LIST OF FACULTY
# LIST OF FACULTY

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Institutional Affiliation</th>
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<tbody>
<tr>
<td>Abrams, Gerald D.</td>
<td>Professor Emeritus</td>
<td>The University of Michigan</td>
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<tr>
<td>Annesley, Thomas M.</td>
<td>Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Appelman, Henry, D.</td>
<td>M.R. Abell Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Baker, James R.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<td>Barr Jr., Mason</td>
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<td>Blaivas, Mila</td>
<td>Clinical Associate Professor</td>
<td>The University of Michigan</td>
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<td>Capps, Rodney D.</td>
<td>Assistant Professor</td>
<td>The University of Michigan</td>
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<tr>
<td>Chamberlain, Priscilla</td>
<td>Clinical Instructor II</td>
<td>The University of Michigan</td>
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<tr>
<td>Chensue, Stephen W.</td>
<td>Associate Professor</td>
<td>Veterans Affairs Medical Center</td>
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<tr>
<td>Chinnaiyan, Arul</td>
<td>Assistant Professor</td>
<td>Veterans Affairs Medical Center</td>
</tr>
<tr>
<td>Cho, Kathleen R.</td>
<td>Professor*</td>
<td>The University of Michigan</td>
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<tr>
<td>Cooling, Laura</td>
<td>Clinical Assistant Professor</td>
<td>The University of Michigan</td>
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<td>D’Amato, Constance J.</td>
<td>Assistant Professor Emeritus</td>
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<td>Dai, Yiran</td>
<td>Clinical Assistant Professor</td>
<td>The University of Michigan</td>
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<td>Davenport, Robertson</td>
<td>Associate Professor</td>
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<tr>
<td>de la Iglesia, Felix</td>
<td>Adjunct Research Scientist***</td>
<td>The University of Michigan</td>
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<td>Dressler, Gregory R.</td>
<td>Associate Professor</td>
<td>The University of Michigan</td>
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<td>Duckett, Colin</td>
<td>Assistant Professor</td>
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<td>Elner, Victor M.</td>
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<td>England, Barry G.</td>
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<td>Fantone, Joseph C.</td>
<td>Godfrey D. Stobbe Professor in Pathology Education and Director, Anatomic Pathology</td>
<td>The University of Michigan</td>
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<td>Fearon, Eric R.</td>
<td>Professor*</td>
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<td>Finn, William</td>
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<td>Friedman, Bruce A.</td>
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<td>Fullen, Douglas R.</td>
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<td>Homeister, Jonathon</td>
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<td>Inohara, Naohiro</td>
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<td>Johnson, Kent J.</td>
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<td>Endowed Professor of Pathology Research and Co-Director, Division of General Pathology</td>
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<td>Vincenz, Claudius</td>
<td>Research Investigator</td>
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<td>Ward, Peter A.</td>
<td>Godfrey D. Stobbe Professor and Chairman</td>
<td>The University of Michigan</td>
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<td>Warren, Jeffrey S.</td>
<td>Warthin/Weller Professor and Director, Clinical Pathology</td>
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<td>Wilson, Thomas</td>
<td>Assistant Professor</td>
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* Joint Appointment, Department of Internal Medicine
** Joint Appointment, Dental School
*** Clinical Appointment, Pfizer
+ Joint Appointment, Department of Pediatrics and Communicable Diseases
++ Joint Appointment, Department of Ophthalmology
+++ Joint Appointment, Department of Obstetrics and Gynecology
# Joint Appointment, Department of Urology
## Joint Appointment, ULAM and Institute of Gerontology
TABLE OF CONTENTS
# Table of Contents

## I. Overview

**Pages**

15

## II. Individual Faculty Reports

**Pages**

21

## III. Section Reports

### A. Division of Anatomic Pathology

(Joseph C. Fantone, M.D.)

| 1. Autopsy Service  
(Daniel G. Remick, M.D.) | 273 |
| 2. Cytopathology Laboratory  
(Claire W. Michael, M.D.) | 275 |
| 3. Dermatopathology Service  
(Lori Lowe, M.D.) | 277 |
| 4. Neuropathology Service  
(Paul E. McKeever, M.D., Ph.D.) | 279 |
| 5. Special Studies Laboratory  
(Robert Ruiz, M.D.) | 281 |

### B. Division of Clinical Pathology

(Jeffrey S. Warren, M.D.)

| 1. Blood Bank and Transfusion Service  
(Harold A. Oberman, M.D.) | 287 |
| 2. Chemical Pathology Laboratory  
(Donald Giacherio, Ph.D.) | 289 |
| 3. Clinical Cytogenetics Laboratory  
(Diane Roulston, Ph.D.) | 291 |
| 4. Combined Hematology Laboratory (including Hematology, Bone Marrow, Flow Cytometry and Coagulation)  
(Bertram Schnitzer, M.D., William G. Finn, M.D., Charles W. Ross, M.D. and Alvin Schmaier, M.D.) | 293 |
| 5. Histocompatibility and Immunogenetics Laboratory  
(Riccardo Valdez, M.D. and Jeffrey S. Warren, M.D.) | 299 |
| 6. Clinical Immunopathology Laboratory  
(Jeffrey S. Warren, M.D.) | 301 |
7. Clinical Microbiology/Virology Laboratories
   (Carl L. Pierson, Ph.D. and Duane Newton, Ph.D.) 303

8. Molecular Diagnostics Laboratory
   (John A. Thorson, M.D., Ph.D.) 305

9. Specimen Procurement, Phlebotomy Services and Central Distribution
   (Harry Neusius) 309

C. General Pathology

1. M-Labs
   (Eugene M. Silverman, M.D.) 317

2. Pathology Research Microarray Laboratory
   (Arul M. Chinnaiyan, M.D., Ph.D.) 321

3. Pathology Educational Programs
   (Joseph Fantone, M.D.) 327

4. Prostate S.P.O.R.E Tissue/Informatics Core
   (Arul M. Chinnaiyan, M.D., Ph.D. and Rajal Shah, M.D.) 329

5. Ann Arbor VA Health System Pathology And Laboratory Medicine Service
   (Stephen W. Chensue, M.D., Ph.D.) 335

D. Finance and Administration

1. Division of Finance and Administration
   (Eugene J. Napolitan) 341
DEPARTMENTAL OVERVIEW


**Introduction**

The volume of activity involving both Surgical Pathology and the Clinical Laboratories continues to expand by approximately 4% per year with no evidence that this trend will be reversed. This has led to problems of compression and overloading in virtually the entire clinical laboratory system. In the late Spring of 2004, some clinical laboratory functions will be relocated to the Traverwood area (approximately 2 miles from UMMC) as a temporary adjustment. This is a stop-gap measure that does not address the long-term needs for the clinical laboratories. In addition, the Department desperately needs additional research space in which programmatic expansion can occur, especially as this relates to translational research which is moving ahead rapidly, employing both genomic and proteomic strategies. The Department of Pathology has played a key role in the use of genomic strategies as related to prostate cancer, lung and ovarian tumors. These tight-knit collaborations have greatly enhanced the institutional position, being at the "cutting edge" for the applications of genomics as a better way to understand behaviors of tumors. As indicated in the sections on teaching, research and service, the Department of Pathology continues to perform in an exemplary manner.
Teaching Activities

Faculty members continue to fill leadership roles as course directors, sequence coordinators, and serve as Associate Dean for Medical Education Assistant Dean for Admissions and Assistant Dean for Diversity and Career Development in the Medical School. Several faculty members continue to be recognized as recipients of outstanding teaching awards and selection as graduation class marshals. Pathology faculty and pathology laboratories continue to be a strength within the re-structured first year normal organ system and second year abnormal organ system sequences. Fourth year clerkships in Pathology and Laboratory Medicine are elected by approximately one fifth of the Medical School class each year and receive excellent evaluations. The Department faculty have been active in working with the Dental School in re-structuring the teaching of the biomedical sciences including pathology within an organ system model focusing on the specific educational needs of these students and engaging them in more interactive learning activities, including the implementation of Web-based instruction. The Pathology graduate program was successful in recruiting five new students with two students receiving Ph.D. degrees. The Department faculty are actively involved in the Medical Scientist Training Program (MD/PhD) and combined graduate student recruitment activities associated with the Program in Biomedical Sciences (PIBS). The Pathology residency and fellowship programs continue to recruit outstanding residents especially as we realize increased interest in our specialty by U.S. medical school graduates over the past three years. The program consists of 28 residents and fellows. Last year all graduates of the house officer program found desirable positions, in both academia and private practice, including fellowships at University of Michigan, M.D. Anderson Hospitals, University of North Carolina and Memorial Sloan Kettering.

Clinical Service Activities

The Anatomic and Clinical Pathology Laboratories continue to provide excellent, full-spectrum service as the UMHS has continued to experience growth in ambulatory care activities and in many major clinical programs. 2002-2003 was marked by new faculty recruitments in Molecular Diagnostics, Microbiology, bone and soft tissue surgical pathology and cytopathology. The laboratories continued their trend of more laboratory procedures (approximately 5%) with a fixed number of staff. Efforts continue to be directed towards more aggressive control of laboratory utilization and the improvement of phlebotomy, central distribution and laboratory operations. In response to pressures to reduce our cost/unit of laboratory service and to improve operating efficiency, a more aggressive plan for laboratory and send-out test utilization was implemented. Augmentation of the capabilities of the Molecular Diagnostics, Blood Bank, Chemistry, Tissue Typing, Hematology, Microbiology, Cytogenetics, Cytopathology and Surgical Pathology Laboratories was contributory to this process. There was a marked improvement by clinical sites in compliance with the HCFA-mandated documentation rules. In 2002-2003, the Laboratories performed more than 3.2 million diagnosis laboratory analyses and more than 55,000 surgical pathology cases. The maintenance of high quality service, in the face of increasing complexity of
Departmental Overview

demands, is a testimony to the professionalism of the staff as well as the management capabilities of laboratory directors and senior laboratory personnel. Finally, as alluded to above, the Laboratories have responded to the institutional initiative to expand primary care capabilities within the region. This activity has been coupled with expansion of on-site point-of-care testing and data handling activities. The Laboratories continue to support the M-Labs outreach program. The Laboratories successfully completed the biannual College of American Pathologists (CAP) self-inspection. Maintenance of the delicate balance among quality service, cost-effective testing, utilization control and research and development, which characterizes an academic institution, will be a continuing challenge.

Research Activities

The Department of Pathology's research activities continue to be one of the many strengthens of our academic mission. The Department's faculty successfully compete for extramural research support, attract outstanding graduate students and fellows from both the national and international scene, publish in highly visible, peer-reviewed scientific journals, and serve on numerous national and international scientific committees. During the past year, the expenditures of active grants and contracts credited to the Pathology Department's research efforts increased by approximately 3 million dollars when compared to the previous year's expenditures. The total research expenditures for 2003 were over $17 million; this included over $12 million in direct expenditures and $5 million in indirect expenditures. Faculty members in the Department of Pathology hold 73 active individual grants, which include 47 grants from the Federal government 41 NIH grants (2 Program Projects, 2 MERIT Awards, and 2 training grants) and 6 DOD grants. In one of these DOD Grants, the Department plays a leadership role in a research program with 5 different institutions. This program is a consortium dealing with therapeutic interventions to block the effects of bioterrorists' chemicals on the lung. In addition, another 26 grants originate from non-Federal sources, including, the American Heart Association, the Pew Charitable Trusts, American Lung Association, the MEDC Life Science Corridor Fund, and contract grants from a variety of pharmaceutical companies. Many of the Departmental faculty actively participate in the support of institutional initiatives, including the University of Michigan Cancer Center, Urology SPORE Program, Breast Cancer Program, Interstitial Lung Disease SCOR, and the acute lung injury SCCOR. This blend of activity underscores the role of Pathology faculty in translational research, especially where DNA-based microarrays and tissue arrays are involved. These studies have resulted in publications dealing with solid tumors and inflammatory diseases. The faculty actively publish in both the clinical and experimental arena and cover very diverse scientific interests, such as clinical pathology, anatomical pathology, and basic cellular and molecular mechanisms of disease. Our faculty participates in peer review of NIH grant applications and peer-review of submitted scientific articles for diverse journals. Another index of the healthy academic research environment in the Pathology Department is the large number of post-doctoral fellows in the different laboratories, as over 40 post-doctoral fellows from many different countries are engaged in research activities and clinical fellowship. These post-doctoral scholars have actively sought positions in the Department of Pathology to enhance their research and clinical careers. Our faculty continue to provide expertise for both internal and
external program review, which include serving as ad hoc and permanent members of NIH study sections, serving as committee members for site visit teams, providing expertise on government sponsored special emphasis panels, and organizing or chairing clinical and experimental scientific conferences.

Respectfully submitted,

Peter A. Ward, M.D.                                           Steven L. Kunkel, Ph.D.
Professor and Chairman                        Co-director, Division of General Pathology

Joseph C. Fantone, M.D.                                                   Jeffrey S. Warren, M.D.
Director, Division of Anatomic Pathology                     Director, Division of Clinical Pathology
INDIVIDUAL FACULTY REPORTS
GERALD D. ABRAMS, M.D.
PROFESSOR EMERITUS OF PATHOLOGY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Surgical Pathology Services – 1 month.
B. Pathologist, Cardiac Transplant Team. Transplant biopsies – 2 weeks.

II. TEACHING ACTIVITIES:

A. Freshman Medical Class:
   1. Pathology 500, Course Director, Lecturer, "Basic Concepts of Disease" - 20 lecture hours.
   2. Multidisciplinary Conferences - 4 contact hours.
   3. Pathology 500, Histopathology Sequence, Sequence Director, Lecturer, Lab Instructor-32 contact hours (8 lectures, 24 lab hours).

B. Sophomore Medical Class:
   1. Pathology Lab Instructor-all sequences. 50 contact hours.

C. Clinical Radiology-Pathology correlation Elective Course-2 lecture hours.

D. Dental School:
   1. Sophomore Dental Class (Path 580) - 2 lecture hours

E. Undergraduate LS&A/Graduate:
   1. Biology 224 - 1.5 lecture hours.
   2. Summer science academy – 4 lecture hours.

F. Hospital Conferences:
   1. Cardiovascular Pathology Case Conference - monthly.
   2. Cardiac Pathology teaching conference – monthly.

G. Community:

H. Invited Lectures:

I. Production of Teaching Materials:
   1. Production of CD-Rom and syllabus for Histopathology Lab sequence of Pathology 500.

J. Honors:
   1. Lifetime achievement award in medical education, 2002.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Pathologic-Radiologic correlation in aortic disease, with D. Williams.
B. Pathology of lesions produced by high intensity ultrasound, with Bioengineering staff and students.
IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL/UNIVERSITY:
A. Member, Curriculum Detail Design team; Patients and Populations sequence. Normal cell sequence.
B. Ombudsperson, Medical Faculty.
C. Member, ad hoc Search Committee for Chair, Department of Medical Education.
D. Member, Faculty Task Force to review Instructional Track.
E. Member, subcommittee for faculty, LCME review.

REGIONAL AND NATIONAL:
A. Editorial Board, Modern Pathology.
THOMAS M. ANNESLEY, PH.D.
PROFESSOR OF CLINICAL CHEMISTRY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
A. Biochemistry Section, Clinical Pathology Laboratories.
B. Laboratory Director, Chelsea Family Practice, M-Care Facility.
C. Laboratory Director, Briarwood Medical Group, M-Care Facility.
D. Laboratory Director, Briarwood Family Practice Facility.
E. Laboratory Director, Chelsea Internal Medicine Associates.
F. Laboratory Director, West Ann Arbor Health Care Facility.
G. Staff Practitioner, The Toledo Hospital, Toledo, Ohio
H. Consultant to Consultants in Laboratory Medicine, Toledo, Ohio

II. TEACHING ACTIVITIES:
A. 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.

III. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Biochemistry Section, Clinical Pathology Laboratories.
B. Coordinator, Clinical Pathology Laboratory CME Program.
C. Clinical Pathology Discretionary Incentive Funds Committee.

REGIONAL AND NATIONAL:
A. Board of Directors, National Academy of Clinical Biochemistry (NACB).
B. Chair, NACB/AACC Professional Activities Committee.
C. Chair, NACB Awards Committee.
D. Annual Meeting Organizing Committee, American Association for Clinical Chemistry.
E. AACC Meeting Task Group, American Association for Clinical Chemistry.
F. Program Coordinating Commission, American Association for Clinical Chemistry.
G. House of Delegates, American Association for Clinical Chemistry.
I. Member, Academy of Clinical Laboratory Physicians and Scientists.
J. Member, National Academy of Clinical Biochemistry.
K. Member, Association of Clinical Scientists.
L. Member, American Society for Mass Spectrometry.
M. Member, Society of Forensic Toxicology.

V. OTHER RELEVANT ACTIVITIES:

JOURNAL EDITORSHIPS:
A. Associate Editor, Clinical Chemistry.

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

EDITORIAL REVIEW ACTIVITIES:
A. Clinical Chemistry, Reviewer.
B. Biomedical Chromatography, Reviewer.
C. Therapeutic Drug Monitoring, Reviewer.
D. Clinical Biochemistry, Reviewer.

AWARDS:
A. Clinical Chemist’s Recognition Award, American Association for Clinical Chemistry.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
HENRY D. APPELMAN, M.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

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

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Medical Students:
   1. Pathology 600 - 2 full class lectures and laboratory 2-4 hours per week
   2. Pathology 630 (dental) - one full class lectures.
   3. Senior Elective in Pathology: mentor, 4 weeks with daily conferences

B. House Officers:
   1. Surgical pathology diagnosing room instruction for assigned house officer - 4 months
   2. Gastrointestinal and hepatic pathology tutoring - full time.
   3. Lectures in gastrointestinal and liver pathology, 2 hours
   4. Consult conferences, 4-5 hours

C. Interdepartmental:
   1. G-I Tumor Conference - (3 hours per month).
   2. Liver Biopsy Conference – 4 hours per year.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Clinical trial of difluoromethylornithine in Barrett’s esophagus, with Dean Brenner of the U of Mich, Gary Stoner of Ohio State Univ, Stuart Spechler, and Edward Lee of University of Texas-Southwestern, and Anil Rustgi of Pennsylvania.
B. Anaplastic, lymphoma-like carcinoma arising in Barrett’s mucosa, with BJ McKenna
C. Adenomas of the duodenum: are there differences between sporadic and FAP-associated? With Paul Kowalski
D. Is hyperplasia of the interstitial cells of Cajal a common reaction to intramural masses in the gut? With Meryem Koker
E. The apoptotic form of microscopic colitis, with BJ McKenna
F. Are juvenile-like polyps in adults the same as in children? With Meryem Koker
G. What is the yield of significant microscopic disease in colorectal biopsies of adult patients with chronic diarrhea and normal endoscopic findings? With BJ McKenna

H. Is there such a thing as ectopic antral mucosa in the duodenal bulb? With Wei Xin

I. What is the cause of the autoimmune hepatitis-like recurrent hepatitis C in liver transplant recipients? With Wei Xin, Joel Greenson, and Robert Fontana

J. What is the rate of neoplastic progression in Barrett’s mucosa during surveillance endoscopy and biopsy at the University of Michigan? With John Inadomi

K. What is the rate of neoplastic progression in ulcerative colitis during surveillance endoscopy and biopsy at the University of Michigan?

L. Marginal collagenous colitis: does it exist? With BJ McKenna, W Xin, M Anderson and L Evans

M. The effects of loss of IL-10 and Familial adenomatosis polyposis-like genetic changes on the development of colorectal carcinomas in knock-out mouse models. With Emina Huang.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

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

MEDICAL SCHOOL/HOSPITAL:

A. Member, Cancer Work Group, University Hospital.

B. Co-Coordinator, Gastrointestinal Sequence for 2nd year medical students.

REGIONAL AND NATIONAL:


C. Member, Editorial Board, Human Pathology.

D. Member, Editorial Board, Modern Pathology.

E. Member, Editorial Board, American Journal of Surgical Pathology.

F. Ad hoc reviewer for American Journal of Pathology, Cancer, Gastroenterology, and American Journal of Gastroenterology.

G. Member of the Long Range Planning Committee, United States and Canadian Academy of Pathology, Inc

H. Member, Lung and Esophagus Task Force, American Joint Committee on Cancer, 2001-present
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. "A whirlwind tour through esophagogastric inflammations and their complications" and "the role of the pathologist in the diagnosis and management of inflammatory bowel diseases, especially the colitides". Half day course, Pathology Update for Practicing Pathologists: Recent Advances and Selected Topics. American Society of Clinical Pathologists, Chicago, IL, July 13, 2002

2. "Whatever happened to the old ulcerative colitis we knew and loved?" and "Why is the gastroesophageal junction such a big deal when it is so small?" Update Course in Surgical Pathology, Ohio State University Medical Center, Columbus, Ohio, August 27, 2002

3. "Large cell minimally differentiated colon carcinoma" and "Small intestinal stromal tumors", presented at the Gastrointestinal Pathology Slide Seminar, 24th International Congress of the International Academy of Pathology, Amsterdam, the Netherlands, October 9, 2002

4. "GI Pathology", Diagnostic Problems in Anatomic and Clinical Pathology, Emory University School of Medicine, Atlanta, GA, October 19, 2002

5. "The gastrointestinal biopsy report: What’s right, what’s wrong and what doesn’t matter?” With BJ McKenna, half day course, Annual meeting, American Society of Clinical Pathologists, Washington, DC, Oct 22, 2002

6. "What’s up with gastrointestinal stromal tumors" and "Gastrointestinal biopsy reports: to err is human, but who will forgive you?" with Barbara J. McKenna, Second Annual Current Topics in Gastrointestinal Pathology, Johns Hopkins University School of Medicine, Baltimore MD, November 10-11, 2002

7. "Changing concepts in our understanding of ulcerative colitis”, Twin Cities Pathology Society, Minneapolis, MN, November 21, 2002

8. "Dysplasia in the GI tract", Early Detection Research Network of the National Cancer Institute, Seventh Steering Committee Meeting, University of Alabama, Birmingham AL, January 31, 2003


10. "Why is the gastric cardia such a big deal when it is so small?" Visiting professor lecture, University of Washington, Seattle, WA, April 23, 2003

11. "Neoplastic diseases of the intestines", half day course, Pathology of the Gastrointestinal Tract, American Society of Clinical Pathologists, Chicago, IL, May 1, 2003

12. "Dysplasia can be a pain in the gut”, Suffolk County Society of Pathologists, Port Jefferson, NY, May 22, 2003

13. "The changing face of ulcerative colitis”, Department of Pathology, State University of New York at Stony Brook, Stony Brook, NY, May 23, 2003

14. "Dysplasia in the gut”, Visiting Blue Grass Professor Lecture, University of Kentucky, Lexington, KY, June 6, 2003

16. “New stuff in Barrett’s mucosa and the gastric cardia”; “GI dysplasias, including Barrett’s epithelium and ulcerative colitis”; “Idiopathic inflammatory bowel disease: changes with time and treatment”; “Gastrointestinal stromal tumors”; “Neoplasms of the appendix and anus”; Diagnosis of Gastrointestinal, Liver and Pancreatic Biopsies, California Pacific Medical Center Course, Ayleska, Alaska, June 23-26, 2003

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

1. McKenna BJ, Appelman HD: Dysplasia can be a pain in the gut. Pathology, 34:518-528, 2002

CHAPTERS AND BOOKS:


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

3. McKenna BJ, Appelman HD: Biopsies of colonoscopically normal mucosa in adult patients with chronic diarrhea provide diagnostically relevant information in most cases. Mod Pathol. 16:128A, 2003
4. Xin W, McKenna BJ, Appelman HD: Gastric surface metaplasia in the duodenal bulb is not ectopic antral mucosa. Mod Pathol. 16:137A, 2003
MILA BLAIVAS, M.D., PH.D.
CLINICAL ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. 21 weeks of Surgical Neuropathology Service.
B. 54 days of Autopsy Service including weekend autopsy calls.
C. All muscle and nerve biopsies at the UMHS and referred by other hospitals in- and out-of-state throughout the year, including new anti-dystrophy workup (434 muscle biopsies and 110 nerve biopsies). 40% muscle biopsies with EM, 100% nerve biopsies with EM and 17 with teasing. Over 20 cases were tested with antidystrophy antibody (10-14) screen by IPOX.
D. Diagnostic EM on skin and other tissues for various rare disorders, 18 cases.
E. Cutting autopsied brains with Pathology House Officers, microscopic evaluation with the residents for the diagnosis.
F. Consulting on brain, muscle and nerve pathology, intradepartmental cases, VAH and other hospitals in MI and other states. 137 personal consults.

II. TEACHING ACTIVITIES:

A. Instructed residents, fellows and staff in Neurology, Rheumatology and Pediatrics and students on muscle, nerve and brain biopsies.
B. Lectures for medical and dental students; M-2 neuropathology labs.
C. Taught Pathology Residents how to perform and read-out autopsies.
D. Lectures on muscle, nerve and brain pathology to residents and fellows in Pathology, Neurology, Neurosurgery and Rheumatology.
E. Conferences on muscle and nerve cases with Neurology Department.
F. Neuropathology cases review with Pathology Residents.
G. Weekly and monthly conferences with Neuromuscular staff.
H. Conferences and lectures for Neurosurgery Residents and staff.
I. Pediatric Oncology conferences for brain tumor cases.
J. Personal tutoring of neurology and pathology residents on Neuropathology – 9 persons.

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Collaboration with EMG group, neurosurgery, genetics, pediatrics, rheumatology, epilepsy and gynecology (Dr. J. Delancey group) on various projects.
B. National study group (ERSET), part of, for evaluation of temporal lobectomy/hippocampectomy cases.
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.
C. Improvements in immunoperoxidase stainings, expansion of anti-dystrophy workup.
D. Daily monitoring muscle histochemistry group performance.

MEDICAL SCHOOL:
A. Member of the Admissions Committee.

INVITED LECTURES:
1. Invited lecturer to St. Mary Hospital, Saginaw, September 2002.
2. Invited lecturer to the Nursing Homes Association, April 2003.

REGIONAL AND NATIONAL:
A. Consulting with outside pathologists, neurologists and family practitioners on muscle and nerve biopsies performance and interpretation, brain biopsies.
B. Member, American Association of Neuropathologists, IAP, CAP, PNS, and AAN.
C. Attended AANP meeting.
D. Ad-hoc reviewer for Archives of Pathology and Laboratory Medicine, Archives of Ophthalmology.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN PEER REVIEWED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:
5. Lagrange AH, Blaivas M, Gomez-Hassan D, Malow BA: Rasmussen’s-like encephalitis presenting as new-onset narcolepsy, cataplexy, and epilepsy in an adult. Accepted to Epilepsy and Behavior.

CHAPTER IN BOOKS

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


PRISCILLA CHAMBERLIN, M.D.
CLINICAL INSTRUCTOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
   B. Surgical Pathology sign out and consultations – 12 months
      - 25% of SP cases
   C. Cytology sign out and consultation – 12 months
      - 50% of Pap Smears
      - 50% of non-gynecological cases

II. TEACHING ACTIVITIES:
   1. Pathology residents, SP – 506 hours
   2. Pathology residents Cytology – 100 hours
   3. M2 pathology lab – 50 hours
   4. Lecture series for ENT residents – 25 hours
   5. Cytology lectures to pathology and surgical residents as needed – 10 hours

II. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

None.

PENDING:

None.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director of Cytopathology for VA Hospital
B. Medical Director of Microbiology, Immunology, Ancillary Testing and Chemistry labs at VA Hospital
D. Anatomical Pathology Imaging at VA Hospital
E. Laboratory Director for Toledo VA Out Patient Clinic

MEDICAL SCHOOL/HOSPITAL:

A. Medical School Admissions Committee
B. VA Hospital Tumor Board
C. VA Hospital Cancer Committee
D. VA Hospital Safety Case Management Committee
UNIVERSITY OF MICHIGAN:
None.

REGIONAL AND NATIONAL:
None.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
None.

HONORS AND AWARDS
None.

PATENTS:
None.

INVITED LECTURES/SEMINARS:
None.

VI. PUBLICATIONS:

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

BOOKS/CHAPTERS IN BOOKS:
None.

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
None.
STEPHEN W. CHENSUE, M.D., PH.D.
ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENT REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES

A. Chief, Pathology and Laboratory Medicine Service (as of March 2001), VA Ann Arbor Healthcare System, responsibilities include, overall laboratory supervision and administration, equipment and methodology evaluation, review and consultation regarding quality management programs, personnel evaluation, counseling and grievance procedures.

B. Hematology, daily evaluation of pathologist referred blood smears, lymph nodes, bone marrow smears, VA Ann Arbor Healthcare System (6 months/year).

C. Surgical/Frozen Section Diagnosis (2.5 months/year).

D. Surgical Case Diagnosis VA Ann Arbor Healthcare System (2.5 months/year).

E. Autopsy Service, rotational basis, on call 13 weeks/year.

F. Special Chemistry/Immunology, daily interpretation of protein electrophoreses and problem ligand studies (6/months/year), VA Ann Arbor Healthcare System.

G. Blood Bank, consults and investigations, full time as needed, VA Ann Arbor Healthcare System.

II. TEACHING ACTIVITIES

A. Pathology house officers, Surgical Pathology/Autopsy supervision and instruction.

B. Medical students, Pathology 600 laboratory.

C. Technologists, technicians and hospital staff, ongoing continuing medical education instruction on clinical laboratory topics.

D. Research mentoring for post-doctoral, graduate, undergraduate, and high school trainees.

III. RESEARCH ACTIVITIES

SPONSORED SUPPORT:

A. Principal Investigator, Chemokine Detrimnants of Th1 and Th2 Immune Responses, VA Merit Review Grant, ($135,000 direct costs annually, 2000-2005).

B. Principal Investigator, Chemokine Receptor Dynamics in Granuloma Formation, NIH AI43460 ($150,000 direct costs annually, 2003-2007)

C. Coinvestigator, Molecular Mechanisms of Lung Host Defense, VA REAP Grant (250,000 annually, 1998-2003)
PROJECTS UNDER STUDY:
A. Cytokine manipulation of mycobacterial (Th1) and schistosomal (Th2) Ag mediated forms of hypersensitivity granuloma formation.
B. Regulation of chemokine receptor expression during Th1 and Th2 immune and inflammatory responses.
C. Role of chemotactic cytokines in granulomatous inflammation and Th1 and Th2 cell expression.
D. In vivo regulation of chemotactic cytokine production by leukocytes and stromal cells in the lung.
D. Analysis of eosinophil recruitment factors in type 2 granulomatous inflammation.
E. Dendritic cell chemokine receptor expression and in vivo migration.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Pathology Graduate Program Preliminary Exam Committee
B. Immunology Graduate Program's Preliminary Exam Committee
C. Member of graduate student thesis committees.
D. Interviewing and evaluation of residents and faculty.

MEDICAL SCHOOL/HOSPITAL:
A. Dean’s Committee, University of Michigan Medical School and VA Ann Arbor Healthcare System
B. Clinical Executive Board, VA Ann Arbor Healthcare System, voting member
C. Professional Standards Board, VA Ann Arbor Healthcare System, voting member
D. Invasive Procedures Committee, VA Ann Arbor Healthcare System, voting member
E. Residency Review Board, VA Ann Arbor Healthcare System, voting member
F. Information Management Committee, VA Ann Arbor Healthcare System, voting member
G. Chief of Staff Advisory Committee, VA Ann Arbor Healthcare System, voting member
H. Personnel employment and annual performance evaluations.
I. Anatomic Pathology Quality Assurance evaluation and reporting
J. Editor, VALabs Newsletter and webmaster for VA Laboratory webpage.
REGIONAL AND NATIONAL:
A. Editorial Review:
1. American Journal of Pathology
2. Journal of Immunology
3. Inflammation Research, Section Editor
4. American Journal of Respiratory Cell and Molecular Biology
5. Journal of Clinical Investigation
6. Chest
7. Journal of Leukocyte Biology
8. Infection and Immunity

V. OTHER RELEVANT ACTIVITIES:
A. Case presentations at Tumor Board and Morbidity and Mortality Conferences.
B. Tissue evaluation for clinical and basic researchers.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS AND CHAPTERS IN BOOKS:


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

1. Freeman, C.M., Chiu, B-C., Stolberg, V.R. and Chensue, S. W. CCR8 is selectively expressed by an IL-10 producing antigen-specific memory CD4+ T cell population. FASEB J. 2003.

2. Chensue, S.W. Chemokine and Chemokine Receptor Dynamics during Type-1 and Type-2 Hypersensitivity-Type Pulmonary Inflammation" Keystone Symposia on Chemokines and Chemokine Receptors, Breckenridge, Colorado, January 7-12, 2003.
I. CLINICAL ACTIVITIES:

A. Board-Certified in Clinical Pathology (2002), Diplomate of the American Board of Pathology

II. TEACHING ACTIVITIES:

A. Mentor, postdoctoral fellows: Chandan Kumar, Arun Sreekumar, Saravana Dhanasekaran, Rohit Mehra, Eric Albrecht (co-mentored with P. Ward)
B. Mentor, graduate students: Scott Tomlins (MSTP, Pathology), Qi Cao (Pathology), Jianjun Yu (Bioinformatics), Daniel Rhodes (MSTP, Pathology), Julie Kim (Bioinformatics), Viktoria Resnick (Bioinformatics), Xiaoyu Jia (Pathology) Smita Lakhotia (Graduate Student, Indian Institute of Sciences), Ronglai Shen (Biostatistics Masters Student)
C. Mentor, Undergraduate Students: Shilpa Murthy, CMB Honors Research
D. Hosted international visiting scholars to train in microarray technology: Jian Huang, M.D. (Zhejiang University, China)
E. Pre-lim Committees:
   Chair of graduate pre-lim committee for Bioinformatics Graduate Student, Chad Creighton
   Chair of graduate pre-lim committee for Bioinformatics Graduate Student, Yili Chen.
F. Instructor, Biochemistry 491
G. Bioinformatics 511 Luncheon and Seminar
H. Biology of Cancer, ME.510.700, Seminar, Johns Hopkins Medical School
I. Co-Director, Bioinformatics 511
J. Cancer Biology Seminar Series, Lecturer, University of Michigan Medical School

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, “Molecular Classification of Prostate Cancer” American Cancer Society RSG-02-179-01-MGO, 07/01/02 – 06/30/06, 15% effort, $180,000/yr direct costs.
B. Principal Investigator, “The Role of Polycomb Group Proteins in Prostate Cancer” NIH R01 CA97063, 07/01/02 – 06/30/07, 20% effort, $178,000/yr direct costs.
C. Principal Investigator, “Transcriptome Analysis of Breast & Prostate Cancer Reveals Oncogenic Connections to Fatty Acid Metabolism”, V Foundation N003689, 03/29/02 – 03/28/04, 0% effort, $50,000/yr direct costs.
D. Principal Investigator, “Development of Breast Cancer biomarkers Using DNA and Protein Microarray Technologies”, Mary Kay Ash Charitable Foundation N003813, 07/01/02 – 06/30/04, 0% effort, $43,478/yr direct costs.

E. Principal Investigator, “A Functional Genomics Approach to Cancer”, PEW Charitable Trust, 07/01/02 – 06/30/06, 0% effort, $55,556/yr direct costs.

F. Principal Investigator, “A Bioinformatics Approach to Cancer Profiling”, Pilot Research Grant 2001N002824, University of Michigan, Bioinformatics Program, 07/01/01 – 12/31/02, 0% effort $75,000.

G. Principal Investigator, “The Role of Hepsin in Prostate Cancer”, CapCURE Foundation, 2001 CapCURE Award N003299 01/01/02 – 12/31/02, 0% effort, $75,000.

H. Principal Investigator, “Molecular Classification of Prostate Cancer”, Wendy Will Case Foundation, Bridging funds for re-submission of ACS grant, 12/01/01-11/31/02, 0% effort, $25,000.

I. Principal Investigator, “Functional Genomics Approach to Lethal Metastatic Prostate Cancer”, Career Development Award, NCI P50 CA69568 (Pienta), 08/01/02 – 07/31/03, 25% effort, $70,000/yr direct costs.

J. Co-Principal Investigator, “Transcriptome Analysis of the EGFR Receptor in Breast Cancer, The Breast Cancer Foundation N003365 (Lippman), 10/01/01 – 09/30/02, 15% effort, $250,000/yr.

K. Co-Investigator, “Biological Differences between prostate cancer cells that metastasize to the bone versus soft tissue sites”, Department of Defense DAMD17-02-1-0098 (Pienta), 11/01/01 – 10/31/04, 5% effort, $141,563/yr direct costs.

L. Co-Investigator, “Protective Effects of Anti-C5a in Sepsis”, NIH (Ward), 12/01/01-11/30/06, 10% effort, $225,000/yr direct costs.

M. Principal Investigator, Pfizer, Inc. 12/15/02-12/14/03, 0% effort $162,132/yr.

N. Principal Investigator, “Discovery of Cancer Biomarkers using High Throughout Multi-Blotting” (GMP Companies, Inc.) 12/01/02-11/30/05, 0%, $168,827/yr.

O. Principal Investigator, “Functional Genomics Approach to Lethal Metastatic Prostate Cancer” S.P.O.R.E. in Prostate Cancer, Project 3, NCI P50 CA69568 (Pienta), 07/01/03 – 06/31/08, 15% effort, $144,578/yr.

P. Core Director, S.P.O.R.E. in Prostate Cancer, Tissue/Informatics Core of the UM Prostate SPORE, NCI P50 CA69568 (Pienta), 07/01/03- 06/30/08, 10% effort, $253,643/yr.

Q. Principal Investigator, “Dysregulation of the Corepressor CtBP in Prostate Cancer,” Department of Defense, DOD PC020322, 1/2/03- 12/31/05, 15% effort, $125,000/yr direct costs.
PENDING:

None.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Pathology student recruitment activities (lunch, poster session)
B. Director of the Pathology DNA Microarray Research Lab
C. Director of the Prostate SPORE Tissue/Informatics Core

MEDICAL SCHOOL/HOSPITAL:

A. Member, MSTP Career Advisory Panel
B. Bioinformatics student interviews
C. Faculty Candidate Interviews for the Department of Urology and the Cancer Center
D. MSTP student interviews
E. Bioinformatics Faculty Search Committee

REGIONAL AND NATIONAL:

B. External grant reviewer for the National Science and Technology Board Biomedical Research Council (Singapore) and the Cancer Society of New Zealand, Inc.
C. Scientific Review Board, 2003 American Cancer Society, Grants Peer Review
D. Scientific Review Board, 2003 Department of Defense Prostate Cancer Research Peer Review Program
E. Scientific Review Board, 2003 Department of Defense Breast Cancer Concept Award Peer Review Program

V. OTHER RELEVANT ACTIVITIES:

A. Affiliated Faculty of the Bioinformatics Program
B. Pew Scholars Program in the Biomedical Sciences, Pew Charitable Trusts
C. Member, Michigan Comprehensive Cancer Center
D. Joint Appointment in the Department of Urology
E. Member of the Faculty Search Committee for the Bioinformatics Program
F. MSTP Career Advisory Panel, University of Michigan
EDITORIAL BOARDS:

A. Cancer Genomics and Proteomics

PATENTS:

A. U.S. Provisional Application Serial no. 60/309,581 filed 8/02/01 and U.S. Provisional Application Serial no. 60/334,468 filed 11/15/01, “Prostate Cancer Biomarkers”

B. U.S. Patent Application No. 09/734,628 COMPOSITIONS AND METHODS FOR IN SITU AND IN VIVO IMAGING OF CELLS AND TISSUES; Filing Date: December 11, 2000; Attorney Docket No.: UM 07825 University of Michigan Filing No.: 1850

INVITED LECTURES/SEMINARS:


8. Pathology Bioinformatics Meeting, University of Michigan, Speaker, November 11, 2002.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


**REVIEW ARTICLES:**


**BOOKS/CHAPTERS IN BOOKS:**

1. None.

**ABSTRACTS:**

1. Several abstracts have been submitted from the Chinnaiyan Lab (during this period) to various national meetings including USCAP, American Association for Cancer Research (AACR), NCI S.P.O.R.E. meeting, and the Fall Research Symposium of the U of Michigan Cancer Center. Please refer to the published manuscripts that have resulted from these abstracts.
KATHLEEN CHO, M.D.
PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Gynecological pathology consultation services and “Room G”/Gynecological Pathology sign out in surgical pathology – six months.

II. TEACHING ACTIVITIES:

A. Postdoctoral Fellows:
   Responsible during the academic year for the following:
   1. Donald Schwartz, Ph.D.
   2. Yali Zhai, Ph.D.

B. Graduate students:
   1. Neali Hendrix (Dept. of Pathology), faculty mentor, doctoral candidate, PIBS program
   2. Kenute Myrie (Dept. of Human Genetics), thesis committee member, Ph.D. awarded 2002
      Course Faculty, Pathology 581 – three lecture hours
      Course Faculty, Pathology 580/630 – two lecture hours

C. Undergraduate students:
   Lisa So

D. House Officers:
   Room G sign-out of gynecologic pathology cases; two staff consultation conferences

E. Interdepartmental:
   Multidisciplinary Gynecologic Oncology tumor board – one hour twice per month

F. National:
   Course Faculty and Co-organizer: Molecular Biology in Clinical Oncology Workshop, American Association for Cancer Research, The Given Institute, Aspen, Colorado.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, "FHT Gene Alterations in Cervical Cancer Pathogenesis", NIH RO1 CA81587 (15% effort), September 1, 1998 - August 31, 2002. Final year is twelve month no cost extension.


E. Co-Investigator (10% effort), "CDX2 Tumor Suppressor Pathway Defects in Colon Cancer", NIH R01 CA82223 (Fearon), August 15, 1999 – May 31, 2004.
F. Co-Investigator (10% effort), "The Role of β-Catenin/Tcf Pathway Defects in Cancer." NIH R01 CA85463 (Fearon), June 1 2000 – May 31, 2005.
G. Co-Investigator (5% effort), “Liquid Proteomics for Marker Screening of Ovarian Cancer", NIH R01 CA100104 (Lubman), April 15 2003 – April 14, 2008

PENDING:

A. National Institutes of Health: 1P50CA98252-01 (09/03 – 09/08). SPORE in Cervical Cancer (Program PI: T.C. Wu); Role in Program: Principal Investigator, Project 2, Molecular Markers of Invasion in Cervical Cancer Progression (20% effort). Co-Investigator, Project 1, Markers of Progression to Cervical Cancer in Rural India (5% effort). Application reviewed by IRG in 06/02, priority score 153, funding anticipated pending final administrative approval.
B. Department of Defense, Ovarian Cancer Research Program: DAMD17-OC030117 (11/01/03 – 10/31/06). Development and Characterization of a Murine Model of Ovarian Endometrioid Adenocarcinoma Induced by Tissue Specific Expression of Oncogenic β-Catenin. Role in project: Mentor (5% effort) for New Investigator, Donald Schwartz, Ph.D.

PROJECTS UNDER STUDY:

A. Molecular profiling of ovarian epithelial tumors using 2-D gel approaches and Affymetrix gene chip technologies.
B. Identification and characterization of molecular markers of ovarian carcinomas.
C. Identification of novel genes amplified in ovarian carcinomas.
D. Evaluation of the role of Wnt/β-catenin/Tcf pathway defects in the pathogenesis of ovarian endometrioid adenocarcinomas.
E. Identification of genes involved in cervical cancer progression

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Department of Pathology, internal Advisory Committee on Appointments, Promotions and Tenure, 2002 – present
B. Department of Pathology, Curriculum Committee, 2002 – present
C. Department of Pathology Graduate Student Admissions Committee, 2002 – present
D. Department of Pathology, Committees for Long Range Planning in the Clinical Laboratories and Research (Chair), Spring 2003
INSTITUTIONAL:

A. Institutional Review Board, University of Michigan School of Medicine (IRB-MED),
   appointment from Feb 2001 – Jan 2005

REGIONAL AND NATIONAL:

A. Special Emphasis Panel, ZRG1 SSS-1(12)B Study Section, National Institutes of
   Health/National Cancer Institute, review of R41, R42, R43, and R44 applications, March
   2003
B. Member, Special Conferences Committee, American Association for Cancer Research,
   1999-2002
C. Member, Publications Committee, American Association for Cancer Research, 2002-
   present
D. Co-Organizer, Molecular Biology in Clinical Oncology Workshop, American
   Association for Cancer Research, 2000-present
E. Member, National Comprehensive Cancer Center Panel for establishment of endometrial
   and cervical cancer treatment guidelines, 1997-present
F. Chairperson, 2003 AACR – Women in Cancer Research – Charlotte Friend Memorial
   Lectureship Selection Committee, American Associate for Cancer Research
G. Member, 2003 AACR-Women in Cancer Research Brigid G. Leventhal Scholar Award
   Selection Committee
H. Secretary, International Society of Gynecological Pathologists, elected to two year term
   (2003-2004) renewable for two additional terms, not to exceed six years

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Associate Editor, Cancer Research
B. Associate Editor, Clinical Cancer Research
C. Member, Editorial Board, Human Pathology
D. Member, Editorial Board, International Journal of Gynecological Pathology
E. Member, Editorial Board, Molecular Diagnostic Pathology
F. Member, Editorial Board, The Women's Oncology Review
G. Ad hoc reviewer for American Journal of Pathology, British Journal of Cancer,
   Gynecologic Oncology, Laboratory Investigation, Journal of Pathology, American
   Journal of Obstetrics and Gynecology, Genes Chromosomes and Cancer, Journal of
   Clinical Investigation, Oncogene

INVITED LECTURES/SEMINARS 2002-2003:

1. Cervical Cancer and Human Papillomaviruses. Annual Symposium of the Binford-Dammin
   Society of Infectious Disease Pathologists, United States and Canadian Academy of Pathology
2. Ovarian Cancer: Molecular Clues to Pathogenesis and Tumor Classification: University of
3. Ovarian Cancer: Molecular Clues to Pathogenesis and Tumor Classification: Molecular Biology
   in Clinical Oncology Workshop, American Association for Cancer Research, The Given
   Institute, Aspen, Colorado, July 2002.

5. Gene Expression Profiling of Ovarian Endometrioid Adenocarcinomas Identifies Novel Candidate Targets of β-catenin/Tcf Signaling. NCI Director’s Challenge Principal Investigator Meeting, Bethesda, Maryland, November, 2002.


VI. PUBLICATIONS (2002-2003):

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


**BOOKS/CHAPTERS IN BOOKS:**

LAURA COOLING, MD, MS  
Clinical Assistant Professor II  
Department of Pathology  
Annual Department Report  
1 July 2002-30 June 2003

I. CLINICAL ACTIVITIES  
A. Associate Medical Director, Transfusion Medicine  
1. Blood Bank, clinical coverage and administration  
2. Bone Marrow/Peripheral Stem Cell Collection and Processing  
3. Clinical Consultation/Management, Special Product Requests  
4. Clinical Coverage, Therapeutic Apheresis

II. TEACHING ACTIVITIES  
A. Resident Education  
1. Responsible/Share didactic teaching activities for the following:  
   a. Blood Component Therapy  
   b. Transfusion Reaction Evaluation  
   c. Evaluation and Management of Platelet Refractoriness  
   d. Fundamentals of Clinical Apheresis (with nursing staff)  
   e. Evaluation and Management of Therapeutic Apheresis Requests  
   f. Administrative Issues on-call  
2. Clinical Teaching  
   Supervision Resident/Visiting Fellow Activities (12 mo/yr)  
   a. Morning Report  
   b. Transfusion reaction sign-out  
   c. Clinical apheresis requests/patient management  
   d. Special product request evaluation and clinical follow-up  
   e. Case-based informal teaching  
3. Other Clinical Teaching  
   a. Hematology Fellows  
   b. Heme/Onc Nursing Staff (in-service lectures)  
   c. Hematology case conference  
      i. TTP in adolescent patient, role of plasma exchange  
      ii. Management of severe HLA alloimmunization in aplastic anemia

B. Medical Students  
1. Transfusion Medicine. Senior Therapeutics Course, Dept. of Pharmacology  
2. Evaluation and management of platelet refractoriness. Hem/Onc residents, medical students and nursing staff.

III. RESEARCH ACTIVITIES  
A. The Regulation and Biology of Globo-Series Glycosphingolipids  
2. Relationship of LKE phenotype on non-globo-glycoconjugates of human RBCs
3. Effect of inflammatory cytokines and retinoic acid on globo- and lacto-family in renal epithelial cells.
4. Molecular basis and regulation of Pk and Luke antigen expression in LKE.
5. Globo/lacto antigens in infectious disease

B. Clinical Research
1. Factors effecting stem cell collection and engraftment
2. Platelet immunology, role in transfusion therapy

IV. SPONSORED RESEARCH

CURRENT

PENDING
B. Globo-glycosphingolipids in disease and development. KO8 Mentored Clinical Scientist Development Award, National Institutes of Health. PI. Laura Cooling, mentor Dr. James Shayman, Dept. of Internal Medicine.

V. ADMINISTRATIVE ACTIVITIES

DEPARTMENTAL
A. Associate Director, Transfusion Medicine

HOSPITAL
A. Transfusion Subcommittee

V. OTHER RELEVANT ACTIVITIES

INVITED LECTURES/SEMINARS:

7. Presenter, American Association of Blood Banks 56th Annual Meeting, Orlando, FL. A missense mutation in □3GalT5, the glycosyltransferase responsible for galactoslygloboside and Lewis c synthesis, may be associated with the LKE-Weak phenotype in African Americans. October 2002.

REVIEWER
Conn's Current Therapy
Journal of Lipid Research
Journal, Leukemia
Journal, Transfusion
Journal, Thrombosis and Hemostasis
Journal, Thrombosis Research
Scientific Abstracts, American Association Blood Bank 56th Annual Meeting

PROFESSIONAL MEMBERSHIPS
American Association of Blood Banks
Michigan Association of Blood Banks
Education Committee
Specialist in Blood Banking Subcommittee/Course Lecturer
Invitational Conference of Investigative Immunohematology
American Society of Clinical Apheresis
Alpha Omega Alpha
V. PUBLICATIONS

JOURNALS:

2. Cooling L, Gu Y. Identification of two new single nucleotide polymorphisms in FUT3 associated with the Lewis null phenotype. Transfusion, in press.

BOOKS/CHAPTERS IN BOOKS:


PEER-REVIEWED ABSTRACTS:

1. Davenport R, Cooling L, Newman B. Acute pain transfusion reaction associated with transfusion of HLA class II antibodies. Submitted (in press?)
4. Hwang D, Cooling L, Gu Y. Homozygosity for the galactosylgloboside synthase (GalT5)-T654 allele is associated with decreased LKE expression on LKE-weak RBC. Transfusion, in press.
YIRAN DAI, M.D.
CLINICAL ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Cytopathology (7 months)
   1. Review and Signout of in-house cytology, Transfer Cytology (TC) and
      intradepartmental and extradepartmental cytology consultations (Gyn & Non-
      Gyn).
   2. Performance of Fine Needle Aspirations (FNA) at the Cancer Center, University
      Hospital, and Mott Children's Hospital. Rapid interpretation of FNA performed
      at CT, Ultrasound, Medical Procedure Unit, and outpatient clinics.

B. Surgical Pathology (4 months)
   1. Review and Signout of Surgical Pathology (Room 1, Room 2 and Room C)
   2. Review and Signout of Genitourinary biopsies and surgical resections (GU)

C. On call for intraoperative consultation (6 weeks)

II. TEACHING ACTIVITIES:

A. Fellows, residents and medical school students:
   1. Cytopathology:
      a. Introduction to the basic concepts of cytopathology through interaction at
         the microscope.
      b. Instruction on FNA performance and principles of cytopathology
         preparations.
      c. Supervision and instruction on rapid assessment of cytology preparations.
      d. Discussion and review of pertinent cytology literature with emphasis on
         diagnostic applications.
   2. Surgical Pathology:
      a. Instruction in surgical pathology diagnostic rooms
      b. Instruction in GU diagnostic room
      c. Instruction in intraoperative consultation
   3. Monthly cytopathology residents' conference
      Weekly cytopathology fellows' conference

B. Cytotechnologist:
   Cytopathology slide conferences.

C. Other education activities:
   National cytopathology teleconference.
III. **RESEARCH ACTIVITIES:**

**PROJECTS UNDERSTUDY:**

A. The overall effect of Thin Prep on the diagnosis of fibroadenoma.
B. The expression pattern of beta-catenin in mesothelial proliferative lesions and its diagnostic utilities.

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Cytopathology division quality control and assurance

**REGIONAL AND NATIONAL:**

A. Elected member of Quality Control Committee, American Society of Cytopathology

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**


VI. **PUBLICATIONS:**

**ABSTRACT ACCEPTED FOR ASC**

Yiran Dai, Celina G. Kleer, Claire W. Michael The overall effect of Thin Prep on the diagnosis of fibroadenoma. 2003 ASC meeting
I. CLINICAL ACTIVITIES:
   A. Medical Director, Blood Bank and Transfusion Service.
   B. Cytopathology staff.

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. Cytopathology sign-out with Pathology House Officers and Cytopathology Fellows.
   D. Current Topics in Blood Banking Conference, Towsley Center for Continuing Medical Education.
   E. M2 Hematology sequence, Blood Transfusion.
   F. Hematology fellows, blood transfusion.
   G. Director, Fellowship Program in Blood Banking/Transfusion Medicine

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
   A. Pathophysiology of transfusion reactions.
   B. Transfusion-transmitted West Nile Virus.
   C. Cefotetan induced immune hemolysis.
   D. Heparin-induced thrombocytopenia.
   E. Cytodiagnosis of epitheliod hemangioendothelioma.

IV. ADMINISTRATIVE ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
   A. Transfusion Committee.
   B. Blood Transfusion Process Improvement Team.

V. OTHER RELEVANT ACTIVITIES:
   A. Program Committee, Michigan Association of Blood Banks.
   B. Scientific Section Coordinating Committee, American Association of Blood Banks.
   C. Annual Meeting Program Planning Committee, American Association of Blood Banks.
   D. Medical Advisory Committee, American Red Cross Southeastern Michigan Region.
   E. Editorial Board, Transfusion.
VI. PUBLICATIONS:

ARTICLES ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN REFEREED JOURNALS:


CHAPTERS IN BOOKS:

FELIX A. DÈ LA IGLESIA, M.D.
ADJUNCT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002-30 JUNE 2003

I. CLINICAL ACTIVITIES:

II. TEACHING ACTIVITIES:

None.

III. RESEARCH ACTIVITIES:

A. In vitro live cell organelle toxicity research using multiple, simultaneous fluorescent probes.

SPONSORED SUPPORT:

A. Research activities with intramural support from Dr. Ward.
B. Collaboration with K. Johnson in the development of morphometric models to evaluate pathologic tissue and cellular changes.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

None.

MEDICAL SCHOOL/HOSPITAL:

None.

REGIONAL AND NATIONAL:

Member, Scientific Advisory Committee, Center for Light Microscopy, Carnegie Mellon University, Pittsburgh, PA.
Member, Scientific Advisory Board, Cellomics Inc., Pittsburgh, PA.
Member, Scientific Advisory Board, QRx Pharma, Brisbane, Australia
V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

Editorial Board Member, Drug Metabolism Reviews.

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


2. Bulera, S.J., Festerling, T.A., de la Iglesia, F.A. Gabapentin Activates MAP kinase In vivo and In vitro in pancreatic acinar cells from Wistar rats: a postulated mechanism for pancreatic acinar cell tumor formation (Submitted, 2002).


BOOKS/CHAPTERS IN BOOKS:


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

None.
I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. Pre-doctoral Students Supervised - Jing Mei Lin, Dept. of Pathology; Marc Prindle, CMB
B. Post-doctoral Trainees Supervised - Yi Cai, M.D., Ph.D.; Sanj Patel, M.D., Doyeob Kim, Ph.D.
C. Ph. D. Thesis Committee Member - Igor Nasonkin, Dept. of Genetics; Kris Coulter, Dept. of Genetics; Hoonkyo Soo, Dept. of Genetics; Yue Ge, Dept. of Genetics; Bryan MacDonald, Dept of Genetics; Brian Gummow, CMB; Collen Doyle, Dept. of Genetics, Ira Weiner, CMB; Rob Morrow, CMB.
D. Course Lectures - Path 581, 7.5 h; Path 582 course director; CDB 530, 3 h; CDB 680, 12h

MEDICAL SCHOOL/HOSPITALS:

A. First year Medical Students – Embryology, 2 h
B. Second Year Medical Students - Renal Section, 1 h

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, “Cell Migration, Chemoattraction and the RET/GDNF Pathway”, NIH/NIDDK 1 R01 DK54723-04 (30% effort), 7/1/02 - 12/31/03, Annual Direct Costs $158,840.
B. Principal Investigator, “PAX2 Interacting Proteins in Development and Disease”, NIH/ NIDDK 1 R01 DK54740-05 (30% effort), 7/1/02 – 6/30/03, Annual Direct Costs $221,000.
D. Principal Investigator, Grant-in-Aid, Polycystic Kidney Disease Research Foundation, 2/1/03-6/30/03, $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.
E. The role of novel TGF-beta inhibitors in renal development and disease.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Dept. of Pathology - Preliminary Exam Committee, Curriculum Committee, Admissions Committee
B. Center for Organogenesis - Interim Co-Director, Steering Committee, Training Grant Review Committee, Advisory Committee, Seminar Committee (Chair)
C. Program in Biomedical Sciences (PIBS) - Admissions Committee

REGIONAL AND NATIONAL:

NIH Study Section, General Medicine B, Permanent Member
NCI Program Project, Reviewer, Columbia Univ. Site Visit
American Journal of Physiology, Editorial Reviews Board
Developmental Dynamics, Editorial Board
Human Frontiers in Sciences Program, reviewer
Irish National Research Council, reviewer
Australian Medical Research council, reviewer
Welcome Trust, reviewer


V. OTHER RELEVANT ACTIVITIES:

Membership in the American Society of Nephrology
Membership in Society for Developmental Biology
Membership in University of Michigan Comprehensive Cancer Center
Membership in the Center for Organogenesis, University of Michigan
INVITED LECTURES/SEMINARS:

1. European Nephrogenesis Workshop IX, Royal College of Physicians, Dublin, Ireland
2. Developmental Gene Regulation, Max Planck Institute, Goettingen, Germany
3. Dept. of Anatomy, Indiana University School of Medicine, Indianapolis, IN
4. Dept. of Medicine, Vanderbilt University, Nashville, TN.
5. Dept. of Pathology, Boston University School of Medicine
6. NIDDK Workshop on Renal Development
7. St. Jude’s Children’s Research Hospital, Memphis, TN

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN REFEREED JOURNALS:

BOOK CHAPTERS:


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

None

II. TEACHING ACTIVITIES:

A. Research Mentor:
   2. Ezra Burstein, M.D., Lecturer, Department of Internal Medicine 2001 - present.

B. Thesis committee/examiner:
   1. Molly Thomas, Pathology Graduate Program
   2. Katie Johnson, Immunology Graduate Program
   3. Lynn Kamen, Immunology Program
   4. Brian Rudd, Pathology

C. Teaching:
   1. Pathology 582
   2. Immunology 850 (course director)

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Role of X-linked IAP (XIAP) in TGF-\(\alpha\) signal transduction pathways, in collaboration with Dr. Anita Roberts, National Cancer Institute.

B. Analysis of the protective effects of XIAP in caspase-dependent and -independent cell death, in collaboration with Dr. Gerry Cohen, University of Leicester, England and Dr. Larry Boise, University of Miami.

C. Characterization of VIAF, a novel IAP-associated factor, in collaboration with Dr. Pam Schwartzberg, Nation Human Genome Research Institute.

D. Interaction of XIAP with Murr1, a factor whose gene is mutated in an inherited copper deficiency, in collaboration with Dr. Gary Nabel, National Institute of Allergy and Infectious Diseases, Dr. Cisca Wijmenga, University Medical Center, Utrecht, and Dr. George Brewer, University of Michigan.
SPONSORED SUPPORT:

2002 - present Startup funds from University of Michigan. Funding provided by Department of Pathology, UM Cancer Center and Biomedical Scholars Program (PI).


2004 – 2007 “Prostate cancer aggressiveness genes in hereditary prostate cancer,” (15%). USARMC Prostate Cancer IDEA Award (Co-PI together with K. Cooney)

FELLOWSHIP AWARDS SERVING AS MENTOR:


PENDING:

2004 - 2009 "Control of Apoptosis and Signaling by XIAP," R01 GM067827-01 (NIGMS). (Principal Investigator) (30%).


IV. ADMINISTRATIVE ACTIVITIES:

1. PIBS International Admissions Committee.
2. Immunology graduate program prelim committee
4. Scientific Advisory Board, Aegera Therapeutics, 2002 - Present.
9. Reviewer, DOD prostate cancer study section, 2003

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL AND REVIEWING ACTIVITIES:


B. Reviewer (selected journals shown):
Cancer Cell,
Cell Death and Differentiation  
Current Biology  
EMBO Journal  
Genes and Development  
Immunity  
Journal of Biological Chemistry  
Molecular Cell  
Nature Cell Biology  
Nature Reviews Cancer  
Oncogene  
Proceedings of the National Academy of Sciences USA  
Science  

HONORS AND AWARDS:  
Biomedical Scholar Award, University of Michigan, 2002.  

INVITED LECTURES/SEMINARS:  
1. Burnham Institute, La Jolla, CA (2003)  

VI. PUBLICATIONS:  
BARRY G. ENGLAND
ASSOCIATE PROFESSOR OF REPRODUCTIVE BIOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

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

II. TEACHING ACTIVITIES:
A. Instructor for Pathology House Offices Laboratory Rotation.
B. Participant, Clinical Pathology Grand Rounds.
C. Graduate Student Advisor for Ph.D. Student Pablo Nepomnaschy

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

OTHER SUPPORT:

ACTIVE:

U01 AG12495-10S1 (McConnell) 2/01/03 - 11/30/03 10%
NIH $583,270
Study of Women's Health Across the Nation-Endocrine Lab
The major purpose of the Central Ligand Assay Satellite Services (CLASS) laboratory is to continue supporting the Study of Women's Health Across the Nation (SWAN) through state-of-the-science, automated assays for all major reproductive axis hormones, adrenal markers of aging, other endocrine markers, and new ovarian markers which have the potential to allow us to hormonally define the menopausal transition and the postmenopause with greater precision.

SP60 DK20572 (WHHerman) 12/01/02 - 11/30/07 5%
NIH $1,229,020 Total $6,071,430
Michigan Diabetes Research and Training Center – Core Facility Lab.

I serve as a Co-Director of the Core Facility Laboratory of the MDRTC. This laboratory is charged with providing a variety of laboratory procedures for the measurement of analytes of interest in the investigator of diabetes and related diseases. These procedures include standard chemistry analyses and immunoassy techniques.

PENDING:

U01 AG12495-11 (McConnell) 12/01/03 - 11/30/08 10%
NIH $1,062,366 (YR-11)
Study of Women's Health Across the Nation-Endocrine Lab
SCIENTIFIC COLLABORATIONS:

1. University of Michigan; Reproductive Science Program: Daniel S. McConnell, Ph.D.: The major purpose of the Central Ligand Assay Satellite Services (CLASS) laboratory at the University of Michigan is to support the Multicenter National Study of Women's Health Across the Nation (SWAN) through state-of-the-science, automated assays for all major reproductive axis hormones, selected markers of aging, other endocrine markers, and new ovarian markers which have the potential to define more accurately the menopause transition and the characterize the postmenopause with greater precision.

2. University of Mississippi: Hamed Benguzzi, Ph.D. Long-term drug delivery is of considerable research and clinical interest, particularly if the rate and length of delivery time can be accurately controlled. This collaborative effort has focused on the use of immunologically inert biomaterial similar to bone in composition (ceramics) that has proven capable of delivering a wide variety of steroids, protein hormones, therapeutic drugs, vitamins, autocrine and paracrine factors, etc. collectively referred to as idrugs. These delivery devices have proven capable of constant release of biological compounds into the circulation for as many as 12 months. These studies are continuing permitting increasingly tighter control in the rate and length of idrug delivery.

3. University of Missouri: Mark Flinn, Ph.D.: We have monitored several biochemical markers of growth, puberty, stress and immunological function in the salivary excretions of children in a small isolated Caribbean village for approximately 8 years. We have examined several markers in saliva samples obtained from children between the ages of 2 and 21. Samples and a detailed history of relevant physical and emotional events are collected daily over a 2 - 3 month period each year throughout the multiyear study. Salivary levels of adrenal and gonadal steroid hormones provide good estimates of the concentration of biologically active hormone in the peripheral circulation on a twice-daily basis throughout the collection interval. This study has lead to a variety of new insights into the interaction between emotional and environmental stress and normal growth and development in human subjects.

4. University of Michigan: Paul Gauger, M.D.: The intra-operative determination of circulating levels of parathormone (PTH) allows for the on-site monitoring of PTH levels as an indicator of removal of hypersecreting parathyroid glands. We have developed a cart-mounted analytical system that permits rapid determination (15 min.) of PTH in the O.R. This procedure ensures that all hypersecreting glands are removed before the patient is released from the O.R., thereby greatly reducing the number of repeat surgeries.

IV. SERVICE ACTIVITIES:

DEPARTMENTAL:

A. Director, Central Ligand Assay Laboratory.

MEDICAL SCHOOL/HOSPITAL:

A. Co-Director, Standards and Reagents Core Facility, Reproductive Sciences Program.

B. Co-Director, Michigan Diabetes Research and Teaching Center Core Facility Laboratory.

C. Associate Director, CLASS laboratory in the SWAN study, Reproductive Science Program.
D. Associate Research Investigator of Reproductive Biology, Reproductive Science Program.

V. PUBLICATIONS:

ARTICLES PUBLISHED AND IN PRESS IN SCIENTIFIC LITERATURE:


ABSTRACTS AND PAPERS AT SCIENTIFIC MEETINGS:


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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003  

I. CLINICAL ACTIVITIES:  
A. Autopsy Service.  

II. TEACHING ACTIVITIES:  
A. Director; Resident Training Program.  
B. Course Director; Pathology Teaching Laboratories.  
C. Laboratory Instructor; M1 Histopathology Sequence.  
D. Laboratory Instructor; M2 Pathology Labs.  
E. Lecturer and small group leader; M1 Host Defense Course.  
F. Medical Student Advisor (3rd and 4th year).  

III. RESEARCH ACTIVITIES:  
SPONSORED SUPPORT:  

PROJECTS UNDER STUDY:  
A. Outcomes measures of undergraduate medical education.  
B. Curriculum development in medical student education  

IV. ADMINISTRATIVE ACTIVITIES:  
DEPARTMENTAL:  
A. Director, Anatomic Pathology.  
B. Coordinator - Educational Programs.  
C. Director, Resident Training Program.  
C. Chairman’s Advisory Committee.  
D. Department ACAPT Committee.  
E. Research Space Advisory Committee.  
F. Faculty Sexual Harassment Contact Person.
MEDICAL SCHOOL/HOSPITAL:

A. Associate Dean for Medical Education.
B. CD/ACD Education Committee (Chair).
C. Curriculum Policy Committee (Chair).
D. Medical Student Basic Science Academic Review Board (Chair).
E. Medical Student Clinical Academic Review Board (Chair).
F. Medical School Academic Hearing Committee (Chair).
G. Medical School Curriculum Review Group (Chair)
H. LCME Review Committee (Chair).

REGIONAL AND NATIONAL:

A. USMLE, Step 1 Test Committee, Chair.
B. Pathology Residency Review Committee. ACGME.

V. AWARDS:

VI. OTHER RELEVANT ACTIVITIES:

VII. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:

WILLIAM G. FINN, M.D.
CLINICAL ASSOCIATE PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002- 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Associate Director, Division of Clinical Pathology
B. Director, Hematopathology Section.
C. Diagnostic Hematopathology (Bone marrow biopsies, lymph nodes, blood smears, body fluids).
D. Clinical Flow Cytometry Laboratory.
E. Clinical Molecular Diagnostics Laboratory.
F. 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. Hematopathology teaching:
   1. Leukemia conference/biweekly.
   2. Lymphoma conference/weekly.
   3. Hematology conference/biweekly.
   5. Clinical Pathology Case Conference/weekly.
C. Medical Students:
   1. M-2 Hematology Sequence: Section leader for laboratory sessions (12 hours).
   2. M-2 Hematology sequence: “Pathology and Classification of Lymphoma” (Lecture) – 1 hour.
   3. M-1 Histopathology Course (24 hours).
D. Dental and Graduate Students: Pathology 580/630: “Pathology of White Blood Cells” (Lecture) – 1 hour.
III. **RESEARCH ACTIVITIES:**

**PROJECTS UNDER STUDY:**

A. Optimization of Clinical Laboratory Hematology Practice.
B. Gene expression profiling of chronic lymphoproliferative disorders.
C. Utilization management and optimization for clinical laboratories.

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Associate Director of Clinical Pathology
B. Director, Hematopathology Section.
C. Chair, Long-Range Planning Committee for Clinical Laboratories.
D. Departmental Advisory Committee on appointment, promotion, and tenure
E. (ACAPT) (pathology) (Henry Appleman, M.D., Chair.)
F. Departmental Residency Selection Committee (Joseph Fantone, M.D., Chair).
G. Pathology Quality Assurance Committee (Jeffrey Warren, M.D., Chair).

**REGIONAL/NATIONAL:**

A. American Society of Clinical Pathologists, Check Path Planning Committee (Hematopathology).
B. College of American Pathologists, Hematology and Clinical Microscopy Resource Committee.
C. Society for Hematopathology, ASCP Companion Program Committee.

V. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES/SEMINARS:**


VI. **PUBLICATIONS:**

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


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS AND CHAPTERS IN BOOKS:


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


DOUGLAS R. FULLEN, M.D.  
CLINICAL ASSISTANT PROFESSOR  
DEPARTMENT OF PATHOLOGY  

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2001 - 30 JUNE 2002  

I. CLINICAL ACTIVITIES:  
A. Dermatopathology Service – 12 months  
B. Dermatopathology Consultation Service – 12 months  
C. Immunofluorescence evaluation of skin biopsies

II. TEACHING ACTIVITIES:  
A. Medical Students:  
   1. Dermatopathology laboratory instructor, MS II Dermatology Sequence  
   2. Dermatopathology, Pathology Clerkship, MS IV  
   3. Dermatopathology, Dermatology Clerkship, MS IV  
B. House Officers:  
   1. Dermatopathology sign-out (dermatology and pathology sign-out)  
   2. Review of dermatopathology consultation material  
   3. Dermatopathology teaching conference (pathology residents – weekly)  
   4. Dermatopathology teaching conference (dermatology residents – weekly)  
   5. Anatomic Pathology Grand Rounds (two lectures)  
   6. Review of immunofluorescence on skin biopsies (interesting cases)  
C. Diagnostic Conference, Department of Dermatology (weekly)

III. RESEARCH ACTIVITIES:  

PROJECTS UNDER STUDY:  
A. Immunohistochemical evaluation of sentinel lymph nodes for micrometastases: patterns of involvement and sensitivity of S100, HMB45 and melan-A immunostains (D. Karimipour, M.D., L. Lowe, M.D., L. Su, M.D., T. Johnson, M.D.)  
B. CD5 expression by immunohistochemistry in cutaneous tumors of eccrine and apocrine differentiation (P. Bogner, M.D., L. Su, M.D.)  
C. BRAF mutations and microsatellite instability in Spitz nevi, atypical Spitz tumors and Spitz-like melanoma (S. Gruber, M.D., J. Poynter, T. Johnson, M.D., J. Elder, M.D.)  
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

Director of Histology Laboratory, Department of Pathology

REGIONAL AND NATIONAL:

1. Ad hoc manuscript reviewer, Journal of Cutaneous Pathology
2. Ad hoc manuscript reviewer, Journal of the American Academy of Dermatology

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

None

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

7. Su LD, Fullen DR, Lowe L, Wang TS, Schwartz JL, Cimmino VM, Sondak VK, Johnson TM. Desmoplastic and neurotropic melanoma: analysis of 33 cases with lymphatic mapping and sentinel lymph node biopsy. (Submitted to Cancer).

BOOKS/CHAPTERS IN BOOKS:

None
ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCHELANGELO PUBLICATIONS IN UNREFEREED JOURNALS:


2. Fullen DR, Lowe L, Su LD. “Antibody to S100A6 is a sensitive immunohistochemical marker for neurothekeoma.” Poster presentation at the American Society of Dermatopathology 39th annual meeting, October 10-13, 2002.

3. Bogner PN, Su LD, Fullen DR. “Detection of CD5 by immunohistochemistry in cutaneous tumors of apocrine and eccrine origin.” Accepted for poster presentation at the American Society of Dermatopathology 40th annual meeting, October 9-12, 2003.

4. Sturtz D, Smith DJ, Calderon MS, Fullen DR. “Giant folliculosebaceous cystic hamartoma of the upper extremity.” Accepted for poster presentation at the American Society of Dermatopathology 40th annual meeting, October 9-12, 2003.
I. CLINICAL ACTIVITIES:
A. Director, Chemistry Laboratory
B. Sign-out and interpretation of lipoprotein 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 approval and establishment of alternate site testing programs.
F. Technical Director for laboratories at U-M Health Centers off-site clinics.
G. Sign out of Triple Marker Screen results from maternal serum testing

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITAL:
A. Pathology House Officers:
   1. Clinical Pathology Grand Rounds (2 lectures)
   2. Coordinator, Pathology House Officer rotation through Chemistry Lab.
   3. Review sign-out and interpretation of electrophoresis results.
   4. Review of selected topics in Clinical Chemistry with Block B residents.
B. Medical Technologists – 1 hour continuing education lecture

III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY
A. Evaluation of HPLC-MS methods for immunosuppressant drugs Tacrolimus and Sirolimus.
B. PSA and Percent free PSA levels in an African-American population (Flint Mens Health Study).
C. Evaluation of an enzymatic method for homocysteine determination.
D. Evaluation of EIA assays for extractable nuclear antigens.
E. Evaluation of Inhibin A assay in prenatal screening for Down Syndrome.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Incentive Committee  
B. Quality Assurance Committee  
C. Laboratory Reorganization / Automation Work Group  
D. Director, Chemistry Laboratory  
E. Director, Point of Care Testing

**MEDICAL SCHOOL / HOSPITAL:**

A. Clinical Information System Vendor Evaluation Decision Support Workgroup

**REGIONAL AND NATIONAL:**

A. Chair-Elect, Michigan Section AACC.  
B. Treasurer, Michigan Section AACC.  
C. Lipids and Lipoproteins Division Member  
C. Ad hoc reviewer, Clinical Chemistry.

V. **OTHER RELEVANT ACTIVITIES:**

A. Consultant to Consultants in Laboratory Medicine, Toledo, OH  
B. Member Clinical Laboratory Advisory Council for Ortho-Clinical Diagnostics

**INVITED LECTURES / SEMINARS:**

A. “Clinical Utility of Percent Free PSA in Screening for Prostate Cancer.” Toledo Hospital, Toledo, OH, Oct 21, 2002.  

VI. **PUBLICATIONS:**

**ARTICLES PUBLISHED IN REFEREED JOURNALS:**

ARTICLES SUBMITTED FOR PUBLICATION IN REFEREED JOURNALS


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

I. **CLINICAL ACTIVITIES:**

A. General Surgical Pathology - four months.
B. Endocrine Surgical Pathology, Departmental and Outside Consultation - 12 months.
C. Immunoperoxidase Service - Outside Consultation - 12 months.
D. M-Labs Surgical Pathology Consultation - 12 months.

II. **TEACHING ACTIVITIES:**

**MEDICAL SCHOOL/HOSPITALS:**

A. Medical Students:
   1. Sequence Co-Coordinator – Component II Endocrine Sequence.
   2. Component II Endocrine Sequence - 2 lectures on Endocrine Pathology.
   3. Endocrine Pathology Laboratories - preparation of course materials.
   4. Component IV Pathology Elective mentor – one month.
B. House Officers:
C. General Surgical Pathology - 4 months.
D. Endocrine Surgical Pathology - 12 months as needed.
   D. Consultation Conferences - four.
E. Molecular Pathology lectures.
F. Endocrine Pathology lectures.
C. Dental and Graduate Students:
   1. Endocrine Pathology lecture.
D. Interdepartmental:
   1. Endocrine Conference, Department of Surgery - monthly.

**EXTERNAL:**

A. Michigan State Medical School.
   1. Endocrine Pathology - 2 lectures.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-Principal Investigator, "University of Michigan Endocrine Bank", Millie Schembecher Adrenal Cancer Research Fund, 1/1/01 to 12/31/02 ($100,000 direct costs), with Dr. Paul Gauger, Department of Surgery, 5% effort

B. Co-Investigator, "Great-Lakes-New England Clinical and Epidemiology Center", NCI CA-99-007, 4/1/00 to 03/31/05 ($4,987,159 total direct costs), with Dr. Dean Brenner, Department of Internal Medicine, 5% effort

C. Co-Principal Investigator, "Towards a Molecular Classification of Tumors", NCI U19-CA84953, 9/99 to 3/04 ($951,282/yr direct costs for 4.5 yrs), with S. Hanash, Department of Pediatrics, Pathology Core Director, 20% effort

D. Co-Principal Investigator, "Proteomics Biomarker Development Laboratory", NCI U01-CA84982, 9/99 to 8/04 ($304,900/yr direct costs for five years), with S. Hanash, Department of Pediatrics, 10% effort

E. Director, "Tissue Procurement Contract", Genentech, Inc., 5/99 to 5/2003 ($92,346 direct costs/year), 10% effort

F. Core Director, The University of Michigan Comprehensive Cancer Center, Tissue Procurement Service, 7-98 to present, 10% effort

G. Core Director, The University of Michigan Comprehensive Cancer Center, Laser Capture Microdissection Core, 1-99 to present

H. Core Director, The University of Michigan Comprehensive Cancer Center, Histology/Immunoperoxidase Service, 9-02 to present, 10% effort

PROJECTS UNDER STUDY:

A. Principal Investigator, "Gene Expression Profiles of Adrenal Cortical Neoplasms."

B. Principal Investigator, "Molecular Studies of Soft Tissue Sarcomas."

C. Principal Investigator, "Gene Expression Profiles of Thyroid Neoplasms."

D. Co-Investigator with Dr. Jim Baker, "Molecular Studies of Thyroiditis."

E. Co-Investigator, "Molecular Classification of Ovarian, Colonic and Thoracic Neoplasms."

F. Principal Investigator, "Gene Expression Profiles of Adrenomedullary Neoplasms."

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL and INSTITUTIONAL:

A. House Officer Candidate Interviews.

B. Faculty Candidate Interviews.

C. Sequence Co-Coordinator – Component II Endocrine Sequence

D. Director, Tissue Procurement Service

E. Director, Frozen Tumor Bank

F. Director, Laser Capture Microdissection Core
G. Medical Institutional Review Board (IRB-Med), ad hoc member.
H. MSTP Career Advisory Panel
I. Director, Histology/Immunoperoxidase Service

NATIONAL:
A. Editorial Board, Endocrine Pathology

V. OTHER RELEVANT ACTIVITIES:
A. Consultant, Eli Lilly & Co.
B. Pathology Consultant, Astearand Corporation.

INVITED LECTURES/SEMINAR:
A. Invited Speaker, “DNA Microarray Analysis of Endocrine Tumors: What Can We Learn”, Cleveland Clinic Foundation, Cleveland, Ohio
B. Pathology Ground Rounds, “DNA Microarray Analysis of Endocrine Tumors: What Can We Learn”, Yale University School of Medicine, New Haven, Connecticut
C. Invited Speaker, “Gene Expression Studies of Lung Adenocarcinoma”, Eli Lilly and Co., Indianapolis, Indiana
D. Invited Speaker, American Society of Investigative Pathology Companion Meeting at the United States and Canadian Academy of Pathology, “NCI Director’s Challenge and Cancer Genome Anatomy Project: Interface with the Practicing Pathologist”, Washington, D.C.

VI. PUBLICATIONS:

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


14. Richards ML, Thompson NW, Giordano TJ. Regression of type II carcinoids in MEN1 patients with ZES after surgical excision of all gastrinomas.


**ARTICLES SUBMITTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:**


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


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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
   A. Supervision of Autopsies (~six weeks).
   B. Cardiovascular Pathology Consultation (Autopsy Service and Surgical Pathology).
   C. Cardiovascular Surgical Pathology (Heart biopsies +).

II. TEACHING ACTIVITIES:
   A. Laboratory Instructor for Pathology Laboratories for M2 curriculum
   B. Cardiovascular Pathology Lectures for M2 Cardiovascular Sequence
   C. Cardiovascular Pathology Lectures for Dental and Graduate Student Pathology Course.
   D. Conference organizer for monthly Pediatric Cardiology/Pathology Conference

III. RESEARCH ACTIVITIES:
   A. Effects of ultrasound on heart muscle (Cardiology project)
   B. Morphology Core Director: NIH PO1 HL57346 “Molecular Genetics Coagulation Disorders” 7/1/03 – 6-30-08. ; PI: D. Ginsburg
   C. Member, Cardiovascular Center

SPONSORED SUPPORT:
   A. Morphology Core Director: NIH PO1 HL57346 “Molecular Genetics Coagulation Disorders” 7/1/03 – 6-30-08. ; PI: D. Ginsburg

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

MEDICAL SCHOOL/HOSPITAL:
   A. Assistant Dean for Diversity and Career Development (50% effort). This position coordinates the Medical School’s diversity efforts, with programs targeting pre-medical students, medical students, house officers, faculty, and minority health/health disparities research.

V. PUBLICATIONS:

BOOKS AND CHAPTERS IN BOOKS:

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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. General surgical pathology – Twenty-three weeks.
B. Gastrointestinal and hepatic pathology consultation services - four months.
C. Liver transplant pathology - four months.

II. TEACHING ACTIVITIES:

MEDICAL SCHOOL/HOSPITALS:

A. Medical Students:
   1. GI Pathology Sequence, assisted Dr. Appelman (ten contact hours).
   2. GI Pathology Sequence, 2 hours full class lecture
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.
   2. Two didactic lectures on gastrointestinal pathology - April, 2002.
   3. Gastrointestinal and hepatic pathology tutoring - four months.
   4. Four consultation conferences.
D. Interdepartmental:
   1. Liver biopsy conference - one hour per month.
   2. Multidisciplinary GI tumor board - 1hour every other week.
   3. GI pathology teaching sessions with GI fellows - one hour/month.
   4. GI and Liver path teaching to GI and transplant fellows – 2 hours/year

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-Investigator R01CA81488-01 ($4,547,772) “Molecular Epidemiology of Colorectal Cancer”, 20% Salary Support, years 1-4, Stephen Gruber, M.D., Ph.D. Principal Investigator.
B. Co-Investigator N01-DK-9-2323 ($1,433,559) “Hepatitis C Clinical Trial”, 7% Salary Support, Anna Lok, M.D. Principal Investigator.
C. Co-investigator with Hari Conjeevaram M.D., “Study of viral resistance to antiviral therapy of chronic hepatitis c (virahep-c) - clinical centers” (7.5% salary support year 2, 3% years 3 and 4), University of Michigan Grant NIH-NIDDK-01-007
PROJECTS UNDER STUDY:

A. Study of Small cell carcinomas of the colon with GI Study Group
B. Study of fatty liver and steatohepatitis with Hari Conjeevaram in Division of Gastroenterology.
C. NIH study of HCV with Anna Lok in Division of Gastroenterology.
D. NIH study of the Molecular Epidemiology of Colon Cancer in Israel.
E. Study of molecular classification of tumors with Stephen Gruber and Thomas Giordano
F. Study of molecular genetic changes in pancreas cancer with Diane Simone and Craig Logsdon
G. Study of Yersinia and Crohn’s disease with Laura Lamps at the University of Arkansas.
H. Study of UC dysplasia grading with GI Study Group.
I. Study of Neuroendocrine Tumors of the Gut with Murray Resnick, M.D. Haifa, Israel
J. Study of Focal Active Colitis in children with Wei Xin, M.D.
K. Study of interval appendectomy specimens with Guangming Guo, M.D.
L. Study of Focally enhanced gastritis with Wei Xin, M.D.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Surgical Pathology Fellowship Program.
B. Quality Assurance Officer for Surgical Pathology
C. Member, Residency Selection Committee
D. Member, Departmental Incentive Committee
E. Member, University Hospital Tissue Committee

REGIONAL AND NATIONAL:

A. Reviewer, Cancer.
B. Reviewer, Archives of Pathology and Laboratory Medicine.
C. Reviewer, Gastroenterology.
D. Reviewer, Human Pathology.
E. Reviewer and Editorial Board member, American Journal of Surgical Pathology.
F. Reviewer, American Journal of Pathology.
G. Reviewer, Modern Pathology
H. Reviewer, Cancer Research
I. Education Committee member, USCAP.
J. Past President, Gastrointestinal Pathology Society.
K. Editorial Board member, The Online Journal of Digestive Diseases
L. American Board of Pathology, Test Question Committee
M. Reviewer, American Journal of Gastroenterology
N. Reviewer, British Journal of Cancer
O. Reviewer, Journal of Clinical Oncology
P. Vogel Award Committee, USCAP
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

2. Faculty Member, ASCP Workshop – Surgical Pathology of the Gastrointestinal Tract, Chicago, Illinois, May 2003.
5. Co-chair, GI Pathology slide seminar, International Academy of Pathology, Amsterdam, Netherlands, Oct. 2002

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

Department of Pathology Annual Report

13. Lawrence TS, McGinn CJ. Surgical resection following radiation therapy with concurrent gemcitabine in patients with previously unresectable adenocarcinoma of the pancreas. Accepted to Annals of Surgery.

ARTICLES SUBMITTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


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


CORY M. HOGABOAM, Ph.D.
ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. Graduate Students:
   1. Ph.D. Dissertation Committees, University of Michigan
      b. Allison Miller
      c. Betsy Pierce (Graduate Immunology Program)
      d. Tobias Rodriguez (Graduate Immunology Program)
      e. Matt Schaller (Graduate Immunology Program)
   2. Undergraduate Students, University of Michigan
      a. Esther Choi (spring/summer 2003)
   3. PIBS Graduate Student Laboratory Rotations, University of Michigan
      a. Megan Henderson
      b. Brian Moore
      b. Betsy Pierce
   4. Preliminary Examiner for Ph.D. Program, Graduate Immunology Program
      a. Malinda Schaefer
      b. Kelly Seidl
      c. Mike Khodadoust
   5. Formal Teaching, Dept. of Pathology
      a. Pathology 581: Inflammation and Sepsis
      b. Pathology 582: Systemic Inflammatory Responses

B. Postdoctoral Fellows:
   1. Jane Schuh, Ph.D.
   2. Claudia Benjamim, Ph.D.
   3. Traci Ness, Ph.D.
   4. Simona Neff, M.D.
   5. Nora Lin, M.D.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-investigator, Monokine gene expression/regulation in lung injury. R01 HL31237 (10%), $200,000 per annum, 4/01/00 - 3/31/05.
B. Principal Investigator, Specialized Centers of Research - Pathobiology of Fibrotic Lung Disease. Project 1: Chemokines and chemokine receptors in IPF. P50 HL56402-08 (20%), $186,210 per annum for Project 1, 12/01/01-11/30/06.

C. Co-investigator, Monocyte/Macrophage Signals in Lung Granuloma. R01 HL35276 (15%), $162,578 per annum, 07/01/01 - 06/30/06.

D. Co-investigator, SCF in Liver Repair after Hepatectomy or Toxic Injury. R01 DK58106 (10%), $225,000 per annum, 07/01/02-11/30/07.

E. Co-investigator, Role of chemokines in acute experimental acute hepatitis Canadian Institutes of Health Proof of Principle Initiative Grant on Hepatitis C. $100,000 (CAN) per annum, 07/01/02-06/30/05.

F. Co-investigator, The role of CC chemokines in eosinophil airway inflammation. R01 AI3602-06 (10%). $200,000 per annum, 07/01/02-06/30/07.

G. Principal Investigator, Therapeutic Targeting of RANTES/CCL5 during Chronic Fungal Asthma. R01 HL69865 (25%), $175,000 per annum, 08/15/03 - 07/31/07.

H. Principal Investigator, Pharmacological validation of a chronic fungal asthma model characterized by persistent airway hyperreactivity, inflammation, and remodeling. Almirall Prodesfarma, S.A., $59,000 per annum. 12/01/03-11/31/04

J. Co-investigator, Specialized Center for Clinically Orientated Research (SCCOR)

K. Project 1: Dynamic effects of chemokines on systemic inflammation. P50 HL-074024-01 (5%) $200,000 per annum. 10/01/03 - 09/30/08.

L. Principal Investigator, IL-13 fusion cytotoxin as a targeted therapeutic for IIP.

M. R01 HL073728-01 (25%), $225,000 per annum, 10/01/03 - 09/30/07.

PENDING:

A. Principal Investigator, *Role of CCR7, CCL19 and CCL21 in idiopathic interstitial pneumonia*. R01 HL076615-01 (20%), $225,000 per annum, 04/01/04-03/31/09

**PROJECTS UNDER STUDY:**

Role of chemokines in airway remodeling due to allergic airway disease and asthma.

Role of chemokine receptors in airway remodeling due to allergic airway and asthma.

Role of chemokines and chemokine receptors in human interstitial fibrotic disease.

Novel approaches to targeting IL-4 and IL-13 in chronic allergic airway disease.

Role of IL-4 and IL-13 in chronic interstitial fibrotic disease.

Novel approaches to targeting IL-4 and IL-13 in human interstitial fibrotic disease.

Regulation of fibroblast activities during idiopathic interstitial pneumonias.

Role of chemokines and SCF in liver regeneration.

Role of CC chemokines in acute and chronic pulmonary inflammation.

IV. **ADMINISTRATIVE ACTIVITIES:**

**REGIONAL AND NATIONAL:**

A. Membership in Professional Associations

1. American Association of Immunologists (AAI)

2. American Society for Investigative Pathology (ASIP)

3. American Thoracic Society (ATS)
B. Journal peer-review
   1. Journal of Immunology (Associate Editor - July 1, 2002 – July 1, 2004)
   2. American Journal of Physiology
   3. American Journal of Pathology
   4. Journal of Clinical Investigation
   5. Journal of Leukocyte Biology
   6. Journal of Clinical Immunology
   7. American Journal of Respiratory Cell and Molecular Biology
   8. Infection and Immunity
   9. Blood
   10. Journal of Experimental Medicine
   11. Nature
   12. Trends in Microbiology
   13. Clinical Cancer Research
   14. Arthritis and Rheumatism

C. Grant peer-review
   2. Department of Veterans Affairs, Merit Review.
   4. Canadian Institutes for Health Research.
   5. The Wellcome Trust.

V. OTHER RELEVANT ACTIVITIES:
   Center for Scientific Review, ZRG1 IMB (01)
   Fellowship (F32) and R15 Review.
   NIAID, Division of Extramural Affairs, Scientific Review Program
   Special Emphasis Review Panel, RFA AI-03-010 (Innovative Grants on Immune
   tolerance)

INVITED LECTURES/SEMINARS:

1. ‘IL-13 receptor as a unique target in chronic pulmonary disease.’ 35th Brazilian Congress of
2. ‘Targeting IL-13 responsive cells in pulmonary disease.’ The 6th World Congress on
3. ‘Balancing innate and acquired immune events: lessons learned from Aspergillus fumigatus.’
4. ‘Chemokines at the interface between innate and acquired immunity.’ Celgene, San Diego, CA.
   April 15, 2003.
5. ‘Chemokines at the forefront of pulmonary anti-fungal and allergic responses to Aspergillus

PATENTS
Method of treating allergen-induced airway disease.
University of Michigan and Micromet Inc.
Filed August 15, 2002.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS.


ARTICLES SUBMITTED FOR PUBLICATION:


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

CHAPTERS:


6. Kunkel S.L., Lukacs N.W., Chensue S.W., Hogaboam C.M.


BOOK REVIEWS:


ABSTRACTS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

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.
   F. Lecturer Genitourinary Pathology – Second Year Pathology Course, Michigan State University Medical School

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Co-Principal Investigator, "Pathophysiology of Aspiration Pneumonitis", with Paul Knight, Anesthesia , R01, National Institutes of Health - Budget - $720,866; $187,518 annual, 08/96 - 07/04.
   C. Co-Investigator, “Nanomolecule-Based Agents for Pathogen Countermeasure”, with James Baker, Allergy, 03/01/97 – 02/28/01, Dept of Defense.
   D. Co-Investigator, “A New Approach to Treat Lupus Nephritis”, with Gary Glick, Chemistry. National Institutes of Health, 02/22/00 – 02/21/04.
   F. Co-Principal Investigator, “Mechanisms of MMP-Involvement in Acute Inflammatory Lung Injury” with Jim Varani, R01, National Institutes of Health. Budget- $775,000, $225,000 annual, 6/01/03-6/01/06.
   G. Co-Investigator with James Baker, “Nanoemulsions for Decontamination”. DOD. Budget $3,100,000/year. 10/01/03.
PENDING SUPPORT:

A. Co-Principal Investigator, “MMPs in Prostate Cancer” NIH
B. Co-Principal Investigator, “Mechanisms of MMP Involvement in Acute Lung Injury” 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.
H. Role of heme oxygenase in renal injury.

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:
   3. American Journal of Respiratory Cell and Molecular Biology
C. Consultant/Grant reviewer for the Veteran's Administration.
D. NIH NHLBI Study Section.

V. INVITED LECTURES AND SEMINARS

1. Invited Speaker-Department of Pathology Seminal Series
2. Invited Speaker Pfizer Research and Development
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:

BOOKS AND CHAPTERS IN BOOKS:


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


I. **CLINICAL ACTIVITIES:**

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

II. **TEACHING ACTIVITIES:**

**Resident Training/Contact Hours**

A. Clinical Pathology Grand Rounds:
   1. Program Director (CME Accredited Program 10016)
   2. Presented lecture on immune hemolysis
   3. Present lecture on testing for weak D expression.

B. Anatomical pathology Conferences:
   1. Program Coordinator (CME Accredited Program 10004)

C. Core-Lecture Series in Blood Banking for 1st-year Pathology House Officers:
   1. Program Coordinator
   2. Presented lectures on:
      a) Pretransfusion testing 4 hours
      b) Prenatal/perinatal testing 4 hours
      c) Immune hemolysis 4 hours
      d) Antibody identification 4 hours

D. Clinical Pathology Case Study Conference (CME Accredited Program 10021)
   1. Program Coordinator
   2. Participant 40 hours

E. Management Lecture Series
   1. Developed/coordinated series of 8 lectures on laboratory management issues relative to Pathology Residents

F. Ethics
   1. Departmental liaison, GME ethics program
   2. Incorporated four 1-hour sessions on ethical issues into the Residency Training Program

G. Residency Training
   1. Provided instruction in immunohematology to six house-officers during their Blood Bank Rotation (over 150 contact hours)
   2. Provided instruction in immunohematology to seven hematology/oncology fellows (28 hours).
III. RESEARCH ACTIVITIES:

B. Cooling L, Gu Y, Judd WJ. A missense mutation in β3GalT5, the glycosyltransferase responsible for galactosylglobosie and Lewis c synthase, may be associated with the LKE-weak phenotype in African Americans. Transfusion 2002;42(S):9.
C. Judd WJ, Butch S. Repeat antibody identification studies, how much is enough? Transfusion 2002;42(S):20.
E. Afenyi-Annan AN, Judd WJ. Cefotetan induced immune-mediated hemolysis complicated by thrombocytopenia: alloimmune or thrombotic? Transfusion 2002;42(S):46.
G. Dake LR, Judd WJ. Weak D testing DAT-positive infants born to Rh-negative women in cases of fetal-maternal ABO incompatibility. Transfusion 2002;42(S):108.
H. Lectin studies, with Irwin Goldstein, PhD.
I. Studies on cefotetan-treated red cells with Robertson Davenport, MD.
J. Principal Investigator, field trial on automated blood typing system (Ortho Clinical Diagnostics).

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. Annual Meeting Program Committee.
   2. Specialist in Blood Banking Lecture Series Committee

B. American Association of Blood Banks:
   2. Editorial Board, Transfusion.
   3. Editorial Board, Immunohematology

C. Reviewer of articles submitted for publication in Transfusion, Immunohematology, Transfusion Medicine and Vox Sanguinis.

D. International Society of Blood Transfusion
   1. Member, WHO Committee on Blood Group Nomenclature

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES:

5. What is weak D and should we test for it? Hurley Hospital, Flint, MI, May, 2003
7. What is a clinically significant antibody? 51st Annual Meeting of the Japanese Society for Transfusion Medicine, Fukuoka, Japan, May 2003.

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


I. RESEARCH ACTIVITIES:

1. National Institute of Aging (R01-AG-15904), “Ethanol-mediated osteoporosis and interleukin-6”. (Keller, PI) 3/1/98-2/28/03 $748,000 direct cost; $260,200 indirect cost

2. National Center for Research Resources. (T32 RR-07008-21) “Biomedical Research Training for Veterinary Scientists.” (Keller, PI) 07/01/97-06/30/02 ($240,000 annual direct cost).

3. National Institute of Aging. (R01) “Aging, gene expression and oxidative stress” (Keller; PI) 12/01/99-11/30/04 ($135,000 annual direct)

4. Dept. of Defense PC991111 “Interleukin-6 and prostate cancer progression” (Keller; Role: PI) 10/01/99-09/28/02 ($69,000 annual direct)

5. National Center for Research Resources (R01) “Development of mature zebrafish as an animal model.” (Keller; Role: PI) ($225,000 annual direct FY1)

6. National Center for Research Resources. (T32) “Biomedical Research Training for Veterinary Scientists.” Competitive Renewal ($280,000 annual direct costs FY1).

7. CaPCURE Awared. “Targeting skeletal metastasis” $75,000

8. National Institute on Aging. (P30-AG-13283) “Nathan Shock Center, Biology of Aging.” (J. Faulkner, PI; Keller, Director Mutant and Transgenic Rodent Core) 07/01/00-06/30/05. ($84,889 Core Annual Directs).


10. Department of Defense “Targeting Skeletal Metastasis” (Keller: PI) ($350,000 directs for three years).

11. Immunex (Gift) “For prostate cancer bone metastases research” (Keller: PI) 10/01 ($40,000).

12. Centocor (Contract) Biology of interleukin-6 in prostate cancer (Keller, PI) 7/03 ($40,000)

II. PENDING GRANTS

1. National Cancer Institute (P01) “The biology of prostate cancer skeletal metastases.” (Keller: PI) ($1,189,000 annual directs FY1).

2. National Cancer Institute (R01) “Metastasis suppressor gene: Role of RKIP.” (Keller: PI) $175,000 annual direct costs.

3. National Cancer Institute (R01) “VEGF and bone remodeling in skeletal metastases.” (Keller, PI) $225,000 annual directs.
III. COLLABORATIVE RESEARCH ACTIVITIES

EXTRAMURAL

1. Mark Day; Collaborator on R01 submission.
2. Kenneth van Golen; Consultant on R21 submission.
3. Eva Corey and Bob Vessella, U. Washington; Serum markers of prostate cancer skeletal metastasis.
4. Eva Feldman; Consultant, IGF, neuroblastoma and bone metastasis.

INTRAMURAL

1. National Cancer Institute (P30-CA-46592), "The University of Michigan Comprehensive Cancer Center Core Grant." (M. Wicha, P.I.; L Baker Director and Keller, Associate Director of Connective Tissue Oncology Program). ($1,865,046 annual directs).

IV. CLINICAL RESEARCH ACTIVITIES

1. SPORE Project Skeletal Metastasis Biomarkers.
2. Assay bone Remodeling markers. Dr. Larry Baker. Dept. of Medicine, UM.

V. PUBLICATIONS


ARTICLES ACCEPTED FOR PUBLICATION


PRESENTATIONS AT REGIONAL, NATIONAL OR INTERNATIONAL MEETINGS

ABSTRACTS

Over 10 abstracts presented at national meetings.

SEMINARS


VI. TEACHING AND MENTORING ACTIVITIES

COURSE SETTINGS

Director: ULAM Post-Doctoral Fellow Training Grant
Preceptor: Institute of Gerontology Training Grant
Preceptor: Clinical Cancer Immunology Training Grant
Preceptor: Cellular and Molecular Biology Program
Preceptor: Immunology Program Mentor
Preceptor: Urology training grant
Undergraduate research opportunity (UROP) mentor
MENTORED STUDENTS, POST-DOCTORAL FELLOWS AND FACULTY

Undergraduate/UROP Students

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Year</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerdine Tan</td>
<td>UROP</td>
<td>2002-2003</td>
<td>UM Undergraduate</td>
</tr>
<tr>
<td>Rachel Roberts</td>
<td>Class</td>
<td>Spring 2003</td>
<td>UM Undergraduate</td>
</tr>
<tr>
<td>Lauren Wallner</td>
<td>Intern</td>
<td>2003</td>
<td>UM Undergraduate</td>
</tr>
<tr>
<td>Leigh Hagopian</td>
<td>Intern</td>
<td>2003</td>
<td>UM Undergraduate</td>
</tr>
<tr>
<td>Eva Marie Vandenbosche</td>
<td>Student help</td>
<td>2003</td>
<td>UM Undergraduate</td>
</tr>
<tr>
<td>Lindsay Dehne</td>
<td>UROP</td>
<td>Winter 2001</td>
<td>UM Undergraduate</td>
</tr>
</tbody>
</table>

Graduate Students

Jill Murtha, Pathology, Scientific Mentor, Pathology, Completed PhD
Zheng Fu, Immunology, Primary Advisor, Immunology, Completed PhD.
Paul Graf, CMB, Prelim committee, Pathology
Keni Rongguke, Thesis committee, Dental School, Bruce Rutherford Chair.
Meghan Brennan, Primary Advisor
Patrick Lester, Primary Advisor, Pathology

Postdoctoral Fellow

Yasuhide Kitagawa (Urologist from Kanazawa University, Japan)

Faculty

Jian Zhang, MD, PhD Research Scientist

VII. ADMINISTRATIVE SERVICE

ULAM

Director of Training Grant; Submit renewal.
Research Committee Representative

MEDICAL SCHOOL/HOSPITAL/UNIVERSITY

Rackham Student Appeals Committee
Associate Director, Connective Tissue Oncology Program (Cancer Center)
Colony for Aged Rodents Advisory Committee
Director, Transgenic and Mutant Rodent Core
Associate Director, Connective Tissue Oncology Program, Cancer Center
VIII. PROFESSIONAL ORGANIZATIONS

National Scientific Advisory Council: American Federation Aging Research
Scientific Advisory Committee: Institute for Advanced Studies on Aging.

IX. OTHER RELEVANT ACTIVITIES

Grant Reviews
1. External Scientific Grant Reviewer, VA Merit Review Board, Department of Veterans Affairs
2. American Federation for Aging Research
3. NIH: NIA, Program Project Review Committee
4. Department of Defense Pathobiology B: Prostate Cancer Grants
5. Department of Defense Bone Biology
6. NIA Comparative Aging SEP

Consulting
1. Centocor Pharmaceuticals, Philadelphia, PA
2. Vertex Pharmaceuticals, Boston, MA.

Manuscript Reviews
1. Ad hoc reviewer, Journal of Clinical Investigation
2. Ad hoc reviewer, Cancer Research
3. Ad hoc reviewer, Neoplasia
4. Ad hoc reviewer, Prostate

Meetings

Publicity
1. Articles highlighting our work in BusinessWeek, BBC, NPR, Reuters, etc.
PAUL D. KILLEN, M.D., PH.D.
ASSOCIATE PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. **CLINICAL ACTIVITIES:**

A. Board Certification, Anatomic Pathology.
B. Diagnostic Renal Biopsy Service (30 weeks).
C. Chief Renal Consultant.

II. **TEACHING ACTIVITIES:**

A. M2 Pathology Lecture - Renal Sequence (4 hours).
B. M2 Pathology Laboratory- Renal Sequence (16 hours).
C. Co-Coordinator - Renal Sequence (80 hours).
D. Renal Pathology for Pathology Residents (4 hours).
E. Renal Pathology for Nephrology Fellows Lectures (8 hours).

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

A. Co-Director, Molecular/Morphology Core, George M. O'Brien Renal Center, NIH-P50-DK39225, (5% Effort) $129,949/year, 8/1/98-7/30/03.
B. Co-Investigator, "The Glomerular Podocyte", NIH RO1-DK46073, (10% Effort) $225,000 direct costs/year, 4/1/02-3/30/06.
C. Co-Investigator, “ETB in regulation of renal sodium handling”, NIH RO1-HL64720, (5% Effort) $225,00 direct costs/year, 5/01/01-4/30/04.
D. Co-Investigator, “Mouse Models of Diabetic Nephropathy and Neuropathy”, RFA-DK-01-009, (5% Effort), $545,421 direct costs/year, 9/30/01-9/30/06.

**PENDING SUPPORT:**

C. None.

**PROJECTS UNDER STUDY:**

A. Regulation of collagen IV gene expression.
B. Interstitial fibrosis as a predictor of renal progression.
IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. AP Informatics  
B. Cerner V500 Core Committee

**MEDICAL SCHOOL/HOSPITAL:**

A. Faculty recruitment, Departments of Internal Medicine, Pediatrics.  
B. Component II Curriculum development, M2 Urinary System.  
C. Director, Diagnostic Electron Microscopy Service.

**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:  

V. **INVITED LECTURES AND SEMINARS:**

None.

VI. **PUBLICATIONS:**

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


**ARTICLES SUBMITTED FOR PUBLICATION:**


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

1. None.
CELINA G. KLEER, M.D.
ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
JULY 1, 2002 - JUNE 30, 2003

I. CLINICAL ACTIVITIES:
   A. General surgical pathology, including frozen sections, and biopsies in diagnostic rooms I, II, and C with residents and fellows – 4 months
   B. Breast pathology transfer and consultation service – 12 months
   C. Review of breast cancer cases to be presented in the Breast Care Conference – 12 months

TEACHING ACTIVITIES:
   A. Medical Students (M2 and M4)
      Radiology-Pathology course for M4 students – 3 contact hours
      Mentored four M4 students - 1 month
   B. Pathology House Officers and Fellows
      Surgical pathology diagnostic room instruction for house officers - 4 months
      Two slide conferences on interesting cases in breast pathology – 2 contact hours
      Two didactic lectures on breast pathology – 2 contact hours
   C. Pathology Graduate Program
      Natalie Whitfield, a first year pathology graduate student rotated in the lab from 4/29/03 to 6/16/03.
   D. Interdepartmental
      Breast Care Clinic tumor board – 12 months

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

   A. Principal Investigator, Detection of Metastatic Potential in Breast Cancer by RhoC-GTPase and WISP3 Proteins, Department of Defense, Career Development Award, DAMD17-02-1-0490 (50%), $355,152, 4/17/02 – 4/16/05
   B. Principal Investigator, Detection of Metastatic Potential in Breast Cancer by RhoC-GTPase and WISP3 Proteins, Department of Defense, Clinical Bridge Award, DAMD17-02-1-0491 (30%), $451,531, 4/17/02 – 4/16/06.
   C. Principal Investigator, Role of EZH2 in the Development of Breast Cancer and its Clinical Utility as a Novel Biomarker, John and Suzanne Munn Endowed Research Fund of the University of Michigan Comprehensive Cancer Center, G003191 (0%), $25,000, 7/1/03 – 6/30/04.
   D. Co-Investigator, Proteomics Alliance for Cancer, PI Omenn, GR356 (5%), 8/01/02 - 7/31/05
   E. Co-Investigator, PI S. Ethier. R01 CA100724-01 (0%),$603,250, 6/28/02-07
PENDING SUPPORT

A. Principal Investigator, Role of LIBC (WISP3) in the Development of the Inflammatory Breast Cancer Phenotype, National Institutes of Health, K08 CA 090876-01A1, (80%), $630,000
B. Principal Investigator, Role of EZH2 in Breast Cancer Progression, National Institutes of Health, RO1 CA107469-01, (30%) $1,250,000

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Coordination of the breast pathology service.
B. Quality assurance of the breast pathology service.
C. Director, Breast Pathology Fellowship
D. Member of the Steering Committee for the Cancer and Aging initiative at the University of Michigan.
E. Medical School Admissions Committee, University of Michigan.

REGIONAL AND NATIONAL:

A. Reviewer, Breast Cancer Research
B. Reviewer, Breast Cancer Research and Treatment
C. Reviewer, Modern Pathology
D. Reviewer, Cancer Research

V. INVITED LECTURES:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


126
Individual Faculty Reports


ARTICLES SUBMITTED FOR PUBLICATION:

1. Kleer CG, Zhang Y, Pan Q, Merajver SD. WISP3 is a Secreted Tumor Suppressor Protein that Modulates IGF Signaling in Inflammatory Breast Cancer. Submitted.


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


I. **CLINICAL ACTIVITIES:**

A. Cytopathology Service:
   1. Fine Needle Aspiration Service – 11 weeks
   2. Hospital Cytology Service (Gynecologic and Non-gynecologic specimens) – 15 weeks

II. **TEACHING ACTIVITIES:**

A. House Officers:
   1. Fine Needle Aspiration Cytology – 11 weeks
   2. Hospital Cytology Service – 15 weeks
   3. Cytopathology Teaching Conference – 1 hour

B. Cytotechnologists:
   1. Cytopathology Teaching Conference – 1 hour

III. **OTHER RELEVANT ACTIVITIES:**

**INVITED LECTURES:**

STEVEN L. KUNKEL, Ph. D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

None

II. TEACHING ACTIVITIES:

A. Host Defense Sequence, First Year Medical School
B. Case Reports First Year Medical Students
C. Grand rounds: Rheumatology
D. Academic Advisor, Immunology Graduate Program
E. Operating Committee Graduate Program in Immunology
F. Member, Pathology Graduate Program Committee
G. Member, Lung Immunopathology Post-doctoral Training Program (Pathology)
H. Member, Experimental Immunopathology Training Program (Pathology)
I. Member, Pulmonary Cellular and Molecular Biology Training Program
J. Member, Pediatric Training Grant “Cellular and Molecular Biology in Pediatrics”
K. Member, Systems and Integrative Biology Training Program (Physiology)
L. Chair, Pathology Graduate Examination Committee
M. Member, Graduate Teaching Award Review Committee
N. Supervised/serve on thesis committee the following postdoctoral fellows, graduate students, medical Students and undergraduates:

O. Fellows: Jane Schuh, Claudia Benjamim, Steven Lundy, Traci Ness, Graduate Students; Hiatol Chen, Claudia Jakubzick.

P. Undergraduate Students: Ester Choi, Kristin Carpenter, Ted Martens, Jillian Ewing, Susan Lewis

Q. Doctoral Thesis Committee Member/Orals Committee for the following graduate students: Molly Thomas, (Pathology), Allison Miller (Pathology), Sara Cheng (MSTP, CMB), Anavelys Ortiz-Suarez (CMB) Tania Gourley (Micro/Immunology), Tina Yee (Micro/Immunology), Phil Schaner (MSTP, Cell and Developmental Biology), John Marrow (MSTP, Neuroscience)

R. Oral Preliminary Examination Committee
S. Facilitator SROP Conference Research Roundtable
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. NIH - Macrophage/Monocyte Signals in Lung Granuloma Formation; HL-RO1-35276; Principal Investigator MERIT Grant
B. NIH - Monokine Gene Expression/Regulation in Lung Injury HL-RO1-31237; Principal Investigator
C. NIH - Inflammatory Cells and Lung Injury; Program Project HL-31963; Principal Investigator for Section II
D. SCOR Occupational and Immunological Lung Disease, P50HL-46487 Principal Investigator for Project 3
E. SCCOR Acute Lung Injury, P50HL60289, Principal Investigator Project 3

PROJECTS UNDER STUDY:

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

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Operating Committee Pathology Graduate Program
B. Space Utilization and Research Committee
C. Interview candidates for graduate program
D. Divisional Co-Director of General Pathology
E. Chair, Graduate Program’s Examination Committee
F. Member, Department of Pathology ACAPE Committee
G. Chair, Medical School Selection Tuition Selection Committee

MEDICAL SCHOOL/HOSPITAL/UNIVERSITY:

A. Member, Committee on Medical Student Research
B. Medical School Admission Interview Committee
C. Medical Scientist Training Program interviewer
D. Member MMP Microbiology Molecular Mechanisms in Microbial Pathogenesis Training Program
E. Member, Research Council of the Office of the Vice President for Research
F. Member, Michigan Cancer Center
G. Grant reviewer, Biomedical Research Council
H. Member, Advisory Committee Cancer Center Animal Core
I. Associate Dean for Interdisciplinary Programs, Rackham Graduate School
REGIONAL AND NATIONAL

A. Associate Editor, American Journal of Pathology
B. Associate Editor, American Journal of Respiratory Cell and Molecular Biology
C. Associate Editor, Experimental and Molecular Pathology
D. Associate Editor, Shock
E. Editorial Board, Mediators of Inflammation
F. Co-Chair 2003 Keystone Conference on Biology of Chemokines
G. Reviewer for the following journals: American Journal of Pathology, American Review of Respiratory Disease, Circulation, Infection and Immunity, Laboratory Investigation, Science, Journal of Immunology, American Journal of Respiratory Cell and Molecular Biology
H. Grant Reviewer, The Arthritis Society
I. Grant Reviewer, Veterans Administration
J. National Institutes of Health Study Section, Lung Biology and Pathology (ad hoc)
K. Chair, Publications Committee American Society of Investigative Pathology

V. OTHER RELEVANT ACTIVITIES:

A. National Institute of Allergy and Infectious Diseases. Board of Scientific Counselors, Laboratory of Host Defense and Clinical Investigation. Ad hoc. Bethesda, MD.
B. National Institute of Aging Site Visit, ad hoc reviewer, Baltimore, MD
C. National Institute of Allergy and Infectious Diseases. Permanent member, Board of Scientific Counselors, Laboratory of Host Defense and Clinical Investigation. 2003-

INVITED LECTURES AND SEMINARS:

1. Invited speaker, Models of emphysema: Speeding the pace of progress, Alpha 1 Foundation, September 2002 Airlie, Virginia
2. Invited speaker, Inflammatory lung diseases, Inflammation Research Association, October, 2002 Sagamore, New York
3. Invited Speaker, Pittsburgh Lung Conference, University of Pittsburgh, October 2002 Pittsburgh PA.
4. Invited lecture, XXVII Brazilian Society of Immunology Congress, Salvador, Brazil, October 2002.
5. Invited lecture, XXXIV Brazilian Congress on Pharmacology and Experimental Therapy, Aguas de Lindoia, Brazil, Oct 2002.
9. Invited Speaker, Indiana University School of Medicine, Indianapolis, In January 2003.
10. Invited Speaker, Keystone Symposia; Regulatory and Effector Functions of Macrophages, Taos, NM Feb 2003
11. Invited Speaker, Abbott Bioscience Center, Worcester, MA March 2003
12. Invited Speaker, Immunobiology Center, Yale University, New Haven CT, March 2003

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS:


ANDREW P. LIEBERMAN, M.D., PH.D.
ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I.  CLINICAL ACTIVITIES:

A.  Diagnostic surgical neuropathology, 6 weeks
B.  Autopsy evaluation of brains submitted to the Michigan Alzheimer’s Disease Research Center

II.  TEACHING ACTIVITIES:

A.  Graduate students and postdoctoral fellows:
   1.  Responsible during the current academic year for teaching activities for the following:
      a.  Monzy Thomas, Ph.D. (Post-Doctoral Fellow)
      b.  Zhigang Yu, M.D. (Post-Doctoral Fellow)
      c.  Christopher Pacheco (Thesis student)
   2.  Rotating Graduate Students
      a.  Christopher Pacheco, Neuroscience Graduate Program
      b.  Mary Heng, Neuroscience Graduate Program
   3.  Thesis committee member
      a.  Valerie Drews, Neuroscience Graduate Program
   4.  Preliminary examination committee member
      a.  Michael Corradetti, Cell and Molecular Biology Graduate Program
      b.  Qi Cau, Pathology Graduate Program
      c.  Brian Rudd, Pathology Graduate Program

B.  Lecturer on neurodegenerative disease, pathology house officers
C.  Lecturer and laboratory instructor, M2 Pathology, Neuroscience Sequence
D.  Instructor, Pathology/Radiology elective for M4 students
E.  Course director and instructor, Pathology 858
F.  Course director and instructor, Neuroscience 700
G.  Lecturer, Pathology 581
H.  Lecturer, Neuroscience 731
I.  Member, Neuroscience Graduate Program

III.  RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A.  Principal Investigator, “Altered androgen receptor function due to CAG expansion”, K02 NS44047 (75%), $156,250/year ($681,250/five years), July 1, 2002 – June 30, 2007.
B. Principal Investigator, “Altered androgen receptor function in Kennedy’s disease”, Muscular Dystrophy Association (5%, no salary support), $73,409/year ($219,000/three years), July 1, 2002 – June 30, 2005.
D. Director, “Neuropathology Core, Michigan Alzheimer’s Disease Research Center”, P50 AG08671 (S. Gilman, P.I.) (15%), $47,043/year

PROJECTS UNDER STUDY:
A. Mechanism of neurodegeneration in Kennedy’s disease
B. Mechanism of neurodegeneration in Niemann – Pick C

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Member, Pathology Graduate Program Admissions Committee
B. Member, Pathology Graduate Program Preliminary Examination Committee
C. Member, Pathology Graduate Program Research Symposium Awards Committee
D. Pathology residency training program candidate interviews
E. Department of Pathology faculty candidate interview

MEDICAL SCHOOL/HOSPITAL:
A. Director, Neuropathology Core, Michigan Alzheimer’s Disease Research Center
B. Member, Medical Scientist Training Program Advisory Committee
C. PIBS student interviews

UNIVERSITY OF MICHIGAN:
A. None

REGIONAL AND NATIONAL:
A. Member, Awards Committee, American Association of Neuropathologists
B. Manuscript review for:
   1. Experimental Neurology
   2. Molecular and Cellular Biology
V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. None

HONORS AND AWARDS

A. None

PATENTS:

A. None

INVITED LECTURES/SEMINARS:

1. Invited Participant, Howard Hughes Medical Institute/Burroughs Wellcome Fund Course on Laboratory Management, Chevy Chase, Maryland, July 2002.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

I. CLINICAL ACTIVITIES:

A. Gynecologic Pathology Consultation - twelve months.
B. Gynecologic Oncology Semimonthly Tumor Planning Conference - twelve months.
C. Autopsy service – twelve months (14 weeks, 6 weekends).
D. Gynecologic Oncology – Colposcopy Clinic, one half day/week, twelve months.
E. Placental Pathology – twelve months.

II. TEACHING ACTIVITIES:

A. Residents:
   1. Sign-out - Gynecologic Pathology, Placentas, and Autopsy cases.
   2. Review cases and supervise presentation of semimonthly Gynecologic Oncology Tumor Planning Conference – twelve months.
   4. Instruction and supervision in the performance, presentation and sign-out of autopsy cases.
   5. Teaching Conferences- lecture in Gyn Pathology, Jan 2002.
   6. Consult Case Conference - two/year.
   7. Miscellaneous resident evening conferences in Gyn Path
   8. Resident resource web page in Gyn Pathology (http://gynonc.path.med.umich.edu – Web access to Gyn Pathology Grossing Manual, lecture slides, “Blue Book” Online guide to Gynecologic Oncology, and other resources
   9. Morbidity and Mortality Conferences – Internal Medicine, General Surgery, and Obstetrics & Gynecology

B. University of Michigan Medical Students:
   1. M2, Obstetrics & Gynecology Sequence: Five hours Gynecologic Pathology lectures; preparation of examination questions.
   2. M2, Obstetrics & Gynecology Sequence: Laboratory instruction.
   3. M2 resource web page in Gyn Pathology ( – Web access to Gyn Pathology laboratory, lecture slides, and other resources

C. Michigan State University Medical Students
   1. M2 School of Human Medicine, Obstetrics & Gynecology Sequence: Three hours Gynecologic Pathology lectures; preparation of examination questions.
   2. M2 School of Osteopathic Medicine, Obstetrics & Gynecology Sequence: Two hours Gynecologic Pathology lectures; preparation of examination questions.

D. Ob/Gyn Residents and Gynecologic Oncology Fellow:
   1. Semimonthly Tumor Planning Conference – twelve months.
   2. Colposcopy clinic staff – one-half day per week (twelve months).
   3. Operating Room Instruction – one-half day per week.
   4. Lectures in Gynecologic Pathology to Gyn Oncology Service – two/year.
   5. Gyn Pathology Rotation for 3rd year Gyn Oncology Fellow – one month.
III. RESEARCH ACTIVITIES:

SOFTWARE DEVELOPMENT:

B. Profiler, Tissue Microarray & Genomics DB Module (under PathView) – Disclosure July 2002
C. Diagnostic Hierarchy – schema development in MS Access, with link to Oracle 8i

SPONSORED SUPPORT:

None

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Member, Pathology Bioinformatics, Department of Pathology.

MEDICAL SCHOOL/HOSPITAL:

Member of Picture Archiving and Communication System Committee (PACS).

UNIVERSITY OF MICHIGAN:

None.

REGIONAL AND NATIONAL:

A. Member, College of American Pathologists, Informatics Committee.
B. Member, NCI Microtissue Array Working Group.
C. Co-Chairperson, Medical Informatics Committee, Gynecologic Oncology Group.
D. Member, Pathology Committee, Gynecologic Oncology Group.
E. Member, Tissue Utilization Committee, Gynecologic Oncology Group.
F. Member, National Comprehensive Cancer Network (NCCN) Cervical/Endometrial Cancer Screening Panel.
G. Editorial Reviewer, Obstetrics and Gynecology.
H. Editorial Reviewer, Cancer.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED IN REFEREED JOURNALS:


ARTICLES SUBMITTED TO REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

None.

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

PUBLICATIONS (NON-PEER REVIEWED):


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

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003  

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 three postdoctoral fellows (Jonathon Homeister, M.D., Ph.D., Lan Zhou, M.D., Ph.D., and Stephanie Chervin, Ph.D.)  
B. Supervision of one MSTP student (David Kim)  
C. Supervision of two PhD students (Yunfan Ma – Pathology; Jeongsup Shim – Biomedical Engineering)  
D. Lecturer – Postdoctoral Research Training Program  
E. Member of four Ph.D. thesis committees (Stacey Arnold, Anavelys Ortiz-Suarez, Qin Li, Gabriel Maine)  
F. Member, Cell and Molecular Biology Program Committee  
G. Member, Pathology Department Ph.D. Program Committee  
H. Member, Graduate Program in Immunology  

III. RESEARCH ACTIVITIES:  

SPONSORED SUPPORT:  

A. "Glycoconjugate function in mammals". Source of award: Howard Hughes Medical Institute  
B. Program Project - Project #2 Principal Investigator, “Carbohydrate-dependent adhesion of normal and tumor cells”, NIH - CA71932 (20% effort), $732,109/five years direct cost, 07/08/96 - 02/28/07  
C. Large Scale Collaborative Project Award “Protein-carbohydrate interactions in cell communication”. Bridging Project Title “Fucosylated Glycan Structure and Function” (Lowe). NIH GM62116 (Paulson) (5% effort) $300,000/five year direct cost, 09/01/01 – 08/31/06  

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. Chair, Biomedical Scholars Program Committee  
B. Member, Department of Pathology's Graduate Program Committee  
C. Member, University of Michigan Technology Transfer Committee  
D. Member, Biomedical Research Core Facilities Advisory Committee  
E. Member, Biomedical Science Research Building Committee  
F. Member, Life Sciences Institute Advisory Committee  
G. Chair, Task Force on Molecular Medicine Recruitment for the Life Sciences Institute  
H. Member, Executive Committee for the Life Sciences Institute  
I. Member, Microarray/Microchip Technology Advisory Committee  

**REGIONAL AND NATIONAL:**

A. Member, Scientific Advisory Board, The Ara Parseghian Medical Research Foundation (Niemann-Pick disease type C)  
B. Member, Editorial Board of the European Journal of Biochemistry  
C. Member, Editorial Board of Molecular Medicine  

V. **OTHER RELEVANT ACTIVITIES:**

A. Howard Hughes Medical Institute, Investigator  

VI. **INVITED LECTURES AND SEMINARS:**

2. Glycosylation in the control of leukocyte recruitment. Max Planck Institute Conferences. Ringberg, Germany, September 2002  
12. Glycosylation events that control selectin-dependent leukocyte biology. UCSD School of Medicine Department of Pathology. La Jolla, CA. June 2003.

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 JB. Dominant pre-implantation lethality in mice directed by aberrant expression of an □(1,2)fucosyltransferase cDNA. In preparation.


BOOKS AND CHAPTERS IN BOOKS:

LORI LOWE, M.D.
CLINICAL ASSOCIATE PROFESSOR OF PATHOLOGY AND DERMATOLOGY
DEPARTMENTS OF PATHOLOGY AND DERMATOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Dermatopathology Service – 12 months.
B. Dermatopathology Consultation Service (including MLabs and Veterans Administration Hospital) – 12 months.

II. TEACHING ACTIVITIES:

A. Medical Students:
   1. Lecturer, MS II Dermatology Sequence (2 hours full class lecture)
   2. Dermatopathology laboratory director and instructor, MS II Dermatology Sequence (2 contact hours)
   3. Dermatopathology, Pathology Clerkship, MS I and MS IV students (4 students).
B. House Officers:
   1. Dermatopathology sign-out (Pathology and Dermatology Residents).
   2. Review of dermatopathology consultation material.
   3. Dermatopathology teaching conference (weekly-twice monthly).
C. Diagnostic Conference, Department of Dermatology (weekly).
D. Director of Diagnostic Conference, Department of Dermatology – (2 hours/month)
E. Hospital Conferences:
   1. Multidisciplinary Melanoma Conference (twice monthly).
F. Honors:
   1. Listed in the Guide to America’s Top Physicians, 2003 edition by the Consumers’ Research Council of America
   2. Listed in Hour Magazine’s Best Doctors, October, 2002 edition

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Patient Examination with MelaFind™ system developed by Electro-Optical Sciences, Inc. (EOS). 2001 Jennifer L. Schwartz, M.D., Timothy M. Johnson, M.D., Timothy S. Wang, M.D., Darius J. Karimipour, M.D., Jeffrey S. Orringer, M.D., Lori Lowe, M.D., Lyndon Su, M.D., Doug Fullen, M.D., Christopher Bichakjian, M.D., Mitzi Rabe, R.N. 4/1/01-9/30/01 (Study ongoing through 2003) $5,750.
PROJECTS UNDER STUDY:


B. University of Michigan (UMCC 2-15): A phase III randomized double-blind pivotal trial of immunotherapy with BCG plus a polyvalent melanoma vaccine, CancerVax™ vaccine versus BCG plus a placebo as a post-surgical treatment for Stage III melanoma. Principal investigator: Michael Sabel, M.D.


IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Dermatopathology Service, Department of Pathology, University of Michigan
B. Member, Advisory Committee on Appointments, Promotions, and Tenure (ACAPT), Department of Pathology, University of Michigan
C. Member, Residency Review Committee, Department of Dermatology, University of Michigan
D. Coordinator, QA/QC program (Mohs surgery slides), Cutaneous Surgery and Oncology Program, Department of Dermatology, University of Michigan
E. Member, Multidisciplinary Melanoma Program, University of Michigan Comprehensive Cancer Center

REGIONAL AND NATIONAL:

A. Editorial Board: Cancer, Associate Editor, Skin section
B. Member, North American Melanoma Pathology Study Group
C. Member, American Medical Women’s Association Mentorship Program
D. Member, American Academy of Dermatology’s Minority Medical Student Mentor Program
E. Ad hoc manuscript reviewer, Journal of Cutaneous Pathology
F. Ad hoc manuscript reviewer, The American Journal of Dermatopathology
G. Ad hoc manuscript reviewer, Journal of the American Academy of Dermatology
H. Ad hoc manuscript reviewer, Archives of Dermatology
I. Ad hoc manuscript reviewer, Dermatologic Surgery
J. Ad hoc manuscript reviewer, Cancer
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

4. “Cutaneous Manifestations of Rheumatologic Disease,” invited seminar, 31st Annual Spring Update in Internal Medicine, University of Michigan, Ann Arbor, Michigan, May, 2003

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


ABSTRACTS, BOOK REVIEWS, PRELIMINARY COMMUNICATIONS, PANEL DISCUSSIONS:


NICHOLAS W. LUKACS, Ph.D.
ASSOCIATE PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENT REPORT
1 JULY 2001-30 JUNE 2002

I. CLINICAL ACTIVITIES:

None.

II. TEACHING ACTIVITIES:

A. Pathology 585, Lecturer, Inflammation section, Summer, 2002, 2003
B. Pathology 580, Dental School. Lectures on Inflammation, cytokines and Chemokines
C. Pathology 581, Graduate Students. Lectures on Inflammation and Immune responses.
D. Pathology 643, Course Director, Immune mechanisms of Disease, Fall, 2002.
E. Post-doctoral fellows- Alison John, Steve Lundy
F. Graduate Students- Allison Miller, Molly Thomas, Matt Schaller, Brian Rudd

III. RESEARCH ACTIVITIES:

NIH SPONSORED SUPPORT:

A. Principal Investigator, "Role of C-C chemokines in eosinophil airway inflammation", RO1, 5/1/01-4/30/06, National Institutes of Health.
B. Principal Investigator, "SCF and mast cells in allergic airway inflammation", NIH R01. 9/1/99-8/30/03.
D. Co-Investigator, "Acute Lung Injury", Project 2, NIH Special Centers of Research (SCOR) grant, with Steven L. Kunkel, Ph.D., Ted Standiford, M.D. SCOR Director. 12/01/98 to 11/30/04.
E. 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.
F. Co-Investigator, “RETINAL CELL/LEUKOCYTE BINDING INDUCES CXC/CC CHEMOKINES”, with Victor Elner, M.D., Ph.D. NIH R01. 9/01/98 to 8/30/03.

INDUSTRIAL SUPPORT:

PROJECTS UNDER STUDY:

A. Regulation of cytokine and chemokines during eosinophilic airway inflammation.
B. Role of mast cells in chronic inflammation.
C. Role of cytokines and chemokine in RSV-induced airway inflammation.
D. Role of chemokines in autoimmune responses.
E. Role of stem cell factor (SCF) in acute and chronic inflammation.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
1. Immunology representative- Curriculum Committee for Joint Medical School Graduate program, PIBS.
2. Admissions Committee- Immunology Graduate Program in PIBS.
3. Curriculum Committee for Pathology Graduate Program.
4. Preliminary exam committee for Pathology Graduate Program.
5. Immunology graduate examination Committee
6. Immunology Graduate Steering Committee

REGIONAL AND NATIONAL:

SECTION EDITOR:

1. Journal of Immunology
2. Journal of Interferon and Cytokine Research

REVIEWER FOR THE FOLLOWING JOURNALS:

1. Journal of Immunology
2. American Journal of Pathology
3. American Journal of Respiratory Cell and Molecular Biology
4. Infection and Immunity
5. European Respiratory Journal
6. Journal of Experimental Medicine
7. Journal of Leukocyte Biology
8. Cellular Immunology
9. BLOOD
10. Journal of Clinical Investigation

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

1. The role of chemokines and their receptors in pulmonary inflammation. Cleveland Clinic. Cleveland, Ohio 11/6/02.

SESSION CHAIRS:


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED IN PEER-REVIEWED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:


PAUL E. McKEEVER, M.D., Ph.D.
PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 – 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Daily weekday and weekend 24 hour surgical neuropathology call. Individual case follow up, immunohistochemical and special stains, and electron microscopic neuropathology; weekly Brain Tumor Board, review of neurosurgical, neuroradiologic, neuropathologic and clinical-pathologic correlation, 28 weeks. Surgical neuropathology case load is four times the national average.

B. Diagnostic neuropathology consultant, Veterans Administration Hospital.

C. Examination of all University Hospital autopsy neuropathologic material – brain cutting, sampling, microscopic examination, and special stains.

D. General autopsies, 12 days.

II. TEACHING ACTIVITIES:

DEPARTMENTAL:

A. Neuroscience Sequence, Neuropathology for Second Year Medical Students.
   1. Prepared two laboratories and two lectures on brain tumors; toxic, metabolic, demyelinating and infectious diseases.
   2. Taught four laboratories.
   3. Senior medical student, Neuropathology elective.

B. House Officers:
   1. Brain cutting, sampling, microscopic examination and special stain instruction of pathology House Officers.
   2. Individual instruction of Pathology House Officers on neurosurgical biopsy material, 28 weeks.
   3. Review all neurosurgically removed material in the hospital in CME-approved biweekly conference, 28 weeks.
   4. Invited presentations of neuropathologic observations at Rheumatology, Ophthalmology and other joint clinical conferences.
   5. Pathology Resident's Tuesday AP Conference rotated with other faculty.
   6. One month House Officer Electives.
   7. Pathology Resident's Monday Special Conferences rotated with other faculty.
   8. Combined Neurosurgery, Neuroradiology, Neuropathology CPC.
   10. Pathology Gross Conference.
   11. Various other conferences.

C. Review laboratory techniques with UMMC Histologists.

D. Other Faculty: Brain Tumor Board, CPC, and other joint clinical conferences.
REGIONAL AND NATIONAL:
A. Faculty, “New Methods of Brain Tumor Analysis”: 41st Annual AFIP Kenneth M. Earle Memorial Neuropathology Review, Armed Forces Institutes of Pathology, Rockville, Maryland, 2003.

III. RESEARCH ACTIVITIES:
A. Immunohistochemical study of germ cell tumor with Dr. Riccardo Valdez.
B. Immunohistochemical study of craniopharyngiomas with Dr. Wei Xin.
C. Study of pituitary adenoma hypophyseal stroma with Dr. Jason Jarzemowski.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Chief, Section of Neuropathology.
B. Director, Neuropathology Residency Training. Full accreditation from the Accreditation Council for Graduate Medical Education obtained in 1996, status inactive for lack of funds.
C. Member, Photography Committee.
D. 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. Interaction with Chiefs and Staff of other clinical services, particularly Neurosurgery, Neurology, Nuclear Medicine, Radiation Oncology, Neuro-oncology and Neuroradiology.
D. Quality control of microscopic, ultrastructural and immunodiagnostic neuropathology. This included various ad hoc reviews requested by faculty.
REGIONAL AND NATIONAL:

B. Editor, Histochemical Society Newsletter.
C. Primary Review Pathologist, Children's Cancer Study Group CCG 9897 nationwide study of childhood low grade gliomas.
D. Reviewer for the following journals:
   4. Archives of Pathology and Laboratory Medicine.
E. Member, Brain Tumor/EMF Study Scientific Advisory Panel, National Cancer Institute, Jonathan Samet, Chairman.
F. Member, Review Panel, Program for Treatment of Malignant Brain Tumors, National Cancer Institute, William Jewell, Chairman.
G. Member, Review Panel, Molecular Markers of Glioma Initiation and Progression, National Cancer Institute, Susan Naylor, Chairwoman.
H. 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 --.
   2. Primary Review Pathologist for astrocytoma study, 1991 --.
      Review and determine correct diagnoses on cases put on study protocol.
I. Member, Histochemical Society, 1989 --.
   1. Constitution Advisor 1996 --.
      Make certain that Council functions in accord with constitution.
J. Lieutenant Colonel, U.S. Army Reserve Medical Corps, 1997 --.
PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

BARBARA J. MCKENNA, M.D.  
CLINICAL ASSOCIATE PROFESSOR OF PATHOLOGY  
DEPARTMENT OF PATHOLOGY  

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003  

I. CLINICAL ACTIVITIES:  

A. General surgical pathology – six weeks  
B. Genitourinary surgical pathology—six weeks  
C. Hospital gynecologic and nongynecologic cytology—seven weeks  
D. Fine needle aspiration cytology—seven weeks  
E. Gastrointestinal and hepatic pathology services – seventeen weeks  

II. TEACHING ACTIVITIES:  

MEDICAL SCHOOL/HOSPITALS:  

A. Medical Students:  
   1. Pathology 600 - laboratory 2-4 hours per week  
   2. Senior Elective in Pathology: mentor, 4 weeks with daily conferences  

B. House Officers:  
   1. Surgical pathology diagnosing room instruction for assigned house officer—6 weeks  
   2. Cytopathology fellow and assigned resident diagnostic teaching—14 weeks  
   3. Gastrointestinal and hepatic pathology tutoring - full time  
   4. Lectures in gastrointestinal and liver pathology, 2 hours  
   5. Consult conferences, 4-5 hours  
   6. Lectures in cytopathology, 3 hours  
   7. Cytopathology fellows weekly case conferences, 40 hours  
   8. Resident Morgue Rounds, 50 hours  

C. Interdepartmental:  
   1. G-I Tumor Conference - (3 hours per month).  
   2. Liver Biopsy Conference – 4 hours per year.  

III. RESEARCH ACTIVITIES:  

PROJECTS UNDER STUDY:  

A. Anaplastic, lymphoma-like carcinoma arising in Barrett’s mucosa, with HD Appelman  
B. The apoptotic form of microscopic colitis, with HD Appelman  
C. What is the yield of significant microscopic disease in colorectal biopsies of adult patients with chronic diarrhea and normal endoscopic findings? With HD Appelman
D. Is there such a thing as ectopic antral mucosa in the duodenal bulb? With Wei XIn and HD Appelman
E. Marginal collagenous colitis: does it exist? With HD Appelman, W Xin, M Anderson and L Evans
F. A study to correlate high resolution CT findings with histologic findings in resected small bowel for Crohn’s disease, with Ellen Zimmerman, Peter Higgins, and others
G. Studies of acute pancreatitis in CFTR/- mice, with Matthew DiMagno and others
H. Correlation of standard cytologic interpretation and molecular characterization of EUS-guided FNA specimens, with Michelle Anderson and others

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Resident Selection Committee
B. Pathology Faculty Library Renovation Project
C. Clinical Laboratories Long Term Planning Committee

MEDICAL SCHOOL/HOSPITAL:

A. Member, Admissions Committee

REGIONAL AND NATIONAL:

A. Commissioner for Graduate Medical Education in Pathology, American Society for Clinical Pathology
B. Member, Board of Directors, American Society for Clinical Pathology
C. Member, Publication Committee, American Society for Clinical Pathology
D. Advisor, Resident Physician Group, American Society for Clinical Pathology
E. Member, Task Force on Maintenance of Certification, American Society for Clinical Pathology
F. Co-Director, Resident Review Course, American Society for Clinical Pathology
G. Ambassador, United States and Canadian Academy of Pathology
H. President, AJames French Society of Pathologists

VI. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

2. “Non-IBD colitis” and “Gastrointestinal biopsy reports: to err is human, but who will forgive you?” with Henry D. Appelman, Second Annual Current Topics in Gastrointestinal Pathology, Johns Hopkins University School of Medicine, Baltimore MD, November 10-11, 2002
3. “Liver Pathology” and “Selected Cases in GI and Liver Pathology” at ASCP Resident Review Course, Hoffman Estates, Illinois, April, 2003
4. "Non-IBD Colitis", Visiting Blue Grass Professor Lecture, University of Kentucky, Lexington, KY, June 6, 2003

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
1. McKenna BJ, Appelman HD: Dysplasia can be a pain in the gut. Pathology, 34:518-528, 2002

CHAPTERS and BOOKS:

ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:
2. McKenna BJ, Appelman HD: Biopsies of colonoscopically normal mucosa in adult patients with chronic diarrhea provide diagnostically relevant information in most cases. Mod Pathol. 16:128A, 2003
3. Xin W, McKenna BJ, Appelman HD: Gastric surface metaplasia in the duodenal bulb is not ectopic antral mucosa. Mod Pathol. 16:137A, 2003
CLAIRE W. MICHAEL, M.D.
CLINICAL ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Cytopathology - six months.
B. Breast Cancer Clinic, Cytopathology – twelve months.
C. Review all ductal lavage specimens – twelve months.
D. Cytopathology Consultation Service, Department of Pathology - twelve months.
E. Necropsy Service - one weekend.

II. TEACHING ACTIVITIES:

A. Medical School Students:
   1. Mentor for medical students’ senior clerkship – six weeks.
   2. Introduction to cytology, second year medical students (30 minute lecture)
B. Residents and Cytopathology Fellow:
   1. Sign out; Gynecologic and Non-Gynecologic Cytology cases.
   2. Instruction in the performance and interpretation of fine needle aspirations.
   5. Weekly Cytopathology Fellowship Conference
   6. Consult Case Conference.
   7. Anatomic Pathology Conference: 2/year-Review of Cytopathology
C. Other Education Activities:
   1. Cytotechnologists - Cytopathology Slide Conferences.

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

1. Co-Investigator (Principle Investigator: E-J Wamsteker, M.D.) ASGE Endoscopic Research Award ($25,000) “Approaches to improve the cytologic diagnosis of pancreatico-biliary malignancy by ERCP”, 0% effort, American Society for Gastrointestinal Endoscopy.

PROJECTS UNDER STUDY:

5. Fine needle aspiration of squamous lesions; Diagnostic features and pitfalls.
6. Dai Y, Michael CW. Application of Beta Catenin and Cyclin D1 in mesothelial lesions.
7. Sturm C, Michael CW. Cytologic features of microglandular hyperplasia.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Cytopathology Laboratory.
B. Director, Cytopathology Fellowship.
C. Member, Residency Review Board.

MEDICAL SCHOOL/HOSPITAL:

None.

REGIONAL AND NATIONAL:

A. Member, Editorial Board, Diagnostic Cytopathology
B. Reviewer, Diagnostic Cytopathology.
C. Reviewer, Cancer Cytopathology.
D. Secretary, Papanicolaou Society of Cytopathology.
E. Member, American society of Clinical Pathologists, Non-Gynecologic Star Program
F. Member, American society of Cytopathology, Scientific Committee
G. Member, Abstract review committee, United States and Canadian Academy of Pathology.

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:


9. “Pulmonary cytopathology, microscopic session”. Invited speaker, Rush Presbyterian Hospital, Chicago, IL. April 7, 2003.


VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION IN PEER-REVIEWED JOURNALS:


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. MEDICAL SCHOOL

None

II. DENTAL SCHOOL

Pathology 631 Laboratory, Instructor for semester, ≈50 students, 2-4 contact hours/week.

III. RESIDENT TRAINING/CONTACT HOURS

None

IV. PATHOLOGY GRADUATE PROGRAM/CONTACT HOURS

None

V. POSTDOCTORAL FELLOWS, GRADUATES & UNDERGRADUATES

1. Graduate students - None
2. Postdoctoral Fellows - None
3. Other students:
   Brett Lantz, undergraduate student

VI. CONTINUING MEDICAL EDUCATION/OTHER EDUCATIONAL ACTIVITIES

A. Advised students who worked on research projects
B. During final year of phased retirement, continued to work on our multimedia, Web-based learning initiative in our non-profit, 501(c)(3) start-up company, inDepthLearning. This project is focused on using novel approaches and state-of-the-art technologies to help anyone regardless of reading ability (ranging persons reading at grade school to professional levels) to learn what they need and want to know about reproduction, reproductive health and sexuality. This project was funded by the U.S. Department of Education’s Fund for the Improvement of Postsecondary Education (FIPSE). Created a new, complementary, for-profit company, NotABook Publishing, Inc. focused on using web-based, motivational tools for publishing. NotABook was recently awarded a Small Business Innovative Research grant from the NIH, “Adherence to Antiretrovirals in People Living with HIV” and inDepthLearning will be receiving an NIH R25 educational grant on June 1, “Reaching Teenage Drinkers via the Internet.”
I. **CLINICAL ACTIVITIES:**

None.

II. **TEACHING ACTIVITIES:**

A. Graduate students:
   1. Responsible during the current academic year for teaching activities for the following:
   2. Immunology Program Prelim Exam Committee
   3. Ph.D. Dissertation Committees, University of Michigan:
      a. Yadira Hernandez
      b. Omer Yilmaz
   4. Ph.D. Dissertation Advisor:
      a. Anavelys Ortiz-Suarez
      b. Scott Berger
      c. Adam Salmon
      d. Yayi Chang
      e. Norma DeJesus

B. Postdoctoral Fellows:
   a. James Harper
   b. Amir Sadighi-Akha
   c. Shin Murakami
   d. Scott Maynard

C. In Lab:
   1. Gonzalo Garcia, Ph.D.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Principal Investigator, R. A. Miller "Genetic Control of Longevity in Mice," NIH/NIA 1-R01-AG11687-10 (8%), $291,292 direct costs/year, 9/1/93–11/30/03.
B. Principal Investigator, R. A. Miller, "Genetics of Age-Sensitive Traits in Mice," NIH/NIA 1-P01-AG-16699-05 (20%), $637,739 direct costs/year, 5/99–4/04.
C. Principal Investigator, R. A. Miller, "Wild Derived Mouse Stocks: New Models for Aging Research," NIH/NIA R01-AG13711-07 (10%), $200,000 direct costs/year, 9/1/00 – 8/31/05.
D. Principal Investigator, R. A. Miller, "Activation Defects in T Cells of Aged Mice," NIH/NIA R01-AG19619-03 (15%), $250,000 direct costs/year, 9/30/00 – 8/31/05.
E. Principal Investigator, J. Faulkner, "Nathan Shock Center of Excellence in the Basic Biology of Aging," NIH P30-AG13283-08, $139,000 direct costs/year, 9/1/95 – 6/30/05. Dr. Miller directs the Gene Expression Profiling Core and the "Laboratory for Anti-Geriatric Testing, Evaluation and Research."
F. Principal Investigator, J. Halter, "Claude D. Pepper Older Americans Independence Center," NIH P30-AG08808-13 (20%), $919,621 direct costs/year, 9/1/99 - 8/31/04. Subproject: “Weight Gain Trajectory and Life Span in Mice” and “Research Development Core”.
G. Principal Investigator, Andrzej Bartke, Southern Illinois University, NIH R01-AG19899-01 (2%), $175,000, 12/1/01 – 11/30/06. Interaction of caloric restriction with longevity genes (Bartke, PI). Subcontract: Gene expression and biomarkers in dwarf mice (Miller), $32,894/year.
H. Program Director, R. A. Miller, "Research Training in Experimental Immunology," NIH T32-AI-07413-10 (5%), $244,867 direct costs/year, 9/15/98 – 8/31/03.
I. Principal Investigator, R. A. Miller, "Laboratory for Anti-Geriatric Testing, Evaluation and Research," NIH/NIA U01-AG022303-01 (5%), $219,679 direct costs/year, 7/03 – 6/08.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Experimental Immunology Training Program

MEDICAL SCHOOL/HOSPITAL:

A. Director, Core Facility for Aging Rodents
B. Member, Cancer Biology Training Program
C. Member, Cell and Molecular Biology Training Program
D. Program Executive Committee
E. Member, Rheumatology Training Program
F. Associate Director for Research, Geriatrics Center
REGIONAL AND NATIONAL:

A. Board of Scientific Advisors, Buck Center for Research on Aging
B. Chair, Research Committee, American Federation for Aging Research
C. Vice-President, American Federation for Aging Research

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Journal of Gerontology: Biological Sciences.
B. Aging: Clinical and Experimental Research
C. Mechanisms of Ageing and Development
D. Experimental Gerontology

HONORS AND AWARDS:

A. None.

INVITED LECTURES/SEMINARS:

2002

1. UM Division of Geriatric Medicine, "Introduction to Aging Research," July 9.
5. Shock Center Symposium on Dietary Restriction, Bandera, TX. "Gene Expression Analysis in Calorically Restricted Mice." October 13.
6. Department of Physiology, University of Texas Health Science Center, San Antonio, TX. "Not Your Father's Aging Rodent: New Mouse Models for Biogerontology." October 14.
8. University of Michigan Bioinformatics Series, Ann Arbor, MI. "Gene Expression and Gene Mapping in Aging Mice." October 31
2003
6. University of Chicago, Department of Psychology, Chicago, IL. "Gene Mapping and Gene Expression Analyses of Aging in Mice." March 5.
10. Boston University Department of Biochemistry, Boston, MA. "Genetics of Aging in Mice." April 1
11. Boston University Immunology Program, Boston, MA. "Defective Activation Pathways in T Cells from Aged Mice" April 2
12. University of Chicago Department of Psychology, Chicago, IL. "Gene Expression and Gene Mapping in Aging Mice." April 16
13. University of Pennsylvania School of Medicine, Philadelphia, PA. "Not Your Father's Aging Rodent: Genetics and Immunology from Barn to Benchtop." April 17
14. University of Washington School of Medicine, Seattle, WA. "Gene Expression Analyses of Aging: Triumph and Tragedy on the Front Lines." April 28
17. Duke University School of Medicine, "Not Your Father's Aging Rodent: Genetics and Immunology from Barn to Benchtop." May 12.
18. 4th International ImAgInE Meeting on Aging and Immunity, Kolybardi, Crete. Plenary lecture: "Genetic and Biochemical Studies of Aging in Mice." May 21.
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:

None
I. CLINICAL ACTIVITIES:

A. Surgical Pathology and Frozen Section Diagnosis (17 weeks/year)
B. Autopsy Service, rotational basis, on call 13 weeks/year (staffing 15-20 cases/year).
D. Case presentations at Morbidity and Mortality Conferences.
E. Case presentations at weekly Urologic Pathology Conferences
F. Coordinator, "Topics in Pathology", CME accredited lecture series

II. TEACHING ACTIVITIES:

A. Post-Doctoral Fellows
   1. Research co-advisor to post-doctoral fellow: Dr. Matthew Adams, Dept. of Rheumatology, University of Michigan. supported by Arthritis Foundation of Michigan
B. House Officers
   1. Pathology house officers, Autopsy supervision and instruction (13 weeks/year)
   2. Pathology house officers, Surgical Pathology supervision and instruction, (5 months/year)
   3. Lecture and Case presentations at weekly Urologic Pathology Conferences
C. Graduate students:
   1. Course Director, Pathology 585, Lecture and Laboratory course for Medical Illustration Graduate students (15 hrs)
   2. Laboratory Instructor, pathology 600 (M2 pathology course)
D. Undergraduate students:

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. Co-Investigator “Gender-specific T cell homing and autoimmunity” (B. Richardson, Internal Medicine, PI) NIH RO1AI42753 12/98 - 11/03 ($1,609,959)
B. Co-Investigator, "Molecular Mechanisms of Lung Host Defense" (J Curtis, PI) Research Enhancement Award Program (REAP) Veteran's Administration 10/01/98-09/30/03 ($1,350,000)
C. Co-investigator, "Metabolic imaging of Renal and Prostate Cancer using C-11 Acetate" (S. Snyder, PI) RO1-CA089448-01 12/01/01-11/31/04 ($1,801,214)
D. Co-Investigator. "Lung Injury by Oxygen Metabolites" NIH/NIGMS R37 GM29507. National Institute of Health (Peter A. Ward, PI). 07/01/01 - 06/30/06 ($1,123,824).
PROJECTS UNDER STUDY:

A. Endothelial cell responses in inflammation
   1. The enzyme source of endothelial cell oxidants
   2. The role of endothelial cell derived oxidants in signaling and cell injury
   3. Repertoire of endothelial cell derived cytokines and their role in inflammation

B. Gender-specific effects of hormones on T cells and endothelial cells in autoimmunity
   1. Effect of estrogen on endothelial cell estrogen reception expression
   2. The role of estrogen in endothelial cell adhesion molecule expression and lymphocyte homing

C. Gender-specific effects of hormones on dendritic cells in autoimmunity
   1. Effect of estrogen on antigen presentation by dendritic cells
   2. Role of estrogen in the autoimmune response to antigen

IV. ADMINISTRATIVE ACTIVITIES:

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

1. American Association for the Advancement of Science (1991-present)
3. American Society for Investigative Pathology (Fellow, 1995-present)
4. American Society of Clinical Pathologists (Fellow, 1995-present)
5. American Association of University Women (199-present)
6. The A. James French Society of Pathologists (1996-present)
7. Society for Experimental Biology and Medicine (2000-present)
8. The Oxygen Society (2001-present)
10. The Nitric Oxide Society (2001v)
11. American Heart Association (1997-present)

DEPARTMENTAL:
A. 2001-present Chief, Histopathology, Pathology and Laboratory Medicine, VAAHS
B. Chief, Clinical Electron Microscopy, Pathology and Laboratory Medicine, VAAHS

MEDICAL SCHOOL/HOSPITAL:
A. Member, Admissions committee of the University of Michigan Medical School, 1999-present

REGIONAL AND NATIONAL:
A. Manuscript Review for
   1. Clinical Immunology and Immunopathology
   2. Biochemical pharmacology
   3. Shock
   4. Free Radical Biology and Medicine
V. OTHER RELEVANT ACTIVITIES:
A. Case presentations at Tumor Board
B. Case presentations at Morbidity and Mortality Conferences.
C. Case presentations at Urologic Pathology Conferences
D. Tissue evaluation for clinical researchers.

VI. PUBLICATIONS:

BOOKS/CHAPTERS IN BOOKS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:
3. Robey, T.C., Valimaa, T., Murphy, H.S., Mooney, D.J., Weatherly, R.A The use of internal "Knitted-type" stents in a rabbit tracheal reconstruction model. Arch. Otolaryng (Accepted for publication)


**SUBMITTED PUBLICATIONS:**

1. Murphy, H. S., Q. Sun, B. A. Murphy, S. W. Chensue, B. C. Richardson, R. Yung. Tissue Specific Estradiol Enhancement of Endothelial Cell Dependent Lymphocyte Recruitment. (Submitted for publication – Microvascular Research)

2. Tounge, J., H. S. Murphy, M.E. P. Prince. Parotid Lipoma: A case report. (Submitted for publication.)


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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Consultation Service: Cytopathology/pulmonary pathology - 12 months.
B. Autopsy Service, occasional coverage.

II. TEACHING ACTIVITIES:

A. Pathology residents – Diagnostic consultations and lectures.
B. Dental and graduate students - Lectures (Dermatopathology).

III. RESEARCH ACTIVITIES:

A. History of cytopathology.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Advisory Committee on Appointments and Promotions.

REGIONAL AND NATIONAL:

A. Cytopathology, Editorial Advisory Board.
B. Acta Cytologica
   Associate Editor
   Editorial Advisory Board
   North American Review Board
C. International Academy of Cytology:
   International Board of Cytopathology, Member
D. Awards Committee, American Society of Cytopathology

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES AND SEMINARS:

I. **CLINICAL ACTIVITIES:**

A. Associate Director, Clinical Microbiology/Virology Laboratories.
B. Co-Coordinator, Infectious Disease Microbiology Laboratory Rounds.
C. Technical Consultant - M-Labs.
D. New clinical test development, verification and implementation.

II. **TEACHING ACTIVITIES:**

A. Instructor, Pathology House Officer Microbiology/Virology Program.
B. Coordinator, Clinical Microbiology/Virology In-service Program.
C. Instructor, Infectious Disease Laboratory Rounds.
D. Coordinator, Clinical Microbiology Journal Club
E. Preceptor for M-4 elective in Pathology.
F. Preceptor for Pharmacy Resident rotation in Clinical Microbiology and Virology.
G. Lecturer, Epidemiology 680, "Hospital Epidemiology," School of Public Health
H. Lecturer, Clinical Microbiology, Wm. Beaumont Hospital Medical Technology Program
I. Clinical Pathology Grand Rounds, UM Dept. of Pathology.
   1. “Specimen Processing in the Clinical Virology Laboratory.” Grand Rounds presentation, Clinical Pathology Division, Department of Pathology, University of Michigan Medical Center. 9/6/02.
   2. “West Nile virus in the U.S. and Michigan.” Grand Rounds presentation, Clinical Pathology Division, Department of Pathology, University of Michigan Medical Center. 10/4/02.
J. Continuing Education Lecturer, UM Dept. of Pathology.
   1. “West Nile virus in the U.S. and Michigan.” Continuing Education Seminar, Department of Pathology, University of Michigan Medical Center. 10/2/02.
   2. “West Nile virus in the U.S. and Michigan.” Continuing Education Seminar, Clinical Microbiology and Virology Laboratories, University of Michigan Medical Center. 11/7/02.
   3. “Quality assurance activities in clinical microbiology.” Continuing Education Seminar, Clinical Microbiology and Virology Laboratories, University of Michigan Medical Center. 1/14/03.
   4. “West Nile virus in the U.S. and Michigan.” Brown-bag lunch seminar for Medical Technology students, Department of Pathology, University of Michigan Medical Center. 2/12/03.
III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

A. “Role of EBV and malaria co-infection in the pathogenesis of endemic Burkitt’s lymphoma,” Principal Investigator: Rosemary Rochford, UM School of Public Health.
B. “Serologic response to EBV infection in the presence and absence of malaria endemicity,” Principal Investigator: Duane Newton, Dept. of Pathology, University of Michigan.

PROJECTS UNDER STUDY:

A. “Real-Time” PCR for the rapid diagnosis of infectious diseases.
B. Use of the Cobas Monitor for the quantitation of HBV in patients with hepatitis.
C. Retrospective comparison of antimicrobial susceptibility profiles of bacteria isolated from pediatric patients and adult patients.
D. Use of the HandyLab bedside PCR device for detecting *Streptococcus agalactiae* during pregnancy.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Clinical Pathology Laboratory Directors Committee.
B. Quality Assurance Committee
C. Clinical Microbiology/Virology Senior Staff committee.
D. Consultant for “Consultants in Laboratory Medicine”, ProMedica Health System, Toledo, OH.
E. Clinical Pathology Training Program Review Committee

MEDICAL SCHOOL/HOSPITAL:

A. Hospital Infection Control Committee.
B. Antimicrobial Use subcommittee of the Pharmaceutical & Therapeutics Committee.
C. Pediatric Virus Prevention Program Committee, Infection Control & Epidemiology

REGIONAL/NATIONAL:

A. Corporate Liaison Co-chair, South Central Association for Clinical Microbiology.
B. Rabies Working Group, Michigan Department of Community Health
C. Ad hoc reviewer, Journal of Clinical Microbiology
D. Ad hoc reviewer, Morbidity and Mortality Weekly Report
V. OTHER RELEVANT ACTIVITIES:

PROFESSIONAL ORGANIZATIONS:

A. American Society for Microbiology.
B. Infectious Disease Society of America.
C. South Central Association for Clinical Microbiology.
D. Pan American Society for Clinical Virology.

INVITED LECTURES/ SEMINARS:

2. “West Nile and Other Arboviruses in the U.S.” Distinguished Lecture Series, Biology Program of the College of Arts and Sciences, Governors State University, University Park, IL. 11/11/02.
4. “West Nile virus in the U.S. and Michigan.” Department of Biology Seminar Series, Eastern Michigan University, Ypsilanti, MI. 2/05/03.
5. “West Nile virus in the U.S. and Michigan.” Department of Microbiology and Immunology Seminar Series, Wayne State University, Detroit, MI. 2/05/03.
6. “West Nile and Other Arboviruses in the U.S.” 6th Annual Infectious Diseases Update, Promedica Health System, Toledo, OH. 4/02/03.
8. “Update on West Nile Virus and SARS.” Association for Professionals in Infection Control and Epidemiology (APIC) Greater Detroit Chapter Meeting, 5/9/03.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/ CHAPTERS IN BOOKS:

1. “West Nile virus.” In APIC Text of Infection Control and Epidemiology, submitted.
ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFEREED JOURNALS:


I. **CLINICAL ACTIVITIES:**
   A. Autopsy Service (two weeks and one weekend on-call).

II. **TEACHING ACTIVITIES:**
   B. Department of Pathology, Graduate Program Course 581, University of Michigan, Ann Arbor, Michigan, (2 lectures).
   C. Instructor, Microbiology and Immunology 553, Cancer Biology Training Program, University of Michigan, (1 lecture).
   D. Instructor, Cell Biology Course 530 for Graduate Students, University of Michigan (1 lecture).

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

**CURRENT:**

B. Principal Investigator, “Role of Apaf-1/Caspase-9 Pathway in tumor development in the breast” US Army Medical Grant; $50,000.
C. Principal Investigator, “Ciper: a novel NF-κB-activating gene involved in Cancer,” National Institutes of Health, $1,000,000 (total direct costs), 1/7/00-6/30/05.
E. Principal Investigator, “Nod2: A Susceptibility Gene for Crohn’s Disease” National Institutes of Health, $1,000,000 (total direct costs), 7/1/02-6/30/04

**PROJECTS UNDER STUDY:**

A. Role of Ciper/Bcl10 Pathway in Signal transduction and lymphoma development.
B. Molecular regulation of apoptosis by Bcl-2 family members.
C. Role of Nod Family in Innate Immunity and Crohn's disease
IV. DEPARTMENTAL:

A. Member, Comprehensive Examination Committee, Pathology Graduate Program, University of Michigan, Ann Arbor, MI.

B. Member, Admissions Committee, Molecular and Cellular Biology, Graduate Program, University of Michigan, Ann Arbor, MI.

MEDICAL SCHOOL/HOSPITAL:

A. Co-Director, Cell Biology Program, University of Michigan Cancer Center.

B. Member, Faculty Search Committee, Rheumatology Division, and Department of Microbiology/Immunology.

C. Reviewer, Departmental Grants and Summer Student Scholarship Program.

D. Member, Biomedical Research Core Facilities (BRCF), University of Michigan, Ann Arbor, Michigan.

E. Member, Biomedical Research Council, University of Michigan, Ann Arbor, Michigan.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARD:

A. Reviewer for the following journals: American Journal of Pathology; Cancer Research; Cell; Cell Death and Differentiation; Immunity; Journal of Biological Chemistry; Journal of Cell Death and Differentiation; Journal of Immunology; Oncogene; Journal of Cell Biology; Laboratory Investigation; Proceedings of National Academy of Science USA; Science, Nature Cell Biology.

INVITED LECTURES AND SEMINARS:

UNIVERSITY OF MICHIGAN:

2002 Invited Speaker, “Nods: Apaf-1-like Molecules Regulating the Host Response to Pathogens”, School of Dentistry Oral Health Sciences Seminar Series, University of Michigan, January 10


2003 Invited Speaker, “Role of Bcl10 in lymphoid Survival and MALT lymphoma”, Cancer Center Research Seminar, University of Michigan, February 11, 2003

2003 Invited Speaker, “NODs: Intracellular Sensors of Bacteria linked to Inflammatory Disease”, Department of Pathology Research Seminar Series, University of Michigan, March 3, 2003
NATIONAL/INTERNATIONAL:

1. Invited Keynote Speaker, "The Nod2 Gene and Crohn's Disease", Symposium "Genomics of Chronic Inflammatory Disorders", Kiel, Germany, July 5
5. Guest Lecturer “Biology of Bcl10/MALT1”, Recent Developments in Gastric MALT lymphoma, University College, London, September 20, 2002
6. Invited Speaker “Sepsis gets the NOD”, 42nd ICAAC, San Diego, CA, Sept. 6, 2002
7. Invited Speaker “Intracellular Recognition of Pathways and Crohn’s Disease”, The University of Texas Southwestern Medical Center, Dallas, TX, October 22, 2002
8. Invited Speaker “Function of NOD2 in mice and humans”, Center for the Study of Inflammatory Bowel Disease, Harvard University, Boston, MA, November 22, 2002
9. Invited Speaker “Intracellular Recognition of Pathways and Crohn’s Disease”, University of Illinois Medical School, Chicago, IL, November 25, 2002
10. Invited Speaker “Intracellular Recognition of Pathways and Crohn’s Disease”, Department of Immunology, University of Washington Medical School, Seattle, WA, December 10, 2002
11. Invited Speaker “Intracellular Recognition of Pathways and Crohn’s Disease”, Medical College of Ohio, Toledo, OH, December 19, 2002
13. Invited Speaker, “NODs: Intracellular Sensors of Bacteria linked to Inflammatory Disease”, Pfizer, Ann Arbor, MI, March 6, 2003
15. Invited Speaker, “Intracellular Recognition of Bacterial Pathogens and Human Disease”, Vanderbilt University, Nashville, TN, March 24, 2003
17. Invited Speaker, “NOD2 function and Crohn’s disease”, 3rd Intntl. Meeting on Inflammatory Bowel Diseases, Capri, Italy, April 13, 2003
VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNAL:


I. **CLINICAL ACTIVITIES:**

A. Autopsy Service.

II. **TEACHING ACTIVITIES:**

A. Lecturer, Pathology 580/630 and Pathology 581
B. Training of postdoctoral fellows
C. Member, Pathology Graduate Program thesis committees
D. House officer training in autopsy service
E. Pathology graduate program student counseling

III. **RESEARCH ACTIVITIES:**

A. Principal Investigator, "Mechanisms of pulmonary fibrosis," NIH, R37, HL28737 MERIT Award.
B. Principal Investigator, "Myofibroblasts in pulmonary fibrosis," NIH, RO-1, HL 52285.
D. Co-investigator, SCOR in Human idiopathic pulmonary fibrosis, NIH, P-50 HL 56402.

**PROJECTS UNDER STUDY:**

A. Mechanisms of lung injury and fibrosis.
B. Cytokine regulation of fibroblast function
C. Smad regulation of the α-smooth muscle actin promoter and gene expression.
D. Myofibroblast differentiation and its regulation by cytokines.
E. Microarray analysis of lung gene expression in lung fibrosis.
F. Induction and regulation of telomerase expression in lung fibrosis.
G. Role of eosinophils in pulmonary fibrosis.
H. Characterization of FIZZ1 and its role in myofibroblast differentiation
IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Director, Pathology Graduate Program.
B. Member, Graduate Program Committee.
B. Member, Departmental Research and Space Advisory Committee.
C. Member, Pathology House Officer Selection Committee.

MEDICAL SCHOOL/HOSPITAL:

A. Member, Medical Scientist Training Program Operating Committee.
B. Member, Program in Biomedical Sciences Admissions Committee.

REGIONAL AND NATIONAL:

A. Associate Editor, American Journal of Pathology.
B. Reviewer for the following journals:
   3. Journal of Immunology.
   6. Journal of Clinical Investigation,
   7. Experimental Cell Research.
   9. Lung.
C. Reviewer/site visitor for NIH Program Project/Study Sections and VA grant proposals.

INVITED LECTURES/SEMINARS:

2. Invited Speaker, “Fibroblasts and pulmonary fibrosis”, Department of Internal Medicine, University of California at Davis, Davis, CA, 2002
V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


BOOKS/CHAPTERS IN BOOKS/REVIEWS:


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


195
I. CLINICAL ACTIVITIES:
   A. General Surgical Pathology - 32 weeks

II. TEACHING ACTIVITIES:
   A. Medical Students:
      1. M2 Pathology Lab – 70 hours
      2. Applied Clinical Anatomy – 4 hours
         Musculoskeletal System
   B. House Officers:
      1. General Surgical Pathology – 30 weeks
      2. Resident Teaching Conference – 60 hours
      3. Consultation Conferences – 4 hours
      4. Intraoperative consultation – 70 hours
      5. Surgical Pathology Elective – 80 hours for senior level residents

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
None.

PENDING:
None.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
None.

MEDICAL SCHOOL/HOSPITAL:
None.

UNIVERSITY OF MICHIGAN:
None.

REGIONAL AND NATIONAL:
None.

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:
None.

HONORS AND AWARDS
Resident Teaching Award - 2003

PATENTS:
None.

INVITED LECTURES/SEMINARS:
None.

VI. PUBLICATIONS:

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

BOOKS/CHAPTERS IN BOOKS:
Surgical Pathology: A Reference (publication pending).

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

A. Surgical Pathology coverage of M-Labs cases, including most from the following hospitals/clinical practices:
   1. Forest Health Medical Center, Ypsilanti;
   2. University of Michigan Health Service;
   3. Livonia SurgiCenter and other University of Michigan Clinics and satellite sites;
   4. Other clients such as clinics outside of Washtenaw County.

B. Outside consults to a growing list of pathologists. These are stat consults and we provide fast turn around times. Most of these cases are shown in consultation to other faculty.

C. Autopsy coverage at the University Hospitals, for weekdays and weekends. Autopsy coverage is also provided to Trillium Hospital, in Albion and Forest Health Medical Center, Ypsilanti.

D. Review peripheral smears at Forest Health Hospital and University of Michigan Health Service.

E. Clinical Pathology consults for M-Labs client hospitals.

F. Cytopathology: provide coverage in gynecologic, non-gyn and FNA services (performance of aspirate/interpretation) at U of M Hospitals for 20 weeks.

II. TEACHING ACTIVITIES:

A. Supervise performing of autopsies by residents and sign out M-Labs and University of Michigan cases.

B. Organize and lecture at the M-labs Symposium (20th Symposium in May, 2003), a one day-long event with lectures and case presentations for pathologists (most are M-Labs clients). CME credits are provided. Held twice a year (October/April).

C. Sign-out in cytopathology, with residents, fellow and, occasionally with medical students.

D. In-service teaching to laboratory staff at the University of Michigan Health Service (UHS).

E. Monthly colposcopy meetings with the Gyn medical staff at UHS.

III. RESEARCH ACTIVITIES:

None

IV. ADMINISTRATIVE ACTIVITIES:

A. Associate Director, M-Labs: (for more details, see M-Labs’ Annual Report).
   Participate in planning, marketing and implementation of M-Labs programs.
   1. Contacts with pathologists from client hospitals and others, as part of our support to pathologists; this includes providing occasional coverage;
   2. Laboratory network activity:
   3. Joint Venture Hospital Laboratory – (JVHL) QA committee, which meets approximately once every three months.
B. Medical Director of the University of Michigan Health Service Laboratory, and Forest Health Medical Center in Ypsilanti.

C. Active medical staff member at Forest Health Medical Center and Community Health Center of Branch Co (Coldwater). Conduct Tissue Review and Transfusion Review meetings. Attend their medical staff meetings.

D. Intra-departmental meetings (e.g., Cytopathology)

V. OTHER:

A. Inspector, for the CAP Accreditation Program. Performed two inspections.

B. QA Review through Peer Review Organization of Michigan (PROM), for other hospitals in Michigan.
I. **CLINICAL ACTIVITIES:**

A. Director, Autopsy Service.
B. Supervision of Autopsies- 3 weeks.
C. Coordinator, Trauma/burn autopsy conference monthly
D. Coordinator of Senior Staff Autopsy Call Schedule.
E. Deputy Medical Examiner, Washtenaw County.

II. **TEACHING ACTIVITIES:**

A. Coordinator, Biweekly Pathology Gross Conference.
B. Lectures to Pathology House Officers in Anatomic and Clinical Pathology.
C. Pathology 600, Provided written critiques of student autopsy write-ups (167).
D. Laboratory Instructor, Pathology 600 (M2 pathology course), year long
E. Thesis Committee - Andrew Merry, Kellie Breen, Department of Physiology, Erin Gatza, Department of Immunology, Jill Murtha Department of Pathology
F. Mentored research of Stewart Wang, M.D., Ph.D. (Department of Surgery), Grace Su, M.D., (Department of Medicine), Jean Nemzek, D.V.M. (Unit for Lab Animal Medicine), Postdoctoral fellows, Jiyoun Kim, Ph.D., Liyu Xin, M.D., Ph.D., Hong Yan Xiao, M.D., Ekram El Laban, M.D.
G. Graduate Students – Andrew Merry, Kellie Breen, Laura McKinley, Jill Murtha
H. Undergraduate Students - Andrew Riskin, Teri Thomas

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.
   4. 2 hit model of acid aspiration induced lung injury
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, mIL-18, mIL-1ra.
F. Oxidant regulation of chemokine gene expression.
G. Chemokines in the pathogenesis of murine asthma
**SPONSORED SUPPORT:**

A. Principal Investigator, "The Role of Cytokines in Sepsis and Trauma", GM44918 $906,182, 1990-2004. 30% effort  
B. Principal Investigator, "Regulation of IL-8 gene expression: four years, GM50401 $870,822, 1995-2004. 20% effort  
C. Principal Investigator, "Chemokines in the Pathogenesis of Asthma", ES09589, project #3, $1,180,00, 1998 – 2003. 10% effort  
F. Co-Investigator, "Can Paraxonase be Used to Treat Endotoxemia and Sepsis", Life Sciences Initiative, Bert LaDu Principal Investigator, $150,000, 2000-2003. 2% effort  
G. Co-Investigator, NIH HD040112, "Neuroimmunology/Cytokine Alterations In Vulvodynia" Principal Investigator, Barbara Reed, $375,000, 2000 – 2003

**IV. ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Director - Autopsy Service.  
B. Interviewer - Candidates for faculty, house officer, postdoctoral, and graduate student positions.  
C. Co-ordinator of call schedule, both weekend and weekday, autopsy service.

**MEDICAL SCHOOL/HOSPITAL:**

A. Assistant Dean for Admissions, Medical School  
B. Member, Task Force on Promotions and Tenure – Instructional Track  
C. Member, Biomedical Research Council Undergraduate Research Council  
D. Reviewer, Biomedical Research Council grants  
E. Pathology representative to Medical Device Explant Committee  
F. Representative for Pathology to Program in Biomedical Sciences (PIBS) Admissions Committee

**REGIONAL AND NATIONAL:**

A. Executive Committee, Michigan Association of Medical Examiners.  
B. Deputy Medical Examiner for Washtenaw County.  
C. Regular member National Institutes of Health, Surgery, Anesthesiology and Trauma Study Section Oct 1999 to June 2003  
D. Member, American Society of Investigative Pathology Education Committee
E. Member, Michigan Coalition on Donation
F. Publications Committee, International Cytokine Society
G. Awards Committee, Shock Society
H. Organizer, Shock Society Young Investigator’s Research Forum
I. 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. Editorial Board: Shock
B. Reviewer:
   1. Journal of Immunology
   2. Journal Leukocyte Biology
   3. American Journal of Pathology
   4. Shock, reviewed
   5. American Journal of Physiology
   6. American Journal of Respiratory Cell and Molecular Biology
   7. American Journal of Respiratory and Critical Care Medicine
   8. Cellular Immunology
   9. Journal of Endotoxin Research
   10. Cytokine
   11. Grant Reviewer, Veterans Administration

INVITED LECTURES/SEMINARS:

2002 Visiting Professor, Washington State University, Pullman, Washington, Understanding the Inflammatory Response to Sepsis to Guide Therapy
2002 Chair, Experimental Biology Poster Discussion Session Pulmonary Inflammation, New Orleans
2002 Chair Experimental Biology Poster Discussion Session, Vascular Biology, New Orleans
2002 External Reviewer, SCCOR grant, SUNY – Buffalo, Buffalo, New York
2002 Invited Speaker, State of Michigan Response to Bioterrorism, Michigan Association of Medical Examiners, Mt. Clemens, Michigan
2003 Organizer and Moderator, Magic Bullets for the Treatment of Sepsis Shock Society meeting

VI. PUBLICATIONS:

ARTICLES PUBLISHED


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002- 30 JUNE 2003

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).
F. Electron Microscopy (platelet ultrastructure).

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. Laboratory Instructor, M1 Histopathology Course.

B. House Officers:
   1. Sign-out of bone marrow biopsies, aspirates, blood smears, and body fluids in Hematology Laboratory.
   2. Sign-out of lymph node biopsies and review of hematopathology consultation material.
   5. Hematopathology case conferences.
   6. Hematopathology lecturer.

C. Hematopathology teaching:
   1. Leukemia conference/biweekly.
   2. Lymphoma conference/weekly.
   3. Hematology conference/biweekly.
   4. Clinical Pathology Grand Rounds (one lecture).
   5. Clinical Pathology Case Conference/weekly.
   7. Lecturer in flow cytometry to hematology/oncology fellows, Department of Internal Medicine and Department of Pediatrics.
   8. Multiple myeloma conference/biweekly
   9. Lecturer, “Hematologic Coups: A practical approach to challenging cases in hematolymphoid diagnosis”, American Society of Clinical Pathology National Meeting
III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:
A. Immunophenotypic profiling of leukemias and lymphomas by flow cytometry and immunohistochemistry.
B. Radioimmunotherapy for B-cell lymphoma.
C. Immunotherapy for acute myelogenous leukemia
D. Gene expression profiling of chronic lymphoproliferative disorders.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Director, Clinical Flow Cytometry Laboratory.
   Coordinator, CP resident teaching program.
B. Clinical Pathology Incentive Distribution Committee.
C. Pathology Faculty Incentive Committee.
D. Interviewer of residency candidates.

REGIONAL/NATIONAL:
A. Central pathology reviewer, multicenter study of I\(^{131}\) anti-B1 radioimmunotherapy for B-cell lymphoma, Corixa Pharmaceutical.
C. Manuscript reviewer, Archives of Pathology and Laboratory Medicine.
D. Manuscript reviewer, Clinical Cytometry.
E. Manuscript reviewer, Human Pathology

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

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

   in surface immunoglobulin-negative follicular lymphomas. Poster presentation, United States
   2003; 16(1)249A.

   Ozogamicin; CMA-676) in AML: predictive variable and response to treatment. Poster
   presentation, United States and Canadian Academy of Pathology Annual Meeting, Washington,
   DC, 2003. Mod Pathol 2003; 16(1)240A.

   M: Characterization of bone marrow lymphoid aggregates in follicular lymphoma treated
   with [131]I anti-B1 antibody. Poster presentation, United States and Canadian Academy of Pathology

4. Selby DM, Ross CW, Finn WG, Valdez R, Schnitzer B: CD10 and cyclin D1 expression in
   hairy cell leukemia. Poster presentation, United States and Canadian Academy of Pathology

5. Selby D, Valdez R, Schnitzer B, Ross CW, Finn WG. Diagnostic criteria for acute
DIANE ROULSTON, Ph.D.  
CLINICAL ASSISTANT PROFESSOR  
DEPARTMENT OF PATHOLOGY  

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003  

I. CLINICAL ACTIVITIES:  

A. Director, Clinical Cytogenetics Laboratory  

II. TEACHING ACTIVITIES:  

A. House Officers and Fellows  
1. Rotations in Cytogenetics  
   a. Pathology residents (N=6)  
   b. Hematopathology fellows (N=3)  
   c. Genetics fellows (N=2)  
   d. Hematology/Oncology fellows (N=2)  
B. Clinical Cytogenetics teaching  
1. Abnormal Cytogenetics Case Conference (Biweekly) for technologists, residents, fellows, and faculty  
2. Leukemia Conference (Biweekly)  
3. Pediatric Genetics Post-clinic Conference (Weekly)  
4. Joint Genetics Conference (Monthly)  
5. Teratology Conference (Weekly)  
6. Pediatric Tumor Conference (4 cases)  
7. BMT Morbidity & Mortality Conference (1 case)  
8. Hematology Conference (2 cases)  
9. Clinical Pathology Grand Rounds  
   a. “Cytogenetics of Hematologic Malignant Diseases” 2/21/03  

III. RESEARCH ACTIVITIES:  

A. N/A  

IV. ADMINISTRATIVE ACTIVITIES:  

DEPARTMENTAL:  

A. Director, Clinical Cytogenetics Laboratory  
B. Interviewer  
   1. Pathology Residency Candidates  
   2. Hematopathology Fellow Candidates  

UNIVERSITY OF MICHIGAN:  

A. Interviewer  
   1. Clinical Genetics Residency/Fellowship Candidates
REGIONAL AND NATIONAL:

A. American Board of Medical Genetics
   2. Fellow, American College of Medical Genetics
   3. Peer Reviews: Oncogene, Blood
B. Children's Oncology Group (COG)
   1. Cytogenetics Committee member: review cases for national study group
   2. Director of an Approved Laboratory; submit clinical cases for review
C. Southwest Oncology Group (SWOG)
D. Director of an Approved Laboratory; submit cases for review

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ABSTRACTS:

I. CLINICAL ACTIVITIES:

A. Consultant, pediatric surgical pathology, full time
B. Consultant, pediatric autopsy pathology, full time
C. Consultant, Teratology histopathology, full time
D. Diagnostic Hematopathology, 1-2 weeks/month
E. Medical Director, Special Studies Laboratory (see separate report)
F. Pathology co-ordinator, Children’s Oncology Group cases
G. Consultant, placental pathology, as needed

II. TEACHING ACTIVITIES:

A. Medical Students
   1. M2 Pathology Laboratory (~32 hours)

B. Dental Students
   1. Pathology Lecture and Laboratory (~3 hours)

C. Pathology House Officers:
   1. Pathology Consult Conferences, Rhabdomyosarcoma, Spindle cell neoplasms (2 hours)
   2. Pathology Teaching Conferences, Neuroblastoma (1 hour)
   3. Hematopathology In House Signout (~1 week per month, ~ 15 hours per month)
   4. Pediatric Autopsy Pathology cases and signout (up to 1 hour per week)

D. Interdepartmental:
   1. Lymphoma Conference (2 hours per month)
   2. Pediatric GI Pathology Case Conference (2 hours per month)
   3. Pediatric GI Pathology Teaching Conference (2 hours per month)
   4. Pediatric Hematology Oncology Fellow Pathology Tutorials (2 hours per month)
   5. Pediatric Hematology Oncology Wednesday Morning Teaching Conference (1 hour per month)
   6. Pediatric Hematology Oncology Tumor Board (2 hours per month)
   7. Pediatric Surgery, Radiology, Pathology Conference (1 hour per month)
   8. Pathology contributor for Pediatric Surgery, Radiology, Pathology Conference teaching case web presentations, Pediatric Surgery internal website (http://www.surgery.med.umich.edu/i/peds/Internal_site.htm)
   9. Pediatric Morbidity & Mortality Conference (1 hour per quarter)
   10. Pediatric Pulmonology Conference (up to 1 hour per month)
   11. Sarcoma Tumor Board (6 hours per month, 1/03 to 7/03)
III. **RESEARCH ACTIVITIES:**

A. Case study of intestinal infantile fibrosarcoma with Drs. Islam and Geiger of Pediatric Surgery (manuscript submitted)

B. Case study of nasopharyngeal neuroblastoma with Drs. Lau and Trobe of Neuro-Ophthalmology (manuscript submitted)

C. Case study of aggressive pediatric hepatic angiomyolipoma with Drs. McKinney and Geiger of Pediatric Surgery (manuscript in preparation)

D. Series report on radiology-pathology correlation in pediatric myofibroma with Dr. Hernandez of Pediatric Radiology.

E. Collaborator in ongoing studies of neuroblastoma with Dr. Castle of Pediatric Hematology Oncology

IV. **ADMINISTRATIVE ACTIVITIES:**

A. Executive Committee, Mott Hospital

V. **PUBLICATIONS:**

I. CLINICAL ACTIVITIES:

A. Professor of Internal Medicine.
B. Professor of Pathology.
C. Director, Coagulation Laboratory

II. TEACHING ACTIVITIES (Department of Pathology):

A. Pathology House Officers:
   1. Responsible during the current academic year for teaching activities for the following:
      a. Residents participated in twice weekly sign-out rounds by laboratory direct of specialized coagulation testing.
      b. Formal lecture for 4th year medical student elective clinical pathology course.

B. Medical School: M2 Hematology Course Director

III. RESEARCH DESCRIPTION

A. Dr. Schmaier’s major investigative work is on the physiology and function of the plasma kallikrein/kinin system (KKS). The Schmaier laboratory made a fundamental discovery that the endothelial cell enzyme prolylcarboxypeptidase (PRCP) activates plasma prekallikrein when bound to high molecular weight kininogen (JBC 277:17962-17969, 2002). This year we have prepared a recombinant PRCP and examined its biochemistry. We have also prepared PRCP KO mice and are starting to examine their physiology. Other mouse models have been developed to determine if the plasma kallikrein/kinin system is a physiologic counterbalance of the renin angiotensin system (Am J Physiol 285:R1, 2003).

B. Second, the research efforts to develop a novel class of selective inhibitors of Î²-thrombin activation of platelet have made good progress. An agent termed “Thrombostatin™” has been developed as an inhibitor of Î²-thrombin cleaving the cloned thrombin receptors, PAR1. The mechanism of Thrombostatin™ as a binder to the thrombin cleavage site on protease activated receptor 1 (PAR1) and the active site of thrombin has been defined (Am J Physiol 285:H183, 2003). Studies examining the interaction of Thrombostatin™ with protease activated receptor 4 (PAR4) are also underway.
IV. HONORS & AWARDS:

None

V. IMPORTANT LECTURES:

1. 9/12/02: Michigan Association of Blood Banks, Romulus MI, “New Therapeutic Products for the Management Coagulopathies”
2. 11/15/02: Dade Symposium, Ann Arbor, MI., “New Anti-Platelet and Anti-Coagulant Drugs And the Assays to Monitor Them”
3. 12/7/02: American Society of Hematology: Grantsmanship Workshop, Philadelphia, PA, “Mock Study Section and Management of an NIH Grant Rejection”
4. 12/8/02: American Society of Hematology: Subcommittee of Clinical Laboratory Hematology, Chairman”Translating Genomics and Proteomics into the Clinical Laboratory”
5. 12/8/02: American Society of Hematology: Oral Abstract Presentation; “Reduced Rate of Bradykinin Metabolism Protects the Mouse from Thrombosis”
9. 6/10/03: Division of Clinical Pharmacology, Department of Internal Medicine, Vanderbilt University, Nashville, TN “The Plasma Kallikrein/Kinin System Interacts with the Renin Angiotensin System”

VI. NATIONAL OR REGIONAL COMMITTEE ASSIGNMENTS:

1. Chairman: Scientific Subcommittee on Clinical Laboratory Hematology, American Society of Hematology, 2002
2. Central Society for Clinical Research: Hematology/Oncology Subspeciality Chairman
3. NASCOLA: North American Specialized Coagulation Laboratory Association – Vice President & Executive Committee

VII. INDIVIDUAL EDITORIAL BOARDS:

1. Editorial Board: Thrombosis and Haemostasis, Section Editor

VIII. NIH STUDY SECTIONS OR OTHER FEDERAL ADVISORY BOARDS:

1. NIH NHLBI: PPG Review Committee, 2002
2. NIH NHLBI: ZRG1 SSS-0 10B and SSS-0 12B Special Emphasis Panel Study Section, 2001-2004
IX. PEER-REVIEWED PUBLICATIONS:


REVIEW PAPERS


BOOKS:


PATENTS:


2. Schmaier, A.H. and Hasan, A.A.K. Synthetic Peptide Analogs of Arg-Pro-Pro-Gly-Phe As Selective Inhibitors of Thrombin and Thrombin Activation of Protease Activated Receptors 1 And 4. (pending), Submitted 5/1/03

X. CURRENT GRANT SUPPORT

1. PO1-HL57346, 2003-2008, “Molecular Genetics of Coagulation Disorders”, D. Ginsburg, P.I. Core A. ($750,000 Direct Costs to Dr. Schmaier)


3. University of Michigan ($344,976 Total Costs to Dr. Schmaier at U of M subcontract)


I. **CLINICAL ACTIVITIES:**

A. Director, Hematopathology Fellowship Training Program  
B. Diagnostic Surgical Pathology, Hematopathology (12 months).  
C. Diagnostic Hematopathology Consultant, Veterans Administration Hospital.  
D. Diagnostic Hematopathology of M-Labs clients.  
E. Consultant for external and transfer Hematopathology cases.  
F. 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, lymphomas, and benign lymphadenopathy.

III. **RESEARCH ACTIVITIES:**

**SPONSORED SUPPORT:**

None.

IV. **ADMINISTRATIVE ACTIVITIES:**

**DEPARTMENTAL:**

A. Diagnostic Surgical Pathology, Hematopathology.  
B. Diagnostic Clinical Pathology, Hematology.
MEDICAL SCHOOL/HOSPITALS:
A. Director of Hematopathology Fellowship Training Program

REGIONAL AND NATIONAL:
A. Society for Hematopathology, Executive Committee
   1. Past President.
B. Children's Cancer Study Group: Review of in-house cases of lymphoma cases.
C. Member, Hematology Workshop Review Committee, American Society of Clinical Pathologists.
D. Hematology Planning Committee, American Society of Clinical Pathologists.
E. Bylaws Committee, Society for Hematopathology.
F. Chair, Hematology Check-Path Committee, American Society of Clinical Pathologists.

V. OTHER RELEVANT ACTIVITIES:

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

INVITED LECTURES/SEMINARS:
2. "Visiting Professor" Department of Pathology, University of Texas, Southwestern Medical Center, Dallas TX, February 2003.
3. "Visiting Professor" Department of Pathology, Yale University, New Haven, CT, April 2003.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

220

ARTICLES SUBMITTED FOR PUBLICATION:

BOOKS AND CHAPTERS IN BOOKS:


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

RAJAL B. SHAH, M.D.,
CLINICAL ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Room #1 and 2 Surgical Pathology sign-out, 9 weeks/year
B. GU surgical subspeciality sign-out, 22 weeks/year
C. Genitourinary transfer cases (TS), daily, 12 months
D. GU consultation service, daily, 12 months
E. Participation in Urology Tumor Board and Grand Rounds, biweekly, 12 months
F. Rapid warm autopsies for men with advanced prostate cancers, 24/7 availability, 12 months
G. Backup coverage of Nephropathology service

II. TEACHING ACTIVITIES:

A. Residents didactic Anatomic Pathology Lectures, 2/year
B. Residents Consultation Conferences, 2/year
C. GU fellow and pathology resident training, daily, 12 months
D. Urology resident pathology lectures, monthly, 12 months
E. M2-Renal Sequence and Reproductive Sequence Lectures, 3/year
F. Laboratory Instructor, M2 GU/Renal Sequence Lab

III. RESEARCH ACTIVITIES:

1. Co-director for Prostate Cancer SPORE Tissue Core
2. Validation of Tissue Microarrays for Research, 12 months.

SPONSORED SUPPORT:

University of Michigan Prostate SPORE (Specialized Program for Research Excellence) Tissue Core Grant (Co-director tissue core)
Analysis of 8p loss in Human Prostate Cancer- Co Investigator, Ro1, 5RO1 CA 60948-08, (JA Macoska, PI), 4/01/01-3/31/05
Erb Signaling in Prostate Cancer Progression- Co Investigator, DRDA 1234, UMCC 1234; CRC 1234 E
PROJECTS UNDER STUDY:

A. Prostate Carcinoma with Predominant Foamy Features: Does it demonstrate an Aggressive Molecular Phenotype?
B. Utility of Basal Cell Cocktail (p63+34betaE12) in the Diagnosis of Atypical Prostate Glandular Proliferations
C. Comparison of Monoclonal Antibody (P504S) and Polyclonal Antibody to α-Methylacyl-CoA Racemase in Benign, Atypical and Malignant Prostate Tissues.
D. Use of tissue microarrays to identify markers associated with response to interleukin-2 in renal cell carcinoma.
E. Elevated α-Methylacyl-CoA Racemase Enzymatic Activity in Prostate Cancer and its Potential Clinical Utility

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. House officer, GU fellow and faculty Candidate Interviews.

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


PRESENTATIONS:

3. “Comparison of Monoclonal Antibody (P504S) and Polyclonal Antibody to \( \alpha \)-Methylacyl-CoA Racemase in Benign, Atypical and Malignant Prostate Tissues”. United and Canadian Academy of Pathology, Washington D.C., March, 2003


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


3. Kunju Lakshmi, Rubin Mark, Shen Ronglai, Ingold Collette, Chimaiyan Arul and Shah Rajal. Comparison of Monoclonal Antibody (P504S) and Polyclonal Antibody to \( \alpha \)-Methylacyl-CoA Racemase in Benign, Atypical and Malignant Prostate Tissues. Modern Pathol, 16(1): 718, Jan 2003


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Surgical Pathology Coverage of M-Labs cases, including most cases from:
   1. University of Michigan Health Service, non-dermatology cases, Ann Arbor, Michigan.
   2. Forest Health Medical Center, Ypsilanti, Michigan.
   3. Other various clients including numerous satellite sites and University acquired practices.

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

C. Clinical Pathology consults for M-Labs clients.

D. Surgical Pathology "Quickie" Anatomic Pathology consults for pathologists at M-Labs client hospitals and others.

II. TEACHING ACTIVITIES:

A. Review of microscopic material with residents in interesting M Labs surgical pathology cases.

III. RESEARCH ACTIVITIES:

None.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Michigan Health Corporation representative to Joint Venture Hospital Labs (JVHL).

B. Director, M-Labs:
   1. Provide leadership for and participate in planning, marketing, and implementation of M-Labs programs.
   2. Growth. In FY 2003, M Labs added 16 new physician offices and specialty service practices to our client list. These now number in 143 offices. The majority of these are related to our contract to provide coverage to MCare patients. There were no new full reference laboratory accounts. No contracts for services were terminated.
   
   This fiscal year, gross billings for clinical pathology services increased by 29% and gross billing for anatomic pathology services increased by 21%. Total
combined expected revenue from CP and AP billing increased by 27% over our last fiscal year. 
M Labs submitted no proposals to prospective new clients during FY2003. 
The department of Pathology rejected business opportunities to provide dermatopathology services to 5 dermatology practices.

3. Managed Care Activities
We have successfully renegotiated our contract of 4/1/01 M Care to provide outpatient lab services for all groups and products for M Care's commercial and Medicare products. M Labs prepares quarterly QA reports on lab services for M Care's QA department and have conducted a Physician Satisfaction Survey for M Labs subcontracted providers and reported the results to M Care. We assist M Care with resolution of laboratory service issues. We are actively engaged in contracting for delivery of HEDIS data for M Care to assist them in meeting requirements of the NCQA.

4. Networks. MLabs is a member of 2 laboratory networks, Great Lakes Laboratory Network (GLN) which consists of 28 hospital laboratories, predominantly in the western and northern parts of Michigan, and Joint Venture Hospital Laboratories (JVHL) which has grown to include 9 equity members and 72 participating member laboratories located in Michigan. JVHL has contracts for laboratory services with 14 managed care organizations including BCN.
I serve on the JVHL Executive committee that is striving to improve the financial rewards to its provider members, including UMHS, by reducing "leakage" to non-contracted providers and increasing reimbursement for contracted services. MLabs coordinates the Pathology Department's issues concerning contractual obligations to JVHL and GLN. These include such items as BCN critical value list and HEDIS reporting.

C. Member Department of Pathology Incentive Committee.
D. Member, University of Michigan Networking Leads Committee.
E. Alternate Member, Peer Review Committee and Executive Committee, Forest Health Medical Center.

V. OTHER RELEVANT ACTIVITIES:
None.

VI. PUBLICATIONS:
None.
LISA R. SMITH, PH.D
CLINICAL ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
   A. Assistant Director, Cytogenetics Laboratory

II. TEACHING ACTIVITIES:
   A. House Officers and Fellows
      1. Rotations in Cytogenetics
         a. Pathology Fellows (N=3)
         b. Pathology Residents (N=6)
         c. Pediatric/Medical Genetics Residents (N=1)
         d. Hematology/Oncology Fellows (N=1)
   B. Clinical Cytogenetics
      1. Abnormal Cytogenetics Case Conference (Biweekly)--- technologists, residents, and fellows
      2. Leukemia Conference (Biweekly)
      3. Pediatric Genetics Post-clinic Conference (Weekly)
      4. Joint Genetics Conference (Monthly)
      5. Clinical Pathology Grand Rounds
         a. "Cytogenetics of Solid Tumors" 02/28/03

III. RESEARCH ACTIVITIES:
    1. Paraffin-embedded tumor fluorescence in situ hybridization (PET FISH)

PROJECTS UNDER STUDY:
    1. "Study of origin and role of fibrotic tissue in the development of Obliterative Bronchiolitis"
    2. PI: Vibha Lama, MD; Dept of Pulmonary and Critical Care + 8 Co-PI

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A. Assistant Director, Clinical Cytogenetics Laboratory
   B. Interviewer for Pathology Residency Candidates
V. PUBLICATIONS:

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


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 MENTOR (200+ contact hours):

1. Rughi Okuyama, M.D., post-doctoral fellow (4/02-present) and Ronald Craig, PhD, Research Associate (1/91-present): Dr. Okuyama’s work focused on T-cell trafficking during active cellular immunotherapy for metastatic cancer. In collaboration with Dr. Craig, he established a treatment model using cultured dendritic cells that permits study of T-cell trafficking from vaccine-primed lymph nodes to the tumor sites. He showed that ovalbumin-specific, endogenous T-lymphoblasts can be detected in tumor-draining and vaccine-primed lymph nodes using an ovalbumin-peptide-specific (OVA-peptide), Class I restricted tetramer and flow cytometry. In conjunction with B16 melanoma cells engineered to express ovalbumin, they will evaluate the trafficking of OVA-specific T-cells from vaccine-primed lymph nodes into tumors after blockade of pertinent adhesion receptors and chemokines. In this manner, they will evaluate trafficking efficiency and dissect the recruitment pathways used by circulating tumor-suppressive T-cells during immunotherapy.

2. Randall Knibbs, Ph.D., Research Scientist (1/94-present) - Dr. Knibbs assumed primary responsibility for the project exploring the trafficking and priming efficiency of cultured dendritic cells that overexpress lymph node homing receptors. Studies to date indicate that one can augment trafficking from subcutaneous inoculation sites to draining lymph nodes using this approach. These data, if confirmed, will provide insight into the mechanism of DC trafficking from tissues into regional lymph nodes. Trafficking studies with highly enriched populations of transduced cells are planned. In addition, the priming activities of homing receptor transduced, peptide and/or tumor-lysate pulsed DC will be compared to standard DC. Finally, the ability of homing receptor transduced DC to suppress established subcutaneous tumors will be compared to standard DC for both OVA-transduced and native murine melanomas.

3. Joseph Skitzki, MD (8/01-7/03) post-doctoral fellow – Dr. Skitzki completed his post-doctoral training this year under the Surgical Oncology Training Grant.
His work focused on the trafficking and clinical activity of infused, tumor-reactive T-lymphoblasts during adoptive cellular immunotherapy for metastatic cancer. He showed that trafficking into tumor-bearing tissues occurred immediately after infusion and subsequently from donor cells proliferating in secondary lymphoid organs. Importantly, the infused cells that entered tumors within 48 hours accounted for >90% of the tumor suppressive activity measured at two-weeks indicating that the initial influx into metastatic lesions is crucial to clinical activity. Finally, he showed that the selectin family of adhesion receptors is essential for optimal suppression of subcutaneous tumor-implants by adoptive immunotherapy. These studies were invited for oral presentation at three national meetings and two manuscripts covering the work are currently under development. In addition, Dr. Skitzki received the outstanding young investigator award (chosen from > 40 participants) after presentation of his work at the Med-West Regional Surgery Research Symposium.

4. **Undergraduate and graduate research assistants:** Mentored two undergraduate students in the laboratory participating in work/study programs and one rotating graduate student.

B. **Co-director, lecturer and seminar leader, M2 Hematology Sequence** (16 contact hours + 120 hours administration/development).

1. Compiled “M2 HEMATOLOGY SEQUENCE SYLLABUS ONLINE” CD. This CD provided a comprehensive, computer-based tool for reviewing all printed and visual course content. It consisted of an outline of major topics linked to the relevant sections of the syllabus, PowerPoint Lectures and Web content.

2. Designed, authored and implemented the 6th generation of The Virtual Microscope-Hematopathology Interactive Syllabus (http://141.214.6.12/virtualheme99). The site incorporates high resolution (1900 X 1300 pixel) photomicrographs of blood smears, bone-marrow aspirates and lymph node sections in an interactive laboratory syllabus. Unique software allows user to pan across low-power images then magnify regions of interest. Questions (and answers) covering the pathophysiology, diagnosis and treatment of the hematologic malignancies are incorporated into the exercises. This "active" learning experience captures the essentials of the in-class laboratory exercises providing students with a flexible tool for preview and review. 1999 Computerworld-Smithsonian Award Finalist.

C. **Director, General Pathology Laboratory Course for Dental Students and co-director, General Pathology Lecture Course** (30 contact hours + 60 hours administration/development): Designed, authored and implemented 6th generation of The Virtual Microscope- Interactive web-based syllabus for General and Organ systems pathology for dental students (D2). URL= http://141.214.6.12/cyberscope631/ This site incorporates several hundred, high resolution (1900 X 1300 pixel) photographs of gross and microscopic specimens into an interactive laboratory syllabus. 1999 Computerworld-Smithsonian Award Finalist.

D. **M1 Host Defense Sequence** (4 contact + 20 development): Lectured and developed CD-based courseware for lecture syllabus and case presentations.

E. **Advanced Topics in Immunology** (15 contact + 50 administration/development): Co-chaired (with Nicholas Lukacs, PhD) a graduate seminar series on Leukocyte Trafficking.
Graduate students prepared presentations in conjunction with the co-chairs using selected primary sources and reviews.

F. Mini Medical School Lecture Series—Gerald Abrams, Director (1 contact hour + 20 hours development): Developed animated presentation on the Immune System for educated lay persons. Presented at the Mini Medical School Session Spring, 2003. Received commendation from the Dean based on evaluation by the Director and participants.

G. Resident Teaching: (30 contact hours)
1. Flow cytometry service, case sign-out (3 months)
2. Autopsy service, weekend coverage

III. RESEARCH ACTIVITIES:

A. Principal Investigator (Kevin Mcdonagh, co-investigator)- Retroviral transgene induction of homing receptors on dendritic cells used for active immunotherapy: impact on trafficking, antigen priming and tumor suppression. University of Michigan Comprehensive Cancer Center Innovation Award Program., $50,000 (direct); July 2003-June 2004.

B. Principal Investigator (Kevin Mcdonagh, co-investigator)- Lymphoma/leukemia therapies using dendritic cells engineered to overexpress lymph-node homing receptors. The Leukemia & Lymphoma Society Translational Research Program. $130,000 (direct + indirect, annual); Oct 2003-Sept 2006.

C. Principal Investigator- T Cell Trafficking in Adoptive Cellular Immunotherapy; NIH, R01CA73059, 30% effort, $196,000 (annual, direct); April 2001 -Mar 2006

D. Co-investigator on Project 2 and Co-director of the Immunology Core (with J. Mule, B. Redman and A.E. Chang, Surgical Oncology Division, University of Michigan)- Cellular Vaccines for Cancer Immunotherapy, NIH P01CA59327, 15% effort, $1,000,000 (annual, direct); June 2001-April 2006.

E. Co-investigator (with B. Redman and A. E. Chang, Surgical Oncology Division, University of Michigan)- T-Cell Therapy of Human Renal Cell Cancer; NIH R01CA69102, $250,000 (annual, direct), 10% effort, April 2001 -Mar 2006.

F. Co-investigator (with A. E. Chang, Surgical Oncology Division, University of Michigan)-"T-cell Activation for Cancer Immunotherapy"; NIH R01CA82529, $211,282 (annual, direct); 5% effort, Jul 1999-June 2004.

G. Co-investigator (with B. Richardson, Rheumatology Division, University of Michigan)- “Gender specific T-cell homing and autoimmunity”; NIH, R01AI42753, 0% effort, $187,000 (annual, direct); Apr 1998-Mar 2003.

H. Trainer on three funded pre-/post-doctoral training grants: Translational Immunology (J. Mule, PI); Surgery Oncology Research (A.E. Chang, PI) and Immunopathology (R. Miller, PI).
IV. ADMINISTRATIVE ACTIVITIES:

A. Faculty Director, Medical Student Portal Project (200+ hours administration, development, implementation):
   1. Initiated and co-directed (with Chris Chapman, Assistant Media Manager LRC) the development of a web-based Medical School Portal that provides tools for course design, management and delivery of the Medical School curriculum. This collaboration involved staff from the Medical School Learning Resource Center, Medical School Information Systems and the Media Union and culminated in the successful release of the application to the Medical School community on August 6th, 2003. The Portal facilitates faculty collaboration during course design, provides students with a flexible on-line academic calendar directly linked to essential educational resources and promotes on-line discussions within the Medical School community. When fully implemented, an “assignment” tool will help students and faculty track student-directed learning activities and a “search/retrieve” tool will help users find and retrieve educational resources when preparing for boards, assembling case presentations or developing courses.
   2. Provided training for faculty developing content for the Medical Student Portal.
   3. Coordinated long-range planning for Medical School Portal Project.

B. Director, General Pathology Laboratory Course for Dental Students (Pathology 631) and co-director, General Pathology Lecture Course (Pathology 630) - see educational activities.

C. Co-Director, Hematology Sequence in Component II - see educational activities.

D. Director of Research Flow Cytometry Laboratory and Co-Director of Clinical Flow Cytometry Laboratory - managed the development of new software to interface clinical flow cytometry instruments with the Laboratory Information System (Cerner Millenium). Participated in the consolidation of Clinical Flow Cytometry and Hematology Laboratories. Managed the operation of the research flow cytometry instrument.

E. Member, Medical School Curriculum Review Group

F. Member, Abnormal Organ Systems Task Force for Curriculum Redesign

G. Member, Medical School Admissions Committees

H. Member, Pathology/Immunology Graduate Program Admissions Committee

V. OTHER RELEVANT ACTIVITIES:

A. EDITORIAL ACTIVITIES:
   3. Journal of Immunology (Associate Editor).
VI. PUBLICATIONS:

A. ARTICLES IN PEER REVIEWED PUBLICATIONS:


B. BOOK CHAPTERS:


C. ABSTRACTS, BOOK REVIEWS, LETTERS TO THE EDITOR, MISCELLANEOUS UNREFFEREE PUBLICATIONS:

1. LM Stoolman, Alvin Schmaier and Sequence Faculty, 2002. M2 HEMATOLOGY SEQUENCE SYLLABUS ONLINE CD.


5. **LM Stoolman.** 1999-2002 (updated annually). Leukocyte Pathophysiology and Leukocyte Trafficking. Powerpoint lecture outlines including high-resolution images, video clips and animations used by Medical Students (Host Defense Sequence, year 1), Dental Students (General Pathology Course, year 2) and Graduate Students (Pathology 581).

LYNDON SU, M.D.
CLINICAL ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. **CLINICAL ACTIVITIES:**
   A. Dermatopathology Service – (University Hospital and Transfer cases) – 12 months
   B. Dermatopathology Consultation Service (including personal, M-Labs, and Veterans Administration Hospital consultations) – 12 months

II. **TEACHING ACTIVITIES:**
   A. Medical Students:
      1. Medical students – (on elective rotation in dermatopathology)
      2. Instructor in medical student laboratories
   B. House Officers:
      1. Dermatopathology daily sign-out (dermatology and pathology residents, and medical students)
      2. Review of dermatopathology consultation material
      3. Dermatopathology Teaching conference – (dermatology residents-weekly)
      4. Dermatopathology Teaching conference – (pathology residents-3 per year)
      5. Anatomic Pathology Core Conference – (2 per year)
      6. Anatomic Pathology Consultation Conference – (2 per year)
   C. Diagnostic Conference, Department of Dermatology – (weekly)
   D. Cutaneous T-Cell Lymphoma Conference—(monthly)

III. **RESEARCH ACTIVITIES:**

   **PROJECTS UNDER STUDY:**
   A. Role of apoptosis in melanoma progression and chemoresistance (Dr. Maria Soengas, Dr. Tim Johnson)
   B. M-RNA expression microarray of Merkel cell carcinoma and other neuroendocrine tumors. (Dr. Tom Giordano, Dr. Lina Wasserman)

IV. **ADMINISTRATIVE ACTIVITIES:**

   **DEPARTMENTAL:**
   A. Co-director, Dermatopathology Service

   **REGIONAL AND NATIONAL:**
   A. Ad hoc manuscript reviewer, Journal of Cutaneous Pathology
   B. Ad hoc manuscript reviewer, Journal of the Academy of Dermatology
   C. Ad hoc manuscript reviewer, Cancer
   D. Ad hoc manuscript reviewer, Journal of Pediatrics
   E. Ad hoc manuscript reviewer, American Journal of Dermatopathology
   F. Ad hoc manuscript reviewer, Applied Immunohistochemistry and Molecular Morphology
V. OTHER RELEVANT ACTIVITIES:

VI. PUBLICATIONS:

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


ABSTRACTS AND PRESENTED PAPERS:


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I.  CLINICAL ACTIVITIES:
   A.  None

II. TEACHING ACTIVITIES:
   A.  Instructor, General Pathology for Dental Students and Graduate Students (Pathology 630/580)
   B.  Mentor, graduate student - Lai Ming Lee
   C.  Mentor, NIH Training Grant in Trauma, Burn and Wound Healing Research (T32 GM08616)

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A.  Co-Investigator, "Mechanisms and Prevention of Lung Injury Caused by Mustard Gas" (U.S. DOD)
   B.  Co-Investigator, "Liquid Ventilation in ARDS" (NIH HL-54224)
   D.  Senior Mentor, "Training Grant in Burn, Trauma and Wound Healing Research" (NIH)

PENDING SUPPORT:
   A.  None

PROJECTS UNDER STUDY:
   A.  Lung injury caused by 2-chloroethyl ethyl sulfide.
   B.  Pathomechanisms of ischemia-reperfusion injury.
   C.  Pathophysiologic role of complement activation products in secondary lung injury

IV.  ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
   A.  Interviewed candidates for faculty and postdoctoral positions
   B.  Participation in undergraduate research program
MEDICAL SCHOOL/HOSPITAL:

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

REGIONAL AND NATIONAL:

None

V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/SEMINARS:

Invited Speaker, “Protective effects of antioxidants on half-mustard gas-induced acute lung injury;” US Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland, September 17-18, 2002

EDITORIAL BOARDS:

A. Member Editorial Board, International Immunopharmacology, 1998-present
B. Member Editorial Advisory Board, Immunobiology, 1980- present
C. Reviewer for the following scientific journals:
   1. American Journal of Pathology
   2. American Journal of Physiology
   3. British Journal of Pharmacology
   4. International Immunopharmacology
   5. Journal of Applied Physiology
   6. Journal of Leukocyte Biology

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

3. McClintock SD, Till GO, Smith MG, Ward PA. Liposome-associated antioxidants protect from lung injury caused by 2-chloroethyl ethyl sulfide. (to be submitted)
4. Till GO, McClintock SD, Elford HL, Ward PA. Protective effects of polyhydroxyphenyl compounds on 2-chloroethyl-ethyl-sulfide-induced lung injury (to be submitted)

**BOOKS AND CHAPTERS IN BOOKS:**

None

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

RICCARDO VALDEZ, M.D.
CLINICAL ASSISTANT PROFESSOR OF PATHOLOGY
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002- 30 JUNE 2003

I. CLINICAL ACTIVITIES:

A. Diagnostic Hematopathology (including peripheral blood and body fluid smears).
B. Clinical Hematology Laboratory.
C. Clinical Flow Cytometry Laboratory.
D. Hematopathology Consultation Cases (including M-Labs and Veteran’s Hospital).
E. Tissue Typing/Histocompatibility Laboratory.
F. Diagnostic Heart Transplant Biopsies (ad hoc, 68 cases).
G. Blood Bank, attending coverage (ad hoc, 1 week).

II. TEACHING ACTIVITIES:

A. Medical Students:
   1. Laboratory Instructor, M2 General Pathology Course (32 hours).
   2. Rotation Mentor, M4 Pathology Elective (1 month).
   3. Laboratory Instructor, 2nd year Dental Student Pathology Course (9 hours).
   4. Co-Mentor, M4 Research elective [Michael Axelson] (5 hours)
   5. Faculty Mentor, Latin American-Native American Medical Student Association (5 hours)

B. House Officers:
   1. Sign-out of bone marrow biopsies, aspirate smears, peripheral blood smears, and body fluids in Hematology Laboratory.
   2. Sign-out of lymph node biopsies and review of Hematopathology Consultation material.
   4. Hematopathology case conferences (2).

C. Hematopathology teaching:
   1. Leukemia conference/biweekly.
   2. Lymphoma conference/weekly.
   3. Hematology conference/biweekly.
   4. Multiple myeloma conference.
   5. Hematology/Oncology Morbidity and Mortality Conference.
   6. Internal Medicine Morbidity and Mortality Conference.
   7. Clinical Pathology Grand Rounds (one lecture).
   8. Clinical Pathology Case Conference/weekly.

D. Laboratory Staff:
   1. Hematology Laboratory monthly CME coordinator.
   2. Tissue Typing Laboratory Journal Club.
III. RESEARCH ACTIVITIES:

PROJECTS UNDER STUDY:

A. Gene expression profiling in small B-cell lymphoproliferative disorders and multiple myeloma.
B. Effects of novel hematopoietic malignancy therapies on bone marrow morphology.
C. Immunophenotyping of hematopoietic neoplasms.
D. Characterization of C57 black mouse hematopoiesis and hematolympoid tumors following stem cell transplant (with Dr. Sean Morrison).

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:

A. Tissue Typing/Histocompatibility Laboratory, Director in training.
B. Clinical Pathology Resident Training (coordinator, CPA Resident and Hematopathology Fellowship monthly rotations).
C. Interviewer for pathology residency program.

REGIONAL/NATIONAL:

V. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:

ARTICLES SUBMITTED FOR PUBLICATION:

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


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
   A. None.

II. TEACHING ACTIVITIES:
   A. Mentor for students who worked in my laboratory over the past year, including five post-
      doctoral fellows, one pathology graduate student, one medical student, two SPH graduate
      students, three undergraduate students and two high school students.
   B. Dissertation committee (committee chairman) for Jill Murtha.
   C. Dissertation committee for Yayi Chang.
   D. Thesis committee (committee chairman) for Ashish Lal (MPH degree)
   E. Course director – Pathology 581. Tissue, cellular and molecular basis of disease.
   F. Instructor – Pathology 581 – Tissue, cellular and molecular basis of disease.
   G. Instructor – Pathology 600 – Pathology course for dental students.
   H. Instructor – Pathology 582 – Tissue, cellular and molecular basis of disease
   I. Instructor – Pathology 553 – Cancer Biology

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Principal Investigator, “Retinoids for Diabetic Foot Ulcers.” NIH DK59169.
   B. Principal Investigator, “MMP-3 and acute lung injury.” NIH NHLBI 70979
   C. Principal Investigators, “Novel therapeucfic approach to psoriasis” NIH AR 44767
   D. Principal Investigator, “Co-polymer – “Microcarrier culture system for human influenza
      vaccind production” HIH AI 50315
   E. Principal Investigator on Project 10, “Retinoic Acid and Cells of the Skin,” Johnson and
      Johnson Corporation.
   F. Principal Investigator, “Cell culture, media, microcarrier system for Marek’s Disease
      Vaccine” NIH AI 46876.

PROJECTS UNDER STUDY:
   A. The biology of collagen destruction and repair in aging skin, photodamaged skin and
      diabetic skin.
   B. Role of MMP-3 in acute and chronic lung injury.
C. The development of a microcarrier-based protocols for production of human influenza vaccine and for Marek’s vaccine.
D. Role of EGF receptor function in benign hyperplastic skin disease.
E. Extracellular calcium sensing receptor as the mediator of epithelial cell proliferation and differentiation

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Member, Department of Pathology Advisory Committee on Appointments, Promotions and Tenure.
B. Member, Department of Pathology Graduate Program Committee
C. Member, Pathology Graduate Program Steering Committee
D. Member and chairman – Pathology Graduate Program Curriculum Revision Committee.
E. Member, Department of Pathology Graduate Program Comprehensive Exam Committee.

MEDICAL SCHOOL/HOSPITAL:
A. Member, Medical School Committee on Summer Research Opportunities.
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.
F. Member, University Committee on Use and Care of Animals (UCUCA).
G. Member, Program in Biomedical Sciences (PIBS) Curriculum Committee
H. Member, Program in Biomedical Sciences (PIBS) Admissions Committee
I. Member, Program in Biomedical Sciences (PIBS) Steering Committee

UNIVERSITY:
A. Member, Graduate School Task Force on Non-Academic Misconduct

REGIONAL AND NATIONAL:
A. Editorial Board of Invasion and Metastasis.
B. Manuscript Review for:
   3. Experimental Cell Research.
   5. Journal of Investigative Dermatology.
   6. Laboratory Investigation.
   7. Invasion and Metastasis.
V. OTHER RELEVANT ACTIVITIES:

INVITED LECTURES/PRESENTATIONS:

1. Invited speaker: Hamchung Lecture, National University of Korea, Seoul, Korea, September 14, 2002.
2. Invited speaker, Department of Biological Sciences, University of Indiana, October 15, 2002.
3. Invited speaker, Department of Pathology and Laboratory Medicine, MD Anderson Cancer Center, July 30, 2003.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFERRED JOURNALS:


**BOOKS AND CHAPTERS IN BOOKS:**


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


CLAUDIUS VINCENZ, PhD  
RESEARCH INVESTIGATOR  
DEPARTMENT OF PATHOLOGY  

ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
None.

II. TEACHING ACTIVITIES:
A. Graduate students:
   Michael Zeidler, Student of the "Freie Universität in Berlin, Germany"
B. Courses: Pathology 581: Lectures on cellular pathology; Pathology 582: Module on poly-glutamine expansion disease (4 sessions).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

PENDING:
A. NIH RO1: Molecular analysis of the p75NTR homologue, NRADD

PROJECTS UNDER STUDY:
A. Studies on the biological activities and molecular mechanisms of NRADD, a novel transmembrane protein with a death domain.
B. Proteolytic processing of death receptors by γ-secretase.

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
None

MEDICAL SCHOOL/HOSPITAL:
Member, University of Michigan Cancer Center
Member, University of Michigan Diabetes Research and Training Center
UNIVERSITY OF MICHIGAN:

None

REGIONAL AND NATIONAL:

A. Grant reviews: Italian Association for Cancer Research (Italy)
B. NOW MtC section (Netherlands)

V. OTHER RELEVANT ACTIVITIES:

EDITORIAL BOARDS:

A. Reviewer for the following journals: The Journal of Cell Biology, Journal of Clinical Investigation, Cell Death and Differentiation, Trends in Immunology.

HONORS AND AWARDS:

None

PATENTS:

None

INVITED LECTURES/SEMINARS:

February 2003: Medical College of Ohio

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


BOOKS/CHAPTERS IN BOOKS:

None

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

None
I. CLINICAL ACTIVITIES

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

II. TEACHING ACTIVITIES

A. Post-doctoral fellows (2002-03):
   1. Ren-Feng Guo, M.D.
   2. Neils Reidemann, M.D.
   3. Ines Laudes, M.D.
   4. Cecelia Speyer, Ph.D.
   5. Eric Albrecht, Ph.D.
   6. Thomas Neff, M.D.
   7. Jayne Reuben, Ph.D.
   8. Hungwei Gao, Ph.D.

B. Graduate students
   1. Ms. Yun Jang Man, Winter Semester 2003
   2. Stephanie McGuire, First Semester Medical Student

C. UROP Undergraduate Students:
   1. Nick Rancilio

D. Undergraduate students:
   1. Lecture, College Honors Seminar 250 (LS&A), three hours.

III. RESEARCH ACTIVITIES

SPONSORED SUPPORT

A. Principal Investigator, "Lung Immunopathology" (Training Grant) HL07517, $227,536/yr., (5%) 06/01/96 - 05/31/06

B. Principal Investigator, "Inflammatory Cells and Lung Injury" NIH/NHLBI PO1-HL31963, $246,249 /yr. (25%) $816,953/yr (all projects) 03/01/99 - 02/29/04

C. Principal Investigator; "Lung Injury by Oxygen Metabolites (MERIT) RO1- GM29507 NIH/NIGMS, (20%) $204,700/yr, 07/01/01 - 06/30/05

D. Principal Investigator, "Protective Effects of Anti-C5a in Sepsis," NIH/NIGMS RO1-GM61656, (20%) $204,700/yr; 01/01/02 - 05/31/07
IV. ADMINISTRATIVE ACTIVITIES

DEPARTMENTAL:

A. Chair, Department of Pathology.

MEDICAL SCHOOL/HOSPITAL:

A. Advisory Committee for the Howard Hughes Medical Institute.
B. Cancer Center Executive Committee.
C. Clinical Chairs Council.
D. Conflict of Interest Committee.
E. Conflict of Interest and Commitment Committee
F. Faculty Group Practices Committee
G. Technology Transfer Committee.
H. Geriatric Center Executive Committee.
I. Michigan Eye Bank Research Review Committee.
J. Undergraduate Research Opportunity Program, University of Michigan.
K. University of Michigan Cancer Center Executive Committee.

UNIVERSITY OF MICHIGAN:

A. Michigan League Board of Governors, September, 1997 – June 2003

REGIONAL AND NATIONAL:

A. American Association of Immunologists.
B. American Society for Clinical Investigation.
C. Association of American Physicians.
E. Association of Pathology Chairmen
F. American Association of University Pathologists
G. Institute of Medicine, National Academy of Sciences, July, 1990-present.
H. Michigan Society of Pathologists.
a. Chair and member, Council for Institute of Laboratory Animal Research.
V. OTHER RELEVANT ACTIVITIES

EDITORIAL BOARDS

A. American Journal of Pathology, Editorial Board, 1982-present.
B. American Review of Respiratory Diseases, Consulting Editor, 1977-present.
C. Free Radical Biology & Medicine, Editorial Board, 1995-present.
D. Journal of Clinical Investigation, Consulting Editor.
E. Journal of Experimental and Molecular Biology, 1999 – present
F. Toxicologic Pathology, Editorial Board, 1988-present.

INVITED LECTURES/SEMINARS:

2. Invited Speaker, “Role of C5a and C5aR in Sepsis”; Keystone Symposia; Tahoe City, CA; March 10, 2003.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS


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

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
   A. Director, Division of Clinical Pathology/Clinical Laboratories, May 1993-present.
   B. Director, Clinical Immunopathology Service; September 1989-present.
   C. Microbiology Laboratory; review of peripheral blood parasite smears; July 1996-present.
   D. Molecular Diagnostics Laboratory; signout of cases (3 weeks/year); July 1997-present.
   E. Molecular Diagnostics Laboratory; Interim Director, August 2002-June 2003.
   F. Sendout Laboratory; Director, August 2002-present.

II. TEACHING ACTIVITIES:
   A. "Current Topics in Immunopathology" journal club series: pathology residents, M4 students (44 contact hours).
   B. "Current Management Problems for Pathology Residents" series: pathology residents (15 contact hours).
   C. Clinical Pathology Grand Rounds:
      1. "Laboratory diagnosis of amyloidosis" (11/22/02).
      2. "Cases and images in immunopathology" (11/29/02).
   D. Immunopathology signout: pathology residents, M-4 medical students, EMU medical technology students (three times/week; 48 weeks/year).
   E. Immunopathology component of Block B (Clinical Pathology); ad hoc topical reviews: pathology residents (63 contact hours).
   F. M-1 Host Defense sequence; "Autoimmunity and tumor immunology" (5/18/03); (1 contact hour); Case Studies (5/17/03; 5/18/03); (2 contact hours).
   G. Supervision of Research activities for:
      1. Anjali Desai, Ph.D. (Research Investigator); (6/15/96-present).
      2. Kevin Coles (2003 UM graduate); (5/03-present).

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:

PROJECTS UNDER STUDY:

A. Role of cellular redox status and neutrophil-derived mediators in MCP-1-mediated pulmonary granulomatous vasculitis.
B. Modulation of proinflammatory endothelial and smooth muscle cell functions by erythropoietin, reactive oxygen intermediates, and reactive nitrogen intermediates.
C. Pathophysiology role of oxidants in uremia and its complications (collaboration with Rajiv Saran, M.D., Department of Internal Medicine, University of Michigan Medical School).
D. Ischemia-reperfusion injury in perinatal rat brain (collaboration with Faye Silverstein, M.D., Departments of Pediatrics and Neurology, University of Michigan Medical School).
IV. **ADMINISTRATIVE ACTIVITIES:**

**MEDICAL SCHOOL:**

A. Member, Operations Improvement Committee, University of Michigan Health System 2000-present.
B. Member, Professional Billing Compliance Committee, University of Michigan Medical School 1999-present.
C. Member, Executive Committee, University of Michigan Medical School, 1999-present.
D. Finance Subcommittee, advisory to Faculty Group Practice (FGP) Executive Committee, 1997-2003.
E. Member, Professional Billing Compliance Committee, 1999-present.
F. Dean’s Advisory Committee (*ad hoc* substitute for Dr. Peter Ward), 1994-present.
G. Clinical Council (*ad hoc* substitute for Dr. Peter Ward), 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, Department of Pathology Quality Assurance Committee, 1993-present.
E. Clinical Associate and Advisory Committee for Medical Technology Program, Eastern Michigan University, 1993-present.
F. Chairman, Category Risk II Faculty Salary Planning Committee, Department of Pathology, 1996-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.
  22. Experimental Lung Research.
  24. Clinical Infectious Diseases.
27. Biological Signals.
28. Metabolism.
29. Molecular Medicine Today.
33. Kidney International

B. Member, Test Committee for Clinical Pathology, American Board of Pathology, 1999-present.
C. Member, Council for Diagnostic Immunology and Molecular Pathology, American Society of Clinical Pathologists, 1998-present.
D. Member, Diagnostic Immunology Resource Committee, College of American Pathologist, 2000-present.

V. INVITED LECTURES/SEMINARS:

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED FOR PUBLICATION:


BOOKS/CHAPTERS IN BOOKS:


ABSTRACTS, BOOK REVIEWS, PUBLISHED LETTERS TO THE EDITOR, MISCELLANEOUS PUBLICATIONS IN UNREFERRED JOURNALS:
THOMAS WILSON, M.D., Ph.D.
ASSISTANT PROFESSOR
DEPARTMENT OF PATHOLOGY

ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. CLINICAL ACTIVITIES:
   A. Began active role as Assistant Director of the Molecular Diagnostics laboratory. Working under the guidance of Dr. John Thorson, I will assist with technology/test development, and provide backup with regards to sign-out, etc.

II. TEACHING ACTIVITIES:
   A. Mentor, postdoctoral fellows: Rajashree Deshpande, Anandi Srinivasan, Leana Topper
   B. Mentor, graduate student fellows: Phil Palmbos (MSTP, CMB), James Daley (CMB)
   C. Mentor, rotation student: Fred Derheimer (PIBS)
   D. Mentor, undergraduate students: Anthony Iacco, Monica Heger
   E. Member, thesis committees: Tammy Morrish (Human Genetics), Jonathan Rios-Doria (CMB), Marc Prindle (CMB), Anne Casper (Human Genetics), Hui-Min Tseng (University of Texas Health Science Center at San Antonio, Molecular Medicine Program)
   F. Member, preliminary examination committee: Matt Whorton (Pharmacology)
   G. Member, Cellular and Molecular Biology Training Program
   H. Path 581, 2 lectures
   I. Path 582, 1 lecture, 1 discussion section
   J. Path 850, Coursemaster, research seminar series for graduate students
   K. Two week full-time course in molecular biology and DNA repair, University of Michigan Postdoctoral Research Training Program

III. RESEARCH ACTIVITIES:

SPONSORED SUPPORT:
   A. Principal Investigator, "Disposition of DNA Double-Strand Breaks Among Multiple Pathways of Repair", Pew Scholars Program in the Biomedical Sciences (8%), $60,000/year ($240,000/four years), 7/1/2000-6/30/2004.
   C. Principal Investigator, “Probing the mechanisms of gemcitabine action using a yeast genomic approach”, University of Michigan Comprehensive Cancer Center Munn Research Grant (0%, no salary support), $15,000/year ($15,000/one year), 9/1/2001-8/31/2002.
Department of Pathology Annual Report


PENDING:

IV. ADMINISTRATIVE ACTIVITIES:

DEPARTMENTAL:
A. Pathology student recruitment activities (lunch, poster session)
B. Chair and organizer, Pathology Research Seminar Series
C. Member, Pathology Graduate Program Curriculum Committee

MEDICAL SCHOOL/HOSPITAL:
A. Member, MSTP Career Advisory Panel
B. MSTP student interviews
C. Faculty candidate interviews/recruitment: Eric Brown (BSSP), Hui Sun (BSSP, MCDB), Harmit Malik (BSSP, Human Genetics), JoAnn Sekiguchi (BSSP, Molecular Medicine), David Ferguson (BSSP, Pathology), Christine Canman (Pharmacology), Paul Andreassen (Pharmacology), Jim Ford (Pharmacology)

UNIVERSITY OF MICHIGAN:
A. PIBS student interviews and recruitment dinners
B. Member, Cellular and Molecular Biology Program Steering Committee

REGIONAL AND NATIONAL:
A. Pew Scholars Annual Meeting Planning Committee

V. OTHER RELEVANT ACTIVITIES:
A. Manuscript review, Genetics, MCB, TIBS
B. Biological Sciences Scholars Program, University of Michigan
C. Pew Scholars Program in the Biomedical Sciences, Pew Charitable Trusts
D. Member, Michigan Comprehensive Cancer Center

EDITORIAL BOARDS:
A. None
HONORS AND AWARDS

A. Invited participant (one of ~30 junior scientists invited from the United States) in the National Academy of Sciences 5th Annual Chinese-American Beckman Frontiers of Science Symposium, a multi-disciplinary event covering topics as diverse as galactic science to oceanography to biomedicine. Represented the fields of molecular biology/genetics.

PATENTS:

A. None

INVITED LECTURES/SEMINARS:

1. Systematic genetics analysis of nonhomologous end-joining. Department of Pathology, University of Michigan, Ann Arbor, MI, September 16, 2002
2. Strand breaks – not simple anymore! Department of Radiation Oncology, University of Michigan, Ann Arbor, MI, November 15, 2002.

VI. PUBLICATIONS:

ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS:


ARTICLES SUBMITTED OR IN PREPARATION:

**BOOKS/CHAPTERS IN BOOKS:**

1. None

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


SECTION REPORTS
ANATOMIC PATHOLOGY
DIVISION OF ANATOMIC PATHOLOGY

ANNUAL REPORT
1 JULY 2002 - 30 JUNE 2003

The Division of Anatomic Pathology continues to enjoy a strong national and international academic reputation while providing a breadth of expertise in support of the clinical, research and educational programs of the University of Michigan Health System, Medical School, and University. This past year three new faculty have joined the Division, Drs. Kunju, Pu, and Lucas. These faculty bring additional expertise in general surgical pathology as well as sub-specialty expertise in genitourinary pathology, cytology, and bone/soft tissue pathology, respectively.

Faculty research programs and extramural support continues to increase especially in programmatic areas associated with the Cancer Center, GI pathology and SPORE in Urologic Disease. There continues to be expansion of core research facilities directed by faculty in the division including; tissue microarrays, laser capture microdissection, histology/immunoperoxidase/FISH, ADRC and tissue procurement. Several faculty have expanded collaborations with biomedical research companies including Genetech (Calif.) and Parke-Davis (Mich.).

Three senior residents completed surgical pathology fellowships. Six additional house officers completed fellowship training in cytopathology, urologic pathology, and hematopathology. All found excellent positions in sub-specialty fellowships (3), private practice (2), and academic faculty positions (2).

Overall, the in-house clinical activity in surgical pathology and cytopathology increased by approximately 5%. The dermatopathology service realized an 8% increase in cases. Additional space in support of the cytopathology service was identified and renovated. Plans for renovation of space in medical science building 1 are underway for expansion of the dermatopathology service. Currently we are actively recruiting to three open positions in cytopathology, head and neck surgical pathology and dermatopathology.

These are times of opportunity for the division, department and medical school and we are well positioned to continue as one of the pre-eminent academic divisions and departments in the country.
AUTOPSY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

I. **Timely Completion of Autopsy Reports:**

The autopsy service continues to emphasize timely completion all our autopsy reports. This has required active management of the autopsy late list and individually contacting both house officers and faculty when their cases are older than 30 days. Additionally, with the new incoming house officers we have made a strong statement that autopsies should be completed within 30 days. The table below lists the autopsy completion time for different years.

<table>
<thead>
<tr>
<th>Time Interval</th>
<th>% completed in 60 days</th>
<th>% completed in 90 days</th>
<th># of Autopsies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-96</td>
<td>40</td>
<td>58</td>
<td>541</td>
</tr>
<tr>
<td>1996-97</td>
<td>64</td>
<td>89</td>
<td>565</td>
</tr>
<tr>
<td>1998-99</td>
<td>96</td>
<td>100</td>
<td>350</td>
</tr>
<tr>
<td>1999-2000</td>
<td>91</td>
<td>100</td>
<td>295</td>
</tr>
<tr>
<td>2000-2001</td>
<td>84</td>
<td>99</td>
<td>295</td>
</tr>
<tr>
<td>2001-2002</td>
<td>85</td>
<td>99</td>
<td>293</td>
</tr>
<tr>
<td>2002-2003</td>
<td>88</td>
<td>96</td>
<td>302</td>
</tr>
</tbody>
</table>

II. **Autopsy percentage:**

We continue to determine the autopsy rate by clinical service in the hospital. The total number of deaths, number of cases and autopsy percentage for the 2002-03 year are listed below. This information as they shared with both the clinical chairs as well as the residency program directors of the University of Michigan.

<table>
<thead>
<tr>
<th></th>
<th># of deaths</th>
<th># of cases</th>
<th>% of deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>475</td>
<td>92</td>
<td>19%</td>
</tr>
<tr>
<td>Surgery</td>
<td>256</td>
<td>39</td>
<td>15%</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>100</td>
<td>41</td>
<td>41%</td>
</tr>
<tr>
<td>Other services</td>
<td>36</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total Hospital</strong></td>
<td><strong>883</strong></td>
<td><strong>171</strong></td>
<td><strong>19%</strong></td>
</tr>
</tbody>
</table>

Hospital total 19%

III **Conferences:**

We continue to present our cases at several different conferences. Pathology regularly participates in the weekly Death and Complications conference in the Department of Surgery. We also make presentations at the monthly Morbidity and Mortality conference in the Department of Internal Medicine. A new, monthly conference has been initiated in the Department of Internal Medicine where 4 autopsies are presented each month. In contrast to the usual M&M conference where most of the presentation deals with the clinical story, the emphasis for this
conference is on the autopsy findings and histopathology. This conferences run primarily by the first year pathology residents who have completed their autopsies. At the request of the Department of Emergency Medicine, we also making presentations twice a year to their house officers.

IV **Medical Examiner Cases:**
The Department of Pathology continues to have a presence in Medical Examiner issues in the State of Michigan and Washtenaw County. However, the Department of Pathology no longer provides medical examiner investigators to be on call for the Washtenaw County Medical Examiners office. The Medical Examiners office now provides staffing for investigators to be on call to investigate medical examiner deaths which arise at the University of Michigan. This has resulted in a cost-saving to the department since we are no longer providing on call pay.

VI **Statistics:**
This covers the time period July 1, 2002 to June 30, 2003.

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of autopsies performed</td>
<td>304</td>
</tr>
<tr>
<td>Hospital autopsies</td>
<td>255 (includes 74 brain only)</td>
</tr>
<tr>
<td>Medical examiner autopsies</td>
<td>49</td>
</tr>
</tbody>
</table>

Daniel G. Remick, M.D.
Director, Autopsy Service
Total gynecologic specimens for the year were 50,828; a 5.4% increase from last year. Non-gynecologic specimens numbered 6,595; a 4.9% increase from last year. Fine needle aspirations totaled 1,528 for the current year. The laboratory continued to achieve the turnaround time for non-gynecologic specimens within 24-48 hours, and the turnaround time for the Papanicolaou smears have been stable at the current 5-7 working days.

Effective November 2002, the laboratory screening area was moved to the newly assigned space in the North Ingalls Building. Two of the cytotechs continue to rotate on a weekly basis through the hospital to provide non-gynecologic screening, overseeing the laboratory prep area, and back-up for the fine needle aspiration. A new cytotechnologist will join us in September of 2003. This position became available when Susan Clozza and Jenise Falan converted to part-time positions in June of 2003.

The T3000 processor (multislide processor) for the ThinPrep was installed in July 2002, and implementation of ThinPrep throughout the hospital system was initiated on a rolling system. At this time, we are approximately 90% converted to ThinPrep in gynecologic specimens. A third prep tech was recruited to support the ThinPrep conversion in the laboratory.

Our fellowship program continued to be highly successful. Dr. Wei Liu completed his training with distinction. Unfortunately, Dr. Theoharis, for personal reasons, had to interrupt his training for a leave of absence. Dr. Robert Pu was successfully recruited to join our faculty in cytopathology effective in September of 2003.

The Cytopathology Section had excellent representation at national and international meetings with several workshops and posters presented by the cytology faculty and residents.

Claire W. Michael, M.D.
Director, Cytopathology Laboratory
DERMATOPATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 – 30 JUNE 2003

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

CLINICAL SERVICE

The clinical service volume has continued to increase and is as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>6,947</td>
<td>7,205</td>
<td>6,811</td>
</tr>
<tr>
<td>MD</td>
<td>6,381</td>
<td>7,248</td>
<td>9,663</td>
</tr>
<tr>
<td>TD</td>
<td>1,486</td>
<td>1,691</td>
<td>1,698</td>
</tr>
<tr>
<td>DP</td>
<td>876</td>
<td>1,244</td>
<td>1,336</td>
</tr>
<tr>
<td>MISC</td>
<td>87</td>
<td>126</td>
<td>145</td>
</tr>
<tr>
<td>TOTAL</td>
<td>15,777</td>
<td>17,514</td>
<td>19,653</td>
</tr>
</tbody>
</table>

Once again, the Dermatopathology Service has seen a significant increase in volume. The total number of cases for 2002-2003 was 19,653 which is a 12% increase when compared to the previous year. Our M-Labs (MD) case volume had the most growth with a 33% increase compared to the previous year and, in fact, represents 64% of total M-Labs accessions. The clinical service load seen by each faculty member of the Dermatopathology Service, Dr. Su, Dr. Fullen, and Dr. Lowe, is substantial and exceeds any other surgical pathologist in the Department.

We continue our active involvement in the University of Michigan Multidisciplinary Melanoma Clinic (MDMC) and Tumor Board (bi-weekly). This remains the largest melanoma program in the United States. Accordingly, the volume of difficult pigmented lesions seen by our service is substantial, as are the numbers of wide local excisions, biopsies, and sentinel lymph node biopsies generated by this busy clinic, all of which directly impact on Dermatopathology. Importantly, there is a 25% significant change in diagnosis for all patients referred to the MDMC after review by our service.

EDUCATION

The Dermatopathology Service continues its extensive and committed involvement with residency and medical student education in the both the Departments of Pathology and Dermatology. Teaching activities include daily instruction at the microscope during signout, weekly formal didactic sessions, weekly diagnostic conference, and active participation in the MSII Dermatology Core
Sequence and Dermatopathology Laboratory. Dr. Lyndon Su and Dr. Douglas Fullen also actively participate in formal dermatopathology didactic sessions for our pathology residents.

**SCHOLARLY ACTIVITIES**

We continue to be highly productive in scholarly activities and academic pursuits. During this academic year (2002-2003), we have individually and/or collectively published 24 manuscripts (including in press) in well-respected peer reviewed journals. In addition, we have all actively participated at national meetings, either as invited speaker(s) and/or abstract/poster presentations.

**GOALS FOR 2003-2004**

Our primary goals for the next academic year are the recruitment of an additional faculty member and the establishment of a Dermatopathology Fellowship, while maintaining excellence in clinical service, education and academic pursuits.

Lori Lowe, M.D.
Director
Dermatopathology Service
NEUROPATHOLOGY SERVICE

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002–30 JUNE 2003

Dr. Mila Blaivas, Ms. Constance J. D’Amato, Dr. Andrew Lieberman and Dr. Paul E. McKeever contributed to the Neuropathology Service. Ms. D’Amato is active emeritus.

I. CLINICAL ACTIVITIES:

1. There were over 1200 neurosurgical cases examined this year. There were many personal consult cases. (M.B. = 135)

2. The Diagnostic Unit of the Neuropathology Core Laboratory of the MADRC processed 74 dementia brain cases. Of these 74 brains, 63 were MADRC cases, 6 were neurology hospital patients, and 5 were from the Michigan Dementia Postmortem Network Program.

3. There were 434 muscle biopsies, 40% with electron microscopy. There were 110 peripheral nerve biopsies. There were 17-teased fiber preparations and 100 with electron microscopy. 18 skin or non-muscle/nerve tissue examined with electron microscopy. 23 muscle biopsies were examined with 10-14 anti-dystrophy antibodies in the IPOX laboratory.

4. There were over 300 University Hospital brains examined.

5. 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 150 difficult neuro-oncology cases.

II. TEACHING ACTIVITIES:

1. Medical Students: This year the neuropathology faculty taught in the eight weeks Neuroscience Sequence for our second year medical school curriculum. There were fourteen hours of neuropathology taught: six hours of lecture and eight hours in the laboratory.

2. Dental Students: 4 lectures.

3. House Officers, Graduate Students, Postgraduate and other students and faculty: These included the following Continuing Medical Education accredited conferences: periodic conferences for Neurology; monthly Rheumatology Pathology Grand Rounds and occasional CPC conferences; monthly conferences where all biopsies are presented and interpreted; a weekly conference where abnormal brains are examined (including two or three weeks per month for dementia cases) with all clinicians invited; weekly nerve and muscle conferences; monthly nerve and muscle biopsy conferences. We provided individual instruction on autopsies and biopsy material; Neuropathology 858, an 8-hour laboratory course; bi-monthly conferences with Neuroradiology, Neurosurgery and Neuroradiology House Staff and every third month a microscopic conference for dementia brain cases. Weekly seminars were provided to neurological and neurosurgical house staff on clinico-pathological correlations.

4. Neuropathology 858, an evening course, given in the Fall, was taught by Dr. Lieberman and Ms. D’Amato.

5. Electives: Senior Medical Students, Pathology, Neurosurgery, and Neurology Residents were offered elective rotations in the Neuropathology Section.
III. RESEARCH ACTIVITIES:

1. Dr. Andrew Lieberman and Ms. D’Amato provided neuropathology support for MADRC. Dr. Lieberman was co-director of the Neuropathology core of MADRC.

2. Dr. Blaivas is working on the histology of animal models and human application in genetic treatment of rheumatoid arthritis with the Arthritis and Rheumatology Section with Blake Roessler; Neurology, Neuro-oncology, Genetics, Gynecology, and Pulmonary/Internal medicine on various projects.

3. Dr. McKeever and associates were determining differences in gene product expression in brain tumors. They assessed the predictive value of markers in brain tumor specimens. He is finishing publications from a NIH funded project studying the prognostic potential of MIB-1 proliferation marker on brain tumors. He was the study pathologist for a multi-institutional study of treatments of low-grade astrocytoma for the Children’s Cancer Group.

4. Dr. Lieberman’s laboratory studies the mechanisms of neurodegeneration in Kennedy’s disease, a disorder affecting motor neurons of the brain stem and spinal cord. He is using cell culture and animal models to determine how the causative mutation leads to neuronal dysfunction and death. He is the principal investigator on grants from the NIH and Muscular Dystrophy Association, that support his work.

5. University of Michigan Cancer Center faculty and staff with clinical research interests in brain tumors met and generated a number of project considerations with Pathology, Neurosurgery, Nuclear Medicine, Neuropathology, Neurology and Neuroradiology collaborations.

INTRODUCTION

Immunoperoxidase (IPOX) staining has continued to increase, and our antibody menu has been significantly expanded with the addition of 20 new antibodies in the past year. The muscle immunohistochemical panel continues to expand with new antibodies for the diagnosis of muscular dystrophies and now contains 15 antibodies. Demand for muscle histochemical staining continues steady, and the laboratory has continued to take on new muscle clients. Immunofluorescence remains busy with a large increase for the skin and heart specimens and a small increase in renal biopsies. In situ hybridization has become more important as a routine procedure in the clinical diagnosis of HPV and EBER.

CLINICAL IMMUNOHISTOCHEMISTRY

Year-end figures show that the average number of slides stained per day has increased from 131 slides/day to 151.5 slides/day representing a 15% increase over last year. Fifteen new antibodies have been added to the menu of antibody stains including Caldesmon, CD3 (new one), Melanoma cocktail, CD138, HHV8, NGFR, EGFR, CK 5/6, E Cadherin, Emerin, Laminin, Lamin A/C and a new breast panel for Chromavision. The Chromavision procedure requires special reagents, procedures and the Benchmark autostainer to accurately stain ER, PR and Her2-neu for quantitative analysis. Additionally, there are 5 new antibodies in development including WT1, Bob-1, Oct-2, P16-IK4a, and FLI-1.

To improve our services, we have been actively seeking written feedback from the clinical faculty on the quality and efficiency of the IPOX services. After a two-week introduction, during which all IPOX cases were accompanied by a new Quality Control worksheet, all of the main diagnostic areas have been stocked with worksheets for reporting problems. Direct meetings with the Hematopathology faculty, major users of the IPOX service, have identified new needs and areas for service improvement. As in the past, we have continued to score 100% on the biannual Immunohistochemistry CAP testing.

With the loss of one FTE in August 2000 and the ever-increasing workload, efficiency continues to be a top priority. The continuing demand for addition and workup of new antibodies, the increased utilization of laboratory services, and the institution of new special procedures like Chromavision will necessitate recruitment of additional laboratory staff in the coming year.

NERVE AND MUSCLE DIAGNOSTIC STUDIES

Under the direction of Dr. Blaivas this service has continued to develop new diagnostic tools this year. A panel of 15 frozen section antibodies is used routinely for the diagnosis of muscular dystrophies. The
caseload for this service has remained steady (364 muscles last year compared to 352 this year). The new dystrophy panel is often used on the same cases as the routine histochemistry panel, which can mean 35-40 stains will be performed on many cases. This has helped the lab to remain on the cutting edge of diagnosis of nerve and muscular disease.

**IMMUNOFLUORESCENCE**

Under the direction of Drs. Killen, Johnson and Gordon this laboratory continues to stain skin, heart and renal biopsies using the automated Ventana ES immunostainer. The caseload has increased steadily in all areas. There were 458 renal biopsies and 319 skin and heart biopsies. This represents an 8% increase in renal biopsies and a 66% increase in skin and heart biopsies. This dramatic increase has made it much harder for laboratory staff to perform immunofluorescence and simultaneously back up the IPOX technologist with their daily workload.

**IN SITU HYBRIDIZATION**

In situ hybridization is becoming a routine part of diagnosis for both HPV and EBER. The number of cases increased dramatically over the last year and the Ventana Benchmark stainer is run most days of the week for these tests. In all likelihood we will continue to see more tests using this technology in the near future.

**CONCLUSION**

The clinical load in all services continues to increase in the year 2003. Our future goals include continuing quality improvement and increased efficiency.
CLINICAL PATHOLOGY
DIVISION OF CLINICAL PATHOLOGY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

The Clinical Laboratories have continued to provide excellent, full-spectrum service (more than 820 different laboratory analyses) as the UMHS has expanded both its volume and scope in ambulatory care activities and experienced growth in several major clinical programs. Substantial effort has been directed towards aggressive laboratory utilization control, the improvement of test ordering, laboratory logistics, achievement of compliance with HCFA-mandated rules on documentation of test-ordering indications, and achievement of compliance with federal rules related to FDA approval of testing methods. Superimposed upon these efforts has been further development of computer links with M-Labs clients. In 2002-03 the Clinical Laboratories again performed more than 3 million billable analyses (10 million individual measurements), supported a wide array of clinical and research programs, and added or replaced more than 30 testing methods. The maintenance of high quality services by the Clinical Laboratories, in the face of increasing complexity of demands, is 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 College of American Pathologists onsite in May, 2003. 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.

A major initiative was achievement of a more aggressive utilization management program. More than $920,000 in direct laboratory cost avoidance and test utilization control was realized in 2002-03. This was made possible through educational meetings with each clinical department chairman, a series of extra-departmental educational presentations, publication of on-line (CareWeb) cost data, and, most effectively, direct utilization control policies and interventions.

Finally, the Clinical Laboratories have continued to respond to the change in scope and organization of UMHS patient care activities. In contrast to the early 1990s when 70% of laboratory testing volume came from inpatient services and 30% from ambulatory patients, the split is now 40:60 in the opposite direction. The laboratories currently support more than 30 UMHS-owned regional satellite facilities as well as many more patients who are M-Care subscribers. These shifts have substantially increased our focus to informatics, logistics, and cost-containment.

Faculty and laboratory staff participated in a wide variety of intramural and extramural educational programs during 2002-03. For instance, the AIMCL (informatics) course was again well attended, making it among the most visible courses of its kind in the United States. The May AIMCL course brought together leaders from a variety of institutions and laboratory information technology fields to discuss the future of clinical pathology practice. These programs, along with the M-Labs educational programs, are prominent examples of educational outreach activities. 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", was again updated in 2002-03. In keeping with a thematic approach, the 2002-03 version
solidified the four rotation blocks and places greater emphasis on molecular diagnostics, coagulation, informatics, statistics, and management. 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. The Department added a second slot in the Hematopathology Fellowship program and added a Blood Bank/Transfusion Medicine fellow.

The academic achievements of faculty members within the Clinical Pathology Division have been outstanding. As a group, the CP faculty had approximately 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 will continue to face new challenges. In addition to its ongoing academic enterprises, educational issues, leadership and development in quality assurance, and laboratory resource utilization in the context of the hospital cost efficiency program, the Division plans to continue its attention to informatics and the clinical molecular diagnostics program. 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
PATIENT CARE:

Blood component utilization decreased relative to the previous year by 3% overall with approximately 97,700 total components dispensed. Red Blood Cell utilization approximated 32,000 units with the majority being used in surgery. Platelet Concentrate utilization was approximately 47,600, continuing a decline in usage. Lower blood utilization occurred despite an increased clinical activity in high blood usage areas. This reflects the successful efforts of the medical staff to control costs.

Hematopoietic progenitor cell processing activity was comparable to the previous year with 419 total units processed. Most patients are continuing to reach the collection target in one procedure.

The transfusion and apheresis activity was also similar to the previous year with 1683 patient encounters. The proportion of progenitor cell collections and therapeutic apheresis procedures has remained steady. There continues to be significant activity in the areas of vascular heart transplant rejection, post-transplant recurrence of focal segmental glomerulosclerosis, and cryoglobulinemia. We successfully implemented low density lipoprotein apheresis for the treatment of refractory hypercholesterolemia.

Prestorage leukocyte-reduced Red Blood Cells and Platelet Concentrates were used almost exclusively.

EDUCATIONAL ACTIVITIES:

Members of the Blood Bank medical and technical staffs participated in Pathology house officer teaching, Hematology fellow teaching, M2 and M4 medical students teaching, the transfusion component of nursing orientation, and many interdepartmental conferences.

The 30th annual postgraduate course, “Current Topics in Blood Banking”, was held on June 5-7, 2002. The course, under the direction of Mr. Judd, attracted over 100 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, and was the first to be presented by a medical center rather than by a national blood program. The Blood Bank and Transfusion Service medical and technical staffs were instrumental in planning, organizing and presenting this program.
PROFESSIONAL ACTIVITIES:

Members of the Blood Bank and Transfusion Service medical and technical staffs were active at the regional and national levels. Ms. Butch served on committees of the American Association of Blood Banks, the Michigan Association of Blood Banks, ICCBBA, the American Society for Clinical Laboratory Science, the Michigan Society for Clinical Laboratory Science, and the National Certifying Agency of Clinical Laboratory Personnel. Ms Dake was a member of the AABB Immunohematology Reference Laboratories Accreditation Program Unit Committee, and presented at programs of the Michigan Association of Blood Banks and the Immunohematology Reference Laboratory Conference. Dr. Davenport served the American Association of Blood Banks on the Scientific Section Coordinating Committee, the Editorial Board of TRANSFUSION, and the Annual Meeting Program Planning Committee. Ms. Butch and Ms. Stoe served as Assessors for the American Association of Blood Banks. Ms. Stoe served on the Executive Board of the Michigan Association of Blood Banks.

RESEARCH ACTIVITIES:

Faculty research activities are documented in individual reports of Dr. Davenport, Dr. Cooling, and Mr. Judd. The Transfusion and Apheresis Service provided crucial support in leukocyte collection for General Clinical Research Center clinical research protocols.

Robertson D. Davenport, M.D.
Medical Director,
Blood Bank and Transfusion Service
CHEMICAL PATHOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 2002 - 30 JUNE 2003

The past year was once again marked by an increase in laboratory workload. The Chemistry Section experienced an approximate 3% increase in overall test volume this year. Included in this was a 5% increase in the more manual testing areas of Special Chemistry, Immunology, and Ligand Assay. This workload was absorbed without the addition of incremental personnel.

The Chemistry Section continued its efforts toward increasing levels of laboratory automation this past year. The section began the process of evaluating new high volume chemistry and immunoassay analyzers that would allow for further consolidation of workstations in the laboratory and achieve savings on reagent pricing. The goal is to acquire and implement new systems by late 2004. Considerable time and effort was spent on visits to view different analyzers in operation and gather performance data.

The laboratory evaluated and acquired a DPC Immulite 2000 chemiluminescent immunoassay analyzer for the special chemistry/RIA area. Multiple tests were moved to this automated, random access platform over the course of the year. These included Insulin, C-peptide, Growth hormone, DHEAS, Erythropoietin, Vitamin B12, Folic acid, and the components of the triple screen (AFP, hCG, unconjugated estriol).

Several assays were moved to other more automated platforms. Hepatitis C antibody testing was moved to a chemiluminescent immunoassay format on the Vitros ECi analyzer. This improved sensitivity assay allowed the lab to implement further reductions in the number of positive samples that required further confirmation by the RIBA assay, thus resulting in a considerable cost savings for the laboratory. Additional assays for Hepatitis B surface antigen and antibody were also moved to the Vitros ECi. An assay for BNP, a marker of congestive heart failure, was evaluated and implemented by the lab.

In the toxicology area, an HPLC-mass spectrometer system was acquired, installed, and development work begun on assays for the immunosuppressant drugs Sirolimus and Tacrolimus. A new atomic absorption analyzer for analysis of blood levels of lead, aluminum, copper, and zinc was acquired.

The Chemistry Laboratory continued its active role in Point of Care (POC) testing both within the hospitals and at the off-site health care centers. Testing for Hemoglobin A1c and microalbuminuria in diabetics and prothrombin time in patients on coumadin has increased in scope and volume. The lab placed new Hemochron Signature Jr coagulation meters in the OR of University Hospital for PT and aPTT testing in its continued efforts to provide OR personnel with testing information that can result in reduced blood product utilization.

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 more than 90 whole blood glucose meters stationed throughout the institution. Lab staff
worked with nursing personnel to complete the switch to AccuChek Inform glucose meters for all bedside testing. Results from these meters are now downloaded directly to a server in Pathology, and patient glucose results passed directly to the laboratory information system.

The laboratory staff contributed a significant amount of time and effort during the past year to the evaluation of new laboratory information system software for the department. Finally, credit should be given to all laboratory personnel who help with preparation for the CAP accreditation inspection. No major deficiencies were found in the Chemistry Section during the inspection.

Donald Giacherio, Ph.D.
CLINICAL CYTOGENETICS LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

OVERVIEW

The laboratory had a 10.3% increase in the number of tests performed this year (N=2818) compared to last fiscal year, with a total of 2542 cytogenetics and 276 FISH studies performed (+9% and +19% respectively).

Thomas Glover, Ph.D. (Professor, Department of Human Genetics) continued to provide invaluable expertise and sign-out coverage of constitutional genetics cases. Lisa R. Smith, Ph.D. was hired to serve as Assistant Director and arrived in September 2002. Two full-time technologists were hired following two departures.

CLINICAL SERVICES

The number of samples sent for cytogenetics for constitutional studies increased, as did those sent due to malignancy. Constitutional blood samples were virtually unchanged (N= -5, -0.8%) while amniocentesis samples decreased (N= -18, -4.4%); however, chorionic villus samples and tissues increased (N= +30, +38% and +34, +41%, respectively). The tissue culture service for fibroblasts to send out for biochemical studies increased substantially (N=+20, +87%).

For neoplasias, the number of bone marrows and solid tumors increased significantly (N=+119, +10.6%, and +30, +94%, respectively). In addition to covering these gains, we stopped sending bone marrow samples to Penrose St. Francis Hospital by the end of September 2002, so the technologists have had an especially busy year. Most of the gains in the bone marrow samples appears to be due to increased in-house activity, since the percentage of bone marrow samples sent through MLabs has remained between 12-15% of the volume since fall of 2001. The increasing value of cytogenetics studies for diagnosis of small round blue cell tumors and sarcomas is reflected in the gains seen for the labor-intensive solid tumor analysis.

Even greater growth was experienced for samples sent for FISH tests. Although the constitutional testing volume dropped (N= -21, -12.6%) the number sent for oncology tests more than offset that loss (N= +74, +132%). The increase in oncology FISH testing was due to the increasing use of BCR/ABL FISH to monitor the remission status of patients with CML treated with Gleevec (N= +46, +288%). These types of tests are more complex and thus more time-consuming than typical constitutional studies. A different constitutional test, Subtelomeric FISH, was implemented and a few clinical samples have been submitted recently for testing.
EDUCATION

A total of thirteen residents and fellows from several departments came to the laboratory for rotations. Six Pathology residents and three Hematopathology fellows, two fellows from Pediatric Genetics, and two fellows from Hematology/Oncology rotated through the laboratory. The Pathology and Genetics residents and fellows gave brief talks for the technologists in areas relevant to the case work in the laboratory, making a much-appreciated contribution to continuing education. In October Dr. Lisa Smith assumed responsibility for most of the teaching and direction of these rotations; without her considerable efforts we would not have been able to support this number.

FUTURE PLANS

As a consequence of the increased demand for both standard cytogenetics and FISH testing, we will need additional technological support, and efforts to hire an additional technologist are underway. However, additional laboratory or office space will be required if any further increase in volume is desired.

Diane Roulston, Ph.D.
Clinical Assistant Professor
Director, Clinical Cytogenetics
I. LABORATORY OPERATIONS

The combined hematopathology laboratories again continued to move forward with new initiatives despite facing increasing volumes and suboptimal staffing. The laboratories operated for most of the year with at least one open position, and with several long-term absences, without the benefit of incremental staff increases.

The laboratory passed its biennial on-site accreditation inspection by the College of American Pathologists with no deficiencies.

In response to employee concerns, the laboratories drafted a vision statement with a list of expectations that applies to all employees at all levels in the laboratories. Copies of the statement were distributed to all staff. In addition, an ongoing series of employee forum meetings was initiated. In these forums, employees' ideas are catalogued, with documentation made of specific actions taken in response to each idea, and a record of the acceptance or rejection of the idea. The forums were designed to increase employee participation and accountability in the decision-making process and operation of the laboratory.

Finally, regular focus meetings were established for each of the laboratory sections (hematology, bone marrow, flow cytometry, and coagulation). The focus meetings were designed to assure continued progress in addressing operations, programs, programs, and long range planning in each laboratory section.

Section specific reports are as follows:

A. COAGULATION LABORATORY

Three major accomplishments in the coagulation laboratory this year included the automation of an anti-IIa inhibitor assay, implementation of autoverification for prothrombin time (PT) and activated partial thromboplastin time (aPTT) orders, and updating of platelet aggregation and secretion assays.

The anti-IIa assay is used for the therapeutic monitoring of new classes of direct thrombin inhibitors currently in clinical use (argatroban and hirudin). This new assay has considerable advantages over the aPTT in monitoring these drugs, and replaces the manually-performed ecarin clotting time. This implementation has allowed the laboratory to expand this testing to 7-day-a-week availability, while markedly reducing the cost and labor-intensity of each test.
Autoverification of PT and aPTT tests began in the summer of 2003, with an immediate and positive impact on productivity in the laboratory. Analytical turnaround time for PTs and aPTTs were reduced by 66% with an approximate autoverification rate of 85%, and the new system allows for technologists to pay greater attention to manual tasks in the laboratory.

Last, the laboratory has updated its platelet function testing. In addition to validating it normal values for ADP-, epinephrine-, and collagen-induced platelet aggregation and secretion, the laboratory has added arachidonic acid- and gamma thrombin-induced platelet aggregation and secretion. These studies increase our array of examinations being performed on an individual platelet sample. Further, normal values have been obtained and we are prospectively getting values on patients with platelet function disorders to determine if the Dade-Berhing instrument PFA (Platelet Functional Analyzer) can be useful in the clinical arena.

Additional progress is also being made in the application of the advanced D-dimer assay, which was first offered last year. A validation trial is currently underway, with the cooperation of the department of surgery, for the establishment of discriminatory values for the prediction of deep venous thrombosis (DVT) and, presumably, pulmonary embolism.

B. HEMATOLOGY AND BONE MARROW LABORATORIES

Hematology and Bone Marrow Laboratories. As part of the continuing effort toward optimizing our approach to automated vs. manual hematology testing, a new set of criteria were established, based on quantitative thresholds, for technologists' interpretations of red blood cell abnormalities in peripheral blood smears. This approach is the first step in what we hope will be a more comprehensive, evidence-based overhaul of our policies regarding red cell morphology interpretation and reporting.

The "blood survey" test was streamlined to include a single panel that includes all tests commonly considered part of the "CBC" (including hemoglobin, hematocrit, RBC count, MCV, MCH, MCHC, platelet count, and MPV). In other words, all CBCs now include platelet counts as part of the order. This change was made in response to new panel definitions and charge codes as mandated by the federal Center for Medicare and Medicaid Services (CMS), and for the general optimization of our lab testing menu. We also made several other changes to our testing menu, mainly consisting of the deletion of tests that have become obsolete (such as urine hemosiderin), for which direct physician ordering was not appropriate (such as enzyme cytochemical staining of bone marrow smears) or for which reagents are no longer routinely available (such as the PK deficiency screen and GSSR assay).

The hematology laboratory successfully evaluated two new hematology analyzers (the Coulter LH755 and the Sysmex XE2100) with the goal of choosing one of those platforms to replace our current Coulter GenS analyzers some time in fiscal 2004.
C. **FLOW CYTOMETRY LABORATORY**

Attending staff continues to triage all requests for leukemia/lymphoma immunophenotyping, with cancellation of unwarranted requests. Of the 2554 specimens submitted for leukemia/lymphoma immunophenotyping, pathologist review lead to cancellation of 856 (34%) of these requests. Leukemia and lymphoma profiles are the most labor-intensive tests offered by the laboratory, and test volumes continue to grow.

Laboratory initiatives begun during the past year include: a program of regular CME sessions for technologists and faculty; a new communication/trouble-shooting log to help rotating technologists keep up with changes and procedures; addition of daily controls for stem cell and immunodeficiency assays per new CAP guidelines; validation study for CD34 stem cell assay in conformity with ISHAGE guidelines; participation in thorough on-site demonstration and “hands-on” evaluation of new instruments from two major vendors, in preparation for new instrument acquisition in the coming year.

II. **LABORATORY GROWTH**

A. **COAGULATION LABORATORY**

Coagulation laboratory. The laboratory performed 212,181 assays for PT, aPTT, fibrinogen, and advanced D-dimer, overall representing a 5% volume increase over FY 2002. Special coagulation testing increased by 9% to 12,903 tests performed.

B. **HEMATOLOGY AND BONE MARROW LABORATORIES**

Hematology and Bone Marrow Laboratories. Blood Survey (CBC) orders increased by 5% over FY 2002, to 365,068, and erythrocyte sedimentation rate orders increased by 13% to 20,309. Body fluid analysis increased by 4% to 6,531. As a result of our concerted effort last year to optimize the application of automated and manual differential leukocyte counts, the number of manual differential counts performed last year decreased by 48% to 11,805. Urinalysis orders also decreased by about 4%, to 50,664. The bone marrow lab continued to experience a relentless increase in volume with a 12% increase in bone marrow aspirates (to 1,619) and a 13% increase in bone marrow biopsies (to 1,691).

C. **FLOW CYTOMETRY LABORATORY**

Flow Cytometry Laboratory. Immunodeficiency monitoring studies and CD34 stem cell counts each experienced volume decreases in FY 2003 (3% and 11% decreases, respectively). However, leukemia/lymphoma immunophenotyping (the most labor intensive testing performed in the laboratory) continued to increase. Chronic leukemia/lymphoma phenotyping panels increased by 3%, and acute leukemia/lymphoma phenotyping panels increased by 2%.
M-Labs referrals continue to compromise a substantial part of the work volume, including 29% of all acute leukemia immunophenotyping panels, 49% of all chronic leukemia/lymphoma panels, and 28% of all immunodeficiency monitoring.

III. RESEARCH AND TEACHING ACTIVITIES

The hematopathology group continues to be academically productive. Despite increasing clinical service loads, members of our group published numerous papers in peer-reviewed scientific journals, and we continue to be active regionally, nationally, and internationally in hematopathology through invited lectures, participation in educational courses and workshops, and editorial activities with several hematology, hemostasis, flow cytometry, and pathology journals. Members of our group are also involved nationally in setting and maintaining standards for hematopathology practice through involvement in oversight bodies such as the American Society of Clinical Pathology CheckPath planning committee and expert panel in hematopathology, the College of American Pathologists hematology and clinical microscopy resource committee, and the executive committees of the Society for Hematopathology and the North American Specialized Coagulation Laboratory Association (NASCOLA).

We currently maintain two ACGME-accredited hematopathology fellowship positions. Our group is quite active in the teaching of pathology residents, including participation in formal rotations and several lectures in the Clinical Pathology Grand Rounds series. We are also quite active in teaching first and second-year medical students through involvement in first year histopathology and host-defense sequences, the second year hematology sequences (directed by Dr. Schmaier and co-directed by Dr. Stoolman) and the general pathology sequence for second year dental students (directed by Dr. Stoolman). Dr. Stoolman has also been involved in the Dean’s initiative to redesign the preclinical medical school curriculum, and the newly designed system will begin this year for first year students and next year for second year students.

We continue our affiliation with the medical technology program at Ferris State University and Eastern Michigan University. To date this new affiliation has been quite successful. We have received excellent feedback from the students rotating through the laboratories, and this program continues to enhance our recruiting efforts during a time of continued critical shortage of medical technologists.

The hematology laboratory took part in a multi-institutional validation of the Coulter LH755 hematology analyzer for the automated performance of body fluid cell counts, and the results of this trial have been submitted for publication.
IV. **FUTURE GOALS FOR THE COMBINED HEMATOPATHOLOGY LABORATORIES**

We are hoping that FY 2004 will bring significant progress in our ability to perform high throughput analysis of our ever-increasing sample volume. We will initiate efforts to replace our flow cytometers with new instruments, including an automated sample preparation system. We also plan to purchase new automated hematology analyzers for the main hospital and Cancer Center laboratories, with the hope of integrating up-front automation as part of this acquisition. We will continue to refine our testing menus to optimally meet clinical demands and the needs of our patients.

William G. Finn, M.D.
Director, Hematopathology

Bertram Schnitzer, M.D.
Director, Hematopathology Fellowship Program

Charles W. Ross, M.D.
Director, Flow Cytometry

Lloyd M. Stoolman, M.D.
Co-Director, Flow Cytometry

Alvin Schmaier, M.D.
Director, Coagulation Laboratory
HISTOCOMPATIBILITY AND IMMUNOGENETICS LABORATORY  
DEPARTMENT OF PATHOLOGY  
ANNUAL DEPARTMENTAL REPORT  
1 JULY 2002 - 30 JUNE 2003

CLINICAL ACTIVITIES:

The clinical activity as well as the overall case complexity in the Histocompatibility Laboratory continued to increase in FY 2002 due to robust and expanding clinical solid organ and bone marrow transplant programs (making the Laboratory one of the ten busiest in the United States).

DNA-based typing remains the primary technique used for the determination of HLA class I and class II alleles. This year the laboratory evaluated, validated, and received ASHI accreditation for the use of the microsphere technology based Luminex instrument to perform high-throughput mid-resolution typing at a substantial cost savings over previously used methods. The extent of HLA Class I and Class II antibody screening continues to increase as does the number of recipient/donor crossmatches performed annually. The degree of pre-sensitization in our patient population (due to prior failed grafts or blood product transfusions) adds significant complexity to the performance and interpretation of the laboratory test results. The Laboratory remains in the process of validating flow cytometry technology for HLA Class I and Class II antibody screening. Dr. Riccardo Valdez increasingly devoted a portion of his professional effort in the area of histocompatibility and immunogenetics in FY 2002 holding bi-weekly meetings with the laboratory supervisor, monthly meetings with Dr. James Baker, and attending educational and business meetings sponsored by the local organ procurement organization (Gift of Life Michigan). Dr. Valdez is working toward ASHI certification as a laboratory director.

TEACHING ACTIVITIES AND RESEARCH:

Ms. Cynthia Schall, the Laboratory Supervisor, and other members of the Laboratory were engaged in the teaching activities of the Laboratory, and they were effective in their work. Laboratory personnel provided instruction in the principles and techniques of histocompatibility testing for pathology house officers, allergy fellows, renal fellows, hematology/oncology fellows, and postdoctoral candidates from the Department of Hematology. Cynthia Schall oversaw the teaching activities for residents in the Laboratory and performed several in-service lectures for the support staff in the transplant programs. Dr. Valdez initiated a monthly journal club/literature review for the Laboratory staff and residents. Dr. Baker has continued to play an active role in ASHI. The Laboratory, in conjunction with the Renal Transplant Program, is preparing for involvement in a multicenter clinical trial assessing the effect of pre-transplant intravenous immunoglobulin administration on panel reactive antibodies (PRA) in pre-sensitized patients.
NEW GOALS:

In addition to continuing to address the demand for more complex services from the Medical Center’s various transplant programs, the Laboratory’s goals for the next year include: 1) implementation of electronic records for tissue typing results and antibody screening test interpretations so that they can be displayed in CareWeb for viewing by the appropriate clinical staff, 2) continue to streamline laboratory procedures and testing algorithms to maximize laboratory efficiency, 3) expand the resident educational experience in tissue typing to include exposure of the residents to renal and heart transplant biopsies. Dr. Valdez will continue to develop expertise in tissue typing with special emphasis on studying the role of flow cytometry in pre-transplant evaluations and pursuing research projects in the Laboratory.

Jeffrey S. Warren, M.D.  
Director, Division of Clinical Pathology

Riccardo Valdez, M.D.  
Clinical Assistant Professor
CLINICAL IMMUNOPATHOLOGY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 2002- 30 JUNE 2003

I. OVERVIEW:

The Immunopathology Laboratory performed more than 65,000 analyses in 2001-02. John Lowe, M.D. provided invaluable service to the laboratory in the interpretation of protein electrophoresis studies. Kent Johnson, M.D., and Paul Killen, M.D., Ph.D., also provided coverage of anti-neutrophil cytoplasmic antibody (ANCA) and anti-GBM studies.

II. CLINICAL SERVICES:

Integration of clinical immunopathology testing into the Chemistry Section continued to progress. New procedures were implemented in the protein electrophoresis area, in the analysis of antibodies to extractable unclear antigens, and in the measurement of several individual analytes previously measured by nephelometry.

III. RESEARCH AND DEVELOPMENT:

The Laboratory supported clinical studies of the effects of cytotoxic/immunosuppressive drugs on IgG, IgA and IgM as well as IgG subclass concentrations in lupus patients and in serum banking in conjunction with Dr. Joseph McCune (Department of Medicine, University of Michigan). Several commercially-financed methods and instrument evaluations were also carried out. These studies involved a new method for detection of antibodies to extractable nuclear antigens and antineutrophil cytoplasmic antibodies.

IV. QUALITY ASSURANCE:

The laboratory actively participated in the Division-wide utilization management program.

V. TEACHING/PROFESSIONAL:

Residents, M4 medical students, and medical technology students from Eastern Michigan University rotated through the laboratory. Clinical Pathology Grand Rounds included immunopathology presentations by Dr. David Keren (Warde Medical Laboratory, Ann Arbor), and Dr. Warren (see individual faculty report). Drs. Warren and Keren continued a 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
Duane Newton, Ph.D., joined the Pathology faculty on July 1, 2002, as a Clinical Assistant Professor of Pathology and Associate Director of the Clinical Microbiology/Virology Laboratory. Dr. Newton previously held the position of Director of the Virology and Immunology Laboratories at the Michigan Dept. of Community Health.

I. CLINICAL ACTIVITIES:

The Laboratory continued to experience significant increases in test volume with an 8% increase compared to that of FY 2002. Increased requests for blood culture, shiga-like toxin, antibiotic susceptibility, HPV genotyping, viral respiratory antigen screens and CMV serologies topped the list. Nucleic acid amplification test for HBV and proviral HIV DNA were added to the test menu along with EIA procedures for two markers for celiac disease, gliadin and transglutaminase antibodies. Much effort was expended on responding to requests for West Nile Virus and Severe Acute Respiratory Syndrome (SARS) testing. Several technologists received certification for shipping biological hazardous materials. Much effort also went toward the Millennium computer upgrade project before it was discontinued. The supervisory staff was successful in hiring several new medical technologists to fill open positions. The Laboratory successfully passed its annual CAP Accreditation Inspection with flying colors!

II. RESEARCH ACTIVITIES:

- Much effort is going toward the use of nucleic acid amplification methods to either substitute for or augment traditional testing methods. New instrumentation has been received or is currently on order to increase efficiency in specimen preparation and test turn-around time, e.g., "real-time" PCR.
- The Laboratory is cooperating with a local company to evaluate a real-time PCR method for the direct bedside detection of group B Streptococcus in urogenital specimens. Clinical evaluation of the system is expected to begin late 2003.
- Procedures for determining yeast susceptibility to antifungal agents is underway.
- An evaluation of the Swab Extraction Tube System was completed and the data presented at a national meeting.
- The Laboratory cooperated with the Michigan Dept. of Community Health to compare EIA and molecular testing methods for the detection of Shiga toxin-producing isolates of E. coli. The data was presented at national meeting.
- The Laboratory responded to numerous IRB-approved requests from clinical services for specific laboratory data to fulfill research goals.
I. TEACHING ACTIVITIES:

All laboratory personnel continued to provide instruction to Pathology House Officers and Infectious Disease Fellows and residents on diagnostic procedures used in the Microbiology/Virology Laboratories. Several laboratory preceptorships for medical students, pharmacy students, and Pharm.D. residents were also provided during the year. Infectious Disease Laboratory rounds were held each weekday during which staff members and assigned Pathology House Officers interacted with ID team members to answer questions, demonstrate laboratory diagnostic procedures and discuss interesting findings. Numerous in-service education programs were held during the course of the year with individual technologists and Pathology House Officers giving presentations to staff members.

II. PROFESSIONAL DEVELOPMENT:

Both supervisors and most of our Sr. Technologists attended one or more regional or national scientific meetings during the year. Several other staff members attended regional scientific meetings of interest. In addition, the Laboratory subscribed to two audioconference programs which provided a total of 14 conferences during the year that were available to all staff members and Pathology House Officers as part of our ongoing CME program. Monthly inservice programs were provided by Pathology residents and faculty.

III. GOALS FOR FY 2004

1. Develop methods and procedures to accommodate an expected increase in test volume.
2. Expand our menu of nucleic acid tests to support the diagnostic needs of our clinical services, e.g., EBV and enteroviruses.
3. Evaluate nucleic acid extraction and real-time amplification instruments to support the activities in item 2.
4. Initiate in-house yeast susceptibility testing.
5. Compete the first phase of the clinical evaluation of the rapid NA amplification method for the detection of group B Streptococcus in urogenital specimens.
6. Assess current and future laboratory space and architectural requirements.
7. Assist in the selection of a new Laboratory Information System.

Carl L. Pierson, Ph.D., Director
Duane Newton, Ph.D. Associate Director

Clinical Microbiology/Virology Laboratory
MOLECULAR DIAGNOSTICS LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

OVERVIEW

The Laboratory had a 36% increase in volume during the year. Anthony Killeen, M.D., Ph.D., was succeeded by John Thorson, M.D., Ph.D., as Director of the Laboratory. The Laboratory acquired additional analytical equipment and has several new assays undergoing validation.

CLINICAL SERVICES

The Laboratory currently employs one full time supervisor, four full time technologists, and two part time technologists. All staff members are cross-trained in all areas of the laboratory.

In August 2002, Dr. Anthony Killeen departed as Director of the Laboratory. Jeffrey Warren, M.D., served as Interim Director until June 2003, at which time Dr. John Thorson assumed the role of Director. Charles Ross, M.D., and William Finn, M.D. both participated actively in the work-up and result interpretation of cases in molecular hematology.

The Laboratory saw an increase in annual volume to approximately 7,000 tests during the 2002-3 academic year. The growth in test volume was mostly accounted for by the addition of the Cystic Fibrosis assay. In addition there were significant increases in the number of requests for genetic tests of inherited thrombophilia risks.

During the past year, turn around times increased to an overall average of 5 - 6 business days. This was in part due to a decreased frequency in the number of times final reports were signed out each week and in part due to workload increases. Although extended relative to the previous reporting period, this is still within the published range and overall levels of service were not adversely affected.

In May 2003, the Laboratory underwent a successful accreditation inspection by the College of American Pathologists. No deficiencies were cited.

An increasing number of requests for cystic fibrosis mutation screening combined with recurrent reagent supply problems have prompted the decision to migrate this assay from the current Roche reverse hybridization platform to the Invader platform. This will result in a significant decrease in the turnaround time for approximately 90% of all patient samples submitted for this assay.

During the past academic year, the Laboratory acquired an ABI 310 Genetic Analyzer. This single capillary electrophoresis instrument will be used primarily for low volume applications such as B-and T-cell receptor gene rearrangement assays and occasional sequencing assays.
The Laboratory also acquired a MagnaPure LC automated nucleic acid extraction instrument. This instrument will greatly facilitate sample preparation, particularly for high volume assays such as cystic fibrosis screening, Factor V Leiden, and Prothrombin 20210 mutation analyses. Validation of this instrument is nearly complete and it is anticipated that it will be put into routine use early in the next academic year.

In order to service the anticipated future demand for assays performed on fixed, embedded tissue specimens, the Laboratory has recently acquired a microtome from the Histology Laboratory. This will allow the Laboratory to obtain appropriate specimen samples from tissue blocks for molecular diagnostics assays while ensuring the proper precautions to prevent carry-over of even minute amounts of tissue between specimens. Training in the use of this instrument and the validation of its use in clinical assays is currently underway.

**EDUCATION**

With the departure of the former Director in August 2002, the educational activities of the Laboratory were somewhat diminished for the 2002-2003 academic year. It is anticipated that the involvement of the laboratory in the education of Pathology residents, Medical Technology students, and others will return to a more normal level with the arrival of the new Director.

**FUTURE PLANS**

Planning for expansion of the Molecular Diagnostics Laboratory’s clinical and research activities are currently underway. A top priority for the next academic year is the acquisition of instrumentation to perform real time PCR analyses. This will allow the Laboratory to perform quantitative assays for a number of diagnostically significant gene transcripts, including BCR/ABL, PML/RARα, and BCL-1. In addition, this equipment will reduce the turn-around time associated with a number of currently performed assays, such as HFE and MTHFR mutation analyses.

Validation of PCR-based assays for B- and T-cell receptor gene rearrangements are nearly complete and these assays will be available on a clinical basis within the year. These assays will utilize the ABI 310 capillary electrophoresis instrument for analysis of results and their availability will eliminate a significant number of send out tests. Related to this, a procedure for the extraction of DNA from formalin fixed tissue is currently being validated and will allow these assays to be performed on fixed tissue blocks as well as fresh tissue specimens.

The acquisition of a high throughput capillary electrophoresis sequencing instrument is anticipated within the next year. This instrument will allow an expanded number of markers to be used for bone marrow engraftment analyses, thus eliminating the need to send a significant number of these assays to a reference laboratory. The use of this technology will also reduce the turn-around time for these assays and provide a true quantitative assessment of residual recipient cellularity. This instrument will also find use in a number of genotyping assays proposed as future additions to the Laboratory’s menu.
Discussions with members of the Surgical Pathology faculty have identified a number of molecular-based assays which would be of value in the diagnosis of a variety of soft tumors, such as synovial sarcomas, Ewing’s sarcoma, and rhabdomyosarcoma. For this purpose, reverse transcription real time PCR assays for the detection of chimeric transcripts will be developed. These assays will also require the isolation of RNA from fixed tissue. Planning and validation of these procedures is currently underway.

Finally, an expected future direction for the Laboratory is in the area of pharmacogenomics. A number of potential collaborative interactions have been identified with members of the University of Michigan Comprehensive Cancer Center for the development of both clinical and research based assays in this area. This would require the Laboratory to perform a number of high throughput genotyping assays, utilizing a mini-sequencing technology employing fluorescence polarization detection. Acquisition of instrumentation for this purpose is anticipated within the next year. With the availability of these types of assays in house, a significant and increasing demand for this information is anticipated.

John A. Thorson, M.D., Ph.D.
Director, Molecular Diagnostics Laboratory
Annual Report
Specimen Procurement
Phlebotomy Services and Central Distribution

Department of Pathology
July 1, 2002-June 30, 2003

Specimen procurement is the front-end specimen collection and processing area for the Department of Pathology. This area includes Inpatient Phlebotomy (University Hospital and Mott Children's Hospital), Outpatient Phlebotomy (Cancer/Geriatric Center and the Taubman Center), and Central Distribution/Referral Laboratory. A total of 96.75 FTE's staff the three areas, responsible for 24-hour/7 day a week operations. The departments are directed by 1FTE manager, 3 FTE supervisors and 11.5 FTE clinic coordinators. The complex and specialized areas in Central Distribution, including Referral Laboratory Services also employs a Senior Medical Technologist and a Medical Technologist Training Coordinator. Budgeted Specimen Procurement salary and wages for FY 2003 were $2,975,323.00.

Budget performance for FY 2003 appears consistent with responsibilities involved and the volume of work performed:

VOLUMES:

Combined inpatient and outpatient volumes were essentially unchanged from FY2002. Inpatient phlebotomy volumes increased 3.7 % (5,036 patient draws) and outpatient phlebotomy volumes decreased -3.6 % (-4,918 patient draws).

<table>
<thead>
<tr>
<th>INPATIENT PHLEBOTOMY VOLUMES</th>
<th>FY2002</th>
<th>FY2003</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Phlebotomy</td>
<td>137,401</td>
<td>142,437</td>
<td>3.7</td>
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</table>

<table>
<thead>
<tr>
<th>OUTPATIENT PHLEBOTOMY VOLUMES</th>
<th>FY2002</th>
<th>FY2003</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer/Geriatric Center</td>
<td>46,682</td>
<td>52,020</td>
<td>11.4</td>
</tr>
<tr>
<td>Taubman Drawing Station, Floor #2</td>
<td>25,924</td>
<td>21,570</td>
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</tr>
<tr>
<td>Taubman Drawing Station, Floor #3</td>
<td>65,795</td>
<td>59,893</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>138,401</td>
<td>133,483</td>
<td>-3.6</td>
</tr>
</tbody>
</table>
New testing technology and sophisticated testing not performed on-site, along with patient acuity and complexity of patient conditions evaluated at our facility, resulted in an increase of 18.0% for referral testing volumes.

### SEND OUT LABORATORY TEST VOLUMES

<table>
<thead>
<tr>
<th></th>
<th>FY2002</th>
<th>FY2003</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mayo Medical Laboratories</strong></td>
<td>29,330</td>
<td>41,741</td>
<td>42.3</td>
</tr>
<tr>
<td><strong>Specialty Laboratories</strong></td>
<td>4,781</td>
<td>0</td>
<td>-100.0</td>
</tr>
<tr>
<td><strong>Miscellaneous Laboratories</strong></td>
<td>5,834</td>
<td>5,399</td>
<td>-7.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>39,945</td>
<td>47,140</td>
<td>18.0</td>
</tr>
</tbody>
</table>

**EXPENSES:**

FY 2003 YTD variances for controllable expenses were +12% ($38,823) for Central Distribution, +2.7% ($4933) for Inpatient Phlebotomy, and -11.3% ($24,206) for Outpatient Phlebotomy. Combined controllable expenses for Central Distribution, Inpatient Phlebotomy, and Outpatient Phlebotomy were +2.7% ($19,550) overbudget.

Salary and wage expenses for FY 2003 were overbudget for all three areas. High turnover rates for many of the department's positions, summer vacations, several personnel medical leaves of absence, and critical staffing bonuses paid in order to guarantee staffing for the expected level of service- primarily for the midnight shift- resulted in salary and wage expenses being overbudget 5.0% (+$165,049).
Fiscal year 2003 provided opportunity for continuation of several on-going projects by the three Specimen Procurement areas (Central Distribution, Inpatient Phlebotomy, and Outpatient Phlebotomy). These projects included:

a. **Cerner Millennium Testing/Validation:**
   Phlebotomy and Central Distribution continued testing the Cerner Millennium product until January, 2003 when the project was put on hold. This project involved regular testing and validation of the general laboratory module, critical to Department of Pathology operations.

b. **Staff Orientation/Training:**
   Phlebotomy and Central Distribution continued to fine-tune and expand on-line orientation and training materials. This included enhancements to the already on-line material used to orient new employees to Specimen Procurement. We also developed additional training materials, including video material that will be used to train staff on unit specific tasks. These materials included:
   - Strep Testing
   - Pregnancy Testing
   - Release of Blood Products in the ED Laboratory
   - Problems Solving of Blood Product Issues in the ED Laboratory
   - Blood Culture Collection
   - Patient Identification

   Plans are to continue expanding the use of this technology in order to improve efficiency and efficacy of employee training and employee competency efforts.

**CENTRAL DISTRIBUTION:**

Central Distribution continues to be the hub of pathology specimen processing activities. Volumes continue to increase and specimen-handling duties have become more demanding. Technology advances and the ensuing need for sophisticated testing involves a constant changing of tests ordered and changing of specimen requirements. Central Distribution staff continue to respond to these changes effectively.

**REFERRAL LABORATORY TESTING:**

Referral laboratory testing continues to be an expensive, yet needed service and is an indication of overall volume demands in Central Distribution. Referral Laboratory test volumes have increased 23.9% over fiscal year 2002. The increase in volume was primarily sent to Mayo Medical Laboratories and the decrease in volume going to “miscellaneous laboratories” is directly related to our efforts to direct testing to our prime vendor (Mayo Medical Laboratories) and away from non-prime vendors (Miscellaneous Laboratories).
SEND OUT LABORATORY TEST VOLUMES

<table>
<thead>
<tr>
<th></th>
<th>FY 2002</th>
<th>FY 2003</th>
<th>% Change</th>
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<tbody>
<tr>
<td>Mayo Medical</td>
<td>27,423</td>
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<tr>
<td>Laboratories</td>
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<tr>
<td>Specialty Laboratories</td>
<td>4,781</td>
<td>0</td>
<td>-100.0</td>
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<tr>
<td>Miscellaneous</td>
<td>5,834</td>
<td>5,399</td>
<td>-7.5</td>
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<tr>
<td>Laboratories</td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>38,038</td>
<td>47,140</td>
<td>23.9</td>
</tr>
</tbody>
</table>

*See #2, below.

Annual Send Out expenditures were 96% over budget. The discrepancy between budget and actual expenses continues to be related to several factors:

1. Increased physician requests for sophisticated and expensive state-of-the-art testing such as genetic, molecular, and other specialized testing.

2. Additional costs were incurred, beginning in April, 2002, as a result of Specialty Laboratories, one of our prime vendor referral laboratories, being deemed non-compliant with regulations primarily related to personnel licensing requirements. As a result, testing that was originally targeted to be sent by us to Specialty Laboratories was referred back to Mayo Medical Laboratories. A portion of the original cost savings expected from the Specialty Laboratories relationship was not realized. The relationship between the University of Michigan and Specialty Laboratories is currently in limbo and an assessment as to the benefits of resurrecting this relationship is expected in the near future.

SEND OUT LABORATORY EXPENSES

<table>
<thead>
<tr>
<th></th>
<th>FY2002</th>
<th></th>
<th>FY2003</th>
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<tbody>
<tr>
<td>Budget</td>
<td>Actual</td>
<td>% Variance</td>
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<td>Actual</td>
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<tr>
<td>$1,500,000</td>
<td>$2,253,444</td>
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<td>$1,534,500</td>
<td>$3,011,664</td>
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</table>
QUALITY ASSURANCE MONITORS:

The department continues to monitor several quality assurance indicators to assess departmental performance. These included:

<table>
<thead>
<tr>
<th>MONITOR</th>
<th>Description</th>
<th>Threshold</th>
<th>FY 2002 Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLab Order Entry Accuracy</td>
<td>Review all MLab (client) requisitions for order accuracy</td>
<td>&lt;5%</td>
<td>2.3% Error Rate</td>
</tr>
<tr>
<td>Health Center Order Entry Accuracy</td>
<td>Review 10% of CD ordered Health Center requisitions for order accuracy</td>
<td>&lt;5%</td>
<td>1.8% Error Rate</td>
</tr>
<tr>
<td>Call Back Review</td>
<td>Review Call Back records for: Correct Documentation Completed within 30 Minutes</td>
<td></td>
<td>100% 95% 85% 66%</td>
</tr>
</tbody>
</table>

The department is within threshold for Order Entry Accuracy (MLab and Health Center specimens), but is not meeting the Call Back thresholds for documentation and completion time. An action plan to address non-compliance with Call Back thresholds is being addressed.

INPATIENT PHLEBOTOMY:

Inpatient Phlebotomy Services continue to be responsible for both specimen collection (phlebotomy) and specimen transport in the University Hospital and Mott Children’s Hospital. Patient draws for fiscal year 2003 have increased 3.7% (+5036 patient draws) over fiscal year 2002.

<table>
<thead>
<tr>
<th>INPATIENT PHLEBOTOMY VOLUMES</th>
<th>FY2002</th>
<th>FY2003</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Phlebotomy</td>
<td>137,401</td>
<td>142,437</td>
<td>3.7</td>
</tr>
</tbody>
</table>

313
Workflow redesign is being planned in order to better meet customer needs of having morning sweep collections into the laboratory by 8:30 AM. This will facilitate the earlier reporting of tests results and assist in getting patients discharged from the hospital as soon as possible.

**OUTPATIENT PHLEBOTOMY:**

Outpatient Phlebotomy Services continue to provide phlebotomy services to two blood drawing stations in the Taubman Center and one blood drawing station in the Cancer/Geriatric Center.

<table>
<thead>
<tr>
<th>OUTPATIENT PHLEBOTOMY VOLUMES</th>
<th>FY2002</th>
<th>FY2003</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer/Geriatric Center</td>
<td>46,682</td>
<td>52,020</td>
<td>11.4</td>
</tr>
<tr>
<td>Taubman Drawing Station, Floor #2</td>
<td>25,924</td>
<td>21,570</td>
<td>-16.8</td>
</tr>
<tr>
<td>Taubman Drawing Station, Floor #3</td>
<td>65,795</td>
<td>59,893</td>
<td>-9.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>138,401</td>
<td>133,483</td>
<td>-3.6</td>
</tr>
</tbody>
</table>

Total outpatient phlebotomy volumes decreased a net of -3.6% (-4918 patient draws). Decreased volumes were seen in the Taubman Blood Drawing Stations, with an increase of 11% (5338 patient draws) seen in the Cancer/Geriatric Center Blood Draw Station.

**QUALITY ASSURANCE MONITORS:**

The Outpatient Phlebotomy area does a monthly monitor of patient wait times. Modeled after a Mayo Clinic program that monitors the flow of patients one day a month through their blood drawing station, we collect data one day a month to assess performance. During fiscal year 2003, 80 to 98% of our patients were drawn within 30 minutes of arrival in the blood draw station. Most recent data shows 95% of Cancer/Geriatric patients are processed within the blood drawing station in under 20 minutes.

Submitted by:
Harry Neusius
GENERAL PATHOLOGY
I. MISSION:

MLabs is the University of Michigan Health System's reference laboratory program, established in 1985. MLabs offers the high quality reference laboratory services and other resources of the Department of Pathology laboratories to hospitals, clinics, other institutions, and physician offices. MLabs mission is to ensure that the Department of Pathology laboratories: (1) remain financially strong, (2) receive sufficient laboratory specimens for teaching, training and research programs, and (3) to encourage increased productivity of the laboratory staff.

II. CURRENT STATUS:

Since its origin, the MLabs program has experienced continuous growth, most notably since 1994 at which time the University Hospital chose to increase resources devoted to it. Gross billings have increased fourfold in the last four years.

MLabs currently provides full anatomic pathology coverage and esoteric clinical laboratory services to one hospital and to the University of Michigan Health Service. MLabs is the primary reference laboratory and provides full esoteric laboratory testing to another 15 hospitals in Michigan and northern Ohio. MLabs does esoteric testing for a local pharmaceutical firm. MLabs also now provides daily courier service and receives laboratory testing from 143 physician offices/clinics.

III. 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.
   - Managed care organizations.
   - Specific esoteric services such as renal biopsies, molecular diagnostics, cytogenetics, and flow cytometry, and other "centers of excellence".

2. Develop and participate in hospital laboratory networks to:

   - Compete effectively for managed care laboratory testing.
   - Reduce 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 Health System.

4. To support the mission of the University of Michigan Hospital System by providing for outpatient laboratory services to M-Care through a network or networks of hospital laboratories which will be potential M-Labs clients.

IV. **GROWTH:**

- In FY2003, MLabs added 16 new physician offices and specialty service practices to our client list. The majority of these were related to our contract to provide coverage to MCare patients. Some were for specialty services, and a few were UMHS acquired practices.
- No new hospital full reference laboratory accounts.
- No contracts for services were terminated.
- MLabs submitted no proposals to prospective new clients during FY2003.
- Business opportunities were rejected by MLabs because the Department of Pathology could not provide the services which were requested. Five dermatology practices requested dermatopathology. These requests were denied. Estimated revenue for these services is $1,000,000.

IV. **BILLING ACTIVITY:**

- Gross billings for anatomic pathology increased by 21% and those for clinical pathology increased by 29%. Total combined expected revenue from billing increased by 27% from last year.

V. **MANAGED CARE ACTIVITIES:**

In the last six years, MLabs has contracted with MCare for provision of outpatient lab services, first to its Medicare members, and later for members enrolled in M Care’s commercial and Medicaid products. MLabs subcontracted much of the work to M Care’s provider hospital labs with benefits to hospitals and patients. These contracts are capitated, which will result in considerable savings to MCare over its previous fee for service contracts for these lab services.

In FY2003, we have successfully implemented our second renegotiated contract with M Care to provide outpatient laboratory services for all groups and products for M Care's commercial and Medicare products. M Labs prepares quarterly QA reports on lab services for M Care's QA department and have conducted a Physician Satisfaction Survey for M Labs subcontracted providers and reported the results to M Care. We assist M Care with resolution of laboratory service issues. We are actively engaged in contracting for delivery of HEDIS data for M Care to assist them in meeting requirements of NCQA and other certifying entities.
VI. NETWORK ACTIVITY:

In the past several years, hospitals throughout the country have been forming networks in order to cope with the evolving demands of a changing health care system including intense cost cutting by third party payors, reduction in inpatient laboratory testing, competition from commercial laboratories, and carve out of outpatient laboratory services (to large independent labs) from managed care contracts. The formation of laboratory networks gives hospital labs the geographic coverage which allows them to successfully compete in a managed care environment as well as to decrease unit costs and increase revenue streams through outreach activities.

MLabs has been positioning itself to deal with an increase in managed care testing by playing a key role in two laboratory networks. Great Lakes Laboratory Network (GLN) consists of 28 hospital laboratories, predominantly in the western and northern parts of Michigan; Joint Venture Hospital Laboratories (JVHL) has grown to include 9 equity members including UMHS, and 72 participating member laboratories located in Michigan. JVHL has contracts with 14 managed care organizations including Blue Care Network. M Labs is represented on the Executive Committee.

VII. PROSPECTS:

Looking ahead, we foresee an increasingly competitive market for outreach and esoteric laboratory testing. We are already experiencing fierce competition in the hospital reference laboratory market from increasingly consolidated large independent laboratories with a national presence who offer a broad range of esoteric testing at extremely competitive prices. Purchasing agreements among groups of hospitals and affiliations/consolidations among groups of hospitals may also dictate their use of reference laboratories other than MLabs.

In the next few years, MLabs will focus its efforts on maintaining and increasing its existing hospital client base. This will require some reduction in our pricing, some broadening of our test menu, and continued efforts to interface the Department of Pathology's information system with client hospital information systems. We may also enter into arrangements with client hospitals where we would provide some management of their outreach programs.

Our recently much increased physician office client base will require efforts to continue to make our services run smoothly. In addition to the managed care work contracted to MLabs, we will focus our efforts on obtaining the discretionary (pull-through) laboratory work from these physician clients.

MLabs plans to increase our efforts significantly in marketing specialty (niche) areas such as dermatopathology, renal pathology, cytogenetics, molecular diagnostics, neuropathology, hematopathology, and flow cytometry. We currently provide laboratory listing to 2 University Health Systems. We are working with a third health system to set up their laboratory and do their esoteric testing.
IX. **IMPEDIMENTS:**

As other hospital labs develop increasingly complex testing capabilities, the University of Michigan Clinical Laboratories must be increasingly innovative to bring more complex testing in-house in order to have a sufficient menu of complex testing to successfully compete in the hospital reference laboratory market. Investment in additional resources, personnel and space will be necessary if M Labs is to be able to accommodate the increased demand for esoteric testing where we have special expertise. So far, recently, additional resources have not been made available stifling growth in these areas. In addition, cost constraints have worked to reduce the scope and frequency of esoteric testing. If this trend continues, it would produce a downward spiral of reduction in volume leading to increased unit costs, leading and reduction in volume, etc.

Prepared by Eugene M. Silverman, M.D.
PATHOLOGY RESEARCH MICROARRAY LABORATORY

DEPARTMENT OF PATHOLOGY
ANNUAL REPORT
1 JULY 2002- 30 JUNE 2003

I. OVERVIEW:

The Pathology Research Microarray Laboratory was established in 1999-2000 as part of the larger Microarray Network at the University of Michigan Medical School. This array facility is in addition to the one in the Cancer Center, which is largely devoted to genetic analysis of solid tumors from humans. DNA microarray analysis is a powerful technology allowing for detailed gene expression studies of cell lines, animal models, and tissues (including pathologic specimens). With the sequencing of the entire human genome, it may soon be possible to monitor gene expression on a comprehensive, global scale as opposed to focusing on one gene at a time. Not only will this technology have an obvious application in the basic sciences, it has the potential of impacting the treatment and diagnosis of patients. As Pathology is a discipline comprised of both scientific investigation and clinical diagnosis, it is imperative that the Department play a role in the use and development of this technology. Clinical Pathology, in particular, has the opportunity of utilizing microarray technology to develop novel diagnostic and prognostic biomarkers.

The Pathology Research Microarray Laboratory functions to support the current and future research activities of the Department as well as Interdepartmental Programs. The primary focus of this facility is in three areas important in the study of human pathology including 1) inflammation, 2) apoptosis/cell death and 3) cancer. These studies are accomplished using characterized animal models as well as with human specimens and cell lines.

II. RESEARCH AND DEVELOPMENT:

While DNA microarray analysis is a potent technique to explore complex and interlocking systems, it is clear that this technology is in its infancy and that there are formidable problems in dealing with the multitude of data generated. Dr. Arul Chinnaian has carefully developed our Research Microarray Laboratory, beginning 2 years ago when he visited the Brown and Botstein laboratories at Stanford in order to talk with experts and determine the best microarray system to meet our needs. Our microarray methodology is based primarily on techniques learned at the 1999 Cold Spring Harbor Workshop on DNA Microarrays attended by Dr. Chinnaian and taught by Drs. Joseph DeRisi (UCSF), Michael Eisen (Stanford), and Patrick Brown (Stanford), all of whom are renowned experts in the field.

Beginning October of 1999, the Lab has been assembling the equipment, clone sets, and supplies necessary to produce high-density cDNA microarrays including a robotic arrayer, microarray scanner, PCR machines, and liquid handling instrumentation. The Lab has successfully generated a 20K human cDNA chip, 10K rat cDNA chip and a 5K mouse cDNA chip.
During this reporting period the following investigators have utilized the Microarray facilities:

1. Dr. Peter Ward (Pathology), studies on sepsis and c5a.
2. Dr. Sem Phan (Pathology), studies using in vivo fibrosis models.
3. Dr. Dan Remick (Pathology, protein microarrays), sandwich antibody microarrays.
4. Dr. William Finn (Pathology), Profiling of hematologic malignancies (CLL and MCL).
5. Dr. Kenneth Pienta (Internal Medicine), gene expression mediated by PAR1.
6. Dr. Marc Lippman (Internal Medicine), Gene expression mediated by ErbB family members.
7. Dr. Andrew Lieberman (Pathology), gene expression mediated by androgen receptor variants.
8. Dr. Mark Rubin (Brigham Woman’s Hospital Pathology), prostate cancer profiling.
9. Dr. Sofia Merajver (Internal Medicine) Gene expression mediated by Rho family members.
10. Dr. Steven Ethier (Radiation Oncology) Gene expression mediated by FGFR family inhibitors.
11. Dr. Joseph Holoshitz (Internal Medicine) Gene expression of studies in identical twins with and without rheumatologic disease.
12. Dr. Kent Johnson (Pathology) and Pfizer Corporation- Development of antibody microarrays.
13. Dr. Donna Livant (Radiation Oncology) Gene expression mediated by PHSCN.
14. Dr. Paul Harari (Univ. of Wisconsin, Radiation Oncology) Gene expression mediated by Tarceva.
15. Dr. Celina Kleer (Pathology) Gene expression mediated by WISP.
16. Dr. Theodora Ross (Internal Medicine) Gene expression mediated by HIF1.

In addition to establishing DNA microarrays in the laboratory, a large effort has also been placed on devising a system to monitor protein levels and activity in a high-throughput fashion. While various genome scale methodologies to identify variations in DNA and RNA exist, an analogous “biochip” to explore protein function has been difficult to implement for various reasons. In this Lab we plan to establish a platform for the massively parallel analysis of protein levels, interactions, and function. One area for which we will implement both DNA and protein microarray technology is the development of novel cancer and inflammation biomarkers. Dr. Dan Remick and Dr. Kent Johnson are both working with the Microarray Lab in order to fabricate and test protein/antibody microarrays for their respective areas of interest.

The following manuscripts include data made possible by the Microarray Lab:


The Pathology Microarray Lab has supported the following grant applications by providing preliminary gene expression analyses:

ACS Beginning Investigator Grant, Molecular Classification of Prostate Cancer, P.I. A. Chinnaiyan

R01, Protective Effects of anti-c5a in Sepsis, P.I. P. Ward

R01, Lung Injury by Oxygen Metabolites, P.I. P. Ward
Microarray Supplement, Sepsis Profiling, P.I. P. Ward

U of M SPORE in Prostate Cancer, P.I. K. Pienta

DOD grant, Biological Differences between prostate cancer cells that metastasize to the bone versus soft tissue sites, P.I. K. Pienta


P01, Program Project on Prostate Cancer Bone Metastases, P.I. E. Keller

RO1, The Role of Polycomb Group Proteins in Prostate Cancer, P.I. Chinnaiyan

Glue Grant, U54 GM64351 Inflammation and the Host Response to Injury; P.I. D. Remick

Department of Defense, DOD PC020322 (Chinnaiyan)
Pfizer Sponsored Research Agreement (Ward)

GMP Sponsored Research Agreement (Chinnaiyan)

1. The Pathology Microarray Lab can now produce 20K human cDNA arrays, 10K rat cDNA arrays, and 5K mouse cDNA arrays
2. A protein microarray platform is being optimized for use with clinical specimens and cell lines.

III FUTURE GOALS:

The future goals of the Pathology Microarray Lab in the next calendar year include:

1. Continue to support the research funding applications of Pathology faculty with preliminary data and bioinformatics expertise.
2. Continue to publish data using microarray technology in peer-reviewed journals to establish the Department in the fast moving field of genomics/proteomics.
3. Expand the rat, mouse, human DNA chips to include additional cDNA clones. Ultimately, we would like to develop a chip that can monitor the entire expressed genome.
4. Develop and utilize protein microarray technology to answer biologically important questions.
5. Train post-doctoral fellows and students in making and using micorarrays.
6. Develop a unified bioinformatics platform for the analysis of DNA microarray, tissue micorarray, protein microarray and clinical/pathology data.
7. Position our resources and expertise such that we can take advantage of opportunities in the emerging field of “clinical genomics”.

324
IV. TEACHING/PROFESSIONAL:

Terry Barrette, the Laboratory manager, has played an important role in setting up our microarray database and data analysis programs. Dr. Chandan Kumar, a post-doctoral fellow in the lab, was instrumental in developing our cDNA microarray system as part of his training. In September of 2003, Dr. Kumar accepted a position as Senior Scientist at the Institute of Bioinformatics, Bangalore India where he setting up their Microarray capabilities. Sooryanaryana Varambally, previously a post-doctoral fellow in the lab was promoted to Research Investigator. Arun Sreekumar, a Research Fellow, was involved in developing the protein microarray platform. Other postdoctoral fellows in the Department of Pathology that have received training in DNA or protein microarrays include: Saravana Dhanasekaran, Ira Maine (mentored by M. Rubin), Atreya Dash (mentored by M. Rubin), Monzy Thomas (mentored by A. Lieberman), Eric Albright (mentored by P. Ward), and Thomas Neff (mentored by P. Ward). Similarly the following medical and graduate students received training in microarrays, microarray analysis and or QRT-PCR: Dan Rhodes (MSTP), Scott Tomlins (MSTP), Qi Cao (Pathology), Jianjun Yu (Bioinformatics), Chad Creighton (Bioinformatics), Patrick Lester (Pathology), Julie Kim (Bioinformatics), Viktortiya Resnick (Bioinformatics), Xiaoyu Jia (Pathology) Smita Lakhotia (Graduate Student, Indian Institute of Sciences), and Ronglai Shen (Biostatistics Masters Student). The Microarray Lab hosted international visiting scholars to train in microarray technology: Jian Huang, M.D. (Zhejiang University, China)

Arul M. Chinnaiyan, M.D., Ph.D.
Director, Pathology Research Microarray Laboratory
DEPARTMENT OF PATHOLOGY EDUCATIONAL PROGRAMS

ANNUAL REPORT
1 JULY 2002 - 30 JUNE 2003

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 many clinical departments in the form of regularly scheduled clinical conferences. Departmental teaching also extends to practitioners in the region and nation through continuing medical education programs, workshops and seminars offered through The University of Michigan, and professional organizations including the United States and Canada Association of Pathologists (USCAP), and American Society of Clinical Pathologists (ASCP).

Medical Student Education:
Pathology faculty continue to provide outstanding leadership (e.g. course directors, sequence coordinators, Associate Dean of Medical Education) and excellent teaching in the first two years of the medical student curriculum. Faculty continue to be recognized as recipients of student teaching awards. Efforts to increase student active learning experiences in a web-based teaching format continue with the development of the "Virtual Microscope" and interactive laboratory exercises. Elective fourth year clerkships in General Pathology and specialty experiences continue to be highly evaluated by students and meet important curriculum educational goals.

Residency Training:
The Department offers combined residency training in Anatomic and Clinical Pathology as well as fellowships in Cytopathology, Hematopathology, Surgical Pathology, Blood Bank/Transfusion Medicine and Urologic Pathology. Approximately 30 residents and fellows receive training annually. Residents continue to be very academically active, with multiple presentations at national meetings and first author publications. Several residents continue to provide strong support to the medical student educational programs through their involvement as laboratory instructors, mentors and tutors to students. Five house officers and nine fellows completed training this past year. Graduates found desirable fellowships and employment as well as faculty position at the University of Michigan Hospitals.

Graduate Program:
The Department's doctoral graduate program continues to expand and thrive (approx. 15 students) with a focus on providing excellent training in preparation for student's careers as scientific investigators. The quality of the faculty and training offered is reflected by the continued interest of MSTP students and the completion of doctoral theses by two students this past year. Two training grants within the Department continue to serve as important sources of support for graduate students and post-doctoral fellows. The Department of Pathology is an active participant with other basic science departments in the Program in Biomedical Science (PIBS). This program involves a joint recruitment effort of biomedical graduate programs to recruit the very best students to the University of Michigan and allow
them to delay selection of specific departments until they have completed their first year of study. Several faculty serve on both the curriculum and admissions committees for the program. An annual Pathology Research Symposium was implemented this past year and well received by students and faculty.

University / CME: Programs:
Department faculty continue to offer high quality laboratory research opportunities to both undergraduate and medical students, a Dental student pathology course with lab, CME programs, and individual teaching in the other schools of the University including Public Health. The Pathology Informatics and Blood Bank CME courses continue to be recognized as foremost programs in the country. Faculty continue to develop internet based educational modules that can be linked established and future CME programs. The fall A.J. French Society meeting continues to be a focal point for CME especially for graduates of our resident training programs.
I. OVERVIEW:

This Core is administered by the Department of Pathology. The Core is primarily supported from funds provided by the University of Michigan Prostate SPORE grant (PI Kenneth Pienta), the Department of Urology, and the Department of Pathology. The aim of the University of Michigan Prostate SPORE Tissue Core is the collection of biological material with associated clinical information to facilitate translational research. Quality assurance is maintained by a staff of two pathologists (Drs. Chinnaian and Shah) and two pathology fellows (Drs. Mehra and Snyder). A urologist directs clinical consent and patient participation with specialty interest in outcomes and quality of life research (Dr. Wei, Department of Urology). As a coordinated effort between Pathology, Urology, and SPORE researchers, the Tissue/Informatics Core has a comprehensive relational database that provides researchers a wide range of data on each sample under study. The Tissue/Informatics Core places patient confidentiality and clinical care as a top priority.

Since 1994 the Prostate Tissue Core has served an important role in the University of Michigan prostate SPORE. One of the main accomplishments of the Tissue Core is the establishment of a model Tissue Microarray (TMA) facility with associated infrastructure. This model has been tested at the University of Michigan site and has been used for managing clinical, pathology, and molecular data on over 1500 prostate cancer (PCa) patients dating back to 1995. This work done alone or in collaboration with other SPORE groups has led to many published studies. In September of 2002, Dr. Chinnaian assumed leadership of the SPORE Tissue Core. As Co-Director, Dr. Rajal Shah is the lead surgical pathologist for the Michigan Prostate SPORE.

II. RESEARCH AND DEVELOPMENT:

Drs. Chinnaian and Shah are dedicated to maintain and improve the existing resources and capabilities of the SPORE Tissue Core. During this reporting period, a new perspective to the Tissue Core led to the development of new resources and technologies. These are delineated here:

1. Development of a bank of genomic DNA, RNA/cDNA, and protein extracted from grossly dissected and laser-microdissected prostatic tissues.
2. Introduction of quantitative real-time PCR technology for the validation of candidate differentially expressed prostate cancer genes.
3. Continued construction of TMAs from cases derived from the University of Ulm collaboration, which provides the SPORE with a rich source of hormone naive prostatic tissues.
4. Development of Mayo Clinic TMAs for the validation of EZH2 and other biomarkers on independent patient cohorts.
5. Development of mRNA in situ hybridization and fluorescence in situ hybridization (FISH) of TMAs.
6. Continued development of a unified bioinformatics platform (designated “Profiler”) to maintain and analyze inter-related clinical/pathology data, tissue microarray images/data, and gene expression/proteomics data.
7. Establishment of a strong inter-SPORE collaboration between Michigan and the Dana Farber HMS Cancer Center as well as between the intra-institution Prostate and Head & Neck SPOREs at Michigan.

The Tissue Core has been innovative in identifying and collecting prostate tissue samples. In addition to collecting samples from the prostatectomy cohort at the University of Michigan, metastatic hormone refractory PCa is harvested from our Rapid Autopsy Program. We have also developed a program to collect hormone naive metastatic PCa from the University Clinic in Ulm, Germany. A recently developed protocol in conjunction with the Michigan Transplantation Society allows us to harvest benign prostate tissue from organ donors. Our Tissue Core performs a central histologic review by expert Genitourinary pathologists on all tissue entering the Core. The samples are carefully annotated by the support staff and entered into a relational database. New technology is employed when needed to help make the best use of these samples for research. Examples of this are the development of TMAs and tumor isolation protocols using laser capture microdissection. These annotated samples are made available to the SPORE projects, SPORE researchers, and other researchers under the direction of the Core PI. The Tissue Core works closely with the Biosatistics Core (PI Taylor) and Clinical Applications Core (PI Montie) in the development of TMAs, identification of representative study cohorts, and validation work. In summary, the Prostate Tissue Core has and continues to play a central role in the success of the University of Michigan Prostate SPORE Program.

III. PROGRESS/TASK REPORT:

The following projects have been completed or in progress in the Tissue/Informatics Core:

1. Twelve Tissue Microarrays have been constructed: 1) Prostate Transition Zone array TMA 67, 2) Bladder test array TMA 68, 3) Bladder Cancer TMA 69, 4) Larynx array (T.Carey) TMA 70, 5) Effect of Radiation on Xenograft Models (M. Nyati) TMA 71, 6) Larynx Ca. array (Carey) TMA 72, 7) Prostate Screening array TMA 73, 8) ENT test array (Carey) TMA 74, 9) Chromosome 8 array (Macoska) TMA 75, 10) Renal array (Shah, Kunju)TMA 76, 11) Screening hereditary array (Cooney) TMA 77, and 12) LOA array TMA 78.

2. Profiler - A bioinformatics infrastructure to analyze TMAs was updated to a second version. The following were active users of the system: Rajal Shah (Pathology), Rohit Mehra (Pathology), Priya Kunju (Pathology), Celina Kleer (Pathology), Thomas Carey (Head and Neck), Carol Bradford (Head and Neck), Mark Rubin (Pathology), Matthias Hoffer (Dr. Rubin’s lab, Brigham), Russel Taichman (School of Dentistry), Dr. Cheville (Pathology), Dan Rhodes (Pathology), Evan Keller (Pathology), Dr. Lippman (Internal Medicine), Max Loda (Pathology, Brigham), Dr. Prince (Head and Neck), Tarek (Dr. Rubin’s lab), and Zheng Fu from (Pathology).
3. LCM Projects- laser capture microdissection
   A) Arul Chinnaiyan (15 LCM caps) Reverse phase gel protein microarrays and RNA analysis
   B) Celina Kleer (31 LCM caps) – Breast cancer Amplicon project

4. Serum collection
   A) Re-started prostate cancer serum collection and restructured database (427 total)
   B) Started organizing and making aliquots to make better use of serum bank

5. DNA collection
   A) Bladder DNA for Dr. Lee 53
   B) Collection of DNA from Prostate Cancer Patients Peripheral Blood 202

6. Tissue Bank collections
   A) Prostate cancer collection (RRP) = 212
   B) Benign prostate from Cystoprostatectomy cases: 4
   C) Bladder cancer collection = 25
   D) Renal cancer = 4

7. Rapid Autopsy Collection (WA25-WA29)
   A) Frozen blocks (204 total)
   B) Paraffin blocks (165 total)

In summary, over the past 6 years, the University of Michigan Prostate SPORE Tissue Core has developed a mature tissue resource that maintains a large amount of clinical and pathology data. This resource has been used in over 70 peer-reviewed publications. The core has also developed an important TMA resource that allows for high-throughput evaluation of prostate tissues. Finally, the Tissue Core has developed important collaborations with other SPORE groups that will allow for important biomarker validation studies in the next few years.

**Publications (Also includes published abstracts) during this reporting period using services provided by the Tissue/Informatics Core:**


4. Chaib H, MacDonald JW, Vessella RL, Washburn JG, Quinn JE, Odman A, Rubin MA, Macoska JA. Haplo insufficiency and reduced expression of genes localized to the 8p


Arul M. Chinnaiyan, M.D., Ph.D.
Director, Prostate S.P.O.R.E. Tissue/Informatics Core

Rajal Shah, M.D.
Co-Director, Prostate S.P.O.R.E. Tissue/Informatics Core
INTRODUCTION:

The VA Ann Arbor VA Healthcare System (VAAHHS) is a University of Michigan affiliated tertiary health care provider for veterans. It is one of three tertiary medical centers in the Veterans Integrated Service Network (VISN) #11 serving the veteran population of Michigan, and portions of Ohio, Indiana and Illinois. The VAAHHS Pathology and Laboratory Medicine Service maintains a close relationship with the University Department of Pathology at every level. All pathologists in the VAAHHS have medical school appointments and participate in university activities in a manner similar to other departmental sections. Recruitment for VAAHHS pathologists is a joint activity 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. Two and 1/2 resident training positions in the Department’s program are supported with funds from the Department of Veterans Affairs. All residents 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, Cytopathology and Digital Imaging. The VAAHHS laboratory was inspected in 2002 and retains full accreditation by the College of American Pathologists. The VAAHHS was inspected by the JCAHO and is currently fully accredited. The medical center's Decentralized Hospital Computer System (VistA) is recognized as the most fully integrated medical information system. It combines all of the clinical management of the patient and has shifted to a computerized patient record system (CPRS) in year 2000. Data storage for all components of pathology and the clinical laboratories contains full patient information for 1 ½ decades. Digital images of selective patient surgical, cytology, autopsies and ultrastructural specimens are stored as part of the patient medical record and are accessible to clinicians within minutes of case review.

Two ongoing reorganizational thrusts are underway at the VAAHHS. 1) The facility is refocusing its mode of healthcare delivery, downsizing inpatient care and greatly expanding its ambulatory care. In keeping with this change, a substantial capital improvement program is ongoing. Completed to date are Research Building, two additional parking structures and a 340,000 sq. ft. clinical addition. This building is attached to the existing hospital and provides space for ambulatory care, new surgical suites, post surgical recovered unit, vascular cath facilities, four intensive care units and a floor for diagnostic services (Pathology, Clinical Labs, Radiology and Nuclear Medicine). Pathology and Laboratory Medicine occupies 23,000 sq. ft. on the third floor of the clinical addition. The previous structure is currently under complete remodeling to allow for current standards of inpatient privacy. Also included will be administrative offices, and additional research space. Current discussions concern a complete functional restructuring of the clinical labs. 2) The VISN continues efforts toward an integrated health delivery system. Diagnostic Services will be a target for networking/consolidation among the current 8 independent facilities. This will result in additional sharing of service responsibilities, equipment standardization, VISN-wide reagent contracting, decreased cost of referred
(send-out) testing to non-VA clinical labs and an increase in the workload in VAAAH's anatomic pathology and the clinical labs. Ann Arbor is currently performing all surgical pathology for the Battle Creek/Grand Rapid facilities. The VISN has added an additional outpatient facility in Flint which is serviced by the Ann Arbor laboratory. A recent CARES review was implemented by the VA Secretary in order to project veteran medical care needs for the next two decades and based upon that review the VAAAH will likely be facing increasing demand and expansion of services.

ANATOMICAL PATHOLOGY:

A. **Surgical Pathology:** 5,648 surgical cases were accessioned and reported during year 2002 continuing a steady increase over the prior reporting periods. 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 mentoring by the staff pathologists. The resident interacts with the clinical teams. Weekly Urology Case Review Conference is held by Dr. Murphy. The residents assigned to autopsy and surgical pathology are primary presenters in 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 Anatomical Pathology including regular consultations with the Armed Forces Institute of Pathology, University of Michigan, and other outside consultants. There is extensive quality assurance review and analysis of frozen sections, amended diagnoses, surgical appropriateness, turnaround times and follow-up of positive cancer diagnoses. The surgical and cytology readout stations are fully integrated into a hospital digital imaging system. Images are captured on cases of interest and when needed for documentation purposes. These are particularly useful in presentations to clinical teams reviewing specimens from their patients with the pathology staff and residents.

B. **Autopsy Pathology:** 33 autopsies were performed during this year that is a rate of approximately 24% 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 VAAAH are also presented at the extended Gross Conference at the University. The Department of Veterans Affairs maintains a policy to recognize the value of the autopsy and to encourage increased utilization. There is an expectation that all facilities will obtain permission to perform autopsies on at least 30% of their in-house deaths.

C. **Cytology:** 2,363 cases were examined and diagnosed during this period. This is a slight increase over the last reporting year. Most of the cytology specimens are of diagnostic type, however the VAAAH performs all PAP screening cytologies for the northern tier of VISN 11. Although there is not a formal rotation in cytology within the VAAAH the cytological material is readily available and is used as correlative information for surgical and autopsy pathology. This laboratory is a VA “Center of Excellence” in cytology.
D. **Electron Microscopy**: 60 electron microscopy cases were processed. Ultrastructural diagnosis is provided through sharing agreements with several Michigan hospitals. Some of the University of Michigan pathology specimens are processed and reported. The unit also serves several VAAAHS research investigators. 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. This VAAAHS 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 contract.

**CLINICAL PATHOLOGY:**

During the period of this report 1,088,933 clinical pathology procedures were performed in the Ann Arbor and its affiliated Toledo outpatient laboratory. In Chemistry there were 776,838; in Hematology 99,026; in Urinalysis 13,672, in Microbiology 25,786 and in Blood Bank 19,754. The Toledo unit performed 94,603 tests. These figures represent productivity (billable) rather than weighted test numbers. A formal clinical pathology rotation has not been available for pathology residents although the residents may participate or observe clinical pathology procedures when this activity is appropriate in relation to their other rotations. Drs. Chensue, Utiger and Chamberlain oversee the clinical laboratory and make available interesting and pertinent clinical laboratory information available to residents as desired. Clinical Pathology and medical historical data is available to pathology residents via CPRS for their information in surgical pathology, autopsy pathology, and elective rotations.

**EDUCATION AND TEACHING:**

In surgical pathology the staff pathologists provide one-to-one mentoring 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 VAAAHS is physically close to the University, the residents are expected to attend the appropriate teaching conferences at the University as well. The staff contribute to the laboratory and lecture portions of the second year medical students at the University of Michigan. 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. Chensue and Murphy have made presentations at international pathology conferences. Through his research program Dr. Chensue also mentors post-doctoral fellows and graduate students.

**RESEARCH:**

The specific efforts of the pathology staff are included on individual reports. Dr. Stephen Chensue has strong funded research programs. He also participates in cooperative studies with other investigators at the University of Michigan. Dr. Murphy carries a full investigative program. She and Dr. Chensue have research laboratories in Research Building 31 of the VAAAHS. All staff participate in various clinical studies and collaborate with a variety of investigators. The laboratory in general serves
the VAAAHs research program by providing considerable technical support for clinical research and in some cases for more basic research in both anatomic and clinical pathology.

ADMINISTRATION:

Dr. Chensue was appointed as Chief of Service in March 2001. 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, Graduate student preliminary exam and thesis committees, teaching faculty of the second year medical students as well as other graduate course in the medical, dental schools and the school of public health. At the VAAAHs, the pathology staff members serve on all major committees involved with institutional policies and procedures.

The VA’s National Cytopathology Proficiency Program’s administrative offices are located in the VAAAHs. 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.

SUMMARY:

The VAAAHs Pathology and Laboratory Medicine Service considers the practice of high quality medicine and the appropriate care of the veteran patients as its first and highest responsibility. There is close supervision of resident activities as they are involved with patient care. All staff members are privileged and evaluated in accordance with their training, experience, continuing education and participation in 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 maintained accreditation by the College of American Pathologists since the early 1960’s. The Blood Bank maintains approval by the federal Food and Drug Administration. The partnership with the University of Michigan serves to strengthen and improve the quality of patient care to our veterans. The teaching effort involving both residents and medical students is of benefit to the two institutions. The newly constructed Clinical Addition now houses: Ambulatory Care, Surgical Suites, the Intensive Care Units, Nuclear Medicine, Radiology and the full Clinical and Anatomic Pathology laboratories.

Stephen W. Chensue, M.D., Ph.D.
Chief, Pathology and Laboratory Medicine Service
VA Ann Arbor Healthcare System
FINANCE AND ADMINISTRATION
DIVISION OF FINANCE AND ADMINISTRATION
DEPARTMENT OF PATHOLOGY - UNIVERSITY OF MICHIGAN
ANNUAL DEPARTMENTAL REPORT
1 JULY 2002 - 30 JUNE 2003

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 five 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 Operations
Beverly J. Smith, Administrative Associate, Human Resources

Clinical Faculty Offices & Surgical Pathology Transcription, University Hospitals:

Deborah Day Jansen, Administrative Coordinator
Paulette Dozier, Office Manager, Surgical Pathology Transcription
Patricia Connolly, Office Manager, Clinical Faculty Offices

B. OFFICE OF ACADEMIC AND BUSINESSAFFAIRS - MEDICAL SCHOOL:

David R. Golden, Administrative Manager
Laura Hessler, Student Services Assistant
John E. Harris, Administrative Associate
Catherine A. Niemiec, Administrative Assistant

C. OFFICE OF THE CHAIRMAN:

Laura D. Blythe, Clinical Department Associate
Lynn A. McCain, Executive Medical Secretary
Jennifer Neff, Receptionist

D. PATHOLOGY PHOTOGRAPHY AND IMAGING CENTER:

Mark V. Deming, Senior Photographer
Elizabeth Horn, Photographer

E. CENTRAL DISTRIBUTION & PHLEBOTOMY SERVICES ADMINISTRATION:
All of the above sections reside in the Division of Finance and Administration. This Division is responsible for the business, operational and fiscal affairs of the Department of Pathology as mandated by the policies of the Chairman, University of Michigan Health System (Medical School and Hospitals) and the University. In addition to directing this division, Mr. Napolitan serves on various departmental, Health Systems and University Committees, several professional society committees and as a board director for several non-profit organizations.

I am pleased to recognize that very little turnover of staff occurred in FY 2003.

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. For Fiscal Year 2003, the Pathology Laboratories were over budget by less than 0.03% or $12,000. This accomplishment reflects our attentiveness to cost containment and expense reduction. We have trained non-medical technology personnel with education in one of the sciences, to complete some of the tasks previously performed by medical technology staff. Additionally, we have implemented a program for medical technology students from area universities, i.e., Ferris State University, Eastern Michigan University, to be provided "on-site" internships. This program also serves as a "pre-recruitment" period for this group of students. Mr. Morrow was appointed as Chairman of a committee to re-design the website for the Department of Pathology. The new site was launched in June 2003.

**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) the SPECTRUM Newsletter, and is responsible for all requisition modifications. Mrs. Jansen lead the Hospital and Health Services Blood Drive Program which was assigned to Pathology by Hospital Administration, and she has been able to increase the number of blood units collected through her innovative marketing techniques. Mrs. Jansen also manages the Surgical Transcription Unit and has assumed responsibility for the Faculty Office Suite in the Hospitals as well as the accessioning function in the Medical Science I Building. Staffing within the surgical transcription unit has stabilized and has resulted in timely processing of surgical pathology
reports. A major reorganization of the Clinical Faculty Offices was accomplished this past year including the addition of new faculty and staff and renovation to existing space. A new Office Manager was hired and in the interim, Mrs. Jansen assumed the day to day management of this unit.

Billing Coordinator: This individual, Ms. Nancy Coray, is responsible for processing and auditing all laboratory charges (gross charges of approximately $211,980,951, 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. With the implementation of APC, timeliness of charges has improved dramatically.

Administrative Associate: This individual, Mrs. Beverly Smith, oversees the clerical support staff assigned to the Administrative Support Center and coordinates the Human Resources functions for Pathology Laboratories non-instructional staff (approximately 438 FTEs). The Administrative Associate is responsible for the compilation of the Pathology Telephone Directory (on-line and hard copy) and serves as lead for the Department’s Orientation Program.

OFFICE OF ACADEMIC AND BUSINESS AFFAIRS - MEDICAL SCHOOL:

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, professional fee billing operations (front end); general funds and teaching and administration funds; departmental renovation and remodeling; and management of the Word Processing Center.

All business and administrative functions associated with our sponsored research and education programs including 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 now performed by staff in this unit. In addition, Human Resources functions associated with non-instructional staff (Medical School paid), house officers and post-doctoral fellows is coordinated in this office.

Mr. John Harris has assumed responsibility for oversight of the staff supporting our Research Programs. Ms. Catherine Niemiec is responsible for Human Resource issues for staff in the Medical School (approximately 134 FTEs) including our House Officer Program (24 FTEs), Post Doctoral Fellows (39 FTEs), and graduate students (34) as well as supervising the staff in the Pathology Education Office.

OFFICE OF THE CHAIRMAN:

In addition to providing support to the Chairman, Mrs. Lynn McCain is responsible for processing faculty appointments and promotions through our departmental ACAPT, the Medical School and University. She also assists the Division Directors with coordinating schedules for faculty recruits.

Mrs. Laura Blythe provides staff support to the Administrator, Mr. Eugene J. Napolitan. In addition, she is responsible for the supervision of faculty support staff, the Chairman’s Office
Department of Pathology Annual Report

Receptionist and temporary office staff. Additional responsibilities include Human Resources for faculty (70+) and other faculty related issues, such as travel and dues reimbursements and p-card reconciliation.

This past year has been an active recruiting period with the addition of five new faculty members. Recruitment efforts continue for several additional slots required for the continued expansion of services required by the Health System.

PATHOLOGY PHOTOGRAPHY AND IMAGING UNIT:

Mr. Mark Deming and Ms. Elizabeth Horn are the photographers assigned to this service. They are responsible for a variety of photography and imaging services including those requested by our clinical and research faculty and house officer staff.

CENTRAL DISTRIBUTION AND PHLEBOTOMY SERVICES:

Mr. Harry J. Neusius is the Chief Technologist for these two laboratory services. All specimens directed to the Pathology Laboratories by the Taubman Clinics, patient floors and off-site health centers are received and accessioned by staff in this unit. The laboratory operates 24 hours per day, 7 days per week to provide the service required by UMHS. Phlebotomy Services are provided to the UMHS patient floors with designated "sweeps" and to UMHS outpatient services with three blood drawing stations located in the Hospitals and Cancer Center, and services available at most of the satellite sites. This unit has, historically, experienced a high rate of turnover in staff, especially on the afternoon and midnight shifts. Over the past year, Mr. Neusius and his supervisory staff have increased efforts to retain current staff. Cross-training with Phlebotomy Services has assisted in covering this critical service, specifically during the off-shifts. Laboratory procedures that are sent to reference laboratories represent a significant expense. A committee comprised of the Laboratory Director for Chemical Pathology, myself, Mr. Neusius, Thomas Morrow and Susan Valliere initiated a review of these procedures and by identifying two primary reference laboratories and performance of selected procedures "in house", have reduced this expense by $200,000 annually.
SUMMARY OF FINANCIAL DATA:

1. Grants and Contracts and Other Accounts:

   241 active grants, contracts and other accounts

   Total Extramural Direct Expenditures: $12,151,608
   Indirect Extramural Research Expenditures: $5,003,032
   Total Sponsored Projects: $17,154,640

2. Faculty Group Practice Plan - Pathology:

   Number of charge entries: 190,866
   Gross Billings - Anatomic and Clinical Pathology: $25,022,801
   Collections $9,169,121
   Part A Payment: $2,768,295
   M-Labs Net Transfer: $950,000

3. All Fund Expenditures – Medical School

   Compensation & Benefits $20,112,368
   Commodities & Other Costs $12,946,088
   Total $33,355,701

   # of Funded Faculty 74.98
   # of Funded Residents 31.00
   (includes 4 clinical fellows)
   # of Funded FTE Research Projects 159.00
   (includes 15 graduate students, 44 pre & post-doctoral fellows)

4. Pathology Laboratories:

   Number of billed tests reported by CDM: 3,168,236
   Total Gross Revenue - Pathology Laboratories: $211,980,951
   Total Direct Expenses Pathology Laboratories: $45,714,302

*Includes General Fund, Extramural Funds, FGP Professional Fee Income, Gift, etc.

Respectfully submitted,

Eugene J. Napolitan
Administrator