pathology New Employee Orientation with the Administrative Support Center staff. The orientation program, which acquaints new, regular employees with the policies and structure of the Department continues to be a success.
5. Participated with the Medical School Information System Goals Group which is instrumental in addressing the problems and future needs of system users. The major accomplishment this year was the development of the Batch Merit Increase Program.

GENERAL:
1. Successfully negotiated a four year MSP agreement with the University Hospitals for the period 1 July 1990 through 30 June 1994.
2. Reorganization of the Pathology Data Systems Unit following the departure of the manager and several key staff in 1989. This reorganization was accomplished with virtually no disruption of service to the Department and the University Hospitals.
3. Development of a document justifying the projected need for additional space for the Anatomic and Clinical Pathology Laboratories for the next five years.
4. Assisted with the implementation plans for new blood drawing activities on the evening and midnight shifts which was mandated by the new House Officer contract.
5. Provided support for the reorganization of the Cytopathology Laboratories necessitated by the departure of several experienced cytotechnologists which created an emergency situation in the laboratory.

SUMMARY OF FINANCIAL DATA:
1. Grants and Contracts:
   73 active grants, contracts and other accounts
   Total Direct Expenditures $4,214,180
Indirect Research Expenditures  $1,964,231  
Total Sponsored Projects  $6,178,411  
Other Expenditures (General Funds, MSP subaccounts, gifts, etc.)  $1,750,306  

TOTAL EXPENDITURES  $7,928,717  

2. Medical Service Plan:  
  Average number of active accounts  13,584  
  Total number of charge entries  67,988  
  Gross Anatomic/Clinical Pathology  
    Billings  $8,569,581  
  Net Anatomic and Clinical Pathology Collections  $4,009,047  
    Part A. Payment  $2,572,667  
    (Source: MSP Billing Office Reports)  

3. Pathology Laboratories:  
  Number of fee code procedures  3,039,790  
  Number of laboratory test results (est.)  12,000,000  
  Gross Revenue  $78,533,282  
  Direct Expenses  $27,113,834  

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

Respectfully Submitted,

Eugene J. Napolitan  
Administrator
EDUCATIONAL ACTIVITIES*

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

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).

The Sophomore Pathology Course (Path 600) continues to be the primary focus of faculty teaching of medical students. 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, and slide sets, and descriptive syllabi. Formal evaluation indicated that the course continues to function smoothly and is generally well accepted by the students. In particular, the laboratory size was viewed as having a positive impact on the students' education by both students and faculty. Efforts to closely correlate the Introduction to Clinical Sciences Course (ICS-601) with the Sophomore Pathology Course continues to function to enhance the students' educational experience and reinforce "core material". The primary area of concern continues to be the relative lack of contact time that the faculty have with students within the Medical School curriculum. This was highlighted by student comments during the recent LCME review.

The Department of Pathology continues to have primary responsibilities for the teaching of general and systemic pathology to dental students. This includes the presentation of formal lectures (Pathology 630) and precepting of laboratory sessions (Pathology 631). Formal student evaluation indicates that the course functions smoothly and is well received by the students.

Following review of the combined Dental/Graduate Student Course three years ago a separate graduate student section was formulated as an alternative to teaching systemic pathology to graduate students. This section was composed of approximately 15 students and focused on the study of the cellular/molecular basis of the inflammatory response and the role of the extracellular matrix in disease. This allowed more indepth discussion of the specific topic areas in a small group seminar format and was generally well received by the students. Further development of a graduate course in general pathology separate from the Dental course has continued and will be offered in the upcoming year.

During the past year, the implementation of a graduate program based in the Department of Pathology was initiated. The primary goal of the Doctoral in Pathology Program is to train individuals for careers as independent scientific investigators with a focus on the study of the cellular and molecular basis of disease processes. Four new graduate level courses have been developed and the Department accepted its first three graduate students into the program: Douglas Gibbs, Susan Moore, and Haining Shao.

*House Officer training and postdoctoral research training 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 (15 contact hours).

D. Pathology 600:
   1. 61 hours of whole-class lecture, 51 hours of laboratory (in each of six sections) (112 contact hours).

E. Pathology Clerkships:
   1. Elected by 45 students at University Hospitals.

II. COURSES IN THE DENTAL CURRICULUM

A. Pathology 630:
   1. General Pathology Lectures (44 contact hours).

B. Pathology 631:
   1. Pathology Laboratory (60 contact hours) each of two sections (assisted by Oral Pathology staff).

III. GRADUATE COURSES IN PATHOLOGY

A. Pathology 580: General Pathology for Biologic Scientists
B. Pathology 581: Cellular and Molecular Basis of Disease
C. Pathology 583: General Pathology Laboratory - Histopathology
D. Pathology 650: Laboratory Techniques in Experimental Pathology
E. Pathology 850: Special Topics in Pathology
F. Pathology 583: General Pathology Laboratory - Histopathology
G. Pathology 599: Non-Dissertation Research
H. Pathology 990: Pre-Candidate Dissertation Research
I. Pathology 995: Candidate Dissertation Research

IV. POSTGRADUATE MEDICINE/CONTINUING MEDICAL EDUCATION:

A. Current Topics in Blood Banking, June 6-June 8, 1990.
C. Pathology 858:
   1. Neuropathology (18 contact hours).

V. 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:

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<td>- Cardiology</td>
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<td>- Nephrology</td>
<td>- Oncology</td>
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<td>- Hematology/Oncology</td>
<td>- Gastroenterology</td>
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<td>- Nuclear Medicine</td>
<td>- General (Death Conference, CPC)</td>
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<td>Obstetrics and Gynecology</td>
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<td>Thoracic Surgery</td>
<td>General Surgery (Breast, GI)</td>
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| Urology                            | Otorhinolaryngology                     |

Joseph C. Fantone, M.D.  
Coordinator  
Educational Activities
M-LABS

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1989 - 30 JUNE 1990

The M-Labs program continues to grow in both areas of Anatomic and Clinical Pathology. In addition to increased volume, the profit margin of the M-Labs program continues to improve based on increased efficiency and maturation of the clinical laboratory system to a reference laboratory system within the central pathology laboratories. The credit for such an increased profit margin as well as increased volume is attributed to the many laboratory professionals who have labored to make M-Labs work.

M-Labs now has over 90 clients, of which approximately 20 can be considered major clients. These clients include hospital accounts, independent laboratories, and large doctor office accounts. The newest large account is Lapeer Regional Hospital, requiring full-time pathologist coverage to maintain the quality that is required. M-Labs also acquired a management contract with Thorn Hospital in Hudson, Michigan.

In addition, it should be noted that M-Labs also maintains the laboratory quality improvement programs in all the M-Care sites.

The forecast for the coming year for M-Labs is for continued growth with no foreseeable increase in costs of the program.

Kenneth D. McClatchey, M.D., D.D.S.
Director, M-Labs Program
RESIDENT TRAINING PROGRAM

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
JULY 1, 1989 - JUNE 30, 1990

The Department of Pathology offers high quality resident training in both anatomic and clinical pathology with opportunities to pursue basic research training in experimental pathology. The program continues to be exceedingly competitive with 119 completed applications received, and 42 candidates invited to interview in the Department this past year. Six outstanding residents were recruited to the Department: Sonya K. Brown, M.D., Jane S. Chen, M.D., Eric D. Hsi, M.D., Charles J. Hunter, M.D., Jeffrey P. Pearson, M.D., and David A. Start, M.D.

Currently, there are 24 residents in the Department; 22 of whom are receiving training in both anatomic and clinical pathology and two receiving training in anatomic pathology alone. Three residents graduated from the program this past year. Two graduates assumed positions as staff pathologists at Toledo Hospital (Toledo, Ohio), and Mt. Sinai Hospital (Detroit, Michigan). The third graduate is a Hematopathology Fellow at the National Institutes of Health (Bethesda, Maryland).

A significant number of residents continue to be involved in both clinical and experimental research projects which have resulted in the presentation of their work at national meetings, as well as publications in peer-reviewed journals. The residents again this year took the American Society of Clinical Pathologists' in-service examination and performed very well.

Publications:


Abstracts:


Joseph C. Fantone, M.D.
Director
Resident Training Program
INTRODUCTION:

The Veterans Administration Medical Center Laboratory Service continues to maintain a strong affiliation with the Department of Pathology at the University of Michigan Medical Center. Three resident slots are available and filled by pathology residents on monthly rotations in the areas of Surgical Pathology, Autopsy Pathology, and electives such as Electron Microscopy and special study areas in Surgical Pathology. There are frequent mutual consultation activities and numerous seminars within the department which are attended by staffs from both the University and the VA. There are four full-time VA pathologist slots but at this time there is a pathologist vacancy and recruitment efforts are underway cooperatively between the VA and the University. Research and educational activities at the VA are supported in many ways by the University.

ANATOMIC PATHOLOGY:

A. Surgical Pathology: 4,419 surgical cases have been completed and all have been examined grossly by the resident rotating in surgical pathology and then processed and reported under the close supervision and guidance of a staff pathologist. The surgical pathology resident serves as the coordinator of the section and is responsible for the timely and accurate reporting as well as for assuring liaison with the clinical services. There is intense one-on-one teaching on the part of the pathology staff and a weekly conference discusses interesting and important cases in the presence of all of the residents assigned and with the pathology staff. There is an extensive quality assurance program in surgical pathology with review of all frozen sections, amended diagnoses and cases in which there is either intramural or extramural consultation.

B. Autopsy Pathology: 60 autopsies have been completed during this time. Most of the autopsies were dissected by the resident under close supervision of the staff and then there is one-on-one microscopic examination and final report. A gross pathology conference is held following an autopsy. An autopsy quality assurance program is in operation and is documented by a survey form which is completed by both the clinical staff and the pathology staff and reviewed by the Quality Assurance Board.

C. Cytology: 2,332 cytology cases were reported during this time. Although a regular resident rotation is not available in Cytology, the material is frequently used for correlation in surgical, autopsy and electron microscopy resident training. Cytology cases are occasionally discussed at the Surgical pathology Conference. A thorough quality assurance program is in operation.

D. Electron Microscopy: 331 electron microscopy cases were reported during this time. An elective rotation for pathology residents is available in electron microscopy and is taught by Dr. Beals. Electron Microscopy is used frequently for clinical cases at this hospital and particularly for correlation with surgical, autopsy, and cytology material. In 1989, the Electron Microscopy section at this medical center was designated by the VA Central Office as a "Center of Excellence" within the VA System. Plans are underway to update the equipment within this area.
CLINICAL PATHOLOGY:

This division of Laboratory Service includes Chemistry, Microbiology, Hematology, and Immunohematology. Approximately 1,600,000 unweighted tests were done during the above period. Dr. Chensue is the overall director of clinical pathology. There has not been a formal resident rotation in the clinical areas but laboratories are available for the residents informal use in any particular area. The residents are welcome to attend the in-service teaching conferences and may participate occasionally in teaching as well. The clinical laboratories are available for particular procedures and data that may relate to residents rotations in other areas. Extensive quality control efforts are in operation in every section of the clinical laboratories and specific quality assurance programs have been developed in blood transfusion, critical values and therapeutic drug levels.

EDUCATION AND TEACHING:

Much of the staff pathologists’ time is devoted to on-the-job teaching of residents in surgical and autopsy pathology in which there is a service component. The size of the VA Laboratory Service and the availability of staff permits significant informal contact with the residents.

Dr. Weatherbee and Dr. Beals present a gross pathology conference to the residents annually. the pathology staff combines in teaching a student pathology laboratory. Dr. Weatherbee gives two lectures to the second year medical students and two to the dental students in bone pathology. More formal teaching is done by all of the staff in the weekly surgical pathology conference as well as with the fourth year medical students who rotate within Laboratory Service at the VA. (Dr. Beals gives biweekly seminars in electron microscopy at the University).

RESEARCH:

Dr. Chensue continues as a member of the VA Research and Development Committee and continues to carry out a strong funded research effort here as well. All members of the staff participate as collaborators or consultants with other investigators within the VA and at the University of Michigan.

SUMMARY:

The goal of the VA Laboratory Service includes a strong commitment to the practice of high quality medicine and to a high level of research and education. It is to that end that there is continued effort to maintain and to improve the close relationship with the University of Michigan. The present recruitment effort is aimed at attaining a pathologist with a high level of experience and/or training for the practice of academic pathology. Every effort is made to assure and strengthen the easy professional interchange between the two institutions. The firm cooperative atmosphere as noted previously is based on the mutual benefit derived form increasing the quality of the relationship with the University. Major plans underway within the VA including the clinical addition, which will increase the laboratory space by some 10,000 square feet and will have a considerable effect on the affiliation particularly in the areas of student and resident education and research activities. The VA acts independently in many areas and is responsible for its own high quality laboratory practice and has been accredited by the College of American Pathologists since 1966 with the most recent inspection on June 19, 1990.

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