The University of Michigan Department of Pathology Annual Report

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Coordinator: Mary Anne Tishma
Technical Consultants: Jim Dignan
                     Peggy Otto
                     Tom Peterson
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<td>Abell, Murray R.</td>
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<td>Abrams, Gerald D.</td>
<td>Professor</td>
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<td>Annesley, Thomas M.</td>
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<td>Appelman, Henry, D.</td>
<td>Professor</td>
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<td>Barnes, Barbara A.</td>
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<td>Barr Jr., Mason*</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Beals, Theodore F.</td>
<td>Assistant Professor</td>
<td>Veterans Administration Medical Center</td>
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<td>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>
<td>Assistant Professor</td>
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<td>D'Amato, Constance J.</td>
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<td>Davenport, Robertson</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>de la Iglesia, Felix**</td>
<td>Adjunct Research Scientist</td>
<td>Warner-Lambert; Parke Davis</td>
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<td>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>
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<td>Gikas, Paul W.</td>
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<td>Hanks, Carl T.*</td>
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<td>Hanson, Curtis A.</td>
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<td>Headington, John T.</td>
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<td>Heidelberger, Kathleen P.</td>
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<td>Hicks, Samuel P.</td>
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<td>Hinerman, Dorin L.</td>
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<td>Lowe, John B.</td>
<td>Assistant Professor</td>
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<td>McClatchey, Kenneth D.</td>
<td>Associate Professor, Associate Chairman, Director, Clinical Laboratories</td>
<td>The University of Michigan</td>
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<td>McKeever, Paul E.</td>
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<td>Mitra, Raj S.</td>
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<td>Oberman, Harold A.</td>
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<td>Regezi, Joseph A.*</td>
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<td>Shu, Suyu+++</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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MISSION STATEMENT
MISSION STATEMENT

The goals of the Department of Pathology are inseparable from goals of the Medical Center: leadership in education, research, and service. In addition, by virtue of its position, the Department is dedicated to serve in a unifying role within the university medical community.

Education. A variety of educational experiences is offered with the objective that persons destined for clinical service may benefit from the scientific literacy gained from exposure to research, and those destined for research careers have a better understanding of disease-related problems. Excellence in teaching is also promoted as an integral part of clinical service; education is what pathologists, as consultants, must do every day.

Research. It is the obligation of a university to contribute to knowledge rather than merely to propagate it. By encouraging research programs we also aim to foster a research mentality among all faculty and trainees, with the objective that they acquire useful habits of analytical thought, become more innovative, and become more likely to devise and to employ state-of-the-art diagnostic developments.

Service. Clinical service, largely diagnostic in nature, is a function that sets the Pathology Department apart from other basic science departments. The Department's objective is to maintain leadership in this field through its emphasis on research, education, innovation, and constant quality assessment, and by so doing to attract the skilled personnel that are the mainstay of this operation.

Unifying role. Because pathology, more than any other discipline, bridges the domains of basic and clinical science, the Department takes advantage of its unique position to encourage interdisciplinary projects and interdepartmental cooperation, thereby assuming a cohesive, collegial, and unifying role within the university medical community.
DEPARTMENTAL OVERVIEW
DEPARTMENTAL OVERVIEW
1990/91

The Department of Pathology continues to be strong and vibrant. The major problems we currently face are related to space constraints effecting both the service and research activities of the Department. The continued consolidation of special limited function laboratories (most recently the Gyn-Endocrine and Pediatric Virology) into the central Pathology Laboratories, together with the yearly growth of clinical diagnostic services has left us space-poor. With expected continued growth of the clinical service functions (due to the inpatient and ambulatory care programs) and plans for physical expansion (Cancer-Geriatric Center, as well as the Taubman Clinics), solutions to the constraint of space for the clinical laboratories will have to be found. The lack of available space for growth of the Department’s research programs is also a matter of serious concern. Although much apprehension has developed regarding the impact of implementation of the Resource Based Relative Value Scales, it is possible that this change will not have a substantial adverse impact on our current revenue flow, although this requires very careful watching.

In January, 1991, we were fortunate to recruit from Washington University (St. Louis) Dr. Gabriel Nunez, who has taken charge of the new Molecular Diagnostic Program. This activity involves the application of complex molecular diagnostic techniques to the clinical service arena as well as providing an important foundation for the teaching of residents. This program is supervised by Dr. Nunez, with careful integration into Clinical Pathology (with Dr. Hanson) and Anatomic Pathology (with Dr. Frank), as well as a strong linkage with the Departmentally based Molecular Biology group.

The Anatomic Pathology Division continues to flourish under the leadership of Dr. Sharon Weiss. The establishment of the fellowship program in Surgical Pathology has been an instant success and the positions are filled with outstanding individuals. As a tribute to Dr. Weiss and her colleagues, Ann Arbor has been designated as one of four permanent sites for the Summer Course in Surgical Pathology, sponsored by the United States and Canadian Academy of Pathology Division of the International Academy of Pathology. This reflects the outstanding success of this course that has been held in Ann Arbor during the past two summers.

As of September 1, 1991, the Division of Clinical Pathology has had the advantage of the leadership of Dr. Curtis Hanson, who replaced Dr. Kenneth D. McClatchey after the latter’s eight years of dedicated and effective service. Dr. Hanson has initiated a series of changes in this Division, the result of which will be to strengthen the service and teaching functions of this Division. As indicated above, he also will be assisting in the important development of the Molecular Diagnostic Laboratory. Currently under exploration is the possibility of obtaining external support for academic fellowship training in various sections of Clinical Pathology.

Teaching functions of the Department of Pathology are well served at all levels. The faculty is working carefully to develop a plan for implementing a curricular change in which pathology teaching will probably follow along the lines of an organ system approach during the Second Year of Medical Students, and the introduction of basic concepts of Pathology for First Year Medical Students. The Graduate (Ph.D.) Program in Experimental Pathology now has eight highly qualified students, including one MSTP (M.D./Ph.D.) student. This program has already enriched the teaching environment of the Department and Medical School and will probably continue to act as a magnet because of the orientation of the educational activities towards an understanding of disease-related topics.

The Research enterprise of the Department continues to flourish as reflected by the research budget (exceeding six million dollars/year), the prolific publications of the faculty and the recognition of many of our faculty members as being international experts in many different areas. The success of the
research activities is also affected in the high number (approximately 32) of postdoctoral fellows in the Department.

In general, the Department of Pathology seems to be doing very well academically. Medical students recruited into our Residency Training Program are of very high caliber and have outstanding credentials. The Department is making an increased effort, through Dr. Fantone who is Residency Program Director, to provide guidance to entering House Officers and help them identify a mentor who can assist the resident in selecting a topic for pursuit of scholarly interests. Attention to this matter will allow our residents to achieve self-distinction long before completion of the Residency Training Program.

Finally, the M-Labs Program is strong and flourishing. Its new Director is Dr. Eugene M. Silverman. During the course of the Winter of 1991/92, we are carefully evaluating the M-Labs Program in order to determine its directions over the next five years and how M-Labs can be more tightly integrated into the academic programs which feature both service and teaching.

Respectfully Submitted,

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 1990 - 30 JUNE 1991  

I. CLINICAL ACTIVITIES:  
A. Surgical Pathology Services - 2 1/2 months (sabbatical leave - six months).  
B. Necropsy Service - on call.  
C. Pathologist, Cardiac Transplant Team - full time.  
D. Consultant for Gastrointestinal Pathology - full time.  
E. Consultant for Cardiovascular Pathology - full time.  

II. TEACHING ACTIVITIES:  
A. Freshman Medical Class:  
   1. ICS-500, 501 Sequence Coordinator and Lecturer, "Basic Concepts of Disease"  
      CPC's - 26 contact hours.  
B. Sophomore Medical Class:  
   1. ICS 600, 601 - CPC's - seven contact hours.  
   2. Pathology 600 lectures - seven 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 - two 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 Atroventricular 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 1990 - 30 JUNE 1991

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.
      2. M1 Clerkship, Clinical Chemistry/Toxicology
   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.
         Se-Hwan Paek; "An Immunosensor with a Heterobifunctional Enzyme Conjugate
         as Signal Generator"

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   A. Erythromycin Breath Test as a Predictor of Cyclosporine A Bioavailability. Clinical
      Research Center NIH M01 RR00042. Co-Investigator.
   B. Measurement of Drugs in Saliva. DHHS PHS Phase I Grant. Co-
      Investigator/Consultant.
      Co-investigator.

   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.
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.
D. Experts Panel Committee, American Association for Clinical Chemistry.
F. Education Committee, Michigan Section, American Association for Clinical Chemistry.
G. College of American Pathologists Chemistry Reference Laboratory.
H. Member, NCAA Drug Testing Team.
I. ETS Advisory Board, Syva Corporation.
J. Member, Academy of Clinical Laboratory Physicians and Scientists.
K. Member, American Association of Pathologists.
L. Member, American Association for Advancement of Science.
M. Member, Clinical Ligand Society.

V. **OTHER RELEVANT ACTIVITIES:**

**EDITORIAL BOARDS:**

A. Clinical Chemistry, Editorial Board.
B. Therapeutic Drug Monitoring, Editorial Board.
C. Biomedical Chromatography, Editorial Board.
D. 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.
F. Therapeutic Drug Monitoring, Reviewer.
G. Drugs and Aging, Reviewer.

**INVITED LECTURES/SEMINARS:**


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1990 - 30 JUNE 1991  

I. CLINICAL ACTIVITIES:  
A. General surgical pathology - 5 1/2 months.  
B. Gastrointestinal and hepatic pathology consultation services - full time.  

II. TEACHING ACTIVITIES:  
MEDICAL SCHOOL/HOSPITALS:  
A. Medical Students.  
   1. Pathology 600 - nine full class lectures.  
   2. Laboratory Instructor, Pathology 600 - one semester.  
   3. Pathology 630 (dental) - three full class lectures.  
   4. Senior medical student, elective rotation in pathology, supervisor 1 month.  
B. House Officers:  
   1. Autopsy service tutoring, one week  
   2. Surgical pathology diagnosing room instruction for assigned house officer - 5 1/2 months.  
   3. Gastrointestinal and hepatic pathology tutoring - full time.  
   4. Mentor for two house officers and three fellows in gastrointestinal and liver pathology subspecialty rotations - four months total.  
   5. Formal Lectures on GI and Liver Pathology - four hours.  
C. Interdepartmental:  
   1. Medical Gastrointestinal Pathology Biopsy 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.  
C. Peptic-associated and Helicobacter-associated gastritis and duodenitis with Grace Elta, Jeffrey Barnett and Tim Nostrant.  
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 (paper accepted for publication, see below).
F. Liver Transplantation for Hepatitis B Disease with Mike Lucey, Keith Henley Bob Merion and Dave Graham.
G. Chronic gastritis in Michigan, with Paul Mazzara.
H. The appendix in ulcerative colitis, with John Goldblum (Abstract accepted for presentation as a poster at the annual meeting, American Society of Clinical Pathologists, New Orleans, LA, September 24, 1991).

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. Reviewer of manuscripts for Archives of Pathology and Laboratory Medicine, Cancer, Human Pathology, Gastroenterology, and Am J of Gastroenterology.
B. Chairman, Publications Committee and Member, Executive Committee, Gastrointestinal Pathology Society.
D. Visiting Pathologist for Regional Workshops on Pathologic Diagnosis in Inflammatory Bowel Disease, sponsored by the Crohn's and Colitis Foundation of America and the University of Chicago.
E. Member, Education Committee, United States-Canadian Academy of Pathology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Seminar, "The Biopsied Stomach Need Not Be a Diagnostic Nightmare, Although It Certainly Drives Us Crazy at Times", USCAP Course: Diagnostic Pathology '90, Ann Arbor, Michigan, August, 1990.
2. Lecture, "Surveillance in Ulcerative Colitis", Symposium on Controversies in IBD, October 6, 1990, Quebec City, Quebec, Canada.
7. Lecture, "Gastritis", Grand Rounds, Department of Pathology, University of California at Los Angeles, Los Angeles, California, June 26, 1991.

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:

MASON 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 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Medical Director, Myelodysplasia Unit: inpatient and outpatient services for children with spina bifida, 300 Clinic Visits.
   B. Attending Physician Pediatrics Infant: three 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 four 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: 178 fetal/neonatal examinations (85 from UMMC, 93 referred from 14 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. Medical Student Clerkship Committee, Ambulatory Care Director Search Committee.

C. Steering Committee for DSCC-funded Cost of Comprehensive Care Study.

D. Standardization and product evaluation committee, vice chair; Infant and Child Care Ethics Committee, co-chair, University Hospital Ethics Committee.

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:

JAMES R. BAKER, M.D.
ASOCIATE PROFESSOR
DIRECTOR, TISSUE TYPING LABORATORY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
A. Director, Histocompatibility and Immunogenetics Laboratory.

II. TEACHING ACTIVITIES:
A. Director, Basic Immunology Course for Allergy Fellows-In-Training.
B. Instructor, ICS Course 600-601.
C. Attending General Internal Medicine Service.
D. Instructed Pathology Residents, Renal Fellows and Allergy Fellows in HLA Typing.
E. Supervised Jodi Maasricht (M1), Thomas Ellis (M2) and three undergraduate students in research.
F. Supervisor for Dr. Reina Salazar's (Allergy Fellow) Research Project.
G. Clinical Pathology Grand Rounds x two.

III. RESEARCH ACTIVITIES:
SPONSORED SUPPORT:
A. Thyroid Autoantibodies and Antigens, R29-AI30501, NIH-NIAID, May 1, 1990 - April 30, $556,500.
C. Principal Investigator, UM-MAC: Hybridoma Core, 5 P60 AR 20557, NIH-NIAID. January 1, 1988 - December 31, 1992, $171,413.
D. Principal Investigator, MDRTC: Hybridoma Core, 5-P60 DK20572-14, NIH-NIAID, April 15, 1991 - November 30, 1991, $15,000.

IV. SERVICE ACTIVITIES:

ADMINISTRATIVE ACTIVITIES:
A. Planning Committee, Advances in Internal Medicine, University of Michigan Medical School, 1990-1991.
B. Histocompatibility Committee, Organ Procurement Agency of Michigan.
C. Immunology Subcommittee, Dean's Committee on Curriculum Improvement 1991.
MILITARY SERVICE:


V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Grand Rounds, Department of Medicine, St. Lukes/Roosevelt Medical Center, July 1990.
2. Grand Rounds, Department of Medicine, St. John Hospital, August 1990.
3. Grand Rounds, Department of Pediatrics, Sparrow Hospital, December 1990.
4. Consultant Visit, Allergy Division, Department of Medicine, Walter Reed Army Medical Center, Washington, DC.
5. Allergy Symposium - Basic Immunology, Towsley Center, April 1991.
7. Grand Rounds, Department of Medicine, Flint Osteopathic Hospital, May 1991.

SCIENTIFIC ACTIVITIES:

2. Reviewer, Annals of Internal Medicine.
4. Reviewer, Endocrinology.
6. Reviewer, Autoimmunity.
7. Consultant Director, HLA Laboratory, Walter Reed Army Medical Center, Washington, D.C.
8. Associated Director, Hybridoma Core, University of Michigan Medical School.

WORKSHOPS/PANEL DISCUSSIONS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN PEER REVIEWED JOURNALS:


ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN NON PEER REVIEWED:


BOOK CHAPTERS:


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


ARTICLES SUBMITTED FOR PUBLICATION TO PEER REVIEWED JOURNALS:


BARBARA A. BARNES, MT(ASCP) SBB
ASSISTANT PROFESSOR OF MEDICAL TECHNOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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.
      1. Introductory Blood Bank Seminar Series for Pathology 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:
   A. Project Under Study.
      The role of premedication and leukocyte poor blood components in multiply transfused pediatric oncology patients.

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

POSTER:

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.
C. Cytopathology, Veterans Affairs Medical Center.
D. Coordinator of Decentralized Hospital Computer Program in Laboratory Service, Veterans Affairs Medical Center.
E. Fine Needle Aspiration, Veterans Affairs Medical Center.
F. Surgical/Autopsy Pathology, Veterans Affairs Medical Center.
G. Tumor Board, Veterans Affairs Medical Center.
H. Deputy Washtenaw County Medical Examiner.
I. 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:

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-Investigators: Baker,Beals,Carey,Krause, McClatchey, Wolf).
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 1990 - 30 JUNE 1991

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. Four months of Neuropathology Service.
C. Six rotations in Autopsy Service.
D. Muscle and nerve biopsies referred by other hospitals in and out of state throughout the year.
E. Consultations on brain biopsies and rheumatology cases.

II. TEACHING ACTIVITIES:

A. Taught residents, fellows and staff in Neurology, Rheumatology and Pediatrics and medical students on muscle and nerve biopsies.
B. Taught pathology residents how to perform and read out autopsies.
C. Lectured on muscle, nerve and brain pathology to residents in Pathology and Neurology
D. Monthly conference on muscle and nerve cases with Neurology and Rheumatology departments.
E. Biweekly and later, monthly muscle, nerve and brain 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, normal, aging, diseased.
B. Embiology and pathology of soft palate muscles of human and mice.
C. Pelvic floor muscles.
D. Masseter and other facial muscles, normal and diseased.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

REGIONAL AND NATIONAL:
A. Visits to Lapeer Community Hospital and Albion Community Hospital.
B. Director of the Knollwood Clinic Laboratory, Lapeer.
C. Member, American Association of Neuropathologists, IAP, AAN and AMA.

V. OTHER RELEVANT ACTIVITIES:
A. Attended IAP and American Association of Neuropathologists meeting and presented posters.
B. Took and passed Neuropathology Boards of American Board of Pathology.

INVITED LECTURES/SEMINARS:
1. None.

VI. PUBLICATIONS:

ARTICLES SUBMITTED:

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

JEFFREY BONADIO, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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:
      a. Thesis Co-Chairman with Steven Goldstein: Ms. Monique Mansoura (Bioengineering).
      b. Thesis Co-Chairman with Steven Goldstein: Mr. John Germiller (MSTP).
      c. Thesis Co-chairman with Steven Goldstein: Mr. Karl Jepsen (Bioengineering).
      d. Thesis committee: Ms. Patricia Sherman (Human Genetics).
      e. Thesis committee: Ms. Elizabeth Allen (Human Genetics).
      f. Thesis committee: Ms. Linda Kallikan (Cellular and Molecular Biology).
   B. Supervision of four postdoctoral fellows: (David Boles, Ph.D., Loretta R. O’Donnell,
      M.D., Thomas Lawton, M.D. and Marcy Wong, Ph.D.).
   C. Mentor, Summer Medical Research Program, University of Michigan, 1990 Summer
      Student, Haining Shao.
   D. Courses:
      1. Lecturer, Pathology 600.
      2. Lecturer, Pathology 580.
      3. Lecturer, Biochemistry 501.
      4. Course Co-Director, Pathology 581.
      5. Mentor, Pathology 650.
   E. Continuing Medical Education:
      1. General Surgery Seminar Series, Department of Surgery, University of Michigan,
         1990.
      2. Rheumatology Seminar Series, Department of Medicine, University of Michigan,
         1990.

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. Principal Investigator, "Transgenic Mouse Model of Osteogenesis Imperfecta Type I",
      NIAMS, NIH, AR40679 (25% effort), $162,679.00/year direct costs $462,843.00/3
PROJECTS UNDER STUDY:

A. Molecular pathogenesis of osteogenesis imperfecta.
B. Regulation of osteoblast gene expression.
C. Structure/function relationships in connective tissue.

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. Assistant Investigator, Howard Hughes Medical Institute.
B. Ad-hoc Reviewer
   3. The Journal of Biological Chemistry.
   4. The March of Dimes Grants Program.
   5. Genomics.
C. Consultant Editor: European Journal of Experimental Musculoskeletal Research.
D. Member
   1. Multipurpose Arthritis Center.
   2. Michigan Cancer Center.
   3. Program in Bioengineering.
   4. Rheumatology Fellowship Training Grant, University of Michigan Multipurpose Arthritis and Musculoskeletal Diseases Center.

INVITED LECTURES/SEMINARS:

2. IV International Conference on Osteogenesis Imperfecta (Session Chair), Pavia, Italy, 1990.
4. Seminar Series, Department of Genetics, M.D. Anderson Hospital, University of Texas, Houston, Texas, 1991.
5. 17th Annual Conference on Craniofacial Biology, University of Michigan, Ann Arbor, Michigan, 1991.
10. NIH Workshop on Transgenic Models of Human Disease, NIH, Bethesda, Maryland, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Director, Clinical Laboratories, Veterans Affairs Medical Center, responsibilities include, new equipment and methodology evaluation, review and consultation regarding quality management programs, personnel evaluation, personnel counseling and grievance procedures.

B. Hematology/Coagulation, daily evaluation of pathologist referred blood smears and interpretation of special coagulation studies (12 months/yr), Veterans Affairs Medical Center.

C. Surgical/Frozen Section Diagnosis, 2 days/week (12 months/yr), Veterans Affairs Medical Center

D. Autopsy Service, rotational basis, on call 18 weeks/yr.

E. Special Chemistry/Immunology, daily interpretation of protein electrophoreses, isoenzyme studies, and problem ligand studies Veterans Affairs Medical Center (12 months/yr).

F. Blood Bank, consults and investigations, full time as needed, Veterans Affairs Medical Center.

II. TEACHING ACTIVITIES:

A. Sophomore medical students, Pathology 600 laboratory course, (1 semester, 30 contact hours).

B. Graduation course, Pathology 580, 1 contact hour.

C. Pathology house officers, Surgical Pathology/Autopsy supervision and instruction, 2 days/week (12 months/yr).

D. Technologists and technicians, ongoing inservice instruction on clinical laboratory topics.

E. Physicians, educational lectures regarding aspects of clinical pathology (1-2 lectures/yr).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:


B. 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:

A. Member of graduate student thesis committees.

MEDICAL SCHOOL/HOSPITAL:

A. Blood Utilization Review Committee, Veterans Administration Medical Center, Chairman.
B. Research and Development Committee, Veterans Administration Medical Center, voting member.
C. Ambulatory Care Committee, Veterans Administration Medical Center, voting member.
D. Hospital Quality Assurance Investigations, ad hoc committees.
E. Personnel employment and evaluation.
F. Editor, "VALABS Interface Laboratory News", Laboratory Newsletter.

REGIONAL AND NATIONAL:

A. Editorial Review:
   American Journal of Pathology.
   Journal of Immunology, Associate Editor.
   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.
D. Reviewer for NIH SCOR proposals regarding pulmonary disease.

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, Tri-County Clinical Microbiology Association.
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 UNREFEREED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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 instruct house officers in the removal and gross examination of brains from
nearly all autopsies at University Hospital.
C. Work with Neuropathology Staff 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 of the course with other instructors, lecturing, and conducting the brain cutting
sessions.
B. Neuropathology for Pathology house officers. This exercise is integrated with Clinical
Activities A, B, and D.
C. Neuropathology 858. Intensive laboratory-lecture course for house officers and fellows,
in Pathology and in the several clinical services concerned with the nervous system, and
medical students, graduate students, and faculty; implement general plan of course and
lecturing. Annual, 18 hours. One credit hour elective.
D. Neuropathology teaching for house officers and fellows from the several clinical services
concerned with the nervous system, and 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 collaboration with colleagues:
   1. Experimental work concerned in the role of fetal rat brain phagocytes in repair
      after radiation injury, and the association of thrombospondin with the
      development of astrocytic gliosis after surgical brain injury in adult rats.

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, Michigan Alzheimer Disease
   Research Center, 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. Admissions Committee Counselor

REGIONAL AND NATIONAL:

A. American Association of Neuropathologist.
B. American Academy of Neurology.
C. Society for Neuroscience.
E. Teratology Society.
F. Neurobehavioral Teratology Society.
G. Consortium to Establish a Registry for Alzheimer's Disease (CERAD) Committee

V. OTHER RELEVANT ACTIVITIES:

A. Presentation: Alzheimer's Disease and other dementias, at Eastern Michigan University,
B. Member: Dementia Subcommittee of the Chronic Disease Advisory Committee (State of
   Michigan)
C. Member: Executive Committee of the Postmortem Examination Work group of the
   Dementia Subcommittee (State of Michigan).
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


2. Foster, N.L., Gilman, S., Berent, S., Sima, A.A.F., D'Amato, C.J., Koepppe, R.A. and Hicks, S.P.: Progressive subcortical gliosis and progressive supranuclear palsy can have similar clinical and pet abnormalities. Revised and resubmitted to J. of Neurol., Neurosurg, Psychiatry.

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 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Associate Medical Director, Blood Bank and Transfusion Service, University of Michigan Hospitals.
   B. Cytopathology, consultation and staff coverage.
   C. Staff coverage of Necropsy Service.
   D. Deputy Medical Examiner, Washtenaw County.

II. TEACHING ACTIVITIES:
   A. Introductory course in Blood Banking/Transfusion Medicine for Pathology House Officers.
   B. Daily teaching rounds for Pathology House Officers assigned to the Blood Bank.
   C. Continuing education presentations for Blood Bank technologists.

III. RESEARCH ACTIVITIES:
PROJECTS UNDER STUDY
   A. Cytokine production in hemolytic transfusion reactions.
   B. Interleukin-8 production by monocytes in response to Fc receptor stimulation.
   C. Lymphocyte engraftment following blood transfusion.

IV. ADMINISTRATIVE ACTIVITIES:
MEDICAL SCHOOL/HOSPITAL
   A. Transfusion Committee, Interim Chair.

V. OTHER RELEVANT ACTIVITIES:
   A. Reviewer, Chest.
   B. Reviewer, Transfusion.
   C. Reviewer, American Journal of Clinical Pathology.
INVITED LECTURES AND SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:


I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Graduate students:
      1. Responsible during the current academic year for teaching activities for the
         following:
         a. Instructor and Course Coordinator: "Advanced Topics in Toxicology:
            Toxicologic Pathology".
         b. Instructor: "Fundamentals in Electron Microscopy".
         c. Student Raining and Doctoral Committees.
         d. Joint Student Training in Pharmacology and Toxicology with Florida
            A&M School of Pharmacy.
         e. Direct a Postdoctoral Research Fellowship Program in Immunotoxicology,
            Gastrointestinal Inflammatory Disease, Molecular and Cellular
            Toxicology, Endocrine Toxicity, Molecular Biology of Cell Proliferation,
            Cardiac Toxicity, and Hepatotoxicity.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. All research activities are conducted with intramural support from Parke-Davis, including
      a co-sponsored program with the Medical Research Council of Canada.
   B. Collaborates with K. Johnson in developing morphometric models for the evaluation of
      renal fibrotic changes.
   C. Consultation with Dr. Ward and colleagues regarding application of morphometric
      techniques to lung research studies.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. None.

MEDICAL SCHOOL/HOSPITAL:
   A. None.
REGIONAL AND NATIONAL:
A. Member, Steering Committee of External Advisors, Wayne State University Institute of Chemical Toxicology.
B. Society of Toxicology Liaison Member to the Society of Toxicologic Pathologists.

V. OTHER RELEVANT ACTIVITIES:
EDITORIAL BOARDS:
A. Editorial Board, Drug Metabolism Reviews.
B. Editorial Board, Toxicology.
C. Editorial Board, Toxicologic Pathology.

INVITED LECTURES/SEMINARS:
2. Invited Lecturer, "Perspectives in Peroxisome Proliferation", American College of Toxicology, Orlando, Florida, October, 1990.

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

ARTICLES SUBMITTED FOR PUBLICATION:

BOOKS/CHAPTERS IN BOOKS:


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

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:
A. Supervised the following undergraduate students: Kara Reynolds.
B. Supervised the following graduate students: Carol Laherty, Tony Opipari, Ron Katz, Muneehew Tewari.
C. Supervised the following post doctoral fellows: Larry Holzman, Vidya Sarma, Rachel Yabkowitz, Theresa Bacon-Bagueley, 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 - $105,621, Principal Investigator, 35% effort.
2. #89-217 - American Heart Association Established Investigatorship Award - "Structure and Function of Thrombospondin", Period 07/01/89-06/31/94, Budget $35,000 annually, Principal Investigator.
3. DK39255-03 - "Mechanisms of Glomerular and Tubular Injury", Period 09/01/87- 07/31/92, Budget - $44,156, Co-Investigator, 10% effort, Roger C. Wiggins, Program Director.
4. American Heart Association - Grant-in-Aid - "Thrombospondin Heparin Binding Domain and Platelet Function", Period 07/01/90-06/30/93, $35,000 per year, Principal Investigator, 10% effort.
5. ACS-CD-466 - "Novel Thrombospondin Receptors on Squamous Carcinoma Cells", Period 07/01/90 - 06/30/92, Budget - $136,000, Principal Investigator, 10% effort.
6. NIH-HL45351-01 - "Cytokine Modulation of Endothelial Gene Expression", Response to RFA entitled "Developmental Biology of the Vessel Wall", Period 07/01/90 - 04/30/93, Budget $194,745, Principal Investigator, 15% effort.
7. NIH-CA51888 - "Novel Thrombospondin Receptors on Squamous Carcinoma Cells", Period 02/01/91 - 01/31/94, Budget $97,454, Principal Investigator, 20% effort.

PENDING GRANTS:
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, The International Conference on Biological Treatment of Melanoma and Other
   Cancers, New Castle, Australia, 1990.
2. Invited Speaker, Cor Therapeutics, Inc., S. San Francisco, California, 1990.
5. Invited Speaker, Washington University Medical Center, Respiratory and Critical Care Division,
   St. Louis, Missouri, 1991.
6. Invited Speaker, Mesangial Cells and Extracellular Matrix, International Society of Nephrology,
   Kloster Banz, Germany, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
1. Dixit, V.M., Green, S., Sarma, V., Holzman, L., Wolf, F.W., O'Rourke, K., Ward, P.A.,
   Prochownik, E.V. and Marks, R.M.: Tumor necrosis factor-α induction of novel genes in human
   endothelial cells including a macrophage specific chemotaxin. J. Biol. Chem. 1990;265:2973-
   2978.


ARTICLES SUBMITTED FOR PUBLICATION


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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. Postdoctoral Mentor for Hamed Benghuzzi, Ph.D.
   E. Participant, Clinical Pathology Grand Rounds.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

   A. USPHS (NIDDKD) 2P60AM20572-10: Michigan Diabetes Research and Training
      Center; Director Ligand Assay Core Facility, $129,322/yr., 1987-1992.
   B. USPHS (NICHD) 5T32HD07048-13: Training Program in Reproductive Endocrinology,
      Co-Investigator, $193,082/yr, 1975-1990.
   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 Laboratory, Diabetes Research and Training Center.
   B. Co-Director, Standards and Reagents Core Facility, Reproductive Sciences Program.
   C. Member, Selection Committee, Reproductive Sciences Program.
V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Autopsy Service.

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. Coordinator, Department of Pathology Summer Clinical/Research Program for Minority
   Medical Students.
I. Pulmonary Pathology Conference (monthly to Pulmonary Division - Internal Medicine).
J. Lecturer - Microbiology and Immunology 624.
K. Preceptor, Microbiology 620, Problem-Based Learning Tutorial.
L. Lecturer - Pathology 580.
M. Preceptor, Pathology 650
N. Preceptor - Undergraduate and Medical Student Research (6).
O. Graduate Student Ph.D. Thesis Committee (3).
P. Preceptor for one Postdoctoral Fellow.

III. RESEARCH ACTIVITIES:

A. Mechanisms of phagocytic cell-mediated tissue injury.
B. Signal transduction pathways of phagocytic cells.

SPONSORED SUPPORT:

A. Principal Investigator: Mechanisms of Myocardial Ischemia/Reperfusion Injury (NIH-
   R01-HL44085).
B. Principal Investigator: Myocardial Ischemia and Reperfusion Injury, (American Heart
   Association Grant-in-Aid).
C. Principal Investigator: Phagocytic Cell and Glomerular Injury. Section IV of Renal
   Center Grant (NIH-P50-DK39255).
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. Human Resource Committee.
E. Research Space Advisory Committee.
F. Department Computer Committee.
G. Department Photography Committee.

**MEDICAL SCHOOL/HOSPITAL:**

A. Medical Student Advisor (3rd and 4th year).
B. ICS - Executive Committee.
C. Basic Science Phase Committee.
D. Clinical Phase Committee.
E. Medical Student Basic Science Academic Review Board.
F. Medical Student Clinical Phase Academic Review Board.
G. Medical School Admissions Committee.
H. Medical School Retreat on Medical Education.

**REGIONAL AND NATIONAL:**

B. NIH Study Section: Pathology Á, 1990.
E. Reviewer, Veteran's Administration Research Grants.

V. **OTHER RELEVANT ACTIVITIES:**

**EDITORIAL BOARDS:**

A. Editorial Board, Infection and Immunity.
B. Editorial Board, Laboratory Investigation.
C. Reviewer, of Clinic Investigation.
D. Reviewer, Immunology.
E. Reviewer, Science
F. Reviewer, American Journal of Pathology.
G. Reviewer, Laboratory Investigation.
H. Reviewer, Journal of Biological Chemistry.
I. Reviewer, American Review of Respiratory Disease.
K. Reviewer, Circulation Research.
L. Reviewer, Biochemical Pharmacology.
M. Reviewer, American Journal of Physiology.
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:

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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:


B. Thoracic Tumor Review Board (Weekly).

II. TEACHING ACTIVITIES:

A. Pathology 600 Lectures:

B. Pathology 630:

C. Residency Training:

D. Other educational activities:

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.
D. Occupational and Immunologic Lung Diseases Scor Grant, Galen B. Toews, M.D., (Principal Investigator).

PROJECTS UNDER STUDY:
A. Methotrexate-induced Hepatic Disease: An Analysis of Sequential Liver Biopsy Samples.
B. DNA Analysis of Renal Cell Carcinoma: Entropy of DNA Histograms.
D. Interstitial Lung Disease: Influence of Biopsy Site on Diagnosis.
E. The Morphologic Manifestations of Metastatic Renal Cell Cacinoma to the Lung.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Interviewed House Officer Candidates (September, 1990-December, 1990).
B. House Officer Recruitment Brochure Revision and Publication.
C. Coordinator, Senior Staff Service Rotations.
D. Director, Surgical Pathology Fellowship Program.
E. Residency Selection Committee.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
1. Reviewer, American Review Respiratory Disease.
2. Reviewer, Archives of Pathology and Laboratory Medicine.

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:
SUBMITTED PUBLICATIONS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
A. Surgical Pathology - 1,935 cases.
B. Necropsy Service - one week.
C. Consultations on surgical gynecologic pathology from other hospitals and medical centers.
D. Weekly interdisciplinary Gynecologic Oncology Tumor Board Review.

II. TEACHING ACTIVITIES:
A. Pathology 600 Lectures:
B. Introduction to Clinical Sciences 601 Course.
C. Preceptor for medical student research project (Biomedical Research Program): Loss of heterozygosity of p53 in adenocarcinoma of the endometrium (Brad Slywka, B.A.).
D. Lecturer, two Anatomic Pathology Didactic Conferences.
E. Monthly Pathology-Gynecology teaching conference for house officers in OB-GYN.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
A. Horace H. Rackham Faculty Grant from the University of Michigan ($6,429 5/91 - 4/93): molecular analysis of clonality.
B. Phoenix Memorial Research Grant from the University of Michigan ($4,811 4/91 - 6/92): molecular analysis of clonality.

PROJECTS UNDER STUDY:
C. Diagnosis of histologically occult cytomegalovirus infection in immunocompromised patients using the polymerase chain reaction.
D. Diagnosis of mycobacterial infection in paraffin-embedded tissues using the polymerase chain reaction.
E. Mutations and gene loss of p53 locus in hepatocellular carcinoma.
G. Morphologic assessment of renal injury during vascular surgery, with L.G.D'Alecy, M.D.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Surgical Pathology representative to the Departmental Quality Assurance/Quality Control Committee.
B. Co-director, Clinical Molecular Diagnostics Laboratory (preserved tissue analysis development).

REGIONAL AND NATIONAL:

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

V. OTHER RELEVANT ACTIVITIES:

A. Gynecologic Oncology Group study section (Pathology).
B. Member of the University of Michigan Cancer Center.
C. Member of the University of Michigan Kughn Clinical Research Center.

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:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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:
   A. Co-Director of a laboratory section for Pathology 600.

MEDICAL SCHOOL/HOSPITALS:

   A. Program Director of the Ninth Annual Clinical Laboratory Computer Symposium at the
      attracted 210 registrants from 30 states and Canada plus 28 system vendors/laboratory
      consultants.

III. WORK IN PROGRESS:

   A. Friedman, B.A.: Information management aphorisms for the laboratory professional.
      (Submitted to MLO).
   B. Friedman, B.A. and Mitchell, W.: Integrating information from decentralized laboratory
      testing sites. (Solicited article in preparation for the "Patterns" supplement to the AJCP).
   C. Mitchell, W. and Friedman, B.A.: Information systems in hospitals: technical, political,
      and transaction costs explanations for departmental success and interdepartmental failure.
   D. Mitchell, W. and Friedman, B.A.: An evolutionary typology of vendors of laboratory
      information systems with special reference to clinical laboratory information systems (To
      be submitted to Clinical Laboratory Management Review).

IV. SERVICE ACTIVITIES:

   DEPARTMENTAL:

   A. Quality Assurance Committee.
   B. Editor, Pathology Electronic News (PEN).

   HOSPITAL COMMITTEES:

   A. ITN (Information Technology and Networking) Steering Committee.
UNIVERSITY OF MICHIGAN:

REGIONAL AND NATIONAL:
A. Council on Medical Informatics of the American Society of Clinical Pathologists.
B. Chairman of the Executive Council, Cerner User's Group.
C. Editorial Advisory Board, Clinical Laboratory Management Review.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


**ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN NON-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.
   D. Direct work group for the establishment of a quality assurance program for bedside blood glucose testing.
   E. Planning group for establishment of STAT labs at alternative sites in University Hospitals.

II. TEACHING ACTIVITIES:
    MEDICAL SCHOOL/HOSPITAL:
    A. Medical School:
       1. Developed case presentation on acute myocardial infarction for Path 600 Laboratory.
    B. Pathology House Officers:
       1. Lecturer, Clinical Pathology Rounds (two lectures).
       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.
    C. Medical Technologists:
       1. Program Director, Continuing Education Series for Medical Technologists.

III. RESEARCH ACTIVITIES:
    A. Evaluation and standardization of an assay for Lipoprotein (a).
    C. Evaluation of instruments for the measurement of blood glucose at the patients bedside.
    F. IDMH Study. Changes in serum lipids, apolipoproteins, 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".
B. Chair, Task Force on Standardization of Blood Glucose Testing.

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.
E. AACC Student Poster Presentation Judges Group

V. INVITED LECTURES:

VI. PUBLICATIONS:

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 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology - Room I and Room II, 17 weeks.
   B. Diagnostic electron microscopy - share nephropathology work with Dr. K. Johnson.
   C. Consultation service for Uropathology.
   D. Conduct monthly conference in Urologic Pathology with Urology Section.
   E. Participate in weekly Renal Biopsy Conference for Nephrology Section with Dr. K. Johnson.
   F. Frozen Section "on call" Rotation.
   G. Consultant, Veterans Administration Hospital.

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, August 20-September 14.
   E. Pathology Resident Teaching.

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:
   A. Member, Advisory Committee on Appointments, Promotion and Tenure.
MEDICAL SCHOOL/HOSPITAL:
A. Assistant Dean for Medical School Admissions.
B. Hospital Claims Control Committee.

UNIVERSITY:
A. 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.
D. NCAA Committee on Competitive Safeguards and Medical Aspects of Sports.
E. NCAA, NFL, U.S. Olympic Committee, American Association Clinical Chemists and 
   College of American Pathologists Committee on Sports Drug Testing Laboratory 
   Accreditation.
F. Deputy Medical Examiner, County of Washtenaw.
G. Board of Directors, Public Citizen, Inc. (Ralph Nader, Initial Chairman and Founder).

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
1. Lecture, "Epidemiology & Pathological Diagnosis of Prostate Cancer" at Prostate Cancer 
   Seminar, Blanchard Valley Hospital, Findlay, Ohio, May 4, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS
   Gikas, P.W.: Prostate cancer: Correlation of MR images with tissue optical density at pathologic 
   Glazer, G.M. and Gikas, P.W.: Carcinoma of the prostate: MR images obtained with body coils 

BOOK REVIEW
   Contemporary Issues in Surgical Pathology Series. American Journal of Surgical Pathology, In 
   Press.

ABSTRACT
None.
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 1990 - 30 JUNE 1991

I. **CLINICAL ACTIVITIES:** None.

II. **TEACHING ACTIVITIES:**

A. D.D.S. Level:
   a. Oral Pathology 694.10 Hours (Lecture).
B. Graduate Level Advisement:
   a. John Wataha - Ph.D. Program (Biomaterials) - three years.
   b. Celeste Swardoss - MSD Program (Oral Pathology) - 18 months.
   c. Rod Parsell - Undergraduate Research - three years.
   d. Fawzi El Shefei - MSD Program (Biomaterials) - nine months.
   e. John C. Fat - MSD Program (Endodontics) - 15 months.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**


IV. **ADMINISTRATIVE ACTIVITIES:**

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

C. Hazardous Waste Committee, School of Dentistry, 1987-1990 (Chairman).
F. Director of Research, School of Dentistry 1989-1991.
G. Vice-Chairman, Department of Oral Medicine, Pathology and Surgery, School of Dentistry, 1991.
I. Biomedical Research Council, University of Michigan School of Medicine 1990-1993.
J. Research Advisory Committee, Department of Surgery, 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).

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 REVIEW BOARDS:

A. Journal of Dental Research.
C. Journal of Periodontal Research.

INVITED LECTURES/SEMINARS:

1. Invited lecture, "In Vitro Testing of Dental Pulp Toxicity", Philadelphia section of the AADR as a part of a one-day symposium in the Summer of 1990.
2. Lecture, "Cyto-Toxicity and Adhesion as Measures of Responses by Eukaryotic Cells and Bacteria to Materials", Fall Conference of Specialized Materials Center in October, 1990.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES IN PRESS OR ACCEPTED BY PEER-REVIEWED JOURNALS:


ARTICLES SUBMITTED TO PEER-REVIEWED JOURNALS:


ABSTRACTS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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.
   4. Molecular Diagnostics Rotation
C. Hematopathology teaching:
   1. Hematopathology Lectures/Weekly.
   2. Hematopathology unknown conferences/biweekly.
D. Clinical Pathology Grand Rounds (two lectures).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None

PROJECTS UNDER STUDY:

A. Acute Biphenotypic Leukemias.
B. Immunophenotyping in Chronic Lymphoproliferative Disorders.
C. CD2-Positive Acute Myeloid Leukemia.
D. CD7 Expression in Acute Leukemias.
E. Cytogenetic Abnormalities in Myeloproliferative and Myelodysplastic Syndromes.
F. Automated Blood Differential Counts.
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, "Applications of Molecular Pathology to Diagnostic Pathology", Ontario Association of Pathologists, Windsor, Ontario, October 12, 1990.  
3. Lecturer, "Flow Cytometry and Southern Blotting in the Diagnosis of Leukemia and Lymphoma", Course presented at the American Society of Clinical Pathologists (ASCP), October 24, 1990.  
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


5. Ross, C.W., Hanson, C.A. and Schnitzer, B.: CD30 (Ki-1)-positive large cell lymphoma mimicking gastrointestinal carcinoma.

BOOKS AND CHAPTERS IN BOOKS:
1. Hanson, C.A.: The acute leukemias and myelodysplastic syndromes, in, McClatchey, K.D. (ed.), Clinical Laboratory Medicine, Williams & Wilkins, Baltimore, Maryland, In Preparation.

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
1. Hanson, C.A.: Multilobular variant of hairy cell leukemia: Case of the Quarter, Society for Hematopathology.
9. Hanson, C.A., Ross, C.W. and Schnitzer, B.: CD34 immunoperoxidase (IP) staining in bone marrow paraffin sections: Correlation with flow cytometric (FC) studies. Lab. Invest. 1991;64:73A.
11. Ross, C.W., Schlegelmilch, J., Grogan, T., Schnitzer, B. and Hanson, C.A.: Detection of Epstein-Barr virus (EBV) genome in Ki-1 (CD30)-positive, large cell anaplastic lymphomas (LCAL) using the polymerase chain reaction (PCR). Lab. Invest. 1991;64:83A.
I. CLINICAL ACTIVITIES:
   A. Dermatopathology, private consultations.
   B. Dermatopathology, M-Labs.
   C. Dermatopathology, UMH.
   D. Dermatopathology, tutorials.
   E. Autopsy Service (January).

II. TEACHING ACTIVITIES:
   A. Medical Students: (second year):
      1. Dermatopathology lectures.
      2. Second year Pathology Laboratory.
   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 histology of the alopecia of secondary syphilis.
   D. Textbook: The Pathology of the Hair Follicle.
   E. Genetic Changes in Melanoma (with J. Trent)

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 Committees For Dermatopathology. (American Boards of Pathology and Dermatology).
D. Member, Council on Clinical and Laboratory Services, American Academy of Dermatology.
E. Board of Directors, National Alopecia Areata Foundation.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

10. The University of South Florida, Tampa, April, 1991.

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 1990 - 30 JUNE 1991

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.)

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 surgical cases, 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. Supervised Pediatric Hematology Fellows (three) for AP elective period.
J. Conferences:
   1. Pediatric Cardiology Death Conference, monthly, all year.
   2. Pediatric Tumor Conference, twice monthly, all year.
   4. Pediatric Liver-GI Conference, approximately twice a month.

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. Ongoing review of the effects of pulmonary artery banding on the lung biopsy findings in young children with complete atrioventricular septal defect with pediatric cardiologists.
B. Continued long term study of aneurysm formation of repaired coarctation with pediatric cardiologists (see articles submitted).
C. Study of correlation, if any, of ECHO study of heart transplant patients with the histologic findings on simultaneous heart biopsy (see articles submitted).
D. Review of neoplasms in post transplant patients with the pediatric cardiologists.
E. Study of the differential development of renal tubules and glomeruli in twin fetuses and newborns with Mason Barr, M.D.
F. Study of the effect of ACE inhibitors on renal tubular maldevelopment with Mason Barr, M.D.
G. Correlation of X-rays, operative findings and histologic features of osteoblastoma and osteoid osteoma of the spine with orthopedic surgeons (see abstracts).
H. Review of the predictie valve of pre-ECMO lung biopsy in determining recovery of pulmonary function with ECMO surgeons, pediatric pulmonologist and Dr. Andrew Flint.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Departmental ACAPT.
B. Interviewing fellowship candidates for Surgical Pathology.

MEDICAL SCHOOL/HOSPITAL:

A. Executive Committee for Mott/Women's/Holden/Psychiatric Hospitals.
B. Executive Committee of the Medical School, 1987-1990 (until August 31).
C. Interviewing Pediatric Cardiology Fellowship Candidates.
D. Dean's External Review Committee for Department of Physical Medicine and Rehabilitation.

REGIONAL AND NATIONAL:

A. Member, American Board of Pathology Test Committee for Pediatric Pathology.

V. OTHER RELEVANT ACTIVITIES:

A. Certified, by examination of the American Board of Pathology, for Special Qualification in Pediatric Pathology. November, 1990.
B. Recipient of the Mother Mary Catherine McGrann Alumni Achievement Award of College Misericordia, Dallas, Penn., June, 1991.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


ABSTRACTS:

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

ANNUAL DEPARTMENTAL REPORT
July 1, 1990 - June 1, 1991

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. Occasional neurosurgical pathology diagnoses.

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: 2 hours.
C. Neuropathology 858 for house officers in Pathology, Neurology, Neurosurgery and other departments, and graduate students. 18 hours including 2 lectures.

III. RESEARCH ACTIVITIES

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

A. Thrombospondin in astrocyte reactions. Thrombospondin (TSP), a glycoprotein of extracellular matrixes, has been known to be associated with migrating cells and neurite growth in the developing nervous system and is found in the surfaces of mature astrocytes. Our interest has been in what the relation might be between TSP and the hypertrophy and multiplication of astrocytes (gliosis) that follows destructive injuries of the central nervous system. We reported earlier that TSP increases in astrocytes near a surgical incision in the mature rat cerebral cortex during the third week after the injury when the hypertrophic growth is most active. Further studies are in progress to see whether increased TSP persists in the astrocytes which remain hypertrophied indefinitely. The matter is of interest because gliosis, which may have originated early in the course of evolution as part of the process of regeneration of injured nerve cell axons, has become a liability by forming an impenetrable barrier of fibers preventing the regeneration. Might excessive TSP be to blame for the hypertrophy? (O'Shea, D'Amato, Dixit, Hicks).

B. Functions of fetal rat brain phagocytes. We reported earlier that the phagocytes produced superoxide anion and phagocytosed disintegrating premature neural cells killed by radiation, but paradoxically those regions in which phagocytes appeared showed the greatest regenerative capacity, malformation occurring in regions where phagocytes were absent. Since phagocytes (macrophages) play an important role in regeneration of adult injured peripheral nerves but not injured CNS axons, we wish to determine whether the fetal CNS is exceptional, its phagocytes possibly promoting all aspects of fetal regeneration. (Varani, Fleigiel, D'Amato, O'Shea, Hicks and others).

C. Pathologic studies of the autopsy brains of people with various forms of dementia and related nervous diseases in collaboration with members of the Department of Neurology and others.
IV PUBLICATIONS


ABSTRACTS

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. "Oxidants and Protease Interaction in Acute Lung Injury". National Institutes of Health. Principal Investigator. $834,625 for five years.
   B. "Oxidants and Glomerular Injury", Project V, Renal Center Grant. National Institutes of Health. Principal Investigator, $246,585 for five years.
   D. "Inflammatory Cells and Lung Injury", Core C. National Institutes of Health, Principal Investigator, $291,025.
   E. "Crescentic Nephritis Program Project", Core B, Principal Investigator, National Institutes of Health, $204,490.

PENDING SUPPORT:
   D. "DNA Methylation and SLE", with Bruce Richardson, Rheumatology. National Institutes of Health, Co-Investigator.
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.
F. Adhesion molecules and cytokines in inflammation.
G. Cyclosporine induced nephrotoxicity.

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. INVITED LECTURES AND SEMINARS:

3. Visiting Professor, Sandoz Pharmaceuticals and the University of Basle, Basle, Switzerland.
4. New Concepts in Glomerulonephritis. St. John's Hospital, Lecture Series, Detroit, MI.

VI. OTHER RELEVANT ACTIVITIES:

A. Consultant on Dermatology and Nephrology training grants.
VII. 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.I.BIOL.
PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENT REPORT
1 JULY, 1990 - 30 JUNE, 1991

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

II. TEACHING ACTIVITIES:
   A. Directed weekly 1990-91 Clinical Pathology Grand Rounds.
   B. Coordinated weekly 1990-91 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. Resolution of ABO Typing Problems
      2. Biochemistry/Genetics of ABH, Se, Le, P and I systems
      3. Rare blood typed.
   F. Trained Pathology and Pediatric Hematology Residents in Immunohematology.
   G. Provided instruction to Pathology Residents during their Blood Bank Rotation.
   H. Director, Current Topics in Blood Banking Conference, Towsley Center for Continuing Medical Education:

III. RESEARCH ACTIVITIES:

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
   A. Blood Bank Daily Rounds.
   C. Monthly Clinical Pathology Faculty Meetings.
REGIONAL/NATIONAL:

A. Michigan Association of Blood Banks:
   1. Chairman, Specialist in Blood Banking Program.
   2. Annual Meeting Program Committee.
B. American Association of Blood Banks: Board of Directors, North Central District Representative.
C. Reviewer of articles submitted for publication in Transfusion.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES:


WORKSHOPS/PANEL DISCUSSIONS:

VI. PUBLICATIONS:

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


CHAPTERS IN BOOKS:


ABSTRACTS/LETTERS:

PAUL D. KILLEN, M.D., PH.D.
ASSISTANT PROFESSOR AND
ASSISTANT RESEARCH SCIENTIST
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Autopsy Pathology.
B. Diagnostic Renal Biopsy Service.

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. Renal Pathology for Nephrology Fellows (20 contact hours).
F. Post Doctoral Fellows (three).
G. Graduate Students (four).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH-P01-HL31963, Principal Investigator, Project VI "Molecular Biology of Alveolar Wall Injury", (40% Effort) $87,140/year, 3/1/89 - 2/28/94.
B. NIH-DC39225 Principal Investigator, Project XI "Monokine-Mediated Matrix Biosynthesis by Mesangial Cells", (10% Effort) $39,110/year, 8/1/88 - 7/30/93.
D. NIH-RO1-DK37448, Co-Investigator, "Cellular Function of the Juxtaglomerular Complex", (5% Effort), $913,156 total, 07/01/91 - 06/30/96.
E. American Heart Association of Michigan, Principal Investigator, "Mesangial Cell Expression of Collagen IV Genes", (5%) $24,500/year, $49,000/2 years, 07/01/89 - 06/30/91.
F. American Heart Association-Grant-in-Aid, Principal Investigator, "Collagen IV Gene Regulation During Renal Development", $25,500, 07/01/91 - 06/30/92.
G. MDRTC Pilot/Feasibility, Principal Investigator, "Collagen IV Metabolism by Human Retinal Pigment Epithelial Cellls in Vitro"

PENDING SUPPORT:

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.
E. Role of aldose reductase in diabetic complications.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Post-doctoral candidate recruitment, Immunopathology Training Grant.

MEDICAL SCHOOL/HOSPITAL:

A. Faculty recruitment - Department of Pathology.
B. Faculty recruitment - Department of Internal Medicine.

REGIONAL AND NATIONAL:

A. Planning Committee, Genetic Basis of Renal Disease. NIDDK, NIH.
B. Ad hoc reviewer, Division of Extramural Activities, NIDDK, NIH.
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:

BOOKS/CHAPTERS IN BOOKS:

ABSTRACTS, BOOK 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 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:
A. Inflammation/Immunopathology Series ICS-600.
B. Pathology 581.
C. Pathology 650.
D. Pathology 850.
E. Course co-director "Cellular and Molecular Basis of Disease" (with Dr. Jeffrey Bonadio)
F. Epidemiology 570.
G. Member, Pathology Graduate Program Committee
H. Member, Molecular Pathogenesis Training Grant (Microbiology).
I. Member, Immunopathology Training Grant (Pathology).
J. Member, Operating Committee, Systems and Integrative Biology Training Grant (Physiology).
K. Teaching/Research Seminars in various departments.
L. Supervised the following postdoctoral fellows, residents, and graduate students: Drs. Kim Brown, Amanda Thornton, Lynn Abruzzo, Mark Rolfe, Robert Schmouder, Ted Standiford, Charles Dibb, Andy Metinko, Kieta Kasahara and John Ham, and Susan Moore and Rob Smith.
M. Undergraduate students: Mark Milia, Andy Gilbert, Paul Holman, Rick Dwyer, and Dan Scharbaum.
N. Doctoral Committee Member/Oral Presentation Committee for the following graduate students: Susan Moore, Ron Allen, Cindy Hoorn, Paul Bojjanen and Oswald D'Auvergne.
O. Mentor for Dr. Alisa F. Koch, Northwestern University Medical School; sabbatical leave.

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. NIH - Crescentic Nephritis; Program Project P01-DK83149; Principal Investigator - Section II.
E. NIH - Fibroblast Heterogeneity in Pulmonary Fibrosis; HL-39925; Co-investigator.
F. Tobacco Research Institute - Principal Investigator.
PROJECTS UNDER STUDY:

A. Regulation of macrophage signals that dictate immune responsiveness.
   1. Tumor necrosis factor production.
   2. Chemotactic cytokines.
   3. Endogenous regulators of cytokine expression.
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. Operating Committee Graduate Program.
B. Space Utilization and Research committee.
C. Committee on Master Planning.
D. Interview Candidates for Residency Program/Graduate Program.

MEDICAL SCHOOL/HOSPITAL:

A. Member, University Senate Assembly.
B. Committee on Medical Student Research.
C. Medical School Admission Interview Committee.
D. Medical School Admissions Executive Committee.
E. Medical Scientist Training Program Interview Committee.
F. Biomedical Research Council Committee.
G. 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. Editorial Board Rapid Communications/Mediators of Inflammation.
F. Program Advisory Committee, Third International Workshop on Cytokines.
G. Member, American Association of Pathology Program Committee.
I. Grant Reviewer, United States Department of Agriculture.
J. Grant Reviewer, The Arthritis Society.
K. Grant Reviewer, Veterans' Administration.
L. Grant Reviewer, The Scleroderma Foundation.
M. Session Chair, FASEB, Regulation of Cytokine and Cytokine Receptor Gene Expression.
N. Long Range Planning Committee, American Association of Pathology.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. Visiting Professor, Department of Medicine, Division of Pulmonary Medicine, Mayo Clinic, Rochester, Minnesota, September, 1990.
2. Invited Speaker, Biogen, Cambridge, Massachusetts, October, 1990.
3. Visiting Professor, Department of Microbiology/Immunology, University of Kansas Medical School, Kansas City, Kansas, November, 1990.
7. Invited Faculty Lecturer, German Society of Pharmacology, Hannover, Germany, December, 1990.
8. Visiting Professor, Department of Microbiology and Infectious Diseases, University of Calgary, Calgary, Alberta, December, 1990.
9. Invited Speaker, Department of Microbiology/Immunology, Wayne State University, Detroit, Michigan, January, 1991.
10. Invited Speaker, Department of Surgery and Critical Care, University of Massachusetts, Worcester, Massachusetts, January, 1991.
13. Invited Speaker, Department of Microbiology/Immunology, University of Oklahoma Health Science Center, Oklahoma City, Oklahoma, March, 1991.

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:


TULLIA LINDSTEN, M.D., PH.D.
ASSISTANT RESEARCH SCIENTIST
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES: None.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Tullia Lindsten, "Lymphokine-specific RNA binding proteins, NIH CA54521 (50%). $70,717/year ($350,000/five years). 4/15/91 - 03/31/96.

IV. ADMINISTRATIVE ACTIVITIES:

None.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

None.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES
   A. Surgical pathology - 12 weeks.
   B. Autopsy Pathology - 1 week
   C. Consultant for endocrine lesions.
   D. Consultant to Veterans Administration Medical Center, Ann Arbor, Michigan.
   E. Consultant for immunochemistry cases.

II. TEACHING ACTIVITIES:
   A. Lectures to sophomore medical students - Pathology 600
   B. Pathology 600 Laboratory - 1 semester.
   C. Fourth Year medical student rotation in Pathology - 1 month.
   D. Lecture to dental students - Pathology 630.
   E. Lectures to pathology house officers.
   F. Immunoperoxidase Rounds - twice monthly.
   G. Supervision of four postdoctoral fellows in research laboratory (Dr. L. Jin, Dr. E. Kulig, Dr. K. Zhang, Dr. T. Maeda).
   H. Honors Elective Course for undergraduate students (Annie Chang) - 1 semester.
   I. Laboratory Session for Graduate Students in Pathology 650 Course - Immunochemistry and In situ hybridization.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   B. Studies of Normal and Neoplastic Human Pituitary Tissues. NIH Grant CA 42951, 7/86 - 6/90 and 7/90 - 6/95 (PI - R. Lloyd), $1,065,133

PROJECTS UNDER STUDY:
   A. Regulation of pituitary growth and differentiation in humans, rats and mice.
   B. Applications of immunochemical and molecular biological techniques to diagnostic pathology.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director of Immunoperoxidase Service.
B. Coordinator of Anatomic Pathology Journal Club.
C. Pathology Graduate Training Program Committee.
D. Space Utilization Committee.
E. Committee to Update Surgical Pathology Cutting Manual

**MEDICAL SCHOOL/HOSPITAL:**

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

**REGIONAL AND NATIONAL:**

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

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURE AND SEMINARS**

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


ARTICLES SUBMITTED FOR PUBLICATION


BOOKS/CHAPTERS IN BOOKS


BOOKS:


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

JOHN B. LOWE, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

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

II. TEACHING ACTIVITIES:

A. Supervision of six postdoctoral fellows (Robert Larsen, Ph.D., Nozomu Hiraia, M.D., Ph.D., Brent Weston, M.D., Marco Trinchera, M.D., Aron Thall, Ph.D. and Rosella Mollicone, Ph.D.) and one M.D., Ph.D. thesis student, (Mr. Kevin Gersten).

B. 1. Lecturer - Pathology 581
    2. Lecturer - Pathology 850

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:


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


PROJECTS UNDER STUDY:

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:

A. Resident Selection Committee.
REGIONAL AND NATIONAL:

V. OTHER RELEVANT ACTIVITIES:
A. Howard Hughes Medical Institute, Assistant Investigator.

INVITED LECTURES AND SEMINARS:
5. ELAM-1-dependent cell adhesion to vascular endothelium determined by a transfected human fucosyltransferase cDNA, Genentech Corp., South San Francisco, California, November, 1990.
12. Endothelial adhesive events determined by transfected human fucosyltransferase cDNAs, University of Texas Southwestern Medical Center, Dallas, Texas, March, 1991.
20. Genetics of glycosyltransferases and implication in cell adhesion, Kyoto University, Kyoto, Japan, June, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


ARTICLES SUBMITTED OR IN PREPARATION:

1. Larsen, R.D., Ernst, L.K., Rajan, V.P. and Lowe, J.B.: Multiple transcripts generated by the human H blood group α1,2 fucosyltransferase gene.


4. Weston, B.W., Nair, R.P. and Lowe, J.B.: Molecular cloning and expression of a human DNA restriction fragment encoding an α(1,3) fucosyltransferase homologous to the Lewis blood group α(1,3/1,4) fucosyltransferase.


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


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

ANNUAL DEPARTMENTAL REPORT
July 1, 1990 - June 30, 1991

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, 25 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.
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.
B. Advisor, Medical and Biological Illustration Program, The University of Michigan Medical School, 1986-present.
D. Chairman, Laboratories Committee of the Medical Staff, The University of Michigan Hospitals, 1987-present.
E. Chairman, Quality Assurance Committee, The University of Michigan Hospitals, 1989-present.
F. Member, Claims Control Committee, The University of Michigan Hospitals, 1990-present.
G. Member, Patient Care Advisory Committee, The University of Michigan Hospitals, 1989-present.
H. Member, Transplant Program Task Force, The University of Michigan Hospitals, 1990-present.

REGIONAL AND NATIONAL

A. College of American Pathologists, Fellow, 1975-present.
   1) Board of Governors, 1986-present.
   2) Liaison, Standards Committee, 1986-present.
   3) Chairman, Commission on Anatomic Pathology, 1986-present.
B. National Committee for Clinical Laboratory Standards, Corresponding Membership, 1987-present.
   1) Council of the National Reference System for the Clinical Laboratory, 1987-present.
   2) Subcommittee on Cost Accounting, member, 1986-90.
   3) Chairman, Area Committee on General Laboratory Practice, 1986-90.
   4) International Relations Committee, member, 1988-present.
   5) Subcommittee on Standardization of the PAP Technique, 1988-present.
C. American Society of Clinical Pathologists, 1975-present.
   1) ASCP Advisory Council, 1984-present.
   2) ASCP Advisory Council, State Councilor, 1987-present.
D. Michigan Society of Pathologists, 1982-present.
   1) Editor, Newsletter, 1988-present.
F. American Society for Testing Materials (ASTM)
   1) Committee F31 on Health Care Services, member, 1988-present.
G. Member, National Fetal-Infant Mortality Review Program Steering Committee, 1990-present.
INTERNATIONAL

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

V. OTHER RELEVANT ACTIVITIES

INVITED LECTURES/SEMINARS


2. Visiting Professor, Emory University School of Medicine, Atlanta, GA. presentations include: 1) Paranasal Sinus, Salivary Gland, and Alveolar Bone Disease, 2) Laboratory Medicine in the '90's: Management Issues. October 8 & 9, 1990.

3. Moderator and lecturer of Residents' Seminar: Reimbursement in the Clinical Laboratories. CAP/ASCP Fall Meeting, Dallas, TX, October 20, 1990.


VI. PUBLICATIONS

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


ARTICLES SUBMITTED FOR PUBLICATION


BOOKS AND CHAPTERS IN BOOKS


BOOKS OR JOURNALS EDITED


PAMPHLETS


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
A. Examination of autopsy neuropathologic material - four months.
B. Daily surgical neuropathology and electron microscopic neuropathology - four months.
C. Consultations on surgical neuropathology from other hospitals - 12 months.
D. Ceroid Service, buffy coat division - 12 months.
E. Nerve and muscle biopsy services - four months.
F. Weekly Brain Tumor Board Review of Neurosurgery, Neuroradiology, Neuropathology and clinical-pathologic correlation - four months.
G. Diagnostic neuropathology consultant, Veterans Administration Hospital.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
A. Neural and Behavioral Sciences 600, Neuropathology for Second Year Medical Students.
B. Neuropathology 858, Intensive laboratory-lecture course for beginning House Officers in Pathology and in several clinical services, Graduate Students and Faculty - 16 hours of instruction.
C. House Officers:
1. Review of neuropathological postmortem material - four months.
2. Review all neurosurgically removed material in this hospital in CME-approved biweekly conference - four months.
4. Invited presentations of neuropathologic observations at joint Pathology-Neurology-Neurosurgery and clinical conferences.
5. One month elective in Neuropathology.
6. Pathology Resident’s monthly Neuropathology Conference - four months.
7. Weekly Neuromuscular Conference - four months.
8. Individual daily instruction of Pathology House Officers over microscope.
D. Medical Students:
Neuropathology electives - four students.
E. Teach laboratory techniques and writing skills to Neurohistologists and Research Staff.

REGIONAL AND NATIONAL:
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 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.

D. National Institutes of Health Grant NIH CA54104, "PET, Growth Kinetics and Neuropathology of Brain Tumors", Co-investigator. 5/1/91-4/30/95.

PROJECTS UNDER STUDY:

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


C. Extracellular matrix products and plasminogen activators of gliomas with Drs. James Varani, Robert Sitrin, Dario Caccamo, and Suzanne Fliegel.

D. Distribution of microspheres in tumor and normal tissues, three-dimensional tumor dosimetry for hepatic Y microsphere therapy with Drs. William Ensminger, Peter Roberson and Randall Ten Haken.

E. Magnetic resonance diffusion and cross relaxation of brain tumors with Drs. Thomas Chenevert and Brian Ross. Grant pending.


I. Prognostic potential of nuclear organizers in myxopapillary ependymoma with Dr. Donald Ross.

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 UNREFEREED JOURNALS:**


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. None.

II. TEACHING ACTIVITIES:

A. Lectures:

1. Taught portion of Mammalian Reproductive Endocrinology, Physiology 581 (six hours lecture; ten contact hours).

B. Primary Supervision of Two Postdoctoral Fellows:

1. Beverly Strassman, Postdoctoral fellow working on NIH F32 fellowship.
2. Daniel McConnell, Postdoctoral fellow working on chemiluminescence-based assays (applications for support pending to NIH and Lindburgh Fund).

C. Primary Supervision of five graduate students:

2. Craig Halberstadt, Bioengineering - defense scheduled for 7/25/91.
4. Jane Wiesen, Cellular and Molecular Biology (presented at the Endocrine Society and to present at the Society for the Study of Reproduction) - defense probably in December.
5. Hal Cantor, Bioengineering (invited address before the Consortium for the Scientific and Industrial Use of the Macintosh; presented at the Society for the Study of Reproduction; presented at the Third International Meeting on Chemical Sensors.) - defense probably in December.

D. Service on Other Dissertation Committees:

1. Gyun Minn Lee, Ph.D. defense on 8/24/90, Chemical Engineering.
2. Soong Kwak, Ph.D. defence on 6/13/91 (Mental Health Research Institute.
5. Dan Burdick, current, Music.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Gonadotrophin Control of the Ovary", NIH RO1 HD18018 (10%), $85,380 TDC current year. 3/1/88-11/30/91. This is my major source of research support. A competitive renewal was submitted on 6/29/91.

B. Principal Investigator, "Center for the Study of Reproduction", NIH P30 HD18258 (10%) (5% as Director of Administrative Core; 5% as Director, Standards and Reagents Core), $337,266 TDC year #3, 3/1/89-2/28/94 None of this is for my research support.

C. Mentor, "Training Program in Reproductive Endocrinology", NIH T32 HD-07048 (5% maximum effort). None of my trainees are currently supported on this grant.

D. Co-investigator, "Site-Directed Bioreagent Immobilization for Development of Microbiosensor Assays", NSF ECS-8915497 (6%) (Principal Investigator Richard Brown, Department of Electrical Engineering and Computer Science), 9/1/89-8/31/92, $181,811 2nd year total costs Role: My annual support from this grant, $13,199, is for one graduate research assistant, Hal Cantor.

E. Mentor, "The Reproductive Endocrinology of the Dogon," NIH F32 HD07480 (5%), Individual postdoctoral fellowship for Beverly I. Strassmann, 01/01/91-01/31/93. Cost shared.

PROPOSAL WRITING:

A. DOE Equipment proposal, October 1990: not selected for submission.

B. Michigan Memorial Phoenix Project: Development of a non-radiometric chemiluminescent energy transfer immunoassay: not funded.

C. OVPR Small Instrumentation Award for Ultralow Temperature Freezer, funded.

D. NIH Instrumentation Program: for Luminoskan microplate luminometer: funded ($27,700 from NIH; balance from RSP).

E. Equipment proposal to BRSG (Principal Investigator: Fred Karch): Research in Reproductive Biology for Microtome and Microscope; Assisted with Preparation: microtome funded ($10,000).

F. NIH P30 Administrative supplemental request for P30 S&R Core: Denied for insufficient funds.

G. NIH K11 Physician Scientist Award Non-competitive renewal (Principal Investigator, Mahmoud Ghazzi): assisted: funded.

H. NIH P30 Center, Non-competitive renewal: funded.

I. NIH T32 training grant non-competitive renewal (Principal Investigator: Doug Foster): assisted with preparation: funded.

J. NASA: Assisted ERIM with development of a section of an application for studying the physiology of animals in space. Pending.


L. NIH F32 fellowship application, Beverly Strassmann: The reproductive endocrinology of the Dogon.: funded.

M. NIH F32 fellowship application, Dan McConnell: Development of novel luminescence-based immunoassays: Submitted 5/8/91; Pending.

O. U54 Cooperative Consortium Infertility Center grant. Associate Director of Center; Principal Investigator of project: Gonadotrope-response to ovulation-controlling signals; Director of Assay Development Core. Submitted 6/1/91, Pending.


SCIENTIFIC COLLABORATIONS:


B. Chemical Engineering: Bernhard Palsson: joint mentorship of Craig Halberstadt; mass culture of hybridoma cells.

Rane Curl: with Craig Halberstadt, development of a mathematical model describing a transtubular bioreactor.

C. Chemistry: Mark Meyerhoff: (with Richard Brown) NSF-funded project aimed at developing multisite, antibody-based solid state microelectrodes.


Richard Brown: (with Mark Meyerhoff) NSF-funded project aimed at developing multisite, antibody-based solid state microelectrodes.

E. Internal Medicine: David Humes: study of the ability of kidney stem cells to form tubules and, perhaps, to interact with endothelial cells to form glomeruli and an artificial kidney in a three dimensional transtubular bioreactor (aim of developing artificial organs).

F. Nursing: Nancy Reame: joint development of the U54 infertility center grant.

G. Pathology: Jim Varani: study of the ability of endothelial cells to form capillaries in a three dimensional transtubular bioreactor (aim of developing artificial organs).

H. Pediatrics: Vasantha Padmanabhan: joint development of a project to include in the U54 center application and a separate RO1 grant - concerning the responsiveness of pituitary cells to GnRH.


J. ERIM: David Conrad: potential of using microsensors to monitor the physiology of animals in space.

K. Michigan State University, Animal Science: James Ireland: development of a solid state, two site chemiluminescence-based immunoassay for inhibin.

L. Wayne State University, Obstetrics and Gynecology: Ruth Moore: examination of the response of sheep pituitary cells in perifusion to GnRH.

M. Wayne State University, Chemistry: Paul Schaap: with Dan McConnell, development of new approaches for chemiluminescent immunoassays.

INTELLECTUAL PROPERTIES ACTIVITY:

A. Submitted Response to Final Office Action for Bioreactor System (UM File #136).

B. Submitted patent application, Bioreactor System with alginate matrix (UM File #548)

PROJECTS UNDER STUDY:

A. Development of a computer-controlled perifusion system for on-line analysis of cellular response to pulsatile and other controlled signalling.
B. Analysis of dynamic control of pituitary function by GnRH: 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 and the development of artificial organs.
E. Development of novel biosensors and immunoassays.
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, Center for the Study of Reproduction.
B. Director, Standards and Reagents Core Facility.
C. Member, Selection Committee

UNIVERSITY:

A. Director, Reproductive Science Program.
B. Member, committee to Review IOG, CHGD and RSP.
C. Proposed the establishment of a Women's Health Initiative.
D. Initiated the establishment of a Michigan Reproductive Medicine Consortium (This led to submission of the U54 Consortium Center grant).
E. Interviewing candidates for Internal Medicine, Ob-Gyn, Perinatal Medicine, IOG.

REGIONAL AND NATIONAL:

A. Member, NIDDK Endocrinology Research Program Advisory Committee, 1986-.
B. Member, NIDDK Hormone Distribution Program Subcommittee, 1986-.
C. Member, NIH Reviewers Reserve, 1989-.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Member, Site visit team, P30 Center grant application, Harvard University/ MGH, Boston, Massachusetts, July 23-25, 1990.
2. Center Directors meeting, Nashville, Tennessee.
3. 23rd Annual meeting of the Society for the Study of Reproduction.
5. Member, Site visit team, P30 Center grant application, University of Washington, Seattle, Washington, September 26-28, 1990.
6. Member, Site visit team, P01 Program Project grant application, Cornell University, Ithaca, New York, October 21-23, 1990.
7. Member, Site visit team, P30 Center grant application, University of Pittsburgh, Pittsburgh, Pennsylvania, November 8-10, 1990.

**RELEVANT ACTIVITIES:**

1. Developing an immunoassay analysis system to meet the needs of the Department of Pathology Ligand Assay Laboratory (Lig Anal).
2. Distributed to other scientists in the U.S. materials developed for presentation before 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 and chemiluminescence-based, solid state, two site immunoassays in Standards and Reagents Core as a partial replacement for radioimmunoassays (and thereby reduction in usage of radioactive isotopes).
4. Initiated collaboration with Lumigen, Inc., of Detroit, Michigan, the world leader in development of chemiluminescent substrates for immunoassays and molecular probes.
5. Assisted the National Hormone and Pituitary Program by evaluating collected antisera to cyclic AMP and preparing a pool for them to distribute for radioimmunoassay of cyclic AMP.
6. Met with Board of Directors or Scientific Advisory Board of BioQuant, Inc. on August 10, October 8, January 11, March 29, April 18.

**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:**


THESES-RELATED MANUSCRIPTS NEARLY READY FOR SUBMISSION


8. Wiesen, J.F. and Midgley, A.R., Jr.: A decrease in ovarian c43 gap junction mRNA levels following the preovulatory surge of luteinizing hormone.


I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Graduate students:
      1. Responsible during the current academic year for teaching activities for the following:
         a. One session Pathology 581 (Kunkel).
         b. Eight sessions Physiology 604 (Faulkner).
         c. Pathology 620 (Miller), "Genetics and Cell Biology of Aging" scheduled for Fall, 1991.
      2. Ph.D. Thesis sponsor for Jia Shi (Pathology Department, Boston University).

   B. Undergraduate students:
      a. None.

   C. Postdoctoral Fellows:
      1. Duaine Jackola, Ph.D.
      2. Li Shaokang, U.S.
      3. Jacek Witkowski, Ph.D.
      4. Jagadananda Ghosh, Ph.D.
      5. Paul Turke, Ph.D.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

   A. Principal Investigator, "Activation Defects in Aging T Cells", NIH AG-08904 (35%), $192,108/year ($1,292,667/five years), 8/1/90-7/31/95. MERIT Award. [Note: values given are total costs, i.e. Direct costs plus indirect costs projected at 59%.]

   B. Principal Investigator, "T Cell Repopulation After Bone Marrow Transplantation", NIH CA-42148 (15%). $100,819/year, ($100,819/one year awarded to University of Michigan; continuation of grant from Boston University), 9/30/90 - 3/31/92.

   C. Principal Investigator, "Aging Effects on IL-2 Secreting Helper T Cells", NIH AG-03978 (15%), $106,690/year ($106,690/one year awarded to University of Michigan; continuation of grant from Boston University), 8/10/90 - 7/31/91.
D. Training Supervisor, "Research Training Agreement: Postdoctoral Training in Aging and Growth Control", Boston University (NIH/NIA Prime) (0%), $20,304/year ($20,304/one year), 10/1/90 - 9/30/91.
E. Principal Investigator, "High Volume Scintillation Counter," University of Michigan Biomedical Research Support Grant (0%), $18,000/year ($18,000/one year).
F. Core Director, "Core Facility for Aged Rodents", NIH AG-08808 (10%), $78,278/year direct costs ($390,000/five years direct costs), 9/1/89 - 8/30/94. [Component of Geriatric Research and Training Center, J. Halter, Program Director].

**PENDING:**

A. Principal Investigator, "Aging Effects on IL-2 Secreting Helper T Cells", NIH AG-03978 (25%), $294,294/year ($1,655,031/five years), 7/1/91-6/30/96.
B. Program Director, "Research Training in Experimental Immunopathology", NIH AI-07413, $122,966/year ($1,349,088/five years), 4/1/92-3/31/97.

**IV. ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Committee on Master Planning Analysis.

**MEDICAL SCHOOL/HOSPITAL:**

A. Institute of Gerontology: Faculty Executive Committee.
B. Geriatric Center and Institute of Gerontology: Director, Core Facility for Aged Rodents.
C. Member, Geriatric Center Research Operating Committee.

**REGIONAL AND NATIONAL:**

A. Board of Scientific Advisors, Buck Center for Research on Aging.
B. Research, Education and Practice Committee, Gerontological Society of America.
C. Immunobiology Study Section (ad hoc).
D. Elected Fellow, Gerontological Society of America.
E. Chair-Elect, Gordon Research Conference on "Biology of Aging".
F. Board of Scientific Advisors: American Federation for Aging Research.

**V. OTHER RELEVANT ACTIVITIES:**

**EDITORIAL BOARDS:**

A. Journal of Immunology.
B. Aging: Immunology and Infectious Disease.
C. Journal of Gerontology: Biological Sciences.

**INVITED LECTURES/SEMINARS:**

2. Invited Lecturer, "Activation Defects in T Lymphocytes from Aging Mice", Department of Microbiology, University of Kansas, Kansas City, October 25, 1990.
4. Invited Lecturer, "Activation Defects in T Lymphocytes from Aging Mice", Division of Geriatric Medicine, Harvard University, December 7, 1990.


7. Invited Lecturer, "Gerontology as Oncology: Research on Aging As The Key To The Understanding of Cancer", American Cancer Society Workshop on Cancer in the Older Person, Atlanta, Georgia, March 14-16, 1991.


12. Invited Lecturer, "Immune Function in Diet Restricted Rodents", Department of Physiology, University of Texas Health Science Center, San Antonio, Texas, May 27-28, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


150

BOOKS/CHAPTERS IN BOOKS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. None.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   A. Co-Investigator, "Role of Adhesion Molecules in Psoriasis", National Institute of Health, Grant 1-R01-AR40065, $416,759, direct cost, three years. (B.J. Nickoloff, Principal Investigator).
   B. Co-Investigator, "Interaction of Interferon γ with Keratinocytes", National Institutes of Health, Grant AR-38957-03, $167,284, direct cost, three years. (B.J. Nickoloff, Principal Investigator).
   C. Co-Investigator, "Dermal Dendrocytes and AIDS-Related Psoriasis", National Institutes of Health, Grant 1-RO1-AR-40488, $573,176, direct cost, three years. (B.J. Nickoloff, Principal Investigator).

   PENDING:
   A. Cytokine Network in Psoriasis; Competitive renewal of RO1-AR40065, (B.J. Nickoloff, Principal Investigator, R.S. Mitra, Co-Investigator)

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 newcomers to the laboratory.

   MEDICAL SCHOOL/HOSPITAL:
   A. None.

   REGIONAL AND NATIONAL:
   A. 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:

BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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. Senior medical students during pathology electives.
   D. Sophomore medical students: class lectures.

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 and Co-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:


HONORS AND AWARDS:

1. Papanicolaou Award for 1990 of the American Society of Cytology.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


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

BRIAN J. NICKOLOFF, M.D., PH.D.
ASSOCIATE PROFESSOR OF PATHOLOGY AND DERMATOLOGY
DEPARTMENT OF PATHOLOGY
DEPARTMENT OF DERMATOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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. Five Week Medical Student (Year 2) Research Elective.
   D. Year One Medical Student Dermatopathology Lecture Series.
   E. Dermatology Grand Rounds - Dermatopathology Presentations.
   F. Ten Week Undergraduate Student Research Elective.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. NIH First Award (50% effort: $90,000 Direct Costs; August, 1990-August, 1991): Interaction of Gamma Interferon with Keratinocytes.
   C. NIH RCDA (50% effort: $60,000 Direct Costs; July 1991-June 1994). 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 PGE$_2$ and IL-1 production by keratinocytes and monocytes.
G. Characterization and biological significance of thrombospondin production by keratinocytes and melanocytes.
H. Role of extracellular matrix in adherence reactions involving resting and activated mononuclear leukocytes.
I. Characterization of epidermal growth factor receptor on normal and psoriatic keratinocytes.
J. Characterization of effect of cyclosporin A on phorbol ester induced cutaneous inflammation and hyperplasia.
K. Role of endothelial cell adhesion molecules (ICAM-1, ELAM-1, VCAM-1) in cutaneous leukocyte trafficking.
L. Role of Factor XIII a positive dermal dendrocytes in AIDS-related psoriasis.
M. Dissection of cytokine networks in psoriasis, allergic contact dermatitis to poison ivy, and mycosis fungoides.

IV. ADMINISTRATIVE ACTIVITIES:

REGIONAL AND NATIONAL:

C. Ad-hoc Review Committee - NIH Study Section - Skin Disease Research Center Grant Applications.
D. Member-General Medicine A Study Section, Subcommittee-1; NIH.
E. Ad-hoc Reviewer: University of Michigan Multipurpose Arthritis Center.
F. Ad-hoc Reviewer: University of Michigan Department of Surgery.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

6. Role of IL-8 in Psoriasis. Visiting Professor, Department of Dermatology, Kiel University, August 17, 1990, West Germany.
8. Current Understanding of Psoriasis, Visiting Professor, Department of Dermatology, University of Wurzburg, August 21, 1990, Wurzburg, West Germany.
10. Molecular Basis for Growth Regulation and Inflammation in Psoriasis, Visiting Professor, Department of Pathology and Dermatology, University of Oklahoma Health Science Center, September, 25-26, 1990, Oklahoma City, Oklahoma.
14. Molecular Basis for Growth Dysregulation and Inflammation in Psoriasis, Visiting Professor, Department of Dermatology, University of Alabama, November 16, 1990, Birmingham, Alabama.
15. Psoriasis Update and Dermatopathology Update, Visiting Professor, Department of Dermatology, University of Rochester, November 21, 1990, Rochester, New York.
17. Induction, Distribution, and Diminution of Keratinocyte Adhesion Molecules in Allergic Contact Dermatitis, Plenary Session Speaker and Co-Chairman, Annual Meeting-American Society of Dermatopathology, November 30, 1990, Atlanta, Georgia.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

emphasizing the dermal dendocyte with active dermal recruitment mediated via endothelial 
6. Nickoloff, B.J. and Griffiths, C.E.M.: Intraepidermal but not dermal T lymphocytes are positive 
for a cell-cycle associated antigen (Ki-67) in mycosis fungoides. Am. J. Pathol. 1990;136:261- 
266.
8. Gupta, A.K., Cooper, K.D., Ellis, C.N., Nickoloff, B.J., Hanson, C.A. and Voorhees, J.J.: 
Lymphocyte infiltrates of the skin in association with cyclosporine A therapy. J. Am. Acad. 
Cooper, K.D. and Voorhees, J.J.: Cellular, biochemical and immunological characterization of 
10. Varani, J., Shayevitz, J., Perry, D., Mitra, R.S., Nickoloff, B.J. and Voorhees, J.J.: Retinoic acid 
stimulation of human dermal fibroblast proliferation is dependent on extracellular Ca^{2+} 
Path. 1990;14:867-871.
Elder, J.T., Kunkel, S.L. and Dixit, V.: Cellular localization of interleukin-8 and its inducer 
initiators of inflammation: A unifying explanation for diverse array of environmental stimuli to 
adhension molecules (ELAM-1, ICAM-1, VCAM-1) T-cell chemotaxin (IL-8), and a modulatory 
cytokine (TNF-α) during the evolution of allergic contact dermatitis (Rhus Dermatitis). Br. J. 
15. Nickoloff, B.J.: The human progenitor cell antigen (CD-34) is localized on endothelial cells, 
dermal dendritic cells, and perifollicular cells in formalin-fixed normal skin, and on proliferating 
B.J.: Detection of gamma interferon mRNA in psoriatic epidermis by polymerase chain 
and Nickoloff, B.J.: Regulation of keratinocyte-derived monocyte chemotaxis and activating 
hair follicle epithelial cells and endothelial leukocyte adhesion molecule-1 (ELAM-1) by 
vascular cells are important adhesion molecule alterations in alopecia areata. J. Invest. 
20. Nickoloff, B.J.: Cytokine network in psoriasis: Molecular pathway pointing to the psoriasis gene 
21. Mahoney, S.E., Duvic, M., Nickoloff, B.J., Minshall, M., Smith, L.L., Griffiths, C.E.M., 
Paddock, S.W. and Lewis, D.E.: HIV transcripts indentified in HIV-related psoriasis and 

BOOKS/CHAPTERS IN BOOKS:


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


I. CLINICAL ACTIVITIES:
   A. Clinical Molecular Diagnostics Laboratory.
   B. Autopsy Service.

II. TEACHING ACTIVITIES:
   A. Supervised the following undergraduate students during the summer.
      a. Lauren K. Horton.
      b. Jeffrey Zacharias.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Principal Investigator, "Functional Role of Bcl-2 and Antigenic Stimulation in the
      Development of Lymphoma," The University of Michigan Cancer Research Committee,
      5% effort, $7,500, 7/1/91 - 7/1/92.

PENDING:
   A. Principal Investigator, "Functional Role of Bcl-2 in B cell Development and
      Lymphoma," Cancer Research Institute, Investigator Award, 40% effort, $50,000/year,
      7/1/91 - 7/1/95.
   B. Principal Investigator, "Development of a Genotyping Core for CF Mutations," Cystic
      Fibrosis Foundation, (Core facility for the project "Gene Transfer Approaches to Cystic
      Fibrosis"), 10% effort, $25,000/year ($75,000/3 years) 9/1/91 - 8/31/94.

PROJECTS UNDER STUDY
   A. Functional role of Bcl-2 in lymphocyte development and neoplasia.
   B. Molecular cloning of genes involved in programmed cell death of B lymphocytes.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Director, Molecular Diagnostics Laboratory.
   B. Interviewer, postdoctoral candidates for fellowship in Anatomic Pathology.
   C. Interviewer, postdoctoral candidates for research fellowships.
MEDICAL SCHOOL/HOSPITAL:
A. None.

V. OTHER RELEVANT ACTIVITIES:
INVITED LECTURES/SEMINARS:

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

ARTICLES ACCEPTED FOR PUBLICATION:

BOOKS/CHAPTERS IN BOOKS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
HAROLD A. OBERMAN, M.D.
PROFESSOR OF PATHOLOGY
CO-DIRECTOR OF CLINICAL PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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 (three) to sophomore class.
B. Postgraduate course, "Current Topics in Blood Banking", Planning Committee.
C. Course on Transfusion Medicine presented to Pathology and Hematology/Oncology House Officers.
D. Seminars and lectures on Pathology of Breast to Pathology House Officers.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Significance of intraductal carcinoma and lobular carcinoma in-situ presenting in adenofibromas or in sclerosing adenosis.
B. Adenomyoepithelial neoplasms of breast.
C. Pleomorphic adenomas of breast.
D. New Ultrasound Methods for Cancer Diagnosis and Treatment (3-5 years at 5% effort).
E. Microvascular and Structural Imaging of Breast Cancer (3-5 years at 3% effort).

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IV. ADMINISTRATIVE ACTIVITIES:

REGIONAL AND NATIONAL:
A. American Association of Blood Banks:
   1. Awards Committee, Chairman.
   2. Publications Committee.
B. American Society of Clinical Pathologists:
   2. Search Committee for Editor, American Journal of Clinical Pathology.
C. International Academy of Pathology:
   1. Abstract Review Board.
D. Michigan Society of Pathologists:
   1. Medical Legislation Committee.
   2. Medical Care Insurance Committee.
E. Southeastern Michigan Red Cross Blood Program:
F. Consultant, Veterans Administration Hospital, Ann Arbor.
G. Test Committee on Blood Banking/Transfusion Medicine, American Board of Pathology.

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.
H. Hospital quality assurance committee.

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. Reviewer, American Journal of Medicine.
G. Reviewer, Cancer.
INVITED LECTURES/SEMINARS:

2. Lecture, to Department of Pathology, University of Bologna Medical School, "Stromal Tumors of the Breast", Bologna, Italy, July 23, 1990.
3. Visiting Professor, Rochester General Hospital, Rochester University School of Medicine, Rochester, New York, September 13, 1990.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

4. Rosen, P.P. and Oberman, H.A.: Tumors of the Breast, Fascicles of Tumor Pathology, Armed Forces Institute of Pathology, Universities Associated for Research and Education in Pathology, Inc.

ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR.


(ILLNESS-RELATED ABSENCE, OCTOBER - NOVEMBER, 1990; SABBATICAL LEAVE, JANUARY - JUNE, 1991)
SEM H. PHAN, PH.D., M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Autopsy Service.

II. TEACHING ACTIVITIES:

A. Course Director, Pathology 650.
B. Soverin Karmiol, Ph.D. - Postdoctoral Fellow.
C. Mariano DiMiguel, M.D. - Postdoctoral Fellow.
D. Masud Malik, Undergraduate/Research.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Mechanisms and Genetic Regulation of Pulmonary Fibrosis", R01-HL28737-09.
B. Principal Investigator, "Macrophage Function in Lung Injury and Fibrosis", P01-HL31963, Section IV.
C. Principal Investigator, "Fibroblast Heterogeneity in Pulmonary Fibrosis", R01-HL39925.
D. Principal Investigator, "Crescentic Nephritis", P01DK38149, Section IV.
E. Co-Investigator, "Hepatic Ischemia-Induced TNF and Multiorgan injury", R01-DK42455, Principal Investigator, D.G. Remick.

PROJECTS UNDER STUDY:

A. Lung macrophage/monocyte, recruitment and activation during lung injury and fibrosis.
B. Cytokine regulation of fibroblast function - in terms of chemotaxis, collagen metabolism and proliferation in fibrotic lesions of lung, kidney and skin.
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 and cells.
E. Regulation of production of fibrogenic mediators and cytokines by pulmonary endothelial cells and fibroblasts; and keratinocytes.
F. Production of monocyte chemotactic factors by alveolar macrophages and fibroblasts and endothelial cells, and its regulation by bleomycin and cytokines.
G. 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, Medical Scientist Training Program Operating Committee.

REGIONAL AND NATIONAL:

A. Reviewer for the following journals: Journal of Clinical Investigation, American Review of Respiratory Diseases, Experimental Lung Research, American Journal of Pathology, Chest, Circulation Research.

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. PIERNON, PH.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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. Lecturer, Microbiology 620.
   E. Coordinator, Microbiology Laboratory Inservice.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   B. "Prevention of antibiotic-associated colitis with Saccharomyces boulardii administration," Biocodex.
   C. "In Vitro susceptibility of hospital isolates to meropenem", ICI Pharmaceutical.
   D. "Fleroxacin Multi-Center In Vitro Study", Hoffmann-LaRoche.
   E. "Temaflaxcin In Vitro Study", Abbott Labs.
   F. Evaluation of "Dry Slide", 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 cefpirome.
   D. Detection of verotoxin in patients with hemorrhagic enterocolitis.
   E. Development of P.C.R. techniques for detection of Mycobacteria in patient specimens.
   F. Evaluation of EIA Kits for detection of Clostridium difficile toxin A.

IV. SERVICE ACTIVITIES:

   DEPARTMENTAL:
   A. Clinical Pathology Laboratory Director's Committee.
   B. M-Labs Technical Advisory Committee (Chairperson).
C. Clinical Microbiology Senior Staff Meeting (Chairperson).
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. Coordinator, Clinical Microbiology Laboratory Directors of Michigan Group meetings.
D. Treasurer, Michigan Branch, American Society for Microbiology.
E. Board member, South Central Association for Clinical Microbiology.

V. OTHER RELEVANT ACTIVITIES:
A. Reviewer, Journal of Clinical Microbiology.
B. Lecturer, Roche Pharmaceutical Training series.

INVITED LECTURES/SEMINARS:

IV. PUBLICATIONS:

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


CHARLES W. ROSS, M.D.
FELLOW/LECTURER IN HEMATOPathOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Diagnostic Surgical Pathology, Hematopathology.
   B. Clinical Flow Cytometry Laboratory.
   C. Clinical Hematology Laboratory.
   D. Clinical Molecular Diagnostics Laboratory.
   E. 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.
   C. Hematopathology teaching:
      1. Hematopathology case conferences/biweekly.
      2. Leukemia conference/biweekly.
      3. Lymphoma conference/weekly.
   D. Clinical Pathology Grand Rounds (one lecture).

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Detection of immunoglobulin gene rearrangements by the polymerase chain reaction.
B. Detection of Epstein-Barr virus in lymphoid lesions by polymerase chain reaction.
C. Immunophenotyping in chronic lymphoproliferative disorders.
D. Detection of Toxoplasma gondii in paraffin-embedded tissues by polymerase chain reaction.
E. Detection of Mycobacterium tuberculosis in sputum specimens by polymerase chain reaction.
IV. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

1. Ross, C.W., Hanson, C.A. and Schnitzer, B.: CD30 (Ki-1)-positive large cell lymphoma mimicking gastrointestinal carcinoma.

BOOKS AND CHAPTERS IN BOOKS:


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


3. Hanson, C.A., Ross, C.W. and Schnitzer, B.: CD34 immunoperoxidase (IP) staining in bone marrow paraffin sections: Correlation with flow cytometric (FC) studies. Lab. Invest. 1991;64:73A.


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Intradepartmental
   1. Oral Pathology Service Clinic, University Hospitals, Department of Dentistry and Oral Surgery.
   2. Oral Pathology Biopsy Service Rotation, School of Dentistry.
   3. Dental Faculty Associates, School of Dentistry.

B. Interdepartmental
   1. Oral Pathology, clinical consultations on an as needed basis, The University of Michigan School of Dentistry Clinics.
   2. Consult to VA Hospital, Ann Arbor.

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 694.
D. Dental Hygiene, Course 220, to Freshmen Students.
E. Oral Pathology Course 624, to Sophomore Dental Students.
F. Oral Pathology, Course 818, to Senior Dental Students.
G. Dental Hygiene, Course 321, Senior Seminar.
H. Graduate Hospital Dentistry, Course 550.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Project Director, "Oral Zovirax for the Treatment of Recurrent HSV Labialis", 3% Effort, Burroughs Wellcome Company, 09/01/89 - 08/31/91, Total Direct Costs: $39,600.00.
B. Project Director, "Determination of the Feasibility and Economy of Central Coordination of the Collection and Disposal of Medical Waste", 10% Effort, A cooperative effort, Cosponsored by Delta Dental Plan of Michigan/Michigan Department of Public Health/Michigan Dental Association/the University of Michigan, 06/91 - 07/92, Total Direct Costs: $82,192.00.

UNDER CURRENT NEGOTIATION:

A. Project Director, "Topical Acyclovir in the Treatment of Recurrent Herpes Labialis", Burroughs Wellcome Co., 5% Effort, Amount approximately $50,000.00, 1 year.
IV. ADMINISTRATIVE ACTIVITIES:

A. 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.

B. School of Dentistry Committees include:
   1. Merit and Raises Committee.
   2. Infection Control Committee, School of Dentistry.
   3. Hazardous Chemical Committee, School of Dentistry.

REGIONAL AND NATIONAL:

STATE OF MICHIGAN

A. Member, AIDS Speaker's Bureau, Michigan State Medical Society.
B. Member, Advisory Committee, Special Office on AIDS Prevention and the Disease Surveillance Section, Michigan Department of Public Health.
C. Member, Tobacco-Free Michigan Action Coalition, Michigan Department of Public Health.
D. Member, Executive Committee, American Cancer Society, Michigan Division.
E. Member, Board of Directors, American Cancer Society, Michigan Division.
F. Area Delegate Director, American Cancer Society, Michigan Division.
G. Member, Public Issues Committee, American Cancer Society, Michigan Division.
H. Member, By-Laws Revision Committee, American Cancer Society, Michigan Division.
I. Member, Professional Education Committee, American Cancer Society, Michigan Division.
J. Consultant, Committee on Cancer and Infection Control, Michigan Dental Association.
K. Member, Special Committee on Health and Hazard Regulation, Michigan Dental Association.
L. Member, Research Screening Committee, Delta Dental Fund.
M. Member, Michigan Coalition on Smoking or Health.
N. 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, 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. Intra-departmental
      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. Inter-departmental
      a. Oral Pathology, clinical consultations on an as needed basis, The University of Michigan Medical School of Dentistry Clinics.
      b. Consultant, VA Hospital, Ann Arbor.

**EDITORIAL BOARDS:**

D. Cancer.
E. Journal of the Academy of General Dentistry.

**INVITED LECTURES/SEMINARS:**


VI. **PUBLICATIONS:**

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


BOOKS AND CHAPTERS IN BOOKS:


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

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 150/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.
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. Member, Review Panel for Lymphomas, Southwest Oncology Group.
G. Member, Hematology Council, American Society of Clinical Pathologists.
H. Member, Hematology Workshop Review Committee, American Society of Clinical Pathologists.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARD:

A. Human Pathology.
B. Hematologic Pathology. Designated reviewer.
C. Arch. Pathol. Lab Med. Designated Reviewer

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:


SUZANNE M. SELVAGGI, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Cytopathology - 26 weeks.
   B. Gynecologic Pathology (transfer cases) - 12 months.
   C. Consultation service, Department of Pathology: Cytopathology and Gynecologic Pathology - 12 months.

II. TEACHING ACTIVITIES:
   A. Daily microscopic sessions in Cytopathology with pathology residents and cytopathology fellow.
   B. Instruction of pathology residents and cytopathology fellow in the performance and interpretation of fine needle aspirates.
   C. Pathology residents - monthly cytopathology conference.
   D. Cytotechnologists - cytopathology conference (6X/yr).
   E. Gynecologic Oncology Tumor Board Conference - weekly.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Cytologic indicators of cervical smear adequacy.
   B. Transplant cytology.
   C. Computer applications to cytology.
   D. Cytomorphology of human breast cancer cells grown in tissue culture (with S. Ethier, Department of Radiation Oncology).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Co-Director, Cytopathology Laboratory.

MEDICAL SCHOOL/HOSPITAL:
   A. Member, Quality Assurance/Quality Control Committee.

REGIONAL AND NATIONAL:
   A. Reviewer, Diagnostic Cytopathology
B. Committee Member, National Cancer Institute's second workshop on the proposed Bethesda Nomenclature System for Cervicovaginal Cytology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


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:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. 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.
   G. Genetic Counseling graduate students:
      1. One lecture.
      2. Individual tutorials.

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:
   A. Assistant Director, Clinical Cytogenetics Laboratory.

MEDICAL SCHOOL/HOSPITAL
   A. Director, Clinical Research Center Cell Immortalization Facility.
REGIONAL AND NATIONAL:

A. Planning Committee, Cytogenetics Technologist Program, Eastern Michigan University.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. "Cytogenetics and Molecular Genetics", lecture to advanced genetics class at University of Michigan, Flint, Michigan.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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, "Adaptive T Cell Immunotherapy of Nonimmunogenic Tumors", National Cancer Institute, Grant 1 RO1 CA47285, June, 1988 to May 1993, Total award of $796,763 (direct cost).

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.
V. OTHER RELEVANT ACTIVITIES:

A. Member, Experimental Therapeutics II Study Section, NCI, NIH, 1989-.
B. Editorial Board (Currently Active) Journal of Immunotherapy, Vaccine Research.

INVITED LECTURES AND SEMINARS:

2. Invited Speaker, "T Cells as Therapeutic Agent for Treatment of Cancer", International Conference on Biological Treatment of Melanoma and Other Cancers, Newcastle, Australia, September 4-7, 1990.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Eastern Michigan University:
      1. Immunotoxicology lecture, 2/19/91 for Chem 412 (Toxicology II).
   B. University of Michigan Medical School:
      1. Pathology 650, two week instruction on immunochemical methods.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:


PENDING:


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL: None.

MEDICAL SCHOOL/HOSPITAL: None.

REGIONAL AND NATIONAL: None.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS: None.
INVITED LECTURES/SEMINARS:

1. "Development of non-toxic (anti-idiotypic) mucosal vaccines to block the absorption of the chemical carcinogen 2-acetylaminoﬂuorene (AAF)", American Association of Immunologists (AAI); 4/23/91, Atlanta, Georgia (FASEB).

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

2. Silbart L.K., McDonald, R.A., Lincoln, P.M. Goslinoski, L. and Keren, D.F.: 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 1990 - 30 JUNE 1991  

I. CLINICAL ACTIVITIES:  

A. Surgical Pathology Coverage of M-Labs cases including most cases from:  
   1. Albion Community Hospital, Albion, Michigan.  
   2. Thorn Hospital, Hudson, Michigan.  
   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. Six weeks coverage at the University Hospital of weekend autopsy call.  

II. TEACHING ACTIVITIES:  

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

B. Read out 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 Committee, 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.
ANDERS A.F. SIMA, M.D., PH.D.
PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
A. Neuropathology Service, 33%.

II. TEACHING ACTIVITIES:
A. Graduate students:
   1. Responsible during the current academic year for teaching activities for the
      following:
      a. Neuropathology 858 6 hours;
      b. CME accredited Conferences
         Brain Conference 16 hours;
         Brain Tumor Conference 16 hours;
         Neuromuscular Conference 16 hours;
         Neuropath Conference for house staff 16 hours.
B. Undergraduate students:
   a. Neuropathology (NSB 600) 4 hours.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
A. Principal Investigator, "Pathology of the Node of Ranvier in Diabetic Neuropathy", RO1-DK 43884-01 (40%), National Institutes of Health, with Tennekoon, G. and Rotkowski, J.L. $1,472,882/5 years, 4/1/91 - 3/31/96.
B. Principal Investigator, "The Role of Trophic Factors and Their Synthesis in Diabetic Neuropathy", #1901122, Juvenile Diabetes Foundation International, $47,801.00/year, 7/1/90 - 6/30/92.
D. Principal Investigator, "The Long Term Preventional and Interventional Effect of Statil on Diabetic Neuropathy in the BB-Rat", ICI-RDN-3, ICI, Great Britain, $212,104.74/3 years, 1988-91.
E. Co-Investigator, and Sima, A.A.F. "Synthesis and Responsiveness to Trophic Factor by Diabetic Nerve of the BB-Rat", Murphy, L.J., Principal Investigator, Medical Research Council of Canada, $141,180.00/year, 4/1/88-3/31/93.

PENDING:
A. "Molecular Elements, Neurocircuits and Mental Illness", National Institute of Mental Health, Sima, A.A.F. (10% effort), Watson, S. (PI), $5,166,343.00/five years.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. CERAD representative, Michigan Dementia Program.

MEDICAL SCHOOL/HOSPITAL:
A. Member, Executive Committee, Michigan DRTC.
B. Director, Image Analysis core, Michigan DRTC.
C. Director, Animal Core, Michigan DRTC.

REGIONAL, NATIONAL AND INTERNATIONAL:
A. Member, Medical Advisory Board, Juvenile Diabetes Foundation International, New York, New York.
B. Member, Organizing Committee, International Diabetes Federation Satellite symposium on Diabetic Neuropathy, New York, New York.
C. International Scientific Coordinator 3rd LAD, Jerusalem, Israel.
D. Executive Committee, LAD, Jerusalem, Israel.
E. Member, Council on Diabetic Complications, ADA, New York, New York.
G. Member, Specialty Committee Neuropathology, Royal College of Physicians and Surgeons of Canada, Ottawa, Canada.
I. Scientific Advisor, Endocrinology Section FDA, Rockville, Maryland.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
A. Journal of Neuropathology and Experimental Neurology.
B. Diabetes Research and Clinical Practice.
D. International Diabetes News.
E. Ad hoc Reviewer for nine journals (Neuropathology and Diabetes).
F. Study sections
   1. Medical Research Council of Canada
   2. Juvenile Diabetes Foundation International
   3. American Diabetes Association

INVITED LECTURES/SEMINARS:
5. Department of Medicine, University of Utrecht, Holland, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:


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

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 postdoctoral 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. R. Situ, M.D. Chairman, Department of Pathology, Jinan University, Guangzow, PRC- visiting scholar studying the expression of receptors for the extracellular matrix in cultured human T-lymphoblastic leukemias.

3. Terry Behrend, B.A., Medical Student (M1), University of Michigan, School of Medicine (summer 1990 and 1991) - recipient summer research grant focusing on the regulation of carbohydrate ligand(s) for ELAM-1 on leukocytes. Initial work on this project culminated in co-authorship on paper demonstrating the role of fucosyl-transferases in construction of ligands for ELAM-1.

4. Judy Shih, Undergraduate student, University of Michigan School of Arts and Sciences (summer 1990) - co-investigator with Dr. J. Grober studying expression and function of endothelial adhesion molecules in rheumatoid synovitis.

B. Small group seminar leader, Microbiology and Immunology-Experimental program in which the basic science are taught in the context of a clinically relevant case study.

C. Laboratory Instructor, Organ Systems Pathology (Pathology 600) - joined group of ten instructors as permanent faculty in the course. Instructors selected for interest and skill in teaching.

D. Lecturer, Experimental Pathology (Pathology 580 and 581).

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

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

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

H. Pediatric/Adult Leukemia Conferences.

I. Adult Lymphoma Conferences.

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

SPONSORED RESEARCH:

Funded:

A. Principal Investigator, "Endothelial Binding Lectins of Lymphoid Malignancies", NIH, RO1 ($425,000), three years, 30 September 1989 through 31 August 1992-30% effort).

B. Principal Investigator, "The Role of Lymphocyte Migration in Chronic Inflammatory Arthritis", NIH, Multipurpose Arthritis Center, Development and Feasibility Grant ($143,469), three years, 1 February 1988 through 31 January 1991 - 15% effort).

C. Co-Principal Investigator, "Mechanisms of Lymphocyte Recruitment to the Lungs", NIH, SCOR in Occupational and Immunologic Lung Diseases, P50 HL 46487-01 project #4, $650,000, five years, 1 December 1991 through 31 November 96, 15% effort.

SUBMITTED:

A. Co-Principal Investigator, "Cytokine Network in Psoriasis" (with Dr. Brian Nickoloff, Department of Pathology, University of Michigan), NIH, RO1, 15% effort.

IN PREPARATION:

A. Principal Investigator, "LEC-CAM (selectin) and integrin mediated adhesion in the spread of lymphoid malignancies", NIH, RO1, 40% effort, competitive renewal.

B. Principal Investigator, "LEC-CAM (selectin) mediated adhesion in delayed-type hypersensitivity diseases of synovium and skin", NIH, RO1, 30% effort.

C. Principal Investigator, "LEC-CAM (selectin) mediated leukocyte recruitment in animal models of inflammatory arthritis", NIH SCOR in Rheumatologic Diseases, 15% effort.

PROJECTS UNDER STUDY:

A. Transmembrane signalling and the control of LECAM-1/LAM-1 during lymphocytic migration and activation.

B. Synthesis of high avidity ligands for the LEC-CAM (selectin) family of cell adhesion molecules.

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. Co-director, Clinical Flow Cytometry Laboratory: Negotiated the purchase and managed the implementation of a new generation of cost effective instruments for acquisition and analysis of flow cytometry data.
V. OTHER RELEVANT ACTIVITIES:

PATENT APPLICATIONS:

A. U.S. Application #07/603,018
   Title: Agents and methods for binding to ELAM-1.
   Status: Co-inventor.

INVITED LECTURES AND SEMINARS:

3. "The Role of Fucosyl-Transferase in the Generation of Cell-Surface Ligands for ELAM-1 and Other Members of the LEC-CAM Family", FASEB Annual Meeting, minisymposium presentation, Atlanta Convention Center, Atlanta, Georgia.

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.
J. National Heart, Lung and Blood Institute, consultant for site visit (program project), University of Minnesota, Minneapolis, Minnesota.
K. Renal Center Program Project, University of Michigan, Member of Internal Review Committee.

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 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Functional tests of neutrophils isolated from patient blood samples.

II. TEACHING ACTIVITIES:

A. Dental and graduate students (Course 630, ten one hour sessions).
B. Postdoctoral fellows, residents, undergraduate students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

3. Co-Principal Investigator, "Lung Injury Produced by Oxygen Metabolites", GM-29507), (with Peter 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:


V. OTHER RELEVANT ACTIVITIES:

Member Editorial Advisory Board Immunobiology.

INVITED LECTURES/SEMINARS:

1. Invited Speaker, International Cartilage Project (ICP) Conference on "Understanding Osteoarthritis (OA) and the Anti-OA Effects of Diclofenac (Voltaren)". Ascot, Great Britain, November 4-7, 1990.
2. Invited Speaker, Teaching Conference on "Complement" at Division of Rheumatology, University of Michigan Medical School, 19 December 1990.
4. Invited Speaker and Symposium Chair, Second International Conference on Shock, "Free Radical Scavengers in Experimental Shock and Trauma", Vienna, Austria, June 2-6, 1991

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 UNREFFEREED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Lecturer, Pathology 580.
   B. Lecturer, Pathology 581.
   C. Course Director, Pathology 850.
   D. Member, Dissertation committee of Mr. Todd Kroll
   E. Member, Dissertation committee of Mr. Zwehi Soong.
   F. Mentor for students who worked in my laboratory over the past year including four postdoctoral fellows, six undergraduate students, one graduate student and one high school student.
   G. Mentor, Small group tutorials in Microbiology for medical students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Principal Investigator, "Monocyte Recognition of Target Cells", American Cancer Society IM-432.
   B. Principal Investigator, "Biochemical Control of Microcarrier Culture", NIH CA33052.
   C. Co-Investigator, "Thrombospondin Receptors on Squamous Carcinoma Cells", American Cancer Society PDT-324.
   D. Co-Investigator, "Protease-Oxidant Interactions in Lung Inflammation", NIH HL42607.
   E. Principal Investigator on Project 10, "Retinoic Acid and Cells of the Skin", Johnson and Johnson Corporation.

PROJECTS UNDER STUDY:
   A. The development of substrates for optimum growth of cells in large-scale culture.
   B. Mechanisms by which monocytes recognize and interact with the endothelium and with squamous epithelial cells.
   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 and kidney 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.
D. Member, Departmental Pathology Human Resource 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.
G. Member, Cancer Biology Research Training Grant Scientific Steering Committee.
H. Director, Pathology Research Seminar Series.

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, Wayne State University, October 17, 1990.
2. Invited Lecturer, Department of Pathology, University of Nebraska, November 13, 1990.
3. Invited participant, Symposium on Endothelial Cell injury, Medical College of Ohio, Toledo, Ohio, November 5-6, 1990.
5. Invited Lecturer, Department of Pathology, VAMC - Wayne State University, December 11, 1990.
7. Invited Lecturer, FASEB Symposium on Oxygen Radicals and Ischemia, Atlanta, Georgia, April 24, 1991.
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:


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. Michael S. Mulligan, M.D., Postdoctoral Fellow.
      d. Hedwig Murphy, M.D., Postdoctoral Fellow.
      e. Jonathon W. Homeister, Ph.D. Dissertation Committee member.
      f. Mary C. Mancini, M.D., Medical College of Ohio, Dissertation Committee member.
      g. Susan A. Moore, M.S., Dissertation Committee member.

A. 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), 1/1/86-12/31/91.

B. Principal Investigator, "Lung Immunopathology", NHLBI HL-07517 (5%), $286,684/year ($1,291,531/five years), 7/1/86-5/31/91.

C. Principal Investigator, "Leukocyte Chemotaxis", NIH HL-28442 (10%), $88,449/year ($505,936/five years), 7/1/86-6/30/91.

D. Principal Investigator, "Lung Injury Produced by Oxygen Metabolites", NIH GM-29507 (20%), $120,486/year ($507,078/five years), 7/1/82-6/30/92.

E. Principal Investigator, "Inflammatory Cells and Lung Injury", NHLBI HL-31963 (35%), $628,780/year ($3,876,003/five years), 3/1/84-2/28/94.
F. Co-Investigator, "Mechanisms of Glomerular and Tubular Injury", NIH-DK39255 (5%), $39,398 (Project V only), 9/1/87-8/31/92.
G. Principal Investigator, "Lung Immunopathology", NHLBI-HL07517 (5%), $287,958 ($1,444,250/five 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. Ambulatory Care Strategic Planning Steering Committee, The University Hospitals, 1991--
B. Advisory Committee for the Howard Hughes Medical Institute, 1984--
C. Board of Directors, M-Care, 1986--
D. Center Advisory Committee for The University of Michigan Multipurpose Arthritis Center, 1987--
E. Clinical Quality Improvement Lead Team, 1991--
F. Committee to Review VA FTE's, The University of Michigan Medical School, October, 1988--
G. Dean's Advisory Council, 1985--
H. Dean's Council of Clinical Chairmen, 1985-1990
I. Executive Advisory Committee for Gene Expression and Gene Transfer in the Cardiovascular System, August, 1991--
J. Executive Director's Advisory Council, 1988--
K. Feasibility Study for Multifloor Medical Research Facility Attached to Medical Science II Committee, Director
L. Geriatric Center Steering Committee, 1990--
M. Guilford Upjohn Endowed Chair in Internal Medicine and Oncology, Department of Internal Medicine, Hematology and Oncology Unit, the Universit of Michigan, 1987--
N. Hospital Advisory Group, 1988-91
O. Internal Medicine Advisory Committee for the University of Michigan George M. O'Brien Renal and Urologic Center, 1991--
P. Medical Sciences Research Building (MSRB) Task Force, Chairman
Q. Medical Science Research Building III Project, September, 1990--
R. Medical Service Plan Advisory Committee, 1987--
S. Medical Service Plan Executive Committee, 1987-91
T. Michigan Diabetes Research and Training Center Policy Committee, 1981--
V. National Task Force on Organ Transplantation, 1985--
W. Pathology Associates, 1980--
X. Presidential Initiatives Fund, The University of Michigan, March, 1987--
Y. University of Michigan Geriatrics Center Steering Committee, 1990--
Z. University of Michigan Medical School Executive Committee, September 1, 1990--

REGIONAL AND NATIONAL:

A. American Association for Advancement of Science.
B. American Association of Immunologists.
C. American Association of Pathologists.
   I. 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.
4. Steering Committee for the Federal Demonstration Project, 1990-.
5. Future Directions Committee, 1989-.
D. American Board of Pathology, effective January 1, 1988.
   1. Trustee, 1980-.
   Vice-Chairman
   3. Anatomic Pathology Examination Committee, 1988-.
   4. By-Laws Committee, 1988-.
   5. Examination Evaluation Committee, 1988-.
   6. Professional Qualification/Competence Committee, 1988-.
   7. ABP/ABPRF Research Committee, 1989-.
   8. Residency Review Committee for Pathology
E. American Federation for Clinical Research
F. American Heart Association, Cardiopulmonary Division.
G. America Lung Association.
H. American Society for Clinical Investigation.
I. American Pathology Foundation.
K. Association of American Physicians.
L. Association of Pathology Chairmen.
M. Center for Alternatives to Animal Testing, Johns Hopkins University.
N. Cytojen, 1983-.
O. A. James French Society of Pathologists, 1988-.
P. Health Policy Agenda for the American People, Advisory Committee.
Q. Institute of Medicine, July 1, 1990
R. International Academy of Pathology.
S. Mallinckrodt, Inc., Advisory Board, 1984-.
T. Michigan Society of Pathologists.
U. Michigan Thoracic Society, 1988-.
V. The New York Academy of Sciences.
   1. Committee on Human Rights, Correspondent.
W. The Oxygen Society, 1988-.
X. Phi Rho Sigma, President, The University of Michigan Chapter, September, 1988
Y. Society of Medical Consultants to the Armed Forces.
   1. President, 1988
Z. Universities Associated for Research and Education in Pathology, Inc., Board of Directors.

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:

6. Review Committee Member, Pathology Site Visit at Case Western Reserve University, Cleveland, Ohio, November 11-12, 1990.
10. Invited Lecturer, "Complement, Cytokines and Tissue Injury" and "Role of ELAM in Inflammation In Vivo", and Co-Chair session, "Cell Adhesion Molecules", at the 2nd International Congress on The Immune Consequences of Trauma, Shock and Sepsis, Munich, Germany, March 4th through 10th, 1991.
13. Participant, Advisory Board for "HIV - Alveolar Macrophage Program Project Grant" for Richard M. Rose, M.D., Deaconess Hospital, Boston, Massachusetts, April 17, 1991.
17. Invited Lecturer. "Oxygen Radicals in Acute Lung Injury", sponsored by the Department of General Surgery, the University of Ulm, at the Reisenberg Castle in Ulm, Germany, April 24-27, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:


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


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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:

A. Director, Clinical Immunopathology Laboratory.
B. Autopsy pathology, staff coverage (one weekend).
C. Diplomate, Immunopathology subspecialty certification; August, 1990.

II. TEACHING ACTIVITIES:

A. Pathology 631 (60 contact hours).
B. ICS 600  
  "Autoimmunity" (10/18/90).  
  "Multiple Myeloma" (1/18/91).
C. Clinical Pathology Grand Rounds:  
  "Complement I" (11/23/90).  
  "Complement II" (11/30/90).  
  "Antinuclear antibody testing" (12/07/90).
D. Immunopathology journal club (one hour; 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. Michael L. Jones, Ph.D. candidate - postdoctoral fellow; (4/1/89-present).  
   2. Craig Flory, Ph.D. - postdoctoral fellow; (6/15/90 - present).  
   3. Peter A. Barton (M-2 medical student); (6/1/90 - 8/25/91) (sponsored by American Heart Association of Michigan summer fellowship).  
   4. James Baker (M-2 medical student); (6/1/91 - 7/31/91) (sponsored by J.C. Fantone III, M.D.).

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. Homozygous C5 deficiency in pathogenesis of endotoxic shock.
D. Cloning and expression of rat monocyte chemoattractant protein 1 (MCP1) in a baculovirus system.

SPONSORED SUPPORT:

A. Principal Investigator, NIH (R29 - HL40526), (50% effort), "Monocyte-Macrophage Cytokines in Immune Complex Lung Injury": 4/1/89 - 3/31/94 ($350,000; direct costs).
B. Principal Investigator, American Heart Association of Michigan Grant-in-Aid, (10% effort), "Platelet-Activating Factor in Immune Alveolitis": 7/1/89 - 6/30/91 ($44,400; direct costs).
C. Biomedical Research Support Grant; (5% effort), "Homozgous C5 Deficiency in the Endotoxin-Triggered Shock Response": 5/1/91 - 7/1/92 ($8,000) (pilot study).
D. Principal Investigator, American Heart Association of Michigan Grant-in-Aid, (10% effort), "Activated endothelium influences monocyte function": 7/1/91-6/30/92 ($25,500; direct costs).
E. NIH(R01) "Monocyte Chemoattractant Protein 1 in Pulmonary Granulomatosis": (Submitted 6/30/91).

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL:
A. Medical School Admissions Committee.

DEPARTMENTAL:
A. Member 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; Clinical Immunology and Immunopathology; Circulation Research.
B. Preparation of immunopathology subspeciality board exam questions.

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 UNREFERRED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Chief, Laboratory Service, Veterans Administration Medical Center, Ann Arbor, Michigan and Veterans Administration Outpatient Clinic, Toledo, Ohio.
   B. Consultant for referred bone pathology cases at University of Michigan.
   C. Surgical pathology, Veterans Administration Medical Center.
   D. Autopsy pathology, Veterans Administration Medical Center.
   E. Cytopathology - occasional coverage Veterans Administration Medical Center.

II. TEACHING ACTIVITIES:
   A. House officers - VA Medical Center surgical and autopsy pathology.
   B. Clinicopathologic conference - monthly, Veterans Administration Medical Center.
   C. Veterans Administration Medical Center Tumor Board - weekly.
   D. Dental Student lectures (three) in bone pathology.
   E. Medical student lectures (two) in bone pathology.
   F. Medical student - second year pathology laboratory.
   G. Medical student - fourth year rotation at the Veterans Administration Medical Center.
   H. Gross pathology seminar for house officers at University of Michigan.

III. RESEARCH ACTIVITIES:

   COOPERATIVE STUDIES: Ongoing: With Environmental Epidemiology Service, Department of Veterans Affairs, Agent Orange and non-Hodgkin's lymphoma.

   SPONSORED SUPPORT: None.

IV. ADMINISTRATIVE ACTIVITIES:

   LOCAL:
   A. Overall responsibility for Veterans Administration Medical Center Laboratory Service and for Laboratory at Veterans Administration Outpatient Clinic, Toledo, Ohio.
   B. Executive Faculty, The University of Michigan Medical School.
   C. Admissions Committee, The University of Michigan Medical School.
   D. Clinical Executive Board, Veterans Administration Medical Center.
   E. Dean's Committee, Veterans Administration representative.
   F. Quality Assurance Board, Veterans Administration Medical Center.
   G. Professional Standards Board, Veterans Administration Medical Center.
   H. Radiation Safety Committee, Veterans Administration Medical Center.
   I. Search Committee for Veterans Administration Medical Center; Chief, Psychiatry.
J. Resident Selection Committee, University of Michigan Department of Pathology.

REGIONAL AND NATIONAL:
A. Red Cross Medical Advisory Board, Southeastern Michigan Region.

V. OTHER RELEVANT ACTIVITIES:
A. Inspector for College of American Pathologists Inspection and Accreditation Program.
B. Deputy Medical Examiner, Washtenaw County.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1990 - 30 JUNE 1991  

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Tutor, Microbiology small group session.
B. Supervised research of medical student (Vernon Stevenson) and two postdoctoral fellows (Jie Wu and Linghua Wang).
C. Student Seminar Evaluation Committee, Cellular and Molecular Biology Training Program.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. American Cancer Society, Mutants for DNA Enzymes, NP770-S.
B. National Science Foundation, Prevention and Repair of DNA Damage in Bacteria, DMB-8922562.

PROJECTS UNDER STUDY:

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

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

REGIONAL AND NATIONAL:

A. Ad hoc grant reviewer for National Science Foundation and National Institutes of Health.
B. Referee for the following journals:
   1. Nucleic Acids Research.
   2. Journal of Biological Chemistry.
   5. Molecular Microbiology.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. International Society for Free Radical Research, Symposium on Oxidative Damage and Repair, Pasadena.
2. University of New Mexico Medical School, Department of Cell Biology.

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 1990 - 30 JUNE 1991

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Service - four months.
   B. Consultant for Bone and Soft Tissue - 12 months.
   C. Secondary Consultant for Breast Pathology - 12 months.
   D. Necropsy Service - one week.
   E. M-Labs Surgical Pathology Service - as needed.

II. TEACHING ACTIVITIES
   A. Sophomore Medical Class:
      Pathology 600 - lecture - two contact hours.
   B. House Officers:
      1. Training in Surgical Pathology.
      2. Lectures, - three hours.
   C. Hospital Conferences:
   D. Graduate Student:
      Responsible for training of Dr. Mark Smith, Imperial Cancer Research Fund, London
      England - 7/90-11/90; Dr. Patricia Perosio, 1/91-6/91; Dr. John Geiss, University of
      California San Francisco.

III. RESEARCH ACTIVITIES

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

PROJECTS UNDER STUDY:
   A. Dedifferentiation in low grade liposarcoma.
   B. Epithelioid malignant Schwannoma.
   C. Angiomatosis.
   D. Prognostic factors in retroperitoneal sarcoma.
   F. Sarcoma amplified sequence in sarcomas.
   G. Tumor necrosis factor in neoplasms.
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.
   3. International Vice President - North American Division.
C. American Society of Clinical Pathology:
   1. Anatomic Pathology Council.
D. Association of Directors of Anatomic Pathology:
   1. Program Chairman.
   2. Executive Council.
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, Human Pathology.
J. Editorial Board, Seminars Diagnostic Pathology.
L. Editorial Board, AFIP Fascicles (3rd Series).
M. Consultant in Pathology, National Institutes of Health.
N. Member, Michigan Society of Pathologists.
O. Member, Arthur Purdy Stout Society of Surgical Pathologists.

V. INVITED LECTURES
2. "Diagnostic Pathology '90", sponsored by the United States and Canadian Academy of Pathology, Inc., Ann Arbor, Michigan, August, 1990.
6. Speaker, Rhabdomyosarcoma Study Group, Columbus, Ohio, December, 1990.
17. Speaker, Department of Pathology, Wayne State Medical School, Detroit, Michigan, May, 1991.

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

DIVISION OF ANATOMIC PATHOLOGY

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

1 JULY 1990 - 30 JUNE 1991

This academic year witnessed the completion of our series of faculty recruitments. Dr. Suzanne Selvaggi joined our ranks as the new Co-Director of the Cytology Service, bringing us additional expertise in gynecologic pathology, while Dr. Elizabeth del Buono will join the surgical pathology staff in the coming academic year sharing with us her interest in liver pathology and diagnostic molecular biology. Dr. Robert Schmidt officially concludes his active academic appointment but will assume a role as Emeritus Professor.

Our educational activities within the division have flourished and acquired added dimensions. In its first year, the surgical pathology fellowship program was an unqualified success. Drs. Elizabeth Del Buono and David Graham performed in a superlative fashion strengthening both the resident and faculty support for this fledgling program. We look forward to the second year with Drs. Randall Shannon, Steven Mandell, and Dr. Lawrence Zukerberg from the Massachusetts General Hospital. Dr. Denise Sulavik served with distinction as the cytopathology fellow and will be followed this coming year by Dr. Paul Mazzara. Our division hosted the Third Annual Diagnostic Pathology course for the US-CAP during the month of August. Our residents freely availed themselves of this week long course which earned excellent reviews from the participants not only for its content but also for the opportunity it provided for the registrants to tour our facilities. Dr. Robert Scully, Professor of Pathology of the Massachusetts General Hospital, accepted our invitation to be the Second Annual Residents’ Visiting Professor delivering a lecture on Serous Borderline Tumors of the Ovary and a slide seminar. In addition, Drs. Kamal Ishak (Armed Forces Institute of Pathology) and Robert Kurman (Johns Hopkins Hospital) shared their expertise with us in their respective areas of liver and gynecologic pathology.

The anatomic pathology laboratories, now under the capable direction of Ms. Ada Tillman following the retirement of Elizabeth Binns, faced new and difficult challenges in responding to budgetary cuts. Although it is inevitable that we will lose some of our flexibility in responding to emergent requests for stat biopsy procedures, we view this as an opportunity to critically and creatively evaluate our entire operation and to devise ways to improve our efficiency. Toward this end we initiated a System Analysis Review which identified a need for changes in our accessioning process, handling of personal consultations, and retrieval and tracking of slides. Although these issues will be addressed over the coming year a series of changes were initiated in January which should improve the efficiency of all of the laboratories. These included deletion of microscopic descriptions in surgical pathology reports on a routine basis, centralization of staining procedures in the histopathology laboratory, utilization of computer-generated slide labels, training sessions for staff and housestaff in accessioning procedures, decrease in the number and stains performed on a routine basis for special procedures (e.g., endomyocardial biopsies), a QA/QC tracking system to ensure timely completion of cases, and integration of personal consultations into our network database. The success of these efforts was acknowledged by the overall excellent performance of our laboratories during the recent CAP inspection.

Our diagnostic sophistication has improved over the past year with the addition of molecular biological techniques to our diagnostic armamentarium. Identification of selected infectious agents (CMV, atypical mycobacteria) represent our initial accomplishments attributable largely to the efforts of Dr. Tom Frank. We look to an expansion of these activities as well as a close working relationship with our Flow Cytometry and Cytogenetic Laboratories.
Although budgetary issues have of necessity consumed a great deal of our time this year, our division is equally concerned about ensuring the viability of academic pathology. Toward that end we all remain committed to the nurturing and education of medical students, housestaff, and junior faculty.

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

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

The Autopsy Service of the Department of Pathology continues its service function of performing autopsies on University of Michigan patients, as well as the Medical Examiner cases for Washtenaw County.

I. Alzheimer's Disease:

A. The University of Michigan. In order to provide the highest quality tissue for researchers of the Alzheimer's Disease Research Center (ADRC), the Department of Pathology has established an on-call system to harvest brains between the hours of 8 PM and 4 AM. The ADRC coordinator makes the arrangements to bring the body to the morgue and the Pathology on-call house officer performs an in situ inspection and removes the brain with the assistance of the on-call dieners. The ADRC is paying the costs of this program, which was instituted on March 1, 1991.

B. State of Michigan. Working closely with the Dementia Subcommittee of the Michigan Department of Public Health, a state-wide program has been initiated to make brain-only autopsies available to the people of the State of Michigan. The neuropathologists at The University of Michigan, Michigan State University, Oakland County Medical Examiner's Office, and William Beaumont Hospital are participating in the program. Under this program, a person with documented dementia will make prior arrangements with a local pathologist for removal of the brain; the local pathologist will then send the entire brain to a neuropathologist for diagnosis. Important components of the program are:

1. An adequate premortem neurological assessment must have been made, in order to correlate the histologic findings with the clinical information.
2. Prior arrangements must have been made with a funeral director and local pathologists.
3. The program is available to anyone who wishes to participate, but the funeral director, local pathologist, and neuropathologist must all be paid by the family. State funding for the program is essentially non-existent.

II. Medical Examiner Cases:

Difficulty with medical examiner's cases continues. We have worked closely with the Michigan Association of Medical Examiners (MAME) to establish a working solution to the problem that arises when injury occurs in one county and death occurs in another county. A compromise has been reached which has the support of both The University of Michigan and MAME. Legislation is presently being written that will be jointly sponsored by Representative Kirk Profit, and the State legislator from the Grand Haven area, the district which previously opposed us. The bill will permit us to charge the county of injury for the cost of the autopsy if death occurs within 24 hours after arrival in the county of death. This legislation will be introduced in the Fall of 1991, and we do not anticipate any difficulty with its passage.
III. Future plans for the Autopsy Service:

At the recent CAP inspection, the Autopsy Service was again cited for: i.) failure to complete autopsy reports in a timely manner, and, ii:) lack of a system to code and retrieve diagnoses. Both of these issues are being addressed vigorously. A carefully analysis is being performed to determine the cause of the delay in obtaining brain reports, since this remains the single slowest component of the service. Pathology Data Systems is working to develop a module to transfer data; hopefully this system will be operational in the near future.

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total University of Michigan Autopsies</td>
<td>385</td>
</tr>
<tr>
<td>M-Labs Cases</td>
<td>11</td>
</tr>
<tr>
<td>Medical Examiner Cases</td>
<td>60</td>
</tr>
<tr>
<td>In-Hospital Cases</td>
<td>18</td>
</tr>
<tr>
<td>Outside Cases</td>
<td>42</td>
</tr>
<tr>
<td>Percent of University of Michigan</td>
<td></td>
</tr>
<tr>
<td>Autopsies (includes Teratology cases)</td>
<td>45%</td>
</tr>
<tr>
<td>Number of Faculty Participating on the Autopsy Service</td>
<td>21</td>
</tr>
</tbody>
</table>

Daniel G. Remick, M.D.
Director, Autopsy Service
CYTOPATHOLOGY LABORATORY
DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1990 - 30 JUNE 1991

The laboratory began the year in difficult circumstances: a severely depleted technical staff resulting in an unprecedented backlog of unexamined specimens. Because of the nation-wide shortage of cytotechnologists, it was not easy to extricate ourselves from this situation. It required an inordinate amount of overtime by our technical staff as well as sending specimens to outside laboratories to get them read and reported. Gradually, our technical staff have been replaced, and we are now up to full complement.

The outside laboratory that supplied 50% of our annual total of 40,000 gynecologic specimens recently stopped sending specimens to our laboratory. These specimens imposed a large burden on the laboratory, not only because of their number but also because of the administrative and logistical disadvantages we labored under with a distant client. Furthermore, for the two years we had been receiving these extra 20,000 specimens we had dealt with them without any increase in technical staff or pathologists.

In September, 1990 additional Federal regulations came into effect governing the practice of gynecologic cytology. They have created extra work, especially for the cytotechnologists, in that we have to carry out additional quality assurance measures, some of dubious value.

Dr. Suzanne M. Selvaggi, formerly of Wayne State University and Hutzel Hospital in Detroit, joined the faculty in December, 1990 to replace Dr. Robert W. Schmidt, who retired. She brings to the position wide experience in cytopathology and gynecologic pathology.

Bernard Naylor, M.D.
Director, Cytopathology Laboratory
DERMATOPATHOLOGY SERVICE
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1990 - 30 JUNE 1991

The Dermatopathology Service receives diagnostic case material from five different sources: (1.) UMMC (ID) cases; (2.) outside contractual (MD) cases; (3.) personal consultations (HE) cases; and (4.) outside slides reviewed for referred patients (TD) cases; and informal consultations (intramural, VAH, and MU) cases:

Work load volume is as follows:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>HE</td>
<td>790</td>
<td>822</td>
</tr>
<tr>
<td>ID</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>MD</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>TD</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Informal</td>
<td>NA</td>
<td>350</td>
</tr>
</tbody>
</table>

Correlative activities included participation in Melanoma Clinics (biweekly), Cutaneous Lymphoma Conference (monthly) and Dermatology Grand Rounds (weekly).

Teaching included scheduled presentations to medical and dental students.

1990-1991 continued the gradual trend for an increased workload.

John T. Headington, M.D.,
Director, Dermatopathology Service

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

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The electron microscopy laboratory continues to provide an important service and research function for the Department of Pathology as well as the Medical Center. For example, during this past year 482 clinical specimens were submitted. This number is up dramatically from the previous year when 391 clinical specimens were processed. Of this total, 140 were renal biopsies while the remainder were tumors of various types as well as nerve and muscle biopsies. This marked increase in clinical electron microscopy cases is in marked contrast to what is seen nationally where most EM services have seen a marked decrease in volume.

The most dramatic growth in electron microscopy continues to be in the area of research. During this past year over 20 investigators from virtually every department in the medical school have utilized this facility. During this past year 356 samples were submitted for actual ultrastructural analysis. This is derived from over 800 samples submitted in total, many of which required only thick sectioning and not complete EM analysis. This high volume continues to tax our capability particularly with the development of newer methodologies such as in-situ hybridization and immunoelectron microscopy. It is a tribute to the laboratory personnel; in particular Ms. Robin Kunkel, that we continue to offer rapid turn around time while providing the most up-to-date techniques for the investigators using this facility.

During this past year there has been several personnel changes. In the Clinical EM area Ms. Cindy Lamm left after three years with us to pursue graduate studies. In addition, in the research area Mr. Bradley Nelson also left to pursue an advanced degree. We have added two new individuals to take their places. In the clinical laboratory we have added Dr. Yin Ru Sieracki and in the research laboratory Ms. Lisa Riggs. In addition, Ms. Barbara Rogers has been made supervisor of the clinical laboratory. It is a tribute to the personnel in the laboratory that the specimens continued to be processed in a timely fashion in spite of all of the laboratory turnover. In particular, I would like to site the efforts of Ms. Rogers who made a major effort to get the clinical laboratory into compliance for a recent CAP inspection which was passed with flying colors. Her efforts included a complete rewriting of many areas of the procedure manual as well as instituting a comprehensive quality control program.

It is anticipated that during this coming year that demands on the EM service will continue to increase; particularly in the research area. Plans are underway to develop a computerized morphometric analysis system that would allow for precise quantification of ultrastructural alterations by the use of image analysis. Therefore, it appears as if concerns about the future of EM in modern pathology are unfounded. In fact, as our degree of understanding on the molecular basis of disease increases, correlative ultrastructural studies using specific molecular probes will assume increasing importance.

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

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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, and made significant contributions to the Autopsy Neuropathology Service. Dr. Anders A.F. Sima joined the service this year. Dr. Mila Blaivas, Ms. Constance J. D’Amato, and Dr. Paul E. McKeever, also contributed to the Neuropathology Service.

CLINICAL ACTIVITIES:

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

1. There were 536 neurosurgical cases examined this year from Main, Mott and outside hospitals in consultation. 47 cases were referrals from other institutions, a portion of which were part of interdepartmental collaborative NIH funded studies of PET scanning and BUDR radio-sensitization of gliomas. One hundred sixty-eight surgical specimens required special neurohistologic procedures.

2. There were 342 brains examined out of 396 autopsies which is 86% of all autopsies at this Medical Center. An additional 24 brains were examined from other institutions and hospitals. While all neuropathology faculty have participated, Dr. Hicks and Ms. D’Amato collaborated to prepare descriptions of most UM autopsy brains, and other brains referred for consultation.

3. There were 169 muscle biopsies (a 17% increase over the previous year), nearly all with histochemistry, some with electron microscopy. There were 66 peripheral nerve biopsies. Teased fiber preparations and electron microscopy were performed on appropriate nerve biopsies. The combination of nerve teasing, muscle histochemistry, electron microscopy and morphometry make the service regionally competitive for diagnostic consultation. Dr. Blaivas examined 47 cases from other hospitals in consultation.

4. Faculty interpreted 169 cases in semithin section and electron micrographs of 112 cases (32% increase). The majority were nerve, pediatric muscle, and neurosurgical biopsy cases.

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

6. The Brain Tumor Board of the University of Michigan Cancer Center and Hospitals reviewed neuropathology and clinical aspects of more than 120 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.

2. House Officers, Graduate Students, Postgraduate and other students and faculty: These include a conference every other month with Neurology; 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: One neurosurgery resident and four medical students chose elective rotations on the Neuropathology Service.

**RESEARCH ACTIVITIES:**

1. Dr. Hicks and Ms. D'Amato's experimental work concerned the role of fetal rat brain phagocytes in repair after radiation injury, and the association of thrombospondin with the development of astrocytic gliosis after surgical brain injury in adult rats. They also provided neuropathologic diagnostic support for Drs. Anne Young and John Penney's biochemical study of Alzheimer's disease and other human dementias.

2. Dr. Blaivas and associates investigate ocular muscle (normal and abnormal). She is also investigating musculature related to cleft palates in children and mice. She is investigating normal and diseased musculature of the face and the pelvic floor.

3. Dr. Sima and collaborators are examining the regulation of all adhesive molecules and junctional molecules in diabetic nerve and retina to elucidate the etiology to defects occurring in axo-glial junctions and endothelial cell tight junctions in diabetes. Furthermore they are examining the interaction between nerve growth factors (NGF, IGF-1) and nerve regeneration in diabetes.

4. 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*.

5. 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.


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

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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:

- M/W/H Unit Deaths (20 weeks gestation or any live born, to 18 years) = 194
- Necropsies on Above = 144
- Necropsy Percentage = 61%

Of the 144 posts, 52 patients' bodies were released to Anatomy for study and disposal. These gross posts were performed by Mason Barr, Jr., M.D., with necessary histology by Dr. Heidelberger. Ninety-two patients were posted by the residents and senior staff in Pathology, primarily Dr. Heidelberger. Necropsies categorized in the adult general hospital statistics as "Medical Legal" posts included 14 posts on pediatric patients including SIDS cases, child abuse cases and trauma cases, most of which were classified as inpatient deaths.

A total of 438 necropsies for UMMC Hospitals patients was performed (including the 14 pediatric "Medical Legals"), 52 by Dr. Barr in the Teratology Unit and 386 by the Pathology Department Staff. Thus, 33% 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 examined in the Teratology Unit was 182 - including both all referred fetuses and infants and newborn fetal losses at less than 20 weeks' gestational age.

The total number of pediatric surgical specimens (including placentas) examined is almost 2,500. This represents an increase of over 8.5% from the previous academic year.

Kathleen P. Heidelberger, M.D.
Director
Pediatric Pathology Service
SURGICAL PATHOLOGY SERVICE
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The Surgical Pathology Service witnessed one of the steepest volume increases last year. Our annual hospital-based work volume increased by 14% and our personal consultation by 22%, bringing our total annual accessions to 31,116 cases. This volume identifies us as one of the most active university hospital services in the country. The imminent opening of the Medical Procedures Unit is projected to further increase our annual volume by 10%. Although the increasing volumes coupled with personnel and budgetary constraints have forced some inevitable cutbacks, we have met the foregoing challenges, for the most part, with programmatic changes such that only minor curtailment of services has resulted. We continue to search for other ways of improving our efficiency in order to support our clinical services.

Our staff looks with immeasurable pride on the accomplishments of our first surgical pathology fellows who completed their training at the conclusion of this year. Their acceptance by our staff and clinical colleagues attests to the highly level of competence which they displayed throughout their fellowship year. The success of this first year has secured a firm place for this fellowship experience within our educational programs.

We continue to expand our diagnostic armamentarium utilizing newer technologies. We are able to identify certain infectious agents by molecular diagnostic techniques, and will soon offer flow cytometric and cytogenetic analysis of some solid neoplasms as a standard laboratory procedure.

Sharon W. Weiss, M.D.
Chief,
Surgical Pathology
CLINICAL PATHOLOGY LABORATORIES

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Clinical laboratory personnel continued to be busy in the past year with increased volume, in addition to consolidation of laboratories and continued 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 Histocompatibility Laboratory. In addition to the consolidation of the laboratory, Dr. James Baker was hired as director of the laboratory.

A College of American Pathologists (CAP) inspection was successfully carried out this spring. The inspection was passed with only a few minor deficiencies. In addition, the Clinical Toxicology Laboratory passed a CAP forensic drug testing lab inspection.

The laboratories responded to the present cost containment program with a program that demonstrated cost savings in personnel (FTEs), commodities, and programs. Implementation of the cost savings is now in effect, including the development of utilization review programs in areas where clinical programs are growing the fastest; for example, in blood products.

The Quality Assurance Committee, made up of members of the laboratory staff and coordinated for Dr. McClatchey by Suzanne Butch, Chief Technologist for the Blood Bank, continues to show a visionary approach to quality assurance in the clinical laboratories, both intra- and inter-laboratory. The development of indicators is now directed at programs where patient outcome can be affected.

The M-Labs program in the clinical laboratories is continues to be a part of the daily routine. The M-Labs program is constantly monitored by the M-Care/M-Labs Quality Improvement Committee, which is made up of selected laboratory personnel to ensure 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 cost efficient laboratory system.

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

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PATIENT CARE:

The usage of blood products in the last year increased, with the exception of Red Blood Cells. This was effected by programmatic changes as well as utilization review, particularly in cardiac surgery. Red Blood Cell usage was 90 per cent of the previous year (figures based on 10-month usage, July 1990 through April 1991). The usage of cryoprecipitate increased 115 per cent, Fresh Frozen Plasma increased 123 per cent, and platelet concentrates increased 107 per cent compared to the previous year. Use of 5 per cent albumin increased 135 per cent, due to increased activity in plasmapheresis.

Laboratory activity increased commensurately with blood products. The volume of type-and-screen procedures increased 109 per cent, antibody identifications increased 111 per cent compared to the previous year. Crossmatches were stable at 98 per cent of previous annual activity.

Significant increases were seen in laboratory activities related to the Bone Marrow Transplantation Program. Ninety stem cell harvest procedures were performed compared to one in the previous year. One hundred twenty-three bone marrow freezing and storage procedures were performed, compared to 19, and 20 marrow separation procedures compared to 9 in the previous year.

Activity in the Transfusion and Apheresis Service also increased. Outpatient transfusions increased 112 per cent, and plasmapheresis procedures increased 136 per cent. The Cobe 2991 apheresis instruments were replaced by Cobe SPECTRA instruments. This is anticipated to increase reliability and decrease set-up time require for each procedure.

The utilization review program conducted with the Section of Thoracic Surgery continued to show positive results. Blood usage in cardiac surgical procedures decreased by approximately one-third in terms of average number of components used and average donor exposures. In addition, the number of patients undergoing cardiac surgical procedures utilizing no homologous blood increased significantly. This utilization review program, which involves peer review within the Section of Thoracic Surgery based upon data provided by the Blood Bank/Transfusion Service, has served as a model for development of comprehensive review procedures within the institution.

EDUCATIONAL ACTIVITIES:

The medical, technical and nursing staff of the Blood Bank/Transfusion Service were active in education at the departmental, institutional, regional and national levels. All first-year Pathology House Officers in Clinical Pathology participated in the Blood Bank orientation course. Daily teaching rounds were held for House Officers assigned to the Blood Bank. Dr. Oberman, Dr. Davenport and Mr. Judd presented Pathology Grand Rounds throughout the year. In addition, Fellows in Pediatric Hematology rotated through the Blood Bank. The nursing staff of the Transfusion and Apheresis Service presented regular education services for nursing at the University of Michigan Hospitals on the topics of blood product administration and adverse transfusion reactions.

The eighteenth annual postgraduate course "Current Topics in Blood Banking" was held June 5, 6 and 7, 1991. Mr. Judd and Ms. McCoy-Pardington were program directors. The course continues to be one of the largest continuing education programs in Blood Banking in the nation. Members of the
Blood Bank and Transfusion Service staff presented Workshops on management, serologic problems and treatment of coagulopathies. Ms. Steiner presented the Ron Scherdт Memorial Lecture entitled, "Is It Auto or Is it Allo?" Mr. Judd presented a lecture entitled, "Pretransfusion Testing: What Else Can Go?"


PROFESSIONAL ACTIVITIES:

Staff at the Blood Bank and Transfusion Service continued to be active at the regional and national levels. Ms. Butch served as Chairperson of the Education Committee of the Michigan Association of Blood Banks; Chair, Director Examination Subcommittee of the Examination Council of the National Certification Agency for Clinical Laboratory Personnel; Historian of the Publications Committee of the Michigan Society for Medical Technology; and Chairperson of the Blood Bank Special Interest Group of Cerner PathNet Users Group. Ms. Barnes served as Inspector for the Inspection and Accreditation Program of the American Association of Blood Banks. Ms. Steiner served as a Member-at-Large of the Executive Board of the Michigan Association of Blood Banks; Chair, Bylaws and Policy Manual Committee; and Annual Meeting Committee of the Michigan Association of Blood Banks. Ms. Steiner also served on the Reference Laboratory and Rare Donor File Committee of the American Association of Blood Banks. Mr. Judd served as Chairman of the Specialist in Blood Banking Program, member of the Annual Meeting Program Committee, and member of the Spring Workshop Committee of the Michigan Association of Blood Banks. Mr. Judd also served as North Central District Representative on the Board of Directors of the American Association of Blood Banks. Ms. Butch served as Co-Editor of the Journal, "Clinical Laboratory Science". Dr. Oberman served as Associate Editor of the Journal, "Transfusion".

RESEARCH ACTIVITIES:

The faculty and staff of the Blood Bank and Transfusion Service are actively pursuing ongoing research activities in the pathophysiology of transfusion reactions, pretransfusion testing, the genetic basis of blood group antigens, and strategies for reduction of donor exposures. Completed publications in peer-reviewed journals by the faculty and staff of the Blood Bank and Transfusion Service in the past year include the following:

2. Judd WJ. Are there better ways than the crossmatch to detect ABO incompatibility? Transfusion 1991;31:192-4.


Harold A. Oberman, M.D.
Director,
Blood Bank and Transfusion Service
CLINICAL CYTOGENETICS LABORATORY

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The Clinical Cytogenetics Laboratory has continued to expand, both in numbers and complexity of samples processed and in personnel. In the last year, approximately 875 amniotic fluids, 60 tissues (skin, POC, etc.), 345 peripheral blood specimens, 145 fragile-X analyses, 67 prophase analyses, 6 breakage studies and 273 bone marrows were completed for a total of 1,771. Increases were seen in all areas, particularly bone marrow and prophase analysis. It is important to note that more than half of the non-prenatal specimens required special processing and analysis. With expanded staffing, the use of the laboratory computer and daily sign out, the turn-around time for the prenatal cases has gone from 3 to 4 weeks to 14 days or less.

The laboratory as a whole is planning to continue to decrease turn-around times and expand the extent of its analyses, as this appears to be the direction that the field of cytogenetics is taking. A collaborative effort with a group from Maternal-Fetal Medicine resulted in the institution of a program of earlier prenatal diagnoses by chorionic villus biopsy. Approximately 100 cases are expected during the first year (which began in May, 1991), and these are not expected to replace any of the amniocenteses being performed now.

Bone marrow cytogenetic analyses continue to increase; this trend is expected to continue as the Bone Marrow Transplant program grows. A number of studies are underway to determine the value of various mitogens and growth factors for stimulation of abnormal clones for bone marrow analyses. In addition, some solid tumors, primarily sarcomas, have been analyzed and this type of analysis is now available clinically.

Some molecular cytogenetic analysis is being offered by the clinical laboratory. Using fluorescent in situ hybridization, chromosomes X, Y, 13, 14, 15, 21, and 22 can now be identified, a procedure which is useful in ascertaining the origin of certain "marker" chromosomes. These studies undoubtedly will be expanded in the future.

Thomas W. Glover, Ph.D.
Director,
Clinical Cytogenetics Laboratory

Susan Sheldon, Ph.D.
Assistant Director
CLINICAL FLOW CYTOMETRY LABORATORY

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The Clinical Flow Cytometry Laboratory has enjoyed a stable and productive year without significant changes in overall operation. The laboratory has continued its active role in diagnostic clinical pathology and indeed has continued to show growth in all areas of the laboratory. A total of 2400 immunophenotyping specimens were handled by the laboratory over the past 12 months, which is an increase of 25% from the previous year. This included approximately 1200 specimens for monitoring T-cell subsets in patients with acquired or inherited immunodeficiencies or in patients receiving organ transplants. Approximately 600 specimens were processed for cell surface markers for possible hematologic disorders, including acute or chronic leukemias. The remaining 600 specimens were studied for platelet-associated immunoglobulins or neutrophil-specific antibodies. An additional 5000 reticulocyte counts were also performed by flow cytometry. This was the first complete year of our laboratory routinely performing reticulocyte counts, which are analyzed Monday thru Saturday in the laboratory. Stat reticulocyte requests (less than 5/year) are performed in the hematology laboratory.

Each immunophenotyping specimen analyzed in the laboratory requires anywhere from 6 to 30 individual staining, quantitation, and analytic procedures. Quality control and calibration procedures further add to the specimen load. Thus, the laboratory staff conducted approximately 37,000 individual marker studies in fiscal year 1990/1991. The laboratory continues to provide 12 to 24 hour turn-around studies on acute leukemia and selected transplant patients. Overall, Part B billings continue to increase without a significant change in commodity expenses.

The Flow Cytometry Laboratory continues to implement changes to enhance the operational efficiency of the laboratory, to maintain commodity expenses, and academically still be at the forefront of clinical flow cytometric applications. Two-color immunophenotypic analysis has become a routine standard in the laboratory. During the past year, we have implemented two-color staining for all non-acute leukemia work-ups and have made significant progress in implementing two-color analysis for our acute leukemias. Once this is accomplished, no single-color assays will be routinely performed in the laboratory. Although two-color reagents are more expensive, the marked reduction in preparation and analysis time has allowed us to handle the continuing increase in laboratory requests without increasing personnel. Other changes in the laboratory have included the development of leukemic cell lines as sources of normal controls and evaluation of nuclear and cytoplasmic antigens in acute leukemia specimens.

The Flow Cytometry Laboratory has continued to enhance the efficiency of its daily operation. The generation of final reports by pathologists and technologists has been greatly simplified requiring less paper work and professional time. The development of a computer database of immunophenotyping results has been a tremendous help in both the day-to-day operation in the laboratory, as well as in its academic mission. This database is relatively unique to a clinical laboratory and provides an instantaneous source of important patient information, which we continue to modify and enhance. It has also enabled us to maintain a more accurate record of cryopreserved leukemia samples.

The laboratory has continued to develop its quality assurance program. The pathologists staffing the laboratory are actively involved in deciding the appropriateness of requested immunophenotyping studies. Only those cases which warrant phenotypic analysis will be processed by the laboratory. Approximately 150 tissue specimens and over 200 blood and bone marrow samples were cancelled...
without instrument analysis as a result of pathologist's triage. This aspect emphasizes the continuing need and importance for the pathologist's daily involvement in the laboratory.

New developments in the Flow Cytometry area in the upcoming year will be concentrated on adapting many of our assays to the new Becton-Dickinson FACSCAN flow cytometer. Approximately 1/2 of our assays can now be performed on the FACSCAN. Continued development on this instrument will happen during the course of the year along with development of appropriate database changes. The laboratory will also closely look at commodity expenses to significantly reduce that portion of its overall budget. The laboratory continues to provide backup service to the hematopathology portion of the Molecular Diagnostic Laboratory. Further description of the Molecular Diagnostic component is discussed separately (see Clinical Molecular Diagnostic Laboratory).

Curtis A. Hanson, M.D.

Lloyd M. Stoolman, M.D.
Directors
Clinical Flow Cytometry Laboratory
CLINICAL HEMATOLOGY LABORATORY

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LABORATORY ACTIVITIES:

A. There was an overall increase in the total number of tests from 463,000 in 1988-1989 to 475,000 in 1989-1990, and to 538,000 in 1990-1991 (13.3% increase from 89-90).
B. There was 7.7% increase in the number of tests requiring review by hematopathologists, from 3900 cases in 1989-1990 to 4200 cases in 1990-1991. This review included cases with abnormal peripheral blood smears and abnormal body cavity fluids including differential white cell counts and screening for malignant cells.
C. In December 1990 the automatic verify by the Cerner system of negative results from the Rapimat urinalysis instrument was implemented. This change was our first main step in using the Cerner system to enhance the efficiency of the laboratory.
D. In March 1991 implementation of reporting automated differential counts from the STKS instruments in the Main Hematology Laboratory was effected, reducing the number of manual differential white cell counts by 41%. In June 1991, implementation of reporting of automated differential counts in the Taubman Stat Laboratory was accomplished, leading to a 39% reduction in the number of manual differentials performed. Implementation was accomplished by dual-reporting manual and automated differentials for a six week interval. During this time, all data (over 10,000 comparisons) were collected on the computer system. Currently, we are in a collaborative project with Biostatistics and the Cancer Center to evaluate and eventually publish these data.
E. On April 1, 1991, we implemented a cooperative protocol with the Microbiology Laboratory for detection and reporting of intracellular bacteria in body fluids.
F. A computer database is being established to keep track of all bone marrow and pertinent reviewed cases. This will allow for better tracking and organization of material.
G. Daily bone marrow signout with house officers and fellows.
H. Daily signout of in-house and UM clients' cases, abnormal smears and body and joint fluids takes place 7 days per week.
I. A quality assurance program has continued in the area of bone marrow cytochemical stains for leukemia and other labor intensive "specialty" tests within the laboratory. This program 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 and Hematopathology Fellows 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. Schnitzer 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-Labs clients.
   6. A formal teaching conference for House Officers has been continued.
   7. Review of SWOG cases.
8. Weekly Interdepartmental Lymphoma Conference.
10. Pediatric Hematology/Oncology Fellows participate in signouts.

B. Hematopathology Fellowship Program
C. Continuing medical education for medical technologists - monthly.

FY 91/92 GOALS:

A. Implementation of cost-containment programs.
B. Review and development of laboratory utilization.
C. Implement limits on repetitive differential requests.
D. Continue to liberalize automated differential criteria.
E. Preliminary studies of limiting WBC requests from intensive care units.
F. Continue to enhance the overall efficiency of the laboratory operation.

Bertram Schnitzer, M.D.

Curtis A. Hanson, M.D.

Directors
Clinical Hematology Laboratory
CLINICAL IMMUNOPATHOLOGY LABORATORY
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OVERVIEW:

Jeffrey Warren, M.D. assumed the role of laboratory director on September 1, 1989 when David Keren, M.D. departed by become the Director of Warde Medical Laboratories. Dr. Keren continues to provide invaluable advice as an ad hoc consultant. John Lowe, M.D. has increased his level of service commitment to aid in filling the void left by Dr. Keren's departure. Kent Johnson, M.D., and Kevin Cooper, M.D. (Dermatology) continue to signout tissue immunofluorescence studies.

CLINICAL SERVICES:

As the fiscal year approached its conclusion, the laboratory had experienced a modest increase in total volume (approximately 2%) despite the setbacks incurred by the nursing strike during the summer of 1989. Particularly gratifying has been the growth in several relatively new assays; these include the neutrophil cytoplasmic antibody (NCA) test, prealbumin assay, and immunoglobulin G subclass determinations. Neutrophil cytoplasmic antibody determinations have increased from approximately 20/month to more than 40/month, prealbumins have increased three-fold and immunoglobulin G subclass determinations have increased by approximately 50%. In addition, we instituted the microalbuminuria assay as a clinical test.

RESEARCH AND DEVELOPMENT:

The laboratory has participated in an ongoing methods comparison study of microalbuminuria assays. This study is being conducted by Dr. Patricia Mueller at the Centers for Disease Control in Atlanta. Involvement in this study has been an outgrowth of our support of ongoing clinical studies of ambulatory diabetic patients being carried out by Dr. William Herman (Department of Medicine, University of Michigan) and Dr. Mindy Smith (Department of Family Practice, University of Michigan). We initiated laboratory support of a clinical study of atypical antinuclear antibodies in conjunction with Dr. Joseph McCune (Department of Medicine, University of Michigan). We are currently setting up the Western immunoblot technique in order to examine the specificities of anti-neutrophil cytoplasmic antibodies. Finally, after conducting a method comparison study of IgG subclasses quantitated by microELISA versus radial immunodiffusion, we have recently switched to the later method. The RID method should prove to be more reliable and the laboratory should realize a significant annual cost savings.

QUALITY ASSURANCE:

The laboratory completed two QA projects. These relate to proper specimen procurement for CSF oligoclonal bands and proper screening requests for Bence Jones proteins.
TEACHING/PROFESSIONAL:

Residents, M4 medical students, and medical technology students from Eastern Michigan University rotated through the laboratory. Immunopathology journal club for medical technologists and on-service house officers were conducted biweekly. Four clinical pathology grand rounds were presented by Drs. Lowe and Warren. Other professional activities of faculty and staff in the laboratory are summarized under individual faculty reports.

Jeffrey S. Warren, M.D.
Director
Clinical Immunopathology Laboratory
CLINICAL MICROBIOLOGY LABORATORY
DEPARTMENT OF PATHOLOGY
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CLINICAL ACTIVITIES:

The volume of tests performed during the year increased 9% compared to last year with requests for CSF, blood and chlamydia increasing greater than 15%. MLabs specimen requests increased 15.8% over last year and accounted for 13% of total laboratory test volume. Several new tests were implemented during the year including the use of DNA probes for the direct detection of Chlamydia trachomatis and Neisseria gonorrhoeae and an EIA method to enhance detection of Giardia lamblia. Considerable effort was put toward the training of phlebotomists stationed in the ER to perform Strep A EIA tests and toward monitoring activities at the M-Care laboratories. Several Quality Assurance projects were carried out including the monitoring of blood and stool cultures for correct usage. Toward the end of the fiscal year, much effort was directed toward the Cost Containment program. The CAP inspection was completed successfully in June. The laboratory provided continuous data and information to Infection Control Services for their daily investigations of potential nosocomial infections.

TEACHING ACTIVITIES:

A more extensive Pathology Resident training program was developed and instituted for the 13 residents who spent 1-2 months in the laboratory. In addition, several Pediatric residents received on-site training in the lab. Infectious Disease laboratory rounds were conducted each weekday attended by fellows, residents and medical students during which interesting cases were discussed and lab demonstrations performed by the assigned Pathology resident. Several of our senior technologists participated in several national and regional conferences. Culture data was supplied to several residents to assist them in preparing for educational presentations.

RESEARCH ACTIVITIES

Most of the research efforts during the year were directed toward the development and evaluation of more rapid and sensitive diagnostic techniques and the comparative evaluation of new antimicrobials. Automated EIA methods for the detection of Chlamydia, Clostridium difficile toxin A and Rubella IgG were performed. An automated method for the screening of urines was evaluated with the results presented at the annual ASM meeting. A research antimicrobial panel was developed and used to evaluate the activity of several new beta-lactam and fluoroquinolone antimicrobics. Appropriate data were supplied to the hospital P&T committed to assist their evaluation of new antimicrobics considered for the formulary. Laboratory personnel assisted investigators from other departments by providing laboratory expertise and cultures for their investigations. Examples include the isolation and characterization of yeast isolates for a member of the Dept. of Family Practice and the isolation, identification and new drug susceptibility of organisms for the Dept. of Obstetrics and
Gynecology. An exciting new development is the utilization of PCR for the direct detection of *Mycobacterium tuberculosis* in clinical specimens. This investigation is being conducted with the Molecular Diagnostic Unit and shows great promise.

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

Carl L. Pierson, Ph.D.
Associate Director
Clinical Microbiology Laboratory
HISTOCOMPATIBILITY AND IMMUNOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

1 JULY 1990 - 30 JUNE 1991

This has been a year of intense change for the Histocompatibility Laboratory; the personnel, techniques and administrative functions were all reorganized in an attempt to make the laboratory run more efficiently. Despite these changes, the laboratory’s clinical activity was maintained, and in some cases, increased. The new personnel and techniques were incorporated in the lab without any disruption in accreditation or quality of service.

CLINICAL ACTIVITIES:

Clinical Activity in the Histocompatibility Laboratory showed a general increase in the number of tests done during the past year. Tissue typings for both Class I and Class II antigens stayed at approximately 1,200 analysis per year, while antibody screenings and crossmatches each had approximately a 10% increase in the number of tests. Mixed Lymphocyte Cultures (MLC’s) showed an enormous increase of approximately 2,000% such that now approximately 60 MLC’s are done each year.

Personnel changes during the year involved the appointment of a new Director, Dr. James Baker, on January 1, 1991 and the hiring of two new employees, Catherine Boik (a Medical Technologist) and Maxine Lipon (a Medical Technician).

Improvements in technical functions in the laboratory involved changes in the procedures for most of the assays. The technique for performing Class II typing was changed to florescence microscopy, with two-color dye labelling and magnetic bead separation of cells. This allowed the time required for the Class II typing to shrink from approximately 48 to 4 hours, while increasing the likelihood that typing could be accomplished on individuals with low lymphocyte counts. The equipment and techniques for MLC’s were improved to reduce background and increase the viability of the cultures. In addition, University of Michigan typing trays were developed to reduce reliance on commercial vendors and increase the specificity of the antigen assignments. This also allowed for a projected savings of approximately 20% of the budget as compared to the cost of commercial trays.

An extended effort was made to automate the functions of the laboratory and this was completed in late June of 1991. A local area network was installed and managed by Jeff Hayward, the Data Supervisor the Laboratory, in conjunction with Pathology Data Services. Activities including data analysis, archiving, retrieval and report generation were automated, and techniques were introduced which allowed direct billing through Pathnet. Because the laboratory was dependent on paper records up until this point, an extensive program of microfiche was undertaken to archive all of the past records of the laboratory. These activities will reap tremendous benefits in efficiency and cost savings in the coming years.

TEACHING ACTIVITIES:

Every member of the laboratory was involved in the teaching activities of the laboratory and these activities were markedly expanded over previous years. The laboratory was involved in the instruction of Pathology Residents, Allergy Fellows, Renal Fellows and the rotation for Hematology Fellows from the Department of Medicine. Dr. Baker, the Laboratory Director, initiated a program for reevaluation of the procurement activities of the Transplant Society of Michigan and this has resulted in
a new and more efficient manner for state-wide matching of organs with recipients. Ms. Cynthia Schall, the Laboratory Supervisor, was involved in teaching review courses at the Henry Ford Hospital, University of Michigan, and the Biotest International Symposium. She also oversaw the teaching activities of the Laboratory for both the Residents and two "Women In Science" Interns.

NEW GOALS:

Goals of the laboratory in the coming year involve the development of HLA typing by DNA analysis using the Polymerase Chain Reaction, in order to better support the bone marrow program. In addition, it is hoped to develop a basic-science research program in Transplantation Immunology to support both the Transplant Surgery Service in the Department of Surgery and the Transplantation Medicine Program in the Department of Medicine.

James R. Baker, Jr., M.D.
Director
Histocompatibility and Immunogenetics Laboratory
LIGAND ASSAY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
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CLINICAL ACTIVITIES:

The Ligand Assay Laboratory is continuing to migrate to non-radioisotopic methodologies as acceptable replacements become available. We are also engaged in an active effort to improve turnaround time. The acquisition of a robot pipetting system (TECAN) enables us to reduce significantly technical pipetting time and more utilization of semi-automated analyzers (e.g., the Abbott IMx) has increased our efficiency. Such efforts have enabled us to absorb an increase of greater than 15% test volume this fiscal year (bringing our volume to over 150,000) without a corresponding increase in the number of FTEs or requiring additional overtime.

Specific changes in the procedures used in the Ligand Laboratory are the conversion of the LH, FSH, Prolactin and B2 Microglobulin assays from RIA procedures to the IMx fluorescent analyzer; conversion of Anti-DNA assay from an in-house 3H method to a simpler 125I kit; and changing the Estrogen Progesterone Receptor assays from a 3H binding method to an enzyme immunoassay (EIA). New tests initiated in this fiscal year include: Hepatitis C antibody, Insulin Growth Factor - 1 (IGF-1) Progesterone and Estradiol. The Estradiol assay was brought over from the Gynecologic Endocrine Laboratory. Progesterone and Estradiol are now done seven days a week. Finally, the PAP assay was brought in-house from send-out.

By the end of July it is projected that we will have set-up and run a Ciba-Corning ACS:180 analyzer that will allow us to convert several more of our assays to chemiluminescence methodology. This analyzer has pipetting capabilities and can read bar code on patient samples, thus significantly reducing the potential for identification error and improve turnaround time. Employing these instruments in large or technician time intensive assays allows us to continue to handle the ever increasing test volume and the development and evaluation of newer assays and analytes without increasing staff levels or overtime. The incorporation of newer assays and analytes gives us the ability to reduce the number of duplicate samples and standard curves that we are running. This results in a significant reduction in our per-test cost.

Migration of data analysis from PDP 11/44 to a Macintosh based system is nearing completion. The hardware is in place and the software is running but is not yet in its final form. Besides the usual opportunities afforded to the Pathology Residents to observe and participate in the Ligand Laboratory Function, we also extend this opportunity to Medical Technology students from Eastern Michigan University.

Barry England, Ph.D.
Director
Ligand Assay Laboratory
PATHOLOGY DATA SYSTEMS

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The activities of Pathology Data Systems for the past year can be divided into three separate categories: (1) PathNet hardware and software upgrades; (2) new hardware and applications to support the data processing needs of users; (3) educational activities.

PATHNET HARDWARE AND SOFTWARE UPGRADES:

In the first category, the most important change was the hardware upgrade of the VAX cluster, with replacement of the old processors with VAX models 8820 and 6510. The capacity of the processors on the cluster was approximately doubled as a result of this upgrade. Two state-of-the-art "optical" disk drives (RV20s) were also installed. Based on WORM technology (write once, ready many times), these drives provide greatly enhanced storage capabilities. As the result of their installation, cost savings are already being realized by the elimination of WAR reports on microfiche.

Software changes on the VAX cluster included two separate upgrades of VMS, the VAX operating system, as well as an upgrade to Version 304 of the PathNet software. WP-LINK was also installed and is now in the final stages of testing. This latter product will allow surgical pathology reports and personal faculty consultations to be generated in WordPerfect software running on distributed PCs in the department, with the final reports uploaded and integrated into the unified departmental data base.

Version 304 of PathNet supports bar code labeling which is now being implemented across all laboratories. Every test tube label generated in Central Distribution will include bar-code information relating to the patient, including name/hospital registration number, tests ordered, and the PathNet accession number. The presence of bar-coded labels will streamline laboratory operations because incoming specimens can be "wanded" to indicate specimen availability. Tubes can be then fed in random order into those automated laboratory instruments with the ability to input bar-code information.

Extensive progress has been made in the development of the test system (verification environment) which is used to test new and untried software before it is brought up on the live PathNet system. More specifically, we have developed software to copy actual patient test results to the test data base so that new software can be stressed in a test environment more closely mimicking the live environment. Accreditation agencies are now placing greater emphasis on the quality of such a test environment.

NEW HARDWARE AND SOFTWARE APPLICATIONS:

A new test inquiry program, POC, was developed locally to allow physician users to retrieve test results from the PathNet data base. This application was a major improvement over the preexisting Cerner software called PRI in that it is more user-friendly and it supports patient list management by physicians. This means that the physician is required to enter the name and registration number of a
patient into the system only once. The computer will then remember the information for subsequent retrieval of test results. Cerner has decided to make this software available to their other client sites.

Progress continues to be made in terms of locally developed CCL applications (Cerner command language: an SQL-type application) to query the data base and provide ad hoc reports. For example, a recurring report is sent to the Obstetrics-Gynecology Clinic containing a list of "non-negative" Pap smear results as a follow-up to the standard patient reports. Other examples of CCL reports include a chart-reprinting feature for those clinics which follow their patients on a long-term basis such as Hematology-Oncology and a feature for automatically extracting screening test results from the data base and generating letters to be sent by clinics to their patients.

A rule-based decision-support system was deployed on PathNet. This is a tool to utilize locally developed rule to facilitate laboratory work and support user needs. Currently the application is being used to support an auto-verify function whereby the system will review test results for reasonableness and then verify them if they fall within preestablished parameters. The system is also being used to support reflexive testing within various laboratories whereby additional tests are automatically ordered for a patient if the results for selected tests are initially positive.

As an R&D project using PDS research funds, a VAX "server" (model 4200) was purchased to which a portion of the laboratory data base is being copied. This server uses relational data base technology and has the capability to respond to SQL queries from users connected to the network throughout the hospital. The basic strategy here is to develop a prototype of a client-server architecture in PDS. Data base queries from users can then be shifted to the server from the production VAX cluster, which can then be used primarily to support the real-time production work of the laboratories. Discussions are ongoing with personnel in various clinical units who wish to have access to this server. This client-server project will be supported by Cerner and will also serve as a "showcase" for DEC.

The departmental centralized word-processing system (IBM 5520) was replaced with high-performance Novell network and PCs running WordPerfect. The choice of this word-processing software was driven by the need to integrate the system with WP-LINK which will be used to upload surgical pathology reports into the PathNet data base. This network has some sophisticated features, including the ability to back-up the PCs disk drives to servers installed on the network. A number of Novell servers were also installed in MSRB, including one to integrate the Macintosh and DOS environments.

The Tissue Typing Laboratory was brought-up using locally developed software and a Novell-based microcomputer network. This was a significant development in that it is an example of the development and integration of a network into the PathNet system when the Cerner-supplied software is not ideally suited to support the mission of the laboratory.

The Maternal and Child Health Center was activated, entailing computer support from PDS personnel. Preliminary plans were made to convert reporting in Cytology to the "Bethesda system." This new reporting system will be accompanied by automatic SNOMED coding of cytology reports. Preparatory work was also done to activate order-entry, result-reporting of test results via the mainframe computer using the HealthQuest software.

**EDUCATIONAL ACTIVITIES:**

PDS personnel supported the ninth annual Laboratory Information System Symposium in June. The conference attracted 210 registrants from 30 states, including Alaska, and Canada. Some 28 LIS vendors were in attendance. The conference was moved to the Power Center this year because the Towsley Center was no longer large enough to accommodate the annual conference.
Four members of the PDS staff presented posters at the annual PathNet Users Group in Kansas City in May. Bruce Friedman was installed as the Chairman of the Executive Council of the PathNet Users Group. PDS also continues to be support site visits from hospital groups considering the purchase of Cerner software.

Bruce A. Friedman, M.D.
Director,
Pathology Data Systems
PHLEBOTOMY SERVICES AND CENTRAL DISTRIBUTION

DEPARTMENT OF PATHOLOGY
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PHLEBOTOMY SERVICES:

The major change during the past year regarding phlebotomy services has been an extension of the range and type of services offered to hospital physicians. Beginning in April, 1990, as a new service on the midnight shift, collection of stat specimens and blood cultures was begun. Beginning in May, 1990, phlebotomists working in the Emergency Department and the Pediatrics Walk-in Clinic also began to draw blood and blood cultures. They also began to perform a limited range of laboratory tests in the Emergency Department such as glucose by glucometer, urine dip sticks, strep testing, and hematocrit.

Another significant expansion of phlebotomy services occurred in October, 1990, when phlebotomists began to draw blood from indwelling catheters on patient unit 8B. This pilot project has been judged to be successful, so there are now plans underway to extend the service to the outpatient pediatric population. This procedure has generally been recognized as a specialized nursing function, both locally and nationally, prior to the implementation of the program here at the University of Michigan Hospitals.

CENTRAL DISTRIBUTION:

In Central Distribution, a collection/handling fee was initiated for research specimens. The number of such specimens had grown precipitously in recent months, and the workload was beginning to effect routine patient specimens. The fee was set at a minimum level, and designed only for cost-recovery.

The workflow of the "sendout" and MLabs specimens in Central Distribution was intensively scrutinized by personnel in Central Distribution. As a result of this study, a new clinical coordinator position was established at the senior technologist level to supervise and rationalize both sendout and MLabs activities.

Finally, intensive planning took place to prepare both Central Distribution and the Phlebotomy Team for the deployment of laboratory-wide bar-coded labels. Such labels will be computer-generated within Central Distribution, and then placed on all phlebotomist-drawn specimens. This machine-readable label will expedite specimen logging into the Central Distribution. Specimens can also be loaded in random order into the various automated analyzers in the laboratories which are capable of reading bar-coded labels.

Bruce A. Friedman, M.D.
Director,
Pathology Data Systems
ADMINISTRATIVE/FINANCIAL AFFAIRS DIVISION

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The Administrative and Financial Affairs Division, which is under the auspices of the Office of the Chairman and his designee, includes five sections which are organized as follows:

A. ADMINISTRATIVE SUPPORT CENTER - PATHOLOGY LABORATORIES:
   - Nancy A. Coray, Financial Analyst and Billing Coordinator
   - Deborah Day Jansen, Administrative Coordinator for Pathology Laboratories
   - Thomas D. Morrow, Assistant Administrator for Finance and Administration
   - Beverly J. Smith, Administrative Assistant, Personnel and Payroll functions

   Surgical Pathology Transcription:
   - Robin O'Connor, 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 D. Blythe, Staff Assistant
   - Mary Anne Tishma, Staff Assistant

In addition to the management of daily activities, each of the units completed major projects.

ADMINISTRATIVE SUPPORT CENTER:

1. The M-Labs Program has gained several new physician clients this past year including one from Advanced Medical/Metpath Laboratories; one from the Lapeer area.
2. Coordinated an inspection of the Laboratories and of the UMMC Satellite Clinics by the College of American Pathologists.
3. Several staff have completed Team Leader Training for the Hospitals' Total Quality Program and initiated development of quality improvement teams in the Pathology Laboratories.
4. Participated in the planning for the renovation and remodeling to the Blood Bank was completed to resolve a citation issued by the Michigan Department of Public Health which included the reconfiguration of space for the Apheresis Center and the addition of an enclosed counseling area for the Directed Donor Program.

5. Participated with PDS staff in the development of an on-line process for surgical consults using a Cerner product titled, WP Link, which is now being piloted in the Faculty Support areas.

**CLINICAL FACULTY OFFICES:**

1. All secretarial support staff have completed classes in WordPerfect in preparation for the implementation of the WP:Link surgical consult processing.
2. Two additional faculty members have been added to the Division of Surgical Pathology, Drs. Suzanne Selvaggi and Elizabeth DelBuono. A reorganization of the secretarial support staff was initiated in support of these faculty members.
3. Assisted in the development of standards for the department and Holly Wagner participated as a member of the Word Processing Committee.

**MEDICAL SERVICE PLAN OFFICE:**

1. Implemented automated entry of professional fee charges, Surgical and Cytopathological, for hospital patients using the Pathology Laboratory Computer System.
2. Coordinated a training program for WordPerfect for departmental clerical support staff.
3. Implemented tape to tape claim submission to Medicaid for all professional fee charges.
4. Implemented the Metropolitan Medicare System which included new claim requirements, remittance forms and action codes.
5. Updated computer equipment for Billing Office staff allowing access to the Pathology Laboratory Computer system for charge entry and report viewing in addition to access to the IDX system.
6. Coordinated the minor renovation of several research laboratory as well as the initiation of a major renovation to the Flow Cytometry Research and Molecular Diagnostics laboratories.
7. Participated in the presentation of the All Funds Budget for Fiscal Year 1991 as requested by the Medical School.

**OFFICE OF RESEARCH AND EDUCATION ADMINISTRATION:**

1. Coordinated the purchase of all equipment and supplies necessary for the research laboratory of Dr. Gabriel Nunez, a new faculty member in the Department.
2. Participated in the revision of a three year budget of all funds.
3. Participated in the development of the annual All Funds Budget.
4. Coordinated the quarterly publication of the Pathology Telephone Directory.
5. Developed and implemented insurance coverage for specific scientific equipment through the Hospitals which resulted in significant savings to the research programs.
6. Coordinated the renovation and remodeling project for the clerical support area and one faculty office in the MSRBI complex.

**GENERAL:**

1. Developed a plan for implementation of the Cost Reduction Program for the University Hospitals and Medical School, reducing all budgeted funds by 7.6% or $1,800,000 which included a staff reduction of 29.5 FTEs.
2. Prepared a forecast of the impact of the change in Medicare regulations (RBRVS) effective 1 January 1992 and developed revenue alternatives for professional income.
3. Participated with the Chairman to initiate expense reduction associated with all Departmental budgets.
4. Assisted in the development of a plan for the reorganization of the M-Labs Program due to a change in the directorship and the loss of several major clients.
5. Coordinated the plans for the Second Scientific Meeting of the A. James French Society of Pathologists which will be held in October 1991 and will be attended by over 100 pathologists from all areas of the country.
6. Began the planning process to initiate a fundraising campaign to endow a chair in honor of A. James French, M.D.

**SUMMARY OF FINANCIAL DATA:**

1. Grants and contracts:
   
   101 active grants, contracts and other accounts

   - **Total Direct Expenditures**: $4,698,302
   - **Indirect Research Expenditures**: $2,037,124
   - **Total Sponsored Projects**: $6,735,427
   - **Other Expenditures (General Funds, MSP subaccounts, gifts, accounts - 27)**: $2,346,723

2. Medical Service Plan:
   
   - **Average number of active accounts**: 13,662
   - **Number of charge entries**: 76,552
   - **Gross Billings - Anatomic & Clinical Pathology**: $10,302,842
   - **Net Collections - Anatomic & Clinical Pathology**: $4,671,147
   - **Part A Payment**: $2,572,667

3. Pathology Laboratories:
   
   - **Number of fee code procedures**: 3,222,177
   - **Number of reportable laboratory test results (est.)**: 12,800,000
   - **Gross Revenue Pathology Laboratories**: $92,176,528
   - **Direct Expenses Pathology Laboratories**: $20,211,435

Respectfully submitted

Eugene J. Napolitan
Administrator
EDUCATIONAL ACTIVITIES

DEPARTMENT OF PATHOLOGY
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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).

MEDICAL AND DENTAL STUDENT PROGRAMS:

This past year, the Department of Pathology initiated a summer clinical/research program for underrepresented minority medical students. The goal of this program is to provide M1 and M2 students the opportunity to participate in Departmental clinical and research activities and promote the integration of Basic Science studies with patient-oriented clinical problems or focused research programs. In addition, it is hoped that the early exposure to the multiple opportunities available in Pathology will encourage students to consider careers in the specialty. Eleven students participated in the program and preliminary evaluations indicate that the program is viewed very positively by the students.

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. Formal evaluation indicated that the course continues to function smoothly and is well accepted by the students. 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 of faculty and students continues to be the relative lack of contact time that the faculty have with students within the Medical School curriculum. During the past year a new clinical rotation in Laboratory Medicine was developed and will be offered to fourth year medical students. This rotation will complement our current fourth year Pathology clerkship (which is more oriented toward anatomic pathology) and medical student research rotations.

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 preceptors of laboratory sessions (Pathology 631). Formal student evaluation indicates that the course functions smoothly and is well received by the students.

DOCTORAL PROGRAM:

The graduate program in Pathology was initiated two years ago and currently has six students enrolled. 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. Five graduate level courses are offered by the Department, including a new course on the Genetics and Cell Biology of Aging.

Graduate Medical Education

The Department of Pathology provides formal advance training to M.D.s and Ph.D.s through the Residency Training Program, clinical fellowships and postdoctoral research fellowships. These programs are integrated to provide trainees the greatest opportunity for clinical and research training in their chosen discipline and to foster academic excellence.

Residency Training

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 113 completed applications received, and 32 candidates invited to interview in the Department this past year. Six outstanding residents were recruited to the Department: Philip J. Boyer, M.D., Ph.D., Walter H. Henricks, III, M.D., Margaret M. Moll, M.D., Patricia M. Perosio, M.D., Scott G. Silveira, M.D., and Robert A. Stern, M.D.

Currently, there are 27 residents in the Department, 25 of whom are receiving training in both anatomic and clinical pathology and 2 receiving training in anatomic pathology alone. Three residents graduated from the program this past year. Two graduates assumed positions as staff pathologists at the University of Michigan, Department of Pathology, and Butterworth Hospital, Grand Rapids, Michigan. The third resident will continue training in Forensic Pathology, Sacramento, California.

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.

Clinical Fellowships

The Department provides advanced training in surgical pathology, cytopathology, hematology, and transfusion medicine through formal fellowship programs. Five positions are currently supported and the clinical fellowships are closely integrated with the Residency Training Programs (see Anatomic and Clinical Pathology Sections).

Postdoctoral Research Training

The Department of Pathology provides advanced research training for approximately 24 postdoctoral fellows which includes Pathology residents seeking advanced training in experimental pathology. Fellows are located within the faculty research laboratories of the Department. Support is provided by an NIH-funded Lung Immunopathology Training grant (HL-07517, P.A. Ward, Principal Investigator) and externally-funded faculty research grants. This past year five fellows completed their training and have assumed the following positions:

1. Elahe Crockett-Torabi, Ph.D., Assistant Research Investigator, Department of Pathology, The University of Michigan Medical School (NIH FIRST Award)
2. Joseph P. Grande, M.D., Ph.D., Senior Associate Consultant, Department of Pathology, Mayo Clinic Medical School
3. Joseph W. Francis, Ph.D., Assistant Research Investigator, Department of Pediatrics, The University of Michigan.
4. Cheryl Swenson, D.V.M., Ph.D., Assistant Professor, Michigan State University.
5. Theresa Bacon-Baguley, Ph.D., Assistant Professor, Department of Health Science, Grand Valley State University.

Formal courses given within the Department include:

I. COURSES IN THE MEDICAL CURRICULUM

A. ICS 500:
   1. Introductory Lectures on General Pathology (15 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 (25 contact hours).

D. Pathology 600:
   1. 68 hours of whole-class lecture, 74 hours of laboratory (in each of six sections)
      (142 contact hours).

E. Pathology Clerkships:
   1. Elected by 47 students at University Hospitals.

F. Summer Clinical/Research Programs in Pathology for Underrepresented Minority Students

II. COURSES IN THE DENTAL CURRICULUM

A. Pathology 630:
   1. General Pathology Lectures (45 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 620: Genetics and Cell Biology of Aging
E. Pathology 650: Laboratory Techniques in Experimental Pathology
F. Pathology 850: Special Topics in Pathology
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:

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>- Hematology/Oncology</td>
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<td>- Nuclear Medicine</td>
<td>- General (Death Conference, CPC)</td>
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<td>- Pulmonary Medicine</td>
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<td>- General (Necropsy Review, CPC)</td>
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Joseph C. Fantone, M.D.
Coordinator,
Educational Activities
M-LABS

DEPARTMENT OF PATHOLOGY
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The M-Labs program continues to grow in both 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.

M-Labs is carefully evaluating its function in the face of recent budget reductions. Presently, the program has not had to alter client service.

M-Labs has over 100 clients, of which approximately 20 can be considered major clients. These clients include hospital accounts and large doctor office accounts. M-Labs has lost a major reference lab client to a regional lab group operating in western Wayne County.

M-Labs' maintenance of the laboratory quality improvement programs in all the M-Care sites has matured to include proficiency testing and preparation for accreditation proceedings.

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

Kenneth D. McClatchey, M.D., D.D.S.
Director,
M-Labs Program
INTRODUCTION:

The Veterans Administration Medical Center Laboratory Service is closely affiliated with the Department of Pathology at the University of Michigan Medical Center. The Faculty have academic appointments and participate in departmental activities in a manner similar to other Sections. Recruitment efforts are combined and candidates are evaluated for academic potential as well as professional competence similar to any departmental candidate. There are four full-time pathology staff positions available although a vacancy has existed from some time despite continued recruitment efforts. Three resident positions are available and are filled by university pathology residents on monthly rotations in Surgical Pathology, Autopsy Pathology and electives including Electron Microscopy and special study areas in Surgical Pathology. The Chief, Laboratory Service is a voting member of the Dean's Committee.

ANATOMIC PATHOLOGY:

A. Surgical Pathology: 4,881 surgical cases have been received and reported during this time. The resident assigned to surgical pathology acts as coordinator of this section and in that capacity examines all material grossly and microscopically under the close, one-to-one, supervision of the staff pathologist. The resident has the opportunity to coordinate the findings with the clinical staff and medical students. An extensive quality assurance program includes consultation with AFIP, University of Michigan and review of frozen sections, amended diagnoses and surgical appropriateness.

B. Autopsy Pathology: 63 autopsies were completed during this period of time. The resident performs the autopsy, prepares the gross pathologic diagnosis, presents the case at the autopsy conference and then cuts tissue for slides and microscopic diagnosis. All of the steps are supervised by staff pathologists including the performance of the dissection as well as microscopic diagnosis. The residents also presented the findings of selected autopsies at Medicine Morbidity and Mortality Conference. Twenty-two cases were presented during this time.

C. Cytology: 2,491 specimens were diagnosed during this period. Close correlation with surgical pathology is made as appropriate and the residents are encouraged to review cytologic material during their surgical and autopsy rotation.

D. Electron Microscopy: 336 electron microscopy cases were reported. An elective rotation is available for pathology residents in discipline. Informally, residents may familiarize themselves with electron microscopy techniques and interpretation through consults with Dr. Beals regarding many cases for which electron microscopy is appropriate. Dr. Beals presents biweekly seminars for the residents at the University during the academic year. As a VA "Center of Excellence" this electron microscopy section serves as consultant to other VA medical centers and to some other hospitals.

CLINICAL PATHOLOGY:

1,610,000 tests were done in the sections of chemistry, hematology, microbiology and immunohematology. Although there is not a formal "clinical" pathology rotation available for the use of
residents, continuing education conference are also presented frequently and are available for residents participation even as a teacher. Dr. Chensue is director of clinical pathology.

**EDUCATION AND TEACHING:**

One-on-one teaching of residents is the daily procedure in surgical pathology. A surgical pathology conference is held biweekly. An autopsy conference with the entire staff is held the day following every autopsy. All residents participate in informal conferences, consultation episodes. The scheduling is such that the residents are generally permitted time to attend conferences, lectures and seminars at University of Michigan.

The entire VA staff participates in laboratory teaching of medical students on a yearly basis. Dr. Weatherbee lectures in bone pathology. Dr. Beals and Weatherbee give a gross pathology conference periodically.

**RESEARCH:**

Dr. Chensue continues as a member of the VA Research and Development Committee and a strong funded research program as well. The other staff are participating in clinical studies in collaboration with a variety of investigators.

**SUMMARY:**

The Veterans Administration Medical Center Laboratory Service is committed to the practice of high quality medicine and the appropriate care of patients. We feel that the close association with the University of Michigan enables us to accomplish that goal by establishing a stimulating academic environment in which research and teaching are encouraged. Every effort is made to improve the professional interchange between the two institutions. During this year there has been steady progress toward the clinical addition to this medical center that will more than double the present space of the Laboratory Service.

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