THE UNIVERSITY OF MICHIGAN

DEPARTMENT OF PATHOLOGY

ANNUAL REPORT

1 JULY 1995 - 30 JUNE 1996
KIRK J. WOJNO, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
AND UROLOGY
DEPARTMENTS OF PATHOLOGY
AND SURGERY

ANNUAL DEPARTMENTAL REPORT
1 AUGUST 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Surgical Pathology Services-four months.
   B. Surgical Pathology On-call-six weeks.
   C. Immunoperoxidase Service-six months.
   D. Consultant for Genitourinary Pathology.
   E. Back-up Consultant for Endocrine Pathology.

II. TEACHING ACTIVITIES:

    MEDICAL SCHOOL/HOSPITALS:
   A. Sophomore Medical Class:
      1. Reproductive sequence - one lecture hour.
      2. Renal/Genitourinary Sequence - three lecture hours, one laboratory.
   B. House Officers:
      1. Pathology Consult Conference - Occasional.
      2. Pathology Resident Series - Occasional.
      3. Immunoperoxidase conference - Occasional.
   C. Interdepartmental:
      1. GU Grand Rounds - Weekly.
      2. GU Pathology Conference - Monthly.
      4. GU Oncology Conference - Weekly.
      5. GU Journal Club - Weekly.
      6. Prostate SPORE Research Conference - Monthly
      7. Cancer Registry Conference - Occasional

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Co-investigator, "Analysis of SP loss in Human Prostate Cancer", Principal Investigator, Jill Macoska, Ph.D. (5% effort).
Department of Pathology Annual Report

B. Co-Investigator, "Role of Chromosome 10 Loss in Prostate Cancer Progression", Principal Investigator, Jill Macoska, Ph.D. (SPORE).
C. Co-Investigator, "Role of BRCA-1 in Prostate Cancer Progression", Principal Investigator, Kathy Cooney, M.D. (SPORE).
D. Co-Investigator, "Androgen Related Target Genes in Apoptosis", Principal Investigator, Mark Day, Ph.D. (SPORE).
E. Co-Investigator, "Color Doppler TRUS in the Prediction of Tumor Vascularization", Principal Investigator, Robert Bree, M.D. (SPORE).
F. Principal Investigator, "Tissue and Serum Core for Prostate Cancer", SPORE grant. (30% effort).
G. "Age Specific PSA Ranges in African Americans", Principal Investigator, Joseph Oesterling, M.D. (SPORE).
H. Co-Investigator, "A Phase II Clinical Trial of Dehydroepiandrosterone (DHEA) in Patients with Prostatic Cancer", Principal Investigator, Kenneth J. Pienta, M.D. (20% effort).
I. Co-Investigator, "Emeyt, VP-16 and Taxol for Metastatic Prostate Cancer", Principal Investigator, Kenneth J. Pienta, M.D. (5%).
J. Co-Investigator, "10p and 10q Allelic Loss in Prostate Carcinoma", Principal investigator Jill Macoska, PhD.
K. Principal Investigator, "Tissue Procurement and Histopathology", Core of the Cancer Center (5%).

PROJECTS UNDER STUDY:

A. Evaluation of surrogate and point biomarkers as prognostic indicators in prostate and bladder cancer. (Bcl2, Bclx-1, Bax, Her2nu, P53, Angiogenesis. PP32, Ki67, PC-1, Pth-LP, Tib-166, Gp78, etc.).
B. Fractal geometric analysis in prostate cancer.
C. Precursor lesions in prostate cancer, PIN, AAH.
D. Role of chromosome 6, 13 and 17 loss in prostate cancer prognosis with Kathleen Cooney, M.D.
E. Role of Chromosome 8 and 10 loss in prostate cancer progression with Jill Macoska, Ph.D.
F. Hereditary prostate cancer, sib-pair analysis with K. Cooney.
G. Significance of free PSA measurements with Drs. England, Giacherio, and Oesterling.
H. Effects of "TUNA" on prostate tissue. Sponsored by Vita Med with Drs. Oesterling and Issa.
J. Effect of Fenasteride on % Free PSA. Collaboration with Merk, Abbott, Hybritech, Dianon, and Wallac.
K. Organ Specific Apoptosis in the Spawning Chinook Salmon.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Special Function Laboratory; Immunoperoxidase & Special Histochemistry & Histology.

INTERDEPARTMENTAL:

A. Director, Tissue Procurement Core and Histopathology Core of the Cancer Center.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


3. "% Free PSA Increases Sensitivity and Specificity Over Total PSA but Does Not Predict Stage of Disease: Tumor Angiogenesis Alters the Molecular Forms of PSA", PSA II Congress, West Palm Beach, Florida, January 19-21, 1996.

4. "DHEA as a Chemopreventative Agent in Prostate Cancer; A Paradigm for Laboratory Based Chemoprevention Trials", Prostate Cancer Prevention Workshop, Annapolis Maryland, April 1-2, 1996.

5. Consensus Workshop on Prostatic Intraepithelial Neoplasia, Bethesda, Maryland, June30-July2, 1996.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:

BOOK CHAPTERS:


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


LIST OF FACULTY
LIST OF FACULTY

Name                      
Abell, Murray R           
Abrams, Gerald D.         
Annesley, Thomas M.       
Appelman, Henry, D.       
Baker, James R.           
Barr Jr., Mason*          
Beals, Theodore F.        
Blaivas, Mila             
Bonadio, Jeffrey          
Brawn, Peter              
Caplan, Michael J.        
Capps, Rodney D.          
Chensue, Stephen W.       
Crockett-Torabi, Elahe    
D'Amato, Constance J.     
Davenport, Robertson      
de la Iglesia, Felix**    
Devaney, Kenneth O.       
Dixit, Vishva M.          
Dressler, Gregory R.      
Elner, Victor M.*         
England, Barry G.         
Fantone, Joseph C.        
Fearon, Eric R.*          
Flint, Andrew             
Frank, Thomas S.          
Friedman, Bruce A.        
Giacherio, Donald         
Gikas, Paul W.            
Giordano, Thomas J.       
Gordon, David             
Greenson, Joel            
Headington, John T.       
Heidelberger, Kathleen P. 
Johnson, Kent J.          
Judd, W. John             

Rank                      
Professor Emeritus        
Professor                 
Associate Professor       
Professor                 
Associate Professor       
Professor                 
Assistant Professor       
Clinical Associate Professor 
Associate Research Scientist  
Assistant Professor       
Clinical Assistant Professor 
Assistant Professor       
Associate Professor       
Assistant Professor       
Research Investigator     
Assistant Professor       
Assistant Professor       
Adjunct Research Scientist  
Associate Professor       
Professor                 
Assistant Professor       
Assistant Professor       
Associate Professor       
Professor                 
Professor                 
Assistant Professor       
Associate Professor       
Professor                 
Assistant Professor       
Professor                 
Professor                 

Institutional Affiliation
The University of Michigan 
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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Keren, David F.</td>
<td>Clinical Professor</td>
<td>Warde Medical Laboratories</td>
</tr>
<tr>
<td>Killeen, Anthony A.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
</tr>
<tr>
<td>Killen, Paul D.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Kunkel, Steven L.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Lowe, John B.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Lukacs, Nicholas</td>
<td>Research Investigator</td>
<td>The University of Michigan</td>
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<tr>
<td>McClatchey, Kenneth D.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>McKeever, Paul E.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Michael, Claire W.</td>
<td>Clinical Assistant Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Midgley, A. Rees</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Miller, Richard A.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Mitra, Raj S.</td>
<td>Assistant Research Scientist</td>
<td>The University of Michigan</td>
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<td>Mosley, R. Lee</td>
<td>Assistant Research Scientist</td>
<td>The University of Michigan</td>
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<tr>
<td>Murphy, Hedwig S.</td>
<td>Research Investigator</td>
<td>The University of Michigan</td>
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<td>Naylor, Bernard</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Nunez, Gabriel</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Oberman, Harold A.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Phan, Sem H.</td>
<td>Assistant Professor</td>
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<td>Pierson, Carl L.</td>
<td>Professor</td>
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<td>Polverini, Peter J.**</td>
<td>Clinical Assistant Professor</td>
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<td>Rasche, Rodolfo</td>
<td>Assistant Research Scientist</td>
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<td>Rekhter, Mark</td>
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<td>Remick, Daniel G.</td>
<td>Assistant Professor</td>
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<td>Ross, Charles W.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Rowe, Nathaniel H.*</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
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<td>Schmidt, Robert W.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<td>Schnitzer, Bertram</td>
<td>Clinical Professor</td>
<td>William Beaumont Hospital</td>
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<tr>
<td>Selvaggi, Suzanne M.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Shanberge, Jacob N.</td>
<td>Clinical Professor</td>
<td>The University of Michigan</td>
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<td>Sheldon, Susan</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Silverman, Eugene M.</td>
<td>Clinical Associate Professor</td>
<td>The University of Michigan</td>
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<td>Sima, Anders A.F.</td>
<td>Visiting Professor</td>
<td>The University of Michigan</td>
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<td>Singleton, Timothy P.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Stoolman, Lloyd M.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<td>Sulavik, Denise</td>
<td>Lecturer</td>
<td>The University of Michigan</td>
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<td>Till, Gerd O.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Varani, James</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<td>Ward, Peter A.</td>
<td>Professor and Chairman</td>
<td>The University of Michigan</td>
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<tr>
<td>Warren, Jeffrey S.</td>
<td>Associate Professor and Director, Clinical Laboratories</td>
<td>The University of Michigan</td>
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<td>Weiss, Bernard</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Weiss, Sharon W.</td>
<td>Professor and Director, Anatomic Pathology</td>
<td>The University of Michigan</td>
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<tr>
<td>Wojno, Kirk J.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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* Joint Appointment, Department of Internal Medicine.
** Joint Appointment, Dental School.
*** Clinical Appointment, Warner-Lambert, Parke Davis.
+ Joint Appointment, Department of Pediatrics and Communicable Diseases.
++ Joint Appointment, Department of Ophthalmology.

**In Memorium:**

The following faculty members passed away during the 1995/1996 academic year:

- Robert C. Hendrix
- Samuel P. Hicks
- Dorin L. Hinerman
- Lee A. Weatherbee
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4. Neuropathology Service (Paul E. McKeever, M.D., Ph.D.)

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6. Surgical Pathology Service (Sharon W. Weiss, M.D.)

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1. University Hospitals Blood Bank and Transfusion (Harold A. Oberman, M.D.)

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2. Chemical Pathology Laboratory (Donald Giacherio, Ph.D.)

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3. Clinical Cytogenetics Laboratory (Susan Sheldon, Ph.D.)

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4. Drug Analysis and Toxicology Laboratory (Thomas Annesley, Ph.D.)

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5. Clinical Flow Cytometry Laboratory (Charles W. Ross, M.D.)

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10. Microbiology/Virology Laboratory  
    (Carl L. Fierman, Ph.D.)  
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DEPARTMENTAL OVERVIEW
DEPARTMENTAL OVERVIEW
1995/1996

This is a time of great challenge. In the past year, as part of the ongoing institutional Cost Efficiency Program (CEP) and in response to mandates from the Reorganization Coordinating Group (RCG), the operating costs of the Clinical Laboratories (both Anatomic and Clinical Pathology Services, but mainly affecting the latter) were dramatically reduced by nearly 25%. This was achieved largely through reorganizations in the Specimen Procurement (Phlebotomy) area and extensive laboratory consolidations. These changes have resulted in a program that is more cost efficient with maintenance of high quality of service, teaching and academic programs. A central issue for the future is how to reduce further the operating costs of the laboratories while remaining able to respond to institutional service demands. It is anticipated that future efficiencies will be gained through changes in utilization, continued, further reorganizations of the Clinical Laboratories, and possibly by affiliations with other institutions.

The financial picture of the Department remains strong, but administrative changes in clinical operations (e.g., consolidated Faculty Group Practice Plan, Clinical Delivery System, Relative Value Units as a basis for reimbursement, etc.) make it very difficult to project clinical revenues in the coming years. The current challenge is to have a stable and predictable clinical operation and, at the same time, to adapt to the changing environment and preserve incentives for clinical activities. The last is essential if clinical activities are to remain robust and healthy. Currently the Faculty Group Practice Plan is deliberating on all of these matters. In addition, the Department is formulating its own initiatives.

Teaching activities continue to be key to our rationale for existence. The Department of Pathology faculty continues to make contributions to the educational programs of the Medical School, University and community. Pathology faculty provide leadership and excellent teaching in the first two years of the medical curriculum and in fourth year elective clerkships. The Department’s relatively young doctoral graduate program has been successful in recruiting a number of Medical Scientist Training Program (MSTP) students and continues to develop as a small focused program. Pathology faculty provide service teaching to various schools within the University, research opportunities to undergraduate students, and continuing medical education to the community. The Pathology Residency Training Program continues to attract outstanding house officers and is one of the top eight in the country. There is significant concern that pressures by the CDS to markedly reduce the number of specialty training positions will result in a decrease in pathology residents, to a level below a critical mass required to maintain an academic program that stands among the top ten in the country. However, the larger challenge for the Department and Medical Center is maintenance of the breadth and quality of educational programs during a period of increasing clinical demands reduce the total number of faculty.

Clinical service activities remain stable and healthy. There has been a slight increment in annual volume of anatomic and clinical laboratory functions, showing a modest 3% annual rise with, at least to date, proportional increases in revenues generated. As we move towards contracted and managed care, the key will be to reduce utilization and to continue to make the services more efficient.
This can only be done by close and careful collaborative actions with our clinical colleagues in other academic departments.

Research activities in the Department continue to be strong and relatively stable in terms of funding (most being from the National Institutes of Health). In spite of severe pressures nationally, our faculty have, on balance, held their own in national competition. Reflective of the research strengths of the Departmental are the numerous investigators (from Research Investigators and Assistant Professors to full Professors, and involving all three Divisions of the Department) receiving external funding for research. Special mention should be made of national awards from the American Society for Investigative Pathology to Department of Pathology personnel: Young Investigator Award in Training (Aklish Pandey, M.D.); 1996 Parke/Davis Award (Vishva Dixit, M.D.); 1996 Rous-Whipple Award (Peter Ward, M.D.). Such recognition speaks volumes about the standing of research in this Department and the widespread recognition of our investigators. Success in research also enhances our ability to recruit House Officers and faculty.

The Department remains strong and committed to adapting to the ever changing environment. Ahead are many challenges that will provide us with an opportunity to change and adapt in ways that will strengthen the Department as we approach the twenty-first century.

Respectfully submitted,

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 1995 - 30 JUNE 1996  

I. CLINICAL ACTIVITIES:
A. Surgical Pathology Services - four and one-half months.  
B. Necropsy Service - on call for consultation.  
C. Pathologist, Cardiac Transplant Team. Transplant biopsies - six months.  
D. Consultant for Gastrointestinal Pathology.  
E. Consultant for Cardiovascular Pathology.  

II. TEACHING ACTIVITIES:
A. Freshman Medical Class:  
   1. Pathology 500, Course Director, Lecturer, "Basic Concepts of Disease" - 20 lecture hours.  
   2. Multidisciplinary Conferences - four contact hours.  
   3. Introductory Histopathology Sequence, Sequence Director, Lecturer, Lab, Instructor - eighteen contact hours (six lectures, twelve lab hours).  
   4. Pathologic correlation in Gross Anatomy Labs - six contact hours.  
B. Sophomore Medical Class:  
   1. Cardiovascular Sequence - four lecture hours.  
   2. Cardiovascular Sequence - Pathology Lab Coordinator.  
   3. Pathology Lab Instructor - all sequences, fifty contact hours.  
   4. Surgical Pathology, Individual Studies Seminar, twenty contact hours.  
C. Senior Medical Class:  
   1. Pathology Clerkship Mentor - one month, twenty contact hours.  
D. Inteflex:  
   1. Philosophy-Ethics - two contact hours (I-3).  
   2. Annual Retreat - two contact hours.  
E. Undergraduate LS&A:  
   1. Biology #224 - two contact hours.  
   2. Undergraduate Research Opportunities Program - two contact hours.  
F. Hospital Conferences:  
   1. Cardiovascular Pathology Conference - monthly.  
   2. Internal Medicine CPC's - occasional.  
   3. Internal Medicine Necropsy Review - occasional.  
G. House Officers:  
   1. Training in Surgical and Necropsy Pathology.  
H. Invited Lectures:  
I. Production of Teaching Materials:  
   1. Glass slide loan sets with accompanying syllabus for M-1 Histopathology Sequence.  
J. Honors:  
   1. Elizabeth Crosby Award for excellence in teaching basic sciences, June 1996.
III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Pathologic-Radiologic correlation in aortic disease, with D. Williams.
B. Pathogenesis of venous thrombosis, with T. Wakefield.
C. Mycophenolate in prevention of cardiac allograft rejection, with J. Nicklas.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Member, Pathology House Officer Selection Committee.

MEDICAL SCHOOL/HOSPITAL/UNIVERSITY:

A. Member, Historical Center for the Health Sciences Liaison Committee.
B. Member, Component I Committee.
C. Ombudsperson, Medical Faculty.
D. Chair, Panel of Inquiry into Federally Sponsored Human Radiation Research at U of M (OVPR).

REGIONAL AND NATIONAL:

A. Editorial Board, Modern Pathology.
B. Deputy Medical Examiner, Washtenaw County.
C. Manuscript Reviewer for Cancer, Gastroenterology.

V. PUBLICATIONS:

ARTICLES SUBMITTED FOR PUBLICATION IN REFEREED JOURNALS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Director, Drug Analysis and Toxicology Laboratory.
   B. Consultant to Veterans Administration Hospital, Ann Arbor, Michigan.
   C. Laboratory Director, Chelsea Family Practice, M-Care Facility.
   D. Laboratory Director, Briarwood Medical Group, M-Care Facility.
   E. Laboratory Director, Briarwood Family Practice Facility.
   F. Laboratory Director, Chelsea Internal Medicine Associates.
   G. Laboratory Director, West Ann Arbor Health Care Facility.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:
   A. Medical Students:
      1. Course Director, Fundamentals of Laboratory Medicine (PTHCLNL.101)
         Component IV Medical School Curriculum.
      2. Lecturer, Minority Students Clerkship in Pathology.
   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.
      5. Coordinator, Clinical Pathology Block B.
   C. Graduate Students:
      1. Thesis Committee, Daniel Trepanier, University of Windsor, “Carbamylation of
         Erythrocyte Membrane Components.”

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. None

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Director, Drug Analysis and Toxicology Laboratory.
   B. M-Labs Technical Group.

REGIONAL AND NATIONAL:
   A. Board of Directors, American Board of Clinical Chemistry.
V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Clinical Chemistry, Editorial Board.
B. Book Reviews Editor, Clinical Chemistry.
C. Therapeutic Drug Monitoring, Editorial Board.
D. Biomedical Chromatography, Editorial Board.
E. Therapeutic Drug Monitoring and Clinical Toxicology Newsletter, Editorial Board.

OTHER:

A. Clinical Chemistry, Reviewer.
B. Biomedical Chromatography, Reviewer.
C. Therapeutic Drug Monitoring, Reviewer.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. **CLINICAL ACTIVITIES:**

A. General surgical pathology - four and one-half months.
B. Gastrointestinal and hepatic pathology consultation services - six months.

II. **TEACHING ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITALS:**

A. Medical Students:
   1. Pathology 600 - five full class lectures.
   2. Pathology 630 (dental) - one full class lectures.
   3. Senior medical student, elective rotation in pathology, supervisor one month.

B. House Officers:
   1. Surgical pathology diagnosing room instruction for assigned house officer - four months.
   2. Gastrointestinal and hepatic pathology tutoring - full time.

C. Interdepartmental:
   1. G-I Tumor Conference - Every other Wednesday (three hours/month).
   2. Liver Biopsy Conference - one hour per month.

III. **RESEARCH ACTIVITIES:**

**PROJECTS UNDER STUDY:**

A. Hepatic histopathologic changes in methotrexate-treated psoriatics, with Andrew Flint and members of the Gastroenterology Division.
B. Helicobacter-associated gastritis and non-ulcer dyspepsia with Grace Elta.
C. The fate of the transplanted liver in chronic alcoholic patients with Michael Lucey and Kyle Carr.
D. National Study of Thymosin Treatment of Chronic Hepatitis B with Milton Mutchnick.
E. Crohn's disease of the appendix with Jane Huang.
F. Recurrent autoimmune hepatitis in the transplanted liver with Michael Lucey and Kyle Carr.
G. Classification of gastric polyps with Priscilla Chamberlain.
H. Genetic changes in hepatoma with Graeme Macdonald and Joel Greenson.
I. Stromal tumors of small intestine with Joe Tworek and Joel Greenson.
J. Carcinoma of ampulla, distal common bile duct and pancreatic head with Margaret Anderson and Joel Greenson.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

MEDICAL SCHOOL/HOSPITAL:

A. Member, Cancer Work Group, University Hospital.
B. Co-Coordinator, Gastrointestinal Sequence for 2nd year medical students.

REGIONAL AND NATIONAL:

A. Chairman, Publications Committee and Member, Executive Committee, Gastrointestinal Pathology Society.
C. 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.
D. Member, Education Committee, United States-Canadian Academy of Pathology.
E. Member, Editorial Board, Human Pathology.
F. Member, Editorial Board, Modern Pathology.
G. Member, Editorial Board, American Journal of Surgical Pathology.
H. Reviewer, Archives of Pathology and Laboratory Medicine, Cancer, Gastroenterology, and American Journal of Gastroenterology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Lecturer, "The Role of the Pathologist in the Diagnosis and Management of IBD", presented at the Inflammatory Bowel Disease: Memphis Update, Memphis, Tennessee, September 24, 1994.
3. Lecture: "It's a Shame to Waste a Liver Biopsy, so Let's Milk It for All It's Worth". Eleventh Annual Eisenstein Memorial Hospital, Mercy Hospital, Port Huron, Michigan, October 21, 1994.


8. Lecturer, GI Pathology, Second Annual Seminar in Pathology, Pittsburgh, Pennsylvania, May 4-7, 1995. Sponsored by the United Hospital Center, Clarksburg, West Virginia.


10. Visiting Professor, Department of Pathology, Stony Brook University Hospital, Stony Brook, New York, May 26, 1995. Lecture on: "Differential Diagnosis of the Acutely Presenting Colitides".

11. Visiting Professor, Department of Pathology, Albany Medical College. Lectures and Seminars in GI Pathology, Albany, New York, June 6-8, 1995.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


CHAPTERS IN BOOKS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Director, Histocompatibility and Immunogenetics Laboratory.

II. TEACHING ACTIVITIES:

A. Director, Basic Immunology Course for Allergy Fellows-In-Training.
B. Instructor, Host Defense Course, First-Year Medical School Students.
C. Attending, General Internal Medicine Service.
D. Instructed Pathology Residents, Renal Fellows and Allergy Fellows in HLA typing.
E. Supervised undergraduate students in research:
   1. Isaac Yue, Jill Knapp, Grishma Joshi, Kiran Khanuja
F. Supervisor for:
   1. Allergy Fellows: Drs. Alice Chou, Joseph Lee, Katherine Liddle.
   2. Postdoctoral Fellow: Dr. Ali Motani.
   3. Medical Student: Jennifer Johnson.
   4. Internal Medicine Resident: Dr. Sunil Reddy.
G. Director, Allergy Training Program.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Immune Responses to Thyroid Peroxidase", NIAID, National Institutes of Health, RO1 A I 37141-01, 01/01/95 - 12/31/97, (budget approximately $653,708).
B. University of Michigan-MAC, National Institutes of Health, D. Fox, Principal Investigator (2 P0 AR20557-15), "Hybridoma Core" J. Baker, Principal Investigator 01/01/93 - 12/31/97 (budget approximately $276,765).
C. Michigan Diabetes Research and Training Center, National Institutes of Health, D. Greene, Principal Investigator (5 P60 DK20572-16), "Hybridoma Core" J. Baker, Principal Investigator, 12/01/92 - 11/30/97 (budget approximately $171,413).
D. Syntex Corporation, (ICM MYC/1880/USA), "Long-Term Effects of Mycophenolate Mofetil in Renal Transplants", J. Baker, Principal Investigator, 07/01/93 - 06/30/97, (budget approximately $53,904).
E. Syntex Corporation, (Study IID 2176), "Randomized, Controlled, Dose Ranging Study of Mycophenolate Mofetil", J. Baker, Principal Investigator, 08/12/93 - 08/11/96, (budget approximately $227,296).
F. Michigan Molecular Institute, "Development of Starburst Dendrimers as a Gene Transfer Agent", J. Baker, Principal Investigator, 07/01/95-12/31/96, (budget approximately $299,901).
G. ImmuLogic Pharmaceutical Corporation, "Clinical Trial of Allervax Ragweed", J. Baker, Principal Investigator, 06/01/95-05/31/96, (budget approximately $132,845).
H. NIH, National Cancer Institute, R43 CA 68820 (Phase I SBIR), "Development of Targeted Gene Transfer Vectors for Treating Colon Cancer", J. Baker, Principal Investigator on Subcontract, 08/01/95-01/31/96, (budget approximately $91,964).

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Executive Board, Michigan Diabetes Research and Training Center.
B. Hybridoma Core Steering Committee.
C. Chief, Division of Allergy, Department of Internal Medicine.
D. Medical School Faculty Representative, University of Michigan Faculty Senate.

REGIONAL AND NATIONAL:

A. Chair, Awards Committee, American Thyroid Association.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

6. Lecturer, "Endoscopic Sinus Surgery Course," University of Michigan, Department of Postgraduate Medicine and Health Professions Education, Ann Arbor, Michigan, April, 1996.

**SCIENTIFIC ACTIVITIES:**

B. Reviewer, Annals of Internal Medicine.
D. Reviewer, Endocrinology.
F. Reviewer, Autoimmunity.
G. Reviewer, Thyroid.
H. Reviewer, Journal of Biological Chemistry.
L. Regional Accreditation Commissioner, American Society for Histocompatibility and Immunogenetics.
M. Editor, JAMA Primer.

**WORKSHOPS/PANEL DISCUSSIONS:**


**VI. PUBLICATIONS:**

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

in vitro gene expression using antisense oligonucleotides or antisense expression plasmids 
transfected using Starburst™ PAMAM dendrimers. Nucleic Acids Research 24:2176-2182, 
1996.
for the treatment of refractory, acute, cellular renal transplant rejection. Transplantation 

ARTICLES SUBMITTED FOR PUBLICATION:

1. Motani, A.S., Arscott, P.L., Hennessey, L.R., McInerney, M.F. and Baker, J.R. Jr.: Thyroid 
peroxidase (TPO) in an autoantigen in non-obese diabetic (NOD) mice which develop 
autoimmune thyroiditis.

BOOKS AND CHAPTERS IN BOOKS:

Thyroid Cancer, Clinical Management, Humana Press, Totowa, New Jersey, In Press.

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

J.R., Jr: Expression of chemokines, cytokines and adhesion molecules in late-phase allergic 
(LAR) lung inflammation in rats passively sensitized with monoclonal IgE antibody, Presented, 
2. Motani, A.S. and Baker, J.R. Jr.: Proliferation of splenic mononuclear cells from NOD mice in 
response to staphylococcal superantigens, Poster Presentation, 9th International Congress of 
Immunology, San Francisco, California, July, 1995.
peroxidase is a autoantigen in non-obese diabetic mice with thyroiditis, Poster Symposium, The 
American Thyroid Association, 11th International Thyroid Congress, Toronto, Canada, 
September, 1995.
transfer and expression of genetic material in vivo in rat lung using Starburst™ dendrimer 
synthetic vectors, Annual Meeting, American Academy of Allergy, Asthma, and Immunology, 
of gene expression by antisense oligonucleotides and expression plasmids transfected with 
Starburst™ PAMAM dendrimers, Joint Meeting, ASBMB, ASIP, AAI, New Orleans, Louisiana, 
June, 1996.
specific transfer of genetic material into eukaryotic cells using synthetic polymer, Joint Meeting, 
ASBMB, ASIP, AAI, New Orleans, Louisiana, June, 1996.
THEODORE F. BEALS, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Diagnostic Electron Microscopy, Veterans Affairs Medical Center, Director of Electron
      Microscopy Center of Excellence.
   B. Cytopathology, Veterans Affairs Medical Center, Director Center of Excellence.
   C. Surgical Pathology, Veterans Affairs Medical Center.
   D. Fine Needle Aspiration, Veterans Affairs Medical Center.
   E. 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, University Hospitals.
   I. Chief Pathology and Laboratory Medicine, Ann Arbor and Toledo OPC, Veterans Affairs
      Medical Center.

II. TEACHING ACTIVITIES:
   A. Pathology House Officer elective: Diagnostic Electron Microscopy and Cytopathology
   B. Diagnostic Electron Microscopy Case Conferences.
   C. Instructor, National Laboratory Practicum Program, Department of Veterans Affairs

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Tumor suppressor gene loci on chromosome 18 and prognosis in squamous cell
      carcinoma (co-investigator, Thomas E. Carey, Principal Investigator).
   B. Head and Neck Oncology Program Project (with G.T. Wolf).

PROJECTS UNDER STUDY:
   A. Clinical relevance of ultrastructural characteristics of small cell carcinoma of lung.
   B. Utilization of plastic embedded cell blocks and electron microscopy in fine needle
      aspiration cytology.
   C. DNA content as a predictor of chemotherapeutic response and prognosis in squamous
      cell carcinoma of the larynx (with C. Bradford).
   D. Differentiation of isolated renal tubular epithelial cells in culture (with D Humes).
   E. Apoptosis in lung injury (with J.L. Curtis).
   F. Detection of Pneumocystis carinii in cytology specimens.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Electron Microscopy Committee.

**MEDICAL SCHOOL/HOSPITAL:**

A. Clinical Executive Committee, Veterans Affairs Medical Center.
B. Professional Standards Board, Veterans Affairs Medical Center.
C. Invasive Procedures Review Committee, Veterans Affairs Medical Center.
D. Electron Microscopy Committee, Veterans Affairs Medical Center.
E. Medical Records Committee, Veterans Affairs Medical Center.
F. Cancer Committee, Veterans Affairs Medical Center.
G. Automated Data Processing Committee, Veterans Affairs Medical Center.
H. Coordinator of Data Processing Committee for Pathology and Laboratory Medicine Service, Veterans Affairs Medical Center.
I. Medical School Admissions Committee.
J. Dean’s Committee, Veterans Affairs Medical Center.

**REGIONAL AND NATIONAL:**

A. Department of Veterans Affairs, Veterans Health Administration, Patient Care Services, Chief Consultant Officer, Diagnostic Services Strategic Healthcare Group.
B. Department of Veterans Affairs, Veterans Health Administration; Acting Director Pathology and Laboratory Medicine.
C. National Veterans Affairs Pathology Field Advisory Board.
D. Armed Forces Institute of Pathology, Scientific Advisory Board.
E. Association of Pathology Chairs, Veterans Affairs Committee.Consultant.
F. American Society of Clinical Pathologists, Quality Management, Cytology Committee.
G. National Veterans Affairs Cytopathology Committee, Chair.
H. National Veterans Affairs Surgical Pathology Committee, Chair.
J. Clinical Information Council.
K. Laboratory Medicine Committee, Veterans Health Administration/Department of Defense/National Institutes of Health/Indian Health Service.
L. Interagency Coordinating Committee for Minority Health Care Careers, VHA/DAD/HHS/Commerce/DOE/NASA.
M. Department of Veterans Affairs, Veterans Health, Administration, Office of Information Technology, Clinical Applications Requirement Group.
N. Department of Veterans Affairs, Veterans Health Administration, Office of Information Technology, Laboratory Expert Panel.
O. National Committee for Clinical Laboratory Standards, Delegate.

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**

1. Short Course, Closed Lung Biopsy Interpretation, with Andrew Flint, USCAP, Washington, D.C.
2. Steering Committee, Iron Mountain/Milwaukee VA HOST Telepathology Project.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:

None.

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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Nine and one-half months of Neuropathology Service.
B. Three weeks of Autopsy Service and six weekends autopsy calls.
C. Muscle and nerve biopsies referred by other hospitals in- and out-of-state throughout the year.
D. Consultations on brain biopsies, autopsied brains and rheumatology cases.

II. TEACHING ACTIVITIES:

A. Taught residents, fellows and staff in Neurology, Rheumatology and Pediatrics and medical students on muscle, nerve and brain biopsies.
B. Taught Pathology Residents how to perform and read-out autopsies.
C. Lectures on muscle, nerve and brain pathology to residents in Pathology, Neurology, and Neurosurgery.
D. Conferences on muscle and nerve cases with Neurology Department.
E. Neuropathology cases review with Pathology Residents.
F. Weekly Conferences with Neuromuscular staff.
G. Conferences and lectures for Neurosurgery Residents and staff.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Histochemistry and morphometry of skeletal muscle in patients with hypertension and diabetes. with Hypertension Clinic at the University of Michigan and Sweden.
B. Histology of animal models of rheumatoid arthritis with Arthritis and Rheumatology Section for possible grant “Molecular synovectomy by in vivo gene transfer,” with Blake Roessler and Timothy Laing.
C. Urethral musculature in aging and incontinence, with John DeLancey group, Obstetrics/Gynecology.
D. Rat model in brain tumors growth and treatment, with Donald Ross, Neurosurgery and Philip Kish.
E. Genetic treatment of hemophilia in mice model, with Kotoku Kurachi’s group in the Department of Genetics.G.
F. Evaluated 83 cases of temporal lobectomy/hippocampectomy with Lori Shuh of epilepsy group.

G. Edited the chapter on brain tumors written by Dr. H.S. Greenberg and in the process of collecting illustrations for it.


I. Histology and histochemistry of orbicularis muscle, normal and aging.

J. Histochemistry, morphometry and EM of levator palatini muscle in children with cleft palate.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Supervision of the muscle histochemistry and muscle and nerve biopsy handling.

B. Continuing improvement of interdepartmental and interinstitutional coordination of muscle and nerve biopsy service.

MEDICAL SCHOOL:

A. Member of the Admissions Committee.

REGIONAL AND NATIONAL:

A. Lectures on muscle, nerve and brain pathology to pathology residents of St. John Hospital in Detroit.

B. Consulting with outside pathologists, neurologists and family practitioners on muscle and nerve biopsies performance and interpretation.

C. Coverage of muscle and nerve biopsy service for MSU during Dr. M. Z. Jone’s vacation.

D. Member, American Association of Neuropathologists, IAP, and AAN.

E. Attended IAP, American Association of Neuropathologists and International Society of Neuropathologists meetings.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN PEER REVIEWED JOURNALS:


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 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. None.

II. TEACHING ACTIVITIES:

A. Graduate Students:
   1. Jeffrey Rouleau (Bioengineering).
   2. Robert Guldberg (Bioengineering).
B. Postdoctoral Fellows:
   1. Wushan Yin, M.D.
   2. Jianming Fang, M.D.
C. Undergraduate Students:
   1. None.
D. Courses:
   1. Pathology 600: Laboratory Instructor.
   3. Pathology 581: Course Director.
E. Continuing Medical Education:
   1. None.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

B. Principal Investigator, "LTBP Genes and Proteins: Regulators of TGF-b Activity," National Institutes of Health, AR44043 (pending)

PROJECTS UNDER STUDY:

A. Molecular cloning of microfibril constituents and members of the TGF-b superfamily.
B. Direct gene transfer in vivo.
IV. **ADMINISTRATIVE ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITAL:**

A. Member, Pre-Clinical Advisory Program, 1988 - present.
B. Biomechanics Core Steering Committee, Multipurpose Arthritis and Musculoskeletal Diseases Center, 1991 - present.
C. Member, University of Michigan Multipurpose Arthritis Center.
D. Member, University of Michigan Cancer Center.
E. Member, University of Michigan Program Bioengineering Program.
F. Patents:
   1. "Composition and Method for Production of Transformed Cells." (08/390,700).
   5. "Latent TGF-Beta Binding Protein Genes, Composition and Methods." (Submitted).

**DEPARTMENTAL:**

A. Oversight Committee, Graduate Program, 1989-present.

V. **OTHER RELEVANT ACTIVITIES:**

**EDITORIAL BOARDS:**

A. Ad-hoc Reviewer:
   1. Journal of Biological Chemistry.
   2. Connective Tissue Research.
   4. Pediatric Pathology and Laboratory Medicine.
   5. Developmental Dynamics.

B. Consultant Editor:

C. Study Sections:
INVITED LECTURES/SEMINARS:


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:


I. CLINICAL ACTIVITIES:
A. AP/CP Pathology, Veterans Administration Hospital.

II. TEACHING ACTIVITIES:
A. Pathology House Officers, Surgical Pathology/Autopsy, Department of Veterans Affairs Medical Center.

III. RESEARCH ACTIVITIES:
None.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
A. Member, Research and Development Committee, Department of Veterans Affairs Medical Center.

V. OTHER RELEVANT ACTIVITIES:

PROFESSIONAL ORGANIZATIONS:
A. Member, International Society of Urological Pathology.
B. Editorial Board, Oncology Reports.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

5. Studies done jointly with the Pathology Departments of Case Western University School of Medicine, Mayo Clinic, Texas A&M University School of Medicine, University of Liverpool and University of Colorado. Studies done jointly with Urology Departments of Texas A&M University School of Medicine, Hammersmith Hospital and University of Colorado. Status unknown.

CHAPITERS IN BOOKS:


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

1. Abstracts of several published articles reprinted in Yearbook of Pathology and Clinical Pathology, The International Monitor in Oncology.
MICHAEL J. CAPLAN, M.D.
CLINICAL ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 AUGUST 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Director, Forensic Pathology and Medicolegal Autopsies.
B. Supervision of Medicolegal Autopsies (ten months, six days per week).
C. Supervision of Hospital autopsies (six weeks, plus one weekend).
D. Deputy Medical Examiner, Washtenaw County, Coordinator of Medical Examiner Investigator activities for University Hospitals, Consultant to Medical Examiner Investigators for University and St. Joseph Mercy Hospitals.
E. Courtroom testimony, Washtenaw, Wayne, Livingston, and Jackson Counties (District and Circuit courts).
F. Intradepartmental Consultant, Surgical Pathology (for specimens of Medicolegal interest), and to pathology faculty for courtroom testimony regarding medicolegal matters and referral cases which involve medicolegal issues.

II. TEACHING ACTIVITIES:

A. Autopsy supervision, pathology house officers (including gross autopsy and case signout).
B. Bi-weekly gross Autopsy Conference.
C. Advisor, extended Gross Autopsy Conference.
D. Autopsy supervision, M4 (Senior Medical Student) clerkship, and M2 (Sophomore Medical Student) autopsy requirement.
E. M4 (Senior Medical Student) individual elective in Forensic Pathology, May, 1996.
F. Monthly Forensic Pathology Conference (Pathology House Officer Series), September 1995 - April 1996.
G. Forensic Pathology review for ASCP Pathology Resident In-Service Examination and American Board of Pathology Certifying Examinations to Pathology House Officers (May, 1996).
I. Anatomical Pathology Conference, “Medicolegal Aspects of Molecular Pathology”, February 27, 1996.
K. In-Service on Forensic Pathology, to University and Mott Hospital Operating Room Nurses and Technologists, January 25, 1996, and March 7, 1996.
L. In-Service, “Guidelines for Reporting Deaths to the Medical Examiner”, Department of Surgery Saturday Conference, Spring, 1996.
M. Presentation: St. Joseph Mercy Hospital Monthly Trauma Conference, Fall, 1995, and March 5, 1996.

III. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Director, Medicolegal Autopsies (Forensic Pathology).
B. Coordinator, Washtenaw County Deputy Medical Examiner Investigator System, University Hospitals.

INTERDEPARTMENTAL/INTERDISCIPLINARY:
A. Consultant, Office of Clinical Affairs/Risk Management.
B. Participant, Sentinel Events, Mott Hospital.

IV. INVITED LECTURES AND SEMINARS:
I. CLINICAL ACTIVITIES:

A. Director, Clinical Laboratories, Veterans Affairs Medical Center, responsibilities include, equipment and methodology evaluation, review and consultation regarding quality management programs, personnel counseling and grievance procedures.
B. Hematology, daily evaluation of pathologist referred blood smears, bone marrow smears, Veterans Affairs Medical Center.
C. Surgical/Frozen Section Diagnosis and Quality Control, (five months/year, approximately 2,200 cases/year).
D. Autopsy Service, rotational basis, on call 17 weeks/year.
E. Special Chemistry/Immunology, daily interpretation of protein electrophoreses, isoenzyme studies, and problem ligand studies, Veterans Affairs Medical Center.
F. Blood Bank, consults and investigations, full time as needed, Veterans Affairs Medical Center.

II. TEACHING ACTIVITIES:

A. Graduate course, Epidemiology 520, four lecture hours.
B. Pathology House Officers, Surgical Pathology/Autopsy supervision and instruction, (five months/year).
C. Technologists, technicians and hospital staff, ongoing continuing medical education instruction on clinical laboratory topics.
D. Graduate students, research training toward doctoral degrees.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:


PROJECTS UNDER STUDY:

A. Cytokine manipulation of mycobacterial (TH1) and schistosomal (TH2) Ag mediated forms of hypersensitivity granuloma formation.
B. Production and regulation of interleukin-1 receptor antagonist during immune/inflammatory responses.
C. Role of chemotactic cytokines, MCP, MIP and RANTES, in granulomatous inflammation.
D. Regulation of chemotactic cytokine production by leukocytes and stromal cells.
E. Analysis of eosinophil recruitment factors in Schistosoma mansoni egg-induced granulomatous inflammation.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

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

**MEDICAL SCHOOL/HOSPITAL:**

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

**REGIONAL AND NATIONAL:**

A. Editorial Review:
   2. Journal of Immunology.
   3. Inflammation Research, Section Editor.
   5. Laboratory Investigation.
   6. Parasitology.
B. Medical Advisory Committee, American Red Cross, SMBSR.

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**

1. Invited faculty lecturer, Symposium on Cytokines in Infectious Diseases, International Congress of Infectious Diseases, Annual Meeting, Hong Kong, June 10-13, 1996.
2. Case presentations at Tumor Board and Morbidity and Mortality Conferences.
3. Tissue evaluation for clinical researchers.

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:**

6. Chensue, S.W.: Cytokines in granuloma formation. 7th International Congress for Infectious Diseases, Hong Kong, Abstract 79.004, June 10-13, 1996.
ELAHE CROCKETT-TORABI, Ph.D.
ASSISTANT RESEARCH SCIENTIST
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. Training and supervision of premedical/medical students in research.

III. RESEARCH ACTIVITIES:

A. Signal transduction pathways of neutrophil activation through Mac-1 molecule.
B. Mechanisms of L-selectin-induced neutrophil activation.
C. Signal transduction pathways of neutrophil activation through FcγR.
D. Mechanisms of immune complex-induced human neutrophil activation.

SPONSORED SUPPORT:

A. Principal Investigator, "Mechanisms of Fc Dependent Neutrophil Activation", NIH-1R29 AI/GM 31436 (85%), $556,500/total costs, July 1, 1991 - July 1, 1996.
B. Principal Investigator, "Mechanisms of L-Selectin Dependent Human Neutrophil Activation", American Heart Association of Michigan Grant-in-Aid, 63GB956 (15%), $28,000 total direct costs/year, July 1, 1995 - June 30, 1996.

IV. ADMINISTRATIVE ACTIVITIES:

None.

V. OTHER RELEVANT ACTIVITIES:

A. Designed the T-shirt logo for The 9th International Congress of Immunology, 1995.
V. 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:

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. Work with house officers in planning 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.
G. Co-coordinator, Neuropathology Core Laboratory, MADRC.

II. TEACHING ACTIVITIES:

A. Neuroscience Sequence, Neuropathology for Second Year Medical Students, two-one hour lectures, eight hours laboratory, and sequence coordinator for the eight week sequence.
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, plan, and teach the course. Annual, 8 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:

PROJECTS UNDER STUDY:

B. The Pathologic Examination of Human Autopsy Brains From Patients With Clinical Diagnosis of Alzheimer's, Huntington's, Pick's and Other Dementing Diseases is being done in collaboration with Dr. Roger Albin, in the Michigan Alzheimer Disease Research Center.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Anatomic Pathology Committee.
B. Organize and teach the Neuropathology 858 Course.

**MEDICAL SCHOOL/HOSPITAL:**

A. Co-coordinator for the Neuroscience Sequence.
B. Neuroscience Curriculum Committee, Chairman.
C. Coordinator for Neuropathology, Neuroscience Sequence.
D. Neuroscience Examination Committee, Chairman.
E. Admissions Committee, the University of Michigan Medical School.
F. Executive Committee of the Admissions Committee.

**REGIONAL AND NATIONAL:**

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

V. **OTHER RELEVANT ACTIVITIES:**

A. Member, Dementia Subcommittee of the Chronic Disease Advisory Committee (State of Michigan).
B. Member, Executive Committee of the Postmortem Examination Work group of the Dementia Subcommittee (State of Michigan).
C. Consortium to Establish a Registry for Alzheimer’s Disease (CERAD) Committee.

VI. **PUBLICATIONS:**

**ARTICLES 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.
   E. Staff coverage, M-Labs

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. Current Topics in Blood Banking Conference, Towsley Center for Continuing Medical Education:
      2. Presented talk entitled: “What Leukoreduction Filters Really Do”.
      3. Moderated session on Controversies and New Directions.
   E. Clinical Pathology M-4 Elective:
      1. Lecture/Discussion: “Blood Component Utilization”.
      2. Lecture/Discussion: “Transfusion Reactions”.
      3. Lecture/Discussion: “Apheresis”.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Cytokine Roles in Hemolytic Transfusion Reactions", National Institutes of Health, K08-HL02757.

PROJECTS UNDER STUDY:

A. Cytokine production in hemolytic transfusion reactions.
B. Safety and efficacy of solvent/detergent treated plasma.
C. Polymorphisms and function of CR1 on erythrocyte membranes.
D. Mechanisms of immune suppression by blood transfusion.
E. Mechanisms of action of leukoreduction filters.
IV. **ADMINISTRATIVE ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITAL:**

A. Transfusion Committee.
B. Department of Pathology Internal Review Committee.

V. **OTHER RELEVANT ACTIVITIES:**

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

VI. **PUBLICATIONS:**

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


**ABSTRACTS, AND PRESENTED PAPERS:**


**BOOKS:**


**CHAPTERS IN BOOKS:**


**PATENTS:**

I.  CLINICAL ACTIVITIES:

   A.  None.

II. TEACHING ACTIVITIES:

   A.  Graduate students:
        1.  Responsible during the current academic year for the following activities:
            a.  Graduate Student Training and Doctoral Committees.
            b.  Joint Student Training in Pharmacology and Toxicology with Florida A&M School of Pharmacy, Toxicology Program.
            c.  Direct Postdoctoral Fellowship Program in Experimental Pathology.

III. RESEARCH ACTIVITIES:

    SPONSORED SUPPORT:

    A.  All research activities conducted with intramural support from Parke-Davis.
    B.  Collaborates with K. Johnson in the development of morphometric models for the evaluation of pathologic changes.
    C.  Consultant in quantitative microscopy, Morphology Core Lab.
    D.  Development of image analysis network system.

IV. ADMINISTRATIVE ACTIVITIES:

    DEPARTMENTAL:

    A.  Co-chair with Dr. Ward, Joint University of Michigan/Parke-Davis Research - Pathology Program.

    MEDICAL SCHOOL/HOSPITAL:

    A.  None.
REGIONAL AND NATIONAL:

A. Member, Scientific Advisory Committee, NSF Center for Light Microscopy, Carnegie Mellon University, Pittsburgh, Pennsylvania.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Editorial Board Member, Drug Metabolism Reviews.

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:


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


KENNETH O. DEVANEY, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Surgical Pathology Service - 15 weeks.
B. Primary Consultant for Bone and Joint Pathology.
D. Secondary Consultant for Head and Neck Pathology.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Sophomore Medical Class:
   1. Pathology 600 - lecture - six contact hours.
   2. Pathology 600 - laboratory sessions - 19 contact hours.
B. Senior Medical Class:
   1. Pathology clerkship - 5 M4 students for four weeks (September 1995).
   2. Pathology clerkship with specialization in orthopaedic pathology-1 M4 student for four weeks (February 1996).
C. House Officers:
   1. Training in Surgical Pathology.
   2. Weekly Surgical Pathology Conference - "Pathology School"- 40 Hours.
   3. Lectures - three hours.
   4. Surgical Pathology Consultation Conference - four hours.
   5. Pathology Resident Elective in Musculoskeletal Research (M. Putzi, M.D.- August 1995) - four weeks.
   6. Pathology Resident Elective in Musculoskeletal Pathology (L. Su, M.D.- November 1995) - four weeks.
D. Interdepartmental:
   1. Sarcoma conference - monthly: 32 hours.
   2. Department of Orthopedic Surgery, Orthopaedic Pathology Lecture Series: two hours lecture.
   3. Department of Orthopedic Surgery, Quarterly Interdisciplinary Musculoskeletal Tumor conference: four hours.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT (PENDING APPROVAL):


PROJECTS UNDER STUDY:

A. Low grade fibrosarcomas of the soft tissues.
B. Angiosarcomas developing in the first two decades of life.
C. The utility of MIC2 antibody staining in the evaluation of neuroendocrine tumors.
D. Clonality in fibromatosis.
E. Androgen receptor gene expression in fibromatosis.
F. MDM2 and p53 expression in fibromatosis.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Quality Assurance/Quality Control Representative for Section of Surgical Pathology, Department of Pathology, University of Michigan Hospitals-1995-

UNIVERSITY:

A. Member, Musculoskeletal Core, Year II Curriculum.

REGIONAL AND NATIONAL:

A. Member, Arthur Purdy Stout Society of Surgical Pathologists.
B. Ad hoc Reviewer, Cancer.
C. Abstract Review Board, United States and Canadian Academy of Pathology (1996 program).
D. Pathology Chair, Sarcoma Committee, Southwest Oncology Group.
V. OTHER RELEVANT ACTIVITIES:

WORKSHOPS:

1. Radiologic-Pathologic Correlation in the Diagnosis of Solitary Skeletal Lesions (Donald E. Sweet, M.D. and Kenneth Devaney, M.D., Course Directors), presented at the 1996 Annual Meeting of the United States and Canadian Academy of Pathology (Washington, D.C.).

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURANALS:


ARTICLES SUBMITTED FOR PUBLICATION:


CHAPTERS IN BOOKS:


ABSTRACTS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. Supervised the following graduate students: Arul Chinnaiyan, Hangjun Duan, Shimin Hu.
B. Supervised the following post doctoral fellows: David Beidler, Jim Bretz, Claudius Vincenz, Marta Muzio.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Signal Transduction by the Eck Receptor Tyrosine Kinase", NIH-GM/DK54386, 15% effort, Budget $137,000 current year, Period 04/01/96 - 03/31/00.
B. Principal Investigator, "Novel Zinc Finger Protein that Inhibits TNF Cytotoxicity", NIH-9RO1-CA61348, 20% effort, Budget $163,278 current year, $1,201,474 Total, Period 07/01/93 - 06/31/98.
C. Principal Investigator, "Thrombospondin 2; Structure, Expression and Function", NIH-RO1 - CA58182-06, 20% effort, Budget $143,657 current year, $1,236,526 Total, 8/04/92 to 05/31/97.
D. Principal Investigator, "Erb-B2 Expression and Resistance to TNF Killing", NIH-LA-64803. 10% effort, Budget $148,779 current year, $858,304 Total, 07/01/94 - 06/31/98.
E. Principal Investigator, "Characterization of Fas associated Death Domain (FADD)", NIH-AG13671, 15% effort, Budget $107,000 current year, Period 04/01/96 to 03/31/99

PENDING:

F. Principal Investigator, "CD40 Signal Transduction", NIH-HD33881, 15% effort, Priority Score: 121, Percentile Ranking: 3.3.
G. Principal Investigator, "Identification of Components of the Cell Death Pathway", NIH-ES08111, 15% effort, Priority Score: 102, Percentile Ranking: 0.2.
PROJECTS UNDER STUDY:

A. Characterization of the components of the cell death pathway.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Interview prospective graduate students for: a) Molecular and Cell Biology Program, and b) Medical Scientist Training Program.
B. 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. Editorial Board for the following journals:
   1. Journal of Biological Chemistry.
B. Pathology A Study Section (Ad-hoc).

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. Invited Speaker, IDUN Pharmaceuticals, San Diego, California, 1995.
11. Invited Speaker, Scripps Research Institute, La Jolla, California, 1995.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


I. CLINICAL ACTIVITIES:

A. None.

II. TEACHING ACTIVITIES:

A. Guest Lecturer, Anatomy & Cell Biology course #580, 1995.
B. Guest Lecturer, Biology course #421, 1995.
C. Guest Lecturer, Biology course #405, 1996.

MEDICAL SCHOOL/HOSPITALS:

A. None.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, Howard Hughes Medical Institute, 001819, "Analysis of Mammalian Developmental Control Genes", (50%), October 1, 1994-September 30, 1997. Approximately $250,000 current year (including staff salaries, supplies and travel) excluding PI's salary and benefits. The actual budget is negotiated yearly.


PENDING:

A. Co-Principal Investigator (Dr. Roger C. Wiggins, Principal Investigator), University of Michigan Nephrology Center Grant, NIH/NIDDK, "Signaling in Glomerular and Tubular Injury and Development", August 1, 1997-July 31, 2002. Dr. Dressler - Project 6 "GDNF and Branching Morphogenesis in the Kidney" (10%). Direct costs/year (Project 6 only) approximately $50,000.
PROJECTS UNDER STUDY:

A. The identification of co-factors required for Pax protein mediated transcription activation.
B. The development of novel methods for identifying genes regulated by Pax proteins.
C. The role of Pax-2 in the initiation and progression of polycystic kidney disease.
D. The GDNF/RET signaling pathway in the developing kidney.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Center for Organogenesis' International Symposium Organizing Committee.

REGIONAL AND NATIONAL:

A. None.

V. OTHER RELEVANT ACTIVITIES:

A. Membership in the American Society of Nephrology.
B. Membership in Society for Developmental Biology.
C. Membership in University of Michigan Comprehensive Cancer Center.
D. Membership in the Center for Organogenesis, University of Michigan.

INVITED LECTURES/SEMINARS:

1. Invited speaker, Sixth International Workshop on Developmental Nephrology, Airlie, Virginia, August 23-25, 1995.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN REFEREED JOURNALS:

None.

BOOKS/CHAPTERS IN BOOKS:


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

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

II. **TEACHING ACTIVITIES:**
   A. Instructor for Pathology House Officers Laboratory Rotation.
   B. Instructor for Nuclear Medicine Residents Laboratory Rotation.
   C. Participant, Clinical Pathology Grand Rounds.
   D. Instructor for Medical Student (M-4) rotation through Chemistry Laboratories.

III. **RESEARCH ACTIVITIES:**

    **SPONSORED SUPPORT:**
    A. USPHS (NIDDKD) 2P60AM20572-10: Michigan Diabetes Research and Training Center, Director Ligand Assay Core Facility, $130,000/yr., 1993-1998.

IV. **SERVICE ACTIVITIES:**

    **DEPARTMENTAL:**
    A. Director, Central Ligand Assay Laboratory

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

V. **OTHER RELEVANT ACTIVITIES:**
   A. Executive Committee Member of the Clinical Ligand Assay Society, 1995-1996.
B. Chairman of Scientific Program (Roundtables) of the 1996 Annual Meeting of the Clinical Ligand Assay Society held in Los Angeles, California.

C. Roundtable Presenter; Annual Meeting 1996 Los Angeles, California, Clinical Ligand Assay Society. Estradiol Calibration, What's Right?


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


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


**ARTICLES SUBMITTED FOR PUBLICATION:**


**MANUSCRIPTS IN PREPARATION:**

appropriate cutpoints for percent free PSA in 413 men referred for prostatic evaluation using the AxS system. In Preparation.

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Autopsy Service.

II. TEACHING ACTIVITIES:
   A. Director, Resident Training Program.
   B. Graduate Program Committee (Chairman).
   C. Course Director - Pathology Teaching Laboratories.
   D. Director - Component I and II: Medical Student Curriculum.
   E. Laboratory Instructor, M1 Histopathology Sequence.
   F. Laboratory Instructor: M2 Pathology Labs
   G. Laboratory Instructor: Dental Labs.
   H. Lecturer, M1 Host Defense Sequence.
   I. Coordinator, Department of Pathology Summer Clinical Program for Minority Medical Students.
   J. Pulmonary Pathology Conference (six per year to Pulmonary Division, Department of Internal Medicine).
   K. Graduate Student Ph.D. Thesis Committee (three).
   L. Medical Student Advisor (3rd and 4th year).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Principal Investigator, "Mechanisms of Myocardial Ischemia/Reperfusion Injury", NIH-R01-HL44085.
   B. Co-Investigator, "Regulation of IL-Gene Expression", (D.G. Remick, Principal Investigator) NIH GM50401.

PROJECTS UNDER STUDY:
   A. Mechanisms of phagocytic cell-mediated tissue injury.
   B. Signal transduction pathways of phagocytic cells.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Chairman's Advisory Committee.
B. Coordinator - Educational Programs.
C. Department ACAPT Committee.
D. Human Resource Committee.
E. Research Space Advisory Committee.
F. Faculty Sexual Harassment Contact Person.

MEDICAL SCHOOL/HOSPITAL:

A. Medical School - Executive Committee.
B. CD/ACD Education Committee.
C. Component I Committee.
D. Component II Committee.
E. Medical Student Basic Science Academic Review Board.
F. Medical Student Clinical Academic Review Board.
G. Medical School Research Space Committee
H. Medical School Information Technology Advisory Committee

REGIONAL AND NATIONAL:

C. USMLE, Pathology Test Group.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Editorial Board, Laboratory Investigation.
B. Editorial Board, Biological Signals.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:


B. Estrogen and progesterone receptor analysis of paraffin embedded breast carcinomas by image analysis - 115 samples.

C. Ophthalmic Pathology Service, September 1995 - present.

II. TEACHING ACTIVITIES:

A. Pathology 600 Lectures:

B. Pathology 630:

C. Residency Training:

D. Inteflex 211:

E. Other educational activities:
   3. Member, M-2 Respiratory Sequence Committee, 1995-1996.
   4. Course Director, M-4 Student Pathology Clerkships.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Interstitial Lung Diseases - Specialized Center of Research (1 P50 HL- 46487-01), Galen Toews, M.D. (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).
B. Monoclonal Antibodies to Bladder Tumor Antigens, H. Barton Grossman, M.D. (Principal Investigator), Andrew Flint, M.D. (Co-Investigator).
C. National Cancer Institute Study Section on Lung Cancer November 12 -14, 1995.

PROJECTS UNDER STUDY:

A. Analysis of TGF-β and its binding protein, decorin, in lung tissue of ARDS patients.
B. Histologic predictors of obliterative bronchiolitis in lung transplant patients.
C. Histologic prognostic indicators of survival in ARDS patients treated with ECMO.
D. Correlation of TGF-β levels in BAL specimens with histochemical demonstration of TGF-β in lung tissue sections
E. Ploidy analysis and P53 expression in Barrett's esophagus.
F. Pathologic effects of perfluorocarbon liquid ventilation of ARDS patients.
G. The clinical usefulness of the abnormal nondiagnostic lung biopsy sample.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

B. Member, Admissions Committee of the University of Michigan Medical School, 1995 - present

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Reviewer, Human Pathology.
B. Reviewer, Annals of Thoracic Surgery

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:


SUBMITTED PUBLICATIONS:


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


Individual Faculty Reports

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Director, Pathology Data Systems.
B. Director, Ancillary Information Systems (Pathology, Radiology, Pharmacy, Radiation Oncology, Nuclear Medicine, HomeMed) University of Michigan Medical Center.

II. TEACHING ACTIVITIES:

DEPARTMENTAL:

A. Co-Director of a laboratory section for Pathology 600.
B. Teaching and supervision of Walter Henricks, fellow in Chemical Pathology and Informatics.

MEDICAL SCHOOL/HOSPITALS:

A. Program Director of the Fourteenth Annual Symposium on Automated Information Management in the Clinical Laboratory (AIMCL) at the Towsley and Power Center, Ann Arbor, Michigan, June 5-7, 1995. The symposium attracted 276 registrants and 37 system vendors.
B. Two hours of programming from AIMCL were transmitted on June 5 as a realtime audioconference to 53 pathology training programs in the U.S. and Canada. Two additional hours of programming were transmitted on June 6 as an audioconference to laboratory managers located at 70 sites around the country in collaboration with the Clinical Laboratory Management Association.
C. Two additional standalone audioconferences were developed and offered to pathology training programs in the U.S. and Canada on October 23, 1995, and March 12, 1996. Both of these audioconferences attracted a registration of about 45 sites.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. The major research activity underway at the present time is the development and analysis of a virtual clinical laboratory and virtual department of pathology which consists of a set of teaching and research activities that are information technology enabled and span
distance barriers. The prime example of this is a relationship that is developing with the pathology informatics program in the Department of Pathology, University of Pittsburgh Medical Center, that is being referred to as the Pathology Information Exchange (PIX).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Clinical Laboratory Directors Committee.

HOSPITAL:

A. Chief Information Officer Executive Committee (CIOEC).

UNIVERSITY:


REGIONAL AND NATIONAL:

A. College of American Pathologists (CAP) Committee on Informatics.
B. Guest Editor of a Pathology Patterns (AJCP) supplement on informatics published in April, 1996.
C. Editorial Advisory Board, Clinical Laboratory Management Review.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. "Leveraging the Laboratory Database for Strategic Advantage," a lecture delivered at the annual meeting of the Clinical Laboratory Management Association, Minneapolis, Minnesota, August 29, 1995.


3. "Delivering Continuing Medical Education to Healthcare Professionals Via the Internet and Web," a lecture delivered as part of a symposium sponsored by the Healthcare Advisory Council, the International Quality and Productivity Center, Nashville, Tennessee, September 27, 1995.

5. "LISs and Managed Care: A Strategic and Management Overview," a teleconference lecture presented under the auspices of the Virtual Department of Pathology, University of Michigan Medical School, Ann Arbor, Michigan, October 23, 1995.


12. "Pathology Informatics and the Evolution of the Clinical Laboratory," an audioconference for approximately 50 sites sponsored by the Clinical Laboratory Management Association and the Catholic University of America, June 19, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Director, Chemistry Laboratory.
   B. Daily sign-out and interpretation of electrophoresis results.
   C. Direct the operation of blood gas/electrolyte analyzers, coagulation testing meters, and hematology analyzers in the Emergency Department and the operating rooms of Main, Mott, and Kellog Hospitals.
   D. Direct the workgroup overseeing the quality assurance programs for bedside blood glucose testing in the Medical Center.
   E. Planning group for the establishment of alternate site testing programs.
   F. Technical Director for laboratories at U-M Health Centers off-site clinics.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
   A. Medical School:
      1. Developed Chemistry Laboratory Presentations for the M4 Laboratory Medicine Elective.
   B. Pathology House Officers:
      1. Lecturer, Clinical Pathology Rounds lecture series.
      2. Coordinator, Pathology House Officer rotation through Chemistry Lab.
      3. Review daily sign-out and interpretation of electrophoresis results.
      4. Review of selected topics in Clinical Chemistry.
   C. Postgraduate:
      1. Doctoral Thesis Committee for Aaron Smith, Chemistry Department, University of Michigan.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Evaluation of assays for Troponin I as an early marker of myocardial injury.
   B. Evaluation of portable analyzers for the measurement of coagulation testing parameters PT, aPTT, and ACT in alternate testing sites.
C. Evaluation of immuno-rate assays for the determination of phenobarbital and carbamazepine on the Ektachem 250 analyzer.
D. Evaluation of the interference in routine serum chemistry analyses from hemoglobin based blood substitutes.
E. Evaluation of the performance and clinical utility of free PSA determinations.
F. Cost analysis of point of care testing versus central laboratory testing.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Quality Assurance Committee.
B. Director, Chemistry Laboratory.
C. Director, Point of Care Testing.

MEDICAL SCHOOL/HOSPITAL:

A. East Medical Campus Laboratory Services Planning Group.

REGIONAL AND NATIONAL:

A. Executive Committee, Michigan Section AACC.
B. Chair, Program Committee, Michigan Section AACC.
C. Lipids and Lipoproteins Division Member, AACC
D. Consultant, Parke-Davis.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Occasional coverage of Nephropathology service for Drs. K. Johnson and P. Killen.

II. TEACHING ACTIVITIES:
   A. Pathology Lab Section for M-1 students, twelve contact hours, Winter term 1996.

III. RESEARCH ACTIVITIES:
     None.

PROJECTS UNDER STUDY:
     None.

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

    MEDICAL SCHOOL/HOSPITAL:
     A. Assistant Dean for Medical School Admissions.

    REGIONAL AND NATIONAL:
     A. National Collegiate Athletic Association (NCAA), Chairperson Drug Testing Appeals Committee.
     B. NCAA Drug Testing Crew Chief.
     C. NCAA Committee on Competitive Safeguards and Medical Aspects of Sports.
        1. Chairperson of Subcommittee on Drug Education and Drug Testing.
     D. Chairman, Board of Directors, Public Citizen, Inc. (Ralph Nader, Initial Chairman and Founder).

V. OTHER RELEVANT ACTIVITIES:
   None.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS

None.
THOMAS J. GIORDANO, M.D., Ph.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. General Surgical Pathology - four months.
B. Endocrine Surgical Pathology, Departmental and Outside Consultation Services - 12 months.
C. Genitourinary Surgical Pathology - backup during Dr. Wojno’s absence.
D. M-Labs Surgical Pathology Consultation - 12 months.
E. Dermatopathology - one month.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Medical Students:
   1. Component II Endocrine Sequence - two lectures on Endocrine Pathology.
   2. Endocrine Pathology Laboratories - preparation of course materials.
B. House Officers:
   1. General Surgical Pathology - four months.
   2. Endocrine Surgical Pathology - 12 months as needed.
   3. Consultation Conferences - four months.
C. Dental and Graduate Students:
   1. Lecture on Endocrine Pathology.
D. Interdepartmental:
   1. Endocrine Conference, Department of Surgery - monthly.
   2. Endocrinology and Metabolism Clinical Conference - occasional case presentations.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, University of Michigan Phoenix Project, “Differential Gene Expression in Adrenal Cortical Neoplasms, $6,000.
PROJECTS UNDER STUDY:

A. Principal Investigator, "Genetic Analysis of Adrenal Cortical Neoplasms."
B. Principal Investigator, "Differential Gene Expression in Adrenal Cortical Neoplasms."
C. Principal Investigator, "Thyroglobulin Expression in Anaplastic Thyroid Carcinoma."
D. Principal Investigator, "Proliferation Studies of Papillary Thyroid Carcinoma During Pregnancy."
E. Co-Investigator, "Pathology of Multiple Endocrine Neoplasia, Type 1," with Dr. Norman Thompson, Department of Surgery.
F. Co-Investigator, "Histologic-Radiologic Correlation of Pulmonary Metastases of Papillary Thyroid Carcinoma," with Dr. James Sissons, Department of Internal Medicine.
G. Co-Investigator, "Pitfalls in the Surgical Treatment of Sporadic Insulinoma," with Dr. Norman Thompson, Department of Surgery.
H. Co-Investigator, "Preclinical Studies on New Drugs for Adrenal Cancer," with Dr. David E. Schteingart, Department of Internal Medicine.
I. Co-Investigator, "Molecular Genetic Analysis of an Unusual Case of Adrenal Cortical Carcinoma," with Dr. David E. Schteingart, Department of Internal Medicine.
J. Co-Investigator, "CD95 Expression in Graves Disease and Thyroiditis," with Dr. James Baker, Department of Internal Medicine.
K. Co-Investigator, "Somatostatin Receptor Analysis in Merkel Cell Carcinoma," with Dr. Rick Kloos, Department of Internal Medicine, University of Alabama, Birmingham.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. House Officer Candidate Interviews.
B. Faculty Candidate Interviews.

REGIONAL AND NATIONAL:

A. Consultant, U.S. Surgical Corporation.
B. Co-Chair of Proffered Endocrine Papers, 1995 United States and Canadian Academy of Pathology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Workshop entitled, “Practical Endocrine Pathology,” American Society of Clinical Pathologists (ASCP), Spring Meeting, Boston, Massachusetts.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN PEER REVIEWED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:


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

DAVID GORDON, M.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Supervision of Autopsies (six weeks).
B. Cardiovascular Pathology Consultation (Autopsy Service).
C. Cardiovascular Surgical Pathology.

II. TEACHING ACTIVITIES:

A. Lecturer, Biomedical Summer Research Program for Minority Students.
B. Laboratory Instructor for Pathology Laboratories for M2 curriculum.
C. Atherosclerosis lecture: Cardiovascular Sequence (M2).

III. RESEARCH ACTIVITIES:

A. Patterns of growth factor/cytokine gene expression and cell proliferation in human atherosclerosis and transplant arteriosclerosis.
B. Patterns of collagen type gene expression in human atherosclerosis and transplant arteriosclerosis; relationships to growth factor/cytokine gene expression.
C. Evaluation of the effects of specific genes transferred into the artery wall (collaborative research with Gary and Elizabeth Nabel, Department of Internal Medicine).
D. The pathologic determinants of human and animal model atherosclerotic plaque rupture (collaborative effort with Parke-Davis, Inc.).
E. The pathologic determinants of human and animal model arterial aneurysm formation and enlargement (collaborative effort with Charles Shanley and the Jobst Vascular Research Laboratory in the Division of Vascular Surgery).
F. Pathology support for ongoing melanoma gene transfer studies (Gary Nabel, Principal Investigator).
H. Member, Cardiovascular Research Center (Cardiology).

SPONSORED SUPPORT:

B. Principal Investigator, "Vascular Biology Patterns of Collagen Gene Expression in Human Atherosclerosis", American Heart Association 93013780, three years, $120,000, 1993-1996.
F. Collaborating Investigator, 10% effort on morphology core (Principal Investigator, Gary J. Nabel, Internal Medicine), “Molecular Genetic Interventions for Pediatric AIDS”, NIH-NIAID AI36606.

G. Collaborating Investigator, 10% effort (Principal Investigator, Elizabeth G. Nabel, Cardiology), “Gene transfer into the pulmonary vasculature”, NIH, NHLBI RO1 HL53466.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

MEDICAL SCHOOL/HOSPITAL:

A. Assistant Dean for Faculty Affairs (30% effort).
B. Cardiovascular Research Center, Executive Committee.
C. Dean's Diversity Advisory Group.
D. Dean’s Faculty Affairs Advisory Group.

REGIONAL AND NATIONAL:

A. National American Heart Association Fellowship Review Committee.
B. American Heart Association of Michigan Research Day Program Committee.
C. ASIP Program Committee.
D. Editorial Board, Cardiovascular Pathology

INVITED LECTURES/SEMINARS:

1. “Cell Proliferation and Collagen Gene Expression in Human Atherosclerosis,” talk given to Gladstone Institute of Cardiovascular Disease, San Francisco, California, July 24, 1995.
3. “Cell Proliferation and Collagen Gene Expression in Human Atherosclerosis,” talk given to Vascular Medicine Program, the University of Michigan, Ann Arbor, Michigan, February 6, 1996.
4. “Cell Proliferation and Collagen Gene Expression in Human Atherosclerosis,” talk given to Department of Surgery, at the University of Arizona, Tucson, Arizona, March 8, 1996.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


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


JOEL K. GREENSON, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. General surgical pathology - four months.
   B. Gastrointestinal and hepatic pathology consultation services - six months.
   C. Liver transplant pathology - six months.
   D. Dermatopathology sign-out - eight days

II. TEACHING ACTIVITIES:

   MEDICAL SCHOOL/HOSPITALS:
   A. Medical Students:
      1. Pathology 600 - Laboratory Instructor (25 contact hours).
      2. GI Pathology Sequence, assisted Dr. Appelman (ten contact hours).
      3. GI Pathology Sequence, 1.5 hour full class lecture (new this year).
      4. Preceptor for M-4 rotation (20 contact hours).
   B. Dental Students:
      1. Pathology 630-631 one full class lecture (one contact hour).
   C. House Officers:
      1. Surgical pathology diagnosing room instruction for house officers - four months.
      3. Gastrointestinal and hepatic pathology tutoring - six months.
      4. Four consultation conferences.
   D. Interdepartmental:
      1. Liver biopsy conference - one hour per month.
      2. Multidisciplinary GI tumor board - every other week.
      3. GI pathology teaching sessions with GI fellows - one hour/week.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:
   A. Co-investigator R01CA66560-01 ($5,180,000) "Staging Breast Cancer with Positron Emission Tomography", 5% salary support, Richard L. Wahl, M.D. Principal investigator.
B. Co-investigator R01ES07129-01A2 ($1,153,536) ODDT and Related Compounds and Pancreas Cancer, 5% salary support, David H. Garabrant, M.D. Principal investigator.

PROJECTS UNDER STUDY:

A. Focal active colitis study with Rob Stern and Jeff Barnett from the Division of Gastroenterology.
B. Pancreatic carcinoma study with Margaret Anderson and Henry Appelman.
C. Study of COX-2 expression in H. pylori gastritis with Division of Rheumatology.
D. Study of recurrent hepatitis C in liver transplant biopsies with Tom Frank, and Bob Merion from the Division of Transplantation Surgery.
E. Study of mini-microabscess disease in liver transplant patients with Henry Appelman, Tom Frank, and Graham Macdonald, Division of Gastroenterology.
F. Study of liver transplant rejection with Keith Henley, Division of Gastroenterology.
G. Study of MALT lymphomas arising in Helicobacter pylori gastritis with Eric Hsi and Charlie Ross.
H. Study of LOH of the DCC gene in Dukes B colon cancers with Richard Boland and John Carruthers, Division of Gastroenterology, UC San Diego.
I. Study of colorectal carcinoma metastases with collaborators at Ohio State University.
J. Study of ishemic colitis with Caroline Reilly.
K. Study of small bowel stromal tumors with Joseph Tworek and Henry Appelman.
L. Study of cytokines in experimental colitis model with Dan Remick.
M. Study of PET scans in detecting metastases in breast cancer with Richard Wahl, Division of Nuclear Medicine.
N. Study of etiology of pancreas cancer with David Garabrant, School of Public Health.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Surgical Pathology Fellowship Program.
B. Coordinator, Surgical Pathology Staff Service Rotations.
C. Member, Residency Selection Committee.

REGIONAL AND NATIONAL:

A. Reviewer, Cancer.
B. Reviewer, Archives of Pathology and Laboratory Medicine.
C. Reviewer, Gastroenterology.
D. Reviewer, Digestive Diseases and Sciences.
E. Reviewer, American Journal of Surgical Pathology.
F. Reviewer, Liver Transplantation and Surgery.
G. Resident in Training Award Committee, Hans Popper hepatopathology society resident.
H. Webmaster, Hans Popper Hepatopathology Society.
I. Abstract reviewer, GI section of USCAP meeting.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

2. Invited Speaker, “Hepatitis 1996”, Central Ohio Society of Pathology, Annual President’s Lecture.
5. Invited Speaker, Gastroesophageal Reflux Disease (GERD) Symposium, Macomb Hospital Center.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:

1. Macdonald, G.A., Greenson, J.K., Saito, K., Appelman, H.D. and Boland, C.R.: Loss of the DNA mismatch repair genes hMSH2 and/or hMLH1 is an early event in hepatic carcinogenesis. Submitted to PNAS.
BOOK CHAPTERS:


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 1995 - 30 JUNE 1996

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

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

III. RESEARCH ACTIVITIES:

   PROJECTS UNDER STUDY:
   A. Pigmented Neurocristic Hamartomas.
   B. Hair loss in utero.
   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. Board of Directors, National Alopecia Areata Foundation.

   INVITED LECTURES AND SEMINARS:
V. PUBLICATIONS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
A. Surgical Pathology reading, six weeks.
B. Pediatric Necropsies, daily, twelve months.
C. Pediatric Consultation Cases, daily, twelve months.
D. Adult Necropsy Service, ten weeks.
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 pathological material and data necessary for all children registered in national tumor protocols. (Collaborating investigator, NCI #2-U10-CA-02971-33, CSG, R. Hutchinson, M.D., P.I.).

II. TEACHING ACTIVITIES:
A. M2: Pathology 600, two hours with class as part of Congenital Heart Sequence of new curriculum.
B. M4: Pathology clerkship mentor, three students.
C. House Officers in Pathology, six weeks in surgical reading rooms.
D. House Officers in Pathology, gross and microscopic supervision of most pediatric necropsies, twelve months, and adult cases, ten weeks plus on-call weekends.
E. Lecture on Pediatric Necropsy Pathology in Orientation for new House Officers in Pathology.
F. Gross Necropsy Conference, one hour/week, twelve months.
G. Supervised Pediatric Hematology Fellows (one) for Pathology elective period.
H. Two lectures on Pediatric Pathology as part of the core curriculum for Pathology Residents.
I. Conferences: Faculty, house staff and students:
   1. Pediatric Cardiology Death Conference, monthly, twelve months.
   2. Pediatric Tumor Conference, twice monthly, twelve months.
   4. Pediatric Liver-GI Conference, twice monthly, twelve months.
   5. Pediatric General Surgery Conference monthly, twelve months.

III. RESEARCH ACTIVITIES:
A. Ongoing review of effects of various congenital heart defects on the pulmonary vasculature.
B. Ongoing study with pediatric cardiologists and thoracic surgeons 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 the predictive value of pre-ECMO lung biopsy in determining survival and recovery of pulmonary function (Group study, pathologists, surgeons, pediatricians).
B. Continuing correlation of histopathologic classification of neuroblastoma cell/tumor maturity with different tissue gene expressions.
C. Study of myocardial ventricular fibrosis in various congenital heart defects, with pediatric cardiologists. (Published - See section IV, #3).

ONGOING RESEARCH:

A. Co-investigator, with Robert Bartlett, Principal Investigator (NIH); study to further develop and research life support systems (Extra Corporeal Life Support Systems).
B. Co-investigator, with Ramiero Hernandez, Principal Investigator (Radiological Diagnostic Oncology Group), Correlative study of pediatric solid tumors - pathology and radiologic imaging.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Departmental ACAP.
B. Interviewing fellowship candidates for Surgical Pathology (ad hoc).

MEDICAL SCHOOL/HOSPITAL:

A. Executive Committee for Mott/Women's/Holden/Psychiatric Hospitals.
B. Interviewing Pediatric Cardiology fellowship candidates.

REGIONAL AND NATIONAL:

A. Member, Abstract Review Board, United States and Canadian Academy of Pathology.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Immunopathological evaluation of skin and renal biopsies.
   B. Director, Morphology Core.
   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. Principal Investigator, "Oxidants and Protease Interaction in Acute Lung Injury", National Institutes of Health, $834,625/five years.
   B. Co-Principal Investigator, "Pathophysiology of Aspiration Pneumonitis", with Paul Knight, Anesthesia, R01, National Institutes of Health - Budget - $720,866; $187,518 annual, 08/96 - 07/99.
   C. Principal Investigator, "Oxidants and Glomerular Injury", Project V, Renal Center Grant, National Institutes of Health, $246,585/five years.
   D. Principal Investigator, "Mechanisms of Glomerular and Tubular Injury", Core B, Renal Center Grant, National Institutes of Health, $147,795.
   E. Principal Investigator, "Inflammatory Cells and Lung Injury", Core C, National Institutes of Health, $291,025.
   F. Co-Investigator, "DNA Methylation and SLE", with Bruce Richardson, Rheumatology, National Institutes of Health.

PENDING SUPPORT:
   A. Principal Investigator, "Solid Phase Assay for Transaminases" NIH. SBIR.
   B. Principal Investigator, "Adhesion Molecules and Cytokines in Glomerulonephritis", with J. Varani. NIH.
C. Co-Investigator, "Amino Acids and Cell Injury", with Joel Weinberg, Nephrology and James Varani, Pathology. NIH.

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. Cyclosporin-induced nephrotoxicity.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Immunopathology Fellowship Program.
B. Renal Pathology Conference - Biweekly.
C. Space Utilization Committee.
D. Stobbe Funds 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. Visiting Professor, SUNY Buffalo, NY, Department of Anesthesiology, Buffalo, New York, 1996.
2. Invited Speaker, "Mechanisms of Pulmonary and Renal Inflammation", Emory University, Atlanta, Georgia, 1996.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


**ARTICLES SUBMITTED FOR PUBLICATION:**


BOOKS AND CHAPTERS IN BOOKS


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

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

II. TEACHING ACTIVITIES:

A. Clinical Pathology Grand Rounds:
   1. Program Director.
   2. Presented lecture entitled: “Blood groups and disease”.
B. Anatomical Pathology Conferences:
   1. Program Coordinator.
C. Core-Lecture Series in Blood Banking for 1st-year Pathology House Officers:
   1. Program Coordinator.
   2. Presented lectures on:
      a. Pretransfusion testing.
      b. Prenatal/perinatal testing.
      c. Immune hemolysis.
D. Clinical Pathology Case Study Conference:
   1. Program Coordinator.
   2. Participant.
E. Hematology/Oncology Fellows:
   1. Provided instruction in immunohematology to Dr. Afshin Ameri(ten contact hours).
F. Pathology Residents:
   1. Residency Training Review Committee.
   3. Provided instruction in immunohematology to house-officers during their Blood Bank Rotation (100 contact hours).
G. Current Topics in Blood Banking Conference, Towsley Center for Continuing Medical Education:
   1. Program Director - Planned and coordinated the May, 1996 Current Topics in Blood Banking Symposium and Preconference Workshops.
   4. Moderated morning session on Transfusion Management.
H. Clinical Pathology M-4 Elective:
   1. Member, Coordinating Committee.
   3. Presented talks on pretransfusion testing, immune hemolysis and prenatal/perinatal testing.
III. **RESEARCH ACTIVITIES:**

A. Judd WJ, Steiner EA, Knafl P. Validation of the gel test. Accepted for presentation at the Annual Meeting of the American Association of Blood Banks, Orlando, October, 1996


IV. **SERVICE ACTIVITIES:**

**DEPARTMENTAL:**

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

**REGIONAL/NATIONAL/INTERNATIONAL:**

A. Michigan Association of Blood Banks:
   1. Chairman, Advanced Lectures in Blood Banking Program - coordinated a series of 60 lectures, two full-day workshops and a two-day review session for technologists seeking Certification as a Specialist in Blood Banking.
   2. Member, Annual Meeting Program Committee.

B. American Association of Blood Banks:
   1. Member, Awards Committee.

C. Member, Editorial Board, Transfusion.

D. Reviewer of articles submitted for publication in Transfusion, Immunohematology, Transfusion Medicine Reviews, Vox Sanguinis and the ASCP Check Sample Program.

E. International Society of Blood Transfusion
   1. WHO Committee on Blood Group Nomenclature

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES:**


VI. PUBLICATIONS:

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


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

I. CLINICAL ACTIVITIES:

A. Director, Molecular Diagnostics, 1993-present.
B. Director, Clinical Chemistry Section, 1993-present.
C. Interpretation and sign-out of protein electrophoretic analyses (Immunology Laboratory), 1993-present.

II. TEACHING ACTIVITIES:

A. Lectures to Medical Students in M4 Laboratory Medicine Elective.
B. Lectures to House Staff on Block B, Clinical Pathology.
C. Protein Sign-Out in Immunology Laboratory with one-two residents for four-six hours biweekly.
D. Molecular Diagnostics Sign-Out with Fellow, weekly.
E. Lectures to Pathology House Staff and Faculty at Clinical Pathology Rounds.
F. Research advisor to undergraduate: Ms. Lisa Passmore (Undergraduate, now accepted for medical school at the University of Alabama, Birmingham, Alabama). Research advisor to Ms. Patricia Polaczyk, Undergraduate.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Identification of genes activated by mineralocorticoid hormones.
B. Quantitative analytical technologies for nucleic acids.

SPONSORED SUPPORT:

A. American Heart Association (Michigan Chapter) 7/1/95-6/30/96, $27,600, "Identification of Mineralocorticoid Response Genes", Principal Investigator.
B. Michigan Phoenix Memorial Project. 7/1/95-6/30/96, $4,900 "Identification of Mineralocorticoid Response Genes", Principal Investigator.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Molecular Diagnostics Laboratory.
B. Director, Clinical Chemistry Section.
C. Member, Pathology Resident Selection Committee.
D. Obtained ACGME Certification for the Fellowship Program in Chemical Pathology for the Department of Pathology.

MEDICAL SCHOOL/HOSPITAL:

A. Member, Patient Care Information Systems (PCIS) Committee.

REGIONAL AND NATIONAL:

A. Program Chair, Association for Molecular Pathology Annual Meeting, 1996 (to be held in Baltimore, November 1996).
   1. Editor of ACLPS Newsletter.
   2. Chair, ACLPS Taskforce on Networking.
B. Member, AACC, ASHG, CAP, ACLPS, AMP.
C. Manuscript Reviewer, Clinical Chemistry, and Molecular Diagnosis

V. INVITED LECTURES AND SEMINARS:

2. "Molecular Biology Applicants in Pathology", Ohio Society for Clinical Laboratory Sciences Annual Meeting, Toledo, Ohio, April, 1996.

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. Board Certification, Anatomic Pathology.
B. Autopsy Pathology (11 days).
C. Diagnostic Renal Biopsy Service (six months).
D. Chief Renal Consultant.

II. **TEACHING ACTIVITIES:**

A. M2 Pathology Lecture - Renal Sequence (three hours).
B. M2 Pathology Laboratory- Renal Sequence (16 hours).
C. Co-Coordinator - Renal Sequence (40 hours).
D. Curriculum Development -Renal Sequence (80 hours).
E. Gross Pathology Conference.
F. Renal Pathology for Pathology Residents (four hours).
G. Renal Pathology for Nephrology Fellows (nine contact hours).
H. Renal Pathology Fellow - Carrie Phillips - (300 hours).
I. Autopsy Pathology (five hours).
J. Undergraduate Students (one).
K. Dissertation Committees (one).
L. Post Doctoral Fellows (two).

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. Principal Investigator, "Collagen IV Gene Transcription in cpk/cpk Mice", NIH-RO1-DK44848, (25% Effort) $143,000/first year, 9/30/91-9/29/95.
B. Principal Investigator, Project VI, "TGF-β Induced Collagen IV Gene Transcription", NIH-P50-DK39225, (10% Effort) $49,822/year, 8/1/92-7/30/97.
C. Co-Investigator, "Renal Fibrosis", NIH-RO1, (5% Effort) $198,213/ year, 4/1/93-3/30/98.
D. Co-Investigator, "Role of EDRF in the Juxtaglomerular Apparatus", NIH-RO1-DK40042, (5% Effort) $164,666/year, 12/1/93-11/30/98.
E. Core Consultant, Molecular Biology Core, "Michigan Diabetes Research and Training Center", NIH-P60-DK20572, (5% Effort) $100,000 direct costs/year, 4/1/93-3/31/98.
PENDING SUPPORT:

A. Co-Investigator, "Altered Neural Myo-Inositol Metabolism in Diabetes", NIH-R01-DK38304, (20% Effort) $225,547 direct costs/year, 1/1/97-12/31/01.
B. Co-Investigator, "IGF-I is an Osmoprotectant in Neuroglial Cells", NIH-R01-DK38304, (5% Effort) $103,045 direct costs/year, 1/1/97-12/31/00.
C. Co-Director, Morphology Core B, George M. O'Brien Renal Center, NIH-P50-DK39225, (5% Effort) $55,603 direct costs/year.

PROJECTS UNDER STUDY:

A. Regulation of collagen IV gene expression.
B. Structure and assembly of collagen IV chains.
C. Regulation/expression of hypertonicity stress proteins.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Postdoctoral fellow recruitment, Immunopathology Training Grant.
B. Anatomic Pathology Accessioning Committee.
C. Assistant Director, Diagnostic Renal Biopsy Service.

MEDICAL SCHOOL/HOSPITAL:

A. Faculty recruitment - Department of Internal Medicine.
B. Faculty recruitment - Department of Surgery.
C. 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.
D. Reviewer:
   1. Laboratory Investigation.
   5. Journal of Biological Chemistry.
V. INVITED LECTURES AND SEMINARS:


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:


I.** CLINICAL ACTIVITIES:**

A. None.

II. **TEACHING ACTIVITIES:**

A. Epidemiology 570.
B. Host Defense Sequence, First Year Medical School.
C. Lecture in didactic seminar series, Internal Medicine (Rheumatology).
D. Member, Pathology Graduate Program Committee.
E. Member, Lung Immunopathology Postdoctoral Training Program (Pathology).
F. Member, Operating Committee, Systems and Integrative Biology Training Program (Physiology).
G. Member, Experimental Immunopathology Training Program (Pathology).
H. Member and Co-Director, Pulmonary Cellular and Molecular Biology Training Program.
I. Member, Graduate Teaching Award Review Committee.
J. Supervised the following postdoctoral fellows and graduate students:
   1. Dr. Doug Arenberg, Postdoctoral Fellow.
   2. Dr. Betsy Parks, Postdoctoral Fellow.
   3. Dr. Ken Simpson, Postdoctoral Fellow.
   4. Dr. Cary Caldwell, Postdoctoral Fellow.
   5. Dr. Bruno DiGiovine, Postdoctoral Fellow.
K. Undergraduate students:
   1. Kolby Keefer.
   2. Laural Goldstein.
   3. Harold Schock.
   4. Drew Pullen.
   5. Matt Steinhouse.
   7. Scott Lipinski
   8. Carrie Zickus.
L. High school students: Jamal Bufford
M. Doctoral Thesis Committee Member/Orals Committee for the following graduate students:
   1. Andrew Merry (Pathology).
   2. Jami Foreback (Pathology).
3. Arul Chinnaian (Pathology).
4. Hangjun Duan (Pathology).
5. Fran Wolber (Pathology).
8. Mei-Chen Kuo (Public Health).
N. Sabbatical supervisor for Dr. Keith Walley, University of British Columbia.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Macrophage/Monocyte Signals in Lung Granuloma Formation", HL-RO1-35276; National Institutes of Health.
B. Principal Investigator, "Monokine Gene Expression/Regulation in Lung Injury", HL-RO1-31237, National Institutes of Health.
C. "Inflammatory Cells and Lung Injury", Program Project HL-31963; Principal Investigator for Section II, National Institutes of Health.
D. "The role of TNF and ICAM-1 in Lung Allograft Rejection", Co-Investigator, HL-50057, National Institutes of Health.
E. NIH-RO1, "The Role of C-X-C Chemokines in Lung Cancer, Co-Investigator.
F. SCOR, "Occupational and Immunological Lung Disease", Co-Investigator, P50HL-46487, Effect of Alcohol on Cytokine Mediated Lung Host Defense", Co-Investigator AA-10571

PATENTS:

A. "Labelled Monocyte Chemotactic Protein-1 and Medical Uses Thereof", # 5,413,778 issued May 9, 1995.

PROJECTS UNDER STUDY:

A. Role of cytokines in acute inflammation.
B. Regulation of macrophage gene expression.
C. Macrophage-lymphocyte interactions in the initiation, maintenance, and resolution of chronic inflammation.
D. Role of cytokines in tumorigenesis.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Operating Committee Pathology Graduate Program.
B. Space Utilization and Research Committee.
C. Interview Candidates for Residency/Graduate Program.
D. Divisional Director of General Pathology.

MEDICAL SCHOOL/HOSPITAL/UNIVERSITY:

A. Member, Committee on Medical Student Research.
B. Medical School Admission Interview Committee.
C. Medical Scientist Training Program Interview Committee.
D. Member, Research Council of the Office of the Vice President for Research.
E. Member, Michigan Cancer Center.
F. Grant Reviewer, Biomedical Research Council.
G. Member, Advisory Committee Cancer Center Animal Core.
H. Member, Panel of Inquiry into Federally-Sponsored Human Radiation Research at the University of Michigan in the Post-World War II Era.
I. Member, Search Committee, Computational Biology.
J. Member, Search Committee, Department of Microbiology/Immunology.
K. Associate Dean, Rackham Graduate School.

REGIONAL AND NATIONAL

A. Senior Associate Editor, American Journal of Pathology.
B. Associate Editor, American Journal of Respiratory Cell and Molecular Biology.
C. Associate Editor, Pathobiology.
D. Associate Editor, Shock.
E. Editorial Board, Mediators of Inflammation.
F. Vice-Chair, 1998 Gordon Conference on Chemokines.
G. Member Program Committee, American Society of Investigative Pathology.
H. Reviewer for the following journals:
   4. Infection and Immunity.
   5. Laboratory Investigation.
   7. Journal of Immunology.
I. Grant Reviewer, The Arthritis Society.
J. Grant Reviewer, Veterans Administration.
K. National Institute of Health Study Section, Lung Biology and Pathology, Ad Hoc, 1995.
L. National Institute of Health Study Section, Bacteriology & Mycology-1, Ad Hoc, 1996.
M. National Cancer Institute Site Visit Team, Laboratory for Molecular Immunoregualtion, 1996.
N. Scientific Advisory Council, American Lung Association.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. Invited Chair/Speaker, The 9th International Congress of Immunology, San Francisco, California, July, 1995.
2. Invited Speaker, World Congress on Immunology, Brighton United Kingdom, September, 1995.
4. Invited Speaker, Hammersmith Hospital, Department of Infectious Diseases, London, United Kingdom, October, 1995.
5. Invited Speaker, Gene I. Higashi Memorial Lecture, School of Public Health, University of Michigan, Ann Arbor, Michigan, November, 1995.
6. Visiting Professor, University of Toronto Immunology Center, Toronto, Ontario, Canada, January, 1996.
7. Invited Speaker, Department of Pathology, University of Virginia, Charlottesville, Virginia, January, 1996.
10. Invited Speaker, Special Emphasis Panel, NHLBI, Lung Biology and Disease, Bethesda, Maryland, June, 1996.

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 PUBLICATION IN UNREFEREED JOURNALS.


I. CLINICAL ACTIVITIES:

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

II. TEACHING ACTIVITIES:

A. Supervision of nine postdoctoral fellows (Aron Thall, Ph.D., Peter Smith, Ph.D., E. Paul Scheidegger, M.D., Kazuhiro Yago, M.D., Daniel Legault, M.D., Steven Domino, M.D., Ph.D., Jonathon Homeister, M.D., Ph.D., Petr Maly, Ph.D., and Hedwig Murphy, M.D., Ph.D.).

B. Lecturer - Postdoctoral Research Training Program.

C. Member of three Ph.D. thesis committees (Akhilesh Pandey, George Pipia, and Vance H. Thomas).

D. Oral preliminary committees; Department of Pathology, Ph.D. Program.

III: RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. "Oligosaccharide Function During Murine Embryogenesis", Source of Award: Howard Hughes Medical Institute.

B. Principle Investigator, "Molecular Biology of Human α1,3fucosyltransferase Genes", NIH GM47455 (25% effort), $286,925/five years direct cost, 5/1/92 - 4/30/97.

C. Principle Investigator, "Molecular Biology of the Human H and Se Blood Group Genes", NIH HL48859 (25% effort), $276,554/five years direct cost, 08/01/92 - 12/31/97.

D. Program Project - Project #2 Principal Investigator, "Carbohydrate-dependent Adhesion of Normal and Tumor Cells", NIH - CA71932 (25% effort), $732,109/five years direct cost, 07/08/96 - 04/30/2001.

E. Program Project - Project #1 Principal Investigator, "Oligosaccharides as Anti-Inflammatory Agents", NIH AI33189, (15% effort), $481,355/five years direct cost, 09/01/92 - 04/30/97.


G. Sponsor, Reproductive Scientist Development Award, "Cell Surface Molecules That Mediate Blastocyst Implantation", Steven E. Domino, M.D., Ph.D., 07/01/94 - 06/30/99.
H. Sponsor, Physician Scientist Award, "Structure and Function of Recombinant Selectin Ligands", Hedwig Murphy, M.D., Ph.D., 09/01/94-08/31/99.

**PROJECTS UNDER STUDY:**

A. Structure and regulation of mammalian oligosaccharide genes. Efforts are focused on the isolation and analysis of gene(s) for human and murine glycosyltransferases, using mammalian gene transfer techniques, and on characterization of immune defects in glycosyltransferase knock-out mice.

**IV: ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Resident Selection Committee.
B. Chair, Neuropathology Faculty Search Committee.

**REGIONAL AND NATIONAL:**

A. Member, Pathobiochemistry Study Section, Division of Research Grants, National Institutes of Health.
B. Member, Scientific Advisory Board, The Ara Parseghian Medical Research Foundation (Niemann-Pick disease type C).
C. Co-chair, Unified Graduate Admission Program Task Group, University of Michigan Medical School.
D. Member, Editorial Board of the Journal of Biological Chemistry.
E. Member, Editorial Board of Glycobiology.
F. Member, Editorial Board of Archives of Biochemistry and Biophysics.

**V. OTHER RELEVANT ACTIVITIES:**

A. Howard Hughes Medical Institute, Associate Investigator.

**VI. INVITED LECTURES AND SEMINARS:**


VII. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED OR IN PREPARATION:


5. Hiraiwa, N., Domino, S., Saunders, T. and Lowe, J.B.: Dominant pre-implantation lethality in mice directed by aberrant expression of an α(1,2)fucosyltransferase cDNA. In Preparation.


BOOKS AND CHAPTERS IN BOOKS:

NICHOLAS W. LUKACS, Ph.D.
RESEARCH INVESTIGATOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENT REPORT
1 JULY 1995-30 JUNE 1996

I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. "Immune mechanisms of Disease", Epidemiology 570, Course Instructor, Fall, 1995.
B. Immunovirology lectures, Epidemiology, School of Public Health, Lecturer, Winter, 1996.
C. Supervised Undergraduate students: Kolby Keifer, Matt Steinhauser, Scott Lipinski, Carrie Zickus, and Eric Strieer.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Role of C-C Chemokines in Eosinophil Airway Inflammation", R-29 FIRST Award, National Institutes of Health, May 1, 1996 to April 30, 2001.
D. Co-Investigator, "The Role of Chemokines in Autoimmune Encephalomyelitis", NIH RO1 NS34510-01, with William J. Karpus, Ph.D. Microbiology/Immunology, Northwestern University, Chicago, Illinois, September, 1995 to August, 1999.

PENDING SUPPORT:

B. Co-Investigator, "Fibrotic Cytokine Phenotypes in Interstitial Lung Disease" Project 3, NIH Special Centers of Research (SCOR) grant, with Steven L. Kunkel, Ph.D. Galen B. Towes, M.D. SCOR Director.
PROJECTS UNDER STUDY:

A. Regulation of cytokine and chemokines during eosinophilic airway inflammation.
B. Role of mast cells in chronic inflammation.
C. Regulation of chemokine production during cell-to-cell interactions.
D. Role of chemokines in autoimmune responses.
E. Adhesion molecules in chronic inflammatory responses.
F. Role of stem cell factor (SCF) in acute and chronic inflammation

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

None

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Reviewer for the following Journals:
   1. American Journal of Pathology
   2. Journal of Immunology
   3. American Journal of Respiratory Cell and Molecular Biology
   4. Infection and Immunity
   5. Immunology Today

INVITED LECTURES/SEMINARS:

1. "Participation of Chemokines in Inflammatory Lung Inflammation", Wayne State University School of Medicine, Department of Immunology/Microbiology. Detroit, Michigan, October 3, 1995.
8. "Chemokine Activation and Regulation in Animal Models of Disease", Louisiana State University Medical School, Department of Microbiology and Immunology, New Orleans, Louisiana, May 13th, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERREED JOURNALS:


**BOOKS/CHAPTERS IN BOOKS**


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Surgical Pathology, consultant on head and neck pathology cases, 1983-June 30, 1996.
B. Autopsy, 1983-present:
   1. Consultant on forensic odontology cases.
   2. Assistant Medical Examiner, Washtenaw County.
C. Director of Clinical Microbiology/Virology Laboratory, 1978-March, 1996.
F. Staff, Oral Pathology Laboratory, School of Dentistry, 1973-June 30, 1996.
G. Professor, Department of Otorhinolaryngology, 1991-1995.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Pathology 630/580/631; Course Director, 1983-June 30, 1996.
B. Otorhinolaryngology Pathology 856, Director, 1979-June 30, 1996.

III. RESEARCH ACTIVITIES:

A. 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, 1988-1995.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Clinical Microbiology/Virology Laboratory, 1978-March, 1996.

MEDICAL SCHOOL/HOSPITAL:

B. Member, Patient Care Advisory Committee, The University of Michigan Hospitals, 1989- June 30, 1996.
C. Member, Technical Advisory Committee, State of Michigan, Department of Health, Bureau of Laboratory and Epidemiological Services, 1987-June 30, 1996.
D. Chairman, Standardization and Product Evaluation Committee (SPEC), The University of Michigan Medical Center, 1991-June 30, 1996.
F. Member, Executive Committee on Clinical Affairs, The University of Michigan Medical Center, 1990-1995.
I. Health Services Research Coordinating Committee, University of Michigan, 1993-June 30, 1996.

REGIONAL AND NATIONAL:

A. College of American Pathologists:
   1. Member, Standards Committee, 1986-present.
B. National Committee for Clinical Laboratory Standards:
   2. International Relations Committee, member, 1988-present.
   3. Committee on Standardization of the PAP Technique, Chairman, 1988-present.
   4. Committee on Standardization of FNA Technique, Chairman, 1992-present.
   5. Area Committee on Alternate Site Testing, member, 1993-present.
   7. Member, Board of Governors.
C. American Society of Clinical Pathologists:
   2. Contributor, Laboratory Management, Resident Examination, 1992-present.
E. American Society for Testing Materials (ASTM):
   1. Committee F31 on Health Care Services, member, 1988-present.

INTERNATIONAL:

A. Secretariat, Commission on World Standards of World Association of Societies of Pathology, 1987-present.
C. International Organization for Standardization Technical Committee 212, 1995-present.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

3. International Laboratory Standardization, National Committee for Clinical Laboratory Standards, Annual Conference, Atlanta, Georgia, March, 1996.
VI. PUBLICATIONS

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


ARTICLES SUBMITTED FOR PUBLICATION


BOOKS AND CHAPTERS IN BOOKS


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

1. McClatchey, K.D.: The reference system for the clinical laboratory: Criteria for development and credentialing of methods and materials for harmonization of results; Accepted guideline, National Committee for Clinical Laboratory Standards, 1995.

2. Clinical Laboratory Medicine, Videodisc Program, Clinical Laboratory Medicine, Wilkins & Wilkins, Inc., 1995.
PAUL E. McKEEVER, M.D., Ph.D.  
ASSOCIATE PROFESSOR OF PATHOLOGY  
DEPARTMENT OF PATHOLOGY  
ANNUAL DEPARTMENTAL REPORT  
1 JULY 1994 - 30 JUNE 1995

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

II. TEACHING ACTIVITIES:

A. Neuroscience Sequence, 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 - six months.
   5. Invited presentations of neuropathologic observations at joint clinical conferences.
   6. Pathology Resident's monthly Neuropathology Conference - four months.
C. Two Pathology House Officers: Scott Silveira and Walter Henricks, and one Neurosurgery House Officer, Michael Polinsky: One month electives in neuropathology.
D. Teach laboratory techniques to Neurohistologists and Research Staff.

REGIONAL AND NATIONAL:
B. 33rd Faculty Annual AFIP Neuropathology Review, Armed Forces Institutes of Pathology, New Orleans, Louisiana.

III. RESEARCH ACTIVITIES:


PROJECTS UNDER STUDY:

A. Glioma tissue marker potential diagnostic and prognostic value with Drs. Mila Blaivas, Thomas W. Glover, David Gordon, Harry S. Greenberg, Robert Jones, Larry Junck, Anthony A. Killeen, Hernando Mena, James S. Nelson, Donald Ross, Susan Sheldon, Myla Strawderman, Jeffrey M. Trent and Sharon W. Weiss. Submitted to NCI.

B. Growth, spread and antigenicity of ENU-induced gliomas in rats with Constance D’Amato and Dr. Terry Hood, submitted to J. Neuro-oncology.

C. Quantitative analysis of DNA in fresh and cultured cells of brain tumors, with Drs. Karin Muraszko, Donald Ross, William Chandler and James Varani.

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

E. 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. Combined ultrastructural and karyotypic analysis of the VX-2 tumor with Dr. Thomas E. Carey, submitted to Int. J. Cancer.

H. Viral vectors in glioma therapy with Drs. Julian Hoff, Brian Ross and Donald Ross.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Chief, Section of Neuropathology.

B. Member, Photography Committee.

C. Member, Immunoperoxidase 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 neuropathology by staff.

C. Supervision of Neurohistologists and Neuropathology Laboratories, and quality control of histologic preparations.

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

E. Quality control of microscopic, ultrastructural and immunodiagnostic neuropathology. This included scheduled twice monthly QA/QC meetings and various ad hoc reviews requested by faculty.
REGIONAL AND NATIONAL:
A. Primary Review Pathologist, Children's Cancer Study Group CCG 9891 nationwide study of childhood low grade gliomas.
B. Reviewer for various pathology, neuroscience and neuro-oncology journals.
C. M-Labs Neuropathology Services.

V. OTHER RELEVANT ACTIVITIES:

PROFESSIONAL ORGANIZATIONS:
A. Faculty of Graduate Program of Department of Pathology.
B. Member of the University of Michigan Cancer Center.
C. Member, International Academy of Pathology, 1972--.
D. Member, Alpha Omega Alpha, Eta Chapter, 1972--.
E. Member, American Association of Neuropathologists, 1978--.
F. Member, Society of Neuroscience, 1983--.
G. Member, American Association of Pathologists, 1984--.
H. Member, Children's Cancer Study Group, 1985--.
   1. Pathology Committee, 1989--.
I. Member, Histochemical Society, 1989--.
   2. Councilor, 1994--.
J. Member, Constitution Committee, American Association of Neuropathologists, 1990--.

INVITED LECTURES/SEMINARS:
2. Chairperson, scientific session, Brain tumors, United States and Canadian Academy of Pathology, Toronto, Ontario, 1995.

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:

CLLAIRE W. MICHAEL, M.D.
CLINICAL ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Cytopathology - six months.
B. Breast Cytopathology (transfer cases) and back-up Breast Pathology - twelve months.
C. Consultation Service, Department of Pathology:
   1. Cytopathology - twelve months.
D. Necropsy Service - one week and six weekends.

II. TEACHING ACTIVITIES:

A. Residents and Cytopathology Fellow:
   1. Sign out; Gynecologic and Non-Gynecologic Cytology cases.
   2. Instruction in the performance and interpretation of fine needle aspirates.
B. Other Education Activities:
   1. Cytotechnologists - Cytopathology Conferences - three/year.
   2. Visiting Cytopathologist - two weeks.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. The cytologic spectrum of mesothelioma in situ, with Dr. C.W.M. Bedrossian, Wayne State University.
B. Can true papillary neoplasms and their mimickers be distinguished cytologically?, with B. Buschmann, University of South Alabama.
C. The differential diagnosis of Psammoma bodies on cervical smears.
D. The cytologic spectrum of apocrine lesions of the breast.
E. Mammographic demonstration of transient microcalcifications in postpartum state: A case report, with D.M. Gomez, and M. Roubidoux, Department of Radiology.
F. Mammographic identification of microinvasive carcinoma (in conjunction with M. Roubidoux, Department of Radiology).
G. Mammographic evaluation of simple versus complex fibroadenoma (in conjunction with M. Roubidouz, Department of Radiology).
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Associate Director, Cytopathology Laboratory.

**MEDICAL SCHOOL/HOSPITAL:**

None.

**REGIONAL AND NATIONAL:**

A. Reviewer, Diagnostic Cytopathology.
B. Member, Quality Control Committee, Papanicolaou Society of Cytopathology.

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**

None.

VI. **PUBLICATIONS:**

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

5. Michael, C.W., King, J. and Hester, R.: Confocal laser scanning microscopy (CLSM) and three-dimensional reconstruction of serous fluids, Submitted to Diagn Cytopathol.

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


I. CLINICAL ACTIVITIES:

CLINICAL RESEARCH-RELATED ACTIVITIES:

A. Laid groundwork for transition to new leadership: initiated multiple discussions with Reproductive Sciences Program Executive Committee and Membership and held two retreats.

B. Stabilized core laboratory with implementation of state-of-the-art procedures for assay performance. This involved moving to new, expanded quarters; introducing a high degree of automation; implementing QC and reagent control systems good for multi-year studies; acquiring a major new supplemental grant; implementing GLP-type practices; and establishing new methods.

C. Generated interest and initial planning towards development of a hypermedia-based learning system re. human reproduction with an aim to be of value to persons at a wide range of ages and with knowledge ranging from middle school years through residency training.

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 1995.
   2. Lectured for Bioengineering 500, Dynamics of Cellular Response.

B. Graduate Students:
   1. Karen Heinze, Bioengineering - Doctoral Student transferred supported on NCIR Grant.
   2. William Lemon, Bioengineering, supported on NCIR Grant.

C. Undergraduate Students:
   1. Marjorie Dugué, post-baccalaureate student, Pre-Medical Student.
   2. Jasmin Ghuznawi, Pre-Medical Student.
   3. Chris Liu, Pre-Medical Student.
   4. Carla O'Neal, post-baccalaureate student, Pre-Medical Student.
   5. Mona Prasad, Pre-Medical Student.

D. Dissertation Committees:
   2. David Mauger, Biostatistics, Ph.D. awarded.

E. Worked with Visiting Scientist:
   1. Bent G. Boving, Ph.D., Extramural Associate, Department of Embryology, Carnegie Institute of Washington.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH, P30 HD 18258, A.R. Midgley, Principal Investigator, “Center for the Study of Reproduction,” 04/01/94 - 03/31/99, $3,039,072, 10%.
B. NIH, U54-HD 29184-04, N. Reame, Principal Investigator, “National Center for Infertility Research at Michigan,” 09/01/91 - 08/31/96, $5,496,007, 28%.
E. NIH, 1RO1-MH 03204, E. Young, Principal Investigator, “Stress and Reproductive Hormones in Depressed Women,” 08/01/94 - 07/31/95, $661,569, 5%.
F. NIH, T32-HD 07048, D. Foster, Principal Investigator, “Training Program in Reproductive Endocrinology,” 07/01/95 - 06/30/00, $1,354,407, 5%, (no salary support).

PENDING:

A. NIH, U54-HD 29184-04, N. Reame, Principal Investigator, “National Center for Infertility Research at Michigan, Project I, Dynamic Mechanisms of Neuroendocrine Feedback in PCO,” 09/01/96 - 08/31/01, $5,496,007 ($1,050,776, Project I), 28% (Project I and Administrative).
B. NIH, R01-HD-34732-01, A.R. Midgley, Principal Investigator, “Dynamic Mechanisms of Neuroendocrine Feedback in PCOS,” 12/01/96 - 11/30/01, $1,204,357, 20%.
C. NIH, R01, A.R. Midgley (June 1, 1996 submission), “Mechanisms Responsible for the LH Surge,” 04/01/97 - 03/31/02, $1,247,332 (estimated direct), 20%.

SCIENTIFIC COLLABORATIONS:

A. Biostatistics; Morton Brown and Yuedong Wang: Development and implementation of a means for automating the collection of immunoassay data and organizing it in a distributed database for clinical hormone studies; modeling the distribution of hormone pulses.
B. Institute of Gerontology; Matthew Witten: Developing a mathematically based model of the sheep reproductive system (with Robert Keener (Statistics), Yuedong Wang (Biostatistics), Fred Karsch (Physiology), Vasanth Padmanabhan (Pediatrics) and Doug Foster (Obstetrics and Gynecology).
C. Obstetrics and Gynecology; John Randolph and Greg Christman: Analysis of hormonal time series profiles in control women and women with polycystic ovarian syndrome.
D. 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.
E. Innovation Associates, Ann Arbor, Michigan, Judith Erb, Immunoassayist: assisted in development of a funded SBIR concerning the development of simplified immunoassays able to evaluate fertility and development of a second funded SBIR.

F. Massachusetts General Hospital: Pat Sluss, Reproductive Biologist: development of assays for inhibin, follistatin and activin.

G. Yale University: Steve Pincus, a mathematician-entrepreneur associated with Yale, is collaborating with our laboratory to explore ways in which application of his measure of approximate entropy to reproductive hormones will be useful.

PROJECTS UNDER STUDY:

A. Neuroendocrine causation of polycystic ovarian syndrome; mechanisms controlling pituitary gonadotropin secretion.

B. Dynamics and modes of regulatory communication among cells.

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

D. Modeling of the LH surge as a prelude to modeling the reproductive cycle of the sheep.

E. Development of novel biosensors and immunoassays.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:

A. Director, Center for the Study of Reproduction (NIH P30).

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

C. Director, Standards and Reagents Core Facility (NIH P30 Center).

D. Director, Assay Development Core (NIH U01 NCIR).

E. Director, Central Laboratory, Study of Women Across the Nation (NIH SWAN).

UNIVERSITY:

A. Director, Reproductive Sciences Program.

B. Member, Scientific Advisory Board, Child/Adolescent Health Behavior Research Center, the University of Michigan, 1991-.

C. Member, Michigan Cancer Center, 1993-.

D. Interviewing candidates for Obstetrics/Gynecology, Internal Medicine, Institute of Gerontology.

E. OVPR Unit Value Centered Management Advisory Committee, 1995-.

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-.
REPRODUCTIVE SCIENCES PROGRAM:

A. Developing an immunoassay analysis system with potential to assist many investigators.
B. Implementing ELISA and chemiluminescence-based, solid state, two site immunoassays in Standards and Reagents Core as partial replacement for radioimmunoassays (and thereby reduction in usage of radioactive isotopes).

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINDARS:

5. U01 Laboratory Meeting, Boston, Massachusetts, July 27, 1995
10. NIH Special Review Committee Meeting, Bethesda, Maryland, November 9-10, 1995.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


ARTICLES SUBMITTED FOR PUBLICATION:


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


I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. Graduate students:
   1. Responsible during the current academic year for teaching activities for the following:
      a. Thirteen sessions Pathology 850 (Miller).
   2. Program Director, "Experimental Immunopathology Training Grant."
   3. Ph.D. Dissertation Committees, University of Michigan:
      b. Alex Greenwood.
   4. Ph.D. Dissertation Advisor:
      a. Michael Eisenbraun.
      b. Chris Kirk.
      c. Neil Faulkner (co-sponsor).
   5. Summer Rotations:
      a. Meryem Koker, Med I.
      b. Andrew Sword, Med I.

B. Postdoctoral Fellows:
   1. Michael Angell, Ph.D.
   2. Nathan Bining, Ph.D., M.D.
   3. William Telford, Ph.D.
   4. Gonzalo Garcia, Ph.D.

C. Assistant Research Scientist:
   1. R. Lee Mosley, Ph.D.
   2. Jacek Witkowski, M.D., Ph.D.

D. Visiting Research Scientist:
   1. Igor Dozmorov, Ph.D.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, “Activation Defects in Aging T Cells”, NIH AG-09801 (15%), $170,741 direct costs/year, 8/1/90 - 7/31/98. MERIT award.
B. Principal Investigator, “Immune and Muscle Function Assays as Biomarkers of Aging”, NIH AG-11067 (8%), $162,629 direct costs/year, 4/1/93 - 3/31/98.
C. Principal Investigator, “Genetic Control of Longevity in Mice”, NIH AG-11687 (8%), $211,266 direct costs/year, 9/1/93 - 8/31/98.
D. Principal Investigator, “New T Cell Subsets Defined by P-glycoprotein in Aging Mice”, NIH R01-AG03978 (15%), $96,288 direct costs year, 12/1/95 - 11/30/98.
E. Principal Investigator, “New T Cell Subsets in Aging Mice”, AlliedSignal Award for Research on Aging, $50,000 direct costs year, 1/1/95 - 12/31/96.
F. Director, “Core Facility for Aged Rodents”, NIH AG-08808 (5%), $64,627 direct costs/year, 9/1/94 - 8/31/99. (Component of Claude Pepper Older Americans Independence Center, J. Halter, Program Director).
G. Director, “Research Development Core”, NIH AG-08808 (15%), $155,270 direct costs/year, 9/1/94 - 8/31/99. (Component of Claude Pepper Older Americans Independence Center, J. Halter, Program Director).
H. Project Director, “Prevention of Disease by Immunotonic Agents in Mice”, NIH AG-08808 (5%), $50,235 direct costs/year, 9/1/94 - 8/31/99. (Component of Claude Pepper Older Americans Independence Center, J. Halter, Program Director).
K. Course Director, “Summer Training Courses in Experimental Aging Research”, NIH/NIA R13-AG12917 (0%), $29,358 direct costs/year, 4/1/95 - 3/31/98.

PENDING:

A. Principal Investigator, “Wild Derived Mouse Stocks: New Models for Aging Research”, NIA R01-AG13711 (5%), $187,826 direct costs requested/year, 4/1/96 - 3/31/01.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Graduate Education Committee.
B. Qualifying Examination Committee.
C. Research Colloquia, Course Coordinator.
D. Director, Experimental Immunopathology Training Program.
MEDICAL SCHOOL/HOSPITAL:
A. Geriatrics Center: Research Development Core Director.
B. Geriatrics Center: Director, Core Facility for Aged Rodents.
C. Member, Geriatrics Center Research Operating Committee.
D. Associate Director for Research, Geriatrics Center.
E. Member, Executive Committee, Cell and Molecular Biology Training Program.
F. Member, Rheumatology Training Program.
G. Co-director, Breast Cancer in Elderly Women Project, UM Cancer Center.

REGIONAL AND NATIONAL:
A. Board of Scientific Advisors, Buck Center for Research on Aging.
B. Fellow, Gerontological Society of America.
C. Board of Scientific Advisors, American Federation for Aging Research.
D. Member, Council, Gerontological Society of America.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
A. Journal of Gerontology: Biological Sciences.
B. Journal of the American Geriatrics Society. (Section Editor).

INVITED LECTURES/SEMINARS:

1. III European Congress on Gerontology, Amsterdam, Netherlands, "Signal Transduction Defects in T Cells from Old Mice.", August 30 to September 2, 1995.
4. Gerontology Division, Dept. of Medicine, Beth Israel Hospital, Boston, Talk 1: “Gerontometrics: Do People Age at Different Rates? and Can Biomarkers Measure Aging?” Talk 2: “Subset Changes and Signalling Defects in T Cells from Old Mice.” January 16 and 17, 1996.
6. Geron Corporation, Menlo Park, California, “Gerontometrics: Do All Mice Age at the Same Rate?”, March 29, 1996.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

1. Bining, N. and Miller, R.A.: Production of IL-5 and IL-10 by age-sensitive subsets of CD4 memory T cells differing in P-glycoprotein expression. Submitted for publication.

BOOKS/CHAPTERS IN BOOKS:

R. LEE MOSLEY, Ph.D.
ASSISTANT RESEARCH SCIENTIST
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Students:
      1. Aalyeha Koreshi (Biology Undergraduate Research Rotation).
      2. Meryem Koker (Medical Student Summer Research Rotation).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

PENDING:
   A. Principal Investigator, "Skewed T Cell Repertoires in Aged Mice", 1RO3AG14178-01, Pilot project research grant program for the NIA, $50,000, September 1, 1996-August, 1997. Under Review.

SUBMITTED PROPOSALS NOT FUNDED:
   A. Principal Investigator, "Age Related Effects on Postthymic T Stem Cell Populations", Sandoz Foundation for Gerontological Research
   B. Principal Investigator, "Postthymic T Stem Cell Frequency and Characterization", 1R29AI40258-01, R29 FIRST Application.
PROJECTS UNDER STUDY:

A. Enumeration and Identification of Postthymic T Stem Cells.
B. Frequency and Expansionary Potential of Postthymic T Stem Cells from Aged Mice.
C. Age-Related Effects of Mucosal T Lymphocytes.
D. Effects of Aging on T Cell Repertoire.

IV. ADMINISTRATIVE ACTIVITIES:

A. None.

V. OTHER RELEVANT ACTIVITIES:

A. Ad hoc reviewer, Journal of Gerontology.
B. Participant, Mock Study Section, Comprehensive Cancer Center and Geriatrics Center, University of Michigan Medical School, Ann Arbor, Michigan.
D. Trainee, Fourth Annual Summer Training Course in Experimental Aging Research by The National Institute of Aging, held at the University of Michigan Medical School, Ann Arbor, Michigan, June 9-13, 1996.

INVITED LECTURES/SEMINARS:

1. Invited Lecturer, “Careers in Research and Teaching”, Graduate Career Fair ’96, University of Michigan Medical School, March 26, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


HEDWIG S. MURPHY, M.D., PH.D.
RESEARCH INVESTIGATOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

None.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NHLBI Clinical Investigator Development Award KO8 HL03181-01: Structure and Function of Recombinant Selectin Ligands, 09/01/94-08/31/99, $402,916.

PROJECTS UNDER STUDY:

A. Structure and function of recombinant glycoproteins.
B. Endothelial cell expression of selectin ligands, function and mechanism of generation of superoxide, signal transduction.
C. Properties of endothelial cells derived from macro- and microvasculature.

IV. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Clinical Immunology and Immunopathology.
B. Biochemical Pharmacology.
C. Shock.
V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Cytopathology - Consultation Service, 12 months.

II. TEACHING ACTIVITIES:
   A. Pathology residents - Lecture seminar.
   B. Sophomore medical students: Instructor (Pulmonary sequence), Pathology 600 laboratory.

III. RESEARCH ACTIVITIES:
   A. Cytopathology, with particular reference to serous fluids.

PROJECTS UNDER STUDY:
   A. None.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Advisory Committee on Appointments and Promotions.

REGIONAL AND NATIONAL:
   B. Associate Editor, Acta Cytologica.
   C. Editorial Board, Cytopathology.
   D. Editorial Consultant, Diagnostic Cytopathology.
   E. Chairman, Publications Committee, International Academy of Cytology.
   F. Membership Committee, International Academy of Cytology.
   G. Budget and Finance Committee, American Society of Cytology.
   H. Chairman, Awards Committee, American Society of Cytology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. Naylor, B.: Lecturer to cytotechnology trainees, Cytotechnology Training Program, Henry Ford Hospital, Detroit, Michigan, January and February 1996.
HONORS AND AWARDS:
None.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
None.

BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
None.
I. **CLINICAL ACTIVITIES:**

A. Autopsy Service (two weeks and one weekend on-call).

II. **TEACHING ACTIVITIES:**

A. Supervised Maribel Gonzalez-Garcia, Didier Grillot, Naohiro Inohara, Ramon Merino, Philip Simonian, and Dayang Wu, Postdoctoral Fellows.

B. Supervised Mary Benedict, Brian Bonish, Diane Maestos, and Herschell Wallen, graduate students.

C. Supervised Vindhyyo Cuddapha, Chaim Hyman, Miguel Suarez and Kevin Winer, undergraduate students.

D. Laboratory Instructor, Pathology 630/631. Full semester, two hours/week.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**


B. Principal Investigator, “Genetic Regulation of Apoptotic Cell Death,” National Institutes of Health, $813,000 (total direct costs).

C. Principal Investigator, Research Career Development Award, “Genetic Regulation of Apoptotic Cell Death,” National Institutes of Health, $315,000 (total direct costs).


E. Principal Investigator, “Regulation and Function of Bcl-2 proto-Oncogene in Germinal Centers,” American Cancer Society, $169,896 (total direct costs).

F. Principal Investigator, “Molecular Analysis of Bcl-xS induced Apoptosis in Breast Cancer,” U.S. Army Medical Research and Material Command, Fort Detrick, Frederick, Maryland, $801,917 (total direct costs).

**PROJECTS UNDER STUDY:**

A. Functional characterization of Bcl-2 and Bcl-x genes during lymphoid development.

B. Molecular interactions among Bcl-2 family members.
C. Gene therapy using Bcl-2 proteins as targets for cancer cell killing.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Member, Preliminary Examination Committee, Training Program in Pathology.
B. Interviewer, faculty, postdoctoral, and graduate student candidates for research fellowships.
C. Interviewer, MSTP Candidates.

MEDICAL SCHOOL/HOSPITAL:

A. Member, Molecular and Cellular Biology Program.
B. Member, University of Michigan Cancer Center.
C. Member, Transgenic Core Facility Committee, Multipurpose.
D. Member, Faculty Search Committee, Rheumatology Division, and Department of Microbiology / Immunology.
E. Reviewer, Departmental Grants.
F. Committee Member, Culture Diversity Assessment Steering Committee, University of Michigan, Ann Arbor, Michigan.
G. Committee Member, Thesis committee for Pan Quintin, Pharmacology, May 23, 1996.
H. Committee Member, Thesis committee for Jordan Fridman, Pharmacology, May 29, 1996.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Reviewer for the following journals:
   2. Journal of Immunology.
   3. Oncogene.
   5. Laboratory Investigation.
B. Ad Hoc reviewer: Research grants, National Institute of Health.
C. Ad Hoc reviewer: American Cancer Society.
INVITED LECTURES AND SEMINARS

UNIVERSITY OF MICHIGAN

2. Invited Speaker, "Regulation of Cell Death by the Bcl-2 Family," Division of Hematology/Oncology Research Seminar, University of Michigan Medical Center, December 7, 1995.
3. Invited Speaker, “Control of Cell Death by the Bcl-2 Gene Family,” Cancer Biology Research Seminar, Comprehensive Cancer Center, University of Michigan Medical Center, June 12, 1996.

NATIONAL AND INTERNATIONAL

3. Invited Speaker, “Regulation of Lymphoid Cell Death by the Bcl-2 Family," Department of Microbiology and Immunology, Wayne State University, Detroit, Michigan, November 15, 1995.
8. Invited Speaker, Wound Healing Society, Annual Meeting, Minneapolis, Minnesota, May 1, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFERRED JOURNALS.


ARTICLES ACCEPTED FOR PUBLICATION:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOK CHAPTERS

I. CLINICAL ACTIVITIES:

A. Director, Blood Bank and Transfusion Service, University Hospitals.
B. Diagnosis of surgical specimens from University Hospital patients.
C. Diagnosis of surgical specimens from M-Labs.
D. Diagnosis of consultation breast cases from pathologists elsewhere in the United States.
E. Medical direction of Transfusion Service.
F. Medical coverage of Necropsy Service (Quality Control Review).
G. Member, University of Michigan Breast Care Center.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Lectures on breast pathology and transfusion medicine to sophomore class (five contact hours).
B. Laboratory Course for sophomore medical students (Pathology 600).
C. Daily case review with pathology house officer assigned to Blood Bank.
D. Weekly lecture/discussion on Transfusion Medicine for Pathology, Hematology and Pediatric Hematology house officers.
E. Weekly teaching ward rounds covering Hematology, Bone Marrow Transplantation and Transfusion Medicine for Hematology and Pathology house officers.
F. Lecture-Discussion (two) on Transfusion Medicine to senior student elective course in Laboratory Medicine.
H. Lectures on Transfusion Medicine presented to Pathology and Hematology/Oncology house officers.
I. Seminars and lectures on Pathology of Breast to Pathology House Officers.
J. Lectures on Transfusion Medicine to Pharmacology and Therapeutics senior student elective course, February 10, 1995.
K. Planning committee for curriculum in hematology for sophomore medical students.
L. Lecture, Pathology of the Breast, to Dental Pathology Course.
M. Presentation of consultation slide conferences (four) on pathology of the breast to pathology house officers.

UNIVERSITY:

A. Doctoral committee for Midori Koga, candidate for Doctor of Musical Arts in Piano, School of Music.
III. **RESEARCH ACTIVITIES:**

**PROJECTS UNDER STUDY:**

A. Rapid 4D MRI of Gad-DTPA enhancement for breast lesion characterization (Grant DAMD 17-94-J-4381 from U.S. Army medical research acquisition activity ($605,849/four years) (T. Chenevert, Principal Investigator, with members of Department of Radiology).

B. New Ultrasound Methods for Cancer Diagnosis and Treatment (three-five years at 5% effort).

C. Microvascular and Structural Imaging of Breast Cancer (three-five years at 3% effort).

D. Adenoid cystic carcinoma of the breast (with C. Kleer).

E. Microinvasive carcinoma of the breast (with L. Pierce).

F. Analysis of epidemiologic and pathologic risk factors for subsequent presentation of breast cancer (D. Schottenfeld, Principal Investigator).

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director, Transfusion Medicine Program.

B. Director, Training Program in Blood Banking/Transfusion Medicine.

**MEDICAL SCHOOL/HOSPITAL/UNIVERSITY:**

A. Transfusion Committee, Chairman.

B. Breast Care Center.

C. Bone Marrow Homotransplantation Task Force.

D. AIDS Task Force.

E. Hospital Program for Excellence Advisory Committee.

F. Task Force on Medical Center Governance, Medical Center Clinicians' Group.

G. Haematology Sequence Advisory Committee, M-2 year.

H. University of Michigan Senate Assembly.

**REGIONAL AND NATIONAL:**

A. American Association of Blood Banks:
   1. Transfusion Practices Committee.
   2. Transfusion Medicine Research Strategies Committee.

B. American Society of Clinical Pathologists.

C. College of American Pathologists:
   1. Task Force on Breast Cancer, Chairman.
   2. Task Force to Develop Clinical Practice Guidelines for Transfusion Reactions.

D. Michigan Society of Pathologists.

E. Southeastern Michigan Region Red Cross Blood Program:
   1. Board of Directors.
   2. Medical Advisory Committee.

F. Consultant, Veterans Administration Hospital, Ann Arbor.


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. Editorial Board, Modern Pathology.
F. Reviewer, Cancer.
H. Reviewer, Blood.

INVITED LECTURES/PAPERS/SEMINARS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


CHAPTERS IN BOOKS:


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

SEM H. PHAN, Ph.D., M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES

A. Autopsy Service.

II. TEACHING ACTIVITIES:

A. Hong-yu Zhang, M.D., Ph.D., Postdoctoral Fellow.
B. Kai Zhang, M.D., Postdoctoral Fellow.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

D. Co-investigator, Project 1, “Cytokine Networks Regulating Inflammation of Pulmonary Fibrosis,” (G.B. Toews, Principal Investigator), SCOR NIH, P-50 HL 46487, SCOR in Occupational and Immunologic Lung Diseases, Project 1 (5% effort), 1992-1996. (Total direct costs: $828, 155).

PROJECTS UNDER STUDY:

A. Lung macrophage/monocyte, recruitment and activation during lung injury and fibrosis.
B. Cytokine regulation of fibroblast function.
C. Regulation of α-smooth muscle actin expression and myofibroblast phenotype.
D. Regulation of production of fibrogenic mediators and cytokines by fibroblasts and eosinophils.
E. Production of monocyte chemotactic factors by alveolar macrophages, eosinophils, and fibroblasts, and its regulation by bleomycin and cytokines.
Department of Pathology Annual Report

F. Regulation of cytokine gene expression in fibrotic tissues.
G. Mechanism of eosinophil recruitment.

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.
B. Review for the following journals:
   3. American Journal of Immunology.

V. **PUBLICATIONS:**

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

ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATION IN UNREFEREED JOURNALS.


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Associate Director, Clinical Microbiology/Virology Laboratories.
   B. Director, UMMC Ypsilanti Pediatrics Health Care Center Laboratory.
   C. Director, UMMC Ypsilanti Family Practice Health Care Center Laboratory.
   D. Director, UMMC -Medsport Laboratory.
   E. Coordinator, Infectious Disease Microbiology Laboratory Rounds.
   F. Technical Consultant - M-Labs.
   G. Hospital Cost Effectiveness Program.
   H. New clinical test development.

II. TEACHING ACTIVITIES:
   A. Coordinator, Pathology House Officer Microbiology/Virology Program.
   B. Lecturer, Clinical Pathology Grand Rounds.
   C. Lecturer, Pathology PHT CLNL - 101 (M-4 elective).
   D. Coordinator, Clinical Microbiology/Virology In-service Program.
   E. Instructor, Infectious Disease Laboratory Rounds.
   F. Co-coordinator, Clinical Pathology Visiting Professor program, 1996.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. “Trends in Antimicrobial Resistance for Clinical Isolates of Bacteroides sp.”, Principal Investigator: D. R. Snyder, New England Medical Center, Boston, Massachusetts.

**PROJECTS UNDER STUDY:**

A. PCR for detection of HSV in spinal fluid.
B. Detection of the mecA resistance gene in staphylococci growing in blood culture bottles.
C. Characterization of the beta lactamase produced by *Pseudomonas aeruginosa* that destroys ticarcillin-clavulanate.
D. Epidemiologic studies of *Pseudomonas aeruginosa* using pulse-field gel electrophoresis.
E. Evaluation of the GenProbe TMA system to detect *Mycobacterium tuberculosis* in AFB smear-negative specimens.
F. Detection of *Escherichia coli* SLT I & II in fecal specimens by EIA.
G. Evaluation of DFA methods to detect CMV pp65 antigen in blood leukocytes.
H. Susceptibility of respiratory bacterial pathogens using the E-test strips.

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Clinical Pathology Laboratory Director’s Committee.
B. Chair, Clinical Microbiology/Virology Senior Staff meeting.
C. Chair, Clinical Microbiology/Virology Advisory Committee.
D. UMMC Health Care Centers Laboratory Committee.

**MEDICAL SCHOOL/HOSPITAL:**

A. Hospital Infection Control Committee.
B. Antimicrobial Use subcommittee of the Pharmaceutical & Therapeutics Committee.
C. GBS protocol committee.

**REGIONAL/NATIONAL:**

A. President, Michigan Branch, American Society for Microbiology.
B. Executive Board, South Central Association for Clinical Microbiology.
C. Co-Chair, Tri-County Clinical Microbiology Association.
D. Co-Chair, Michigan Microbiology Laboratory Director’s Association.

V. **OTHER RELEVANT ACTIVITIES:**

**PROFESSIONAL ORGANIZATIONS:**

A. American Society for Microbiology.
B. European Congress for Clinical Microbiology and Infectious Diseases.
C. Infectious Disease Society of America.
D. Association for Molecular Pathology.
E. Michigan Infectious Disease Society.
F. South Central Association for Clinical Microbiology.
G. TriCounty Clinical Microbiology Association.

INVITED LECTURES/SEMINARS


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:

None.

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


RODOLFO F.H. RASCHE, M.D.
CLINICAL ASSISTANT PROFESSOR II IN PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

OVERVIEW:

I continued to devote my efforts predominantly to the M-Labs program. We were able to add more hospitals to our list of clients (Community Health Center of Branch County in Coldwater, Botsford Hospital in Farmington Hills and Hurley Hospital in Flint) and as a result our revenues continued to increase. A marketing plan was developed to increase our activity in Michigan and Ohio, taking advantage of our potential as an alternative to the independent commercial laboratories. The group of client pathologists continues to increase as more hospitals send us reference lab work and so does my involvement in our support to them. The number of surgical pathology cases increased as we added several satellite clinics or acquired physician offices to the cases from Albion and Addison Hospitals. The M-Labs Symposium for pathologists continues to be successful. The seventh was held in April, 1996. My commitment to help the Cytopathology Lab continued, as well as my participation in the autopsy coverage.

I. CLINICAL ACTIVITIES:

A. Reading surgicals for M-Labs' clients (Albion and Addison Hospitals and selected offices). This activity is predominantly performed by E.M. Silverman, M.D. Reporting on consultation cases from our clients.

B. These stat-consults rely on our courier and provide test turnaround time. Most of these cases are shown in consultation to other faculty.

C. Cytopathology: reviewing and verifying cases from the University of Michigan Health Service and other M-Labs clients.

D. Autopsy coverage at the University Hospitals five weeks a year and six week-ends a year.

E. Pathologist, on site coverage for Albion and Addison Community Hospitals.

II. TEACHING ACTIVITIES:

A. Read out autopsies with house officers.

B. Organize and lecture at the M-Labs Symposium, a one day-long event with lectures and case presentations for pathologists. Discussions also include Managed Care and Utilization. Held twice a year (October/April).

C. In-service teaching to laboratory staffs at Albion Community Hospital and the University of Michigan Health Service.

III. RESEARCH ACTIVITIES:

Utility of urine cultures-study in progress, with the medical and laboratory staff at the University Health System. To develop criteria for ordering urine cultures.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Associate Director, M-Labs Program. Participate in planning, marketing and implementation.

B. Problem solving with laboratory directors and supervisors.

C. Intra-departmental meetings (faculty, cytopathology, etc.)

**OTHER:**

A. Director of Laboratory, University of Michigan Health Service.

B. Medical staff member at Albion and Addison Hospitals.

C. Monthly colposcopy meeting with Gynecology staff at the University of Michigan Health Service.

V. **OTHER RELEVANT ACTIVITIES:**

A. Continued enhancement of the M-Labs version of the Spectrum, a newsletter sent to our clients and their medical staff.

B. Inspector for College of American Pathologists Inspection and Accreditation Program.

C. Fellow, College of American Pathologists.

D. Started a Quality Assurance program for client pathologists with AP faculty approval.

E. Participated in a week-long meeting on networking, managed care and legal issues, in addition to Diagnostic Pathology sponsored by the College of American Pathologists, in Boston.
I. CLINICAL ACTIVITIES:

A. Director, Autopsy Service.
B. Supervision of Autopsies-11 weeks, signed out 96 autopsies.
C. Coordinator of Senior Staff Autopsy Call Schedule.
D. Deputy Medical Examiner for University Hospitals (16 weeks).
E. Director, Electron Microscopy Service.

II. TEACHING ACTIVITIES:

A. Coordinator, Biweekly Pathology Gross Conference.
B. Lectures to Pathology House Officers in Anatomic and Clinical Pathology.
C. Lecturer, Pathology 600 Course.
D. Pathology 600, Provided written critiques of student autopsy write-ups (200).
E. Laboratory Instructor, Histopathology Laboratory for M1 students.
F. Thesis Committee - Andrew Merry.
G. Directed research of Jorge Rodriguez, M.D. (Department of Surgery); Michael O’Reilly, M.D. (Department of Anesthesiology), Stewart Wang, M.D., Ph.D. (Department of Surgery), House Officers - Devina Prakash (Pediatrics) Postdoctoral fellows, Lorelie Villarete, Ph.D.; Samuel Ebon, Ph.D. Graduate Students - Jami Foreback, Medical Students - Sunir Garg, Liza Green, Undergraduate Students - David Newcomb.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

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. Oxident regulation of IL-8 gene expression.
G. Mechanisms of noscomial pneumonia, and association with IL-8.
H. Immunopathology of inflammatory bowel disease.
I. Body wall fat as predictor of morbid obesity.

SPONSORED SUPPORT:

B. Principal Investigator, "The Effects of IL-10", $31,500, 1994-96.
C. Scientific Reviews:
   2. NIH phone conference June, 1996.
   3. Ad hoc reviewer, Surgery, Anesthesiology and Trauma, February, 1996.
D. Principal Investigator, "Regulation of IL-8 gene expression: four years, GM50401 $870,822, 1995-1999.
E. G. Burroughs Wellcome Travel Fund, $3,890.00, 1995.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director - Autopsy Service.
B. Director, Electron Microscopy Service.
C. Interviewer - Candidates for faculty, house officer, postdoctoral, and graduate student positions.
D. Co-ordinator of call schedule, Autopsy Service.

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.

REGIONAL AND NATIONAL:

A. Co-Chair, Michigan Department of Public Health Postmortem Examination Workgroup.
B. Member, Executive Committee, Dementia Subcommittee, Chronic Disease Advisory Committee to the Michigan Department of Public Health.
C. Member, Dementia Subcommittee, Chronic Disease Advisory Committee to the Michigan Department of Public Health.
D. Deputy Medical Examiner for Washtenaw County.
E. Member, Executive Committee, Michigan Association of Medical Examiners.
F. Secretary, Michigan Association of Medical Examiners.
G. Member, Michigan Association of Medical Examiners, Shock Society, American Association of Immunologists, A. James French Society, American Society of Investigative Pathologists, United States-Canadian Academy of Pathology.

V. OTHER RELEVANT ACTIVITIES

A. Reviewer, Veterans Administration Merit grants.
B. Editorial Board: Shock
C. Reviewer:
   1. Laboratory Investigation.
   2. Journal of Immunology.
   5. Immunology and Infectious Diseases.
   8. Infection and Immunity.
  10. Shock.
  12. Journal of Immunology.

INVITED LECTURES/SEMINARS

5. Invited participant, Washtenaw County Medical Examiners Roundtable Discussion, Ann Arbor, Michigan, November 29, 1995.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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


BOOKS AND CHAPTERS IN BOOKS

CHARLES W. ROSS, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995- 30 JUNE 1996

I. CLINICAL ACTIVITIES:
A. 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. Lecturer, M2 Hematology Sequence.
   2. Laboratory Instructor, M2 Hematology Sequence.
   3. Lecturer, Dental School Pathology 630.
   4. Histopathology Laboratory Instructor, M1 Histology Course.
   5. Instructor, hematology portion of clinical pathology rotation, M4 clerkship in general pathology.
   6. Lecturer, Hematology Sequence, M4 clerkship in clinical pathology.
   7. Instructor, Hematology Sequence, summer program for minority M1 students.
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 hemopathology consultation material.
   5. Hematopathology case conferences/bimonthly.
C. Hematopathology teaching:
   1. Leukemia conference/biweekly.
   2. Lymphoma conference/weekly.
   3. Hematology conference/monthly.
D. Clinical Pathology Grand Rounds (two lectures).
E. Clinical Pathology Case Conference/weekly.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

None
PROJECTS UNDER STUDY:

A. Immunophenotyping in acute and chronic leukemias.
B. Phenotyping and genotyping of lymphomas.
C. Detection of immunoglobulin gene rearrangements by the polymerase chain reaction.
D. Effects of radioimmunotherapy in B-cell lymphoma.
E. Detection of infectious agents in lymphoid lesions by polymerase chain reaction.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Clinical Flow Cytometry Laboratory.
B. Coordinator, CP resident teaching program.
C. Resident Selection Committee.

REGIONAL/NATIONAL:

A. Pathology reviewer, multicenter phase II dosimetry study of $^{131}$I anti-B1 radioimmunotherapy for B-cell lymphoma, Coulter Pharmaceutical.
B. Ad hoc manuscript reviewer, American Society of Clinical Pathology.
C. Ad hoc manuscript reviewer, Blood.
D. Ad hoc manuscript reviewer, Cancer Investigation.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. Lecturer, "Hematologic Coups: A practical approach to challenging cases in hematolymphoid diagnosis", American Society of Clinical Pathologists National Meeting, April, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS AND CHAPTERS IN BOOKS:


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


2. Poston, C.D., Ross, C.W., Schnitzer, B. and Singleton, T.P.: Phenotypic analysis of acute leukemias by immunohistochemistry (IHC) on bone marrow, flow cytometry (FC), and morphology. Mod. Pathol. 9:120A, 1996.


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Director, Clinical Hematology Laboratory.
   B. Director, University of Michigan Health Services Laboratories.
   C. Diagnostic Surgical Pathology, Hematopathology (12 months).
   D. Diagnostic Hematopathology Consultant, Veterans Administration Hospital.
   E. Diagnostic Hematopathology of M-Labs 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.

III. RESEARCH ACTIVITIES:

   SPONSORED SUPPORT:

   None.

IV. ADMINISTRATIVE ACTIVITIES:

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

   MEDICAL SCHOOL/HOSPITALS:
   A. Clinical Hematology Laboratory, Director.
   B. University of Michigan Health Service Laboratories.
REGIONAL AND NATIONAL:
A. Society for Hematopathology, Executive Committee
   1. Past President.
B. Southwest Oncology Group
   1. Lymphoma Subcommittee.
   2. Leukemia Subcommittee.
C. Children's Cancer Study Group: Review of in-house cases of lymphoma cases.
D. Regional Center Review Pathologist, Southwest Oncology Group.
E. Member, Review Panel for Lymphomas, Southwest Oncology Group.
F. Member, Hematology Council, American Society of Clinical Pathologists.
G. Member, Hematology Workshop Review Committee, American Society of Clinical Pathologists.
H. Member, Quality Management Hematopathology Expert Review Panel, American Society of Clinical Pathologists.
I. Nominating Committee, Society for Hematopathology.

V. OTHER RELEVANT ACTIVITIES:

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

INVITED LECTURES/SEMINARS:
4. "Reactive Lymphadenopathies", Tutorial on Neoplastic Hematopathology, Department of Laboratory Medicine and Pathology, University of Minnesota, San Diego, California, February, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS AND CHAPTERS IN BOOKS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Cytopathology - 23 weeks.
B. Gynecologic Pathology (transfer cases) - 12 months.
C. Consultation service, Department of Pathology:
   1. Cytopathology and Gynecologic Pathology - 12 months.
D. Necropsy Service - One week.

II. TEACHING ACTIVITIES:

A. Medical Students:
   1. Pathology laboratory instructor, April, 1996.
   2. Reproductive sequence lecture: Gynecologic Pathology, April 1, 1996.
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-Obstetric/Gynecologic Pathology - one hour.
   5. Consult Case Conference - one/year.
C. Other Education Activities:
   1. Cytotechnologists-Cytopathology conferences - monthly.
   2. Obstetric/Gynecologic Colposcopy/Pathology Conference - monthly.

III. GRANT SUPPORT

A. National Institute of Health, Co-investigator (1 U01 CA68291-01), “Retinoids and Intermediate Biomarkers for CIN II and III”, 09/01/95 - 08/31/2000 ($2,610,213 - direct cost), (8% effort).

IV. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Cervical atypia in women with SLE treated with intravenous cyclophosphamide (in conjunction with Dr. J. McCune, Dept. of Internal Medicine/Rheumatology).
B. Genital infections as risk factors for low grade squamous intraepithelial lesion progression (in conjunction with Dr. Barbara Reed, Department of Family Practice).
C. Retinoids and Intermediate Biomarkers for CIN II and III. (In conjunction with Dr. Mack Ruffin, Department of Family Practice).

V. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Cytopathology Laboratory.
B. Director, Cytopathology Fellowship Program.
C. Member, Resident Selection Committee.

MEDICAL SCHOOL/HOSPITAL:

A. Member, Quality Assurance/Quality Control Committee.
B. Member, M II Curriculum Committee-Reproduction Sequence.

REGIONAL AND NATIONAL:

A. Editorial Review Board, Diagnostic Cytopathology.
B. Editorial Review Board, Cancer Cytopathology.
C. Member, Cytopathology Committee, College of American Pathologists.
D. Member, Cervical Cancer Advisory Committee, Michigan Department of Public Health, Lansing, Michigan.

VI. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES(SEMINARS):


VII. 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 OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Chief, Hemostasis and Coagulation Laboratory, William Beaumont Hospital, Royal Oak, Michigan.
   B. Hematopathology, Bone Marrow Service, William Beaumont Hospital, Royal Oak, Michigan.
   C. Clinical Consultant, Problems in Bleeding and Thrombosis, William Beaumont Hospital, Royal Oak, Michigan.

II. TEACHING ACTIVITIES:
   B. Periodic lectures to ICU residents on blood component therapy, William Beaumont Hospital.
   C. Clinical Pathology Grand Rounds, General Principles of Hemostasis, University of Michigan Medical Center.
   D. Coagulation conferences for pathology residents, William Beaumont Hospital.
   E. Seven lectures for Medical Technology Students - Coagulation and Hemostasis, William Beaumont Hospital.
   F. Participated in Clinical Pathology Elective for Senior Medical Students - Lecture on Approach to Bleeding Disorders plus case presentations and discussions, University of Michigan.
   G. Weekly conferences on Coagulation, Thrombosis and Component Therapy for Blood Bank Residents, University of Michigan.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Co-Investigator, "Protamine Filter for Extracorporeal Heparin Removal," University of Michigan College of Pharmacy, NIH-NHLBI HL-38353 (5%), $204,000, 01/01/95-12/31/95.

IV. PUBLICATIONS:
   A. None.

V. MISCELLANEOUS:
   A. On June 15, 1996, Dr. Shanberge resigned his position in the Department of Pathology at William Beaumont Hospital and became an Emeritus Member of the Medical Staff.
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, two lectures.
E. Pediatric Genetics Rounds, weekly participant, one lecture.
F. Leukemia Conference, biweekly.
G. Genetic Counseling graduate students:
   1. Two lectures.
   2. Individual tutorials.
H. Clinical Pathology M4 elective: eight hour lecture/laboratory.
I. Pathology Graduate Course, three lectures.

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 chromosome abnormalities in eosinophilia.
F. Fluorescence in situ hybridization for identification of marker chromosomes.
G. Fluorescence in situ hybridization as "interphase cytogenetics".
H. Role of chromosome abnormalities in treatment-resistant low grade lymphoma.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Clinical Cytogenetics Laboratory.

REGIONAL AND NATIONAL:
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

1. University of Michigan Comprehensive Cancer Center Colleagues in Care, June, 1996 CCG.
2. Pediatric (Hematology/Oncology) June, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


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

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Surgical Pathology Coverage of M-Labs cases, including most cases from:
   1. Albion Community Hospital, Albion, Michigan (including frozen sections).
   2. University of Michigan Health Service, non-dermatology cases, Ann Arbor, Michigan.
   3. Addison Community Hospital, Addison, Michigan.
   4. Other various clients including numerous satellite sites and University acquired practices.

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

C. Rotation with other staff pathologists:
   1. Coverage at the University Hospitals of weekend and weekday autopsy call.

D. Perform bone marrow aspiration and biopsies at Albion Community Hospital, Albion, Michigan.

E. Review peripheral blood smears at Albion and Addison Community Hospitals.

F. Clinical Pathology consults at Albion and Addison Community Hospitals and other M-Labs clients.

G. Surgical Pathology "Quickie" Anatomic Pathology consults for a growing list of pathologists at M-Labs client hospitals (Dr. Rasche does most of these).

II. TEACHING ACTIVITIES:

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

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

C. In-service teaching to laboratory staffs at Addison and Albion Community Hospitals.

III. RESEARCH ACTIVITIES:

A. Investigation of malacoplakia of the endometrium and vasitis nodosa.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, M-Labs:
   1. Provide leadership for and participate in planning, marketing, and implementation of M-Labs programs.
   2. Expansion of M-Labs.
      a. The additional personnel hired at the end of the last fiscal year and the one hired in the middle of this fiscal year have added to the effectiveness of our highly motivated and talented M-Labs team. We are now able to deal with support of existing clients as well as marketing. Operations are now
Department of Pathology Annual Report

dealt with in a more coordinated fashion. The M-Labs office has been reorganized. The operations representative has prepared a manual with specific client issues and requirements for the M-Labs office and accessioning personnel.

b. Problems with our report formats have been ameliorated by changes in format accomplished with assistance from laboratory personnel and PDS.

c. Accessioning errors have not increased despite cutbacks in personnel, partly because of the client handbook and a "client exception list" prepared by M-Labs operations for CD personnel.

d. Through the efforts of PDS, we have our first fully operational interface between the University of Michigan laboratory computer system and a client hospital's computer system. Two others are under development and two more are planned.

3. Growth. M-Labs has experienced a 23% increase in net revenues from billings to clients for clinical pathology services and a 344% increase in net billings to patients for clinical pathology services. The number of M-Labs surgical pathology cases has also increased by 16%. Billing for these cases have increased by 22%.

a. In this fiscal year we added the reference laboratory work of a 500 bed hospital, a 130 bed hospital, the health service of a nearby university, and several large group practices and individual physicians' offices.

b. We lost one large group practice because of difficulties with TAT, reporting, and differences in test profiles from those desired by that physician group.

c. We are finalizing agreements to provide reference lab testing to another large hospital and a small hospital which will begin in the next few months.

d. We have submitted proposals to a 150 bed hospital in northern Ohio and to an entity that includes 2 large hospitals in northwestern Ohio.

4. Managed Care Contracts. We have succeeded in contracting with MCare to provide outpatient laboratory testing for its soon to be introduced Medicare product. We are subcontracting the work to a group of hospitals. M-Labs will manage the revenue distribution to the subcontractors based on the relative-value weighted volume of testing furnished by each provider.

5. Networks. We are still working with a group of Michigan hospital laboratories to form Great Lakes Laboratory Network, which will have the capability to negotiate for statewide and, eventually, regional managed care contracts for laboratory services. M-Labs personnel now work in key committees of this group.

a. We have been accepted for membership in JVHL, a network of major hospital laboratories in the Detroit area.

b. We are exploring the possibility of providing reference laboratory work to a developing 13 hospital laboratory network in Central Michigan.

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, Addison Community Hospital, Addison, Michigan.

F. Chair, Tissue Transfusion and Infection Control Committees, Addison Community Hospital, Addison, Michigan, 9/92 -.

G. Plan and review Laboratory QA and CQI at Albion and Addison Community Hospitals.

H. Review Quality Control of Clinical Pathology tests at Albion and Addison Community Hospitals.

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V. OTHER RELEVANT ACTIVITIES:
   None.

VI. PUBLICATIONS:
    None.
TIMOTHY P. SINGLETON, M.D.
ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 AUGUST 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:

A. Sign-out lymph node and bone marrow biopsies, peripheral blood smears and body fluids.
B. Sign-out flow cytometry.
C. Quality control and antibody development for clinical immunohistochemistry laboratory.
D. Review material for interdepartmental conferences.
   2. Biweekly leukemia conference

II. TEACHING ACTIVITIES:

A. Medical students, first two years:
   1. Lecture, Lymphoprolifertive Disorders.
   2. Laboratory, Hematology.
B. Medical students, last two years:
   1. Lecture, Red Cell Disorders.
   2. Laboratories, Hematology
   3. Review biopsies at sign-out.
C. Dental students, first two years
   1. Lecture, Leukocyte Disorders
C. Residents and fellows in pathology and other departments:
   1. Review of biopsies at sign-out.
   2. Bimonthly unknown conference in hematopathology.

III. RESEARCH ACTIVITIES:

A. Assistant Director, Cancer Center Core Facility for Tissue Procurement (Research Immunohistochemistry and Histology).
IV. ADMINISTRATIVE ACTIVITIES:

A. Assistant Director, Hematology Laboratory.
B. Assistant Director, Immunohistochemistry Laboratory for Anatomic Pathology’s Special Studies Laboratory.

V. PRESENTATIONS:

1. "Coups in Hematopathology", Course presented at the American Society for Clinical Pathology, April, 1996.

V. PUBLICATIONS:

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


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

6. Hsi, E.D., Greenson, J.K., Singleton, T.P., Eishbruch, A., Ross, C.W. and Schnitzer, B.: Classification of primary gastric lymphoma according to histologic features, United States and Canadian Academy of Pathology, 1996
DENISE SULAVIK, M.D.
LECTURER
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. Diagnostic Surgical Pathology, Hematopathology.
   B. Clinical Hematology Laboratory.
   C. Clinical Flow Cytometry Laboratory.
   D. Hematopathology Consultation Cases (including M-Labs).

II. TEACHING ACTIVITIES:
   A. 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.
   B. Medical Students:
      1. Laboratory instructor, M4 Clerkship in Clinical Pathology.
   C. Hematopathology Teaching:
      1. Lymphoma conference/weekly.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Histomorphologic, flow cytometric and cytogenetic variances of blasts in a treated acute
      lymphoblastic leukemia.

IV. ADMINISTRATIVE ACTIVITIES:
   None.

V. OTHER RELEVANT ACTIVITIES:
   None.

VI. PUBLICATIONS:
   None.
I. CLINICAL ACTIVITIES:

A. Flow Cytometry Diagnostic Service - interpretation of cell surface marker studies 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, postdoctoral and research-track investigators:

1. Randall Knibbs, Ph.D., Research Scientist (January, 1994-present) - Dr. Knibbs recently published the first evidence that regulation of a single fucosyltransferase, FucT-VII, controls the synthesis of ligands for E-selectin on T-cells. These ligands are essential for the entry of T-cells into both normal and pathologic immune lesions in the skin. Recently completed studies show that the same enzyme regulates the synthesis of P-selectin ligands on T-cells as well. These discoveries provide the first specific target for development of agents which suppress selectin-mediated T-cell recruitment in immune mediated diseases. Dr. Knibbs will next focus on the structure of the carbohydrate portion of the selectin ligands on T-cells and on the signalling pathways controlling FucT-VII activity.

2. Francis Wolber, Ph.D. candidate in Experimental Pathology (July, 1992-present) - Ms. Wolber's thesis project focuses on the role of adhesion receptors in the leukocyte recruitment in murine hypersensitivity pneumonitis. Her study is based on in vitro modeling from this laboratory showing that T-lymphoblasts use P-selectin, E-selectin and the β1-integrin VLA-4 to initiate contact with activated endothelium at physiologic levels of linear-shear stress. Ms. Wolber developed assays which permit the evaluation of selectin and integrin adhesive interactions during T-lymphoblast recruitment into the lung. This effort resulted in the first direct evidence that both selectins and the β1-integrin VLA-4 contribute to T-cell recruitment in hypersensitivity pneumonitis.

3. Neil Faulkner (July, 1995-present), MD., Ph.D. student - Mr. Faulkner's project focus on the regulation of selectin ligand synthesis by the FucT-VII enzyme during antigen-driven T-cell proliferation. Mr. Faulkner will determine whether FucT-VII activity is controlled at the transcriptional levels in T-cells.

B. Co-director and lecturer, Hematology Sequence in Component II (Medical School 2nd year curriculum) - designed/administered pathology component of sequence and co-directed course with Roland Hiss, M.D. (Department of Internal Medicine). Developed new lectures series covering the growth, differentiation and normal physiology of leukocytes. The sequence, particularly the laboratory component, continues to enjoy one of the highest ratings (both student and faculty) for any sequence in Component II.

C. General Pathology laboratory instructor, Component II - one of ten permanent faculty in the laboratory component. We are currently the only instructors in any department with teaching activities throughout the entire 2nd year curriculum. The group provides
sequence-specific laboratory instruction, general reviews at intervals throughout the year and quality-control for laboratory examinations in all sequences.

D. Section leader, Hematopathology Section of Component II - several sequences use specialists to cover pertinent laboratories. This is in addition to serving as an instructor in the general pathology laboratories of Component II.

E. Co-director and lecturer, General Pathology Course for Dental and Graduate Students (Pathology 580/630) - assumed co-directorship with special emphasis on the use of computer-based learning in laboratories. Developed new lecture series on the growth, differentiation and normal physiology of leukocytes and autoimmune diseases.

F. Lecturer, Host-Defense Sequence in Component I - developed new lecture series on leukocyte recruitment and the clinical uses of flow cytometry.

G. Daily sign-out of cases in flow cytometry with pathology residents and medical students.

H. Attending, Autopsy Service.

III. RESEARCH ACTIVITIES:

ACTIVE SUPPORT:

A. Principal Investigator, Project 4, "Leukocyte-Microvascular Adhesive Interactions in Rheumatoid Arthritis", NIH, P50AR41703 (SCOR in Rheumatoid Arthritis; Josi Holoshitz, M.D., Program Director), 25% effort, $398,269; 30 September 1992 - 31 August 1995.

B. Principal Investigator, Project 3- "Selectin Binding Sites on Leukocytes and Inflamed Venules", NIH, P01AI33189 (Oligosaccharides as Anti-inflammatory Agents; PA Ward, Program Director), 20% effort, $347,950; 1 September 1992 - 31 August 1996.

C. Co-Principal Investigator, (J. Curtis, Principal Investigator), Project 4, "Mechanisms of Lymphocyte Recruitment to the Lungs", NIH, P50HL46487 (SCOR in Pulmonary Fibrosis; G. Toews, M.D., Program Director), 15% effort, $650,000; 1 December 1991 - 31 November 1996.

D. Principal Investigator, Project 5, "Mononuclear Leukocyte Adhesion and Recruitment in Chronic Inflammatory Disease", NIH, P01, HL31963 (Inflammatory Cells and Lung Injury; PA Ward, M.D., Program Director), 20% effort, $500,000; 1 February 1994 - 29 January 1999.

PENDING SUPPORT:

A. Principal Investigator, Project III, "Structure of Selectin-Ligands Synthesized by Human T-Lymphoblasts", NIH, P01AI33189 (Competitive renewal of Oligosaccharides as Anti-inflammatory Agents; PA Ward, Program Director), 15% effort, submitted 7/1/95: This project will determine whether mammalian cells which synthesize high avidity selectin ligands on their surface can be used to generate soluble recombinant glycoprotein inhibitors of the selectins. In addition, the activities of monomeric and multimeric selectin inhibitors will be compared using a novel in vitro assay which allows one to measure the impact of inhibitors on leukocyte-endothelial interactions at physiologic levels of linear shear-stress.

B. Principal Investigator, "Structure-Function Studies of Selectin Ligands on T-lymphoblasts", 25% effort, submitted 10/1/95: Studies in this area have been hampered by the difficulty of collecting sufficient starting material for structural studies on authentic ligands. We have overcome this obstacle through the development of a growth protocol which allows the production of >10^11 human T-cells expressing high levels of functional ligands for the selectins. Viable lymphocytes from any source can be used with a 100-1000 fold increase in cell number achieved over two weeks. These ligands
are indistinguishable from those on circulating T-cells. This proposal seeks funding for structural analysis of the selectin ligands on human T-cells.

C. Principal Investigator, "T-Cell Trafficking in Adoptive Cellular Immunotherapy", NIH, RO1CA73059, 30% effort, submitted 2/1/96: This project builds on the discovery that the protocols used to expand vaccine-derived and tumor-infiltrating lymphocytes prior to infusion into patients dramatically alter the prevalence and function of adhesion receptors used by the infused cells to gain access into tissues. Current protocols generate cells which require expression of the selectin family for optimal adhesion at physiologic levels of shear. However, studies in animal models show virtually no induction of these molecules in the vascular beds of experimental tumors. If this is true in human neoplasms then a “mismatch” between the adhesion molecules on the infused cells and the adhesion molecules expressed on the vasculature in the tumor bed may account for the poor recruitment of cells into tumors during adoptive immunotherapy. This proposal will define the adhesion molecules used by circulating cells to enter tumor-bearing organs and determine whether upregulation of selectin expression on the vasculature in the tumor bed will augment the therapeutic effect of adoptively transferred cells.

IV. **ADMINISTRATIVE ACTIVITIES:**

A. Director of Research Flow Cytometry Laboratory and Co-Director of Clinical Flow Cytometry Laboratory - manage the development and maintenance of the analytic systems for the clinical laboratory. Lead the evaluation of new instrumentation for both the clinical and research laboratories. Participate in the consolidation of Clinical Flow Cytometry and Hematology Laboratories. Manage the operation of the research instruments.

B. Co-Director, Hematology Sequence in Component II of Medical School Curriculum - design and implement laboratory exercises, oversee lecture development for leukocyte disorders, co-edit/author exams and provide quality control for sequence.

C. Co-Director, General Pathology Course for Dental and Graduate Students (580/630) - re-design laboratory exercises, compose new lecture series on leukocyte physiology and autoimmune diseases, co-edit/author exams and provide quality control for sequence.

D. Cancer Center Executive Committee - departmental representative.

V. **OTHER RELEVANT ACTIVITIES:**

**EDITORIAL ACTIVITIES:**

A. Journal of Clinical Investigation.
B. Journal of Biological Chemistry
C. Journal of Laboratory Investigation.
C. Nature.
E. Cell.
H. Journal of Immunology (Associate Editor).
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


MANUSCRIPTS SUBMITTED/IN PREPARATION FOR PUBLICATION:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Lecturer in General Pathology for Dental Students and Graduate Students (Pathology 630/580)
   B. Research supervisor for undergraduate and graduate students and for postdoctoral investigators
      1. Maria-Thereza S. Piccolo, M.D.
      2. Elisabeth Schmid, M.D.
      3. Aresh Monem, Pharm. D.
      4. Dorothy Pao, Medical Student.
      5. Serge Verbrugge, Medical Student.
      6. Minh Nguyen, Undergraduate Student.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. "Role of Cytokines and Adhesion Molecules in Thermal Injury", (NIH GM-48477), Principal Investigator.
   B. "Lung Injury Produced by Oxygen Metabolites", (NIH GM-29507), Co-Principal Investigator with Dr. P.A. Ward.

PENDING SUPPORT:
   A. None

PROJECTS UNDER STUDY:
   A. Role of leukocytes, inflammatory mediators, and adhesion molecules in thermal trauma-related cell and tissue injury.
   B. Pathomechanisms of ocular ischemia-reperfusion injury.
   C. Functional responses of retinal pigment epithelial (RPE) cells in vitro.
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Interviewed candidates for faculty and postdoctoral positions.
B. Participation in undergraduate research program.

MEDICAL SCHOOL/HOSPITAL:

A. Course Co-Director Pathology 630/580/631.
B. Member Medical School Committee on Student Biomedical Research Programs.
C. Interviewed candidates for faculty positions.
D. Consultant for clinical research programs.
E. Reviewer of intra-departmental grant proposals.

REGIONAL AND NATIONAL:

A. Member NIH Study Section Surgery, Anesthesiology and Trauma, 1996.
B. Member Honors and Awards Committee of the American Shock Society, 1995-present.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Member Editorial Advisory Board Immunobiology.
B. Reviewer for the following scientific journals:
   8. Shock.

INVITED LECTURES/SEMINARS:

1. Speaker at a Seminar on Experimental Studies in Thermal Injury I, University of Michigan Hospitals Burn Unit, Ann Arbor, Michigan, February 6, 1996.
2. Speaker at a Seminar on Experimental Studies in Thermal Injury II, University of Michigan Hospitals Burn Unit, Ann Arbor, Michigan, March 12, 1996.
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:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Member, Dissertation Committee of Douglas F. Gibbs (Pathology).
   B. Member, Dissertation Committee of Mike Model (Biophysics).
   C. Member, Dissertation Committee of Thomas Cheng (Neurosciences).
   D. Mentor for students who worked in my laboratory over the past year including one visiting scientist, two post-doctoral fellows, one pathology graduate student, one medical student, and five undergraduate students.
   E. Member, University of Michigan Minority Student Research Opportunities Program.
   F. Member, University of Michigan Student Research Opportunities Program.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

C. Principal Investigator, “High Density Cell Growth in Microcarrier Aggregate,” NIH CA 61616, 7/1/96-6/30/98.
PROJECTS UNDER STUDY:

A. The development of substrates for optimum growth of cells in large-scale culture.
B. The biology of human squamous carcinoma cell invasion.
C. Biological basis of photoaging and natural aging in skin.

IV. ADMINISTRATIVE 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.
B. Manuscript Review for:
   4. Experimental Cell Research.
   7. Laboratory Investigation.
   8. Invasion and Metastasis.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/PRESENTATIONS

3. Department of Laboratory Medicine, M.D. Anderson Cancer Center, Houston, Texas, February 15, 1996.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS.


BOOKS AND CHAPTERS IN BOOKS:


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

I. CLINICAL ACTIVITIES:

A. These have been chiefly related to administrative responsibility for all clinical service functions of the Department.

B. Autopsy Service.

II. TEACHING ACTIVITIES:

A. Graduate students:

1. Responsible during the current academic year for teaching activities for the following:
   a. Beatrice Beck-Schimmer, M.D., Postdoctoral Fellow.
   b. Nicolas Bless, M.D., Postdoctoral Fellow.
   c. Larry Crouch, Ph.D., Postdoctoral Fellow.
   d. Boris Szermak, M.D., Postdoctoral Fellow.
   e. Jami Foreback, Pathology Graduate Program Student (MSTP student) (mentor).
   f. Teletha Gipson, Ph.D., Postdoctoral Fellow.
   g. Michael S. Mulligan, M.D., Postdoctoral fellow.
   h. Elizabeth Schmid, M.D., Postdoctoral Fellow.
   i. Ralph C. Schimmer, M.D., Postdoctoral Fellow.
   j. Hagen Schmal, M.D., Postdoctoral Fellow.
   k. Thomas Shanley, M.D., Postdoctoral Fellow.
   l. David Tung, Ph.D., Postdoctoral Fellow.
   m. Roscoe Warner, Ph.D., Postdoctoral Fellow.
   n. UROP Undergraduate Students:
      - Hillary Cohen, Senior.
      - Karen Rosner, Sophomore.
      - Richard Carter, Freshman.
   o. Morgan Althoen, Medical Student.

2. Indirect supervision of four Research Scientists.


B. Undergraduate students:

1. Lecture, College Honors Seminar 250, March 29, 1995, three hours.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Lung Immunopathology" (Training Grant), NHLBI-NIH-HL-07517 (5%), $235,013/year ($2,693,183/ten years), June 1, 1996 -May 31, 1997. (Renewed for another five years, June 1, 1996 to May 31, 2001.)
Department of Pathology Annual Report

C. Principal Investigator, "Inflammatory Cells and Lung Injury", NHLBI-HL-31963 (29%), Section I - $189,794, Core A -$38,431/year ($1,010,734/five years), March 1, 1989-February 28, 1997.
D. Co-Investigator, "Mechanisms of Glomerular and Tubular Injury" (R. Wiggins, Principal Investigator), NIADDK-NIH-DK-39255 (5%), Section 1 - $48,000/year; August 1, 1995 - July 31, 1996.
E. Principal Investigator, "Oligosaccharides as Inflammatory Agents" NIH-AI33189-01 (Core - 10%; Administrative Core - 5%), $449,661/year ($2,192,155/four years), September 1, 1992-June 30, 1996. No Cost Extension.

PENDING:

A. Co-Investigator, "The Role of Cytokines and Adhesion Molecules in Thermal Injury", (5%), $178,772/year ($1,384,651/five years), with G.O. Till, Principal Investigator.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Division of General Pathology.

MEDICAL SCHOOL/HOSPITAL:

A. Dean's Cabinet, 1993--.
B. Advisory Committee for the Howard Hughes Medical Institute, 1984--.
C. Clinical Council, 1993--.
D. Conflict of Interest Committee, 1993--.
E. Dean's Advisory Council, 1985--.
F. Geriatric Center Executive Committee.
G. Howard Hughes Medical Institute Dean’s Advisory Committee.
H. Internal Medicine Advisory Committee for the University of Michigan George M. O'Brien Renal and Urologic Center, 1991--.
I. Michigan Eye Bank Research Review Committee, 1980--.
J. Presidential Initiatives Fund, The University of Michigan, March, 1987--.
K. Undergraduate Research Opportunity Program, University of Michigan, 1992--.
L. University of Michigan Cancer Center Executive Committee.

UNIVERSITY OF MICHIGAN:

A. Senate Assembly Committee on University Affairs, September, 1995 --
   1. Health Affairs Advisory Committee, Chair, September, 1996--.

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. President, 1996
   2. Vice-President, 1995
   3. Trustee, 1980--.
      Vice-Chairman.
   5. Anatomic Pathology Examination Committee, 1988--.
   7. Examination Evaluation Committee, 1988--.
   8. Professional Qualification/Competence Committee, 1988--.
   9. ABP/ABPRF Research Committee, 1989--.
10. Residency Review Committee for Pathology.
12. Planning and Development Committee, 1992--.
13. Test Committee for Molecular Pathology, 1993--.

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. A. James French Society of Pathologists, 1988--.
O. Health Policy Agenda for the American People, Advisory Committee.
P. Institute of Medicine, July 1, 1990.
Q. United States and Canadian Academy of Pathology, Inc.
R. Michigan Society of Pathologists.
S. Michigan Thoracic Society, 1988--.
T. National Research Council
   1. Institute of Laboratory Animal Resources.
   2. Committee on Human Rights, Correspondent.
U. The Oxygen Society, 1988--.
W. Society of Medical Consultants to the Armed Forces:
X. 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. Biological Signals, Consulting Editor.
D. Clinical Immunology and Immunopathology, Consulting Editor, 1977--.
E. CRC Critical Reviews in Free Radical Research, Advisory Board, 1986--.
F. CRC Critical Reviews in Toxicology, Advisory Board, 1986--.
G. Journal of Critical Care, Editorial Board.
H. Toxicologic Pathology, Editorial Board, 1988--.

HONORS AND AWARDS

A. Rous-Whipple Award, American Society for Investigative Pathology, Hilton Hotel, New Orleans, Louisiana, June 5, 1996.

PATENTS:


INVITED LECTURES/SEMINARS:

3. Invited Lecturer, "Molecular Regulation of Lung Inflammation", First International Ringberg Symposium on "Molecular Mechanisms of Inflammation", Ringberg Castle, Tegernsee, Germany, September 5-9, 1995.
5. Invited Lecturer, "Cytokines, Adhesion Molecules and Pulmonary Injury (Overview Lecture)", the Charles G. Cochrane Festschrift and Immunopathology Symposium, Sheraton Grande Torrey Pines, La Jolla, California, October 14, 1995.
8. Visiting Professor, "Role of Nitric Oxide and Role of Lung Injury", Searle Research and Development, Monsanto Company, St. Louis, Missouri, December 1, 1995.

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12. Invited Lecturer, "Regulation of Lung Inflammation", Department of Immunology/Microbiology, Rush-Presbyterian-St. Luke’s Medical Center, Chicago, Illinois, February 19, 1996.

13. Invited Speaker, "Cytokines and Lung Inflammation", Bernie B. Carter Center for Immunology Research Spring 1996 Seminar Series, University of Virginia Health Sciences Center, Charlottesville, Virginia, April 1, 1996.


15. Invited Lecturer, "Activation and Regulation of Lung Inflammation", Montreal General Hospital Research Institute, Montreal, Quebec, Canada, April 25, 1996.


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.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I.  CLINICAL ACTIVITIES:

A.  Director, Division of Clinical Pathology/Clinical Laboratories, May 1993-present.
B.  Director, Clinical Immunopathology Service; September 1989-present.

II.  TEACHING ACTIVITIES:

A.  "Current Topics in Immunopathology" series: pathology residents, M4 students; (25 contact hours).
B.  Clinical Pathology Grand Rounds:
   1.  "The Inflammatory Response" (1/6/95).
C.  Immunopathology journal club: EMU medical technology students, medical technologists, pathology residents (one hour; biweekly, September-June).
D.  Immunopathology signout: pathology residents, M-4 medical students, EMU medical technology students (three times/week; 26 weeks/year).
E.  M-4 Laboratory Medicine Elective; 4th year medical students, four week block; (eight contact hours).
F.  M-1 Histopathology sequence (shared section with J.C. Fantone, M.D.); 1st year medical students; (four contact hours).
G.  Supervision of Research activities for:
   1.  Kenneth Kilgore, Ph.D. (Postdoctoral Fellow); (1/1/94-6/30/96) (supported by American Heart Association of Michigan Fellowship).
   2.  Brigitt Casselman (Undergraduate, University of Michigan); (5/1/94 - 4/30/96).
   3.  Douglas Allen (Undergraduate, University of Michigan); (9/1/94-12/1/95) (sponsored in UROP).
   4.  Valary Evans (Undergraduate, University of Michigan); (9/1/94-present), (sponsored in Howard Hughes Medical Institute Student Fellowship Program; sponsored in Student Biomedical Research Program).
   5.  Jennifer Beyer (Undergraduate, Texas Technical University); (5/1/95-8/15/95).
   6.  Vipul Maheswari (Undergraduate, University of Michigan); (6/15/95-present); (sponsored by American Heart Association of Michigan Fellowship).
   7.  Karen Powers (Undergraduate, University of Michigan); (9/1/95-present).
   8.  Anjali Desai, Ph.D. (Postdoctoral Fellow); (6/15/96-present).
   9.  Hernan Gomez, M.D. (Assistant Professor; Emergency Medicine, University of Michigan); (6/1/96-present).

H.  Ph.D. Thesis Committees:
   1.  Michael Gralinski, Department of Pharmacology, University of Michigan Medical School (completed Ph.D. 6/1/96).
   2.  James Park, Department of Pharmacology, University of Michigan Medical School (6/2/95-present).
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "Oxidant-Induced Beta Chemokines in Granuloma Formation", NIH (RO1-HL48287), (40% effort), $877,511; direct costs, 7/1/96-6/30/01.

B. Co-Investigator, "Monocyte Chemoattractant Protein 1 in Corpus Luteum", NIH (RO1-HD33478), (10% effort), $651,215; direct costs, 5/1/96-4/30/00 (Landis Keyes, Ph.D., Department of Physiology, University of Michigan, Principal Investigator).

C. Principal Investigator, “Monocyte Chemoattractant Protein-1 Receptor Antagonist Studies” 1/1/96-12/31/96 Roche Bioscience (Syntex) ($15,000).

D. Principal Investigator, “Carbohydrate P-Selectin Antagonist Studies In Vivo and In Vitro” 1/1/96-12/31/96 Glycomed ($9,300).

PROJECTS UNDER STUDY:

A. Role of neutrophil-derived mediators in MCP-1-mediated pulmonary granulomatous vasculitis.

B. Modulation of proinflammatory endothelial cell functions by C5a and the membrane attack complex (MAC).

C. Role of MCP-1 in luteolysis (collaboration with Landis Keyes, Ph.D., Department of Physiology, University of Michigan Medical School).

D. Role of MCP-1 in PAN-induced interstitial nephritis (collaboration with Allison Eddy, M.D., Department of Pediatrics, University of Toronto, Canada).

E. Pathogenesis of extrinsic allergic encephalomyelitis (collaboration with Joan Berman, Ph.D., Department of Neurology, Albert Einstein, New York).

F. Ischemia-reperfusion injury in perinatal rat brain (collaboration with Faye Silverstein, M.D., Departments of Pediatrics and Neurology, University of Michigan Medical School).


H. MCP-1 in arterialized vein grafts (collaboration with John Hoch, M.D., Department of Surgery, University of Wisconsin, Madison, Wisconsin).

I. P-selectin antagonists in glucan-induced granulomatous vasculitis (collaboration with Mark Anderson, Ph.D., GlycoMed Corp., Alameda, California).

J. MCP-1 antagonists in granulomatous vasculitis (collaboration with Kurt Jarnagin, Ph.D., Roche Bioscience, Palo Alto, California).

K. Role of MAC in tissue factor production by endothelial cells (collaboration with James Park, Benedict Lucchesi, M.D., Ph.D., Department of Pharmacology, University of Michigan, Ann Arbor, Michigan, and Rob Davenport, M.D., Department of Pathology, University of Michigan, Ann Arbor, Michigan).
IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL:

A. Clinical Contracting Strategic Advisory Group, University of Michigan Medical Center, 1994-present.
B. Dean's Advisory Committee (ad hoc substitute for Dr. Ward), 1994-present.
C. Incentive Task Group, advisory to Medical Service Plan Executive Committee, 1994-1996.
E. Medical Leadership Council, University of Michigan Medical Center, 1996-present.
F. Cancer Center Clinical Leadership Committee, 1996-present.
G. Representative, National Committee for Clinical Laboratory Standards, 1996-present.
H. Member, Standardization and Product Evaluation Committee, 1996-present.
I. Clinical Council (ad hoc substitute for Dr. Ward), 1996-present.
J. Senate Assembly, Alternate, 1996-present.

DEPARTMENTAL:

A. Interviewer of Pathology Residency Candidates, 1989-present.
B. Interviewer of Pathology Graduate Program Candidates, 1990-present.
C. Chairman, Laboratories Communications Committee, 1993-present.
D. Chairman's Advisory Committee, 1993-present.
E. Chairman, Department of Pathology Quality Assurance Committee, 1993-present.
F. Clinical Associate and Advisory Committee for Medical Technology Program, Eastern Michigan University, 1993-present.
G. Chairman, Utilization Management Committee, Department of Pathology, 1995-present.

REGIONAL AND NATIONAL:

A. Ad hoc referee for:
   2. Laboratory Investigation.
   3. Human Pathology.
   5. Lung.
   8. Pediatric Research.
   10. American Review of Respiratory Disease.
   16. Clinical Immunology and Immunopathology.
   18. Journal of Immunology.
   20. Reviews of Infectious Diseases.
SECTION REPORTS
ANATOMIC PATHOLOGY
DIVISION OF ANATOMIC PATHOLOGY

ANNUAL REPORT
DEPARTMENT OF PATHOLOGY
1 JULY 1995 - 30 JUNE 1996

The division faced one of its greatest challenges in years with the mandated cost efficiency program. In concert with the global departmental plan the division merged its laboratories into a single laboratory placing a greater emphasis on cross training of personnel and sharing of space and commodities. In this effort, we greatly acknowledge the contributions of our newly appointed supervisor Diana Souza who brings strong administrative skills from her clinical pathology background. This reorganization is an evolutionary process which will rely heavily on increased computerization of all aspects of specimen handling and reporting as well as on strong educational initiatives in helping our residents and faculty understand the need for better use of ancillary tests in daily practice.

Our faculty continues to thrive despite the stringent climate. They participate in numerous short course offerings for both the American Society of Clinical Pathology and the United States Academy of Pathology from topics ranging from the applications in molecular diagnostics to diagnosis of bone tumors. Over a dozen abstracts were presented at the USCAP meeting, one of which won the Stowell Orbison Prize for best resident research project. In addition two of our faculty were cited for exceptional contributions in the teaching arena. Drs. Caplan and Devaney shared the annual resident teaching award. Drs. Appelman, Headington, and Weiss were listed among the best doctors in the midwest and Dr. Weiss was elected Vice-President of the US-CAP. Dr. Thomas Frank in conjunction with Drs. Wojno and Singleton redefined the role that pathology will play in the successful competing renewal for the Cancer Center. The Tissue Procurement Core accordingly was expanded to include histology and immunohistochemistry services with ultimate plans that these activities will be relocated and housed in dedicated space in the Cancer Center. Our fellowship programs graduated 3 residents in surgical pathology (Drs. Khalidi, Reith and Silvera), 1 in cytopathology (Dr. Stern), and 1 in soft tissue pathology (Dr. Lane). Dr. Mark Wielk (Barnes Hospital) served as our Annual Residents Visiting Progressor and lectured on “Algorithmic Approach to Diagnosis using Immunohistochemistry”.
The closure of this academic year witnessed the departure of two valued faculty members: Dr. Bernard Naylor and Dr. Thomas Frank. Dr. Frank, a product of Washington University and University of Pennsylvania, was responsible for the development of the molecular diagnostic laboratory in anatomic pathology and will be especially remembered for the numerous resident projects he mentored during his seven years in the department. He leaves to assume the position as Vice President of Medical Education for Myriad Genetics. Dr. Bernard Naylor retired after more than thirty years, bringing to a close an end an epoch in cytology in this department. He was the consummate diagnostic cytopathologist outstanding in nearly every area but identified closely with pulmonary cytopathology, asbestosis, and mesothelioma. He served with distinction in the past as the President of the American Society of Cytology. He is equally known throughout the department for his teaching skills both at the medial student and resident level. Hardly a resident leaves this program without remembering Dr. Naylor’s words of wisdom on the importance of delivering an oral presentation properly, “Just remember the next time I listen to you speak, I may not care so much what you are saying, but I will remember how you said it.”

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. TIMELY COMPLETION OF AUTOPSY REPORTS:

Autopsies are still not completed in a timely fashion, and this has resulted in an interim CAP inspection citation. We are continuing to make improvements in the management of cases. Particularly, the typing has been revamped so that house officers and staff may make their own corrections. This has completely removed this portion of the processing from causing delays. The table below indicates the improvements in turnaround time.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total # autopsies</th>
<th>Average days to completion</th>
<th># &gt;60 days to completion %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>496</td>
<td>176</td>
<td>448 (90%)</td>
</tr>
<tr>
<td>1995</td>
<td>566</td>
<td>112</td>
<td>406 (72%)</td>
</tr>
<tr>
<td>1996 (first six months only)</td>
<td>249</td>
<td>91</td>
<td>160 (64%)</td>
</tr>
</tbody>
</table>

While there has been substantial improvement in our ability to complete the cases, we have not yet achieved the final goal of having virtually all of our cases completed within 60 days. Beginning July 1, 1996, we have incorporated an incentive clause for completion of autopsies. Any autopsy reports that are not completed within 60 days will result in $500.00 per case reduction in pay for the staff person.

II. MORGUE RENOVATIONS:

The refrigerator in the morgue has been completely replaced. This renovation has upgraded the backup capacity of the refrigeration unit, improved the ability to service the refrigeration components, brought us into compliance with environmental regulations for the refrigerant, and increased the storage capacity. A new floor was also installed. While there have been some difficulties with the storage racks and initial performance of the cooling unit, these issues are being resolved. This new refrigerator doubles the storage capacity of the refrigerator.

We are in the process of acquiring a new room contiguous to the present facility. This will increase the office area to accommodate the greater the number of presentations which are being performed in the morgue. These presentations include review of cases with other house officers at the University of Michigan.
III. MEDICAL EXAMINER CASES:

We have concluded a contract with the Washtenaw County Medical Examiners Office which includes substantial improvements in reimbursement. We will be paid for past work that we performed for the county, and the new contract provides enhanced reimbursement for future years. However, there is a penalty clause which reduces reimbursement to the Department if there is a delay in the final report. If a report is 60 days late, there will be a 50% reduction, if it is 90 days late, 75% reduction, and if 120 days late, 100% reduction. Also new in the contract is the requirement that all autopsies be performed by forensic pathologists, which relieves the general pathology faculty of the need to staff these cases. Additionally, the Chief Medical Examiner of Washtenaw County, Bader Cassin, M.D., will perform medical examiner autopsies at the University of Michigan, with administrative and technical support from the University. The pathology house officers will not participate in these autopsies, although they may. This decompresses the service commitments on the pathology house officers.

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<thead>
<tr>
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<th>1995 (6 months)</th>
<th>1993 (6 months)</th>
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<tbody>
<tr>
<td>Total ME autopsies</td>
<td>126</td>
<td>87</td>
</tr>
<tr>
<td>U of M hospital cases, or death at scene</td>
<td>101</td>
<td>73</td>
</tr>
<tr>
<td>Transfer from other hospital</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>Injury in Washtenaw County</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Injury outside Washtenaw County</td>
<td>28</td>
<td></td>
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<tr>
<td>Medical Examiner’s case, but autopsy requested by family and not ME</td>
<td>14</td>
<td></td>
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</table>

We have completed an extensive analysis of the medical examiner caseload. We reviewed all of the ME autopsies performed, and the ME cases investigated from July 1, 1995 to December 31, 1995, i.e., a six month time interval. For comparison, the figures for the first six months of 1993 are included.

There are several important pieces of information in this table.

The number of medical examiner cases has increased, but this has primarily been due to either University of Michigan Hospital deaths, or deaths at the scene. We are getting very few cases transferred from other hospitals (only 11 such cases in the last six months of 1995). This indicates that the growth of the medical examiner work is due to the increased activity at the University, primarily because of the success of the Trauma/Burn Unit.

A. In most situations, the injury or violent act occurred in Washtenaw County.
B. Several medical examiner’s cases are accepted, but an autopsy is not ordered by the medical examiner. However, the family will still request an autopsy (14 cases).
We also evaluated the utilization of the autopsy service by the medical examiner during this same time period.

Total number of in-hospital deaths investigated 179
Investigated deaths with no ME ordered autopsy 78
Investigated deaths with autopsy 101
Autopsy percentage 56%

IV. **STATISTICS:**

All of these are for the time period July 1, 1995 to June 30, 1996.

Total number of U of M deaths 1088
Total number of autopsies performed 541
Total number of medical examiner cases 219

Daniel G. Remick, M.D.
Director, Autopsy Service
This past year has brought several new developments to the division of Cytopathology. Due to the increasing demands for cost containment in the health care industry, reorganization of the Cytopathology Laboratory with the Histology Laboratory will occur in the near future.

Gynecologic specimens numbered 31,913 and non-gynecologic specimens 5,603 of which 30% were fine needle aspirates. The increasing number of aspirates represents the main area of growth in cytopathology. Drs. Selvaggi and Michael in conjunction with representatives from the Cancer Center were fortunate to acquire space in the building for a fine needle aspiration clinic. Recruitment of an additional cytopathologist will ensure continuous staffing.

In the tenth year of our Cytopathology Fellowship Program, Dr. Robert Stern completed his training with distinction. Due to the demand for cytopathologists in the community, he received several job offers.

The division has continued to refine its computer program for the reporting of cervicovaginal cytology and will begin to develop a software package for non-gynecologic cytology in conjunction with Pathology Data Systems. Ms. Belinda Davis is working with representatives from Cerner to develop a working quality assurance/quality control software program for cervicovaginal cytology.

The cytotechnologists have been actively involved in the regional cytology society. Ms. Belinda Davis is the current Vice President of the Michigan Society of Cytology and serves as a screener for the College of American Pathologists Cytopathology Committee. Drs. Naylor, Selvaggi, and Michael have presented papers and workshops at various national meetings and cytologic societies. Henry Ford Hospital programs of Cytotechnology and have presented several workshops and papers at various national meetings and cytology societies.

Gynecologic specimens numbered 31,913 and non-gynecologic specimens 5,603 of which 30% were fine needle aspirates. The increasing number of aspirates represents the main area of growth in cytopathology. It is anticipated that the demand for aspirates will continue to increase in the new health care era and with the opening of the Cancer Center.

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

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The Dermatopathology Service receives diagnostic case material from six different sources: (1) UMMC (ID) cases; (2) outside contractual (MD) cases; (3) personal consultations (HE and NI) cases; (4) outside slides reviewed for referred patients (TD) cases; (5) miscellaneous intramural referrals (IE, IF, IS, ME, SC, TS) cases; (6) and informal consultations (intramural, VAH and MU).

Work load volume is as follows:

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<tbody>
<tr>
<td>HE</td>
<td>731</td>
<td>981</td>
<td>694</td>
<td>569</td>
<td>639</td>
</tr>
<tr>
<td>ID</td>
<td>5651</td>
<td>4255</td>
<td>4791</td>
<td>4759</td>
<td>4787</td>
</tr>
<tr>
<td>MD</td>
<td>1347</td>
<td>1663</td>
<td>2240</td>
<td>2560</td>
<td></td>
</tr>
<tr>
<td>TD</td>
<td>550</td>
<td>709</td>
<td>553</td>
<td>578</td>
<td></td>
</tr>
<tr>
<td>Misc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal</td>
<td>300</td>
<td>225</td>
<td>254</td>
<td>106</td>
<td>125</td>
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The total case numbers for 1995-1996 are somewhat inaccurate because of inability to include cases reported by General Surgical Pathologists during periods of absence by Dermatopathologists.

There was again an increase in the number of personal consultations and a significant increase in the number of cases coming from M-Labs. TD cases increased in parallel with an increased number of melanoma patients.

As noted for the previous year the workload in the Dermatopathology service continues to be significantly impacted by the growth of Cutaneous Oncology services. The number of patients being seen in the Melanoma Clinic increased this year to almost 400 and bi-weekly conferences including 15 to 20 patients or more are not exceptional. The Otolaryngology and Plastic Surgery services have also been contributing complex cases for microscopic study.

Dermatopathology teaching in the Department of Dermatology remains unchanged.

Correlative activities include participation in the Pigmented Lesion Clinics (bi-weekly), Cutaneous Lymphoma Conference (monthly), and Dermatology Grand Rounds (weekly).

Formal presentations were made to both the medical and dental students.

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

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The Laboratory of Neuropathology continues to have three interrelated functions: Laboratory diagnostic service, teaching and research. Dr. Samuel P. Hicks was on Active Emeritus status, and made significant contributions to the Autopsy Neuropathology Service. Dr. Mila Blaivas, Ms. Constance J. D'Amato, Dr. Paul E. McKeever, and Dr. Anders A.F. Sima also contributed to the Neuropathology Service.

I. CLINICAL ACTIVITIES:

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

1. There were 695 neurosurgical cases including CNS, pituitary, muscle and nerve examined this year, with 79 of these cases coming from outside hospitals in consultation. A portion of these were part of an interdepartmental study of PET/BUDR and neuropathology funded by NIH. Approximately 300 surgical specimens required special neurohistologic procedures.

2. There were 300 brains out of 556 autopsies processed in the hospital neuropathology laboratory. This is 54% of the total autopsies. Five brains were also processed from other institutions. In addition, the Diagnostic Unit of the Neuropathology Core Laboratory of the MADRC processed 46 hospital dementia brains which is 8% of the total autopsies. Fifteen additional brains were processed by the Core Laboratory from the Michigan Dementia Network Program.

3. There were 239 muscle biopsies (122 inside, 117 outside) 87 processed through M-Labs, nearly all with histochemistry, 20% with electron microscopy. There were 97 (57 internal, 40 external) peripheral nerve biopsies. There were 50% with teased fiber preparations, all with thick plastic sections and 30% had electron microscopy performed. The combination of nerve teasing, muscle histochemistry, electron microscopy and morphometry make the service regionally competitive for diagnostic consultation.

4. Faculty interpreted 231 cases in semithin or thin section from electron microscopy. The majority of these cases were nerve, pediatric muscle, and neurosurgical biopsy cases.

5. The ceroid service, buffy coat division, reported 10 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 130 difficult neuro-oncology cases.

7. One brain was examined for research purposes.

8. There are two neuropathology quality assurance meetings each month. Attendees include neuropathologists from nearby institutions.

II. TEACHING ACTIVITIES:

1. Medical Students: This year the neuropathology faculty taught in the eight week neuroscience sequence of our 2nd year medical curriculum. There were fourteen hours of neuropathology taught: six hours of lecture and eight hours in the laboratory.

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 weekly conference where abnormal brains are examined with all clinicians invited; monthly nerve and muscle
biopsy conferences accredited for CME; individual instruction on autopsies and biopsy material; Neuropathology 858, an 8 hour laboratory course; bimonthly conferences with Neuroradiology, conferences for neuromuscular disease and bi-weekly Neuropathology seminars for Neurosurgery and Neuroradiology House staff. Weekly seminars are provided to neurological and neurosurgical house staff on clinico-pathological correlations.

3. Electives: Two Pathology Residents, one Neurosurgery and one Neurology Resident chose elective rotations on the Neuropathology Service.

III. RESEARCH ACTIVITIES:

1. Dr. Hicks, Dr. Sima and Ms. D’Amato provided neuropathologic support for MADRC. Ms. D’Amato is Core Coordinator of the Diagnostic Neuropathology Unit of the Neuropathology Core of the MADRC. Ms. D’Amato is also Co-Investigator with Dr. Anders Sima on the MADRC Project: The Pathology of Diffuse Lewy Body Disease.

2. Dr. Blaivas and associates investigate: 1) ocular muscle (aging and botulinum effect), 2) musculature related to cleft palates in children 3) histology of animal model of rheumatoid arthritis, 4) histochemistry and morphometry of muscle in patients with hypertension and diabetes.

3. Dr. Sima's laboratory was investigating pathogenetic mechanisms involved in experimental and human diabetic neuropathies. In particular, the laboratory is focusing on the molecular, structural, and functional abnormalities of the nodal apparatus of myelinated fibers in diabetic nerve. The laboratory is also investigating trophic and immunological factors governing nerve fiber regeneration in diabetes. The Morphometric Imaging Core, directed by Dr. Sima, served as an international reading laboratory for nerve biopsies obtained from several ongoing multicenter clinical trails of drugs designed to ameliorate and halt the progression of diabetic neuropathy. Dr. Sima moved to Wayne State University in February.

4. Dr. McKeever and associates are determining the extent and cause of differences in gene product expression in brain tumor tissue versus cells in culture. These differences may result from a separate population of cells within brain tumors or from genetic instability in neoplastic cells. They are assessing the prognostic value of DNA content, specific chromosomal markers by in situ hybridization, and Ki-67, PCNA and BUDR labeling indices in brain tumor specimens in vivo and in vitro. He is studying the prognostic potential of MIB-1 proliferation marker on brain tumors. He is the study pathologist for a multi-institutional transferrin receptor targeted glioma treatment protocol, and for a multi-institutional study of treatments of low grade astrocytomas. He is studying receptor-ligand interactions and neuropathology of epilepsy with colleagues in Neurology.

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, Beaumont Hospital and Wayne State University has established a registry for Alzheimer's disease and other dementias and degenerative diseases.

Paul E. McKeever, M.D., Ph.D.
Chief
Neuropathology Section
SPECIAL FUNCTIONS LABORATORY
(immunoperoxidase, immunofluorescence, neural muscular studies, and electron microscopy)
DEPARTMENT OF PATHOLOGY
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The immunoperoxidase laboratory has changed substantially over the last year. The major impetus for these changes being the cost efficiency program. To maximize use of personnel and resources the following services were combined under a single umbrella; immunoperoxidase, immunofluorescence, nerve teasing, muscle histochemistry, electron myoscopy, special histochemistry, and anatomic pathology molecular diagnostics. We have initiated the process of cross training personnel and have already realized the saving from this more efficient use of personnel in that we have not had to reduce the services provided in any substantial way with implementation of the cost efficiency program.

The immunohistology lab has continued to offer over 75 different immunohistochemical stains for paraffin and frozen tissues and perform approximately 650 test each month or over 7500 during the year. This is a substantial reduction from previous years and is mainly due to the decreased utilization of redundant antibodies on individual cases. During this time period we are not aware of a single incidence where this reduced redundant ordering of antibodies has impacted patient care in any way. We will continue to make inroads into the most cost effective use of immunoperoxidase staining in anatomic pathology.

As part of continued efforts at cost efficiency we are planning to merge all of the anatomic pathology laboratories including cytology, histology, and the special studies mentioned above in order to maximize cross training and personnel utilization. These plans will be enhanced by the implementation of the new Cerner operating system (V500). The efficient use of this computer technology to eliminate manual logs and manual quality assurance records has the potential to increase productivity. This combined anatomic laboratory will be overseen by a single supervisor (Diana Souza) who will begin on July 1, 1996. We also plan to completely separate the research activities of this laboratory from the hospital service work. The research activities will be shunted to the Cancer Center Core histopathology and immunoperoxidase core facility as well as the research histology that is provided by the department (Cathy McClinchey). This initiative will remove a tremendous burden from the service lab and allow us the flexibility for cross training of personnel to maximize productivity. In conclusion we have made significant inroads into the establishment of a cost efficient system over the past year and will continue our efforts in the coming year while trying to maintain the excellent quality of work for which this laboratory is known.

Kirk J. Wojno, M.D.
Director

Timothy P. Singleton, M.D.
Assistant Director
The surgical pathology service remains an active University service with in-house accessions approximating 30,000 and personal consultations 6000. The cases continue to demand increasingly higher levels of diagnostic sophistication coupled with more sophisticated ancillary procedures. More emphasis than ever is placed on STAT biopsy interpretations to facilitate treatment plans and diminish hospital stay. Consequently the staff has worked very conscientiously to improve turn around times (TAT) in order to better assist our clinical colleagues. Our current TAT for biopsies is 2.4 days, a figure which compares very favorably with the CAP guideline of 3.0 days. The Tissue Procurement Core, administered jointly by the Cancer Center and Surgical Pathology Service, distributes several thousand specimens per year to investigators throughout the medical center.

In concert with the departmental cost efficiency program the surgical pathology service has merged its histopathology laboratory with that of cytology and with time will integrate fully with immunohistochemistry. The consolidation of these three units will allow better cross training of individuals so as to acclimate to personnel reductions. We continue to work closely with Pathology Data Systems to complete full computerization of functions. Automatic SNOMED coding was added to our capability this year with future plans to adopt a computerized means of tracking slides and blocks.

Our fellowship programs remain robust. Drs. Hassan Khalidi (University of Texas), John Reith (Cleveland Clinic) and Scott Silvera completed their training in surgical pathology and Dr. Kathryn Lane (Duke University) finished a year of specialty training in soft tissue pathology. This coming year we look forward to three internal fellows: Drs. Lyndon Su, Steve Ramsburgh, and Joseph Tworek. Dr. Gelareh Farshid (Stanford University) will serve as the Soft Tissue Fellow. Dr. Joel Greenson is to be complimented for his direction of this program.

The surgical pathology service welcomes Dr. Lori Lowe as our new dermatopathology faculty member to assist Dr. Headington. Dr. Lowe joins us from Henry Ford Hospital where she had previously been the Director of Dermatopathology. In the coming year we will complete our recruitment for a new director of dermatopathology as Dr. Headington looks toward his retirement after an illustrious career in the department. Finally, we wish to acknowledge the retirements of Ada Tillman and Gwen Long from our Histopathology Laboratory. “Ada” and “Gwen”, as we all called them, served as Supervisor and Assistant Supervisor of the laboratory for many years. Both were outstanding histotechnologists and fine, dependable individuals whose expertise will be missed.

Sharon W. Weiss, M.D.
Director, Anatomic Pathology
CLINICAL PATHOLOGY
DIVISION OF CLINICAL PATHOLOGY
DEPARTMENT OF PATHOLOGY
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Despite a continuing, institution-wide mandate to reduce operating budget the Clinical Laboratories continued to provide excellent, full-spectrum service. In 1995-96 the Clinical Labs performed approximately 3.2 million billable analyses. The reduction in cost per unit of activity provided by the Clinical Labs, in the face of rising overall health care costs, is a testimony to the professionalism of the staff and the management capabilities of the laboratory directors and senior laboratory personnel. The Clinical Laboratories successfully completed the biannual on-site College of American Pathologists (CAP) inspection and, with the oversight of Clinical Laboratory personnel, the UMMC - acquired physician office practices and satellite facilities received COLA certification. The Divisional Quality Assurance Program, as a component of the Departmental Program for Excellence, continues to be at the forefront both within the University of Michigan Medical Center and among clinical laboratories located in tertiary care facilities throughout the United States. Maintenance of the delicate balance among quality service, cost effective testing, utilization control, and the research and development which characterizes an academic institution, will be a continuing challenge.

1995-96 was marked by three major initiatives. In response to pressures to reduce our cost/unit of laboratory service and to improve our operating efficiency, a comprehensive plan for laboratory reorganization was initiated. Reorganization entailed a nearly 10% reduction in operating budget, consolidation of several laboratories, and reorganization of phlebotomy services. Major future cost efficiencies were gained through new agreements with the Southeastern Michigan American Red Cross (blood products) and Johnson and Johnson (chemistry instruments and reagents). The initial phases of this plan have been implemented with the expectation that reorganization will be completed by autumn. The present reorganization will entail consolidation of the Immunopathology, Ligand Assay, Toxicology/Therapeutic Drug Monitoring, and Chemistry Laboratories into a single unit, consolidation of the Hematology, Flow Cytometry, and Coagulation Laboratories (formerly Internal Medicine) into a single unit, and streamlining of the administrative structure of these and other laboratories. Second, the Clinical Laboratories successfully reallocated the resources necessary to meet the continuing and marked increase in transplantation activity (especially bone marrow) experienced in 1995-96. Integral to this programmatic demand was implementation of DNA-based high resolution class II antigen typing and DNA sequencing as clinical assays. Augmentation of the capabilities of the Blood Bank, Tissue Typing, and Cytogenetics Laboratories was contributory to the approval of the UMMC as a participant in the National Allogeneic Bone Marrow Transplantation Program. Finally, the Clinical Laboratories have responded to the institutional initiative to acquire broader primary care capabilities within the region. Specifically, nine medical practices and two UMMC satellite facilities that maintain on-site laboratory testing were added to the overall UMMC laboratory network. This activity was coupled with a robust expansion of on-site point-of-care testing and data handling activities. In preparation for the future, the Clinical Laboratories continue to support the growing M-Labs outreach program, forge
Department of Pathology Annual Report

strong collaborative relationships with local and regional reference laboratories, and intensify our role in institutional utilization management.

Faculty and laboratory staff participated in a wide variety of intramural and extramural educational programs during 1995-96. For instance, the 27th annual Blood Bank/Transfusion Medicine course and the Laboratory Information Systems course were each attended by more than 200 registrants making them among the most visible courses of their kind in the United States. Twenty pathology residents from around the nation received scholarships to attend the June LIS course. This program, coupled with a burgeoning collaborative relationship with the Informatics Program in the Department of Pathology at the University of Pittsburgh, an exceptionally strong presence by information technology-savvy senior pathology house officers, an informatics focus in the Chemistry Fellowship (see below), and establishment of a house officers website on the Internet, along with several pending Departmental and Institutional initiatives promise to further enhance the Department’s leadership role in this growing and important area. These courses, along with the M-Labs educational programs, are prominent examples of educational outreach activities. Evaluations from senior medical students enrolled in the fourth M4 Laboratory Medicine course were again highly laudatory. The revised clinical pathology residency training format (July, 1993), which organizes pathology residents into teams that rotate through three blocks of clinical laboratories that are grouped according to “relatedness of discipline”, continues to meet with critical success. The continued high quality of trainees in the Hematopathology Fellowship program has enhanced the service, educational, and academic missions of the Hematopathology group and the Department. Certification of a Clinical Chemistry Fellowship was received from the ACGME. This fellowship has further enhanced the service, academic, and educational missions of the Division and Department.

The academic achievements of faculty members within the Clinical Pathology Division have been outstanding. As a group, the CP faculty had over 100 articles published in peer reviewed journals. Most faculty members played highly visible leadership roles in national organizations, courses, symposia, as well as on editorial boards, examining committees, and research review study sections; an illustration of their high levels of recognition throughout the United States (see individual reports). Numerous faculty members received extramural funding that supported a variety of scholarly activities (see individual reports).

The Clinical Pathology Division is faced with numerous challenges in the future. In addition to its ongoing academic enterprises, educational issues, faculty diversity initiatives, leadership and development in quality assurance, and laboratory resource utilization in the context of the hospital cost efficiency program, the Division plans to continue to expand its attention to informatics and other new technology (e.g. automation), its clinical molecular diagnostics program and, in cooperation with the M-Labs program, to optimize its position in the regional clinical laboratory market. Achievement of these objectives will require the continued commitment, professionalism, and hard work of the faculty, laboratory staff, administration, and house officers.

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

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PATIENT CARE:

Blood component utilization continued to grow during the year, approximating 100,000 units. This was related to further expansion of the liver and bone marrow transplantation programs and the need to provide support for patients prior to the actual procedure, as well as to growth in areas such as trauma care, extracorporeal membrane oxygenation and thoracic surgical operations. This growth occurred despite efforts to contain blood utilization in University Hospital.

Component utilization increased particularly in the areas of platelet and plasma transfusion. The requests for platelet transfusions were monitored by laboratory medical staff to ensure their appropriateness. A new initiative to monitor plasma and cryoprecipitate transfusions was instituted in hopes of ensuring appropriateness of utilization.

The Transfusion and Apheresis area, in an effort to meet the increased demands for therapeutic plasma exchange and for stem cell harvesting, modified its approach to blood transfusion and collection. An additional blood cell separator was obtained, allowing for a 50 per cent increase in apheresis procedures. This was accommodated by transferring hematology and oncology outpatient transfusions to an area elsewhere in the hospital. It is hoped that the introduction of the Cancer Center will allow improved relocation of some of the outpatient transfusion activity, perhaps associated with relocation of some of the I.V. immune serum globulin infusions.

Members of the staff played an integral role in support of specialized clinical activities. Mrs. Hoffman worked closely with the Bone Marrow Transplantation Program and also coordinated orders for HLA-matched Single Donor Platelets from our blood suppliers. Ms. Steiner supported the Department of Obstetrics and Gynecology, attending their weekly high-risk pregnancy conference, and playing a vital role in PUBS procedures. Ms. Butch led the Quality Management program of the clinical laboratories of the Department of Pathology and Mrs. Stoe chaired the Department’s Laboratory Safety Committee.

EDUCATIONAL ACTIVITIES:

As in previous years, the medical, technical and nursing staffs of the Blood Bank/Transfusion Service were active in providing educational programs within the institution and at regional and national meetings. The long-standing two-week Blood Bank orientation program for House Officers at University Hospital was presented on two occasions during the year, related to modification in the training program schedule. The Blood Bank portion of the Laboratory Medicine elective course for senior medical students was well received. Three hours of lecture were provided for the sophomore
medical class in the context of the hematology portion of the Department of Pathology course, and a presentation on Transfusion Medicine was provided for the medical student senior elective course in Pharmacology and Therapeutics. Finally, senior medical students partaking of a month-long pathology elective, spent three to five days in the laboratory.

Lectures on Transfusion Medicine were given to clinical departments in University Hospital, including the Section of Thoracic Surgery and the Departments of Anesthesiology and Pediatrics.

The 23rd annual postgraduate course, “Current Topics in Blood Banking”, was held on May 29-31, 1996. The course, under the direction of Mr. Judd, attracted approximately 200 technologists and physicians from throughout the United States. It continues to be one of the most popular postgraduate courses in the country devoted to blood bank topics. Members of the Blood Bank and Transfusion Service staff presented Workshops on a variety of topics, and Ms. Steiner, Ms. Butch, Mr. Judd and Drs. Oberman and Davenport participated in the plenary sessions 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, providing poster presentations and lectures covering a variety of topics. In addition, members of the laboratory, including Mr. Judd, Ms. Butch, Mrs. Stoe, Ms. Steiner and Drs. Davenport and Oberman, presented invited lectures to a variety of regional and national blood banking organizations and state societies.

Aside from the lectures and presentations noted in the individual faculty reports of Mr. Judd and Drs. Davenport and Oberman, Mrs. Stoe, Ms. Steiner and Ms. Butch were active in education programs of the Michigan Association of Blood Banks and provided invited lectures throughout the country. Mrs. Knafl was active in organization of the MABB spring meeting.

**PROFESSIONAL ACTIVITIES:**

Members of the Blood Bank and Transfusion Service medical and technical staffs were active at the regional and national levels. Dr. Oberman served as Associate Editor of TRANSFUSION and was a member of the Transfusion Practices Committee of the American Association of Blood Banks. Ms. Butch also served on the Information Systems Committee and on the Chief Technologist’s Forum of the American Association of Blood Banks. Ms. Steiner served as chairperson of the AABB Committee on Reference Laboratories and Rare Donor File, co-edited the newsletter of the Michigan Association of Blood Banks and chaired the By-laws and Policy Manual Committee of the MABB. In addition, members of the technical staff participated in the Inspection and Accreditation program of the American Association of Blood Banks. Dr. Oberman’s, Dr. Davenport’s, and Mr. Judd’s activities are further noted in their individual faculty reports.
RESEARCH ACTIVITIES:

The individual reports of Drs. Oberman, Davenport and a Mr. Judd record their publications and investigative efforts related to blood banking and Transfusion Medicine. In addition, Mr. Judd and Ms. Steiner studied the appropriateness of implementation of a gel-based system for pretransfusion blood testing.

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

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The Chemical Pathology Laboratory completed a stressful, but ultimately successful year that saw multiple changes in the lab operation. The focus of the year clearly was on reorganization and continued automation of manual assays in an attempt to meet personnel reduction goals. A great deal of planning time was spent on a renovation project that will allow the consolidation of the Drug Analysis and Toxicology Laboratory into Chemistry. The implementation of this consolidation and cross-training of personnel in the coming year should allow for greater flexibility and potential further budget reductions. The Chemistry Laboratory experienced an approximate 2.0% increase in test volume, performing nearly 3.5 million tests this past fiscal year. The laboratory is projecting it will finish 4.0% under budget for this same time period.

The Chemistry lab undertook a series of instrument changes and upgrades aimed at increasing the number of tests performed on automated, random access analyzers. The major chemistry instruments were upgraded to Ektachem 950IRC analyzers. This allows for faster throughput, easier processing of both of urine chemistries and dilutions on serum samples, and the capability of performing more therapeutic drug monitoring assays on these systems. Cortisol, testosterone, estradiol, and progesterone were moved from manual RIA's to the automated Ciba Corning ACS-180 immunoassay analyzer. A super sensitive TSH assay was evaluated and implemented on the ACS-180. The lab evaluated and initiated testing on the Abbott AxSYM immunoassay analyzer. Testing for PSA, beta-HCG, CEA, AFP, and CK-MB were all switched to the AxSYM following extensive correlation studies. Correlations for many of the therapeutic drug monitoring assays were also performed in preparation for the planned consolidation of the Drug Analysis Laboratory with Chemistry.

The laboratory directors and staff participated in a significant number of evaluations and research studies. These included:
1. Comparison of multiple super sensitive TSH methods.
2. Evaluation of methods for measuring the free fraction of PSA and the use of percent free PSA as an improved marker of prostate cancer.
3. Evaluation of the performance of phenobarbital and carbamazepine determinations by the Ektachem dry slide technology.
4. Beta site evaluator of new software for the Abbott AxSYM.
5. Alpha site evaluation of a new prototype whole blood glucose meter.
6. Evaluation of Troponin I as a marker of myocardial injury following cardiac catheterization.
7. Interference of a polymerized hemoglobin based blood substitute on laboratory testing.

The Chemistry Laboratory continued its active role in Point of Care testing both within the hospitals and at the off-site health care centers. As part of a multi-departmental initiative to reduce blood product utilization, Chemistry personnel were responsible for the evaluation, implementation, and
ongoing management of a program that will bring rapid delivery of platelet counts, prothrombin time, and APTT to the operating rooms. A small Coulter MD8 hematology analyzer and portable CoaguCheck Plus whole blood coagulation analyzers have been placed in the operating rooms. Testing is performed by Anesthesiology Department staff, with chemistry lab personnel doing all training, quality control evaluation, and ongoing competency assessment of all operators.

The lab has continued its active role in the supervision of bedside blood glucose monitoring programs at University Hospitals. The lab maintains quality control, linearity, and proficiency testing records on 75 whole blood glucose meters stationed throughout the institution. Several new glucose meters are being evaluated by the Point of Care Testing group, and the Chemistry Lab continues to actively pursue options for the computerized collection and analysis of quality control data from these meters.

The Point of Care group in Chemistry has implemented a number of other smaller projects. Pregnancy tests are being performed in Mott OR and in the OB-GN Clinic, with results collected and entered into Pathnet by Chemistry personnel. Cholesterol testing is being performed on select patients at the MedSport Clinic, and Hemoglobin A1c is being performed in the Diabetes Clinic. In both of these programs, clinic personnel perform the tests, and Chemistry Lab staff are responsible for training, quality assurance, and proficiency testing.

The labs role in managing small laboratories at off-site clinics has also continued to grow. The opening of Health Care Centers in Saline and West Ann Arbor, plus the acquisition of a group physician practices in Chelsea and Monroe have added to the management load of the Point of Care testing group. All of the sites have passed COLA accreditation inspections of their on-site laboratory functions with no deficiencies.

Donald Giacherio, Ph.D.
CLINICAL CYTOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY
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The Clinical Cytogenetics Laboratory has maintained its plateau in volume in some areas, while others have continued to expand. In the area of prenatal diagnosis, just over 760 amniotic fluid specimens, 85 chorionic villus biopsies and 70 tissues were analyzed; this is approximately the same number as last year. Of interest is the increase in the number of cases that are seen solely for the purpose of growing fibroblasts with the ultimate aim of DNA or biochemical diagnosis; these cases are in addition to the 70 enumerated above. The bone marrow specimens continue to skyrocket, from under 400 three years ago, to 573 in the last year to 707 in the current fiscal year. These requests are scrutinized more carefully due to staffing problems and our active program of utilization review. The increased volume does not include the approximately 150 requests which were declined for one or more reasons. In addition, 523 peripheral blood specimens were analyzed, a five percent increase from last year. Approximately 50 of these tests were for high resolution karyotypes. Much of the increase was accounted for by repeat analyses requested by physicians whose patients had had studies performed at commercial laboratories.

Cytogenetic analysis of solid tumors has remained steady. Pediatric sarcomas and “small round, blue cell tumors” remain the specimens most commonly submitted. Although there are descriptions of various other tumors with specific cytogenetic abnormalities, often the clinical significance is unclear.

The demand for Molecular Cytogenetic analysis has increased from one request a month to two or more per week. The Laboratory is currently offering a number of specific gene probes for fluorescence in situ hybridization on a research basis, including those for Prader-Willi, Angelman’s, Williams and DiGeorge syndromes. Marker chromosomes are characterized. A probe for the so-called minor breakpoint cluster region in the bcr/abl gene rearrangement in CML and ALL are being developed as a potential supplement to cytogenetic analysis, as has dMYC amplification for neuroblastoma. In situ hybridization is performed on at least a weekly basis.

The Laboratory hosted the Southeastern Michigan Cytogenetics Meeting this year. Speakers included members of the Laboratory staff, as well as faculty from Child Psychiatry, Pediatric Genetics, and a Pathology Resident, Leslie Bruch. Approximately 50 people from six institutions attended the meeting.

Again, the Laboratory is faced with space constraints, and the consequent staffing constraints. This is particularly worrisome as other Clinical Services are being encouraged to expand by the institution of a Clinical Delivery System. Cytogenetics technologists still require a minimum of one year to train, and several years to properly evaluate the more complex specimens which are being received at an increasingly frequent rate.

Susan Sheldon, Ph.D.
Director, Clinical Cytogenetics
DRUG ANALYSIS AND TOXICOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
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1 JULY 1995 - 30 JUNE 1996

The Drug Analysis and Toxicology Laboratory continues to maintain its prominent role as an active, progressive, and vital contributor to the success of the Department of Pathology and the University of Michigan. The volume of assays performed in support of the M-Labs program continues to remain strong. The types of tests being referred to DATL are typically the more labor intensive, specialized assays. While the overall activity for the laboratory was similar to the previous year, decreases in the volume of routine or automated assays were balanced by increases in volume for some specialized tests.

During the last year the Department of Pathology decided not to continue forensic urine drug testing in the laboratory, so that re-certification was not sought for 1996. DATL was one of the initial laboratories to be certified by the College of American Pathologists and the efforts made by the laboratory staff in achieving and maintaining the certification for over 6 years should be lauded.

One positive improvement made during the last year was the development and implementation of a new cyclosporine assay. Larry Clayton served as lead of the development of the assay, with contributions from a number of the laboratory staff. This assay uses a novel analytical column (prepared in-house) as well as the ability to use autoinjection of samples, both of which have reduced personnel time required for performance and maintenance of the assay. Because of the high volume of the assay, this assay advancement has allowed the laboratory to adjust to changes in staffing and volume without a loss of service to the transplant program. Savings in commodities are also being realized.

Much of the last year was spent in preparation for the Cost Efficiency Program mandated throughout the medical center. As part of the program a consolidation of personnel and testing into the Chemical Pathology workspace has been requested. The ability to efficiently consolidate and integrate laboratory services will require a major renovation of space, which we are currently awaiting. Goals for the next year will be to contribute to the departmental program of laboratory consolidations. The environment surrounding academic medical centers continues to change and the laboratory will continue to contribute to the challenge of making the medical center successful in the future.

Thomas Annesley, Ph.D.
Drug Analysis and Toxicology Laboratory
The Clinical Flow Cytometry Laboratory processed approximately 3400 immunophenotyping specimens, a volume increase of 9% from the previous year. This included approximately 800 specimens submitted for leukemia/lymphoma immunophenotyping, 1250 specimens for monitoring of acquired and inherited immunodeficiencies, and 350 specimens for T-cell subset monitoring in organ transplant recipients. Anti-platelet and anti-neutrophil antibody assays were performed on approximately 350 specimens. Reticulocyte analysis was transferred to the main hematology laboratory in November 1995.

The laboratory has continued to increase its volume of work through the M-Labs Program. The comprehensive hematopathology consultation service provided by the laboratory has helped to attract this enlarging referral base. For the past year, M-Labs referrals comprised 39% of all acute leukemia immunophenotyping panels, 46% of all chronic leukemia/lymphoma profiles, and 44% of all non-transplant immunodeficiency monitoring.

The laboratory works in close cooperation with clinical services to enhance efficiency and control costs. Working in conjunction with the bone marrow transplant service, the laboratory now provides same-day reports of stem cell quantitation from apheresis products, peripheral blood, and bone marrow. Approximately 380 stem cell quantitations were performed in the last year, an increase of 155% from the previous year.

A major area of utilization management continues to be the close monitoring of all requests for leukemia/lymphoma immunophenotyping. The hematopathologists staffing the laboratory must screen all requests for these extensive antigen profiles. Of the 800 specimens submitted for leukemia/lymphoma immunophenotyping, pathologist review lead to cancellation of 310 of these requests.

The clinical data base stored in the laboratory has served as a resource for collaborative projects on immunophenotyping in chronic lymphoproliferative disorders and bclx expression in acute myeloid leukemias. The laboratory has also participated in collaborative efforts with the hematology laboratory for testing methods of CD4 lymphocyte counting.
Quality assurance conferences enable medical and technical staff to review leukemia/lymphoma cases reported by the laboratory. 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 diagnosis. Teaching activities in the laboratory include daily case sign-out with the residents and hematopathology fellow. Continuing medical education for the technologists and house staff is also offered at the biweekly leukemia conference, an interdisciplinary conference held in conjunction with the Division of Hematology, Internal Medicine.

Charles W. Ross, M.D.
Director

Lloyd M. Stoolman, M.D.
Co-Director
I. LABORATORY ACTIVITIES:

A. Competency testing:
   1. differentials, fluid differentials, and urine microscopics.
   2. differential slide preparation.


C. Beta site for CD4/CD8 on STKS.

D. Continued to prepare for Cancer/Geriatric Center opening.

E. Reduction of 5 FTE's.

F. Several internal quality improvement teams dealt with such laboratory problems as work flow on different shifts, EMU students, implementation of new policies, etc.

G. Began plans to merge Flow Cytometry and Hematology, including cross-training of personnel and meetings with architects.

H. Discontinued differential counts when WBC <0.5.

I. Began labeling of bone marrow aspirate slides with surgical pathology numbers to facilitate storage.

J. 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.

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

II. TEACHING ACTIVITIES:

A. Pathology House Officers and Hematopathology Fellows, Fellows from Pediatric and Adult Hematology/Oncology and visitors from other institutions (Dr. Felicitas Hitz, University of Zurich, Switzerland and Dr. Sun-Hee Kim from Korea) participated in the following activities:

1. Daily review of abnormal blood smears, body fluids, joint fluids for crystals, bone marrow aspirates, smears 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 Dr. Schnitzer .

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. Weekly review of cases to be presented at Lymphoma Conference (Hematopathologists, Fellows, and house officers).

8. Review of SWOG cases.


10. Biweekly Interdepartmental Leukemia Conference.


12. 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.

III. FISCAL YEAR 1996/1997 GOALS:

A. Complete merger between flow cytometry and hematology including laboratory reorganization and movement of flow cytometry from Medical Science I to the Hospital.
B. Implement Coulter Gen-S for improved laboratory efficiency.
C. Schedule bone marrow biopsies, to facilitate more efficient utilization of personnel.
D. Prepare for the opening of the laboratory in the Cancer/Geriatric Center.
E. Continuation of cost-containment programs.
F. Continue to review and develop of laboratory utilization.
G. Continue to liberalize automated differential criteria.
H. Continue studies of limiting WBC requests from intensive care units.
I. Continue to enhance the overall efficiency of the laboratory operation.

Bertram Schnitzer, M.D.
Director, Clinical Hematology Laboratory

Timothy P. Singleton, M.D.
Assistant Director, Clinical Hematology Laboratory
HISTOCOMPATIBILITY AND IMMUNOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY
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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.

I. CLINICAL ACTIVITIES:

Clinical activity of the Histocompatibility Laboratory doubled over the prior year. Essentially the Laboratory has shown a four-fold increase in activity over the past two years. This tremendous increase in activity has been painful for the Laboratory to absorb and has been primarily the result of increased activity in the Bone Marrow Transplant Program and Solid Organ Kidney Program. The Laboratory has had to expand to seventeen individuals to accommodate this increased activity and has had to streamline all areas of its function. Average numbers of tissue typings per month are in the 200 range for Class I and Class II typings whereas cross matches are in the 500 per month range. This activity is remarkable and makes the Laboratory one of the ten busiest in the country.

More importantly, the Bone Marrow Transplant Unit has required the development of entirely new procedures for histocompatibility testing. High resolution Class II DNA typing has been initiated and achieved with excellent results. In conjunction with the DNA Sequencing Core for the University, essentially any polymorphism in Class II HLA DR§ can now be identified by the Laboratory within 72 hours. This capability was initiated with minimal equipment and without any additional requirement for laboratory space. This is a truly remarkable achievement that has made the Laboratory the envy of any other in the country.

I. 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 in ASHI. 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.
III. **NEW GOALS:**

The goal for the Laboratory is to continue to deal with the increasing activity from the transplant programs. Starting August 1 the Laboratory will assume all of the non-living related bone marrow evaluations. This will increase the typings by approximately fifty per week and save the Hospital Clinical Delivery System approximately $500,000.00 a year in send-out costs. It is hoped that the transplant programs will be more active in clinical and basic research although currently it appears that their heavy clinical load precludes this. The transplantation laboratory, however, is interested in supporting a research role for the clinical transplant programs.

James R. Baker, Jr., M.D.
Director, Histocompatibility and Immunogenetics Laboratory
CLINICAL IMMUNOPATHOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
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I. OVERVIEW:

The Immunopathology Laboratory experienced a 3% increase in overall test volume in 1995-96. Anthony A. Killeen, M.D., Ph.D. and John Lowe, M.D. provided invaluable service commitments to the laboratory in the interpretation of protein electrophoresis studies. Kent Johnson, M.D., and Glen Bowen, M.D. (Dermatology) continued to signout tissue immunofluorescence studies under the auspices of the Anatomic Pathology Division. Paul Killen, M.D., Ph.D. and Dr. Johnson, also under the auspices of Anatomic Pathology, continued to enhance the renal biopsy service. Dr. Killen provided invaluable technical oversight of tissue immunofluorescence studies and leadership in the area of case-handling and tracking. Drs. Johnson, Killen, and Killeen also provided cross coverage of anti-neutrophil cytoplasmic antibody (ANCA) and anti-GBM studies.

II. CLINICAL SERVICES:

As the fiscal year approached its conclusion, the laboratory had experienced a modest increase in overall volume (approximately 3%). Particularly gratifying was the continued growth in several specialized assays; most notably the ANCA test and the anti-GBM indirect immunofluorescence test. Neutrophil cytoplastic antibody determinations increased from approximately 125/month to more than 150/month. More than 200 indirect immunofluorescence assays for anti-glomerular basement membrane antibodies were interpreted in 1995-96. New procedures were also implemented in the protein electrophoresis area; in hemolytic complement assays, and in the measurement of antibodies to extractable nuclear antigens. We have recently evaluated and initiated a series of new utilization control measures in the laboratory. Most notable in this regard is sendout assays of circulating immune complexes, at a cost of $180/test. By instituting necessary approval by IP laboratory professional staff the number of these requests declined 5-fold, resulting in more than $12,000 saved. Finally, laboratory personnel continued cross-training programs with the Chemistry Laboratory. This was one of the chief goals of the Chemistry Section consolidation.

III. RESEARCH AND DEVELOPMENT:

The laboratory 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 and Prevention in Atlanta. Involvement in this study was 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 clinical studies of the effects of cytotoxic/immunosuppressive drugs on IgG, IgA and IgM as well as IgG subclass concentrations in
lupus patients in conjunction with Dr. Joseph McCune (Department of Medicine, University of Michigan). Finally, we 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. Several commercially-financed methods evaluations were also carried out. These studies involved anti-streptolysin O and anti-cardiolipin antibody measurements.

IV. QUALITY ASSURANCE:

The laboratory participated in two departmental QA projects. These related to a project that addressed transmission of laboratory testing data from point of order to medical record and the development of a department-wide utilization management database and activity plan.

V. 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 during the academic year. Clinical Pathology Grand Rounds included immunopathology presentations by Dr. John Carey (Henry Ford Hospital, Detroit), Dr. Glen Bowen (Department of Dermatology, University of Michigan), Dr. David Keren (Warde Medical Laboratory, Ann Arbor), and Dr. Warren (see individual faculty report). Dr. Keren was appointed as a Clinical Professor of Pathology and Drs. Warren and Keren continued the weekly series of didactic sessions entitled "Current Topics in Immunopathology". Other professional activities of faculty and staff in the laboratory are summarized under individual reports.

Jeffrey S. Warren, M.D.
Director, Clinical Immunopathology Laboratory
LIGAND ASSAY LABORATORY

DEPARTMENT OF PATHOLOGY
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CLINICAL ACTIVITIES:

The clinical laboratories continue to undergo sweeping changes. This year saw the consolidation of the following laboratories into one functional entity: Chemistry, Immunology, Ligand and Toxicology. An integral part of this consolidation has been the conversion of many immunoradioassay methods to non-radioisotopic methods that lend themselves to automation. This provides a two-fold improvement, (1) increased laboratory efficiency with the same or decreased staffing levels and (2) improved turnaround time for the availability of specimen results.

Volume of current laboratory analyses continues to increase, as does the number of different analytes offered to the clinical staff. A total of 171,585 specimens were processed during the 95-96 fiscal year, an increase of 6.6% over the previous year.

Barry G. England, Ph.D.
Director
CLINICAL MICROBIOLOGY/VIROLOGY LABORATORIES

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
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I. CLINICAL ACTIVITIES:

The laboratories experienced a modest (2.9%) increase in specimen volume compared to fiscal year 1994-95. Efforts were made to decrease specimen volume for certain tests such as bacterial antigen testing and urinary CMV culture in cooperation with the appropriate clinical services. Other tests such as antibiotic susceptibilities, fecal cultures and viral serologies increased in volume. Several new tests were introduced resulting in a decreased number of tests that were being sent out to reference laboratories, including tests for Helicobacter pylori antibody, Pneumocystis carinii DFA, ligase chain reaction testing of urine for Chlamydia trachomatis and Neisseria gonorrhoeae STDs, Legionella urinary antigen and, more recently, mec A gene detection in staphylococci using PCR. New instrumentation (Omni-Solus) was introduced in Virology to increase efficiency and testing spectra for viral antibodies and selected antigens. At the request of Pulmonary Medicine, new quantitative procedures were added for specified pulmonary specimens to assist in differentiating contaminating flora from potential pathogens. Other new tests are currently undergoing validation which will further decrease our sendout volume.

Considerable effort was directed toward reaching our CEP goals. This required a considerable amount of cooperation among our staff members while maintaining or improving our lab functions. Also, much time and effort was expended working with PDS and the PCIS team. Fortunately much of this information will be useful for converting to Cerner Version 500.

We continued to focus on Total Quality Improvement tasks by working with various clinical departments on specimen collection and handling issues as well as reporting quality issues. The Microbiology/Virology QI Team completed a multi-year program working with unit 6C to improve specimen quality. We monitored our antibiotic resistance rates for Streptococcus pneumoniae and Enterococcus spp. and reported these results to the Michigan Community Public Health Agency at the Michigan Department of Public Health as part of a state-wide surveillance program.

II. RESEARCH ACTIVITIES:

The Laboratory completed a multi-center evaluation of the BacT/Alert automated blood culture system for detecting organisms in sterile body fluids other than blood. The system is now being used for this purpose. The results of this study were presented at the ASM General Meeting and will soon be published.

A comparative evaluation of antimicrobial susceptibility testing methods for anaerobes was completed and reported at the same meeting. The E-test methods was found to be comparable to the more cumbersome conventional standard method (agar dilution) and will become our test method.
In cooperation with the UMMC Infectious Disease Section and our Cytology Lab, we evaluated the sensitivity and specificity of a DF monoclonal antibody assay method to detect *Pneumocystis carinii* in induced sputum specimens collected from AIDS patients. This method was found to be superior to cytology for detecting *P. carinii* in this specimen type and has been implemented.

We continue to focus on rapid methods to detect *Mycobacterium tuberculosis* in pulmonary specimens. We successfully evaluated the GenProbe TMA system and have implemented the method after it received FDA approval. This method has displaced our in-house PCR method.

Phenotypic detection of methicillin resistance in staphylococci has been an inefficient process. We successfully tested and implemented a PCR method that allows for more rapid and sensitive detection of this form of resistance. We expect this to result in decreased vancomycin usage.

We have assisted residents and staff members from the departments of Pharmacy, Infection Control Services and Internal Medicine by performing culture analysis for their specific projects which have resulted in revised procedures and/or articles submitted for publication. One such project, the contribution of contaminated stethoscopes to nosocomial infections, received a departmental award for best research project.

Several projects are underway to determine the clinical utility of various molecular techniques to detect selected bacterial and viral pathogens in tissues and body fluids. Comparative testing of bacterial isolates to various new antimicrobics is ongoing.

**III. ABSTRACTS PRESENTED:**


Carl L. Pierson, Ph.D.  
Director, Clinical Microbiology/Virology Laboratories
The Molecular Diagnostics Laboratory continued its growth in activities in 1995-1996. The recruitment of a new Senior Clinical Technologist and a new Medical Technologist were significant factors in the laboratory this year. We are particularly fortunate in our recruitment of Ms. Nahida Akel as Senior Clinical Technologist. Ms. Akel has been in the field of molecular diagnostics for several years in positions at Dianon in Massachusetts, and at the William Beaumont Hospital in Royal Oak. Ms. Akel previously worked at the University of Michigan Medical Center.

The growth of the bone marrow transplant program has led to our bringing up DNA based tests for monitoring bone marrow engraftment by microsatellite analysis. The other tests that we began to offer this year were detection of the Factor V Leiden mutation and apo E genotyping.

We find ourselves under constant pressure to implement new diagnostic tests. Because of our small staff we have limited resources to devote to clinical R & D. This forces us to carefully select those tests we offer. Our position to this point has been to select those assays which we expect to have higher volume demand. Although we have not developed infectious disease testing this year, almost certainly we will move in that direction next year. In the area of infectious disease testing, we decided in conjunction with the Microbiology Laboratory to drop the routine testing of all specimens for M. Tb. By PCR. The decision was taken because we found that very few cases were being detected by PCR that were not detected by conventional acid-fast stains of sputum. If the case mix of patients attending the University of Michigan Medical Center were to alter so that more patients with Tb were being seen here, we would re-consider the decision.

The field is still in need of automation. Delays in getting diagnostic instrumentation approved by the FDA have resulted in a shortage of useful instruments on the market. One of our purchases this year was a capillary electrophoresis instrument which we intend to use for microsatellite analysis.

Anthony A. Killeen, M.D., Ph.D.
Assistant Professor
Director, Clinical Chemistry/Molecular Diagnostics
PHLEBOTOMY SERVICES AND CENTRAL DISTRIBUTION

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
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The following are the major achievements for Phlebotomy and Central Distribution during 1995-1996:

- Readjustment of Phlebotomy and Central Distribution services providing the same services with fewer employees during the hiring freeze of November 1995 to June 1996 due to attrition. No services were cut during this time.

- Extensive reengineering was done in the spring of 1996 for the June 1996 downsizing of 35.7 FTE’s as follows:
  - Inpatient Phlebotomy 21.45 FTE’s
  - Outpatient Phlebotomy 6.75 FTE’s
  - Central Distribution 8.50 FTE’s

  At the completion of the Reengineering process, we were still able to offer the same services.

- Drawing of Clozaril patients in the Psych ER and remotely at designated sites. Delivery of service was changed from two phlebotomists to one phlebotomist. Approximately 82 patients are drawn in one day.

- Entering of point of care results performed at the bedside into the PathNet database includes these tests as part of the patient’s electronic record, and in addition captures revenue of the hospital. For the Fiscal year 1996, 742,010 tests were entered, creating a revenue for the hospital of over 2.8 million dollars.

- Supporting the MCare off sites for blood drawing and bench testing back up with the development of an on-call system for phlebotomists working also in the inpatient setting.

- Cyclosporin specimens drawn outside the hospital are now received in Central Distribution instead of the transplant offices. These specimens come without requisitions. Information for handling these specimens must be obtained from the transplant office.

- Drawing the average of eight patients from children/adolescents at the Hawthorn Center in Northville Township two days per week, was started July, 1995. Stat service is provided 24 hours/day, seven days/week.

- MCare specimens increased from approximately 9600 patients for the month of July, 1995 to 10,731 for the month of June, 1996.
• Handling a significant increase in the number of specimens that are sent to other reference labs, due in largely to specimens coming from Mlab clients and inhouse downsizing of number of tests offered. Billable tests for the 1996 fiscal year was 29,438, up from 1995 fiscal year of 20,815.

Suzanne Johnson
GENERAL PATHOLOGY
ELECTRON MICROSCOPY SERVICE

DEPARTMENT OF PATHOLOGY
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The electron microscopy service continues to provide important diagnostic services to the University of Michigan. The facility provides high quality diagnostic work for the nephropathologists, neuropathologists, hematopathologists, and the general pathologists.

This past year there has been a continuing major effort to maintain the low turnaround time required to complete specimens. Using the successful changes implemented last year, the turnaround time has routinely been within departmental guidelines (seven working days for completion of prints for kidney, 14 days for all other cases).

We are attempting to upgrade the present Zeiss electron microscope by installing a digitizing camera interfaced with the scope, and a laser printer. This will further decrease turnaround time since most cases will be capable of analysis using the laser prints, rather than using the labor intensive process of printing the film images. The EM staff have already evaluated several electron microscopes, and have found the quality to be very satisfactory. We have also explored the option of using the services of the Department of Anatomy and Cell Biology, but there are significant questions concerning that proposal.

The following table indicates the activity of the EM Service. The column "submitted" indicates the number of specimens submitted, to the lab. The column "semi-thin" indicates the number of cases embedded, semi-thin sectioned, and examined by the pathologist, and the column "thin/scope" indicates the number examined under the electron microscope. It should be noted that the Department of Pathology was reimbursed for all of the research cases.

<table>
<thead>
<tr>
<th></th>
<th>Submitted</th>
<th>Semi-thin</th>
<th>Thin/Scope</th>
</tr>
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<tbody>
<tr>
<td>Neuro</td>
<td>275</td>
<td>143</td>
<td>95</td>
</tr>
<tr>
<td>Renal</td>
<td>276</td>
<td>254</td>
<td>219</td>
</tr>
<tr>
<td>Other</td>
<td>35</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Research</td>
<td>8</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Total Cases</td>
<td>594</td>
<td>430</td>
<td>340</td>
</tr>
</tbody>
</table>
There has been a 12% increase in activity on the EM service. This table provides a breakdown of the types of cases and change from last year. It would appear that we will have another increase this year based on the volume of material submitted to date.

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1996</th>
<th>Increase # of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuro</td>
<td>252</td>
<td>275</td>
<td>+ 23 (9%)</td>
</tr>
<tr>
<td>Renal</td>
<td>256</td>
<td>276</td>
<td>+ 20 (8%)</td>
</tr>
<tr>
<td>Other, including research</td>
<td>23</td>
<td>43</td>
<td>+ 20 (87%)</td>
</tr>
<tr>
<td>Total Cases</td>
<td>531</td>
<td>594</td>
<td>+ 63 (12%)</td>
</tr>
</tbody>
</table>

Daniel G. Remick, M.D.
Director, Electron Microscopy Service
I. **GOALS:**

1. To generate increased revenue and decreased unit operating cost of the University of Michigan Hospitals Clinical Laboratory System by outreach testing for:
   - Reference laboratory services to hospitals.
   - Group Practices.
   - Physicians offices.
   - Specific esoteric services such as renal biopsies, molecular diagnostics, cytogenetics, and flow cytometry, and other "centers of excellence".
   - Clinical trials for clinical research organizations and pharmaceutical firms.

2. Develop and participate in hospital laboratory networks to:
   - Compete effectively for managed care laboratory testing.
   - Reduced costs through test sharing and consolidation.

3. Through our outreach efforts, to build bridges to other institutions that will facilitate working arrangements between these institutions and other branches of the University of Michigan Clinical Delivery System.

4. To replace USML as the primary provider of outpatient laboratory services to M-Care and to arrange that these services be provided by a network or networks of hospital laboratories which will be potential M-Labs clients.

II. **M-LABS EXPANSION:**

The additional personnel hired this fiscal year are now trained and performing in their positions and have added to the effectiveness of our highly motivated and talented M-Labs team. We are now able to deal with the support of existing clients as well as marketing to new clients, especially the previously neglected area of group practices and physician's offices. Operations functions are now being addressed in a more coordinated fashion. The operations manager has developed a Unit Orientation Manual outlining departmental policies and procedures and has developed a Client Manual which lists all the specific information for each individual client. The M-Labs office has been reorganized. Problems with our report formats have been ameliorated by changes in format accomplished with the assistance of Pathology Data Systems and individual laboratory personnel.

III. **GROWTH:**

- CP client billing net revenue increased 23% over FY 95.
- CP third party payor billing increased 344% over FY 95.
- AP surgical pathology cases increased by 16% over FY 95.
- Billing for these AP cases increased by 22%.
New MLabs accounts during FY 96 include:

- Hurley Medical Center - 500 bed hospital located in Flint, Michigan.
- Community Health Center of Branch County - 130 bed hospital in Coldwater, Michigan.
- Several large group practices and individual physician’s offices.
- Lost - one large group practice (because of difficulties with TAT, reporting format, and differences in test profiles from those desired by that physician group.

**IV. INTERFACES:**

Support of our efforts by Pathology Data Systems this fiscal year has been superb. We have achieved our first fully operational interface between the University of Michigan laboratory computer system and Mount Clemens General Hospital’s laboratory computer. Two others are under development and two more are planned.

**V. MANAGED CARE CONTRACTS:**

We have succeeded in contracting with M-Care to provide outpatient laboratory testing for its soon-to-be introduced Medicare Product. We are subcontracting the work to a group of hospitals. MLabs will manage the revenue distribution to the subcontractors based on the relative-value weighted volume of testing furnished by each provider. We will also be involved with quality assurance for the contracted services. We will gain a small management fee and considerable experience and standing in the laboratory managed care arena. It is our goal to ultimately contract with M-Care for the outpatient laboratory services of its main product which would be provided for by a network or networks of hospital laboratories who also provide the rest of the care for their subscribers.

**VI. NETWORKS:**

In order to provide geographic coverage for managed care products, and to compete with the large national laboratories which are now dominant in that arena, hospital laboratories are now increasingly banding together in networks. MLabs has been accepted for membership in JVHL, a network of major hospital laboratories in the Detroit area. We are still working with a group of Michigan hospital laboratories to form Great Lakes Laboratory Network which will have the capacity to negotiate for statewide managed care contracts for laboratory services. We are actively pursuing the possibility of joining a developing 13 hospital laboratory network in the Central Michigan area where a significant portion of our client base is located.

**VII. PROSPECTS:**

This fall we will begin providing reference laboratory service to Botsford General Hospital and Eaton Rapids Hospital. The Toledo Hospital and Flower Hospital have merged and MLabs has submitted a proposal for the reference laboratory work of these institutions. If our bid is successful, there will be a significant increase in revenues generated from that region. MLabs efforts in Northern Ohio also include a proposal to St. Lukes Hospital and a proposal in preparation to Defiance Hospital, both located in the northern area of that state.

**VIII. CLINICAL TRIALS LABORATORY TESTING:**

There has been slow growth in the volume of work generated from a local large pharmaceutical firm. We plan on developing contact with other pharmaceutical firms and clinical research organizations to increase our currently very small market share in this field. We received our first request for proposal from a clinical research organization and hope to increase our contacts in this area.
IX. IMPEDIMENTS TO GROWTH:

- **External:**
  - Revenues can be expected to decrease from:
    - Increased penetration of managed care.
    - Continued erosion of pricing.
    - Outpatient DRGs.

- **Internal:**
  - Maintaining a broad test menu and rapid turnaround times in spite of internal demands for cost reduction.
  - Accessioned tests have increased by 20,000 tests over FY 95 but the accessioning staff has been reduced. There are no plans as yet, to address the increased testing due to arrive soon from Botsford Hospital and Eaton Rapids, and from other clients should our proposals to Promedica, or St. Lukes Hospital be accepted. We are concerned that error rates will increase and cause concern to our clients and their patients.
  - Commitment to the M-Labs outreach among Department of Pathology faculty and hospital laboratory staff is spotty. The M-Labs group believes that the success of the outreach effort is necessary for the continued viability of the hospital clinical laboratories. Although some faculty and staff are anxious to help and plan for growth of the outreach, others seem unwilling to do anything extra to accommodate the extra concerns and needs of “external” clients. This lack of commitment makes the addition of each new client more of a strain on the M-Labs marketing and operations teams than it needs to be and hinders our ability to market the services of the hospital clinical laboratories. We will be better able to accomplish our goals if we can concentrate on external marketing rather than on changing the corporate culture in the labs. The importance of outreach should be emphasized in the Pathology Department and the Clinical laboratories and contributions to our outreach effort should be recognized in performance evaluations of staff and faculty.
  - Indecision about the direction of affiliation of the University Health Systems with other institutions.
  - Lack of coordination of our efforts with those of M-Care.
  - Two of our large clients have not been chosen to participate in M-Care’s newly developed Medicare product. This puts our relationship with these clients at risk.
  - M-Care’s relationship with Michigan Capital Medical Center (Columbia HCA) Health System in Lansing, Michigan and lack of participation of Sparrow Hospital and other small hospitals in Central Michigan has put one-third of our client base at risk. (M-Care may not have had a choice in this case.)

Eugene M. Silverman, M.D.
Director, M-Labs Program
The following is a bulleted list of some of the major accomplishments of Pathology Data Systems during the past academic year, July 1995 through June 1996:

**Improvements in daily operational support to the clinical laboratories**

- Improved the system downtime record from last year to the current performance of less than 1% downtime, calculated on a 7/24 basis.
- Modified the PDS Help Desk rotation with participation by more PDS personnel. This change necessitated PC cross-training which will enhance the effectiveness of the unit as V. 500 of PathNet is installed which is a client-server architecture with a PC user-interface.
- The Cerner WPLink was replaced by the APLink/Word application which is a superior product with fewer training barriers.
- Anatomic pathology statistics are now being gathered on an ongoing basis and entered into a Microsoft Access database, enabling accurate workload and TAT measurements for the division for the first time.
- The on-call policy for PDS was revamped as part of the CEP effort in the unit, requiring three additional personnel to be trained in PathNet on-call operations.
- The DNA database application for the Tissue Laboratory was activated.

**Interface engine (hub) enhancements and deployment of new interfaces to foreign systems**

- Implemented an HL7 interface between the enterprise interface engine (hub) and the current version of PathNet. This is strategically important because it will avoid the development of complex and costly point-to-point interfaces in the future.
- Extensive work was performed on an interface with the Mayo reference laboratory that will save Central Distribution and the Blood Bank several hours of work per day in the manual data entry of Mayo reference laboratory results.

**PathNet enhancements, upgrades, and preparation for V. 500 of the software**

- Extensive training and system design in preparation for the installation of V. 500 of Cerner PathNet in the Fall of 1997. V. 500 of PathNet will utilize a modern client-server architecture and allow for the deployment of a web-base system for viewing laboratory results enterprise-wide and by MLabs clients.
- Implemented security measures for Window NT servers and also deployed software for the automated installation of Windows NT software. Extensive training on the Windows NT operating system was also completed by 10 personnel in PDS. This is in preparation for the installation of V. 500 of Cerner PathNet.
M-Labs-related activities

- Implemented an HL7 based interface between the hospital interface engine and Mount Clemens General Hospital, an important MLabs client.
- Database synchronization is nearly complete for two MLabs clients, Bottsford and Hurley Hospitals, in anticipation of the installation of host-to-host interfaces to the two sites. One of these two interface will require a very creative conversion of HL7 to ASTM data, two entirely different interface protocols.
- Completed a series of major format changes for presenting test results to MLabs clients.
- Installed 12 new remote printers at MLabs sites.
- Installed a FAX server on PathNet so that test results can be automatically transmitted to MLabs clients.

Web-based initiatives

- Developed a prototype web-based data browser that was then presented to Cerner development personnel. This prototype will be used by Cerner as a model for the creation of a viewer for test results in V. 500 of PathNet.
- Worked in collaboration with MCIT developmental personnel to integrate the browser development in pathology with similar activities relating to the browser to be used in conjunction with the clinical data repository.
- Developed PathNet linkage to the departmental web site to disseminate antimicrobial susceptibility data for the institution

Enterprise-wide information technology activities

- Participated in the planning, implementation and validation of the clinical data repository (CDR) to which test results will be replicated from the PathNet database to achieve integration with clinical, administrative, and financial information.
- PDS personnel worked actively with the DEC/Alpha consortium, culminating in the installation of two large DEC Alpha CPUs connected to the FDDI network in the hospital. The Alpha system used by the department of Internal Medicine’s alpha physically located in the PDS machine computer room
Educational and committee activities

- The fourteenth annual symposium of automated information management in the clinical laboratory (AIMCL) was presented at the Power Center last June. More than 40 vendors attended the meeting and about 280 paid registrants. Two two-hour sessions were broadcast as audioconferences to 50 training programs in pathology and 90 CLMA chapters on the first two afternoons of the plenary conference.

- PDS personnel hosted a meeting of the Cerner Great Lakes Regional User Group at the Towsley center in November, 1997

Bruce A. Friedman, M.D.
Laboratory Director
PATHOLOGY EDUCATION OFFICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

The Department of Pathology continues 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, senior medical student Pathology clerkships, and research training for undergraduate, graduate and medical students, as well as postdoctoral fellows. Within the Medical Center, Departmental teaching activities extend not only to medical students but also house officers and the staff of form of regularly scheduled clinical 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 Canadian Academy of Pathologists (USCAP).

I. MEDICAL AND DENTAL STUDENT PROGRAMS:

Department faculty continue to fulfill significant teaching and leadership roles in the medical school curriculum. Multiple faculty within the Department have teaching responsibilities in both the first and second year courses and sequences including: Molecular and Cell Biology, Histology, Host Defense, Introduction to Pathology, and each of the second year organ system sequences including 46 pathology laboratories. In addition, faculty serve as directors and co-directors of several first and second year courses while Dr. Joseph Fantone serves as Director of the first and second year curriculum. The Department offers four elective clerkships to fourth year students with approximately 30% of each class electing at least one of the clerkships. Overall, formal student evaluations of faculty teaching throughout the medical curriculum have noted it to be excellent.

The summer clinical program for underrepresented minority medical students continues to attract between eight and ten students annually. 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. Formal evaluations indicate that the program is viewed very positively by the students and has been successful in encouraging one to two students per class to chose pathology for their residency training.

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.
II. **DOCTORAL PROGRAM:**

The Graduate Program in Pathology, which was initiated seven years ago currently has eight students enrolled. The primary goal of the Doctoral Program in Pathology 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. Four students are enrolled in combined M.D./Ph.D. programs and five students have achieved candidacy status. Four students have received their doctoral degree since the programs reactivation in 1989. One student received the prestigious Experimental Pathologist in Training Award from the American Society of Investigative Pathology this past year. An Immunopathology Training Grant within the Department provides support for both graduate students and postdoctoral fellow training.

III. **GRADUATE EDUCATION:**

The Department of Pathology provides formal advanced 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 Fellows:**

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

**Postdoctoral Research Fellowships:**

The Department of Pathology provides advanced research training for approximately 40 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), an Immunopathology Training Grant (NIH AI-07413, R. Miller, Principal Investigator), and externally funded faculty research grants.

**Residency Training:**

The Department offers 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 100 completed applications received, and 32 candidates invited to interview in the Department this past year. Five outstanding residents were recruited to the Department: Mariko Suchi, M.D., Ph.D., Rachael Vidal, M.D., Luzette Kuizon, M.D., Peter Lucas, M.D., Ph.D., and Christine Petricek, M.D.
Currently, there are 25 residents in the Department, 23 of whom are receiving training in both anatomic and clinical pathology and two receiving training in anatomic pathology. 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. Six residents graduated from the program this past year. Three assumed positions as staff pathologists at large community hospitals in Michigan, Arizona, and Texas. Three residents are continuing training, in a Chemistry and Informatics Fellowship (University of Michigan), a Neuropathology Fellowship (Massachusetts General Hospital), and a Renal Pathology Fellowship (University of Michigan).
I. **Courses in the Medical Curriculum:**

A. First year courses:
   1. Molecular and Cell Biology.
   3. Introduction to Pathology.
   4. Histology.
   5. Multidisciplinary conferences.

B. Second year organ system sequences.

C. Fourth year clinical clerkships:
   1. General Pathology.
   2. Laboratory Medicine.
   3. Special Topics in Pathology.
   4. Pathology Research.

D. Summer Clinical Program in Pathology for Underrepresented Minority Students.

II. **Courses in the Dental Curriculum:**

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

B. Pathology 631: Pathology Laboratory.

III. **Graduate Courses in Pathology:**

A. Pathology 580: General Pathology for Biologic Scientists.

B. Pathology 581: Cellular and Molecular Basis of Disease.

C. Pathology 620: Genetics and Cell Biology of Aging.

D. Pathology 850: Research Colloquium.

E. Pathology 599: Non-Dissertation Research.

F. Pathology 990: Pre-Candidate Dissertation Research.

G. Pathology 995: Candidate Dissertation Research.

IV. **Postgraduate Medicine/Continuing Medical Education:**

A. Current Topics in Blood Banking Symposium, June, 1996.

B. Clinical Laboratory Computers Symposium, June, 1996.

C. Pathology 858: Neuropathology.
V. Clinical Conferences:

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

**Internal Medicine**
- Gastroenterology
- Nephrology
- Hematology/Oncology
- Nuclear Medicine
- Pulmonary Medicine
- Cardiology
- General (Necropsy Review, CPC)

**Pediatrics**
- Cardiology
- Oncology
- Gastroenterology
- General (Mortality Conf., CPC)

**Dermatology**

**Obstetrics and Gynecology**

**Thoracic Surgery**

**Oral Surgery**

**Urology**

**General Surgery**

**Otorhinolaryngology**

Joseph C. Fantone, M.D.
Director, Educational Program
DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER
PATHOLOGY AND LABORATORY MEDICINE SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

I. INTRODUCTION:

The Department of Veterans Affairs Medical Center (VAMC) is a Dean’s Committee tertiary health care provider for veterans, affiliated with the University of Michigan. The VAMC Pathology and Laboratory Medicine Service maintains a close relationship with the University of Michigan Department of Pathology at every level. All pathologists in the VAMC have academic appointments and participate in university activities in a manner similar to other departmental 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. Three are currently filled and the fourth is slatted for filling in October, 1996. Three resident training positions have been maintained at the VAMC for university pathology residents. They serve monthly rotations in Surgical Pathology, Autopsy Pathology, and a number of arranged electives including Diagnostic Electron Microscopy and special study programs in Surgical Pathology and Cytopathology. The Chief, Pathology and Laboratory Medicine Service, is a voting member of the Dean’s Committee. During this reporting period the full laboratory was inspected by the College of American Pathologists and received full accreditation. The VA Medical Center is inspected by the Joint Commission and is currently accredited. The medical center’s Decentralized Hospital Commuter System is considered the state-of-the-art integrated medical information system. This combines all of the clinical management of the patient. Data storage for all components of pathology and the clinical laboratories contains full patient information for more than a decade.

II. ANATOMIC PATHOLOGY:

A. Surgical Pathology: 4,536 surgical pathology cases have been accessioned and reported during this period of time. 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 teams. Monthly Morbidity and Mortality Conferences are held jointly by Pathology and Medicine Service. The residents assigned to autopsy and surgical pathology are primary presenters in these clinical conferences. The residents obtain a broad educational experience and aid in providing high quality medical care. There is an extensive quality improvement program within Anatomic 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, surgical appropriateness, turnaround times and follow-up of positive diagnoses, within the medical center. The surgical and cytology readout stations are fully integrated into a
hospital digital imaging system. Routine images are captured on cases of interest. These are particularly useful in presentations to clinical teams reviewing specimens from their patients with the pathology staff and residents.

B. **Autopsy Pathology:** 47 autopsies were performed during this year; that is a rate of approximately 28% of in-patient deaths. 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 for 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. Several autopsies performed at the VAMC were also presented at the extended Gross Conference at the University.

C. **Cytology:** 2,325 cases were examined and diagnosed during this period. This is an increase of 132 over the last reporting year. Nearly all of the cytology specimens are of a diagnostic type, with very few screening cytologies. Although there is not a formal rotation to cytology within the VAMC, the cytological material is readily available and is used as correlative information for surgical and autopsy pathology. This laboratory is a “Center of Excellence” in cytology.

D. **Electron Microscopy:** 266 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 Medical Center and to other hospitals by contact.

III. **CLINICAL PATHOLOGY:**

During the period of this report 887,605 clinical pathology procedures were done in the laboratory. In Chemistry there were 726,858; in Hematology 112,809; in Microbiology 28,322; and in Blood Bank 19,616. This represents productivity (billable) 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 available to residents as desired. Clinical Pathology data is available to residents via computer for their information in surgical pathology, autopsy pathology, and elective rotations.

IV. **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. Residents join in continuing educational activities in histopathology and cytopathology from the AFIP, CAP, and ASCP. 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 physically close to the University, the residents are expected to attend the appropriate teaching conferences at the University as well. The entire staff participate 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. Both Drs. Beals and Chensue have made presentations at international pathology conferences.

V. RESEARCH:

The specific efforts of the pathology staff are included on individual reports. Dr. Stephen Chensue has a strong funded research program that was renewed for four years in October, 1993. He also participates in cooperative studies with other investigators at the University of Michigan. Dr. Beals maintains a strong role in the University/VAMC cooperative studies in head and neck cancer with the Department of Otolaryngology. 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 also serves as consultants and advisors for a number of research programs. Dr. Peter Brawn continues his research in carcinoma of the prostate gland and has been a member of the VA Research and Development Committee since 1 July 1993.

VI. ADMINISTRATION:

During this reporting period, Dr. Lee Weatherbee, who had been the Chief of the Service for 30 years died. In the interim Dr. Beals is serving as acting Chief. 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. At the VA Medical Center the pathology staff members serve on all major committees involved with institutional policies and procedures. Dr. Beals has been designated by the National Veterans Administration to oversee anatomic pathology within the Department of Veterans Affairs Medical Centers. He has been instrumental in developing policies and procedures related to anatomic pathology within the Department of Veterans Affairs. Dr. Beals continues his appointment as Acting Director of Pathology for the VA nationally. He has been designated as the Chief Consultant for the Diagnostic Service Strategic Healthcare Group in this capacity, serving as the leader of the Veterans Health Administration Headquarter's administrative oversight of: Pathology, Clinical Laboratories, Radiology and Nuclear Medicine throughout the VA system.

The VA's National Cytopathology Proficiency Program's administrative offices are located at the VAMC. All VA pathologists privileged in cytopathology are required to participate in a 16 glass slide comprehensive proficiency review annually. This is the largest comprehensive cytopathology proficiency program in the nation.
VII. SUMMARY:

The Department of Veterans Affairs Medical Center Pathology and Laboratory Medicine Service considers the practice of high quality medicine and the appropriate care of patients as its first and highest responsibility. There is close supervision of resident activities as they are involved in patient care. All staff members are privileged and evaluated in accordance with their training, experience, continuing education and participation in high quality improvement activities. Within the service there is an extensive quality improvement program that integrates with that of the hospital as a whole. The Pathology and Laboratory Medicine 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 benefit to the two institutions. The physical plant of the VAMC Pathology and Laboratory Medicine Service is short of space. Correction of this deficiency is currently underway with the building of a Clinical Addition that will house: Ambulatory Care, Surgical Suites, the Intensive Care Units, Nuclear Medicine, Radiology and the full Clinical and Anatomic Pathology Laboratories. Move to the new structure is scheduled for the end of 1997.

Theodore F. Beals, M.D.
Acting Chief, Pathology and Laboratory Medicine Service
Ann Arbor VA Medical Center
FINANCE AND ADMINISTRATION
DIVISION OF FINANCE AND ADMINISTRATION

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 1995 - 30 JUNE 1996

INTRODUCTION:

The Division of Finance and Administration, which is under the auspices of the Office of the Chairman and directed by Mr. Eugene J. Napolitan, Department Administrator is comprised of four units 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

Clinical Faculty Offices & Surgical Pathology Transcription, University Hospitals:

Deborah Day Jansen, Administrative Coordinator
Paulette Dozier, Office Manager

B. ADMINISTRATIVE SUPPORT CENTER - MEDICAL SCHOOL ACTIVITIES:

David R. Golden, Clinical Department Associate
John E. Harris, Administrative Assistant

C. OFFICE OF RESEARCH AND EDUCATION ADMINISTRATION:

Maydis Caldwell Skeete, Research and Education Administrator
Susan M. Hunter, Student Services Assistant

D. OFFICE OF THE CHAIRMAN

Laura D. Blythe, Staff Assistant
Mary Anne Tishma, Staff Assistant

This Division is responsible for the business, operational and fiscal affairs of the Department of Pathology as mandated by the policies of the Chairman, Clinical Delivery System (CDS), Medical School and University. In addition to directing this division, Mr. Napolitan serves on various departmental, CDS, Medical School and University Committees, several professional society committees and as a board director for non-profit organizations. Mrs. Mary Anne Tishma has announced that she will retire effective 31 August 1996 after 38 years of service.
In addition to the management of daily activities, each of the units has completed major projects which are summarized as follows:

**ADMINISTRATIVE SUPPORT CENTER/PATHOLOGY LABORATORIES:**

This unit is directed by Mr. Thomas Morrow, Assistant Administrator and is responsible for the business, operational and fiscal affairs of the Anatomic and Clinical Pathology Laboratories. This includes preparation and monitoring of all Hospitals laboratories revenue, expense and capital budgets, and personnel and payroll systems. Mr. Morrow assisted with the planning, development and implementation of the Cost Efficiency Program for the Pathology Laboratories as mandated by CDS Administration and the Redesign Coordinating Group (RCG). Our RCG mandated staff reduction, based upon MECON data, was 96.8 FTEs - equal to $3,150,000. In addition to this figure, we were required to meet a CEP reduction of $1,051,000. This involved a major restructuring of our laboratory system. Mr. Morrow is responsible for analyzing the MECON data for comparison of our laboratory productivity with similar academic institutions. This tool was used by Departmental Administration to develop and implement a plan to reduce costs. Key administrative support staff, in addition to the Assistant Administrator include:

**Administrative Coordinator:** This individual, Mrs. Deborah Day Jansen, assists with the coordination of intra and inter laboratory activities for the anatomic and clinical pathology laboratories which include coordination of required proficiency tests; coordination of inspections required for continuing certification or licensure by the JCAH, CAP and MDPH; serving as departmental representative on the Safety Committee, Disaster Committee and as United Way Chairperson. In addition, the Administrative Coordinator acts as the liaison with the Hospital for renovation projects and coordinates the publication of the Pathology Laboratories Handbook (including on-line version) and the SPECTRUM Newsletter; and is responsible for all requisition modifications. This individual also manages the Surgical Transcription Unit and has assumed responsibility for the Faculty Office Suite in the Hospitals which underwent major reorganization with the implementation of the Cost Efficiency Program.

**Billing Coordinator:** This individual, Ms. Nancy Coray, is responsible for auditing all laboratory charges, ensuring the accuracy of the daily billing files, correction of all errors with the appropriate Hospital department and responding to all questions regarding interdepartmental, MLabs or Hospital patient billings (technical portion). This position is also responsible for our billing system related to the MLabs Program.

**Administrative Assistant:** This individual, Mrs. Beverly Smith, oversees the clerical support staff assigned to the Administrative Support Center and coordinates personnel and payroll paperwork for all Hospital paid staff. The Administrative Assistant is responsible for the compilation of the Pathology Telephone Directory (on-line and hard copy) and serves as lead for the Departmental Orientation Program.
ADMINISTRATIVE SUPPORT CENTER/MEDICAL SCHOOL ACTIVITIES:

This unit, which is managed by Mr. David Golden, is responsible for the Medical School all funds budget preparation and variance reporting; tracking of all Medical School expenditures (with the exception of sponsored research); professional fee billing operations; general funds and teaching and administration funds; departmental renovation and remodeling; and management of the Word Processing Center.

The impact of the CDS was substantial to this unit's operation. In March 1996, the PPFBO (back end functions) became part of the CDS centralized billing department. Two of the four billing clerks were relocated to the new facility. The two remaining clerks were assigned other duties and responsibilities and are now concerned with charge capture for all professional fees. They also capture all technical fees for Hospital and MLabs patients.

The Pathology Wing of the Medical Science I Building was rekeyed in September 1995. The planning and distribution of keys for this project was handled by the administrative staff in this unit. In addition, the installation of a new HVAC unit necessary to augment the present building system was coordinated in this unit and completed in July 1995.

OFFICE OF RESEARCH AND EDUCATION ADMINISTRATION:

This unit, managed by Mrs. Maydis Caldwell Skeete assists the Chairman, Administrator and Principal Investigators with the business and administrative functions associated with our sponsored research and education programs. Coordination of the application process, receipt of grant awards, establishment of budgets, monitoring of expenditures and acting as liaison between the Principal Investigators, research sponsors and other University departments are the responsibility of staff in this unit. In addition, personnel and payroll paperwork associated with non-instructional staff (Medical School paid), house officers and post-doctoral fellows is coordinated in this office.

In addition, this unit also assists the Coordinator of the Pathology Education Programs with Medical School courses, the Pathology Graduate Program and the House Officer Training Program.

SUMMARY OF FINANCIAL DATA:

1. Grants and Contracts:

128 active grants, contracts and other accounts

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<th>Expenditure</th>
<th>Amount</th>
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<td>Indirect Research Expenditures:</td>
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</table>

345
2. Faculty Group Practice Plan - Pathology:

15,352 active accounts (average number)

Number of charge entries: 106,655
Gross Billings - Anatomic and Clinical Pathology: $15,169,777
Net Collections - Anatomic and Clinical Pathology: $5,354,064
Part A Payment: $2,572,667
M-Labs Transfer: $731,225

3. Pathology Laboratories:

Number of fee code procedures: 2,466,586
Number of billed tests reported to MECON: 2,426,029
Total Gross Revenue - Pathology Laboratories: $122,307,130
Total Direct Expenses Pathology Laboratories: $38,001,610

Eugene J. Napolitan
Administrator