LIST OF FACULTY
# LIST OF FACULTY

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Institutional Affiliation</th>
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<tbody>
<tr>
<td>Abell, Murray R.</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
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<tr>
<td>Abrams, Gerald D.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Annesley, Thomas M.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<td>Appelman, Henry D.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Baker, James R.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Barnes, Barbara A.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Barr Jr., Mason +</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<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>
<td>The University of Michigan</td>
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<td>Capps, Rodney D.</td>
<td>Assistant Professor</td>
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<td>Chensue, Stephen W.</td>
<td>Assistant Professor</td>
<td>Veterans Administration Medical Center</td>
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<td>Courtney, Richard M.*</td>
<td>Assistant Professor</td>
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<td>Crockett-Torabi, Elahe</td>
<td>Assistant Research Scientist</td>
<td>The University of Michigan</td>
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<td>D'Amato, Constance J.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Davenport, Robertson</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>de la Iglesia, Felix**</td>
<td>Adjunct Research Scientist</td>
<td>Warner-Lambert; Parke Davis</td>
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<tr>
<td>Del Buono, Elizabeth</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Dixit, Vishva M.</td>
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<td>Elner, Victor M. ++</td>
<td>Assistant Professor</td>
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<td>England, Barry G.</td>
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<td>Fantone, Joseph C.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Flint, Andrew</td>
<td>Associate Professor</td>
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<td>Frank, Thomas S.</td>
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<td>Professor</td>
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<td>Gordon, David</td>
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<td>Hanks, Carl T.*</td>
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<td>Hanson, Curtis A.</td>
<td>Assistant Professor</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>Killen, Paul D.</td>
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<td>Lindsten, Tullia</td>
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<td>Shanberge, Jacob N.</td>
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<td>Silverman, Eugene M.</td>
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<td>Smolen, James E. +</td>
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<td>Stoolman, Lloyd M.</td>
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<td>Varani, James</td>
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<td>Ward, Peter A.</td>
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<td>Warren, Jeffrey S.</td>
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<td>Weatherbee, Lee</td>
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<td>Weiss, Sharon W.</td>
<td>Professor and Director, Anatomic Pathology</td>
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<td>Wolter, J. Reimer++</td>
<td>Professor Emeritus</td>
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<tr>
<td>Yabkowitz, Rachel</td>
<td>Assistant Research Scientist</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
TABLE OF CONTENTS
TABLE OF CONTENTS

I. OVERVIEW

II. INDIVIDUAL FACULTY REPORTS

III. PROGRAMS AND SECTION REPORTS

A. Division of Anatomic Pathology
   (Sharon W. Weiss, M.D.)
   1. Autopsy Service
      (Daniel G. Remick, M.D.)
      241
   2. Cytopathology Laboratory
      (Bernard Naylor, M.D.)
      242
   3. Dermatopathology Service
      (John T. Headington, M.D.)
      243
   4. Electron Microscopy Service
      (Kent J. Johnson, M.D.)
      244
   5. Neuropathology Service
      (Paul E. McKeever, M.D., Ph.D.)
      245-246
   6. Pediatric Pathology Service
      (Kathleen P. Heidelberger, M.D.)
      247
   7. Surgical Pathology Service
      (Sharon W. Weiss, M.D.)
      248

B. Clinical Pathology Laboratories
   (Curtis A. Hanson, M.D.)
   1. University Hospitals Blood Bank
      (Harold A. Oberman, M.D.)
      251-252
   2. Chemical Pathology Laboratory
      (Donald Giacherio, Ph.D.)
      253
   3. Clinical Cytogenetics Laboratory
      (Thomas W. Glover, Ph.D.)
      254
   4. Clinical Flow Cytometry Laboratory
      (Charles W. Ross, M.D.)
      255-256
   5. Clinical Hematology Laboratory
      (Bertram Schnitzer, M.D.)
      257-258

Pages

15-16
19-236
239-285
239-247
241
242
243
244
245-246
247
248
249-273
251-252
253
254
255-256
257-258
6. Clinical Immunopathology Laboratory  
   (Jeffrey S. Warren, M.D.)  259-260

7. Histocompatibility & Immunogenetics Laboratory  
   (James R. Baker, Jr., M.D.)  261-262

8. Clinical Molecular Diagnostics  
   (Gabriel Nuñez, M.D.)  263

9. Drug Analysis and Toxicology Laboratory  
   (Thomas Annesley, Ph.D.)  264-265

10. Ligand Assay Laboratory  
    (Barry G. England, Ph.D.)  266

11. Microbiology/Virology Laboratory  
    (Kenneth D. McClatchey, M.D., D.D.S.)  267-269

12. Pathology Data Systems  
    (Bruce A. Friedman, M.D.)  270-271

13. Phlebotomy Services and Central Distribution  
    (Bruce A. Friedman, M.D.)  272-273

C. Administrative/Financial Affairs  
   (Eugene J. Napolitan)  274-276

D. Educational Activities  
   (Joseph C. Fantone, M.D.)  277-280

E. M-Labs  
   (Eugene M. Silverman, M.D.)  281

F. Resident Training Program  
   (Joseph C. Fantone, M.D.)  282

G. Dept. of Veterans Affairs Medical Center  
   (Lee Weatherbee, M.D.)  283-285
DEPARTMENTAL OVERVIEW
DEPARTMENTAL OVERVIEW
1991/92

Events and initiatives of the past year have had important impacts on the Department of Pathology. In the area of education, perhaps the most visible institutional event has been the introduction of the new Medical School curriculum which especially impacts on the first two years of Medical Student education and will result in a fundamental change in the manner by which Pathology is taught. The format entails a shift from the departmental block-type teaching to a broadly integrated "subject committee" type of presentation, emphasizing organ system pathology, physiology, biochemistry, etc. The new curriculum also involves diminished numbers of formal hours of interaction (e.g. lecture) as well as a better integration of the curriculum. On behalf of the Department of Pathology, Drs. Gerald Abrams and Joseph Fantone have major roles in development and coordination of the new curriculum. The graduate program in Experimental Pathology appears to be moving ahead on schedule and currently has eight graduate students (including two Medical Scientist Training Program individuals). The success in attracting MSTP students to the Department of Pathology is an important goal that is becoming increasingly recognized. The Department of Pathology has consistently been recognized for its excellence in the area of teaching at all levels within the institution, and this tradition can be expected to continue.

With respect to clinical service, this past year has had its share of challenges. The three issues most directly affecting the Department all deal with reimbursement and include imposition of the resource based/relative value scales (RB/RVS), a federally implemented schedule of reduction in professional fees in Pathology (as well as in other clinical disciplines). Since Pathology part B fees in the State of Michigan have historically been very low, the impacts of the RB/RVS system are so far marginal. A matter of considerable concern was the decision by Michigan Blue Shield in Spring, 1992, to reduce part B payments to pathologists by a mean of 8.5% in the State of Michigan. The Department is actively engaged in efforts to seek reversal of this initiative. Finally, we continue to struggle with a Hospitals-mandated successive and additive 6.5% cuts in the operating budget for each of four years. The operating budgets of the Clinical Laboratories have been trimmed to date by somewhat more than 2.4 million dollars. The Hospitals budget-based operations in the Department seem at present to be operating in a very lean fashion. Further reductions will inevitably require substantial decrements in available Clinical Laboratory services, to the point of affecting lengths-of-stay and specimen turnaround times.

An important initiative in the Clinical Pathology Division has been the program designed to reduce unnecessary use of blood products. Drs. Hanson, Davenport, Oberman and Friedman, working with Drs. Todd and Yamada in the Department of Internal Medicine, have developed criterion maps that must be filled out before the elective ordering of blood products. The purpose behind this program is to encourage physicians to be more judicious in the ordering of blood products. It is our hope that this program, which is being initially targeted in Medical Oncology, can be expanded to include all blood product usage and that such a program will result in significantly reduced utilization of blood products. The magnitude of this challenge cannot be underestimated, because it entails behavior modification in Medical attendings, house officers, and even medical students and nurses. This initiative is a very important one, success in which can be translated into many other areas of clinical activity (e.g. imaging, pharmacy, etc.).

A major change in the Division of Clinical Pathology in the Fall of 1991 was the naming of Dr. Curtis A. Hanson as Division Director. Dr. Hanson took over the duties from Dr. Kenneth D. McClatchey, whose service as Division Director for almost a decade greatly strengthened the Department. As part of the reorganization changes, Dr. Hanson has named Dr. Jeffrey S. Warren as Associate Director of the Division. This new administrative alignment has, among other things, resulted in the consolidation both administratively and geographically of Clinical Chemistry, Toxicology, and Immunology. These changes should make the new unit a very strong and highly efficient clinical
operation. Similar charges are underway in the area of cytogenetics. We continue to develop the area of Molecular Diagnostics, which bridges both Anatomic and Clinical pathology and is increasingly becoming an important departmental and institutional function. The Division of Anatomic Pathology continues to be a strong and widely respected unit, very capably directed by Dr. Sharon W. Weiss, who has just completed four years at the helm of this important Division. It should also be noted that the Residency Program is recruiting excellent house officers, the success probably being the reflection of the Department's broad strengths in service, teaching and research. The Surgical Pathology, Cytopathology and Hematopathology Fellowships continue to draw excellent individuals to our programs.

Research programs in the Department continue to prosper, the total (direct and indirect) incomes to the Department and institution being approximately $6,726,165 per annum. This also includes the recent award of a Program Project dealing with "Oligosaccharides as Antiinflammatory Agents". The breadth of the research programs in the Department of Pathology is reflected not only in the very strong intradepartmental research efforts but also by the key role that pathology faculty members play in other activities such as the Comprehensive Cancer Center, Renal Center, Diabetes Research and Training Center, Multipurpose Arthritis Center, Pulmonary Specialized Center of Research.

There are a few events worthy of note. As a result of the June, 1992, Department Retreat, which was very effectively developed and directed by Dr. Joseph C. Fantone, it became clear that a problem existed with respect to faculty development and the understanding of how the promotion system is defined and operates. To this end, after careful discussions the Department has put into place a system of annual review of all faculty members, featuring verbal as well as written communication regarding academic development. This process involves a key role for Division Directors who work closely with the Department Chair. In addition, the Department has developed a detailed document which outlines the criteria for appointment and promotion in each of the appointment tracts. Criteria for tenure nomination are also spelled out. By the publishing of these criteria as well as an annual review of the performance of each faculty member, this should result in a strengthening of our faculty. Also discussed in the Chairman's Advisory Committee as a follow-up to the June Retreat were additional issues, decisions for which will be formulated in the current calendar year.

It should also be noted that the Department is working in close alliance with the A. James French, M.D., Society in a fund raising effort to develop an Endowed Professorship in Dr. French's name. These efforts are being done in cooperation with the University's "Momentum Campaign" which seeks to raise $1 billion in gifts, representing the largest fund raising effort for any State University. As of the early Fall, 1992, the A. James French M.D. endowment account has pledges and contributions of approximately $260,000. We hope that the campaign target of $500,000 will be realized within the year. The intent of the endowment will be to support a position linked to the diagnostic field of pathology, which will reflect the interests of Dr. French when he was Chairman of the Department.

Although there is the constant need to respond to the ever changing environment, especially as this relates to state and federally directed changes in health care reimbursement, the Department is very strong and stands among the top academic Departments of Pathology in North America. There is still much to be done to strengthen the Department in its search for excellence.

Respectfully Submitted,

[Signature]

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Services - 3 1/2 months.
   B. Necropsy Service - on call.
   C. Pathologist, Cardiac Transplant Team
   D. Consultant for Gastrointestinal Pathology
   E. Consultant for Cardiovascular Pathology

II. TEACHING ACTIVITIES:
   A. Freshman Medical Class:
      1. ICS-500 Sequence Coordinator and Lecturer, "Basic Concepts of Disease" - 20
         lecture hours.
      2. ICS 500, 501 - CPC's - 3 contact hours.
   B. Sophomore Medical Class:
      1. ICS 600, 601 - CPC's - 3 contact hours.
      2. Pathology 600 - 6 lecture hours.
   C. Senior Medical Class:
      1. Pathology Clerkship Mentor.
   D. Graduate School
      1. Pathology 580 (Graduate School), Course Director, Lecturer - 36 lecture hours.
      2. Pathology 583 (Graduate School), Course Director, Instructor - 28 contact hours.
   E. Hospital Conferences:
      1. Cardiovascular Pathology Conference - monthly.
      2. Internal Medicine CPC - occasional.
      3. Internal Medicine Necropsy Review - monthly.
   F. House Officers:
      1. Training in Surgical and Necropsy Pathology.
   G. Invited Lectures:
   H. Honors:
      1. Recognition Award, University of Michigan Learning Disabilities Society.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Evaluation of Cardiac Autonomic Innervation by PET. NIH 1-R01-HL 47543-1
B. SCOR Grant - Occupational and Immunologic Lung Diseases. NIH 1-P50 HL 46487-01.
PROJECTS UNDER STUDY:

A. Pathologic-Radiologic Correlation in Aortic Disease (with W. Williams).
B. Pathologic Aspects of Cardiac Autonomic Innervation (with M. Schwaiger).
C. Microbial Flora in Ulcerative Colitis (with J. Benent, R. Freter).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

1. Member, Pathology Doctoral Program Committee.
2. Member, Pathology House Officer Selection Committee.
3. Member, Pathology Human Resources Committee.

MEDICAL SCHOOL/HOSPITAL:

1. Member, Historical Center for the Health Sciences Liaison Committee.
2. Member, Hospital Ethics Committee.
3. Member, Inteflex Policy Committee.
4. Member, Curriculum Policy Committee.
5. Director, Component II, Medical Curriculum.
6. Ombudsperson, Medical Faculty.
7. Member, Medical School Advisory Committee on Appointments, Promotions and Titles.

REGIONAL AND NATIONAL:

1. Editorial Board, "Modern Pathology".
2. Deputy Medical Examiner, Washtenaw County.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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. Pathology 600 Course, Case Preparations.
      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:

PROJECTS UNDER STUDY:
   A. Metabolism, Analysis, and Therapeutic Effect of OG37-325 (CsG) in Renal Transplant Patients.
   B. Distribution of cyclosporine and metabolites in blood and tissues.
   C. Measurement of therapeutic drugs using alternative fluids beyond serum.
   D. Esoteric analysis of drugs by gas chromatography/mass spectrometry.
   E. Microbore Applications to the analysis of drugs.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director, Drug Analysis and Toxicology Laboratory.
B. M-Labs Technical Group.
C. Pathology Associates.

**MEDICAL SCHOOL/HOSPITAL:**

A. Standardization of Procedures Committee.
B. Pharmacokinetics Quality Improvement Team.

**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.
N. Board of Directors, American Board of Clinical Chemistry.
O. Secretary, National Therapeutic Drug Monitoring and Clinical Toxicology Division, American Association for Clinical Chemistry.

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.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOK CHAPTERS:

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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:

A. General surgical pathology - 5 months.  
B. Gastrointestinal and hepatic pathology consultation services - full time.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Medical Students.  
   1. Pathology 600 - 8 full class lectures.  
   2. Pathology 630 (dental) - 3 full class lectures.  
   3. Senior medical student, elective rotation in pathology, supervisor 1 month.  
B. House Officers:  
   1. Autopsy service tutoring, 1 week  
   2. Surgical pathology diagnosing room instruction for assigned house officer - 5 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 - 4 months total.  
   5. Formal Lectures on GI and Liver Pathology - 3 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.  
   4. Liver Biopsy Conference - Every other Wednesday.

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 Muchnick
F. Liver Transplantation for Hepatitis B Disease with Mike Lucey, Keith Henley Bob Merion and Dave Graham. (Paper accepted. See below.)
G. Chronic gastritis in Michigan, with Paul Mazzara.
H. The appendix in ulcerative colitis, with John Goldblum (Abstract published; Paper accepted, see below).
I. Morphologic expressions of achalasia, with John Goldblum.
J. PCNA in gastric and duodenal stromal tumors, with John Goldblum and Ric Lloyd.
K. Crohn's disease of the appendix, with Jane Huang.
L. Recurrent autoimmune hepatitis in the transplanted liver, with Michael Lucey and Kyle Carr.

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.
F. Member, Editorial Board, Human Pathology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
1. Short Course, "Inflammatory Conditions of the Esophagus, Stomach and Duodenum", USCAP, Atlanta, Georgia, March, 1992, with D. A. Antonioli.
2. 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, 1991.

4. Seminar, Gastrointestinal biopsies that annoy me, and how I decide to deal with them, so I can get on with the rest of my life, Fall Meeting of Pacific Northwest Society of Pathologists, Victoria, BC, September 14, 1991.


8. Visiting Professor, Department of Pathology, Yale University Medical School, University of Connecticut School of Medicine, St. Francis Hospital of Hartford, November 12-13, 1991.


   1. "Stromal tumours of the upper gut: Do we need to know the cell of origin?"
   2. "Fighting your way through gastritis"


15. Visiting Professor, Department of Pathology, Flinders University, Adelaide, South Australia, June 16, 1992.

16. Slide Seminar on Gastrointestinal Pathology, Royal Melbourne Hospital, Melbourne, Australia, June 18, 1992.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


4. Goldblum, J. and Appelman, H.D.: The appendix in ulcerative colitis. Accepted for publication in Mod Pathol.

BOOKS AND CHAPTERS IN BOOKS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
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 Maastricht (M1), Mathew Waier (M1) and three undergraduate students in research.
F. Supervisor for Dr. Lawrence Hennessey's (Allergy Fellow) Research Project.
G. Internal Medicine Grand Rounds

III. RESEARCH ACTIVITIES

SPONSORED SUPPORT:

A. Characterization of Thyroid Autoantigens and Antigens, NIH-NIAID, R29-AI 30501, May 1, 1992 - April 30, 1993, $70,000/year.
D. Core Co-Director, MDRTC: Hybridoma Core, 5 P60 DK20572- 4, NIH, April 15, 1992 - April 14, 1993, $171,413/year.
E. Endocrine Fellow Training Grant, Endocrine Society, 5 P32 DK07245 15, July 1, 1992 - June 30, 1993, $33,000/year.

IV. SERVICE ACTIVITIES

COMMITTEE and ADMINISTRATIVE SERVICES:

A. Planning Committee, Advances in Internal Medicine, University of Michigan Medical School, 1990-1992.
B. Histocompatibility Committee, Organ Procurement Agency of Michigan.
MILITARY SERVICE:

V. OTHER RELEVANT ACTIVITIES

INVITED LECTURES:
1. Consultant Visit, Allergy Division, Department of Medicine, Walter Reed Army Medical Center, Washington, DC.

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, DC.
8. Director, Hybridoma Core, University of Michigan Medical School.

WORKSHOPS/PANEL DISCUSSIONS:
1. Current Use of Theophylline, American Academy of Allergy and Immunology, Orlando, Florida, March 1992
2. Drug Allergies, Allergy for the Primary Care Physician, Towsley Center, Ann Arbor, Michigan, March 1991

VI. PUBLICATIONS

ARTICLES PUBLISHED IN PEER REVIEWED JOURNALS:

ARTICLES PUBLISHED IN NON PEER REVIEWED JOURNALS:
ARTICLES ACCEPTED FOR PUBLICATION:


BOOK CHAPTERS:


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


ARTICLES SUBMITTED FOR PUBLICATION TO PEER REVIEWED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Medical Director, Myelodysplasia Unit: inpatient and outpatient services for children
      with spina bifida.
   B. 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. Pediatrics-Pathology Conference: organize and present CPC-type conferences to the
      Department of Pediatrics; four per year.
   C. Neonatology Pathology Conference: quarterly review and discussion of neonatal deaths.
   D. Malformations lecture, Embryology (M-1) Course.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT: None.

TERATOLOGY UNIT (DIRECTOR):
   A. Detailed postmortem investigations of abortuses, stillborns, and selected neonatal deaths
      for morphologic, pathologic, and growth characteristics, correlations with family and
      prenatal histories, and counseling for future reproductive decisions by the parents.
   B. Continuing investigation of normal and abnormal patterns of somatic and visceral
      growth. Detection of patterns of growth abnormalities associated with specific
      syndromes, exposures, and obstetrical antecedents.
   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:
A. 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.
B. 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.
C. Research with Wayne State University (M.P. Johnson, M.D.) on fetal growth assessment in aneuploid fetuses.
D. Investigation of ACE inhibitor fetopathy (with M. Michael Cohen, D.M.D., Dalhousie University, and Peter Pryde, M.D., Wayne State University, and unnamed investigators from the pharmaceutical industry).

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
A. Departmental - Pathology: none.
B. Departmental - Pediatrics: Editorial Board, Pediatric Round.
C. On sabbatical leave from various other committees.

REGIONAL AND NATIONAL:
A. Reviewer for journals: Teratology, Pediatric Pathology.
B. President Elect, Teratology Society (President 92-93).

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:
1. Ohio State University, Columbus, Ohio.
3. Dental School, University of Michigan, Ann Arbor, Michigan.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:

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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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

II. TEACHING ACTIVITIES:
   A. Pathology House Officer monthly elective: Diagnostic Electron Microscopy, 10 months.
   B. Diagnostic Electron Microscopy Case Conference, bi-weekly.
   C. Pathology House Officers, fine needle aspiration technique and interpretation.
   D. Pathology 600 Lab Section.
   E. Microbiology 620 Small Group Sessions.

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 and Wolf).
   D. Crescentic Nephritis -Core B- NIH Program Project, Consultant (Wiggins and 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. Growth of Cells on Microcarriers (with J. Varani)
E. Endothelial Cell Damage Caused by Oxidants (with D. Hinshaw).
F. DNA content as a Predictor of Chemotherapeutic Response And Prognosis in Squamous Cell Carcinoma of the Larynx (with C. Gregg and G. Wolf)
G. Differentiation of Isolated Renal Tubular Cells in Culture (with D. Humes).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Electron Microscopy 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. Automated Data Processing 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.
C. Veterans Affairs Representative on Scientific Advisory Board, Armed Forces Institute of Pathology.

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:

4. Mierau, G.W., Agostini, R., Beals, T.F., Carlen, B., Dardick, I., Henderson, D.W., Pysher, T.J.,
   Weeks, D.A. and Yowell, R.: The role of electron microscopy in evaluating ciliary dysfunction:
5. Truelson, J.M., Fisher, S.G., Beals, T.F., McClatchey, K.D. and Wolf, G.T.: DNA content and
   histologic growth pattern correlate with prognosis in patients with advanced squamous cell

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

1. Gregg, C.M., Beals, T.F., Fisher, S.G. and Wolf, G.T. DNA content and tumor response to
   induction chemotherapy in patients with advanced laryngeal squamous cell carcinoma, Third
MILA BLAIVAS, M.D., PH.D.
CLINICAL ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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. 8.5 months of Neuropathology Service. All inside muscle biopsies through-out the year.
   C. Three 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 cases with Neurology department.
   E. Monthly neuropathology cases review with pathology residents.
   F. Weekly conference with Neuromuscular staff.
   G. Bimonthly conference with Neuroradiology fellows and staff.

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. Pathologic changes in rat brain induced by MK-801.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Supervision of the muscle histochemistry.
   B. Continuing improvement of interdepartmental coordination of muscle 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, Peripheral Neuropathy Association and American Association of Neuropathologists meetings.

INVITED LECTURES/SEMINARS:
1. Lectured students and fellows in Toledo Medical College on muscle and nerve pathology.

VI. PUBLICATIONS:

ARTICLES ACCEPTED FOR PUBLICATION:

ARTICLES SUBMITTED FOR PUBLICATION:

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 1991 - 30 JUNE 1992

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: Mr. John Germiller (MSTP).
      b. Thesis Co-Chairman with Steven Goldstein: Mr. Karl Jepsen (Bioengineering).
      c. Thesis Co-chairman with Steven Goldstein: Ms. Patrician Sherman (Human
         Genetics).
      e. Thesis committee: Ms. Linda Kallikan (Cellular and Molecular Biology).
   B. Supervision of four postdoctoral fellows: (David Bole, Ph.D., Marcy Wong, Ph.D.,
      Wushan Yin, M.D., and Chiara Sanguineti, Ph.D.)
   C. Mentor, Summer Medical Research Program, University of Michigan: (Arul Chinnaiyan,
      Maurice Albright).
   D. Courses:
      1. Lab Instructor, Pathology 600.
      2. Lecturer, Biochemistry 501.
      3. Course Co-Director, Pathology 581.
   E. Continuing Medical Education:
      1. Genetics Grand Rounds, Department of Medicine, University of Michigan, 1991.
      2. Gene Therapy Seminar Series, Department of Medicine, University of Michigan,
      3. Biomechanics 1000 Lecture Series, Department of Surgery, University of
   F. Invited Presentations:
      2. Plenary Session on Inherited Connective Tissue Diseases (Session co-chair),
         European Society for Pediatric Research Annual Meeting, Zurich, Switzerland,
      4. NIH Workshop on Transgenic Models of Human Disease, NIH, Bethesda,
         Maryland, September, 1991.
      5. Seminar Series, Department of Biochemistry, University of Nebraska, Omaha,
         Nebraska, October, 1991.
      6. Seminar Series, Department of Human Genetics, University of Nebraska, Omaha,
         Nebraska, October, 1991.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
A. Principal Investigator, "Transgenic Mouse Model of Osteogenesis Imperfecta Type I", NIAMSD, NIH, AR40679 (25% effort), $162,679.00/year direct costs $462,843.00/3 years 1991-1993.

PROJECTS UNDER STUDY:
A. Structure/function relationships in connective tissue.
B. Regulation of osteoblast gene expression.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL:
A. Member, Preclinical Advisory Program, University of Michigan Medical School.
B. 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. Appointments:
   1. Assistant Investigator, Howard Hughes Medical Institute
   2. Faculty Member, Bioengineering Program, University of Michigan
B. Ad-hoc Reviewer
   3. The Journal of Biological Chemistry.
   4. The March of Dimes Grants Program.
   5. Genomics.
D. Study Section:
   1. NIH, Site Visit Team, Ad Hoc Member, NIAMS, 1992.
   2. NIH, Program Project Review Ad Hoc Member, MIAMS, 1992.
E. 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.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS:

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 (500/yr), bone marrow smears (110/year) 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. (approx. 2250 cases/year).

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

E. Special Chemistry/Immunology, daily interpretation of protein electrophoreses (800/yr), isoenzyme studies (2200/yr), and problem ligand studies Veterans Affairs Medical Center (12 months/year).

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

II. TEACHING ACTIVITIES:

A. Medical School, Pathology 600 laboratory course, (1 semester, 40 contact hours).

B. Graduate course, Pathology 580, 1 lecture hour.

C. Graduate course, Epidemiology 570, 2 lecture hours.

D. Pathology house officers, Surgical Pathology/Autopsy supervision and instruction, 2 days/week (12 month/year).

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

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

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, Cytokine Cascades in Granuloma Formation, VAMC Merit Review ($55,000 annual) 1990-1993.

B. Consultant on NIH-HL-R01-31237, Macrophage Function in Pulmonary Inflammation, Dr. S. Kunkel, Principal Investigator.
PROJECTS UNDER STUDY:

A. Role of chemotactic cytokines (MCP and MIP) in Schistosoma mansoni egg-induced granulomatous inflammation.
B. Role of interleukin-1 antagonist protein (IRAP) in the regulation of immune responses.
C. Regulation and orchestration of T helper cell cytokine production during granulomatous inflammation.
D. Analysis of eosinophil recruitment and chemotactic factors in Schistosoma mansoni egg-induced granulomatous inflammation.
E. In vivo and in vitro analysis of neutrophil and monocyte chemoattractant function and regulation.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Member of graduate student thesis committees.
B. Interviewing of resident and faculty applicants.

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:
   2. Journal of Immunology, Associate Editor.
   3. Clinical Immunology and Immunopathology.
   5. Agents and Actions, Section Editor.
B. Inspector, College of American Pathologists.
C. Reviewer and on site inspection for Merit Review Board.
D. Chair, Minisymposium session, FASEB, 1992.

V. OTHER RELEVANT ACTIVITIES:

A. Case presentations at Tumor Board, 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:


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 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:

A. Work 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 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 occasionally for the Neurology Department including 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 10 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. 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, J.B. Penney, and R. Albin, in the University of Michigan Alzheimer Disease Research Center, who are examining the brains biochemically.

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

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Anatomic Pathology Committee.

MEDICAL SCHOOL/HOSPITAL:

A. 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.
J. Co-coordinator for the Neuroscience Sequence (new curriculum).

REGIONAL AND NATIONAL:

A. American Association of Neuropathologists.
B. American Academy of Neurology.
C. Society for Neuroscience.
E. Teratology Society.
F. Neurobehavioral Teratology Society.

V. OTHER RELEVANT ACTIVITIES:

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).
D. Consortium to Establish a Registry for Alzheimer's Disease (CERAD) Committee.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


I. CLINICAL ACTIVITIES:
A. 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:
SPONSORED SUPPORT:
A. Biomedical Research Council - Biological Mediators of Transfusion Reactions; Principal Investigator.

PROJECTS UNDER STUDY
A. Cytokine production in hemolytic transfusion reactions.
B. Interleukin-8 and monocyte chemoattractant protein production by monocytes in response to Fc receptor stimulation.
C. Leukocyte-associated procoagulant activity induction in whole blood in response to ABO incompatibility.
D. Endothelial cell responses in hemolytic transfusion reactions.

IV. ADMINISTRATIVE ACTIVITIES:
MEDICAL SCHOOL/HOSPITAL
A. Transfusion Committee.
B. Quality Improvement Team in Outpatient Care.

V. OTHER RELEVANT ACTIVITIES:

A. Reviewer, Chest.
B. Reviewer, Transfusion.
C. Reviewer, American Journal of Clinical Pathology.
D. Program committee, Michigan Association of Blood Banks

INVITED LECTURES AND SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:

VISHVA M. DIXIT, M.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. Supervised the following undergraduate students: Kara Reynolds.
B. Supervised the following graduate students: Carol Laherty, Tony Opipari, Ron Katz, Muneesh Tewari.
C. Supervised the following post doctoral fellows: Larry Holzman, Vidya Sarma, Rachel Yabkowitz, Theresa Bacon-Baguely, Valerie 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:

1. NIH-1-R01-HL47857-01 - "Heparin and Aortic Smooth Muscle Cell Proliferation", Response to RFA NIH-91-HL-02-H "Mechanisms of Restenosis After Coronary
Angioplasty", Period 09/01/91 - 08/31/96, Budget $150,476, Principal Investigator, 20% effort.

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.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION

FELIX A. DE LA IGLESDIA, M.D.
ADJUNCT RESEARCH SCIENTIST
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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 Training 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 Experimental
            Pathology.

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
      kidney pathology.
   C. Consultation with Dr. Ward and colleagues regarding application of morphometric
      techniques.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Co-chair, Joint University of Michigan and Parke-Davis Pathology Program.
MEDICAL SCHOOL/HOSPITAL:
A. None.

REGIONAL AND NATIONAL:
A. Member, Steering Committee of External Advisors, Wayne State University Institute of Chemical Toxicology.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
A. Editorial Board Member, Drug Metabolism Reviews.
B. Editorial Board Member, Toxicology.
C. Editorial Board Member, Toxicologic Pathology.

INVITED LECTURES/SEMINARS:
2. Skin Toxicity, International Training Course on Environmental and Industrial Toxicology, Chulaborn Research Institute, Bangkok, Thailand, November 19, 1991.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

BOOKS/CHAPTERS IN BOOKS:


ARTICLES SUBMITTED FOR PUBLICATION:


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
   A. Director, Central Ligand Assay Laboratory.

MEDICAL SCHOOL/HOSPITAL:
   A. Director, Chemistry Core Facility, Michigan Diabetes Research and Training Center.
   B. Co-Director, Standards and Reagents Core Facility, Reproductive Sciences Program.
   C. Member, Selection Committee, Reproductive Sciences Program.
V. OTHER RELEVANT ACTIVITIES:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


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


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. Lecturer and Laboratory Instructor - Pathology 600.
   E. Coordinator - Senior Medical Student Clerkships.
   F. Sequence Coordinator and Lecturer - ICS-600: Immunopathology.
   G. Associate Director - Sophomore Medical Student ICS Course (600/601).
   H. Coordinator, Department of Pathology Summer Clinical Program for Minority Medical Students.
   I. Pulmonary Pathology Conference (6 per year 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 (5).
   O. Graduate Student Ph.D. Thesis Committee (3).
   P. Assistant Director - Medical Student Curriculum Component I.
   Q. Faculty Mentor - Baccalaureate Program for Pre-Medical Minority Students.

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 Programs.
C. Department ACAPT Committee.
D. Coordinator, Department Faculty Retreat on Junior Faculty Development.
E. Human Resource Committee.
F. Research Space Advisory 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 Site Visit, Program Project: Physical Properties and Biologic Functions of Lipids, Hormel Institute, Austin, Minnesota, 1991.
D. Reviewer, Veteran's Administration Research Grants.
E. USMLE, Pathophysiology Test Group.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
A. Editorial Board, Infection and Immunity.
B. Editorial Board, Laboratory Investigation.
C. Editorial Board, Biological Signals

INVITED LECTURES AND SEMINARS:
1. Invited Speaker, American College of Sports Medicine, Dallas, Texas 1992.
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 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Rotations, July (1/4), August (2/4), September (2/4), November (2/4). March (2/4), April (2/4), May (2/4), June (1/4); Autopsy rotation, August (1/4).

II. TEACHING ACTIVITIES:
   A. Pathology 600 Lectures:
      5. Gyn Pathology I - March 31, 1992
      6. Gyn Pathology II - April 1, 1992
      7. Pathology 600 Laboratory Instructor, January-April, 1992
   B. Pathology 630:
   C. Residency Training:
   D. Other educational activities:
     10. Member, M-2 Respiratory Sequence Committee, 1992.
11. Course Director, M-4 Student Pathology Clerkships.
12. Pathology Resident Mentor.

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. Prognostic Markers of Urinary Bladder Cancer (RFACA 91-09), H. Barton Grossman, M.D., (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).
C. Role of Urothelial Cell Activation in Interstitial Cystitis (DK-91-04), Monica Liebert, Ph.D. (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).
D. Interstitial Lung Diseases - Specialized Center of Research (1 P50 HL - 46487-01), Galen Toews, M.D. (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).
E. Monoclonal Antibodies to Bladder Tumor Antigens, H. Barton Grossman, M.D. (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).

PROJECTS UNDER STUDY:

A. Measurement of Proliferating Cell Nuclear Antigen of low stage renal cell carcinoma and correlation with ploidy measurement and clinical outcome.
B. Quantitation of immunochemically-determined estrogen and progesterone receptors of breast carcinomas.
C. Methotrexate-induced hepatic disease: an analysis of sequential liver biopsy samples.
D. Measurement of CEA expression in cytopathology samples as a diagnostic adjunct.
E. Airway inflammation of the lingula: can gender differences explain unusual localization of m. avium infection?
F. Interstitial lung disease: the influence of biopsy site on diagnosis.
G. The morphologic manifestations of metastatic renal cell carcinoma to the lung.
H. PCNA expression of preoperative esophageal biopsy samples: correlation with response to treatment and prognosis.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

B. Member, Residency Selection Committee
C. Coordinator, Senior Staff Service Rotations.
D. Director, Surgical Pathology Fellowship Program.
E. Member Credentials Committee (a Continuing Committee of the Medical Staff).

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

2. Reviewer, American Journal of Pathology.
INVITED LECTURES/SEMINARS:

2. "Drug and Chemical Induced Hypersensitivity Disorders" Environmental Pathology, UAREP, Sugarbush, Vermont, October, 1991.

VI. PUBLICATIONS:


SUBMITTED PUBLICATIONS:


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology, including consultations on surgical gynecologic pathology from
      other hospitals and medical centers - 2139 cases.
   B. Necropsy Service - one week.
   C. Molecular Diagnostics for Anatomic Pathology.
   D. Weekly interdisciplinary Gynecologic Oncology Tumor Board Review.

II. TEACHING ACTIVITIES:
   A. Pathology 600 Lectures:
      2. Gynecology (two hours), March 1992.
   B. Introduction to Clinical Sciences 601 Course (one hour), January, 1992.
   C. Co-Director, Pathology 600 laboratory section.
   D. Preceptor for medical student research project under auspices of Biomedical Research
      Program: Genetic alterations in gynecologic malignancy (Brad Slywka, B.A.).
   E. Lecturer, two Anatomic Pathology Didactic Conferences.
   F. Monthly Pathology-Gynecology teaching conference for house officers in Obstetrics and
      Gynecology.
   G. Presentation of Grand Rounds to Department of Obstetrics and Gynecology: Pathology

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

   A. Linkage and Mapping of Breast Cancer to Chromosome 17, NIH Grant RO1 CA57601-
      01, 7/1/91-6/30/97. Barbara Weber, M.D. (Principal investigator), Francis Collins, M.D.,
      Ph.D. (co-investigator), Judy Garber, M.D., M.P.H. (consultant), Thomas S. Frank, M.D.
      (consultant).
   B. Significance of allelic loss of p53 tumor suppressor gene in endometrial neoplasia,
      University of Michigan Cancer Center Institutional Grant IRG-40-33, 4/1/92-3/31/93.
   C. Molecular analysis of clonality, Horace H. Rackham Faculty Grant from the University
      of Michigan, 5/1/91-6/30/93.
   D. Molecular analysis of clonality, Phoenix Memorial Research Grant from the University
      of Michigan, 4/18/91-6/30/92.
   E. Genetic markers in gynecologic malignancy, Harris Foundation, 1/1/92-1/1/94.
PROJECTS UNDER STUDY:

A. Loss of heterozygosity of p53 gene in epithelial malignancies of ovary and endometrium (with James A. Roberts, M.D., Department of Obstetrics and Gynecology).
C. Diagnosis of histologically occult cytomegalovirus infection in immunocompromised patients using the polymerase chain reaction.
D. Identification of mycobacterial DNA in paraffin-embedded tissues using the polymerase chain reaction.
E. Mutations and gene loss of p53 locus in hepatocellular carcinoma.
F. Molecular analysis of clonality.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Surgical Pathology representative to the Departmental Quality Assurance/Quality Control Committee.

REGIONAL AND NATIONAL:

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

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 1991 - 30 JUNE 1992

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:

DEPARTMENT:
A. Co-Director of a laboratory section for Pathology 600.
B. Course Co-Director, Pathology 631 (Dental School, Sophomore Pathology), 1991-.
C. Teaching and supervision of three Pathology house officers through two-week Pathology Data Systems rotations.

MEDICAL SCHOOL/HOSPITALS:
A. Program Director of the Tenth Annual Clinical Laboratory Computer Symposium at the Towsley Center for Continuing Medical Education, June 10-12, 1992. Symposium attracted 175 registrants and 34 vendors.

III. WORK IN PROGRESS:
1. Information systems in hospitals: technical, political, and transaction cost explanations for departmental success and interdepartmental failure.
2. Informating versus informationalizing: the information product of pathology.
3. Alliances between for-profit reference laboratories and tertiary care hospital laboratories.

IV. SERVICE ACTIVITIES:

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

HOSPITAL:
A. ITN (Information Technology and Networking) Steering Committee.
B. Chairman, Committee on Blood Products Utilization (1991-1992); helped to develop a system of criteria maps to optimize ordering of blood and blood products.

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 Users' Group.
C. Editorial Advisory Board, Clinical Laboratory Management Review.
D. Co-Editor of a special focus issue of Clinical Laboratory Management Review of a special edition devoted to laboratory information systems (January-February, 1992).
E. Ad Hoc Committee on Laboratory Management/Medical Informatics of the American Board of Pathology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

5. "The Role of Pathology Informatics in a Tertiary Care Medical Center. The Nitty-Gritty of Hospital Computer Politics", Two lectures delivered while a visiting professor in the Department of Laboratory Medicine and Pathology, the University of Minnesota Medical School, Minneapolis, Minnesota, February 12-13, 1992.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN NON-REFEREED JOURNALS:

DONALD A. GIACHERIO, PH.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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 alternate site testing and near the patient testing programs.

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).
B. Evaluation of new methods for drugs of abuse testing.
D. 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.
B. M-Labs/M-Care Quality Assurance Group.
C. Co-Director, M-Care Site Laboratory Advisory Group.
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. Chair-Elect, Michigan Section, AACC.
C. Education Committee Chair, Michigan Section, AACC.
D. Lipids and Lipoproteins Subgroup, AACC.

V. **INVITED LECTURES:**


VI. **PUBLICATIONS:**

**ARTICLES SUBMITTED FOR PUBLICATION:**


**ABSTRACTS:**

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology - Room I and Room II, 13 weeks.
   B. Diagnostic electron microscopy - share nephropathology work with Dr. K. Johnson and Dr. Killen.
   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 and Dr. Killen.
   F. Frozen Section "on call" Rotation.
   G. Consultant, Veterans Administration Hospital.
   H. Autopsy Service, 1 week

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. Lecture on Urologic Pathology to Dental Pathology 630 students.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Collaborating with urology staff and a pathology resident (Cheryl Utiger) on a study to estimate the size of prostatic adenocarcinoma based on the number of random needle biopsy cores involved.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
   A. Member, Advisory Committee on Appointments, Promotion and Tenure.

MEDICAL SCHOOL/HOSPITAL:
   A. Assistant Dean for Medical School Admissions.
UNIVERSITY:
A. None.

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

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS
None.

BOOK REVIEW
None.

ABSTRACT
None.
DAVID GORDON, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
A. Supervision of Autopsies (6 weeks).
B. Cardiovascular Pathology Consultation.
C. Cardiovascular Surgical Pathology.

II. TEACHING ACTIVITIES:
A. Lecturer, Biomedical Summer Research Program for Minority Students.

III. RESEARCH ACTIVITIES:
A. Patterns of growth factor gene expression and cell proliferation in human atherosclerosis.
B. Patterns of collagen type gene expression in human atherosclerosis.
C. Patterns of growth factor gene expression and cell proliferation in transplant arteriosclerosis (human and rat models).
D. Patterns of collagen type gene expression in transplant arteriosclerosis (human and rat models).
E. Evaluation of the effects of specific genes transferred into the artery wall (collaborative research with Gary and Betsy Nabel, Department of Internal Medicine).
F. Immunosuppressive modifications of transplant rejection (collaborative research with Larry Turka and Hua Lin in Departments of Internal Medicine and Surgery).
G. The pathobiology of arterial stenting (collaborative research with David Muller, Division of Cardiology).

SPONSORED SUPPORT:

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Interviewer - Candidates for faculty and house officer positions.

MEDICAL SCHOOL/HOSPITAL:
A. Cardiovascular Research Center, Executive Committee
REGIONAL AND NATIONAL:

A. National American Heart Association Grant-in-Aid review committee (Vascular Biology).
B. National American Heart Association Fellowship review committee.

INVITED LECTURES/SEMINARS:

2. Invited speaker: Div. of Hematology, Emory University, Atlanta, March 1992.
3. Invited speaker: Div. of Cardiology, Tufts University (St. Elizabeth's Hospital) Boston, April, 1992.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:
   A. D.D.S. Level:
      a. Oral Pathology 694 (Sophomore Core Course)
   B. Graduate Dental Level:
      a. Oral Pathology 694 (Graduate Core Course)
      c. Oral Pathology 624 (Graduate Core Course)
   C. Dental Hygiene Level:
      a. Dental Hygiene 494 (Clinical Oral Pathology)
      b. Dental Hygiene 293 (General/Oral Pathology)
   B. Graduate Level Advisement:
      a. John Wataha - Ph.D. Program (Oral Biology and Materials Sci-Engineering) - 4 years.
      b. Celeste Swamidoss - MSD Program (Oral Pathology) - 2.5 years.
      c. Rod Parsell - DDS Program - 4 years.
      d. Fawzi El Shefei - MSD Program (Biomaterials) - 2.0 years.
      e. John C. Fat - MSD Program (Endodontics) - 2.5 years.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. "Specialized Materials Science Research Center"
      Co-director as well as principal investigator for one of four projects; R.G. Craig, P.I.
      25% for this last year (10% of this is cost-shared with the dental school). NIDR 9/29/89-
      9/28/94.
      $2,657,883 for direct costs, total period; $115,113 direct costs for Biocompatibility
      Group for the year.
   B. "Restorative Dental Materials" --- Training Grant
      Participating Investigator; R.G. Craig-P.I.
      10% for this last year. NIDR 7/1/91-6/30/95
      $258,586 for direct costs, total period
IV. **ADMINISTRATIVE ACTIVITIES:**

**UNIVERSITY OF MICHIGAN, SCHOOL OF DENTISTRY AND DEPARTMENT OF ORAL PATHOLOGY:**

F. Vice-Chairman, Department of Oral Medicine, Pathology and Surgery, School of Dentistry, 1990-1992.
L. Chair, Search Committee for Biomaterials faculty, 1992.

**REGIONAL AND NATIONAL:**

D. External Review Board for NIDR Program Project in Materials Science, University of Missouri at Kansas City.

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. New York Academy of Sciences.
G. Sigma Xi.
H. American Association of Dental Schools
EDITORIAL REVIEW BOARDS:

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

INVITED LECTURES/SEMINARS: None

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: None

ABSTRACTS:

CURTIS A. HANSON, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DIRECTOR, CLINICAL PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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.
F. Director, Clinical Pathology Laboratories
G. Medical Director, Medical Technology Program, Eastern Michigan University

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.
B. House Officers:
   1. Sign-out of bone marrow biopsies and aspirates.
   2. Review of blood smears and body fluids in Hematology Laboratory.
C. Hematopathology teaching:
   1. Hematopathology Lectures/biweekly.
   2. Hematopathology unknown conferences/biweekly.
D. Clinical Pathology Grand Rounds (two lectures).
E. Clinical Pathology Case Conference (weekly).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Clinical Oncology Fellowship Program, American Cancer Society, 1991 - 1992 ($10,000).

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. Quality Assurance Committee, Department of Pathology, 1991-present.
B. Co-Director, Clinical Hematology Laboratory, The University of Michigan Hospitals, 1987-present.
C. Co-Director, Flow Cytometry Laboratory, The University of Michigan Hospitals, 1991-present.
D. Leukemia Conference, biweekly.
D. Chairman's Advisory Committee, The University of Michigan Hospitals, 1990-present.
E. Director, Hematopathology Fellowship Program, The University of Michigan Hospitals, 1989-present.
F. Director, Clinical Pathology/Clinical Laboratories, The University of Michigan Hospitals, 1991-present.

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. Ad hoc reviewer of articles for Blood, American Journal of 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. Lecturer, Automated Differential Counts in the Hematology Laboratory, Internal Medicine Grand Rounds, Department of Internal Medicine, University of Michigan, September 12, 1991.
2. Lecturer, Flow Cytometry and Southern Blotting in the Diagnosis of Leukemia and Lymphoma, course presented at the American Society of Clinical Pathologists (ASCP), New Orleans, Louisiana, September 23, 1991.
3. Lecturer, Acute Lymphocytic Leukemia, Course presented at the American Society of Clinical Pathologists (ASCP), New Orleans, Louisiana, September 26, 1991.
5. Co-Chairman, Hematopathology platform session, United States and Canadian Academy of Pathology (USCAP), Atlanta, Georgia, March 16, 1992.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS AND CHAPTERS IN BOOKS:

4. Hanson, C.A.: The acute leukemias and myelodysplastic syndromes, in, McClatchey, K.D. (ed) Clinical Laboratory Medicine, Williams & Wilkins, Baltimore, Maryland, In Press.
5. Hanson, C.A. and Ross, C.W.: Clinical applications of molecular biology: Hematopoietic disorders, in, McClatchey, KD (ed), Clinical Laboratory Medicine, Williams & Wilkins, Baltimore, Maryland, In Press.
6. Hanson, C.A.: Peripheral blood and bone marrow: morphology, counts and differentials, and reactive disorders, in, McClatchey, K.D. (ed), Clinical Laboratory Medicine, Williams & Wilkins, Baltimore, Maryland, In Press.

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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Dermatopathology, private consultations.
   B. Dermatopathology, M-Labs.
   C. Dermatopathology, UMH.
   D. Dermatopathology, tutorials.
   E. Autopsy call.

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. Unclassified malignant cutaneous neoplasms of neural crest origin.
   B. Genetic Changes in Melanoma (with J. Trent)
   C. Atlas: The Histology of Alopecia

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Consultant, Pigmented Lesion Clinic.

MEDICAL SCHOOL/HOSPITAL:
   A. Director, Dermatopathology Unit.

REGIONAL AND NATIONAL:
   A. Editorial Board, Archives of Dermatology.
   B. Test Committees For Dermatopathology. (American Boards of Pathology and Dermatology).
   C. Board of Directors, National Alopecia Areata Foundation.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

2. Midland Hospital, Midland, Michigan, April 1992.

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 1991 - 30 JUNE 1992

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, 0.75 months.
E. Continued to organize and maintain the Michigan Cardiac Registry, twelve months.
F. Teratology Unit, histology, as necessary, approximately 40 cases per year.
G. 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, CCG, 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 surgicals, twelve months.
E. House Officers in Pathology, gross and microscopic supervision of most pediatric necropsies, twelve months and adult cases 0.75 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. Lectures on Pediatric Surgical Pathology in Core Curriculum Series for House Officers in Pathology.
I. Gross Necropsy Conference, one hour/week, twelve months.
J. Supervised Pediatric Hematology Fellows (two) for AP elective period.
K. Conferences:
   1. Pediatric Cardiology Death Conference, monthly, all year.
   2. Pediatric Tumor Conference, twice monthly, all year.
   4. Pediatric Liver-GI Conference, twice a month.
   5. Pediatric General Surgery Conference monthly.
L. Lecture: Classification and Histopathology of Pulmonary Artery Hypertension for Pediatric Cardiology Division.

III. RESEARCH ACTIVITIES:
A. Continued study of effects of various congenital heart defects on the pulmonary vasculature.
B. Study with pediatric cardiologists of effects of various stents and therapeutic manipulations on different stenotic vessels.
C. Histopathological component of lung changes associated with various cardiopulmonary therapeutic support mechanisms.

PROJECTS UNDER STUDY:

A. Review of neoplasms in post transplant patients.
B. Study of the differential development of renal tubules and glomeruli in twin fetuses and newborns with Mason Barr, M.D.
C. Continued study of the effect of ACE inhibitors on renal tubular maldevelopment with Mason Barr, M.D. (Earlier work resulted in FDA drug warning).
D. Correlation of x-rays, operative findings and histologic features of osteoblastoma and osteoid osteoma of the spine with orthopedic surgeons (see abstracts and papers).
E. Review of the predictive value of pre-ECMO lung biopsy in determining recovery of pulmonary function (Group study, pathologists, surgeons, pediatricians).
F. Correlating clinicopathologic study of histopathology of pediatric aneurysmal bone cysts with clinical recurrence risk, with pediatric orthopedic surgeons.
G. With pediatric hematologists/oncologists: histopathology slide correlation of neuroblastoma maturity with tissue gene expression.

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. Interviewing Pediatric Cardiology fellowship candidates.
C. Dean's External Review Committee for Department of Physical Medicine and Rehabilitation. (Completed, Fall 1991).

REGIONAL AND NATIONAL:

A. Member, CAP Council on Anatomic Pathology's Autopsy Committee.
B. Appointed member, Nominating Committee, Society for Pediatric Pathology.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. With C.J. D'Amato prepare microscopic descriptions of most UM autopsy brains for the Pathology House Officers which after review with the officers are incorporated into the final autopsy report. We also examine many of the brains sent to the Department for diagnosis, and prepare gross and microscopic descriptions. Many of these brains are from patients with clinical dementia.

II. TEACHING ACTIVITIES:
   A. Review microscopics of some of the above brains with house officers in Pathology and other house officers spending time in the department of Pathology.
   B. Neural and Behavioral Sciences 600 for second year medical students: two hours of lecture on neuropathology.
   C. Neuropathology 858, a laboratory - lecture course for house officers in Pathology, Neurology, Neurosurgery, and other neural areas, graduate students and occasionally faculty and undergraduate students. 18 hours including two lectures.

III RESEARCH ACTIVITIES:
   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. ADMINISTRATIVE ACTIVITIES:

REGIONAL AND NATIONAL:
   A. American Association of Neuropathologists.
   B. American Academy of Neurology.
   C. Society of Neuroscience.
   D. American Society of Human Genetics.

V. OTHER RELEVANT ACTIVITIES:
   None

VI. PUBLICATIONS:
ABSTRACTS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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.
   E. Laboratory Instructor - Second year 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.
   C. "Mechanisms of Glomerular and Tubular Injury", Core B, Renal Center Grant. National Institutes of Health, Principal Investigator, $147,795.
   E. "Crescentic Nephritis Program Project", Core B, Principal Investigator, National Institutes of Health, $204,490.

PENDING SUPPORT:
   B. "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:
   C. Consultant/Grant reviewer for the Veteran's Administration.
   D. NIH NHLBI Study Section.

V. INVITED LECTURES AND SEMINARS:

   1. Invited Speaker, "Metalloproteinases in Inflammation", AMGEN Corporation.
   2. Invited Speaker and Symposium Moderator, Cyclosporine and Autoimmune Diseases, Bad Zurzach, Switzerland.
   3. Visiting Professor, University of Basle, Basle, Switzerland.

VI. OTHER RELEVANT ACTIVITIES:

   A. Consultant on Dermatology and Nephrology training grants.

VII. PUBLICATIONS:

   ARTICLES PUBLISHED IN REFEREEED JOURNALS:


ARTICLES ACCEPTED FOR PUBLICATION:


ARTICLES SUBMITTED FOR PUBLICATION:


16. Richardson, B., Buckmaster, T., Keren, D. and Johnson, K.J.: Evidence that macrophages are programmed to die after activating cloned, antigen specific CD4+ T cells. Submitted for publication.
18. Richardson, B.C., Buckmaster, T., Keren, D.F. and Johnson, K.J.: Evidence that macrophages are programmed to die after activating autologous, cloned antigen specific, CD4+ T cells. Submitted for publication.

BOOKS AND CHAPTERS IN BOOKS


ABSTRACTS, PRELIMINARY COMMUNICATIONS, PANEL DISCUSSIONS


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

ANNUAL DEPARTMENT REPORT
1 JULY, 1991 - 30 JUNE, 1992

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

II. TEACHING ACTIVITIES:
B. Coordinated weekly 1991-92 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. Made two presentations at Clinical Pathology Grand Rounds:
   1. Immune hemolysis.
   2. Rh blood groups.
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:
   1. Planned and coordinated the June, 1992 Current Topics in Blood Banking Symposium and Preconference Workshops
   2. Presented Workshop entitled: Serological Testing in the Detection, Diagnosis and Transfusion Management of Immune Hemolysis
   4. Moderated morning session on Transfusion Management.
I. Provided experience in pretransfusion testing to 10 1st-year minority medical students.

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:
   Chairman, Advanced Lectures in Blood Banking Program - coordinated a series of 60 lectures and two full-day workshops for MABB members seeking Certification as a Specialist in Blood Banking.

B. American Association of Blood Banks:
   Board of Directors, North Central District Representative.

C. Reviewer of articles submitted for publication in Transfusion and Immunohematology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES:

   William Beaumont Hospital, Troy, Michigan.
   William Beaumont Hospital, Troy, Michigan.

PANEL DISCUSSIONS/WORKSHOPS


VI. PUBLICATIONS:

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

5. Judd, W.J.: Polyagglutination (editorial). Immunohematology; Accepted for publication.

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 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   A. Board Certification, Anatomic Pathology.
   B. Autopsy Pathology.
   C. Diagnostic Renal Biopsy Service.

II. TEACHING ACTIVITIES:
   A. Pathology 631 - Pathology Laboratory for Dental Student. Approximately 60 contact hours.
   B. Pathology 580 - three contact hours.
   C. Gross Pathology Conference.
   D. Renal Pathology Conference.
   E. Renal Pathology for Nephrology Fellows (20 contact hours).
   F. Post Doctoral Fellows (4).
   G. Graduate Students (3).
   H. Dissertation Committees (9).

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-P50-DK39225, Principal Investigator, Project XI "Monokine-Mediated Matrix Biosynthesis by Mesangial Cells", (10% Effort) $39,110/year, 8/1/88-7/30/93.
   C. NIH-RO1-DK44848, Principal Investigator, "Collagen IV Gene Transcription in cpk/cpk Mice", (25% Effort) $143,000/first year, 9/30/91-9/30/96.
   D. American Heart Association-Grant-in-Aid, Principal Investigator, "Collagen IV Gene Regulation During Renal Development", $25,500, 7/01/91-9/30/92.

PENDING SUPPORT:
   A. NIH-P50-DK39225, Principal Investigator, Project VI "TGF-β Induced Collagen IV Gene Transcription" (10% Effort) $49,822/year 8/1/92-7/30/97.
   B. NIH-RO1, Co-Investigator, "Renal Fibrosis" (10% Effort) $198,213/first year, 4/1/93-3/30/98.
   C. NIH-RO1-DK40042, Co-Investigator, "Role of EDRF in the Juxtaglomerular Apparatus", (10% Effort) $181,858/first year, 4/1/93-3/30/98.
   D. NIH-Physician Scientist Award, Co-Sponsor, "Aldose Reductase Expression in Diabetes", $60,429/year, 4/1/93-3/30/98.
PROJECTS UNDER STUDY:
A. Structure and function of collagen IV.
B. Regulation of collagen IV gene expression during development.
C. Localization of nephron segment-specific genes by PCR.
D. Role of aldose reductase in diabetic complications.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Post-doctoral candidate recruitment, Immunopathology Training Grant.
B. Anatomic Pathology Accessioning Committee.

MEDICAL SCHOOL/HOSPITAL:
A. Faculty recruitment - Department of Pathology.
B. Faculty recruitment - Department of Internal Medicine.
C. Curriculum development-M1 Pathology.
D. Curriculum development-M2 Urinary System.

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:
1. Invited Speaker, "Regulation of Collagen IV Transcription", Forefronts in Nephrology, Banz, Germany, 1991.
4. Invited Speaker, "Collagen Expression in Glomerular Disease", Molecular Approaches to Nephrology: Prospects in Diagnosis and Management, Bari, Italy, 1992.
6. Invited Speaker, Department of Anatomy and Cell Biology, Univ. of Kansas, Kansas City Kansas, 1993.
8. Invited Speaker, XIIth International Congress of Nephrology, Jerusalem, Israel, June 1993.
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.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:
A. Inflammation/Immunopathology Series ICS-600.
B. Pathology 581.
C. Course co-director "Cellular and Molecular Basis of Disease" (with Dr. Jeffrey Bonadio).
D. Epidemiology 570.
E. Member, Pathology Graduate Program Committee.
F. Member, Molecular Pathogenesis Training Grant (Microbiology).
G. Member, Immunopathology Training Grant (Pathology).
H. Member, Operating Committee, Systems and Intergrative Biology Training Grant (Physiology).
I. Teaching/Research Seminars in various departments.
J. Supervised the following postdoctoral fellows and graduate students: Drs. Kim Brown, Amanda Thornton, Mark Rolfe, Robert Schmouder, Charles Dibb, Andy Metinko, Tsuyoshi Kasama, Susan Moore, Rob Smith, and Ron Allen.
K. Undergraduate students: Mark Milia, Andy Gilbert, Paul Holman, Rick Dwyer, and Dan Scharbaum.
L. Doctoral Committee Member/Oral Presentation Committee for the following graduate students: Susan Moore, Ron Allen, Cindy Hoorn and Paul Bohjanen.
M. Mentor for Dr. Janice Liebler, University of Oregon Health Science Center; 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-DK38149; Principal Investigator - Section II.
E. 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. Program Committee for 1992 Pathology Faculty Retreat
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 (Vice-Chair).
G. Member, Michigan Cancer Center.

REGIONAL AND NATIONAL:
A. Associate Editor, American Journal of Pathology.
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. Organizing Committee, 1994 International Cytokine Symposium.
H. Organizing Committee, 3rd International Conference on Chemotactic Cytokines.
I. Organizer/Session Chair, International Conference on Interleukins and Other Cytokines.
J. Member, American Association of Pathology Program Committee.
L. Grant Reviewer, United States Department of Agriculture.
M. Grant Reviewer, The Arthritis Society.
N. Grant Reviewer, Veterans' Administration.
O. Grant Reviewer, The Scleroderma Foundation.
P. Grant reviewer, Canadian Cystic Fibrosis Foundation.
Q. Session Chair, 3rd International Workshop on Cytokines.
R. Session Chair, ATS, Cytokines in Lung Inflammation.
S. Session Chair, FASEB, Novel Neutrophil Activating Factors.
T. Session Chair, 3rd International Conference on Tumor Necrosis Factor.
U. Session Chair, Australian Inflammatory Symposium.
V. Long-Range Planning Committee, American Association of Pathology.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

2. Invited Speaker/Faculty, 1st Annual Congress of European Respiratory Society, Brussels, Belgium, September, 1991.
5. Invited Speaker, Cleveland Clinic Research Institute, Immunology Section, Cleveland, Ohio, October, 1991.
11. Invited Speaker/Chair, Australian Inflammatory Symposium, St. Vincent's Hospital, Sydney, Australia, February, 1992.
15. Invited Speaker, Biochemistry Lecture Series, University of Kansas, Lawrence, Kansas, April, 1992.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


**BOOKS AND CHAPTERS IN BOOKS:**


115
ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFERRED JOURNALS.


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
   None.

II. TEACHING ACTIVITIES:
   A. Pathology 581.
   B. Doctoral Committee Member: Paul Bohjanen.

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:
    A. Reviewer for Journal of Immunology.

V. OTHER RELEVANT ACTIVITIES:
   EDITORIAL BOARDS:
   None.

   INVITED LECTURES/SEMINARS:
   None.

VI. PUBLICATIONS:

   ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES
   A. Surgical pathology - 12 weeks.
   B. Autopsy Pathology - one 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. Fourth Year medical student rotation in Pathology - one month.
   C. Lecture to dental students - Pathology 630.
   D. Lectures to pathology house officers.
   E. Immunoperoxidase Rounds - Monthly.
   F. Supervision of three postdoctoral fellows in research laboratory (Dr. L. Jin, Dr. E. Kulig, Dr. T. Maeda).
   G. Honors Elective Course for undergraduate student (Annie Chang)- one semester.
   H. Medical Student Summer Research Program Mentor (Chris Antczak).
   I. High School Minority Summer Research Program Mentor (Ameer Daniels).
   J. Resident elective rotation in immunohistochemistry (Drs. Phil Perkins, Eric Kaldjian and Cindy Hegg).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   B. Studies of Normal and Neoplastic Human Pituitary Tissues. NIH Grant CA 42951, 7/90 - 6/95 (Principal Investigator - R. Lloyd).

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.
   C. Hormonal regulation of mammary tumor development in transgenic mice and in humans.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director of Immunohistochemistry Service.
B. Coordinator of Anatomic Pathology Journal Club.

**MEDICAL SCHOOL/HOSPITAL:**

A. Endocrine Surgery Conference.
B. Pathology presentations at General Endocrine Conference.
C. Curriculum Revision Committee - Endocrine Section.

**REGIONAL AND NATIONAL:**

B. Editorial Board - Endocrine Pathology.
C. Editorial Board - American Journal of Surgical Pathology.
D. Editorial Board - Modern Pathology.
E. Editorial Board - Applied Immunohistochemistry.
G. 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.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I.  CLINICAL ACTIVITIES:

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

II.  TEACHING ACTIVITIES:

A.  Supervision of seven postdoctoral fellows (Robert Larsen, Ph.D., Nozomu Hiraiwa, M.D., Ph.D., Brent Weston, M.D., Marco Trinchera, M.D., Aron Thall, Ph.D., Peter Smith, Ph.D., and Daniel LeGault, M.D.) and one M.D., Ph.D. thesis student, (Mr. Kevin Gersten).

B.  Lecturer - Pathology 581.

III.  RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A.  "Analysis of the roles of oligosaccharides during murine embryogenesis".
   Source of award: Howard Hughes Medical Institute.

B.  Principal Investigator, "The Molecular Biology of Intracellular Lipid Transport", NIH DK-38482 (50% effort), $57,297/year direct cost ($317,737/five years), 8/1/86 - 7/31/92.

C.  Sponsor, NRSA Postdoctoral Fellow, Brent Weston, M.D. "The Lewis Blood Group a(1,3/1,4) Fucosyltransferase Gene". Inclusive dates of funding: 12/1/90 - 11/30/92.
   Source of award: National Institutes of Health. Total direct costs = $62,300.00.

D.  Principal Investigator, "Molecular genetics of the human Lewis and Lewis-related blood group loci". (5% effort), Source of Award: National Blood Foundation. Inclusive dates of funding: 7/1/91 - 6/30/93. Total direct costs = $19,500.00.

E.  Principal Investigator, "Molecular biology of human a1,3 fucosyltransferase", NIH GM47455-01 (25% effort), $71,951/year direct cost ($632,749/five years), 5/1/92 - 4/30/97.

F.  Subcontract Principal Investigator, "Controlled expression of neoglycans in animal cells", NIH GM45914 (5% effort), $27,740/year direct cost ($89,334/two years), 8/1/91 - 7/31/93.


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:

1. Resident Selection Committee.

REGIONAL AND NATIONAL:

1. Member, Editorial Board, Journal of Biological Chemistry.

V. OTHER RELEVANT ACTIVITIES:

1. Howard Hughes Medical Institute, Assistant Investigator.

INVITED LECTURES AND SEMINARS:

3. Cloned human fucosyltransferase genes and oligosaccharide ligands for cell adhesion molecules, Scripps Research Institute, La Jolla, California, October, 1991.
9. Mammalian genes that determine glycosylation events, FASEB Meeting, April, 1992.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


ARTICLES SUBMITTED OR IN PREPARATION:


3. Weston, B.W., Smith, P.L., Kelly, R.J. and Lowe, J.B.: Molecular cloning of a fourth member of a human a(1,3)fucosyltransferase gene family: Multiple homologous sequences that determine expression of the Lewis x, sialyl Lewis x, VIM-2, and difucosyl sialyl Lewis x epitopes.

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


KENNETH D. MCCLATCHEY, M.D., D.D.S.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
July 1, 1991 - June 30, 1992

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 Microbiology/Virology Laboratory.
D. Medical Director of Medical Technology Program; Eastern Michigan University.
E. Ann Arbor Veterans Administration Medical Center - monthly consultant.
F. Associate Chief of Medical Affairs.
G. Director of Pathology Laboratory, School of Dentistry.

II. TEACHING ACTIVITIES

MEDICAL SCHOOL/HOSPITALS

A. Pathology 630/631; Course Director:
   1. Five hours credit (Monday and Wednesday, 2-4:00 p.m.)
   2. 100 dental students, 25 medical illustration and graduate students.
B. Oral Diagnosis 644; lecturer.
C. Pathology 600; lecturer, head and neck pathology.
D. Oral Pathology 695, Course Director.

III. RESEARCH ACTIVITIES

A. Consultant, Serologic Studies of Squamous Cell Carcinoma of the Head and Neck.
   Principal Investigator: Thomas E. Carey, Ph.D., Department of Otorhinolaryngology,
   The University of Michigan. NCI CA-49708-01, 6/1/89-3/31/92.
B. Consultant, Impact of Follow-Up on Control of High Blood Pressure and Cholesterol.
   Principal Investigator: Andrea Foote, Ph.D., Institute of Labor and Industrial Relations,
   The University of Michigan, 1988-present.
C. Veterans Administration Co-operative Studies Program, Executive Committee. G.T.
   Wolf, T.F. Beals, A.A. Forastiere, T. Carey, K.D. McClatchey, A. Flint, and J.L. Hudson:
   A New Strategy to Preserve the Voice Box in Advanced Laryngeal Cancer. Protocol
   582-C, Clinical Research Center, The University of Michigan, 1985-present.
D. Consultant, Impact of Follow-up on Control of High Blood Pressure and Cholesterol.
   Principal Investigator, Andrea Foote, Ph.D., Institute of Labor and Industrial Relations,
   The University of Michigan, 1988-present.
E. Co-Investigator, Enzyme Tagging of Malignant Cervical Epithelial Cells. Principal
   Investigator, Daisy S. McCann, Ph.D., McCann Associates, Wayne, Michigan, 1991-
   present.
PENDING SUPPORT

A. Consultant, Head and Neck Cancer in Young Patients. Principal Investigator, Thomas E. Carey, Ph.D., Department of Otorhinolaryngology, The University of Michigan, 1988-present.

IV. ADMINISTRATIVE ACTIVITIES

DEPARTMENTAL

A. Medical Service Plan Executive Committee, 1979-present.
B. Chairman's Advisory Committee.

MEDICAL SCHOOL/HOSPITAL

B. Advisor, Medical and Biological Illustration Program, The University of Michigan Medical School, 1986-present.
C. Member, Infection Control Committee, The University of Michigan Hospitals, 1978-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. Vice Chairman, 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.
I. Chairman, Standardization and Product Evaluation Committee (SPEC), The University of Michigan Medical Center, 1991-present.

REGIONAL AND NATIONAL

A. College of American Pathologists, Fellow, 1975-present.
   3. Chairman, Commission on Anatomic Pathology, 1986-present.
B. National Committee for Clinical Laboratory Standards, Corresponding Membership, 1987-present.
   2. International Relations Committee, member, 1988-present.
   3. 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.

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


VI. PUBLICATIONS

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


ARTICLES SUBMITTED FOR PUBLICATION


BOOKS AND CHAPTERS IN BOOKS


PAMPHLETS


ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR


I. CLINICAL ACTIVITIES:

A. Daily surgical neuropathology and electron microscopic neuropathology - three months.
B. Consultations on surgical neuropathology from other hospitals - six months.
C. Weekly Brain Tumor Board, review of neurosurgical, neuroradiologic, neuropathologic and clinical-pathologic correlation - three months.
D. Diagnostic neuropathology consultant, Veterans Administration Hospital - three months.
E. Examination of autopsy neuropathologic material - staff rotation and consults to faculty.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Neural and Behavioral Sciences 600, Neuropathology for Second Year Medical Students.
B. House Officers:
   1. Individual daily instruction of Pathology House Officers over microscope.
   2. Review of neuropathologic postmortem material - staff rotation and consults to residents.
   3. Review all neurosurgically removed material in this hospital in CME-approved biweekly conference - three months.
   5. Invited presentations of neuropathologic observations at joint clinical conferences.
   6. Pathology Resident’s monthly Neuropathology Conference - three months.
C. Neurology resident, Norman Pflaster: One month elective in neuropathology.
D. Teach laboratory techniques 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 are 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 are studied. Antigenic changes are 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. 4/1/93 - 3/31/96 (Pending).

C. National Institute of Health Program Project NS-15655, "PET Study of Biochemistry and Metabolism of the CNS" (Program Title). "Glioma Imaging with Benzodiazepine Analog (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 Dr. Terry Hood, Submitted to J. Neuro-oncology.


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

D. Magnetic resonance diffusion and cross relaxation of brain tumors with Drs. James Brunberg, Thomas Chenevert and Brian Ross.


F. Characterization of Rosai-Dorfman disease in brain with Drs. Michael Boland and Karin Muraszko.

G. 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 - six months.

D. Interaction with Chiefs and Staff of other clinical services, particularly Neurosurgery, Neurology, Nuclear Medicine, Radiation Oncology, Neuro-oncology and Neuroradiology - six months.

E. Quality control of ultrastructural and immunodiagnostic neuropathology. This included scheduled twice monthly meetings and various ad hoc reviews requested by faculty.
REGIONAL AND NATIONAL:
A. Editorial Board, Critical Reviews in Neurobiology.
B. International Editorial Board, Cellular and Molecular Biology.
C. Primary Review Pathologist, Children's Cancer Study Group CCG 9891 nationwide study of childhood low grade gliomas.
D. Reviewer, for various pathology, neuroscience and neurooncology journals.
E. M-Lab Neuropathology Services.

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-.

SABBATICAL
A1. DNA extraction, quantitation, purification and electrophoresis.
B. Southern and Northern blots.
C. DNA radiolabeling and hybridization.
D. Plasmid preparation.
E. High resolution G-banding of chromosomes.
F. Karyotyping.
G. Fluorescent in situ hybridization to chromosomal DNA.
H. Preparation of two manuscripts and three chapters.

INVITED LECTURES AND SEMINARS
5. Lecturer, Interdepartmental Immunology Research Seminar, Phenotypic Alterations in Gliomas, University of Michigan, Ann Arbor, Michigan, March 25, 1992.
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 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:

CLINICAL RESEARCH-RELATED ACTIVITIES:

A. Assisted as a Co-Principal investigator in preparation of a NIH proposal for studying the effects of clinical depression on the human reproduction.

B. Developed a method for continuous, integrated sampling from human subjects involving collection into a refrigerated fraction collector and continuous monitoring of oxidizable molecules.

C. Developed an approach for generating protocols and bar-coded labels to facilitate analysis of samples for a large clinical study.

II. TEACHING ACTIVITIES:

A. Lectures:
   1. Served as a primary instructor for a full semester four hours/week laboratory course for dental and health professional students, Pathology 630/631, Fall 1991.
   2. Taught portion of Mammalian Reproductive Endocrinology, Physiology 541 (6 hrs lecture; ten contact hours).
   6. Taught portion of Mammalian Reproductive Endocrinology, Physiology 581 (6 hrs lecture; ten contact hours).

B. Primary supervision of two postdoctoral fellows:
   1. Beverly Strassman - postdoctoral fellow working on F32 fellowship. Appointed as Assistant Professor of Anthropology at the University of Michigan.
   2. Daniel McConnell - postdoctoral fellow working on chemiluminescence-based assays (Support received from the TLindbergh Fund).

C. Primary supervision of eight graduate students:
   1. Mahmoud Ghazvi, Bioengineering (recipient of an NIH Physician Scientist Award) - successfully defended on 7/3/91; now working as Assistant Research Scientist in RSP.
   2. Craig Halberstadt, Bioengineering - successfully defended on 7/25/91; now employed by a biotechnology firm in California.
   5. Hal Cantor, Bioengineering - defense probably in Spring, 1993, supported on NSF sensor grant.
6. Sharolyn Belzer, Education with Biology Concentration - working for two semesters on research project involving hormones and behavior in preadolescent children, volunteering services.
7. Karen Heinze, Bioengineering - first year doctoral student transferred from Northwestern, supported on NCIR grant.
8. William Lemon, Bioengineering, supported on Cellular Biotechnology Training Grant.

D. Primary supervision of two pre-medical students:

E. Service on Other Dissertation Committees.
   1. Kevin Ferreri, Biochemistry - successfully defended on 1/30/92.
   3. John Bendell, external examiner, University of Toronto, 10/1/92.
   4. Dan Burdick (current; Music).

F. Worked with two Visiting Scientists:

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH, P30 HD18258, "Center for the Study of Reproduction", $337,266 TDC year #3, 3/1/89-2/28/94, Principal Investigator, 10% effort (5% as director of Administrative Core; 5% as Director, Standards and Reagents Core).

B. NIH, T32 HD-07048, "Training Program in Reproductive Endocrinology", $186,439 direct and stipends, 7/1/90-6/30/95, Mentor, 5% maximum effort.

C. NSF ECS-8915497, "Site-directed bioreagent immobilization for development of microbiosensor arrays", 9/1/89-8/31/92, $181,811 3rd year total costs, 6% effort (cost-shared), PI: Richard Brown (Dept. Electrical Engineering and Computer Science) Role: Co-investigator. My annual support from this grant, $13,199, is for one graduate research assistant, Hal Cantor.

D. NIH F32 HD07480, "The reproductive endocrinology of the Dogon." Individual postdoctoral fellowship for Beverly I. Strassmann, 02/01/91-01/31/93. Role: mentor, 5% maximum effort, cost shared.

E. NIH U54 Cooperative Center, "National Center for Infertility Research". $624,096 year 01. 9/30/91-8/31/96 PI: Nancy Reame (School of Nursing). Role: Associate Director of Center, 3% effort (cost shared); Director of "Assay Development Core," 5% effort (2% cost shared), $34,094 and PI of one project, "Gonadotrope response to ovulation-controlling signals." 15% effort year 01 (10% cost shared), $84,934.

F. Office of Vice President for Research, "University of Michigan Women's Health Initiative", Principal Investigator with Patricia Levine, 2% effort, cost shared, $5,840, 4/1/92-9/30/92.

G. Office of Vice President for Research, "Hormones and Behavior: An Interdisciplinary Study of Women and Adolescents", Principal Investigator, 5% effort, cost shared, $7,000, 6/15/92-9/30/92.
PROPOSAL WRITING:

A. Submitted to NIMH, "Stress and Reproductive Hormones in Depressed Women". $165,357 year 1 TDC, $708,446 years 1-4. PI: Elizabeth Young (MHRI & Psychiatry). Role: Co-PI, 10% effort. 12/1/92-11/30/96. Pending.
C. Assisted on behalf of RSP in development of a new training grant application for six predoctoral fellowships from the NSF.
E. Assisted on behalf of the Bioengineering Program in the development of a proposal to the Whitaker Foundation (we are now among the finalists).
F. Assisted three individuals in three firms (Innovation Associates, Software Technologies, Inc. and Wolpert Polymers) to develop SBIR grants which, if successful, will involve the University as a sub-contractor.
G. Submitted supplemental application for the NICHD to support the development of an immunoassay for follistatin which will be funded on October 1, 1992.

SCIENTIFIC COLLABORATIONS:

B. Chemistry: Mark Meyerhoff: (with Richard Brown) NSF-funded project aimed at developing multisite, antibody-based solid state microelectrodes.
C. Electrical Engineering: Richard Brown: (with Mark Meyerhoff) NSF-funded project aimed at developing multisite, antibody-based solid state microelectrodes.
D. Internal Medicine: David Humes: continuing to study the ability of kidney stem cells to form tubules and perhaps form an artificial kidney using our patented three dimensional bioreactor (we are getting kidney tubules to form from dissociated rabbit kidney cells).
E. Nursing: Nancy Reame: joint involvement in developing the NIH U54 National Center for Infertility Research.
F. Pediatrics: Vasantha Padmanabhan: co-investigator of a project in the NCIR grant and development of a new RO1 grant - concerning the regulation of pituitary gonadotropin secretion.
G. Psychology: Jacquelynne Eccles: returning this fall to the University of Michigan. Completing a long term, longitudinal study concerning hormones and behavior in adolescents.
I. Innovation Associates, Ann Arbor, MI: Judith Erb, Immunoassayist: assisted in development of a to-be-funded SBIR concerning the development of simplified immunoassays able to evaluate fertility.
J. Michigan State University, Animal Science: James Ireland, Reproductive Biologist: development of a solid state, two site chemiluminescence-based immunoassay for inhibin.
SBIR focused on creating a novel affinity matrix-membrane for immunoassays, blotting experiments, etc.

M. Wayne State University, Obstetrics and Gynecology: Kamran Moghissi: Co-Associate Director of the NCIR grant and Key Investigator of one of its projects.

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

INTELLECTUAL PROPERTIES ACTIVITY:


B. Responding to first office action on patent application, Bioreactor system with alginate matrix (SN 07/744,109; UM#136c1 RM-6HM).

PROJECTS UNDER STUDY:

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

B. Analysis of dynamic control of pituitary function by GnRH: the role of intercellular signaling.

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. Associate Director, National Center for Infertility Research at Michigan (NCIR).

C. Director, Standards and Reagents Core Facility.

D. Director, Assay Core, NCIR.

E. Member, RSP Selection Committee.

UNIVERSITY:

A. Director, Reproductive Sciences 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.

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, P01 Center grant application, Cornell University, July 10-12, 1991.
4. Member, Site visit team, P30 Center grant application, University of North Carolina, September 4-6, 1991.
5. Give seminar and explore possibility of developing assays by chemiluminescence at Ciba Corning, Boston, Massachusetts, October 28-October 30, 1991.
6. Member, Site visit team, P30 Center grant, Harvard University, October 30-November 1, 1991.
8. Phone review of grant, Cornell University, November 19, 1991.
11. Visit Boehringer Mannheim, Indianapolis to explore applicability of automated ELISA methods to our NCIR grant, December 5, 1991.
13. Phone review of grant, Cornell University, January 6, 1992.
19. Seminar, Dept. of Physiology, Wayne State University, Detroit, Michigan, April 14, 1992.

RELEVANT ACTIVITIES:

1. Developing an immunoassay analysis system (LigAnal) that will assist many investigators and possibly the Department of Pathology Ligand Assay Laboratory.
2. 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).
3. Met with Board of Directors or Scientific Advisory Board of BioQuant, Inc. on July 18, October 10, November 27, and December 17, 1991, and January 14 and 28, and May 13, 1992.

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:


THESIS-RELATED MANUSCRIPTS NEARLY READY FOR SUBMISSION:


I. CLINICAL ACTIVITIES

None

II. TEACHING ACTIVITIES

A. Graduate students:
   1. Responsible during the current academic year for teaching activities for the following:
      a. Two sessions Pathology 581 (Kunkel).
      b. Four sessions Pathology 620 (Miller).
      c. Six sessions Cellular and Molecular Biology 850.
   2. Ph.D. Thesis sponsor for Jia Shi (Pathology Department, Boston University).
   3. Laboratory Rotation, Heidi Michaels (Cell and Molecular Biology).
   4. Program Director, "Experimental Immunopathology Training Grant" submitted 6/92.

B. Undergraduate students:
   1. Meredith Pfifer, Minority High School Summer Research Program.

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-09801 (30%), $126,107 direct costs/year. 8/1/90-7/31/95. MERIT award.
B. Principal Investigator, "T Cell Repopulation After Bone Marrow Transplantation", NIH CA-42148 (15%), $63,400 direct costs/year, 9/30/90 - 3/31/92.
C. Principal Investigator, "Aging Effects on IL-2 Secreting Helper T Cells", NIH AG-03978 (21%), $110,581 direct costs/year, 8/1/91 - 7/31/94.
D. Training Supervisor, "Research Training Agreement: Postdoctoral Training in Aging and Growth Control", Boston University (NIH/NIA Prime) (0%), $20,304 direct costs/year, 10/1/91-9/30/92.
E. Core Director, "Core Facility for Aged Rodents", NIH AG-08808 (10%), $66,755 direct costs/year, 9/1/89 - 8/30/94. (Component of Geriatric Research and Training Center, J. Halter, Program Director).

PENDING

A. Principal Investigator, "Immune and Muscle Function Assays as Biomarkers of Aging", NIH AG-11067 (15%), $149,000 direct costs/year, 4/1/93 - 3/31/98.
B. Program Director, "Research Training in Experimental Immunopathology", NIH AI-07413, $117,126 direct costs/year, 4/1/93-3/31/98.
C. Principal Investigator, "Summer Training Course in Aging Research", NIH AG-unassigned (2.5%), $33,651 direct costs, 4/1/93 - 6/30/93.
D. Principal Investigator, "T Cell Repopulation After Human Bone Marrow Transplantation, NIH CA-42148 (15%), $112,483 direct costs/year, 4/1/93 - 3/31/98.

IV. ADMINISTRATIVE ACTIVITIES

DEPARTMENTAL

A. Committee on Master Planning Analysis.
B. Graduate Education Committee.
C. Qualifying Examination Committee.

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.
D. Associate Director for Research, Geriatrics Center.
E. Research Retreat Co-ordinator, Geriatric Research and Training Center.

REGIONAL AND NATIONAL

A. Member, National Advisory Council on Aging.
B. Research, Education and Practice Committee, Gerontological Society of America.
C. Board of Scientific Advisors, Buck Center for Research on Aging.
D. 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. Workshop on Aging, Cell Proliferation and Cancer (Session Chair), Montreal, Canada, October, 1991.
5. Dept. of Immunology, Scripps Clinic and Research Foundation, February, 1992.
10. NIA Workshop on Genetically Heterogeneous Mice, Bethesda, April, 1992.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION

BOOKS/CHAPTERS IN BOOKS

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. None.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

   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. Safety Testing: Skin Irritation and Contact Sensitization, to be submitted to Proctor and Gamble, (R.S. Mitra, Principal Investigator; B.J. Nickoloff, Co-Investigator)

PROJECTS UNDER STUDY:

   A. Characterization of gamma interferon receptor on normal and psoriatic keratinocytes.
   B. Characterization of epidermal growth factor receptor on normal and psoriatic keratinocytes.
   C. Role of Gamma interferon in modulating adherence reactions between resting and activated mononuclear leukocytes and keratinocytes.
   D. Role of Urocanic acid and histidine metabolites on tumor necrosis factor alfa induced ICAM-1 expression in cultured keratinocytes.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

   A. Responsible for teaching theoretical as well as technical to 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:


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

BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS:


LETTERS TO THE EDITOR:


VI. OTHER RELEVANT ACTIVITIES:

1. Visiting Scientist, Free University Hospital, Amsterdam, The Netherlands. 6 October - 12 October, 1991.
2. Guest Lecturer:
   1. Modulation of 125I-EGF ligand binding to cultured keratinocytes by antiproliferative agents.
   2. Epidermal growth factor and transforming growth factor - alpha decrease gamma interferon receptors and induction of ICAM-1 on cultured keratinocytes.
BERNARD NAYLOR, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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, ICS course.
   E. Sophomore medical students: Instructor, Pathology 600 laboratory.

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

PROJECTS UNDER STUDY:
   A. Cross contamination in the cytologic staining circuit.
   B. Cytomegalovirus infection of the uterine cervix.

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.
C. Associate Editor, Acta Cytologica.
E. Editorial Board, Cytopathology.
F. Chairman, Editorial and Publications Committee, International Academy of Cytology.
G. Membership Committee, International Academy of Cytology.
H. Budget and Finance Committee, American Society of Cytology.
I. Committee on Commemoration, American Society of Cytology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:


HONORS AND AWARDS:

None
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:

None
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:

   B. 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. Member-General Medicine A Study Section, Subcommittee-1; NIH.

D. Ad-hoc Reviewer: University of Michigan Multipurpose Arthritis Center.

E. Ad-hoc Reviewer: University of Michigan Department of Surgery.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


4. CD-34 Expression in Kaposi's Sarcoma, Annual Meeting-The Laboratory of Tumor Cell Biology-National Cancer Institute, September 3, 1991, Bethesda, Maryland.


6. Cytokine Networks in Psoriasis, Invited Speaker and Visiting Professor, Zurich University Hospital, Dept of Dermatology, Zurich, Switzerland, September 30, 1991.


14. Cytokine Network in Psoriasis, Visiting Professor, Dept of Dermatology, Cleveland Clinic, April 2, 1992, Cleveland, Ohio.

15. Psoriatic Keratinocyte induced Angiogenesis is Inhibited by Thrombospondin, Annual Meeting-Society for Investigative Dermatology, April 30, 1992, Baltimore, Maryland.


17. Role of Keratinocytes in Cutaneous Inflammation, Invited Speaker, Contact Hypersensitivity Workshop, 18th World Congress of Dermatology, June 13, 1992, New York, New York.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREE JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


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

I. CLINICAL ACTIVITIES:
   A. Director, Molecular Diagnostics Laboratory.
   B. Autopsy Service (two weeks).

II. TEACHING ACTIVITIES:
   A. Supervised Dr. Maribel Gonzalez-Garcia (Postdoctoral Fellow).
   B. Speaker, Rheumatology Teaching Conference and Research Seminar.
   C. Coordinator, Molecular Diagnostics Conference (weekly) and Grand Rounds.
   D. Clinical Pathology Grand Rounds (one lecture).

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.
   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.

PENDING:

   A. Principal Investigator, "Regulation and Function of Bcl-2 in T cell Development." NIH, Multi-purpose Arthritis Center, Development and Feasibility Grant ($150,000/3 years) 1/1/93 - 12/31/95.
   B. Principal Investigator, "Regulation of Bcl-2 Proto-oncogene in Germinal Centers." American Cancer Society, ($352,928/3 years) 7/1/93 - 6/30/96.

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.
   C. Regulation and role of Bcl-2 in Neuroblastoma.
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. Director, Genotyping Core for Cystic Fibrosis Rotations.
B. Member, Transgenic Core Facility Committee, Multi-purpose Arthritis Center.
C. Reviewer, Departmental Grants.
D. Interviewer, Faculty and Pre-doctoral Candidates.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
1. Speaker, Department of Human Genetics, Wayne State University, Detroit, Michigan, December 1991.
2. Speaker, Department of Microbiology and Immunology, Michigan State University, East Lansing, Michigan, February 1992.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:
1. Gratiot-Deans, J., Ding, L., Turka, L. and Nuñez, G.: Immature human cortical thymocytes expressing high levels of proto-oncogene Bcl-2 are resistant to glucocorticoid-induced apoptosis.

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 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:

A. Co-Director, Section of Clinical Pathology, University Hospitals (to 9/91).
B. Director, Blood Bank and Transfusion Service, University Hospitals.
C. Diagnosis of surgical specimens from University Hospital patients.
D. Diagnosis of surgical specimens from M-Labs.
E. Diagnosis of consultation cases from pathologists elsewhere on surgical pathology of breast.
F. Medical coverage of Transfusion Service.
G. Medical coverage of Necropsy Service (Quality Control review).
H. Member, University of Michigan Breast Care Center.
I. Member, Committee on Guidelines for Blood Product Utilization.

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.
E. Director, Pathology clerkship for senior medical students, October-November, 1991.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. New Ultrasound Methods for Cancer Diagnosis and Treatment
   (3-5 years at 5% effort).
B. Microvascular and Structural Imaging of Breast Cancer
   (3-5 years at 3% effort).
C. Specialized Program of Research Excellence (SPORE) in Breast Cancer. Member, 
   Advisory Board of proposal from Allegheny-Singer Research Institute, Pittsburgh, Pennsylvania (Dr. Stanley E. Shackney, Principal Investigator).
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:
C. International Academy of Pathology:
   1. Abstract Review Board.
D. Michigan Society of Pathologists.
E. Southeastern Michigan Red Cross Blood Program:
   1. Board of Directors.
F. Consultant, Veterans Administration Hospital, Ann Arbor.
G. Test Committee on Blood Banking/Transfusion Medicine, American Board of Pathology.

DEPARTMENTAL:

A. Director, Transfusion Medicine program.
B. M-Labs Operation Committee.
C. Chairman's Advisory Committee.
D. Director, Fellowship Program in Blood Banking/Transfusion Medicine.

MEDICAL SCHOOL/HOSPITAL:

A. Transfusion Committee, Chairman.
B. Breast Care Center.
C. Bone marrow homotransplantation task force.
D. AIDS task force.
E. Hospital Quality Assurance Committee.
F. Committee for development of guidelines for use of blood products.
G. Haematology sequence advisory committee, M-2 year.

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. Reviewer, Cancer.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR:

I. **CLINICAL ACTIVITIES:**
   A. Autopsy Service.

II. **TEACHING ACTIVITIES:**
   A. Course Director, Pathology 650.
   B. Soverin Karmiol, Ph.D. - Postdoctoral Fellow.
   C. Kai Zhang, M.D. - Postdoctoral Fellow.
   D. Young Choi, Undergraduate/Research.
   C. Ravis Curry, Summer Undergraduate Research Program.

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", P01-DK38149, Section IV.
   E. Co-Investigator, "Hepatic Ischemia-Induced TNF and Multiorgan injury", RO1-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. Regulation of cytokine gene expression and signal transduction by fatty acids.
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. Member, Lung Biology and Pathology Study Section, National Institutes of Health.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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 620.
   D. 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. "Temafloxacin In Vitro Study", Abbott Labs.
   G. Antibacterial Activity of Cefpirome against Clinical Isolates, Hoffmann LaRoche.
   J. Development of Resistance to Topical Mupirocin, Smith Kline Beecham.
   K. EVS Endophthalmitis Vitrectomy Multi-Center Study.
   L. Yellow Mercuric Oxide Ophthalmic Multi-Center Study, Del Pharamceuticals.

PROJECTS UNDER STUDY:
   A. Detection of Verotoxin in Fecal Specimens.
   B. Development of PCR Techniques for the Detection of Mycobacteria in Clinical Specimens.
   C. Clinical Utility of Anaerobic Blood Cultures.
   D. Clinical Utility of Treating Infected IV Catheters with Antimicrobics.
   E. Clinical Significance of Altered Intestinal Flora.
   F. Utility of Unit-Specific Susceptibility Profiles.
IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
A. Clinical Pathology Laboratory Director's Committee.
B. Junior Faculty Development Committee.
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).
C. Pharmacy and Therapeutics Committee (Antibiotics only).

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.
F. Member of CAP Site Visit Teams.
   1. Shands Hospital, Gainsville, Florida.
   2. ARUP, Salt Lake City, Utah.

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

INVITED LECTURES/SEMINARS:
1. "New Enteric Pathogens" - Albion Hospital, Albion, Michigan.

IV. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


I. CLINICAL ACTIVITIES:
   A. Director of Autopsy Service.
   B. Supervision of Autopsies (2.5 months).
   C. Coordinator of Senior Staff Autopsy Call Schedule.

II. TEACHING ACTIVITIES:
   A. Coordinator - Biweekly Pathology Gross Conference.
   B. Lectures to Pathology House Officers in Anatomic and Clinical Pathology.
   C. Morbidity and Mortality Conference.
   D. Lecturer, Pathology 600 Course.
   E. Mentor - Fourth Year Medical Student Clerkship - one month rotations.
   F. Directed research of three postdoctoral fellows, one Visiting Scholar, two house officers (one in Pathology, one in Anesthesiology), one medical student and two undergraduate students.

III. RESEARCH ACTIVITIES:
   A. Regulation of gene expression of soluble mediators of inflammation using the following models:
      1. Endotoxin-stimulated human whole blood.
      2. Endotoxin injection in mice.
      3. Cecal ligation and puncture.
   B. Toxic effects of immunomodulators.
   C. Pathophysiology of septic shock.
   D. Quantitation of mediators in septic shock.
   E. Cloning, sequencing, and expressing cytokines including mTNF, hTNF, mIL-6, hIL-8, MCP, JE.
   F. Mechanisms of organ injury induced by hepatic ischemia/reperfusion.
   G. Mechanisms of nosocomial pneumonia, and asocation with IL-8.
   H. Directed research of Allan Olson, M.D. (Department of Pediatrics), Jorge Rodriguez, M.D. (Department of Surgery); House officers - Eric Hsi, M.D., Kyle Carr, M.D. (Pathology), and Anna Penna, M.D. (Anesthesiology), Eiji Takeuchi, M.D., Visiting Scholar, Postdoctoral fellows - Laura DeForge, Ph.D., Gordon Wollenberg, D.V.M., Ph.D., Undergraduate students - Carolyn Shumas, Tony Cardillo, Connie Ngiu

SPONSORED SUPPORT:
   B. Principal Investigator, Long-Term Minority Supplement for Jorge Rodriguez, M.D., 1991-1995, $200,000
D. Principal Investigator, "Hepatic Ischemia-Induced TNF and Multi-organ Injury", National Institutes of Health, four years, $924,643.
G. Co-Investigator on Core II of Program Project, "Inflammatory Cells and Lung Injury", National Institutes of Health - five years, $48,595, 1984-1994.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Director - Autopsy Service.
B. Member, Faculty Retreat Planning Committee, 1992.
C. Interviewer - Candidates for faculty, house officer, postdoctoral, and graduate student positions

MEDICAL SCHOOL/HOSPITAL:
A. Member, Medical School Admissions Committee.
B. Member, Michigan Cancer Center.
C. Reviewer, Biomedical Research Council grants.
D. Reviewer, Department of Surgery grants.
E. Coordinator - University of Michigan Hospital Medical Examiner On-Call.

REGIONAL AND NATIONAL:
A. Co-Chair, Michigan Department of Public Health Postmortem Examination Workgroup.
B. Member, Executive Committee, Dementia Subcommittee.
C. Member, Dementia Subcommittee, Chronic Disease Advisory Committee to the Michigan Department of Public Health.
D. Deputy Medical Examiner for Washtenaw County
E. Member, Legislative Committee, Michigan Association of Medical Examiners.
F. Member, Michigan Association of Medical Examiners, Shock Society, American Association of Immunologists, Adam James French Society, American Association of Pathologists, United States-Canadian Academy of Pathology.
H. Reviewer, National Science Foundation grants.
I. Reviewer, Veterans Administration Merit grants.
INVITED LECTURES/SEMINARS:

1. Invited Speaker, Workshop on Cytokine and Growth Factor Pathology, Basel, Switzerland, August, 1991
4. Invited Speaker, 3M Company, St. Paul, Minneapolis, March, 1992
5. Invited Speaker, Wound Healing Society, Richmond, Virginia, April 1992
6. Invited Lecturer, House Officer Orientation, The University of Michigan, June, 1992

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS


I. **CLINICAL ACTIVITIES:**

A. Co-Director, Clinical Flow Cytometry Laboratory.
B. Diagnostic Surgical Pathology, Hematopathology.
C. Clinical Hematology Laboratory.
D. Clinical Molecular Diagnostics Laboratory.
E. Hematopathology Consultation Cases (including M-Labs and Veterans Administration Hospital).

II. **TEACHING ACTIVITIES:**

A. Medical Students and Dental Students:
   1. Laboratory Instructor (2 sessions), Hematopathology - Pathology 600 course.
   2. M4 Clerkship, Hematology portion of Clinical Pathology Rotation.
   3. Dental School, Lecture on Anemias, Path 630.
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.
   5. Dermatology Lymphoma Conference, monthly.
D. Clinical Pathology Grand Rounds (one lecture).
E. Clinical Pathology Case Conference/weekly.

III. **RESEARCH ACTIVITIES:**

**PROJECTS UNDER STUDY:**

A. Immunophenotyping in acute and chronic leukemias.
B. Detection of *Mycobacterium tuberculosis* in sputum specimens by polymerase chain reaction.
C. Detection of Epstein-Barr virus in lymphoid lesions by polymerase chain reaction.
D. Detection of immunoglobulin gene rearrangements by the polymerase chain reaction.
IV. ADMINISTRATIVE ACTIVITIES

DEPARTMENTAL

A. Co-Director, Clinical Flow Cytometry Laboratory.
B. Residency Teaching Committee.
C. M-Labs Committee.

REGIONAL/NATIONAL:

Member, Southwest Oncology Group Lymphoma Review Panel.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Invited Seminar, Surgical Pathology of the Spleen, American Society of Clinical Pathologists, National Meeting, Boston, Massachusetts, April 1992.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

2. Hansen, E.R., Vejlsgaard, G.L., Cooper, K.D., Heidenheim, M., Larsen, J.L., Ho, V.C., Ross, C.W., Fox, D.A., Thomsen, K. and Baadsgaard, O.: Leukemic T-cells from patients with Sezary syndrome demonstrate enhanced activation through CDw60, CD2, and CD28 relative to activation through the T-cell antigen receptor complex.

BOOKS AND CHAPTERS IN BOOKS:

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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:

INTRADEPARTMENTAL:
A. Oral Pathology Biopsy Service Rotation, School of Dentistry.
B. Dental Faculty Associates, School of Dentistry.

INTERDEPARTMENTAL:
A. Oral Pathology, clinical consultations on an as needed basis, The University of Michigan School of Dentistry Clinics.
B. Consultant to Veterans Administration Hospital, Ann Arbor.

II. TEACHING ACTIVITIES:

FALL TERM, 1991:
A. Oral Pathology, Course 516, to Freshmen Dental Students (course director).
B. Oral Pathology, Course 824, to Senior Dental Students.
C. Graduate Oral Pathology Seminar in Periodontics, Course 781 (course director).
D. Graduate Oral Pathology, Course 694.
E. Dental Hygiene, Course 220, to Freshmen Students.

WINTER TERM, 1992:
F. Oral Pathology Course 624, to Sophomore Dental Students.
G. Oral Pathology Laboratory, Course 625, to Sophomore Dental Students.
H. Dental Hygiene, Course 313, to Junior Students
I. Graduate Oral Pathology Core Laboratory, Course 695.

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: $56,700.00.
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 - 07/93, Total Direct Costs: $82,192.00.
UNDER CURRENT NEGOTIATION:
A. "Oral Famiciclovir in the Treatment of Experimentally Induced Herpes Simplex Labialis: A Double-Blind, Dose-Ranging, Placebo-Controlled, Multi-Center Trial", Director. 5% Effort. SmithKline Beecham Pharmaceuticals Co., 07/01/92-06/30/94, Amount approximately $ 90,000.00 Direct Costs.

IV. ADMINISTRATIVE ACTIVITIES:

SCHOOL OF DENTISTRY COMMITTEES:
A. Infection Control Committee, School of Dentistry.
B. Hazardous Chemical Committee, School of Dentistry.

REGIONAL AND NATIONAL:

STATE OF MICHIGAN
A. Member, Council of Michigan Dental Specialty Presidents.
B. Member, Specialty Ad Hoc Committee, Michigan Board of Dentistry.
C. Member, State of Michigan Dental Specialty Task Force.
D. President, Michigan Society of Oral Pathology.
E. Member, AIDS Speaker's Bureau, Michigan State Medical Society.
F. Member, Advisory Committee, Special Office on AIDS Prevention and the Disease Surveillance Section, Michigan Department of Public Health.
G. Member, Tobacco-Free Michigan Action Coalition, Michigan Department of Public Health.
H. Member, Executive Committee, American Cancer Society, Michigan Division.
I. Member, Board of Directors, American Cancer Society, Michigan Division.
J. Area Delegate Director, American Cancer Society, Michigan Division.
K. Member, Public Issues Committee, American Cancer Society, Michigan Division.
L. Member, By-Laws Revision Committee, American Cancer Society, Michigan Division.
M. Member, Professional Education Committee, American Cancer Society, Michigan Division.
N. Consultant, Committee on Cancer and Infection Control, Michigan Dental Association.
O. Member, Special Committee on Health and Hazard Regulation, Michigan Dental Association.
P. Member, Research Screening Committee, Delta Dental Fund.
Q. Member, Michigan Coalition on Smoking or Health.
R. Member, Coalition for Access to Health Care.

HONORS AND AWARDS:

1992 Michigan Dental Association's Public Service Award.

NATIONAL:

A. Civilian Professor and consultant, Office of the Surgeon General, United States Army.
B. Member, Science Information Committee, American Association for Dental Research.
C. Member, Council on Dental Therapeutics, American Dental Association.
INTERNATIONAL:
A. External examiner in Oral Pathology, University of Malaysia, Kuala Lumpur.

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. Dental Faculty Associates, School of Dentistry.
      c. Oral Pathology Biopsy Service Rotation.
   2. Inter-departmental
      a. Oral Pathology, clinical consultations on an as needed basis, The University of Michigan Medical School of Dentistry Clinics.
      b. Consultant, Veterans Administration Hospital, Ann Arbor.

B. Continuing Education
   1. University

EDITORIAL BOARDS:
D. Cancer.
E. Journal of the Academy of General Dentistry.

INVITED LECTURES/SEMINARS:
14. Michigan Dental Association Annual Session, "Herpes, Hepatitis, and AIDS Revisited" (A.M. Session); "Diagnosis and the Treatment or Prevention of Noninfectious Oral Health Problems" (P.M. Session), Detroit, April 3, 1992.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREEED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

1. Rowe, N.H.: Jaw, Neuroectodermal Pigmented Tumor, in, Birth Defects Encyclopedia. #711.

VII. MISCELLANEOUS:

1. Professional Meetings Attended
   B. M.D.A. Annual Session, Grand Rapids, Michigan, April, 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. Designated reviewer.
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 1991 - 30 JUNE 1992

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.
D. Necropsy Service - One week.
E. M-Labs Surgical Pathology Service (Gyn) - As needed.

II. TEACHING ACTIVITIES:

A. Medical Students:
   1. Pathology 600 laboratory instructor, January-April.
B. Residents and Cytopathology Fellow:
   1. Sign-out; gynecologic and non-gynecologic cytology cases.
   2. Instruction in the performance and interpretation of fine needle aspirates.
   4. Lecture-OB/Gyn Pathology- one hour.
   5. One-month electives in Ob/Gyn Pathology (Cynthia Hegg, M.D., Denise Sulavik, M.D.).
   6. Instruction in Ob/Gyn Pathology and Cytopathology (Hope Haefner, M.D., Fellow, Dept. Ob/Gyn; Ralph Lelle, M.D., Fellow, Gynecologic Oncology Division.
C. Other Education Activities:
   2. Gynecologic Oncology Tumor Board Conference-weekly.
   3. Ob/Gyn Colposcopy/Pathology Conference-bi monthly.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Computer Applications to Cytology.
B. Cytologic Analysis of endocervical gland involvement by squamous cell carcinoma in-situ versus adenocarcinoma in-situ on cervical smears obtained with a cytobrush.
C. Cytologic features of cystic ovarian lesions.
D. Neovagina cytology following total pelvic exenereation for gynecologic malignancies.
E. The clinical significance of the degree of cellular atypia in endometrial hyperplasias (in conjunction with Dr. Hope Haefner, fellow, Dept. of Obstetrics/Gynecology).
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Co-Director, Cytopathology Laboratory.

**MEDICAL SCHOOL/HOSPITAL:**

A. Member, Quality Assurance/Quality Control Committee.
B. Member, M II Curriculum Committee-Reproductive Medicine.

**REGIONAL AND NATIONAL:**

A. Reviewer, Diagnostic Cytopathology.
B. Member, Cytopathology Committee, College of American Pathologists.

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**


3. Fine Needle Aspiration Cytology of Cystic Ovarian Lesions. Guest Speaker; School of Cytotechnology, Henry Ford Hospital, Detroit, Michigan, December 12, 1991.


VI. **PUBLICATIONS:**

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


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

JACOB N. SHANBERGE, M.D.
CLINICAL PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:

A. Chief, Hemostasis and Coagulation Laboratory, William Beaumont Hospital, Royal Oak, Michigan.
B. Performance and diagnosis of bone marrow biopsies and aspirates.
C. Daily educational "plasma" rounds - monitoring of blood component usage on behalf of Transfusion Committee, William Beaumont Hospital.
D. Clinical Consultant - problems in bleeding, thrombosis, and anti-coagulant therapy, William Beaumont Hospital.

II. TEACHING ACTIVITIES:

A. Graduate students:
   1. Seven lectures on Coagulation and Hemostasis for School of Medical Technology at William Beaumont Hospital.
   2. Three discussion seminars for Pathology Residents at William Beaumont Hospital.
   5. Daily teaching rounds for Pathology Residents and Transfusion Fellows in Blood Component Therapy.
   6. Four Clinical Pathology Grand Rounds at the University of Michigan on "Coagulation and Hemostasis".
   7. Teaching rounds for Pathology Residents at the University of Michigan of Blood Component Therapy.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Production of Thrombi on Intact Endothelium In Vivo", William Beaumont Hospital Reasearch Institute, $57,667/1 year, 2/1/91-1/31-92.

OTHER RESEARCH:

A. Collaboration with Dr. Victor Yang, The University of Michigan School of Pharmacy, on development of a protamine exchange filter for removal of heparin from blood.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director of Residency Training Program, William Beaumont Hospital.
B. Administrator, Afternoon and Night Shifts of Clinical Laboratories, William Beaumont Hospital.

**HOSPITAL:**

A. Educational Committee, William Beaumont Hospital.
B. Transfusion Committee, William Beaumont Hospital.

**REGIONAL AND NATIONAL:**

A. Reviewer of manuscripts for:
   3. Transfusion.
B. Member, CAP Committee to establish guidelines for blood component therapy.

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**

1. Invited Lecturer, "Hemostasis and Component Therapy", Grand Rounds, St. Joseph Mercy Hospital, Ann Arbor, October 10, 1992.

VI. **PUBLICATIONS:**

**ARTICLES SUBMITTED FOR PUBLICATION:**


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

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:
   1. Instruction in cytogenetics as it relates to both genetic and acquired disease.

C. Hematology/Oncology fellows:
   1. Instruction in cytogenetics as it relates to hematologic disease.

D. Clinical Pathology Grand Rounds.

E. Medical Genetics Rounds, weekly participant, one lecture.

F. Leukemia Conference, biweekly.

G. Genetic Counseling graduate students:
   1. Two lectures.
   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 differential function.

E. Role of deletions of 12p in eosinophilia.

F. Fluorescence *in situ* hybridization for identification of marker chromosomes.

G. Fluorescence *in situ* hybridization as "interphase cytogenetics".

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Co-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. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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. Other various institutions.
B. Autopsy Coverage for Albion Community Hospital, Albion, Michigan, and Thorn Hospital.
C. Rotation with other staff pathologists.
   1. Seven weeks coverage at the University Hospital with 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.
C. In-Service teaching to laboratory staffs at Albion, Lapeer, and Thorn Hospitals.

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. Director, M-Labs.
   1. Participate in planning, marketing, and implementation of M-Labs programs.
B. Director, Laboratory at Albion Community Hospital, Albion, Michigan.
C. Chairman, Tissue/Transfusion Committee, Albion Community Hospital, Albion, Michigan.
D. Chairman, Infection Control Committee, Albion Community Hospital, Albion, Michigan.
E. Director of Laboratories, Thorn Hospital, Hudson, Michigan.
F. Chairman, Tissue/Transfusion Committee, Thorn Hospital, Hudson, Michigan.
G. Chairman, Infection Control Committee, Thorn Hospital, Hudson, Michigan.
H. Director of Laboratories, Lapeer Regional Hospital, Lapeer, Michigan.
I. Member, Tissue/Transfusion Committee, Infection Control Committee and Ethics Committee, Lapeer Regional Hospital, Lapeer, Michigan.
V. OTHER RELEVANT ACTIVITIES:

1. Poster Presentation - Regression of Hepatic Steatosis with Weight Loss After Gastric Exclusion for Morbid Obesity at ASCP/CAP Meeting, April 4-9, 1992, Boston, Massachusetts.

VI. PUBLICATIONS:

ABSTRACTS:

ANDERS A.F. SIMA, M.D., PH.D.
PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

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

II. TEACHING ACTIVITIES:
   A. Graduate students:
      1. Responsible during the current academic year for teaching activities for the following:
         a. Neuropathology 858 - six hours.
         b. CME accredited Conferences.
         c. Brain Conference - 40 hours.
         d. Neuromuscular Conference - 40 hours.
         e. 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", RO1-1
   43884-01 (40%), National Institutes of Health, with Tennekoon, G. and Rutkowski,
   $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, 7/1/93
   - 2/1/94.
C. Co-Investigator, "Synthesis and Responsiveness to Trophic Factor by Diabetic Nerve of the F
   Rat", Murphy, L.J. (PI), Medical Research Council of Canada, $141,180.00/ year, 4/1/89
   3/31/93.
D. Sima A.A.F. (Co-Investigator, 5% effort), "Molecular Elements, Neurocircuits and Me
   Illness", Watson, S. (PI), National Institute of Mental Health. $5,166,343.00/5 yrs, 12/1/96 -
   11/30/96.
E. Sima, A.A.F. (Co-Investigator, 5% effort), "Luteotrophic Actions of Insulin-like Growth Fa
   l", Keyes, L. (PI), National Institutes of Health, $404,922, 7/1/92-6/30/95.

PENDING:

A. Sima, A.A.F (Co-Investigator, 10% effort), Michigan Diabetes Research & Training Cen
   Image Analysis Core, National Institutes of Health, 5 P60 DK20572-16, 12/1/92-11/30/93
   $1,250,000 annual
B. Sima, A.A.F. (Principal Investigator, 20% effort) Neuropathology Core, Michigan Alzheimer
   Disease Research Center, National Institutes of Health, $225,027/yr, 10/1/94-9/30/99.
C. Sima, A.A.F. (Principal Investigator, 10% effort) Diffuse Lewy Body Disease (DLBD), Michigan Alzheimer's Disease Research Center, National Institutes of Health, $105,600/yr, 10/1/94-9/30/99.

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.
D. Director, Neuropathology Core, MADRC.
E. Member, Executive Committee, MADRC.

REGIONAL/NATIONAL/INTERNATIONAL:

A. Member, Medical Advisory Board, Juvenile Diabetes Foundation International, New York, New York.
B. Executive Committee, Lessons from Animal Diabetes, Jerusalem, Israel.
C. Member, Council on Diabetic Complications, American Diabetes Association, New York, New York.
E. Member, Specialty Committee Neuropathology, Royal College of Physicians and Surgeons of Canada, Ottawa, Canada.
G. Scientific Advisor, Endocrinology Section FDA, Rockville, Maryland.
H. Member, Executive Committee, Wyeth Ayerst Inc.
I. Member, Executive Committee, Pfizer Pharmaceuticals.
J. Awards Committee, American Association of Neuropathologists.

OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Diabetes Research and Clinical Practice.
B. Lessons from Animal Diabetes.
C. International Diabetes News.
D. Journal of Diabetic Complications.
E. Ad hoc Reviewer for 9 journals (Neuropathology and Diabetes).
F. Study sections:
   1. Medical Research Council of Canada.
   2. Juvenile Diabetes Foundation International.

INVITED LECTURES/SEMINARS

IV. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


197
ARTICLES SUBMITTED FOR PUBLICATION


BOOKS/CHAPTERS IN BOOKS


ABSTRACTS

11. Magnani, P., Tennekoon, G., Sima, A. and Brosius, F.: Biochemical and molecular characteristics of glucose transporters (GT) in cultured Schwann cells (SwC) and peripheral nerve. Diabe 1992;41:22A.
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. Autopsy service.

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 (July, 1990-October, 1991) - recipient of NIH post-doctoral fellowship to study the adhesion molecules mediating attachment of leukocytes to the endothelium of rheumatoid synovium.
   2. Eric Kaldjian, M.D., Pathology Research Fellow (July, 1991 - present)- Dr. Kaldjian's project focuses on the transcriptional regulation of the lymph node homing receptor (L-selectin) in normal and malignant lymphoid cells. An abstract covering this work was selected for a FASEB '92 minisymposium presentation.
   3. Terry Behrend, B.A., Medical Student (M1), University of Michigan, School of Medicine (July, 1991-September, 1991) - recipient summer research grant focusing on the regulation of carbohydrate ligand(s) for E-selectin on leukocytes. Initial work on this project culminated in co-authorship on paper demonstrating the role of fucosyl-transferases in construction of ligands for E-selectin.
   4. Francis Wolber, Ph.D. candidate in Experimental Pathology (July, 1992 - September, 1992) - project focuses on mononuclear leukocyte attachment to induced and constitutively expressed adhesion molecules at physiologic levels of shear-stress.
   5. Jennifer Ballew, undergraduate student (July, 1990 - present) - projects focus on development of basic and advanced laboratory skills including tissue culture, immunostaining and operation of flow cytometer.

B. 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.

C. Section leader, Hematopathology Section of Pathology 600 Course.

D. Lecturer, Host Defense Section of ICS 600 Course.

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

F. Member, Graduate Comprehensive Examination Committee - formulate questions, conduct and grade written and oral examinations for Ph.D. candidates in Experimental Pathology Program.

G. Daily sign-out of cases in flow cytometry and hematopathology with pathology residents and medical students (three-four months).

H. Didactic case-studies on the clinical applications of flow cytometry for the residents, fellows and medical students.

I. Attending, Autopsy Service (two weeks).
J. Preceptor, Senior medical student (M4) elective in Pathology (1 month).
K. 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; 30 September 1989 - 31 August 1992), 30% effort.
C. Co-Principal Investigator, "Mechanisms of Lymphocyte Recruitment to the Lungs", NIH, SCOR in Occupational and Immunologic Lung Diseases, ($650,000; 1 December 1991 - 31 November 1996), 15% effort.

IN PREPARATION:

A. Principal Investigator, "Regulation of selectins and their counter-receptors in normal and malignant cells", NIH, R01, competitive renewal.
B. Principle Investigator, "Selectin-mediated leukocyte recruitment in chronic inflammatory disease", NIH, P01, Peter A. Ward, Program Director.

IV. ADMINISTRATIVE ACTIVITIES:

A. Co-director Flow Cytometry Laboratory.
B. Member, Quality Assurance Committee.
C. Member, Equipment and Space Allocation Committee.
D. Member, Coordinating Committee for Elective in Laboratory Medicine.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. Chair, Minisymposium on Cell-Cell Interactions, American College of Rheumatology, Boston, Massachusetts, November, 1991.
MANUSCRIPT REVIEWS:

A. Journal of Clinical Investigation.
B. Journal of Laboratory Investigation.
C. American Journal of Pathology.
D. Journal of Immunology.
E. Nature

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOK CHAPTERS:


ABSTRACTS:

arthrits, presented by LMS at the Keystone Symposium on Glycobiology, Park City, Utah, March, 1992.


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
None.

II. TEACHING ACTIVITIES:
A. Lectures on inflammation and wound healing (Immunopathology Course 630, for dental and graduate students.
B. Supervision of postdoctoral fellows and premedical/medical students in research.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
A. Lung Injury Produced by Oxygen Metabolites (GM-29507). Co-Principal Investigator with Dr. P.A. Ward.
B. Role of Oxidants, Complement and Neutrophils in Ocular Ischemia-Reperfusion Injury (Michigan Eye Bank and Transplantation Center). Principal Investigator.

PROJECTS UNDER STUDY:
A. Cytokines and adhesion molecules in thermal injury.
B. Ocular ischemia-reperfusion injury.

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:


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. 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 two post-doctoral fellows, six undergraduate students, and one graduate student.

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 HL39238.
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 in monolayer culture and organ culture.
E. Mechanisms of vascular cell injury in lung inflammation and kidney inflammation.
IV. SERVICE ACTIVITIES:

DEPARTMENTAL:
A. Member, Department of Pathology Advisory Committee on Appointments, Promotions and Tenure.
B. Member, Department of Pathology Space and Research Committee.
C. Member, Department of Pathology Graduate Program Committee.
D. Member, Department of Pathology Human Resource Committee.
E. Member, Department of Pathology Graduate Program Comprehensive Exam Committee.
F. Director, Pathology Research Seminar Series.

MEDICAL SCHOOL/HOSPITAL:
A. Member, Medical School Committee on Summer Research Opportunities.
B. Program Director, University of Michigan Cancer Center Program on Tumor Cell Metastasis and the Extracellular Matrix.
C. Member, University of Michigan Cancer Center Basic Research Committee.
D. Member, Cancer Biology Research Training Grant Scientific Steering Committee.
E. Member, Department of Dermatology Research Training Grant Steering Committee.

REGIONAL AND NATIONAL:
A. Editorial Board of Invasion and Metastasis.
C. Grant reviewer for the Medical Research Council of Canada, Veterans Administration, and the Johns Hopkins Center for Alternatives to Animal Research. and for the Veterans Administration.
D. NIH Study Section Member: National Drug Development Cooperative Grants review panel.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:
2. Invited Speaker, American Society of Dermatopathology, Dallas, Texas, December 6, 1991.
5. Invited Speaker, Department of Pharmacology and Toxicology; Michigan State University, Lansing, Michigan, January 17, 1992.
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 UNREFERRED JOURNALS:


2. Dame, M.K., Murphy, H. and Varani, J.: Spontaneous injury to human umbilical vein endothelial cells increases during in vitro culture and is blocked with phorbol ester. FASEB J. 1992;A1620.


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:
      b. Michael S. Mulligan, M.D., Postdoctoral Fellow.
      c. Hedwig Murphy, M.D., Postdoctoral Fellow.
      d. Ara Vaporsicyan, M.D., Postdoctoral Fellow.
      e. Susan A. Moore, M.S., Dissertation Committee member.
   2. Indirect supervision of four Research Scientists.

B. Undergraduate students:

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Lung Immunopathology" (Training Grant), NHLBI NIH HL-07517 (5%), $310,376/year ($1,291,531/five years), 7/1/86-5/31/91.

B. Principal Investigator, "Lung Injury by Oxygen Metabolites (Merit)" , NIGMS NIH-GM-29507 (20%), $221,266/year ($1,217,378), 7/1/92-6/30/9.

C. Principal Investigator, "Inflammatory Cells and Lung Injury", NHLBI NIH-HL-31963 (30%), Section I - $93,321/year, Section V - $58,941/year, Core A - $32,826/year ($1,010,734/five years), 3/1/89-2/28/94.

F. Co-Investigator, "Mechanisms of Glomerular and Tubular Injury", NIADDK NIH-DK39255 (5%), $45,000, 8/1/92-7/31/93.

PENDING:

A. Principal Investigator, "Oligosaccharides as Inflammatory Agents", NIH AI33189-01 (10%), $449,661/year ($2,192,115).
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 University 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.
   1. 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.
   5. Future Directions Committee, 1989--.
D. American Board of Pathology, effective January 1, 1988:
   1. Trustee, 1980--.
   2. Immunopathology Test Committee, 1980-85, 1988--.
      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.
  10. Planning and Development Committee, 1992--.
E. American Federation for Clinical Research.
F. American Heart Association, Cardiopulmonary Division.
G. American 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. Cytogen, 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. United States and Canadian Academy of Pathology, Inc.
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--.
Y. Society of Medical Consultants to the Armed Forces:
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:

4. Session Moderator (representing the American Board of Pathology) at the College of American Pathologists Foundation Conference VI, "2001: A Profile of the Pathologist", at the Grand Hotel, Mackinac Island, Michigan, September 5-8, 1991.
8. Lecture, "Mediation of the Inflammatory Response", Pathology 580 course, General Pathology or Biomedical Scientists, September 18, 1991.
10. Sophomore Course Lecturer, "Inflammation", Department of Pathology, Medical College of Wisconsin, Milwaukee, Wisconsin, November 4, 1991.
16. Visiting Professor, Department of Physiology, Louisiana State University Medical Center, Shreveport, Louisiana, March 1-2, 1992.
17. Consultant, Mock Site Visit, Department of Anesthesiology, the University of Alabama, Birmingham, Alabama, March 23-24, 1992.
18. Invited Lecturer, "Adhesion Molecules and Lung Inflammation", Department of Pathology, the University of Alabama, Birmingham, Alabama, March 24, 1992.
20. Invited Participant, Session 2, Environmental Disease, "Control Through Molecular Research", 75th Anniversary Celebration, Johns Hopkins University, Baltimore, Maryland, April 22-23, 1992.
27. Howard Hughes Medical Institute Review Panel for Postdoctoral Research Fellowships, Howard Hughes Medical Institute, Bethesda, Maryland, June 8-10, 1992.
28. Program Project Advisory Board Meeting, Section of Pulmonary and Critical Care Medicine, New England Deaconess Hospital, Harvard Medical School, Boston, Massachusetts, June 16, 1992.

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:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1991 - 30 JUNE 1992

I.  CLINICAL ACTIVITIES:
A. Director, Clinical Immunopathology Laboratory; September 1989-present.
B. Autopsy pathology, staff coverage (1 week plus one weekend)
C. Associate Director, Division of Clinical Pathology/Clinical Laboratories, January 1992-present.

II. TEACHING ACTIVITIES:
A. Pathology 631 (60 contact hours).
B. ICS 600 lectures:
   1. "Autoimmunity" (10/29/91).
   2. "Multiple myeloma" (1/27/92).
C. Clinical Pathology Grand Rounds:
   2. "Humoral immunodeficiencies" (1/10/92).
      "Monocyte chemoattractant protein 1" (1/24/92).
D. Immunopathology journal club (1 hour; biweekly).
E. Immunopathology signout: Pathology residents, M-4 medical students, EMU medical technology students (daily; every other week).
F. Microbiology/Immunology 505 (2 contact hours).
   1. "The acute inflammatory response" (2/7/92; 2/10/92).
G. Supervision of research activities for:
   1. Craig Flory, Ph.D. (postdoctoral fellow); (6/15/90-present).
   2. Peter A. Barton (M-2 medical student); (6/1/90-8/25/91) (sponsored by American Heart Association of Michigan summer fellowship).
   3. Sanjiv Ghogale (Junior undergraduate; University of Michigan); (1/15/92-present) (sponsored by Student Biomedical Research Program).
   4. Daniel Reznick; (5/15/92-present).
   5. Jeffrey Pearson, M.D. (Pathology resident); (12/2/91-present).
   6. Barbara Markey, M.D. (Pathology resident); (3/12/92-present).

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. Pathogenesis of endotoxic shock in mice with homozygous C5 deficiency.
D. Cloning and expression of rat monocyte chemoattractant protein 1 (MCP1) in a baculovirus system.
E. Role of MCP 1 in lung inflammation models.
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. Biomedical Research Support Grant; (5% effort), "Homozygous C5 deficiency in the endotoxin-triggered shock response": 5/1/91-7/1/92 ($8,000) (pilot study).
C. 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).
D. Prinicipal Investigator, NIH(R01-HL48287) (40% effort), "Monocyte chemoattractant protein 1 in pulmonary granulomatosis": 4/1/92-3/31/95 ($470,623; direct costs).

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL:

A. Medical school admissions committee.
B. Interviewer, Medical Scientist Training Program.

DEPARTMENTAL:

A. Interviewer of Pathology Residency Candidates, 1989-present.
B. Interviewer of Pathology Graduate Program Candidates, 1990-present.
C. Selection Committee for Pathology Residents, 1991-present.
E. Coordinator for revised Resident Training in Clinical Pathology, 1992-present.

REGIONAL AND NATIONAL:

C. NIH site visit: General Clinical Research Center; Stanford University, Palo Alto, CA; August 20-21, 1991.
D. College of American Pathologists Inspection Team, Indiana University Hospitals, Indianapolis, IN, October 15-16, 1991.

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 1991 - 30 JUNE 1992

I. CLINICAL ACTIVITIES:
A. Chief, Laboratory Service, Department of Veterans Affairs 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, Department of Veterans Affairs Medical Center.
D. Autopsy pathology, Department of Veterans Affairs Medical Center.
E. Cytopathology - occasional coverage, Department of Veterans Affairs Medical Center.

II. TEACHING ACTIVITIES:
A. Director of program for house officers at Department of Veterans Affairs Medical Center in surgical pathology, autopsy pathology, and electives.
B. Clinicopathologic conference - monthly, Department of Veterans Affairs Medical Center.
C. Department of Veterans Affairs 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 Department of Veterans Affairs 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 Department of Veterans Affairs Medical Center Laboratory Service and for Laboratory at Department of Veterans Affairs 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, Department of Veterans Affairs Medical Center.
E. Dean’s Committee, Department of Veterans Affairs representative.
F. Quality Assurance Board, Department of Veterans Affairs Medical Center.
G. Professional Standards Board, Department of Veterans Affairs Medical Center.
H. Radiation Safety Committee, Department of Veterans Affairs Medical Center.
I. Pharmacy and Therapeutic Committee, Department of Veterans Affairs Medical Center.
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:

I. CLINICAL ACTIVITIES: None.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Tutor, Microbiology small group session.
B. Lecturer, Pathology 581.
C. Organizer and discussion leader of seminar on Ethics in Science - Cellular and Molecular Biology Training Program.
D. Supervision of two postdoctoral fellows (Jie Wu and Linghua Wang).
E. Member, Program Committee - Cellular and Molecular Biology Training Program.
F. Member, Program and Examination Committees, Graduate Program in Pathology.
G. Member, dissertation committees for two graduate students.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

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

PROJECTS UNDER STUDY:

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

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

REGIONAL AND NATIONAL:

A. Ad hoc grant reviewer for National Science Foundation
B. Referee for the following journals:
   1. Microbiological Reviews.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. University of Vermont College of Medicine, Department of Microbiology and Molecular Genetics
2. Wayne State University, Department of Chemistry.
3. Michigan State University, Genetics Program.
4. Parke-Davis Laboratories.
5. Albany Conference, "Molecular Responses to Oxygen".

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

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:
   1. Pathology 600 - lecture - two contact hours.
   2. M-4 Clerkship Rotation - twelve contact hours.
B. House Officers:
   1. Training in Surgical Pathology.
   2. Lectures - five hours.
   3. Surgical Pathology Consultation Conference - six hours.
C. Hospital Conferences:
   2. Correlative Radiologic/Pathologic Bone Conference - bimonthly.
D. Graduate Student:
   1. Responsible for training of Dr. Anthony Nascimento, Mayo Clinic, 7/1/91-8/1/91.

III. RESEARCH ACTIVITIES

SPONSORED SUPPORT:

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

PROJECTS UNDER STUDY:

A. Expression of neurofibromatous gene product in benign and malignant soft tissue tumors.
B. Correlation of grade and flow cytometric analysis in soft tissue tumors.
C. Carpal tunnel syndrome.
D. CD-34 expression in selected soft tissue tumors.
E. Epithelioid smooth muscle tumors of soft tissue.
F. Borderline vascular tumors.
IV. SERVICE ACTIVITIES

DEPARTMENTAL:
A. Director, Division of Anatomic Pathology.
B. Chief, Surgical Pathology.
C. Member, Chairman’s Advisory Committee.
D. Member, Photography Committee.
E. Member, Program Committee, Residency Training Program.
F. Co-Director, Surgical Pathology Fellowship Program.

INSTITUTIONAL
A. Vice-Chair, Ob-Gyn Chair Search Committee.
B. Member, Neurofibromatosis Center.
C. Member, University of Michigan Cancer Center and Director of Tissue Procurement Core.
D. Member, Tissue and Invasive Procedures Committee.
E. Member, Musculoskeletal Core, Year II Curriculum.

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

V. INVITED LECTURES
2. Site Visit, Memorial Sloan Kettering Cancer Hospital (Biology of Sarcomas, Murray Brennan, M.D., Principal Investigator), New York City, New York, July, 1991.
3. Faculty, Fourth Annual USCAP Course-Diagnostic Pathology '91, Ann Arbor, Michigan, August, 1991.
11. Visiting Professor, University of Cincinnati School of Medicine, Cincinnati, Ohio, April, 1992.
12. Speaker, Cincinnati Society of Pathologists, Cincinnati, Ohio, April, 1992.
15. Visiting Professor, University of Massachusetts School of Medicine, Worcester, Massachusetts, May, 1992.
17. Visiting Professor, University of Iowa School of Medicine, Iowa City, Iowa, June, 1992.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


SUBMITTED FOR PUBLICATION


BOOKS AND CHAPTERS IN BOOKS


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

SECTION REPORTS
DIVISION OF ANATOMIC PATHOLOGY
DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

This academic year witnessed the completion of a series of academic recruitments which brings the Division to a level of full staffing. Dr. David Gordon brings to our Division an exciting level of expertise in the area of cardiovascular research. As the former director of the autopsy service at the University of Washington (Seattle), he has enhanced our autopsy service with his teaching skills and new autopsy techniques. Dr. Lisa Del Buono joined the faculty as a surgical pathologist with an area of specialization in gastrointestinal and hepatic pathology.

For our laboratories it has been a difficult and challenging year to meet the demands of the cost reduction initiative. Through a series of personnel reductions on all services we were able to reach our goal this first year. Although we have been able to offset these reductions by increasing automation in our histology laboratory, it is unlikely that we can meet subsequent goals without significant and probably unacceptable reductions in services. Continued efforts to improve our laboratory efficiency are an ongoing concern. Our departmental quality improvement team, under the capable direction of Deb Day Jansen, has initiated a splendid effort to improve the check-out and tracking of slides by means of a computer and image-assisted system.

The Division takes pride in our numerous and ongoing education activities, which range from a heavy commitment to the newly emerging curriculum for our own medical students, to national educational initiatives. Our fellowship programs have allowed our senior residents and selected outside individuals to achieve a measure of self-distinction in either surgical or cytopathology. Dr. Paul Mazarra completed the cytopathology fellowship and will be followed by Dr. Phil Perkins. Drs. Steve Mandell, Randall Shannon, and Lawrence Zuckerberg (Massachusetts General Hospital), this year's departing surgical pathology fellows, will be succeeded by Drs. John Goldblum, Joe Willis (University of Rochester), and Jack Jansen (University of Kentucky). As an extension of the philosophy of the fellowship experience, the faculty has worked closely with the residents in encouraging them to find a project or area of interest in which they might excel. These efforts were amply rewarded by the presentation of eleven resident papers at the US-CAP or ASCP meetings in conjunction with the anatomic pathology faculty.

For the second year, the Division hosted the summer US-CAP Diagnostic Pathology course which, once again, earned praise for the quality of the course and facilities. As a result, we have been selected as one of the four permanent rotational sites for this course, thereby providing our own residents with the opportunity to take advantage of this course at least once during their training. Dr. Thomas Colby (Mayo Clinic) was our invited Residents' Visiting Professor this year, delivering both a lecture and seminar in pulmonary pathology. Additional visiting professors included Dr. Dale Snover (University of Minnesota) and Stanley Hamilton (Johns Hopkins) who lectured in the area of liver and gastrointestinal pathology respectively. Finally, our Division has been recognized as a collaborating center for the WHO International Committee for the Classification of Soft Tissue Tumors. This designation has been accorded to two other institutions in the country: Massachusetts General Hospital for the WHO Committee for the Classification of Gynecologic Tumors, and Memorial Sloan Kettering Hospital for the WHO Committee for Classification of Thymic Tumors.

Over the next year we look forward to the development of an image analysis facility under the direction of Dr. Flint, to the expansion of our molecular diagnostic activities supervised by Dr. Frank, and to the institution of a Staff Consensus Conference to improve the quality of diagnoses.
As we reflect on the past year, we continue to see the recruitment of young pathologists to academia as our most pressing concern. Our Division felt the annual retreat, which dealt critically and constructively with this problem, represented an important beginning to the exploration of possible solutions to this problem.

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

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

The Autopsy Service of The University of Michigan continues to serve its central goals of resident training, performance of autopsies on University of Michigan patients, and performance of forensic autopsies for Washtenaw County.

I. Medical Examiners Cases

There continues to be difficulties related to medical examiners' cases from other counties. Legislation has been written which will allow us to either return bodies to the county of injury for autopsy, or allow us to bill these counties for our services. House Bill 4663 specifically addresses these issues, and after testimony by the University, it passed the House Judiciary Committee, as well as the full House. Its fate is currently being debated in the Senate, where it will probably have a hearing in Fall - 1992.

The University of Michigan has also instituted a policy of performing "gross only" examinations on selected medical examiners' cases and performing toxicology. A reduced fee is charged for these exams.

II. Quality Assurance:

A random review of two cases per month is now being conducted. A senior staff pathologist reviews all aspects of the case including gross description in the protocol, microscopic diagnoses, neuropathologic material and gross photographs. The results are documented, and the house officer who performed the autopsy is invited to examine the case with the pathologist who performed the review.

Turn-around time continues to be unacceptably slow, with the last analysis showing that it required an average of 80 days to complete a case. This problem is being addressed on two different fronts. First, efforts are being made to reduce the time required to complete the typing. Second, a pilot study has been initiated to determine if fewer neuropathology sections may be taken without compromising the ability to make clinically-relevant diagnoses. It is anticipated that this study will be complete in about six months, and actions will be taken based on its results.

III. Statistics:

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<tbody>
<tr>
<td>Total U of M Cases</td>
<td>322</td>
</tr>
<tr>
<td>M-Labs cases</td>
<td>8</td>
</tr>
<tr>
<td>Medical Examiners' Cases</td>
<td>58</td>
</tr>
<tr>
<td>In Hospital Cases</td>
<td>24</td>
</tr>
<tr>
<td>Outside Cases</td>
<td>34</td>
</tr>
<tr>
<td>Autopsy Rate</td>
<td>35%</td>
</tr>
<tr>
<td>(includes tetralogy cases)</td>
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</tbody>
</table>

Daniel G. Remick, M.D.
Director, Autopsy Service
The year began on an optimistic note, with full staffing after a period of severe depletion. By the end of 1991, however, we were down one cytotechnologist, a 25% reduction in our cytotechnologist work force, and this situation still continues. This has serious repercussions. The remaining cytotechnologists repeatedly have to work overtime on the weekends. The demands of routine diagnostic work make it difficult for the cytotechnologists to participate in Quality Assurance activity; whenever they do, the routine diagnostic work backs up. In effect, except for the screening of cytologic specimens, our cytotechnologists are unable to participate in any other kind of activity in the laboratory.

Because of the shortage of available cytotechnologists, remedying this situation has been most difficult. The few experienced cytotechnologists who have been available declined the position because the salary did not come up to their expectation. Finally, after a nine-month vacancy, we shall hire a newly trained and inexperienced cytotechnologist. These facts illustrate the difficulty in keeping a cytopathology laboratory going in today's situation.

The Cytopathology Fellowship Program is now in its sixth year. The indispensability of the Fellows is well recognized by the cytopathology staff persons. For example, in 1991 the time spent in the Medical Center away from the laboratory to participate in the procurement and/or interpretation of fine needle aspirations totalled 336 man hours (8.5 working weeks). The 596 aspirations in which our Fellows participated were mainly in the Department of Radiology, with the remainder on the patient floors or in the out-patient clinics. The total number of aspirations in which we participated is about 50% more than it was three years ago.

While the number of non-gynecologic specimens seems to have plateaued at about 7,300 per year, the number of gynecologic specimens has markedly increased. This is because the University Student Health Service has begun to send us its cervical smears, about 7,000 per year, bringing our total of gynecologic specimens to 34,000, for a total of all cytologic specimens of 41,000.

Bernard Naylor, M.D.
Director, Cytopathology Laboratory

Suzanne M. Selvaggi, M.D.
Co-Director, Cytopathology Laboratory
DERMATOPATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

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>
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<tbody>
<tr>
<td>HE</td>
<td>822</td>
<td>1331</td>
</tr>
<tr>
<td>ID</td>
<td>NA</td>
<td>5651</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>350</td>
<td>300</td>
</tr>
<tr>
<td>Flow</td>
<td>NA</td>
<td>95</td>
</tr>
<tr>
<td>EM</td>
<td>NA</td>
<td>2</td>
</tr>
</tbody>
</table>

There was an estimated 10% increase in overall workload with a 100% increase in revenue from HE consultation cases.

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
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

The electron microscopy continues to provide an important service to the Department of Pathology and the institution overall both in the analysis of clinical specimens as well as providing research support. For example, during this past year a total of 484 clinical biopsies were submitted for EM analysis. This is almost identical to the previous year when 482 clinical specimens were processed. The majority of cases submitted were either kidney or nerve and muscle biopsies. For example, 184 cases of the 484 total were renal biopsies, 131 were muscle biopsies and 57 nerve biopsies. Thus, the types of clinical material submitted for EM analysis continues to evolve. Previously, tumors represented a majority of samples submitted along with kidney biopsies. However, today tumors are examined much less frequently ultrastructurally because of the development of immunohistochemistry and ultrastructural evaluation of nerve and muscle biopsies is assuming increasing importance. Another change in our clinical samples is the increased use of our facility by outside hospitals. During this past year several new outside hospitals have contacted us to process EM specimens primarily in the area of renal pathology. Thus our laboratory is continuing to expand as a reference laboratory.

A major demand on the EM service continues to be the processing of research specimens. The laboratory processes well over 1000 tissue samples from experimental studies/year. Of this number 380 samples were processed completely for EM studies. In addition to routine electron microscopy more and more of these studies are requiring sophisticated morphometric and immunologic techniques as part of the evaluation process. These techniques are time consuming and because of our limited manpower have limited our ability to handle more specimens. In the future if the demand for these services continues to increase consideration will need to be made to add additional personnel.

In summary, the EM service continues to provide an important service and research function for the Department of Pathology as well as the institution as a whole. Efforts continue to decrease the turnover time particularly in regards to the handling of the clinical biopsies with our goal being a turn around time of 10 working days. In the area of research we continue to work with investigators from several departments including pathology to optimize the collection of specimens and the use of appropriate morphometric techniques. Plans are underway to develop a core facility for the researchers using various molecular probes to addition to the usual ultrastructural analysis.

Kent J. Johnson, M.D.
Director
Electron Microscopy Service
NEUROPATHOLOGY SERVICE
DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

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. Mila Blaivas, Ms. Constance J. D’Amato, Dr. Paul E. McKeever, and Dr. Anders A.F. Sima 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 836 neurosurgical cases examined this year from Main, Mott and outside hospitals in consultation. This is a 56% increase over the previous year, a portion of which reflects better computer tracking. A portion of these were part of an interdepartmental study of PET/BUDR and neuropathology funded by NIH. 225 surgical specimens required special neurohistologic procedures. Of the 225 surgical specimens 100 were muscle, 13 were temporal lobectomies and the others required various neurohistologic procedures.

2. There were 252 brains examined out of 322 autopsies which is 78% of all autopsies at this Medical Center. An additional 27 brains were examined from other institutions and hospitals.

3. There were 183 muscle biopsies an 8% increase over the previous year, nearly all with histochemistry, some with electron microscopy. There were 60 peripheral nerve biopsies, 28 nerves referred from other institutions. There were 26 teased fiber preparations, 24 nerves had thick plastic sections only and 35 had electron microscopy performed on appropriate nerve biopsies. The combination of nerve teasing, muscle histochemistry, electron microscopy and morphometry make the service regionally competitive for diagnostic consultation.

4. Faculty interpreted 244 cases in semithin or thin section from electron microscopy. This is a 44% increase over the previous year. The majority of these cases were nerve, pediatric muscle, and neurosurgical biopsy cases.

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

6. The Brain Tumor Board of the University of Michigan Cancer Center and Hospitals, supported weekly by a neuropathologist, reviewed neuropathology and clinical aspects of more than 120 difficult neuro-oncology cases.

7. 15 brains were examined for research purposes.

8. Autopsy neuropathology and surgical neuropathology each have monthly quality assurance meetings. Attendees have included neuropathologists from nearby institutions.

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 10 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 periodic conferences 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; monthly nerve and muscle biopsy conferences accredited for CME; individual instruction on autopsies and biopsy material; Neuropathology 858, an 18 hour laboratory-lecture course; and bimonthly conferences with Neuroradiology.

3. Electives: Two neurosurgery residents and one neurology resident chose elective rotations on the Neuropathology Service. Weekly seminars with neurological and neurosurgical house staff on clinico-pathological correlations.

4. Two Neuromuscular fellows were instructed at conferences held twice a week.

5. Dr. Stephen Gebarski studied neuropathology and radiographic correlation during his sabbatical leave.

RESEARCH ACTIVITIES:

1. Dr. Hicks and Ms. D’Amato provided neuropathologic diagnostic support for Drs. Anne Young, John Penney and Roger Albin’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 pathologic changes in rat brain induced by Mk-801 with Dr. E.F. Domino.

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. Dr. McKeever was on sabbatical leave from August through January.

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.

6. Collaboration with Neurology, Michigan State University. The State of Michigan Department of Public Health, the Alzheimer’s Association, Henry Ford Hospital, and Beaumont Hospital has established a registry for dementias and Alzheimer’s disease.

Paul E. McKeever, M.D., Ph.D.
Director
Neuropathology Service
PEDiatric Pathology Service
Department of Pathology
Annual Report
1 July 1991 - 30 June 1992

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) =148
Necropsies on Above =106
Necropsy Percentage =67%

Of the 106 posts, 33 patients' bodies, as defined above, 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. Seventy-three 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 15 posts on pediatric patients including SIDS cases, child abuse cases and trauma cases, only 10 of which were classified as inpatient deaths, because of treatment here.

A total of 355 necropsies for UMMC Hospitals patients was performed (including the 15 pediatric "Medical Legals"), 33 by Dr. Barr in the Teratology Unit and 322 by the Pathology Department Staff. Thus, 30% 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 167 - including both all referred fetuses and infants and inborn newborn fetal losses at less than 20 weeks' gestational age.

The total number of pediatric surgical specimens (including placentas) examined is almost 2,400. This represents a plateau compared to the previous academic year.

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

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

During the past year, the Surgical Pathology Service experienced a growth of 5% in hospital-based accessions and nearly 30% growth in the volume of extramural (personal) consultations, bringing our total volume to 33,853 (Table 1). It is with a great deal of commitment and diligence that our laboratory has managed to deal with this volume in the face of personnel reductions associated with our cost reduction initiative. In part, we have met this challenge with a greater degree of laboratory automation in the areas of staining, cover-slipping, and labelling of slides.

In the second year of our surgical pathology fellowship, Drs. Mandell, Shannon, and Zukerberg (Massachusetts General Hospital), completed their training with distinction and will be followed by Drs. John Goldblum, Jack Jansen (University of Kentucky), and Joe Willis (University of Rochester). With this year, we expand and broaden the concept of the fellowship experience by the addition of a fourth position so as to offer a period of independent research for each fellow.

New initiatives in the Surgical Pathology Service include the applications of molecular biology techniques to our diagnostic process. Headed by Dr. Thomas Frank, our molecular diagnostic activities include pilot tests for the identification of cytomegalovirus in tissue sections, as well as two-day identification and specification of mycobacteria in surgical specimens. The latter test has proved to be of inordinate use in cases of unexpected mycobacterial infection when intraoperative cultures have not been obtained. Dr. Andrew Flint, utilizing recently upgraded image analysis equipment, is developing a rapid test for ploidy studies and quantitation of hormone receptors on tissue sections.

Plans for the upcoming academic year include expansion of our molecular diagnostic tests to determine clonality of tumors and detection of the transposition site in Ewing's sarcoma. In addition, our fellows are engaged in a research project in conjunction with the Department of Surgery to determine the patterns of utilization of intraoperative consultations.

Sharon W. Weiss, M.D.
Chief,
Surgical Pathology

TABLE I

SURGICAL PATHOLOGY ACCESSIONS
UNIVERSITY OF MICHIGAN MEDICAL CENTER

<table>
<thead>
<tr>
<th></th>
<th>Hospital-Based</th>
<th>Personal Consultations</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>26355</td>
<td>4762</td>
<td>31117</td>
</tr>
<tr>
<td>1991-92</td>
<td>27768</td>
<td>6085</td>
<td>33853</td>
</tr>
</tbody>
</table>
The Clinical Pathology Laboratories have again undergone and endured significant changes in their operations during this past year. The laboratory directors, chief technologists, supervisors, and all laboratory personnel are to be commended for the professional and responsible manner in which they have responded to the Hospital's Cost Effectiveness Program (CEP). The first round of the CEP went into effect July 1, 1991. In spite of the loss of 26 personnel and a 7.5% reduction in the budget, the laboratories continued to operate in an efficient and professional manner. Planning for the second round of CEP began in Fall 1991 with implementation July 1, 1992. This latest effort will result in the reduction of 11 personnel and a 4.0% decrease in our overall laboratory budget.

In spite of these significant cuts into our operational budget, the laboratories saw a 0.9% increase in total test volume to 3.32 million billable tests. The laboratories have responded to the difficulties of doing more with less by continuing to enhance the efficiency of their operations. However, these operational changes that have occurred have led to increased turn-around times in some cases and decreased ability to perform the research and development needed to maintain high quality, tertiary care center laboratories. This aspect continues to be one of the biggest challenges of the Clinical Laboratories.

Several laboratory consolidation activities have occurred during this past year. The Gyn/Endocrine Laboratory was consolidated into the Ligand Laboratory in Fall 1991 and the Virology Laboratory became a part of the Pathology Laboratories also in Fall 1991. As a part of the CEP activities for the upcoming year, the Ligand, Immunology, Drug Analysis/Toxicology, and Biochemistry Laboratories will be further consolidated to enhance the overall operation of the Clinical Chemistry section. This will result in the Ligand Laboratory activities being distributed to Drug Analysis/Toxicology, as well as the Biochemistry Laboratory.

As part of the Departmental response to changes in professional reimbursement, we have reviewed and enhanced the professional billing activities of the Division. The Part B billings from Clinical Pathology faculty (Flow Cytometry, Hematology, Immunology, and Blood Bank Laboratories) accounted for 24% of the Departmental billing volume and approximately 20% of gross billings.

We have continued to support a Fellowship Program in the Hematopathology section (one per year). This program has enhanced both the service and academic needs of Hematopathology. We are also exploring opportunities for fellowships in other areas of the Clinical Pathology Division.

The academic program of the Division continues to shine. The specific academic accomplishments can be found in the faculty section but some deserve additional comment. The Clinical Pathology Faculty continue to be productive with over 100 publications published or accepted in refereed journals. Several faculty are on the Editorial Boards of prestigious and important journals. Most of the faculty have participated in national symposia, meetings, or grant study sections in their respective academic areas. Excellence in the research laboratories continue to grow with 10 Clinical Pathology faculty receiving research grants this past year. This includes our full-time clinical faculty in the Chemistry and Microbiology Laboratories who received over $200,000 for various clinical and scientific studies in recognition of their respective expertise and scientific abilities.

Several major goals of the Clinical Pathology Division will challenge us during upcoming years. These include: 1) continuing to plan for the space needs of the laboratories for the rest of the decade; 2) continue to develop the concept of decentralized laboratory testing and begin to provide more point-of-
care testing. This will likely be directed toward ambulatory care and ICU settings; 3) continue the process of evaluating and controlling utilization of laboratory resources as response to the hospital CEP; 4) continue to develop and polish the Division's QA program (under the leadership of Ms. Suzanne Butch) and continue our initiatives that will enhance quality improvement; 5) continue to expand the Molecular Diagnostic Program as applied to Clinical Pathology; 6) revise the Clinical Pathology teaching component of the Residency Training Program; and 7) offer a Laboratory Medicine Elective for senior medical students (Spring 1993). These tasks are not trivial and will demand a significant commitment and desire from the faculty and laboratory staff to effectively begin and implement these changes.

Curtis A. Hanson, M.D.
Director, Clinical Pathology Division
UNIVERSITY HOSPITALS BLOOD BANK AND TRANSFUSION SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

PATIENT CARE:

Transfusion-related activity plateaued during the past year. While there was a 10 per cent decrease in the number of pretransfusion tests performed, there was a 5 per cent increase in the number of platelet concentrates transfused, a slight decrease in the number of Red Blood Cells transfused and little change in the number of units of plasma and cryoprecipitate transfused. However, the number of autologous donations for subsequent transfusion increased by approximately 30 per cent, reflecting the public's continued concern about the risk of post-transfusion infectious disease. While the moderation of blood component utilization may be attributed, at least in part, to institutional efforts to control this activity, other factors may be influential. These include a decline in length of average hospitalization, lack of increase in occupancy and pressure upon physicians to reduce use of blood because of patient concerns and fear of legal action.

Significant increases were seen in laboratory activities related to the Bone Marrow Transplantation Program. This was reflected by the advent of peripheral blood stem cell collection and the implementation of autologous bone marrow transplantation for patients with advanced carcinoma of the breast. This activity countered the slight potential reduction of apheresis activity due to the increased use of interavenous immune serum globulin for treatment of patients with Guillain-Barre syndrome.

While over-all blood utilization did not expand during the past year, it should be appreciated that there has been an increase in surgical procedures which call for large volumes of blood, often on an emergent basis. These include liver transplants and thoraco-abdominal aortic aneurysmectomies. Approximately 50 of the former procedures were performed while an average of 1 TAAA was performed each month. Blood usage for cardiac surgical procedures has remained at the level of the previous year, averaging approximately 12 donor exposures per patient. The Utilization Review Program of the Section of Thoracic Surgery, based upon data provided by the Blood Bank/Transfusion Service, has helped control inappropriate blood transfusion for these patients. A more extensive utilization review program was implemented during the past year for adult and pediatric hematology patients, and this will be expanded to include the majority of patients in University Hospital during 1992-1993.

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. As in past years, all first-year Clinical Pathology House Officers participated in a two-week Blood Bank orientation course. In addition, daily patient care rounds were attended by medical and technical staff and by House Officers assigned to the Blood Bank. Dr. Oberman, Dr. Davenport and Mr. Judd presented Pathology Grand Rounds during the year, and also participated in the weekly case presentation Clinical Pathology Conference. The nursing staff of the Transfusion and Apheresis Service presented regular educational services for the nursing staff of University Hospitals on topics of blood product administration, adverse transfusion reactions and use of blood component administration filters.

The nineteenth annual postgraduate course, "Current Topics in Blood Banking" was held June 3, 4 and 5, 1992. Mr. Judd was the program director. This course attracted approximately 250 attendees from throughout the United States, thereby representing one of the largest postgraduate courses held in
the Medical Center during the past year. Members of the Blood Bank and Transfusion Service staff presented workshops on pediatric immunohematology, assessment of immune hemolysis, clinical problem-solving in the blood bank, and blood bank inspections. In addition, Ms. Steiner, Mr. Judd, Dr. Davenport and Dr. Oberman participated in the lecture program of the symposium.

Members of the Blood Bank and Transfusion Service faculty and staff participated in the Annual Meeting of the American Association of Blood Banks. In addition, members of the laboratory, including Mr. Judd, Ms. Butch, Mrs. Stoe and Ms. Steiner presented invited lectures to regional organizations such as the Michigan Association of Blood Banks, Michigan Society of Medical Technologists, Toledo Red Cross, Detroit Red Cross, the Community Blood Center of Greater Kansas City (Ms. Butch) and the Pennsylvania and California Associations of Blood Banks (Mr. Judd).

PROFESSIONAL ACTIVITIES:

Blood Bank and Transfusion Service staff continued to be active at the regional and national levels. Dr. Oberman served as Associate Editor of TRANSFUSION and also chaired the Awards Committee of the American Association of Blood Banks. Mr. Judd was the North Central District representative to the Board of Directors of the American Association of Blood Banks, edited the Special Methods section for 11th edition of the Technical Manual of the American Association of Blood Banks, and chaired the "Advanced Lectures" program of the Michigan Association of Blood Banks. Ms. Butch was a member of the Standards Committee and the Informations Systems Committee of the American Association of Blood Banks and chaired the users' group on the blood donor module for the Pathnet program for Cerner. Mrs. Stoe served as an inspector for the Inspection and Accreditation Program of the American Association of Blood Banks. Ms. Steiner was a member of the Reference Laboratory and Rare Donor File Committees of the American Association of Blood Banks, is the president-elect of the Michigan Association of Blood Banks and chaired the Annual Meeting Committee of the latter organization.

RESEARCH ACTIVITIES:

The faculty and staff of the Blood Bank and Transfusion Service pursued research activities on the pathophysiology of transfusion reactions, pretransfusion testing, the genetic basis of blood group antigens, and strategies for reduction of donor exposures. The laboratory played a leading role in the national implementation of a computerized crossmatch procedure. Publications by the staff during the past year include the following (see faculty publications elsewhere in this booklet):


Harold A. Oberman, M.D.
Director,
Blood Bank and Transfusion Service
CHEMICAL PATHOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

During the past year, the workload of the Chemistry Laboratory remained constant. The lab performed approximately 2.95 million tests, a 0.2% decrease in volume from the previous year. However, due to a variety of cost cutting measures, the lab budget was decreased 3.3% over the previous year. Approximately 40% of the total testing performed by the lab was done in a STAT mode, with 1 hour turnaround time. Quality assurance monitoring studies have shown that the lab is meeting this turnaround time goal greater than 95% of the time.

The laboratory has remained active in evaluating and implementing alternate site testing options within the medical center. In January, the lab directed the standardization of all bedside blood glucose meters within the medical center. The Chemistry Lab now performs linearity checks, maintains quality control records, and supervises proficiency testing on 68 glucose meters located at nursing stations within the institution.

The lab expanded its coverage of blood gases, electrolytes, and glucose in the operating rooms with the acquisition of another analyzer. The laboratory now maintains blood gas/electrolyte analyzers and hematocrit centrifuges in the Operating Rooms of Main, Mott and Kellogg Hospitals, and a backup instrument on a cart within the Chemistry Lab. The laboratories role in these sites includes performing all quality control analysis, instrument maintenance, and supervising the training of the Department of Anesthesiology staff who perform the analysis.

In the area of quality assurance, the lab has initiated the formation of a quality improvement team with Central Distribution and Emergency Services to study methods of improving turnaround time on STAT tests to the ER. Discussions continue on expansion of the menu of tests which are performed on site in the ER. Recently, pregnancy tests were added to the menu of tests performed in the ER by phlebotomists. This should decrease the turnaround time on this frequently ordered test.

The lab director and supervisory staff have devoted a great deal of time and effort to planning for the upcoming consolidation of the Chemistry, Ligand Assay, and Immunology lab functions. This complex move and reorganization of the laboratories should occur in the fall of 1992.

Donald Giacherio, Ph.D.
Director
CLINICAL CYTOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

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 were done during the first year (which began in May, 1991), and these do not appear to have replaced 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, 1, 7, 12, 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 continue to expand in the future. Additionally, molecular diagnostic techniques, such as implementation of a DNA-based test for fragile-X syndrome, are anticipated in the next year.

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

Susan Sheldon, Ph.D.
Co-Director, Clinical Cytogenetics Laboratory
CLINICAL FLOW CYTOMETRY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

Over the past year, the Clinical Flow Cytometry Laboratory processed approximately 2800 immunophenotyping specimens. This was a volume increase of 17% from the previous year. This change was attributable mainly to a 67% increase in requests for T-cell subset phenotyping in patients with acquired immunodeficiencies, inherited immunodeficiencies, and organ transplants. In addition, the laboratory analyzed approximately 400 leukemia specimens and performed about 3900 flow cytometry reticulocyte counts. Anti-platelet and anti-neutrophil antibody assays were performed on approximately 400 specimens. Direct anti-platelet antibody testing continues uninterrupted, but indirect anti-platelet antibody testing has been suspended indefinitely due to poor reproducibility of the assay. The lymphocyte mitogen assay was also discontinued; it is now performed in the HLA/Tissue Typing Laboratory. The Flow Cytometry Laboratory continues to provide support to the Hematopathology section of the Molecular Diagnostics Laboratory (see report on Molecular Diagnostics Laboratory for further description).

By year's end, the laboratory was prepared to implement two-color analysis for all leukemia profiles. Although two-color reagents are more expensive than single-color reagents, the significant reduction in preparation and analysis time has afforded compensatory savings.

As noted above, there has been a dramatic increase in the volume of specimens sent for T-cell subset analysis. This is attributable mainly to increased numbers of acquired immunodeficiency patients and the increased demands for transplant immunosuppression monitoring. As the demand for these tests is expected to continue to rise, plans are underway to purchase an upgraded flow cytometer to replace the Coulter Profile instrument. To enhance the accuracy of our lymphocyte subset enumerations, a concomitant CBC and 5-part differential is now required for all acquired and inherited immunodeficiency specimens.

The laboratory staff continued efforts to enhance our Quality Assurance Program. The hematopathologists staffing the laboratory must triage all requests for leukemia/lymphoma phenotyping; inappropriate requests are cancelled. As a result of this utilization control procedure, approximately 300 submitted specimens were not analyzed flow cytometrically.

Biweekly Quality Assurance Conferences are held for the medical staff to review all leukemia/lymphoma phenotyping cases signed-out for the preceding two-week period. These meetings entail a comprehensive review of each case to assure such things as appropriateness of the test request, technical quality of the analysis, clerical quality of the reports, and consensus regarding final diagnoses.

Teaching activities in the laboratory include the daily case sign-out with the residents and the hematopathology fellow. Continuing medical education for the technologists and house staff is also offered at the biweekly leukemia conference.

Finally, the laboratory has provided collaborative support to several investigators in other departments. These research activities include: leukocyte adhesion molecule analysis in patients with inflammatory dermatoses and inflammatory bowel disease (Depts. of Dermatology and Gastroenterology); phenotyping of lymphocytes in lymphoma patients receiving experimental anti-CD20 therapy (Division of Hematology/Oncology); bone marrow stem cell enrichment study (Adult
Bone Marrow Transplant Program). In addition, the laboratory has become a beta test site for application of a new flow cytometry data analysis program being developed by Verity Software Systems, Topsham, Maine. This collaboration is expected to enhance the efficiency of data analysis in the laboratory.

Charles W. Ross, M.D.
Director

Curtis A. Hanson, M.D.
Co-Director
CLINICAL HEMATOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

LABORATORY ACTIVITIES:

A. The criteria for doing automated differential white blood cell counts were revised to decrease technologist time for the labor-intensive manual differentials, which is often not necessary. Implementation of this automation increased the percentage of these differential counts from 41% to 59%.

B. Criteria were revised for review of body fluids by hematopathologists. These revisions together with a 16% decrease in the number of fluids sent to the laboratory for review resulted in a 31% (from 4200 to 2900) decrease in the number of cases being reviewed by hematopathologists.

C. Reduced our number of F.T.E.'s by 1.2 in accordance with the budget reduction program. Eosinophil counts and L.E. preparations were discontinued.

D. There was an overall increase in billable tests of 10% due to a change in the fee code structure. There was a 15% decrease in the number of ordered tests but only an 8% decrease in actual work performed.

E. Daily bone marrow and lymph node signout with house officers, hematology fellows and fellows from adult and pediatric Hematology/Oncology as well as visiting pathologists from other institutions.

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

G. 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 and adult Hematology/Oncology Fellows participate in signouts.

B. Hematopathology Fellowship Program.

C. Continuing medical education for medical technologists - monthly.

D. Senior Student Clerkship Elective.

E. Summer Clinical/Research Program for Under-represented Minority Students.
FISCAL YEAR 1992/1993 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.
G. Transfer of hemoglobin electrophoresis from the Chemistry Laboratory to the Hematology Laboratory.

Bertram Schnitzer, M.D.
Curtis A. Hanson, M.D.
Directors
Clinical Hematology Laboratory
CLINICAL IMMUNOPATHOLOGY LABORATORY
DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

OVERVIEW:

With the impending chemistry "mega-lab" consolidation, implementation of some CLIA 88 regulations, and a hospital-imposed budget restructuring, fiscal year 1991-92 has been challenging. The immunopathology laboratory experienced an increase in test volume and several new assays/programs were instituted. John Lowe, M.D. has again provided an invaluable service commitment to the laboratory. 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 4%). 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 50/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. We have recently evaluated and initiated a variety of utilization control measures in the laboratory.

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 clinical studies of ambulatory diabetic patients that were carried out by Dr. William Herman (Department of Medicine, University of Michigan) and Dr. Mindy Smith (Department of Family Practice, University of Michigan). We continued laboratory support of a clinical study of atypical antinuclear antibodies in conjunction with Dr. Joseph McCune (Department of Medicine, University of Michigan). 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. We have recently added the capability of determining specific IgG and IgM anti-cardiolipin antibody concentrations. This assay has relevance to the "anti-phospholipid antibody syndrome" which has been associated with thrombosis, thrombocytopenia, and fetal wastage. Finally, we recently completed a collaboration with Dr. Paul Watkins (Internal Medicine, University of Michigan) in an analysis of serum samples for anti-liver-kidney-microsomal antibodies from patients with Cognex-induced hepatitis.

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. More recent efforts have been directed towards analyzing utilization of circulating immune complex assays.
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 was conducted biweekly. Three clinical pathology grand rounds were presented by Dr. Warren. Dr. Daniel Remick presented a CP grand rounds entitled "Update on Cytokines" as part of the immunopathology series. 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
HISTOCOMPATIBILITY & IMMUNOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

The HLA laboratory has had a very successful year. The laboratory has made a number of changes that have increased both the efficiency and the function of the facility. This resulted in increased revenues for the Department. In addition, two new staff members were incorporated in the laboratory that helped increase the quality of our service.

CLINICAL ACTIVITIES:

Clinical Activities in the Histocompatibility Laboratory showed a consistent increase from last year with approximately a 17% overall increase in the number of test performed and a 21% increase in overall revenue. This was despite a decrease of approximately 22% in consumable cost. A new laboratory test, the lymphocyte proliferation assay, was added and has progressively increased its activity to approximately 2 to 3 per week.

Two personnel were added to the laboratory this year. These two individuals Debra Marantis and Mary-Lee Sharp markedly improved the efficiency of the laboratory and helped in the cost savings.

Technical improvements in the laboratory included the full implementation of Class II HLA typing by magnetic beads, which as resulted in a tremendous improvement in the ability to identify Class II antigens on samples. In addition, DNA analysis of Class II antigens was also initiated and is currently being quality controlled before its introduction into clinical use.

The automation of the laboratory was finished and this also increased efficiency. Jeff Hayward, the Data Supervisor of the Laboratory in conjunction with Tomas Peterson and James Dignan of Pathology data services were key in achieving these gains.

TEACHING ACTIVITIES:

Every member of the laboratory was involved in the teaching activities of the laboratory and they were effective in their work. The laboratory was involved in the instruction of Pathology Residents, Allergy Fellows, Renal Fellows and Postdoctoral Candidates from the Department of Hematology. Dr. Baker, the Laboratory Director, took an active role and also served as the alternate for the University for its UNOS membership. Ms. Cynthia Schall, the Laboratory Supervisor, was involved in teaching review courses at Henry Ford Hospital and the University of Michigan. She also oversaw the activities for Residents in the Laboratory and several "Women In Science" Interns.

NEW GOALS:

The goals of the laboratory in the coming year include implementing HLA Class II typing by DNA analysis as a standardized test and attempting to increase the overall efficacy of the laboratory to better meet the needs of both the solid organ and bone
marrow transplant programs. In addition, the laboratory is a key to the development of a basic-science research program in Transplantation Immunology. This program will center its investigations on clarifying the role of cell surface antigen recognition in allograft transplantation and the immune response to allografts.

James R. Baker, Jr., M.D.
Director, Histocompatibility & Immunogenetics Laboratory
CLINICAL MOLECULAR DIAGNOSTICS

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

CLINICAL ACTIVITIES:

The Molecular Diagnostics Laboratory was relocated to a newly renovated facility in August 1991. During the past year, the laboratory has been involved in three main activities: (I) Diagnostic Hematopathology under the supervision of Drs. Hanson and Ross, (II) Research and development of new methodology for the diagnosis of infectious agents, and (III) development of genotyping techniques for the detection of cystic fibrosis mutations.

I. Diagnostic Hematopathology. The laboratory performed 196 immunoglobulin and T-cell receptor gene rearrangement studies. PCR of the bcr/abl fusion gene was performed in 12 cases. Finally, PCR of the EBV genome was performed in 4 diagnostic cases. The goals for the next year are (A) to develop PCR methodology for the detection of minimal residual disease in lymphoma and leukemia and, (B) to develop non-radioactive methods for the analysis of single-copy genes by Southern-blot analysis.

II. Development of PCR-based methods for the detection of infectious agents. Charles Ross, working with Javed Siddiqui and Carl Pierson, has developed a PCR-based technique for the specific amplification of DNA from Mycobacterium tuberculosis in sputum samples. Analysis of 140 sputum specimens has shown a perfect correlation between PCR and the standard mycobacterial cultures. We are currently assessing, with clinicians, ways to use this methodology for the diagnosis of patients admitted to the University Hospital. Tom Frank has also developed a technique of diagnosing mycobacteria in paraffin tissue sections and distinguishing between pathogenic mycobacterial species using restriction enzymes. Gabriel Nuñez and Donald Zhou in collaboration with Dr. Frank are applying hybridization with specific biotinylated oligonucleotides for the diagnosis of Mycobacterium tuberculosis vs. avium/intracellulare complex in unfixed specimens. Preliminary results are very encouraging. In addition, Dr. Frank developed a PCR-based method of detecting cytomegalovirus in formalin fixed tissue, which was recently published.

III. Development of a Genotyping Core for CF mutations. We were funded last October by the Cystic Fibrosis Foundation to establish a genotyping facility for the main CF mutations. The main purpose of the Core is to support CF investigators at the University of Michigan. We have developed a nonradioactive reverse dot-blot assay for the screening of the five most common CF mutations. So far we have genotyped 75 CF patients. Our plan is to extend genotyping to seven mutations during the next year.

TEACHING ACTIVITIES:

We have established a weekly conference on Molecular Diagnostics and encourage residents and interested faculty to attend. At the present time, the focus of the resident's rotation in Molecular Diagnostics is Hematopathology. Charles Ross has been coordinating this rotation. In addition, Drs. Del Buono, Cook, Goldblum, and Perosio have worked with Dr. Frank in research projects applying PCR-based methodology to paraffin-fixed tissue sections.

Gabriel Nuñez, M.D.
Director, Clinical Molecular Diagnostics
DRUG ANALYSIS AND TOXICOLOGY LABORATORY
DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

Despite the major changes affecting the Medical Center and Clinical Laboratories, the Drug Analysis and Toxicology Laboratory has maintained its prominent role as an active, progressive, and vital contributor to the success of the Department of Pathology and the University of Michigan.

Multiple new assays were introduced in-house during the last year. A novel drug screen for newborns utilizing meconium sampling was instituted. Previously the turnaround time for this type of screening was 2 to 3 weeks, but has been shortened to under 2 days in-house. A screen for diuretics has been developed, as well as therapeutic assays for clomipramine, norclomipramine, and Cyclosporin G.

The laboratory continues to be certified by the College of American Pathologists for the forensic drug testing program. The requirements and demands to achieve this recognition escalate each year. The laboratory is currently awaiting the next accreditation inspection for recertification in this special area. Support of the M-Labs program through involvement in this added certification process places a large burden of responsibility on the staff of the laboratory, and the technologists in the laboratory deserve special recognition for their efforts. The Drug Analysis Laboratory also underwent an interim clinical laboratory inspection by the College of American Pathologists and performed very well during the accreditation review.

The laboratory has been involved in several ongoing quality assurance projects. These projects involve reviews of the utility of both therapeutic drug assays and components of the existing drug screen menus, turnaround times, accuracy of data entry, and the appropriateness of critical value assignments. Dr. Annesley is also involved in a pharmacokinetic Quality Improvement Team, headed by the Pharmacy Department, which is evaluating the appropriateness of serum drug requests.

The Drug Analysis Laboratory continues to be active in novel research and development projects. The laboratory supports a large number of institutional clinical projects through collaboration with the Departments of Surgery, Dermatology, Obstetrics and Gynecology, Pediatrics and Pharmacology. Dr. Patel is performing primary development and clinical applications studies in a project investigating novel chromatographic resins and materials for a major corporation, and is also investigating approaches for monitoring testosterone and epitestosterone under a grant from the National Collegiate Athletic Association. Dr. Annesley is a co-investigator in a major-funded project from the Sandoz Corporation which is investigating the clinical utility of a new immunosuppressant drug. Dr. Annesley is also a co-investigator in a Clinical Research Center NIH-funded project evaluating predictors of Cyclosporine A bioavailability, and also a co-investigator in a recently finished Department of Health and Human Services Innovation Research Grant evaluating the measurement of anticonvulsant drugs in saliva.

The laboratory staff were actively involved in the training of house officers and medical students. At the national level, Dr. Patel has maintained involvement in the NCAA and IOC drug testing programs, and both Drs. Annesley and Patel are members of NCAA drug testing teams. In an effort to explore ways to enhance and improve the scope of service, the Drug Analysis Laboratory has recently enrolled in a pilot project co-sponsored by the CAP and AACC to evaluate interlaboratory performance in the areas of drug and steroid testing, with the possible goal of future expanded involvement in these areas.

The laboratory has been involved in the first important stages of the consolidation of functions performed by the three major laboratories making up the Biochemistry Section. The therapeutic drug
assays for digoxin, methotrexate, amikacin, gentamicin, tobramycin, and vancomycin have been transferred to the Drug Analysis and Toxicology Laboratory. Two medical technologists have joined the laboratory as part of this change and have been a welcome addition to the staff.

Lastly, the laboratory has struggled with ways to meet the budgetary reductions imposed by the medical center, while striving to maintain the same high quality level of service. The laboratory successfully achieved its cost reduction goal for this last fiscal year, during which both personnel hours plus commodities were lost. Most of the burden in adapting to the changes were placed upon the technologists and the success of the process is a credit to these individuals. A proposed plan to comply with further cost reductions has been submitted to hospital administration. The impact of these cuts remains to be seen during the next fiscal and academic year.

Thomas Annesley, Ph.D.
Director
Drug Analysis and Toxicology Laboratory
LIGAND ASSAY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

CLINICAL ACTIVITIES:

The Ligand Assay Laboratory continues to undergo significant changes with the goal of consolidating operation with the Immunology and Chemistry Laboratories in the Main Hospital. Much of the planning required for this change has been completed. The therapeutic drugs and two medical technologists have been transferred to the Drug Analysis Laboratory and preliminary plans for laboratory renovation to accomodate the move have been submitted to the University Hospital architect for his comments and suggestions. We are actively examining and adapting for our operation, a new microcomputer based data analysis package, that will replace the current data analysis software maintained on the DEC PDP-11/44, which is located on the second level in Medical Science I. Consolidation of the former OB/GYN laboratory with all of its assay repertoire and the transfer of 2 medical technologists into the Ligand Assay laboratory occured during the past fiscal year. Total volume of specimens processed increased to approximately 156,000/yr. during the last fiscal year. This represents an increase of approximately 4%. In addition to the changes outlined above, the laboratory is continuing to convert many of its radioisotopic procedures to semi-automated and fully automated non-radioisotopic methodologies. These changes should permit an increase in laboratory efficiency with the goal of accommodating the continuing demands on the laboratory in the face of decreasing resources.

The Ligand Laboratory has acquired two Ciba-Corning ACS:180 analyzers that will allow us to convert several of our assays to chemiluminescence methodology. At the present time TSH, total T3, and free T4 are being run on the ACS:180. The goal is to add all of the thyroid hormones, LH, FSH, prolactin, vitamin B12 and folate during the present year. This analyzer has random access capabilities with bar code reading capabilities for reagents and patient samples. This significantly reduces the potential for identification error and improves turnaround time. Utilization of these instruments will allow us to handle the ever increasing test volume and the development and evaluation of assays for the measurement of newer analytes without increasing staff levels or increasing overtime expenses. The incorporation of this new instrumentation into the laboratory will greatly increase laboratory efficiency, reduce reagent costs by avoiding the requirement for duplicate samples and reducing the number of standards and calibrators required per result. All of these changes will result in a significant reduction in our per-test cost.

Barry G. England, Ph.D.
Director
CLINICAL ACTIVITIES

Based on the first 11 months of activity this year, the Microbiology Laboratory has experienced an 8.1% decrease in activity. A total of 133,932 tests were performed from July 1991 to May 1992. This total includes 17,425 M-Labs tests (a decrease of 6.9% from the previous year). M-Labs represents 13.0% of the total laboratory volume. The decrease in lab test volume is strongly influenced by laboratory staff initiatives made to decrease inappropriate utilization of laboratory tests. Tests showing a decrease of 15% or more, in order of decreasing volume are: Susceptibility Test, Borrelia Antibody, Ova & Parasite Exam, Stool Culture, CSF Culture, AFB Culture and Fungus Culture. Tests showing a volume increase greater than 15% were Mycoplasma/Ureaplasma Culture and Neisseria Gene Probe Test.

Significant changes were made to meet Cost Effectiveness Program goals including: reduction of 3.5 staff positions, elimination of 4 tests, significant ordering restrictions on 6 tests, implementation of susceptibility orders, requiring physician order, procedural changes in all lab areas, reduction of weekend and holiday coverage for routine cultures and reduction in overtime.

New tests/procedures implemented this year include: routine use of gene probe analysis for Neisseria gonorrhoeae testing, gene probe analysis for confirmation of AFB identification, combined fastidious/anaerobe MIC panel, Mycoplasma/Ureaplasma culture from CSF and blood, new Mycoplasma/Ureaplasma transport and Acidine Orange for smear negative blood cultures that are instrument positive.

The laboratory achieved several other important goals during the year. Virology Laboratory was integrated into the Microbiology/Virology Laboratory. The manual blood culture system was replaced by the semi-automated BacT/Alert system. Significant effort was used to update the Chemical Hygiene Plan and to establish safe work practices to meet new OSHA regulations for Bloodbourne Pathogens. A semi-automated susceptibility inoculation instrument replaced manual methods. The Diamedix EIA system replaced 6 traditional IFA tests in the Virology section of the laboratories.

The laboratory has also actively participated in the Total Quality Program. Nine lab staff completed QI leader and team training, and the Microbiology QI team is currently in step 1 of the QI Story. All supervisors have completed the Leadership for Total Quality training program. In addition, the laboratory completed 2 CAP Q-Probe interlaboratory quality assurance studies and 4 intralaboratory QA studies.

Finally, the Microbiology/Virology laboratory has actively utilized laboratory-based information services to improve the delivery of quality laboratory data. The Virology database was completely restructured so statistical reports can be produced. Custom programs for Infection Control daily hospital surveillance for nosocomial infections and the Reportable Disease daily report were implemented. Several creative programs were written to support the CEP program for physician order of susceptibility tests. Monthly susceptibility data is now collected automatically on the computer and downloaded to a IBM-PC to produce the highly-regarded Quarterly Susceptibility Report.
RESEARCH ACTIVITIES

Investigations into the in vitro efficacy of four new quinoline and three new beta-lactam antimicrobics were conducted using special microtiter plates prepared in-house for this purpose. The laboratory continues to participate in the multi-center monitoring of antimicrobial resistance of the Bacteroides fragilis group and participated in a multi-center quinoline study. Much effort has gone into investigations to determine antimicrobial resistance profiles that were found to be unique among various intensive care units. This may lead to more specific empiric therapy recommendations for these units. Strains of Escherichia coli and Klebsiella spp. were noted to have unusual resistance to third generation cephalosporins and we are currently investigating these strains for atypical beta lactamases. Numerous cooperative investigations were carried out with other members of the department or with members of other departments. Mycobacterium tuberculosis can now be detected in tissue and fluid specimens directly by the polymerase chain reaction conducted in the Molecular Diagnostic Unit. Plans are underway to expand this service. Several innovative computer programs have been developed in cooperation with Pathology Data Systems personnel to investigate changes in antimicrobial susceptibility and to monitor the ordering of potentially ineffective antimicrobics for patient therapy. The laboratory continues to cooperate with members of the Infectious Disease Service in the use of biological inhibitors to control Clostridium difficile enterocolitis. We are participating in two projects with the Department of Ophthalmology, one involving vitrectomy fluids and the other involves testing the efficacy of a topically-applied dye to control blepharitis. We continue to monitor the susceptibility of Gram-positive bacteria to topical mupirocin that are recovered from dermatology patients. In addition, we conducted two investigations for other departments as part of the Cost Containment Program. We showed that vials of Magnevist can safely be used twice/day rather than only once with consequent savings to the hospital. We also showed that Fentanyl/Bupivacaine preparations in the Pharmacy Department were unlikely to support the growth of contaminants. We initiated a program with Pediatrics to study the rate of mycoplasma isolation from neonates and maternal/fetal membranes. Preliminary data showed this to be an interesting area to pursue and the investigation has been expanded. These investigations contributed to the six publications and to the four presentations (abstracts) at national scientific meetings this year.

PUBLICATIONS


ABSTRACTS, BOOK CHAPTERS, ETC.


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

Carl L Pierson, Ph.D.
Associate Director
Clinical Microbiology Laboratory
The activities of Pathology Data Systems for the past year can be divided into three separate categories: (1) PathNet software modifications and enhancements; (2) new hardware and software applications to support the data processing needs of users; (3) information support and educational activities.

**PATHNET SOFTWARE MODIFICATIONS AND ENHANCEMENTS:**

1. Deployed "rules" in hematology, chemistry, and immunology, achieving personnel time savings by shifting previously manual activities to computer-automated tasks.
2. Installation of Version 305 of the Cerner PathNet software.
3. Deployed WP-Link in Anatomic Pathology, allowing faculty members to generate customized reports for personal consultation cases and then upload the report into the departmental database.
4. Deployed automatic SNOMED coding for personal consultation cases in Surgical Pathology with WP-Link as well as for non-gynecologic cytology reports.
5. Implemented bar-code labeling on all specimen collection labels.
6. Activated Cernermail (i.e., the Cerner proprietary electronic mail products) in all laboratories to facilitate communication.
7. Introduced computer-generated slide labels for histology slides.
8. Implemented a pilot project whereby "future" test orders can be entered into the PathNet System and activated when the patient arrives in the future at any blood drawing site for test performance.
9. Upgraded and installed several new instrument interfaces to improve the productivity of the laboratories.

**NEW HARDWARE AND SOFTWARE APPLICATIONS:**

1. Defined standards and specifications for the new interface between PathNet and the patient management and patient accounting modules (HealthQuest) to be brought up on the INS mainframe computer.
2. Defined functionality requirements for the order entry-results reporting system to be deployed in the future on the hospital mainframe computer.
3. Achieved network connectivity of all Macintosh computers in the department via the Novell network.
4. Developed a series of customized, key-word-driven, utilities for extracting selected surgical pathology reports for faculty members in Anatomic Pathology.
5. Implemented improvements to the professional component billing software.
6. Developed CCL applications to support the review by anesthesiologist of laboratory test results as part of the criteria-map review of blood utilization in the hospital.
7. Deployed the Eagle Innovations software for the development of inexpensive interfaces between heterogeneous host computers.
8. Brought up a new application in cooperation with the Department of Radiology for copying radiology test results from the Radiology Information System to the VAX cluster in PDS, allowing clinicians the opportunity to review such results in an integrated fashion with laboratory results.
9. Continued to improve the performance of the VAX 4200 server whereby transplantation surgeons through the Organ Transplantation Information System (OTIS) and surgeons through
the information system in the Department of Surgery can download and manipulate laboratory information in near-real-time.

INFORMATION SUPPORT AND EDUCATIONAL ACTIVITIES:

1. Served as a host for multiple site-visit teams from other hospitals reviewing Cerner PathNet software.
2. Active participation in the Anatomic Pathology Quality Improvement Team.
3. Database support and statistical analysis for ongoing consolidation and cost-savings efforts in Pathology as well as in the hospital as a whole.
4. Multiple workshop presentation by PDS personnel at the Cerner Annual Meeting, ASCP national meetings, and local continuing education conferences at the Towsley Center.
5. Host for the tenth annual Laboratory Information System Symposium in June at the Power Center which attracted 175 registrants from thirty states and Canada, as well as 34 information system vendors and consultants.
6. Participated in initial efforts to avoid copyright infringement on software running on PCs by such efforts as monitoring software use and making software utilities available on departmental servers.

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

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

1. As part of the 1992 Cost Efficiency Program, Blood Drawing Station I in the Taubman Health Center was closed, and patients were routed to Stations II and III. This change necessitated major personnel and equipment shifts, and was completed by June 29, 1992. Economies of scale were achieved as a result of the change, but some patients have to travel further for services.

2. Changes mandated by new OSHA requirements were instituted, including gloving during all venipunctures. This change was difficult to implement because of the loss of tactile sensitivity during blood drawing, particularly with pediatric patients.

3. The Briarwood Medical Group facilities were activated in mid-November, 1991. Adult and pediatric blood drawing services were initiated at this time, as well as the option of centrifuging and freezing specimens for subsequent analysis. A considerable effort was expended in designing the laboratory area, ordering equipment, hiring and training new employees, and activating the new facility.

4. A major undertaking during the year was the sponsorship of a two-day post-graduate educational conference at the Towsley Center on phlebotomy team management and techniques. The meeting was very successful, attracting 155 registrants. Supervisory staff from Central Distribution also participated in the conference as faculty members.

5. The following new tests have been added to the menus performed by phlebotomists at the Briarwood facility and the Emergency Department: mono spot test, sedimentation rate, and pregnancy testing.

6. Barcoding of all specimens processed through Central Distribution was initiated, resulting in faster and more accurate processing of specimens through all of the laboratories.

7. A pilot project was initiated involving Pediatric Nephrology and outpatient phlebotomy whereby physicians can order laboratory tests which are performed at some future time. Patients can thus report directly to an outpatient blood drawing station where the pending order is called up on the computer and activated.

8. Questionnaires were developed and implemented to survey both outpatients and inpatients about their degree of satisfaction with phlebotomy services. These in-depth surveys will allow supervisory personnel to better understand results from patient telephone surveys.

9. As part of the Cost Efficiency Program, personnel reductions in Phlebotomy and Central Distribution were as follows: 4.3 FTEs in Central Distribution and 1.5 FTEs in Phlebotomy during 1991; 1.5 FTEs in Central Distribution and 3.0 FTEs in Phlebotomy during 1992. As the result of this downsizing, an increased burden has been placed on the shoulders of current personnel. In addition, timed draws and stat draws are no longer performed by phlebotomists during their inpatients sweeps. Patients lacking identification bracelets are also not being drawn until the bracelets are replaced.

10. Planning activities for the Cancer and Geriatric Center were undertaken with special emphasis on phlebotomy and specimen handling services.
11. Four employees participated in Quality Improvement Teams during the year.

12. Considerable effort has been directed toward making the Central Distribution and Phlebotomy areas more ergonomically structured in an attempt to avoid carpal tunnel syndrome among employees. This is an area where intensive "production" keyboard entry takes place for test order entry.

13. Linda Darrow visited the Mayo Clinic to learn more efficient ways to handle our large volume of specimens and to avoid tendonitis and carpal tunnel syndrome.

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

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

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:
   - Paulette Dozier, 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:
   - Maydis Caldwell Skeete, Grants Administrator
   - 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 clients including Knollwood Clinic, Toledo General Hospital and Lyn Hadley Memorial Clinic. In addition, negotiations are underway with Mt. Clemens General Hospital and Addison Community Hospital.
2. Coordinated the interim inspection of the Laboratories by the College of American Pathologists.
3. Completed information required by CLIA '88. We are awaiting the CLIA '88 application and will coordinate implementation of these regulations for all Pathology and Hospital Laboratories.
4. Several staff are participating on Quality Improvement Teams as part of the Hospitals' Total Quality Program.
5. Participated in the planning for the renovation and remodeling of the Chemistry Laboratory to accommodate the new Chemistry Division which will integrate the General Chemistry, Immunology and Ligand Assay Laboratories.
6. Developed a plan for implementation of the second year of the cost Reduction Program for the University Hospitals and Medical School, reducing budgeted funds by approximately 3% or $700,000 which included a staff reduction of 6 FTEs. This was accomplished primarily through consolidation, reorganization and relocation of the Chemical Pathology Section.

CLINICAL FACULTY OFFICES:

1. Completed a re-organization of secretarial support staff to accommodate the needs of the faculty located in the Hospitals.
2. Participated on a Quality Improvement Team to review slide/block storage, tracking and retrieval.

MEDICAL SERVICE PLAN OFFICE:

1. Developed procedures and methodologies necessary for the implementation of the Resource Based Relative Value System (RBRVS) in January 1992. This preparation resulted in a smooth transition to RBRVS and minimal negative financial impact.
2. With staff from the Department Administration and Pathology Data Systems, implemented improvements to the automated charge entry process and interface resulted in a) ability to audit charges on the front end limiting the number of edits; b) direct charge file transfer to the IDX Billing System allowing professional fees to be posted to accounts one day after physician verification and; c) the ability to process MLabs charges through the interface rather than manually into the IDX System.
3. Automated Immunology service reporting on the charge summary report reducing paper handling by all staff.
4. Initiated direct printing capabilities for Billing Office staff to print pathology reports which enhances statusing and cash flow.
5. Participated in the presentation of the All Funds Budget for Fiscal Year 1992 as requested by the Medical School.

OFFICE OF RESEARCH AND EDUCATION ADMINISTRATION:

1. Processed two NIH grant transfers for new faculty member from the University of Washington at Seattle.
2. Participated in the revision of the Pathology Telephone Directory including placing information on-line for access by all Pathology staff.
3. Participated in the development of the annual departmental rotation for the House Officer Training Program.
4. Processed appropriate documentation to obtain Visas for three research fellows.

GENERAL:

1. Participated with the Chairman to initiate expense reduction associated with all Departmental budgets.
2. Assisted in the development of contracts for new MLabs Clients including Knollwood Clinic and the Toledo Hospital.
3. Served as a member of the A. James French Endowment Campaign Committee to endow a Chair in Dr. French's name as part of the University's Momentum Campaign.
4. Developed a proposal which was submitted to Hospital Administration for the implementation of the CLIA `88 Regulations for all Pathology and Hospital Laboratories.
5. Selected as a member of the Hospitals Division Lead Team for the Total Quality Program. Selected as member of the Purchasing/Accounts Payable "cross over" Quality Improvement Team. Selected as member of the Medical School's Total Quality Team.
6. Served as a member of the Gainsharing Committee including the development of guidelines used for implementing the Hospital's profit sharing program.

SUMMARY OF FINANCIAL DATA:

1. Grants and contracts:
   114 active grants, contracts and other accounts
   
   Total Direct Expenditures $4,711,414
   Indirect Research Expenditures $2,014,751
   Total Sponsored Projects $6,726,165

2. Medical Service Plan:
   Average number of active accounts 13,718
   Number of charge entries 226,361
   Gross Billings - Anatomic & Clinical Pathology $12,226,361
   Net Collections - Anatomic & Clinical Pathology $4,955,243
   Part A Payment $2,572,000

3. Pathology Laboratories:
   Number of fee code procedures 3,324,655
   Number of reportable laboratory test results (est.) 14,200,000
   Total Gross Revenue Pathology Laboratories $103,659,465
   Total Direct Expenses Pathology Laboratories $23,373,475

Respectfully submitted

Eugene J. Napolitan
Administrator
EDUCATIONAL ACTIVITIES

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

1 JULY 1990 - 30 JUNE 1991

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 and undergraduate student pathology elective clerkships. Many faculty continue to serve on graduate student thesis committees and supervise medical student research experiences. Within the Medical Center, 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 United States and Canada Association of Pathologists (USCAP).

MEDICAL AND DENTAL STUDENT PROGRAMS:

This was the second year the Department of Pathology offered a summer clinical program for underrepresented minority medical students. The goal of this program is to provide medical students, who have completed their first year, the opportunity to participate in Departmental clinical activities and promote the integration of Basic Science studies with patient-oriented clinical problems. 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. Ten students participated in the program and formal 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". Revision of the laboratory experience resulted in greater faculty-student interaction and promoted more active learning by students. This is viewed as a positive change by both students and faculty. 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 and medical student research rotations. Department faculty have taken an active role in the development of the new medical student curriculum with faculty serving as Director of Component 2 (2nd year courses), Assistant Director of Component 1 (1st year courses), and individual course directors.

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 three years ago and currently has nine 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. Three students are enrolled in combined M.D./Ph.D. programs and three students have achieved candidacy status.

**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.

**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 33 postdoctoral fellows which includes Pathology residents seeking 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 5 fellows completed their training and have assumed the following positions:

1. Mohamed Abaza, Mb,Bcm, Assistant Professor and Head of Hematopathology, University of Southern Alabama, Mobile, Alabama.
2. Robert Larsen, Ph.D., Research Scientist, Glycomed, Inc. Alameda, California.
3. Michael Mulligan, M.D., General Surgery House Officer II, Department of Surgery, Milstein Hospital, Columbia University, New York, New York.
4. Hedwig Murphy, M.D., Ph.D., House Officer, Department of Pathology, The University of Michigan Medical School, Ann Arbor, Michigan.
5. Lawrence Zukerberg, M.D., Boston General Hospital, Boston, Massachusetts

**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 over 110 completed applications received, and 24 candidates invited to interview in the Department this past year. Five outstanding residents were recruited to the Department: Vonda Douglas, M.D., Lois Arend, M.D., Ph.D., Lyndon Su, M.D., Joseph Tworek, M.D. and Hedwig Murphy, M.D., Ph.D.

Currently, there are 25 residents in the Department, 23 of whom are receiving training in both anatomic and clinical pathology and 2 receiving training in anatomic pathology alone. Six residents graduated from the program this past year. Four graduates assumed positions as staff pathologists at The Toledo Hospital, Toledo, Ohio, St. Joseph's Hospital, Flint, Michigan, Mt. Sinai Hospital, Detroit, Michigan, and Swedish Medical Group, Denver, Colorado. Two residents are continuing training, one in Forensic Pathology at the New York Medical Examiners Office in New York City, New York and in the Department of Pathology, University of Wisconsin, Madison, Wisconsin.
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 completed the American Society of Clinical Pathologists’ in-service examination and performed well above the national average.

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 (13 contact hours).

D. Pathology 600:
   1. 83 hours of whole-class lecture (includes self-study, review and examinations), 71 hours of laboratory (includes self-study, review and examinations in each of six sections) (154 contact hours).

E. Pathology Clerkships:
   1. Clinical rotations elected by 49 students at University Hospitals.

F. Summer Clinical Program in Pathology for Underrepresented Minority Students
   1. Elected by nine first year students and one second year student

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:

B. Clinical Laboratory Computers Symposium, June 10 - June 12, 1992.
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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<th>Internal Medicine</th>
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<td>- Cardiology</td>
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<td>- Nephrology</td>
<td>- Oncology</td>
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<td>- Hematology/Oncology</td>
<td>- Gastroenterology</td>
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<td>- Nuclear Medicine</td>
<td>- General (Death Conference, CPC)</td>
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<td>- Arthritis</td>
<td><em>Obstetrics and Gynecology</em></td>
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<td>- Cardiology</td>
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<td>- General (Necropsy Review, CPC)</td>
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<td><strong>Urology</strong></td>
<td><strong>Otorhinolaryngology</strong></td>
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Joseph C. Fantone, M.D.  
Coordinator,  
Educational Activities
The M-Labs program has seen several changes in this last year. I have become the Director, Susan Sadler has become our Client Services Representative, and Rodolfo Rasche, M.D., has joined our staff part-time.

In the recent past, the M-Labs program had suffered the loss of two major clients, one an independent laboratory, the other a hospital. Although there was some increased revenue from growth of services to current clients and from the addition of a few physicians accounts, the net result has been a reduction in services delivered and in revenue generated.

M-Labs is currently beginning a marketing survey to be sent to selected pathologists within our service range of 100 miles. We are also looking forward to a review by Chi Laboratory Systems, a consulting firm which has been engaged to evaluate the program and assist in the strategic planning for M-Labs.

We have meanwhile been marketing more actively and we look forward to providing Clinical Pathology Services to a major new hospital client this fall. Proposals have also been submitted to several other potential clients for Clinical Pathology and Cytopathology services.

M-Labs goals for the forthcoming year are to assess the needs of our potential clients, to see where our strengths can be utilized to meet these needs, perhaps to increase our strengths where needs are strong, and to resume the net growth in M-Labs activities that was present in earlier years.

Eugene M. Silverman, M.D.,
Director,
M-Labs Program
RESIDENT TRAINING PROGRAM

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

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Publications and Presentations:


Joseph C. Fantone, M.D.
Director
Resident Training Program
DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER
LABORATORY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 1991 - 30 JUNE 1992

INTRODUCTION:

The Department of Veterans Affairs Medical Center (VAMC) is a Dean's Committee institution affiliated with the University of Michigan. The VAMC Laboratory Service maintains a close relationship with the University Department of Pathology at every level. The pathologists in the Laboratory Service have academic appointments and participate in University departmental activities in a manner similar to other sections. Recruitment efforts for pathologists are combined and candidates are selected on the basis of academic performance and potential as well as professional competence similar to any departmental candidate. There are four full-time pathology staff positions and although one vacancy has existed for some time a candidate for the position has been identified and is expected to be on the staff by September 1992. Three resident training positions have been maintained at the VAMC for university pathology residents who serve monthly rotations in Surgical Pathology, Autopsy Pathology, and a number of arranged electives including Electron Microscopy and special study programs in Surgical Pathology. The Chief, Laboratory Service is a voting Member of the Dean's Committee.

ANATOMIC PATHOLOGY:

A. Surgical Pathology: 4,983 surgical cases have been accessioned and reported during this period of time. This is an increase of approximately 100 cases over the past year. The resident assigned to surgical pathology, usually a first year resident, acts as coordinator of the section and in that capacity has the opportunity to examine all of the specimens grossly and microscopically under close one-to-one supervision by the staff pathologist. The resident interacts with the clinical staff, the medical students and the other sections of the Laboratory Service as appropriate to obtain a broad educational experience and to aid in providing high quality medical care. There is an extensive quality improvement program within Surgical Pathology including regular consultations with the Armed Forces Institute of Pathology, University of Michigan, and other outside consultants. There is extensive review and analysis of frozen sections, amended diagnoses and surgical appropriateness within the medical center.

B. Autopsy Pathology: 67 autopsies were performed during this year. Assigned residents perform the autopsies, prepare the pathologic diagnosis, and present the case in conference to the staff pathologists and other residents. The resident cuts and otherwise prepares the tissue or the preparation of slides and then reviews them and makes a microscopic diagnosis. These steps are supervised by staff pathologists who permit a gradual increase in independence for the resident with increased experience. During the year the residents presented the findings of selected autopsies at the Medicine Morbidity and Mortality Conference with a total of 23 cases presented. Several autopsies performed at the VAMC were also presented at the extended Gross Conference at the University.

C. Cytology: 2,702 cases were examined and diagnosed during this period. Although there is not a mandated rotation in cytology within the VAMC the cytologic material is readily available and is used as correlative information for surgical and autopsy pathology.

D. Electron Microscopy: 412 electron microscopy cases were reported. An elective rotation is available for pathology residents in electron microscopy. In other rotations the electron microscope findings are used to complement surgical or cytopathology
diagnoses. During the academic year Dr. Beals presents biweekly electron microscopy seminars at the University of Michigan. This VAMC is a "Center of Excellence" in electron microscopy and serves as consultant to other VA Medical Centers, to the University of Michigan Hospital, and to other hospitals by contract.

CLINICAL PATHOLOGY:

During the last fiscal year (Fiscal Year 1991) 1,511,885 clinical pathology procedures were done in the laboratory. In chemistry there were 875,454; in hematology 135,474; in microbiology 200,900; and in blood bank 200,180 tests were done. This represents raw data rather than weighted test numbers. There is not a formal clinical pathology rotation available for pathology residents at this time although the residents may participate or observe clinical pathology procedures when this activity is appropriate in relation to their other rotations. Dr. Chensue is director of clinical pathology and makes available interesting and pertinent clinical laboratory information to the residents as desired.

EDUCATION AND TEACHING:

In surgical pathology the staff pathologists provide one-to-one teaching during the surgical sign out time. In addition, there is a surgical pathology conference approximately every other week and an autopsy conference with the entire staff following each autopsy. Because of the closeness of various sections of the laboratory there is frequent consultation among the pathologists and the residents are involved throughout. Since the VAMC is relatively close to the University the residents are permitted and expected to attend the appropriate teaching conferences at the university as well. The entire staff participates in the laboratory and lecture portions of the second year medical students at the University of Michigan. Lectures in bone pathology are also given to the dental students. The VA staff also participate in other ad hoc lectures and in a moderate number of seminars for the resident staff, most often given at the University of Michigan.

RESEARCH:

The specific efforts of the pathology staff are included on individual reports. Dr. Chensue served as a member of the VA Research and Development Committee for most of the time period covered by this report. At the present time his term on that committee is complete. He does have a strong funded research program and cooperates with other investigators at the University of Michigan. Other staff participate in various clinical studies and collaborate with a variety of investigators. The laboratory in general serves the VAMC research program by providing considerable technical support for clinical research and in some cases for more basic research in both anatomic and clinical pathology. The staff serve as consultants and advisors for a number of research programs.

ADMINISTRATION:

The staff pathologists at the VAMC serve in various capacities involving administrative tasks for the University of Michigan, such as the Resident Selection Committee, the Medical Student Admissions Committee, and the teaching faculty of the second year medical students.

SUMMARY:

The Department of Veterans Affairs Medical Center Laboratory Service considers the practice of high quality medicine and the appropriate care of patients as its first and highest responsibility. Within the service there is an extensive quality improvement program that integrates with that of the hospital as a whole. The laboratory service has been accredited by the College of American Pathologists since the early 1960's. The Blood Bank is certified by the American Association of Blood Banks and is approved
by the Federal Drug Administration. The association with the University of Michigan serves to strengthen and improve the quality of patient care. The teaching effort involving both residents and medical students is of mutual benefit to the two institutions. The physical plant of the VAMC Laboratory Service is short of space but there continues to be progress toward the VA Clinical addition that will double the present space.

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