

University of California San Francisco  
**CURRICULUM VITAE**

**Name:** Linda Ferrell, MD

**Position:** Professor, Step VI  
Department of Pathology

Vice Chair of Clinical Affairs

Director of Surgical Pathology, Department of Pathology, School of Medicine

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**EDUCATION:**

1970-74	University of Kansas, Lawrence, KS	B.A.	Summa cum laude, Microbiology
1974-77	University of Kansas, Kansas City, KS	M.D.	
1977-79	University of Kansas, Kansas City, KS	Resident	Pathology
1980-81	University of California, San Francisco	Chief Resident/Surgical Pathology Fellow	Pathology

**LICENSES, CERTIFICATION:**

1978-79	Medical Licensure, Kansas
1980-now	Medical Licensure, California, G41978
1982	Board Certification, Anatomic Pathology, American Board of Pathology

**PRINCIPAL POSITIONS HELD:**

1981-88	Assistant Professor of Pathology, University of California, San Francisco, CA
1988-94	Associate Professor of Pathology and Surgery, University of California, San Francisco, CA
1994-now	Professor of Pathology and Surgery, University of California, San Francisco, CA
1999-now	Vice Chair of Clinical Affairs, Director of Surgical Pathology, University of California San

Francisco

**OTHER POSITIONS HELD CONCURRENTLY:**

1982-89 Co-Director, Cytology Laboratory, Department of Pathology, University of California, San Francisco, CA  
1985-now Consultant, Anatomic Pathology, Veterans Administration Medical Center, San Francisco, CA  
2001-now Member of UCSF Cancer Center, GI/Liver/Pancreas Section

**HONORS AND AWARDS:**

1970-74 Watkins-Berger Scholar, Univ. Kansas  
1972, 73 Chemistry Awards  
1973 Phi Beta Kappa  
1974 Outstanding Senior Woman in Academics, Dean's Award  
1975-77 Robert-Wood Johnson Scholarship, Univ. Kansas  
1975 Postgraduate Scholarship Award, Alpha Chi Omega  
1983 Academic Senate Distinguished Teaching Award, UCSF  
1984 American Roentgen Ray Executive Council Award (for hepatocryosurgery project)  
1984 Nominated for Kaiser Award for Excellence in Teaching  
1986 Nominated for "Excellent Small Group Teaching Award," MSII  
1987 Received Kaiser Award for Excellence in Teaching, UCSF  
1987 Received Distinction in Teaching, Excellent Small Group Instruction, MSII  
1987 Received Distinction in Teaching, Pathology Residents  
1987 Nominated for MSII "Major Contribution to Teaching" and "Stimulating Lectures"  
1988 Nominated for MSII "Excellent Small Group Instructor"  
1989 Nominated for MSII "Excellent Small Group Instructor" and "Stimulating Lecture Series"  
1989 125th Anniversary Celebration: 1 of 125 honorees for "Exceptional Contribution"  
1990 Nominated for MSII "Major Contribution in Teaching" and "Excellence in Laboratory Instruction"  
1990 Nominated for MSI "Excellent Small Group Instructor"  
1990 Invited to be permanent member of the International Liver Pathology Study Group, limited to 15 pathologists  
1991 Received MSII "A Major Contribution to Teaching"  
1991 Nominated for MSII "A Stimulating Lecture Series", "An Outstanding Lecture" and "Excellence in Small/Lab Instruction"  
1992 Elected AOA  
1992 Received MSIV award for teaching excellence  
1993 Received MSIV award for teaching excellence  
1993 Nominated for Kaiser Award for Excellence in Teaching  
1993 Recognition Award, US and Canadian Academy of Pathology  
1994 Received MSIV award for teaching excellence  
1995 Nominated for MSIV teaching award  
2001 Recognition Award, US and Canadian Academy of Pathology  
2001-07 Listed as one of America's Top Doctors, The Nation's Leading Medical Specialists, Castle Connolly Guide  
2003-05 Listed in San Francisco Magazine Best Doctors

2003-08 Listed in Best Doctors in America database  
2006-07 Nominated for Chancellor's Award for the Advancement of Women for a faculty member.  
2008 Gold Headed Cane Society, Honorary Membership

**KEYWORDS/AREAS OF INTEREST:**

Liver, liver transplantation, hepatocellular carcinoma, dysplastic nodules, liver tumors, HIV, biliary cirrhosis, ulcerative colitis, hepatitis, steatohepatitis, diagnostic pathology, surgical pathology, surgical pathology fellowship, anatomic pathology.

**PROFESSIONAL ACTIVITIES**

CLINICAL

Vice Chair of Clinical Affairs, Director of Surgical Pathology, UCSF Moffitt, Mt. Zion: I have had this responsibility from 1999 to present, fulltime

Cytology Attending Physician 1982-89

Surgical Pathology Attending, UCSF: I attend on this service, covering internal diagnostics and outside requests for consultation, night and weekend call including frozen section diagnoses, and Liver Transplant.

Time on service:	1981-1989	60-100% for Moffitt/Mt. Zion
	1990-2000	60% for Moffitt/Mt. Zion
	2000-2004	20% for Moffitt/Mt. Zion with sign-out of about 2,000 cases per year, with consult cases at 100% time on service.
	2004-now	100% on service for Liver/GI consults, 20% for transplant and frozen sections

Director, Surgical Pathology Fellowship: I direct the selection and the training program for 7 surgical pathology fellows per year, which are all clinical service fellows

Director, Gastrointestinal/Liver Pathology Fellowship: I direct the selection and training for 1 fellow per year at the Moffitt campus, which is 80% clinical service.

Director, Transplant Pathology Fellowship: I direct the selection and training for 1 fellow per year, which is 20% clinical service.

SUMMARY OF CLINICAL ACTIVITIES

My major diagnostic role in clinical service is the consultation service for liver and GI cases, which primarily involves rendering diagnoses on pathology slides sent to me from other pathologists across the country and some from other countries (60%) as well as consult on problem diagnostic cases with liver/GI problems for UCSF patients (40%). I spend at least 2-4

hours per day in this capacity. These cases are much more complex than the average samples, and require my expertise in these areas to render the diagnosis. I also have frozen section night and weekend call as well as review of stat cases on the weekend equal to that of other Moffitt surgical pathology faculty. I cover frozen section and transplant daily coverage about 1 week per month. I also am the liver pathologist that attends, reviews, and presents current cases about 2 times per month to the Pediatric gastroenterology service and for the biweekly Liver Transplant service.

My administrative role as Vice Chair and Director of Surgical Pathology accounts for about 50% of my clinical service time. This also includes the Medical Director of Anatomic Pathology laboratories for the CLIA licensures and JCAHO inspections. Quality Improvement activities, faculty scheduling for clinical services, and relationships/service to clinical departments account for most of this administrative work. Faculty recruitment falls under my title of Vice Chair of Clinical Affairs. (See summary of service activities below)

As Director of Surgical Pathology, I deal daily with clinical service issues. In this role, I coordinate the surgical pathology sign-out and call schedules, troubleshoot problems in service coverage for attendings and residents on all surgical pathology rotations at Moffitt and Mt Zion, deal with all problems at any time relating in any aspect to the diagnosis or performance of surgical pathology services, set up quality improvement projects as part of the QI program, and act as the site director for any resident or fellow problem related to surgical pathology. I have performed as the sole Medical Director of Histology and Immunopathology labs (which includes the primary medical director responsibility for the JCAHO inspections), roles which are currently being taken on (as of late 2005) by other more junior faculty under my advisement. Under my supervision, we have undergone 3 Laboratory JCAHO inspections, and received 98%, 100%, and 100% scores respectively. The Associate Director of Surgical Pathology (Grace Kim) has assisted me in management of the gross room and histology lab since Feb 2005. I also coordinate our services with clinical and basic science research efforts by meeting with and helping scientists plan their protocols so that they can conform to the recent IRB and HIPAA requirements.

## **PROFESSIONAL ORGANIZATIONS**

### Memberships

1978-79	Kansas City Society of Pathologists
1978-80	American Society of Clinical Pathologists
1982-92	Physicians for Social Responsibility
1983	American Gastroenterology Association
1984-now	Rodger Haggitt Gastrointestinal Pathology Society
1985-now	US and Canadian Division of the International Academy of Pathology (USCAP)
1986-89	UCSF Women's Faculty Association
1987-89	National Foundation for Ileitis and Colitis
1987-90	American Society of Cytology
1989-93	American Society of Clinical Pathology
1989-now	California Society of Pathology
1993-now	Arthur Purdy Stout Society (for Academic Surgical Pathologists)

1993-now Hans Popper Hepatopathology Society (for Liver Pathologists)  
1996-2005 South Bay Pathology Society  
2001-now Association of Directors of Anatomic and Surgical Pathology (for Academic Directors)

Service to Professional Organizations

1988-1989	UCSF Women's Faculty Association	Steering Committee and Co-chair
1991-present	California Society of Pathologists	Education Committee
1997	California Society of Pathologists	Co-chair, Educational Committee
1998-2006	California Society of Pathologists	Chair, Educational Committee
1996-1998	International Academy of Pathology	Moderator, organizer of symposium
1991-1994	Gastrointestinal Pathology Society	Fellowship Committee
1991-1994	US and Canadian Division of the International Academy of Pathology (USCAP)	Reviewer of liver abstracts, 1991-4
1998-2000	US and Canadian Division of the international Academy of Pathology (USCAP)	Organized and moderated liver specialty conference for 3 years
1998-2002	US and Canadian Division of the International Academy of Pathology (USCAP)	Educational Committee for 4 years, includes review of abstracts
2002-2005	US and Canadian Division of the International Academy of Pathology (USCAP)	Council Member (Governing Board role)
2004-06	US and Canadian Division of the International Academy of Pathology (USCAP)	Long course co-chair 2006
2005-07	US and Canadian Division of the International Academy of Pathology (USCAP)	Nominating Committee (2 year term)
2002-2008	Association of Directors of Anatomic and Surgical Pathology	Council Member (Planning and Governing Body)
2004-06	Association of Directors of Anatomic and Surgical Pathology	Practice Management Committee
2006-10	Hans Popper Hepatopathology Society	Vice-President/President
2004-06	International Academy of Pathology	Co-convenor and organizer of 3 medical liver disease sessions for 2006 meeting

**SERVICE TO PROFESSIONAL PUBLICATIONS**

1982-88	Ad hoc referee for GASTROENTEROLOGY, approximately 1 per month
1985-00	Editorial staff, MODERN PATHOLOGY, (reviews approximately 4-5 papers per year)
1992-00	Ad hoc referee for HEPATOLOGY, approximately 1 every 3 months
1995-97	Editorial Board, ADVANCES IN GASTROENTEROLOGY, HEPATOLOGY, and CLINICAL NUTRITION, Raven Press
1995-97	Editorial Consultant, GI Pathology Section, AMERICAN JOURNAL OF SURGICAL PATHOLOGY, Raven Press.
1996-present	Editorial Board, AMERICAN JOURNAL OF SURGICAL PATHOLOGY, Lippincott, Williams & Wilkins
1997-03	Editorial Board, LIVER, Munksgaard International Publishers
2005-present	Editorial Board, HUMAN PATHOLOGY, Elsevier

## **INVITED PRESENTATIONS**

### **INTERNATIONAL**

University of Glasgow, Western Infirmary; Department of Pathology and Department of Medicine, Glasgow, March, 1982 (2 lectures).

Royal Free Hospital, Department of Pathology, Department of Medicine, April 1982 (3 lectures).

FNA Symposium; Stockholm, Sweden, August, 1984 (lecturer and workshop faculty).

Medical University of Xian, Liver Pathology, Xian, China (1 week course); FNA Biopsy Techniques and Diagnosis, Xian, China, (1 ½ week course) March-April, 1988.

International Liver Pathology Study Group; University of Amsterdam, Amsterdam, Netherlands, June, 1992 (panelist).

International Liver Pathology Study Group; Instituto di Anatomia Patologica, Universite de Verona, Verona, Italy, September, 1994 (lecture).

International Liver Pathology Study Group; Universite Bordeaux: Cours de Pathologie Hepatique Division, Bordeaux, France, July, 1995 (lecture).

International Academy of Pathology; Hong Kong, November 1996 (2 lectures).

International Symposium on Liver Pathology; Kanazawa University School of Medicine, Kanazawa, Japan, September, 1997 (lecture).

International Academy of Pathology, Liver Pathology Symposium; Warsaw, Poland, June, 1998 (lecture).

International Academy of Pathology, XXII International Congress; Nice, France, October, 1998 (co-chair of session and lecture).

Progress in Liver Pathology; Darwin, Australia, July, 1999 (lecture).

University of Verona; Verona, Italy, October, 1999 (visiting professor and lecture).

International Symposia, Instituto Portugues Oncologia; Lisbon, Portugal, April, 2000 (visiting professor and lecture).

Scientific Symposiums International, Hawaii, Oct 2001, (5 lectures)

Danish Society of Pathological Anatomy and Clinical Cytology, Aalborg, Denmark, May, 2002 (5-hour course which included many northern European attendees).

International Liver Pathology Study Group, Kings Hospital, London, England, July, 2002 (lecture).  
Scientific Symposiums International, Anchorage, AL, June 2003 (5 lectures)

Update in Liver Pathology, Melbourne, Australia, September, 2003 (lecture).

Canadian Association of Pathologists, Montreal, Canada, July, 2004 (4 lectures).

International Liver Pathology Study Group, Minneapolis, MN, August, 2004 (lecture).

Laennec Society and International Liver Pathology Study Group, Bordeaux, France, June, 2005 (panelist and lecture).

Scientific Symposiums International, Maui, HI, June 2005 (5 lectures)

International Liver Pathology Study Group, Gainesville, FL, Feb 2006 (case presentations)

Laennec Society, Thessoloniki, Greece, May 2006 (invited panelist/discussant and case presentation)

Scientific Symposiums International, South Carolina, Jul 2006 (5 lectures)

International Academy of Pathology, XXVI International Congress, Montreal, Oct 2006 (organizing 2 symposia, speaker at short course)

International Liver Pathology Study Group, Dartmouth, NH, June 2007 (case presentations)

Scientific Symposiums International, Kauai, HI, Feb 2008 (5 lectures)

Japanese Society of Pathologists, Annual meeting, Special lecturer, Kanasawa, Japan, May 2008 (1 hour lecture to Congress)

International Academy of Pathology, XXVIIth International Congress, Athens, Greece, Oct 2008 (symposium lecture)

## INTERNATIONAL/NATIONAL

US and Canadian Academy of Pathology, Annual Meeting

Site not available for new CV, 1988 (poster)

Site not available for new CV, 1991, (platform presentation, session chair)

Atlanta, GA, March, 1992 (platform presentation, poster, specialty conference lecturer)

New Orleans, LA, March, 1993 (platform presentation posters, specialty conference lecturer)

San Francisco, CA, March, 1994 (posters, specialty conference lecturer)

Chicago, IL, March, 1995 (platform presentation, 3-hour short course)

Washington, DC, March, 1996 (platform presentation, 3-hour short course)

Orlando, FL, March, 1997 (poster, session chair, 3-hour short course and specialty conference lecturer)

Boston, MA, March, 1998 (session chair, 3-hour short course and moderator for liver specialty conference)  
San Francisco, CA, March, 1999 (3-hour short course, moderator for liver specialty conference and specialty seminar)  
New Orleans, LA, March, 2000 (posters, Hans Popper Society speaker and moderator for liver specialty conference)  
Atlanta, GA, March, 2001 (posters)  
Chicago, IL, March, 2002 (posters, 1.5-hour short course)  
Washington, D.C., March, 2003 (posters, 1.5-hour short course)  
Vancouver, Canada, March, 2004 (posters, 1.5-hour short course)  
San Antonio, TX, Feb, 2005 (poster, platform and 1.5-hour short course)  
Atlanta, Feb, 2006 (poster and 1.5-hour short course, Course Director for Long Course in Liver Pathology)  
San Diego, Mar, 2007 (liver specialty conference speaker)  
Denver, Mar 2008 (Surgical Pathology specialty conference speaker)

## NATIONAL

### US and Canadian Academy of Pathology, Diagnostic Pathology Course

University of Michigan, Ann Arbor, MI, August, 1991 (2 lectures and discussion period)  
University of Washington, Seattle, WA, August, 1992 (2 lectures)  
Boston, MA, August, 1993 (2 lectures)  
Philadelphia, PA, August, 2000 (2 lectures)  
Monterey, CA, July, 2001 (2 lectures)  
Bar Harbor, ME, July, 2002 (2 lectures)  
Bar Harbor, ME, July 2003 (2 lectures)  
Banff, Alberta, Canada, July 2004 (2 lectures)  
Santa Barbara, CA, July 2005 (2 lectures)

### US and Canadian Academy of Pathology, Weekends in Pathology

Jacksonville, FL, Mar 2006 (1.5 hr short course)

### American Gastroenterology Association, Annual Meeting

San Francisco, CA, September, 1992 (case presentations)  
San Francisco, CA, September, 1992 (lecture)

### American Association for the Study of Liver Disease, Annual Meeting

Chicago, IL, November, 1995 (case presentation).  
Chicago, IL, November, 1998 (lecture)

### American Society of Clinical Pathologists

June, 1996 (lecture, teleconference).  
April, 1998, Annual Meeting, Los Angeles (lecture)

### College of American Pathologists

September, 2005, Annual Meeting (short course, video tutorial)

September, 2006, Annual Meeting (short course, video tutorial)  
September, 2008, Annual Meeting (short course, video tutorial)

## REGIONAL AND OTHER INVITED PRESENTATIONS

### USCF sponsored courses

- 1984, 85, 91 Bay Area Seminars in Cytopathology
- 1985-1997 Current Issues in Anatomic Pathology, UCSF course, annual meeting (course co-chair and lectures)
- 1998-2005 Current Issues in Anatomic Pathology, UCSF/Stanford course, annual meeting (co-chair)
- 1999 Current Issues in Anatomic Pathology (lecture)
- 2000 Current Issues in Anatomic Pathology (lecture)
- 2002 Current Issues in Anatomic Pathology (lecture)
- 2003 Current Issues in Anatomic Pathology (lecture)
- 2004 Current Issues in Anatomic Pathology (lecture)
- 2005 Current Issues in Anatomic Pathology (lecture)
- 2007 Current Issues in Anatomic Pathology (lecture)

## OTHER INVITED PRESENTATIONS

- 1991 Nebraska Association of Pathologists, University of Nebraska, Omaha, NE (invited lecture)
- 1993 Stanford University Grand Rounds (invited lecture)
- 1994 Rush University, Lake Tahoe, February, 1994 (Invited lecture)
- 1994 Nebraska Society of Pathologists and Creighton University (invited lecture)
- 1994 California Society of Pathologists (invited lectures)
- 1995 Palm Beach Gastrointestinal Cancer Conference, Palm Beach, FL (invited lecture)
- 1995 The Merlin L. Trumbull Lectureship in Pathology, Memphis, TN (visiting professor and invited lectureship)
- 1995 University of Kansas, Kansas City, KS (visiting professor)
- 1995 Colorado Society of Pathologists, Denver, CO (invited lecture)
- 1995 Sutherland Fellows Symposium, Scottsdale, AZ (invited lecture)
- 1996 University of Ohio, Department of Transplantation (visiting professor)
- 1996 Kaiser Permanente Gut Club (invited lectures)
- 1996 Kansas City Society of Pathologists (invited lectures)
- 1997 UC Davis The 1997 Highman Symposium (visiting professor and invited lectureship)
- 1997 Duke University, NC (visiting professor)
- 1998 Los Angeles Pathologist Society (invited lecture)
- 1998 UC San Diego, Department of Medicine, GI Division (visiting professor)
- 1999 Cleveland Clinic (visiting professor)
- 1999 Long Island Society of Pathologists, NY (invited lecture)
- 1999 Winthrop Hospital, NY (visiting professor)
- 2000 New York University, NY (invited lecture)
- 2000 Northern CA Kaiser Permanente (invited lecture)
- 2001 Fresno Society of Pathologists (invited lecture)

2001 University of South Florida, Tampa, FL (visiting professor)  
2001 Florida West Coast Association of Pathologists, Tampa, FL (invited lecture)  
2001 Harvard Hospitals Peter S. Ciano Lectureship, Boston, MA (visiting professor and invited lectureship)  
2001 Genentech, South San Francisco, CA (invited lecture)  
2002 Kaiser Permanente Annual Pathology Seminar, Los Angeles, CA (invited lectures)  
2004 Yale University Department of Pathology Grand Rounds (visiting professor)  
2005 Rush University, Chicago, IL (visiting professor)  
2005 University of New Mexico Department of Pathology, Albuquerque, NM (visiting professor)  
2005 Ohio State University Department of Pathology, Columbus, OH (invited lectures)  
2006 University of Washington, Seattle, WA, Rodger Haggitt Memorial Lectureship (visiting professor and invited lectureship)  
2006 PhenoPath, Seattle, WA (visiting professor)  
2006 University of Iowa (visiting professor)  
2006 Kaiser Permanente Regional Seminar, Oakland, CA  
2007 Medical College of Virginia, VA (visiting professor)  
2007 California Society of Pathologists Annual Meeting (video tutorial)  
2008 Stanford University, Stanford, CA (Holsten professorship, invited memorial lecturer)  
2008 Harvard, Brigham and Women's Hospital (visiting professor, invited lecture)

### **CME COURSES ATTENDED (last 7 years)**

U. S. and Canadian Academy of Pathology, 2000-07  
Current Issues in Anatomic Pathology, UCSF/Stanford Course, 2000-07  
California Society of Pathologists, 2000-07  
UCSF Department of Pathology, Mechanisms of Disease, 1999-07 approximately 28 hours/year  
Pathology Coding and Claims Update, 2003, 06  
Amer Assoc of the Study of Liver Diseases 2005  
College of American Pathologists Annual Meeting 2005, 2006, 2008  
Mechanisms of Disease Conference, Dept of Pathology, 2001-07

### **UNIVERSITY AND PUBLIC SERVICE**

#### UCSF CAMPUS-WIDE

1986-93 Chancellor's Committee for Personal Safety  
1990-92 Academic Senate Committee on Educational Policy, San Francisco Division  
1993, 98 Ad hoc committee for selection of Distinction in Teaching Award  
2000-02 Chancellor's Council

#### SCHOOL OF MEDICINE

1981 Tissue Committee, ad hoc review  
1983-87 **Admissions Committee, Vice-Chair Panel 1, 1985-87**  
1984 Medical Student Orientation Program

1985-86 Scholarship Committee  
1987-91 First Year Screening Committee, Standing Committee Member until 1991  
1988-92 Medical Student Academic Standards Committee  
1989-96 **Director, Pathology 101-103 (MSII) Course**  
1997-01 **Section leader, GI/liver, Pathology 102 (MSII) Course**  
1989-96 Second Year Course Committee  
**1989-present Medical Student Career Advisor**  
1989, 91 Dinner host for Medical School Orientation Program, MSI  
1990-91 Committee on Curriculum and Educational Policy  
1990 Women's Mentor Group for Students  
1991, 92 Committee for Faculty Development (Including faculty peer review of teaching)  
1991, 92 Ad Hoc Committee on Curricular Balance  
1992-98 **Admissions Committee, Chair Panel 1, Executive Board Member**  
1993-95 Committee on Curriculum and Educational Policy  
1994-95 Co-Chair, CCEP ad hoc subcommittee to evaluate block teaching system for first and second year curriculum  
1994, 95 Ad Hoc Committee for selection of Kaiser Teaching Awards  
1994-current Ad Hoc Committees for promotions, chair of review committees  
1996, 2004 Ad Hoc faculty conduct review investigations  
1996-02 **Faculty Council, two terms, elected member for Academic Senate**  
2000-2 **Chair of Faculty Council and Faculty**  
1996-00 **Surgical Case & Hospital Mortality Review Committee, Chair, 1998, 1999, 2000**  
1997 UC-Stanford Health Care Strategic Support Team Committee  
1998 Elected member of Physicians' Organization Board, 1998 (2 year term) for UC-Stanford Health Care System  
1998 Chair, Quality and Risk Committee, UC-Stanford Health Care System  
**1998-00 Chair, Academic Standards Committee**, continued as member through 2002  
1998 Chair, search committee for Associate Director of Graduate Medical Education  
2000-03 Advisor, UCSF School of Medicine post baccalaureate program  
2004-5 Search Committee, Dept of Medicine  
2000-2006 Governing Board Member, Continuing Medical Education  
2000-present Operating room committee member  
2005 Ad hoc committee, harassment review, School of Medicine  
2006 Committee member for Stewardship review

#### DEPARTMENT OF PATHOLOGY SERVICE

1980-91 Resident Selection Committee, Director, 1984-89  
1981-now **Resident Evaluation Committee, Director, 1984-89**  
1981-84 Harassment Committee  
1981-now **Surgical Pathology Diagnostic Service, includes consults, on-service scheduling**  
1981-91 Anatomic Pathology Policies and Procedures Committee  
1982-89 Cytology Diagnostic Service  
1982-84 Search Committees, faculty positions  
1984-89 **Director of Residency in Anatomic Pathology, including Resident teaching program, selection, and evaluations**  
1984-95 Supervisor of Pathology clerkship for 3rd and 4th yr students

1987-now Quality Assurance Committee, Pathology Director, '87-89  
1990-now Search Committees, occasional intermittent service for several faculty positions, Department of Surgery  
1989-2000 **Director, Post-Sophomore Fellowship, including selection, program planning, and evaluations**  
1987-now **Co-Chair and Chair, Current Issues in Anatomic Pathology, CME Course**  
1989-91, Coordinator of Henry Moon Lectureship  
2001, 03, 05, 07  
1990-92 Computer Teaching Committee  
1996-now Promotions committee  
1998-now Search committees, Chair of Anatomic Pathology search committees for faculty clinical positions  
1998-99 **Acting Director of Surgical Pathology**  
1998-now Resident Selection Committee  
1999-2005 **Director of Anatomic Pathology Histology and Immunohistochemistry Laboratories**  
1999-now **Vice Chair of Clinical Affairs, includes duties of Director of Surgical Pathology, Director of Surgical Pathology Fellowship, and Site-Director for Residency at Moffitt Hospital.**  
2005-now Director of Gastrointestinal/Liver Pathology Fellowship  
2005-now Director of Transplant Pathology Fellowship

## **PUBLIC SERVICE**

1984-90 Beideman Area Neighborhood Group  
1986-90 Trained visiting community pathologists in fine needle aspiration cytology  
1986-00 Expert Witness, GI, Liver, and General Pathology cases  
1987 Trained Fresno pathologist on interpretation of pediatric GI biopsies, 1-day session  
1987, 89 Board of Directors, Divisadero Heights Homeowner's Association; President, 1987  
1988-89 National Foundation, Ileitis and Colitis, Symposium for Inflammatory Bowel Disease, Co-Chair for course.  
1990-99 Science and Health Educational Partnership Program, advise student participants on use of pathology specimens, help in collection of specimens for the program, gave talk on careers in medicine at Lowell High School (12/91), give occasional tours of pathology to grade school and high school students  
1992-99 Train visiting pathologists in liver transplant diagnosis, one 1-2 day sessions to one week sessions, 2-3 times per year.  
1994 Supervised visiting attending pathologist from Hong Kong in liver pathology, 3 months  
1995 – now Ad hoc teaching of visiting residents, other faculty from other academic institutions in liver pathology, 2wk to 1 month durations, 1-3 per year. One visitor for 3 months to train her to be the liver pathologist for Turkey from Nov 06-Jan 07.

## **SUMMARY OF SERVICE ACTIVITIES**

**Professional Organizations:** I currently serve on the Editorial Board for the American Journal of Surgical Pathology and Human Pathology. I am also actively involved in several professional organizations to a significant degree. My primary duties include service to the United States and Canadian Academy of Pathology (USCAP), California Society of Pathologists (CSP), Association of

Directors of Anatomic and Surgical Pathology (ADASP), and Hans Popper Hepatopathology Society. **USCAP:** I have served on the Educational committee, been elected and served as Council member, and selected as one of the few members of the Nominating committee. I have also been extensively involved in teaching for this group, as described below in the teaching narrative. **CSP:** I still have the key role in the planning of their annual symposium as Chair of the Educational Committee. Since this course supplies a large portion of the funding for the organization, the success of the course is a key element to the survival of the society. **Hans Popper Society:** I have just served as Vice-President, and am now beginning my term as President (2 years). **ADASP:** I currently am in a second term on the Executive Council. We deal with both academic and practice-related problems for academic anatomic and surgical pathology programs including billing/coding compliance, quality improvement issues, residency training, faculty mentoring, subspecialty training, etc, as well as plan an annual seminar for members on topics related to these issues. As a part of this group, I was actively involved in the development and/or approval of policies on QI for Anatomic pathology, Critical Values, Role of Pathology Assistants, Guidelines for processing of SP samples, all of which have become cutting edge items for pathology nationwide.

**School of Medicine:** My major roles in service to the School of Medicine and the UCSF Hospital and Clinics include Medical School Admissions Committee (10 years total) with service on the Executive Board for 6 years, Faculty Council for 8 years, with 2 years as Chair of the Faculty, Chair of the Surgical Case & Hospital Mortality Review Committee for 3 years, Director of the Medical School Pathology Course in the old curriculum for 6 years, and Chair of the Academic Standards Board for 2 years.

**Departmental Service:** As Vice Chair, I am responsible for most of the clinical faculty searches, recruitment, and hiring; coordination of the clinical services with advisory and supervisory roles over the Directors of Cytology, Autopsy, and Neuropathology services as well as the Program Director for the Anatomic Pathology Residency. I also interview and participate in the final selection all residency applicants. I participate in and advise the Chair on most decisions regarding departmental policy and planning. I also coordinated the relocation of residents and surgical pathology services during the recent remodel of the new residency room and surgical pathology cutting room; supervised and coordinated all activities of our clinical services at Moffitt during the remodels; and assisted the project manager in completion plans and move into the new facilities. This remodel was complex and has accounted for about 15% additional workload during that time period. I also served as major advisor on the administration move to Mt Zion and neuropathology faculty move to 5<sup>th</sup> floor Moffitt. I also have chaired and directed our departmental CME course (Current Issues in Anatomic Pathology) for 19 years.

My duties as Director of Surgical Pathology are noted above in the Summary of Clinical Activities.

As Director of the Surgical Pathology fellowship, I also supervise 7 senior residents each year in their clinical duties as they function in major roles in surgical pathology services, including the vital functions of gross room supervisor, hot seat preliminary diagnoses, kidney/transplant service, consultation services. As the Director of the Gastrointestinal Pathology fellowship and Liver Pathology transplant fellowship, I also supervise two other fellows on both clinical duties and clinical research projects. (See teaching summary below for other related fellowship activities.)

**Public Service:** Due to my recognition as a liver pathology expert, I get numerous requests from academic and private practice physicians to come to UCSF for informal training in liver and GI pathology

under my supervision. Because of severe space limitations, I must limit this opportunity to 2-3 visitors for a total of approximately 4-6 weeks per year, with a few exceptions for a rare visitor for a longer 3 month visit. I try to accommodate junior faculty from other academic institutions preferentially.

## TEACHING and MENTORING

### FORMAL SCHEDULED CLASSES FOR UCSF STUDENTS (since last promotion)

Quarter	Course No. & Title	Teaching Contribution	Units	Class Size
Fall, 2002-05, Winter 06	IDS 106; Medicine, Metabolism/Nutrition Block for New Curriculum	Lab leader for half of block and 1-hr lecture	10	Class size: 40 in lab; 140 in lecture

### POSTGRADUATE AND OTHER COURSES

Dates	Course	Teaching Contribution
2002-05	Pathology residency teaching series	Lecturer (7 lectures per year)
2002-06	Current Issues in Anatomic Pathology UCSF/Stanford CME course	Course chair and lecturer
2002-07	California Society of Pathologists Annual Symposium	Course chair
2002-11	US and Canadian Academy of Pathology	Short course, 4 years Faculty at Diagnostic Pathology course, 5 years Chair to organize long course for 2006 Short course for weekends in pathology, 2006 Will have another short course from 2009-11

### PREDOCTORAL STUDENTS SUPERVISED OR MENTORED

Post Sophomore Fellowship--1-year work-study experience. This fellowship provides medical students the opportunity to extend their knowledge of pathology in a working fellowship, while offering them the opportunity to engage in research and independent study in Anatomic Pathology or Laboratory Medicine.

Academic Year	Name	Medical School	Current Position
1988-89	Ernest Rector	Class of 1991, UCSF	Private Practice, Urology, San Francisco, CA
1989-90	Kenneth Aldape	Class of 1991, UCSF	Neuropathology, M.D. Anderson Faculty
	Joan Etzell	Class of 1992, UCSF	Associate Professor, Department of Laboratory Medicine, UCSF
	Steven Long	Class of 1992, UCSF	Private Practice, Sacramento, CA
1990-91	Arun Amar	Class of 1993, UCSF	Assistant Professor, Neurosurgery, Yale
	Russell Bowler	Class of 1993, UCSF	Internal Medicine
	Phillip Febbo	Class of 1993, UCSF	Hematology, Harvard
1991-92	Gabor Hertz	Class of 1993, UCLA	Private Practice, Sacramento, CA

	Kirk Jones	Class of 1994, UCSF	Associate Professor, Pathology, UCSF
	Connie Teresi	Class of 1994, UCSF	
1992-93	Sherie Cohen	Class of 1995, UCSF	
	Jennifer Siegel	Class of 1994, UCSF	Family Practice
	Judy Tjoe	Class of 1995, UCSF	Surgery
1993-94	Timothy Kuo	Class of 1995, UCSF	Ears, Nose, and Throat Surgery
	Jeffrey Roberts	Class of 1995, UCSF	Pathology, Private Practice
	Akiko Tsuzuki	Class of 1996, UCSF	
	Matthew Wise	Class of 1996, UCSF	
1994-95	Keren Ziv	Class of 1997, UCSF	
	Theresa Burton	Class of 1996, U of MN	
	Maile Guerrero	Class of 1996, UCSF	Pathology, Private Practice
	Shane Meehan	Class of 1996, Dartmouth	Pathology
1995-96	Phillip Holsten	Class of 1998, UCSF	Deceased
	James Hsu	Class of 1997, UCSF	
	Stephanie Phan	Class of 1997, UCSF	
	Hannah Vargas	Class of 1997, U of VT	Ears, Nose and Throat Surgery
1996-97	Bong Koh	Class of 1999, UCSF	Left medicine
	Diego Ruiz	Class of 1999, UCSF	Radiology, UCSF
	Jennifer Wu	Class of 1999, UCSF	Gynecology
1997-98	Teodoro Nissan	Class of 2000, UCSF	Orthopedic Surgery, UCSF
	Blanca Ochoa	Class of 2000, UCSF	Family Practice
	Kimberly Workman	Class of 2000, UCSF	Orthopedic Surgery, UCSF
1998-99	Patrick Bolton	Class of 2001, UCSF	
	Phillip Cole	Class of 2001, UCSF	Pathology residency
	Laura Coulson	Class of 2000, UCSF	
1999-2000	Kwame Denianke	Class of 2001, UCSF	Private Practice, Richmond, CA
	Rebecca Swain	Class of 2002, UCSF	Current Clinical Pathology Resident

Additional UCSF Medical Student Mentoring

Senior Year of Medical School	Name
2000-04	Phillip Cole
2002-03	Maggie Lam
2003-04	John Cupp
2003-04	Lily Pang
2004-05	Scott Young
2004-05	Anne Huang
2006-7	Daniel Cortez
2007-8	Kristie White
2007-8	Anatoly Urisman

POSTDOCTORAL FELLOW AND RESIDENTS

Surgical Pathology Fellowship—1-year fellowship in general surgical pathology for AP or AP/CP residents to receive focused and intensive training in diagnostic surgical pathology. I have been the Director of the fellowship from 1999-present.

Dates	Name	Current Position
1999-2000	James Bainton, MD	Private Practice, South San Francisco, CA
	Brad Butler, MD	Private Practice and Forensics, Atlanta, GA
	Russell Nash, MD	Assistant Professor, University of Colorado
	Thad Mully, MD	Assistant Professor, New York, NY
	Ron Balassanian, MD	Assistant Professor, Pittsburgh, PA
	Nicole Mihok, MD	Private Practice, Newton, MA
2000-01	Allison Loudermilk, MD	Private Practice, Medford, OR
	Kedar “Che” Prasad, MD	Private Practice, Marin General Hospital
	Jody Burkes, MD	Private Practice, East Bay
	Kelly Arthur, MD	Private Practice forensic pathology-Sonoma and Marin County
	Rick Baehner, MD	Assistant Professor, UCSF
	Phillip Chen, MD	Private Practice, CA
2001-02	Ron Rowberry, MD	Private Practice, Sacramento, CA
	Amy Heerema, MD	Assistant Professor, Stanford, CA
	Jessie Xiong, MD	Private Practice, Fremont, CA
	Lorelle Carley, MD	Private Practice, Oakland, CA
	Joe Rabban, MD	Assistant Professor, UCSF
	Jeff Simko, MD	Assistant Professor, UCSF
2002-03	Nader Shihabi, MD	Private Practice, Concord, CA
	Andrew Horvai, MD	Assistant Professor, UCSF
	Ellen Moffat, MD	Coroner’s Office, San Francisco, CA
	Carol Trujillo, MD	Private Practice, Lone Tree, CO
	Shantala Bindu, MD	Private Practice, Las Vegas, NV
	Ana Quiroga, MD	Private Practice, Daly City, CA
	Shannon Mulholland, MD	Private Practice, St. Mary’s, San Francisco, CA
2003-04	Emily Howard, MD	Fellowship, Boston, MA
	Ken Schneider, MD	Private Practice, Oakland, CA
	Andrew Szmit, MD	Private Practice, Monterey, CA
	William McDonald, MD	Private Practice, MN
	Lamia Shagrun, MD	Private Practice, San Francisco, CA
	George Yang, MD	Private Practice, Pleasanton, CA
2004-05	Dawn Darbonne, MD	Private Practice, San Jose, CA
	J. P. Grenert, MD	Assistant Professor & Molecular Pathology Fellowship, UCSF
	Mathew Greenberg, MD	Private Practice, Denver, CO
	Sally Agersborg, MD	Private Practice, Denver, CO

	Merrill Hines, MD	Assistant Professor, Houston, TX
	Amit Lamba, MD	Private Practice, Hayward, CA
2005-7	Walden Browne, MD	Private Practice, Antioch, CA
2005-6	Anne Buckley, MD	Clinical Instructor, Durham, NC
	Nicholas Byrne, MD	Private Practice, Walnut Creek, CA
	Joaquin Garcia, MD	Head and Neck Fellow, Pittsburgh, PA
	Karuna Garg, MD	Clinical Instructor, Sloan Kettering, NY
2005-8	Rebecca Spies-Swain, MD	Current Cytopathology Fellow
2005-6	Dean Joelson, MD	Private Practice, Atlanta, GA
2005-8	Vivian Tan, MD	Clinical Instructor, VAMC
	Annoel Yabes, MD	Private Practice, San Francisco, CA
2006-8	Judy Doyle, MD	Private Practice, San Francisco, CA
	Elizabeth Hosfield, MD	Private Practice, Oakland, CA
2006-7	Lorren Jackson, MD	Clinical Instructor, SFGH
	Judy Pang, MD	Current Clinical Pathology Resident
	Jennifer Raffel, MD	Current Surgical Pathology Fellow
2006-8	Annemieke Van Zante, MD	Assistant Professor, UCSF
2006-7	Tony Yang, MD	Private Practice, Reno, NV
2007-8	Hugh Fenton, MD	Private Practice, Newport Beach, CA
	Maggie Lam, MD	Current Liver/GI Fellow
	Stephanie McAlhany, MD, PhD	Current Hempath Fellow
	Lily Pang, MD	Current Clinical Pathology Resident
	David Park, MD, PhD	Private Practice, Los Angeles, CA
	Andrea Pingitore, MD	Current Clinical Pathology Resident
	Raga Ramachandran, MD, PhD	Current Liver/GI Fellow
	Imran Siddiqi, MD, PhD	Clinical Instructor, UCSF
2008-9	Helen Bailey, MD	Current Surgical Pathology Fellow
	Michael Barnes, MD	Current Surgical Pathology Fellow
	Amanda Doherty, MD	Current Surgical Pathology Fellow
	Anne Huang, MD	Current Surgical Pathology Fellow
	Nalini Madiraju, MD	Current Surgical Pathology Fellow
	Frank Melgoza, MD	Current Surgical Pathology Fellow
	Nafis Shafizadeh, MD	Current Surgical Pathology Fellow

### INFORMAL TEACHING

Quarter	Academic Year	Course
F, W, S, Su	1988-present	Pediatric GI Pathology Conference, every week through 03, about 2x/mon currently
Su, F, W	1991-present	Gross unknown sessions (1-2 per year) with pathology residents
Su, F, W, S	1996-03	Lectures to Pediatric GI staff and fellows on GI and Liver pathology, approx. 3-4 hours per year
F, W, S	2002-present	Tutorial slide sessions for medical students (1-hr session every 2-3 months)
F, W, S, Su	2003-present	Liver transplant service clinical case review (1 hr. every other week)

F, W, S, Su	1984-present	Surgical pathology diagnosis and sign-out: Discuss cases with students, residents, clinicians, especially GI cases (Daily)
F, W, S, Su	1994-present	Discuss cases with visiting fellows or pathologists interested in liver or liver transplant pathology (4-6 weeks per year)
S, Su	2006	Liver Pathology/Hepatology case discussion conference, 1/month

## FACULTY MENTORING

As one of the senior faculty in our department, I have for many years acted in a role as an informal advisor to younger faculty members to advise them on various academic activities, promotion requirements, and career decisions. In more recent years, I have continued to mentor these faculty members more regularly in my role as Vice Chair. This expanded role includes introducing young faculty to prominent pathologists with similar clinical research interests and setting up the opportunity for them to train with those individuals in order to establish a mentor for them in their subspecialty field outside of UCSF. I have devoted more time for junior faculty (Jones, Chen, Simko, Horvai, Baehner) who did not have the opportunity to do a subspecialty fellowships outside of UCSF.

## FACULTY MENTORED

Dates	Name	Mentoring Role	Current Position
1994-2004	Imok Cha, MD	Career, personal, and clinical research advisor	Assistant Professor, UCSF
1992-present	Henry Sanchez, MD, PhD	Career, personal advisor	Assistant Professor, UCSF
1999-present	Kirk Jones, MD	Career, personal, and clinical research advisor	Associate Professor, UCSF
2000-present	Yunn-Yi Chen, MD, PhD	Career, personal, and clinical research advisor	Associate Professor, UCSF
2000-present	Grace Kim, MD	Career, personal, and clinical research advisor	Associate Professor, UCSF
2001-present	Laura Tabatabai, MD	Career and clinical research advisor	Assistant Professor, UCSF
2002-present	Sanjay Kakar, MD	Career, personal, and clinical research advisor	Assistant Professor, UCSF
2002-present	Jeff Simko, MD, PhD	Career, personal, and clinical research advisor	Assistant Professor, UCSF
2003-present	Rick Baehner, MD	Career and personal advisor	Assistant Professor, UCSF
2003-present	Andrew Horvai, MD, PhD	Career and clinical research advisor	Assistant Professor, UCSF
2004-present	Joe Rabban, MD, MPH	Career advisor	Assistant Professor, UCSF
2004-2005	Eric Nakakura, MD	Career advisor and support	Assistant Professor, UCSF
2006-present	Anna Berry, MD	Career and clinical research advisor	Assistant Professor, UCSF
2006-present	Elham Khanafshar	Career and clinical research advisor	Assistant Professor, UCSF

#### OTHER VISITING FACULTY SUPERVISED/Mentored

- 1994 Polly Lam, Queen Elizabeth Hospital, Hong Kong (3 months)
- 1995 Shari Taylor, University of Tennessee Health Science Center, Memphis, TN (1 month)
- 2003 Laura Davico Bonino, University of Torino, Turin, Italy (3 months)
- 2005 Matthew Yeh, University of Washington, Seattle, WA (2 weeks)
- 2006 Oyedele Adeyi, University of Toronto (2 weeks)
- 2006 Semin Ayhan, University of Celal Bayar, Manisa, Turkey (3 months)
- 2008 Sandra Fischer, University of Toronto (3 weeks)**

#### TEACHING AIDS

Surgical Pathology Procedure Manual: For resident teaching at UCSF hospitals: Compiled, organized, edited entire manual with annual revisions as required. 1983-91; 1999-2005. In 2006, the Associate Director of Surgical Pathology took over the primary review of the manual under my supervision.

Liver Syllabus for new curriculum, Metabolic section, 2<sup>nd</sup> year medical students. 2002 - now

Numerous class handouts for Path 101 and 102. 1981-2001

Multiple syllabi for CME courses and invited lectures—handouts on liver and GI Pathology

Diagnostic Problems in Liver Pathology, a monograph for the California Society of Pathologists (Editor)

MacSween's Pathology of the Liver 5E (Co-editor)

Numerous chapters in major Pathology textbooks

#### OTHER

I have been asked to do a variety of guest lectureships locally, nationally, and internationally. Most of these required considerable effort in the preparation of the lecture and syllabus material and some also required the selection and preparation of pathology cases and materials for the attendees to review prior to the lecture.

Continuing Medical Education Governing Board: As a member of the UCSF CME Governing Board, I advise and vote on policy and also serve on one of the subcommittees that review all CME applications for accreditation. I also have assisted in the ACCME review by meeting with national inspectors, assisted in trials of new online programs, and interviewed job applicants for the CME office. I am currently co-chair of one of the course review subcommittees (2007-8).

#### Other Creative/Teaching activities:

I designed and for many years served as the director of a year-long fellowship (post-sophomore fellowship) for medical students in the department of pathology which the student elects to do either after the second or third year of medical school. The program consists of a combination of service, teaching, and research activities for the students, and has been highly successful. This has been an exciting program for our

department as it allows students to have an in-depth experience with our department, which becomes a home-base for them in their future endeavors. All participants to date have found this program to be invaluable in advancing their knowledge base and improving their ability to function in their future roles in the clinical clerkships. We hope to continue this program as long as the department can fund the positions. Dr. Henry Sanchez is currently in charge of this program, and I continue to advise him and monitor the program. Other universities such as Stanford have recently used our program as a model to set up their own program in response to the fact that Stanford medical students were coming to UCSF to do our fellowship.

## TEACHING AWARDS AND NOMINATIONS

1983	Academic Senate Distinguished Teaching Award
1984	Nominated for Kaiser Teaching Award
1986	Nominated for "Excellent Small Group Teacher," MSII
1987	Kaiser Award for Excellence in Teaching, UCSF
1987	Distinction in Teaching, Excellent Small Group Instruction, MSII
1987	Distinction in Teaching, Pathology Residents
1987	Nominated for MSII "Major Contribution to Teaching" and "Stimulating Lectures"
1988	Nominated for MSII "Excellence in Small Group Instruction"
1989	Nominated for MSII "Excellence in Small Group Instruction" and "Stimulating Lecture Series"
1990	Nominated for MSII "Major Contribution in Teaching" and "Excellence in Laboratory Instruction"
1990	Nominated for MSI "Excellent Small Group Instructor"
1991	Distinction in Teaching "Major contribution to Teaching", MSII
1991	Nominated for MSII "A Stimulating Lecture Series", "An Outstanding Lecture", and "Excellence in Small/Lab Instruction"
1992	MSIV Teaching Excellence
1993	MSIV Teaching Excellence
1993	Nominated for Kaiser Teaching Award
1994	MSIV Teaching Excellence
1995	Nominated for MSIV Teaching Award

## SUMMARY OF TEACHING HOURS

2003-4	1,065 total hours of teaching (including preparation) Formal class or course teaching hours at UCSF: 40 Informal teaching hours at UCSF: 750 Mentoring hours: 75+ Other CME courses: 200 hours (includes course organization for two major courses)
2004-5	Same as above
2005-6	Estimate same as above

## TEACHING NARRATIVE

Student Teaching: My major teaching load in the past was in the Pathology 101-103 course (Sept through May) for second year medical students as Course Director from 1989-1996. After 1996, I acted as advisor to the course director and lieutenants, and was the section head of the GI/Liver portion of the Path 102 course.

In the new curriculum, I have served as the lab leader for the GI/endocrine section of the Metabolism block and I give one lecture on Liver pathology. I also give 3-4 tutorials a year on liver pathology to medical students rotating through pathology during their 3<sup>rd</sup> and 4<sup>th</sup> years, and teach these students as well as the post-sophomore fellows (students doing an entire year in pathology between their second and third year of medical school) on a one-on-one basis.

Residents/Fellows: I currently give several lectures/year to pathology residents, as well as numerous sessions on consultation slide material. I also give a case review conference for the pediatric GI service residents and attendings about 2 times per month. I also teach residents and fellows in pathology on an individual basis when I am on service while diagnosing cases (including consultations), working with them on techniques of cutting, differential diagnosis, and criteria for diagnosis on their surgical pathology rotations.

UCSF courses: I serve as chair/co-chair for an annual departmental three-day course, "Current Issues in Anatomic Pathology", and lecture on topics in this course nearly every year. This course has been well received by the pathologists who attended each year and has grown in size from about 100 to over 250 since 1987. At the time of the merger with Stanford, we invited their faculty to join us, and we currently maintain this course as a joint UCSF/Stanford course. The organization of this successful course has been a significant contribution to our department's national reputation in surgical pathology in my opinion.

California Society of Pathologists: I have served on the educational committee for the California Society of Pathologists since 1991, co-chair from 1997-1998, and have chaired this committee from 1999 through 2005. In 2006, I will co-chair the committee with another pathologist who will take over the chair in 2007. This committee organizes the yearly symposium for the society that is attended by pathologists from across the USA (more than 50% out of state attendees). This society meeting attracts more and more pathologists each year as its reputation for excellence spreads, with current attendance around 400, which is one of the largest state society meetings in the USA. I currently have the key role as chair to contact high quality speakers, organize the topics for the symposium, and direct the activities during the course.

#### National/International Societies

US and Canadian Academy of Pathology (USCAP): This society is the largest and most respected academic surgical pathology society in the world, and so the annual meeting routinely attracts an international audience. I served on the Educational Committee for 4 years. I gave a half-day course from 1995-9, and then shared another half-day course on liver tumors at the annual scientific meeting, which was presented for 4 consecutive years (through 2006). I have also lectured for 4 years at the Liver Specialty Conference, and I organized this conference for three years (98-2000). I was also asked to lecture for 8 years in this Society's smaller summer course, "Diagnostic Pathology" from 1991-1993 and 2000-2004. I also co-organized the long course for the 2006 meeting that typically has an attendance of 800-1,000 pathologists. This is a day-long course with an organ system focus. I was selected by the Educational Committee to select my cochair and organize this course on the subject of liver and pancreas. I now serve as a guest editor to have the course content published in the journal *Modern Pathology*.

International Academy of Pathology: The USCAP is the largest division of this society. I have served as course organizer at two IAP Congresses (1998, 2006), which are held every other year at sites around the world.

Hans Popper Hepatopathology Society: As President, I will be responsible for 2 half-day CME courses on liver pathology that will be presented as a companion meeting to the USCAP meeting in 2008 and 2009.

## **RESEARCH AND CREATIVE ACTIVITIES**

### **RESEARCH AWARDS AND GRANTS**

#### **CURRENT**

- |   |                                      |                |
|---|--------------------------------------|----------------|
| 1. U01 DK61738 (Bass)<br>NIH/NIDDK<br>Clinical Research Network in NASH | 4/1/02-03/31/09<br>Direct: \$321,998 | 0.6 Cal Months |
|---|--------------------------------------|----------------|

The major goals of this project are to establish a large Clinical Center patient database capturing the spectrum of NAFLD/NASH and to explore the hypothesis that familial/genetic factors contribute to the pathogenesis of NASH and its natural history

Role: Review as onsite pathologist at UCSF all liver biopsies to record histologic features, help evaluate the features of steatohepatitis and any other features of fatty liver that may lead to fibrosis.

- |                                       |                                       |                |
|---------------------------------------|---------------------------------------|----------------|
| 2. R01 DK074718 (Qayyum)<br>NIH/NIAID | 7/1/07 – 6/30/12<br>Direct: \$140,630 | 0.6 Cal Months |
|---------------------------------------|---------------------------------------|----------------|

**Title: Evaluation of novel MR imaging and MR spectroscopic markers of histopathologic changes in non-alcoholic fatty liver disease**

The broad long-term objective of the project: The broad long-term objective of this study is to improve the management of patients with non-alcoholic fatty liver disease (NAFLD) by developing a non-invasive alternative to liver biopsy for the evaluation and monitoring of hepatic steatosis, necroinflammatory change, and fibrosis leading to cirrhosis using novel MR imaging (MRI and MR spectroscopic (MRS) markers.

Role: Review of histopathology

- |   |  |                |
|---|--|----------------|
| 3. U01 AI52748 (PI: Stock, P.)<br>NIH/NIAID | 8/15/03 - 1/31/08<br>\$3,563,048 (Grant's total) | 0.6 Cal Months |
|---|--|----------------|

Title: Solid organ transplantation in HIV: Multi-site studies

The Primary aim of this study is to evaluate the safety and efficacy of solid organ transplantation in people with the HIV disease by conducting a prospective, multi-center of HIV – positive patients who undergo kidney or liver transplantation.

Role: To serve as the on site and overall central-site pathologist to evaluate the liver biopsies for findings of rejections, possible HCV, drug reactions, and record histologic findings, assist in interpretation of these changes.

#### **PENDING:**

None

**PAST:** Data not available for new format CV

## **PEER REVIEWED PUBLICATIONS**

1. Lusby RJ, Woodcock JP, Machleder HI, Ferrell LD, Heans W, Skidmore R, Stedden J, Baird RN. Transient ischemic attack: The static and dynamic morphology of the carotid artery bifurcation. *Brit J Surg*, 69(suppl):41-44, 1982.
2. Lusby RJ, Ferrell LD, Stoney RJ, Ehrenfeld WK, Wylie EJ. Carotid artery atheroma: The importance of intraplaque hemorrhage. *Arch Surg*, 117:1479-1487, 1982.
3. Lusby RJ, Ferrell LD, Englestad BL, Price DC, Lipton MS, Stoney RJ. Vessel wall and Indium III labelled platelet response to carotid endarterectomy. *Surgery*, 93:424-432, 1983.
4. Richardson BC, Chafetz NI, Ferrell LD, Zulman JI, Genant HK. Hereditary chondrocalcinosis (CPPD) in a Mexican-American family. *Arth & Rheum*, 26:1387-1396, 1983.
5. Rielly LM, Lusby RJ, Jeffrey RB, Hughes L, Ferrell DL, Stoney RJ, Ehrenfeld WK. Carotid plaque histology using real-time ultrasound: Clinical and therapeutic implications. *Am J Surg*, 146:188-193, 1983.
6. Ferrell LD. Myospherulosis of the breast: Diagnosis by fine needle aspiration. *Acta Cytol*, 28:726-728, 1984.
7. Bottles K, Miller TR, Ferrell LD. Tyrosine crystals in fine needle aspirates of a pleomorphic adenoma of the parotid gland. *Acta Cytol*, 28:490-492, 1984.
8. Clawson GA, Moody DE, Ferrell LD, Smuckler EA. Increased nucleoside triphosphatase activity of rat liver nuclear envelope is associated with hepatocarcinogen exposure. *Lab Invest*, 51:682-689, 1984.
9. Fassoulaki A, Eger EI, Johnson BH, Ferrell LD, Smuckler EA, Cahalan MK, Eger RR, Harper MH. Isoflurane does not prevent hepatic injury produced by halothane in rats. *Anesth Analg*, 63:888-890, 1984.
10. Fassoulaki A, Eger EI, Johnson BH, Ferrell LD, Smuckler EA, Harper MH, Eger RR, Cahalan MK. Brief periods of hypoxia can produce hepatic injury in rats. *Anesth Analg*, 63:885-887, 1984.
11. Fassoulaki A, Eger E, Johnson BM, Ferrell L, Smuckler E, Harper M, Eger R, Cahalan M. Nitrous oxide is hepatotoxic in rats. *Anesth Analg*, 63:1076-1080, 1984.
12. Hohn D, Melnick J, Stagg R, Altman D, Friedman W, Ignoffo R, Ferrell L, Lerois B. Biliary sclerosis in patients receiving hepatic arterial infusions of floxuridine. *J Clin Oncol*, 3:98-102, 1985.

13. Niederau C, Ferrell LD, Grendell JG. Caerulein-induced acute necrotizing pancreatitis in mice: Protective effects of proglumide, benzotript, and secretin. *Gastroenterology*, 88:1192-1204, 1985.
14. Quarfordt PG, Reilly L, Ferrell LD, Lusby R, Stony RS. Prostacyclin [PGI<sub>2</sub>] production in regions of arterial stenosis. *Surgery*, 98:484-490, 1985.
15. Onik G, Gilbert J, Hoddick W, Ferrell L. Ultrasonic monitoring of hepatic cryosurgery: Preliminary results in animal model. *Amer J Roentgenol*, 144:1043-1047, 1985 (Winner of American Roentgen Ray Award).
16. Fassoulaki A, Eger E, Johnson B, Ferrell L, Smuckler E, Calahan M, Eeger R, Harper M. Nitrous oxide does not hinder the repair of injured liver in the rat. *Anest Analg*, 64:465-467, 1985.
17. Shea WJ, Jr, Demas BE, Goldberg HI, Hohn DC, Ferrell LD, Kerlan RK. Sclerosing cholangitis associated with hepatic arterial FUDR chemotherapy: Radiographic-histologic correlation. *Amer J Roentgenol*, 146:717-721, 1986.
18. Eger EI, Smuckler EA, Ferrell LD, Goldsmith CH, Johnson BH. Is enflurane hepatotoxic? *Anesth Analg*, 65:21-30, 1986.
19. Forwell M, Gray KG, MacSween RNM, Peel MG, Madhok R, Forbes CD, harvey JA, Roberts J, Ferrell LD, Sandilands GP. Immunosuppression following alloantigen exposure: A role for lymphocyte Fc gamma-receptor blocking antibodies. *J Clin Lab Immunol*, 19:53-57, 1986.
20. Gilbert JC, Onik GM, Hoddick WK, Rubinsky B, Ferrell LD. Ultrasound monitored hepatic cryosurgery: Longevity study on an animal model. *Cryobiology*, 23:277-285, 1986.
21. Niederau C, Fiddle RA, Ferrell LD, Grendell JH. Beneficial effects of CCK-receptor blockade and inhibition of proteolytic enzyme activity in experimental acute hemorrhagic pancreatitis in mice. *J Clin Invest*, 78:1056-1063, 1986.
22. Cohen MS, Beckstead JH, Ferrell LD, Yen TSB. Enzyme histochemistry of hepatic neoplasms. *Am J Surg Pathol*, 10:789-794, 1986.
23. Itzkowitz SH, Yuan M, Ferrell LD, Palekar A, Kim YS. Cancer-associated alterations of blood group antigen expression in human colorectal polyps. *Cancer Res*, 46:5976-5984, 1986.
24. Niederau C, Ferrell LD, Grendell JH. Experimentelle akute pankreatitis. *Der Internist*, 27:681-696, 1986.
25. Messina LM, Reilly LM, Goldstone J, Ehrenfeld WK, Ferrell LD, Stoney RJ. Middle aortic syndrome. Effectiveness and durability of complex arterial revascularization techniques. *Ann Surg*, 204:331-339, 1986.

26. Wisner JR, Renner IG, Grendell JH, Niederau C, Ferrell LD. Gabexate mesilate (FOY) protects against ceruletide-induced acute pancreatitis in the rat. *Pancreas*, 2:181-186, 1987.
27. Tsay D, Niederau C, Schmidt H, Goldberg H, Higgins CB, Ferrell LD, Grendell JH. Experimental acute pancreatitis: *In vitro* magnetic resonance characteristics. *Invest Radiol*, 22:556-561, 1987.
28. Heyman MB, Perman JA, Ferrell LD, Thaler MM. Chronic non-specific inflammatory bowel disease of the cecum and proximal colon in children with grossly normal-appearing colonic mucosa: Diagnosis by colonoscopic biopsies. *Pediatrics*, 80:255-261, 1987.
29. Strum DP, Eger EI, Johnson BH, Steffey EP, Ferrell LD. Toxicity of sevoflurane in rats: Effects of hypoxia and degradation by soda lime. *Anesth Analg*, 66:769-773, 1987.
30. Davis JJ, Heyman MB, Ferrell L, Kerlin R, Thaler MM. Sclerosing cholangitis caused by chronic cryptosporidiosis in a child with congenital immunodeficiency disorder. *Am J Gastroenterol*, 82:1196-1202, 1987.
31. Yuan M, Itzkowitz SH, Ferrell LD, Fukushi Y, Palekar A, Hakomori S, Kim, YS. Expression of Le<sup>x</sup> and sialylated Le<sup>x</sup> antigens in human colorectal polyps. *J Natl Cancer Inst*, 78:479-488, 1987.
32. Itzkowitz SH, Yuan M, Ferrell LD, Ratcliffe RM, Chung Y-S, Satale K, Umeyama K, Jones RT, Kim YS. Cancer-associated alterations of blood group antigen expression in the human pancreas. *J Natl Cancer Inst*, 79:425-434, 1987.
33. Eger EI, Johnson BH, Strum DP, Ferrell LD. Studies of the toxicity of I-653, halothane, and isoflurane in enzyme-induced hypoxic rats. *Anesth Analg*, 66:1227-1229, 1987.
34. Eger EI, Johnson BH, Ferrell LD. Toxicity of I-653 versus isoflurane in rats: A test of the effect of repeated anesthesia and the use of dry soda lime. *Anesth Analg*, 66:1230-1233, 1987.
35. Hales MS, Ferrell LD. Fine-needle aspiration biopsy of tibial adamantinoma: A case report. *Diagn Cytol*, 4:67-70. 1988.
36. Ferrell LD, Beckstead JH. Plastic-embedded endoscopic biopsies: Diagnostic advantages. *Am J Surg Pathol*, 12:547-553, 1988.
37. Niederau C, Crass RA, Silver G, Ferrell LD, Grendell JH. Therapeutic regimens in acute experimental hemorrhagic pancreatitis: Effects of hydration, oxygenation, peritoneal lavage, and a potent protease inhibitor. *Gastroenterology*, 95:1648-1657, 1988.
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123. Snyder JD, Sipe W, Gugig R, Elkayam O, Heyman MB, Haas-Beckert B, Ferrell L. The nature and location of ulcers in children in the era of H pylori. Amer Gastroenterol Assn/Digestive Disease Week, Chicago, IL, May 2005.
124. Yao FY, Ferrell LD, Bass NM, Kerlan RK, Hirose R, Ascher NL, Roberts JP. Liver transplantation for hepatocellular carcinoma: the impact of the degree of tumor necrosis from pre-operative loc-regional therapy on recurrence. AASLD at Digestive Disease Week, Chicago, IL, May 2005 (Platform). *Gastroenterology*, 128 (Suppl 2): A-689, 2005.

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132. Tan V, Terrault N, E Agudelo E, Ferrell L, Roberts J, Feng S. Long-term histological outcomes after achievement of sustained virological response in liver transplant recipients with recurrent hepatitis C virus infection. World Transplant Congress, July 2006, Boston, MA (poster).
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139. Ferrell L, Belt P, and Bass N. Arterialization of central zones in nonalcoholic steatohepatitis. Hepatol 46 (Supple): Oct 07. Amer Assoc for Study of Liver Disease, Nov 2007, Boston, MA.
140. Pingitore A, Kim G, Rosenthal G and Ferrell L. Atypical Neonatal Obstructive Liver Disease (NOLD): Variants of Billiary Atresia (BA) or Not? Mod Path 21 (supple 1): Jan 08. United States and Canadian Academy of Pathology, Mar 08, Stowell-Orbison/Autopsy Award Poster Session
141. Doherty AR, Stock PG, Roland ME, Barin B, Terrault NA, and Ferrell LD. A novel Hepatic/Doctular Lesion in HIV-Hepatitis C (HCV) Coinfected Liver Transplant Patients. Mod Path 21 (supple 1): Jan 08. United States and Canadian Academy of Pathology, Mar 08, Platform Presentation
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143. Tan V, Jimenez C, Merriman R and Ferrell L. Variants of Nonalcoholic Fatty Liver Disease (NAFLD) and Nonalcoholic Steatohepatitis (NASH) with Rapidly Progressive Course. Mod Path 21 (supple 1): Jan 08. United States and Canadian Academy of Pathology, Mar 08, Poster Presentation.
144. Fenton H, Torbenson M, Vivekanandan P and Ferrell L. Marked Iron Accumulation in Liver Explants: A Risk Factor for Cardiac Failure (CF) Even in the absence of Major Gene Defects of Hereditary. Mod Path 21 (supple 1): Jan 08. United States and Canadian Academy of Pathology, Mar 08, Poster Presentatio
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146. Kleiner DE, Yeh MM, Guy CD, Ferrell L, Cummings OW, Contos M, Brunt EM, Behling C for

the NASH CRN Research Group. Creation of a Continuous Visual Scale of Ballooned Hepatocytes in Non-Alcoholic Fatty Liver Disease, AASLD, Nov 08.

147. Kakar S, Grenert JP, Pease E, Adeyi O, Ferrell D. Chromosomal gains demonstrate by fluorescent in situ hybridization are helpful in the diagnosis of atypical hepatocellular neoplasms. USCAP, Mar 09.

## RESEARCH PROGRAM

### Significant Books/Chapters/Paper Summary

In the past few years, I have been invited to be a co-editor of the major liver pathology textbook currently available, and the primary author for a liver pathology chapter in several major textbooks in the field of pathology. This has been a major academic effort due to the comprehensive nature of these chapters and the high standards set by the editorial staff for these publications. The following represent the most significant of my efforts.

1. Co-editor, 5<sup>th</sup> Ed, *MacSween's Pathology of the Liver*, Burt AD, Portmann BC, Ferrell LD (eds), 5<sup>th</sup> Ed, Elsevier, Edinburgh, 2007.  
Theise N, Bodenheimer H, and Ferrell LD. Viral hepatitis. In, *MacSween's Pathology of the Liver*, Burt AD, Portmann BC, Ferrell LD (eds), 5<sup>th</sup> Ed, Elsevier, Edinburgh, 2006, pp 399-442..  
This textbook has remained in the top ten pathology textbooks worldwide for the last few years; it is considered the top liver pathology textbook available and was classified as "highly commended at the by the British Medical Association . I am one of three co-editors and coauthored the chapter on viral hepatitis.
2. Ferrell LD. Benign and malignant tumors of the liver. In: *Surgical Pathology of the GI Tract, Liver, Biliary Tract, and Pancreas*, Odze R, Goldblum J, and Crawford J, (eds), 1<sup>st</sup> ed, W.B.Saunders, Philadelphia, 2004, pp.999-1024. 2<sup>nd</sup> Edition in press.  
This comprehensive textbook was in the top ten for pathology textbooks in 2004.
3. Ferrell LD and Kakar S. Tumors of the Liver, Gallbladder, and Biliary Tree. In: *Diagnostic Histopathology of Tumours*, Fletcher CDM (ed), 3<sup>rd</sup> ed, Elsevier, Edinburgh, 2007, 417-461.  
I am the primary invited author for this chapter to replace the previous author. The comprehensive textbook was in the top three best sellers for pathology textbooks in 2004 and is expected to maintain its top-selling status with the current edition.
4. Ferrell L. and Giesinger K. Surgical Diseases of the Liver, In: *Principles and Practice of Surgical and Cytopathology*, Silverberg S, DeLellis R, Frable W, Wick M, and LiVolsi V (eds) 4th Ed, Churchill-Livingstone, 2006, pp1527-47.  
This comprehensive textbook is one of the top, two-volume, pathology textbooks for the general pathologist in practice. In the Silverberg text, I was the primary invited author who chose my co-author for the cytopathology portions of the chapter.

In addition, the following are a sample of peer-reviewed papers listed in those cited most frequently in hepatopathology literature and that I consider key papers on less-commonly cited topics.

1. Ferrell L, Crawford J, Dhillon P, Scheuer P, Nakanuma Y. Proposal for standardized criteria for the diagnosis of benign, borderline, and malignant hepatocellular lesions arising in chronic advanced liver disease. *Amer J Surg Pathol*, 17:1113-1123, 1993.  
I was the primary author to propose, organize, and complete this paper, which has become the single most cited paper on the nomenclature for well-differentiated hepatocellular tumors (as documented by the reference, Evidence-based interpretation of liver biopsies, Lab Invest 2006)
2. Demetris AJ, Seaberg EC, Batts KP, Ferrell L, Ludwig J, Markin R, Belle S, Detre K. Reliability and predictive value of the NIDDK liver transplant database nomenclature and grading system for cellular rejection of liver allografts. *Hepatology*, 21(2):408-416, 1995.  
I was a key member of the pathology group on this study and manuscript, which is #137 on the most cited papers in hepatopathology. This paper has provided the foundation for much of what is currently practiced in the diagnosis of acute rejection in liver transplantation. (as documented by the reference, Evidence-based interpretation of liver biopsies, Lab Invest 2006)
3. Demetris AJ, Seaberg EC, Batts KP, Ferrell L, Lee RG, Markin R, Detre KM. Chronic liver allograft rejection: a National Institute of Diabetes and Digestive and Kidney Diseases interinstitutional study analyzing the reliability of current criteria and proposal of an expanded definition. *Am J Surg Pathol*, 22:28-39, 1998.  
As in the paper above, I was a key member of the pathology group on this study, which has become an important standard for criteria for chronic rejection.
4. International Working Party. Terminology of hepatic allograft rejection, *Hepatology*, 22:548-554, 1995.  
Due to my key position as a liver transplant pathologist in the international setting, I was asked to be a panel member on this study. The manuscript is #126 on the most cited papers in hepatopathology. (as documented by the reference, Evidence-based interpretation of liver biopsies, Lab Invest 2006)
5. International Working Party, Wanless IR, Chair. Terminology of nodular lesions of the liver. *Hepatology*, 25:983-993, 1995.  
Due to my previous key publications on this topic, I also played an important role in the terminology developed for this manuscript.
6. Ferrell LD, Wright TL, Roberts J, Ascher N, Lake J. Hepatitis C viral infection in liver transplant recipients. *Hepatology*, 16:865-876, 1992.  
This was the first and the most comprehensive description and evaluation of pathology of hepatitis C following liver transplantation, and the findings remain valid.
7. Huang E, Wright T, Combs C, Lake J, Ferrell L. Hepatitis B and C coinfections and persistent hepatitis B infections: clinical outcome and liver pathology after transplantation. *Hepatology*, 23:396-404, 1996.  
This manuscript was one of the key descriptions and evaluation of pathology of the co-infections for hepatitis C and B following liver transplantation, and the findings remain valid.
8. Taga S, Washington K, Terrault, Wright T, Somberg K, Ferrell L. Cholestatic hepatitis C in liver allografts. *Liver Transplantation and Surgery*, 4:1-8, 1998.  
This manuscript was one of the key descriptions and evaluation of pathology of the aggressive variant of hepatitis C following liver transplantation, and the findings remain valid. This abstract was selected as the best hepatopathology paper presented by a resident by the Hans Popper Society at the USCAP in 1996.

9. Kleiner D, Brunt E, Van Natta M, Behling C, Contos M, Cummings O, Ferrell L, Liu Y, Torbenson M, Unalp-Arida A et al. Design and validation of a histological scoring system for nonalcoholic fatty liver disease. *Hepatology*, 41:1313-1321, 2005.

This manuscript may prove to become highly-cited over time for leading the field for the evaluation of fatty liver disease.

Description of new/previously unrecognized or underrecognized entities: I personally find these types of papers rewarding, as these involve significant diagnostic acumen and knowledge base that resulted in the recognition and /or naming of a previously, undescribed or underrecognized entity. In all of the examples below, I was the senior author who noted the finding as worthy of interest to the co-authors and led the group to publication.

- Ferrell L, Bass N, Roberts J, Ascher N. Lipopeliosis in the transplanted liver: A fat-induced sinusoidal dilatation that mimics peliosis hepatitis. *J Clin Pathol*, 45:1109-1110, 1992.
- Cha I, Bass N, Ferrell LD. Lipopeliosis: A clinical-pathologic study of 5 cases. *Amer J Surg Pathol*, 18(8):789-795, 1994.
- Hartshorne N, Hartman G, Markin R, Demetris AJ, Ferrell LD. Bile duct hemorrhage: A sequelae of cholangiography or other manipulation of the biliary tract. *Liver*, 12:137-139, 1992.
- Kim GE, Thung SN, Tsui WMS, Ferrell LD. Hepatic cavernous hemangioma: underrecognized associated histologic features. *Liver Int'l*, 26:334-38, 2006.
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- Ferrell LD, Belt P, Bass N. Arterialization of central zones in nonalcoholic steatohepatitis. *Amer Assoc for Study of Liver Disease*, Nov 2007, Boston, MA.

## Research Summary

In my role as a major diagnostic consultant in liver pathology, I receive unusual problem cases in liver pathology from pathologists across the country and some from other nations as well. This has set up an unusual setting where I can collect a larger number of rare lesions for studies. The following recently completed and ongoing projects result directly from this situation.

1. Kim GE, Thung SN, Tsui WMS, Ferrell LD. Cavernous hemangioma, Underrecognized lesion associated with cavernous hemangioma, *Liver Int'l*, 26:334-38, 2006.

This study involved collection of multiple consultation cases as well as in-house cases, and applying immunohistochemical techniques to a unique vascular lesion noted in these samples in order to determine their similarity to a coexisting giant hemangioma.

2. Kakar S and Ferrell LD. Examination of chromosomal abnormalities in well-differentiated hepatocellular tumors: Utility in Differential Diagnosis and Correlation with Etiology and Prognosis, Platform presentation at USCAP, 2007, continued work in progress.

I have just completed collecting cases of unusual, rare, well-differentiated hepatocellular tumors including adenomas, well-differentiated hepatocellular carcinomas, and well-differentiated hepatocellular tumors of uncertain classification as adenoma versus HCC. Now, in collaboration with a junior colleague in my department, Dr. Sanjay Kakar, we have begun an analysis of chromosomal abnormalities in these tumors using various methods including CGH and FISH technology to try to determine whether there are markers which distinguish these lesions in a more reliable manner than routine histology and immunohistology. This could be an important breakthrough in determining/predicting the biological outcome of these problematic lesions.

3. Tabatabai L and Ferrell LD. Utility of various staining methods in the diagnosis of focal nodular hyperplasia. (abstract published in Mod Path and presented as poster at USCAP, manuscript in preparation)

I am currently working with a junior colleague in my department, Dr Laura Tabatabai, on techniques that might be useful in the more successful diagnosis of this well-differentiated tumor within the liver. These tumors are often biopsied by needle cores or fine needle aspiration cytology, which only provides small samples, and we are trying to establish a more reliable set of criteria and use of stains that may be helpful in distinguishing this lesion from hepatocellular carcinoma, cirrhosis, and adenoma.

4. Yabes A, Ferrell LD. Arterialization of central zones in alcoholic cirrhosis. Mod Pathol 18:289A, Jan 2005. USCAP Annual Meeting, San Antonio, TX, Feb 2005 (platform presentation by Dr. Yabes, the current liver/GI pathology fellow), manuscript in preparation.
5. Ferrell LD, Belt P, and Bass N. Arterialization of central zones in nonalcoholic steatohepatitis. Amer Assoc for Study of Liver Disease, Nov 2007, Boston, MA.

The first paper was initiated by my observation of the finding of arteries in the scarred central zones of chronic steatohepatitis due to alcohol and nonalcoholic fatty liver disease. I presented these findings as an aspect of a case presentation to an international liver pathology group, and was surprised to find that about half of the experienced liver pathology experts there had not noticed this finding. This then led us to more systematically study this finding in end-stage alcoholic liver disease, and now I am continuing with the studies in the nonalcoholic steatohepatitis patients in the NASH consortium database.

6. Torbensen M, Chen YY, Brunt E, Cummings OW, Gottfried M, Jakate S, Liu YC, Yeh M, Ferrell L, Glycogenic hepatopathy: An under-recognized hepatic complication of diabetes mellitus. American Journal of Surgical Pathology 30(4): 508-513, 2006.

I initiated and coordinated this multisite project to collect these very unusual rare cases, similar to what I had rarely seen in my consultation service. The cases were initially presented as a poster at the USCAP by Dr. Chen and I. I served as senior author and wrote the first draft of the final manuscript.

7. Yabes A, Naini B, Lassman C, Yeh MM, Jakate S, Torbenson M, Nakhleh RE, Portmann B, Tomezzoli A, Ferrell LD. Cirrhosis-like Hepatocellular Carcinoma (HCC): A rare and often clinically-undetected variant. Mod Pathol 20 (Suppl 1): Jan 07. USCAP, Mar 2006, San Diego, CA (platform)

I initiated and coordinated this multisite international project to collect these very unusual cases through Preliminary (nonpublished) presentations of the findings at the International Liver Pathology Study Group and Laennec Society.

### **Other multicenter and interdisciplinary studies**

The *NASH (Nonalcoholic steatohepatitis) consortium study* is a multicenter study, based out of the Johns Hopkins Center for Clinical Trials, and sponsored by the National Cancer Institute that is striving to spend several years to evaluate many aspects of fatty liver disease. As one of the center pathologists, I have ongoing responsibilities to evaluate the liver biopsies on the study patients and to coordinate these findings with clinical features in order to better define fatty liver disease. I participated in the proposal for a new scoring system for fatty liver disease developed by our pathology group. This proposal was accepted as an abstract for plenary session presentation at the 2003 American Association for the Study of Liver Disease (AASLD) meeting, and the manuscript published in *Hepatology*. Other studies are ongoing, including my ancillary study on arterialization of central zones in NASH, described above.

Kleiner D, Brunt E, vanNatta M, Behling C, Contos MJ, Cummings OW, Ferrell LD, Liu Y, Torbenson MS, Yeh M, McCullough AJ, Sanyal AJ. Design and validation of a histology scoring system for nonalcoholic fatty liver disease (NAFLD), *Hepatology*, 41:1313-1321, 2005.

-Numerous studies in liver and liver transplant pathology in collaboration with UCSF Liver Transplant Service, Hepatology/GI division of the Dept of Medicine, and Radiology. I am acting as the consultant liver pathologist for several NIH grants and other support for these projects. The funding varies as salary support or consultant fees.

-Ongoing collaboration with two international groups of liver pathologists, hepatologists, and hepatic radiologists (Laennec Society and the International Liver Pathology Study Group) on consensus terminology and diagnostic criteria for hepatocellular carcinoma and hepatic nodules in the cirrhotic liver and well as benign nodules in the noncirrhotic liver. I had a significant role in the preparation of the first manuscript consensus document on benign lesions Bioulac-Sage P, et al. Pathological diagnosis of liver cell adenoma and focal nodular hyperplasia: Bordeaux update. *Journal of Hepatology* 46(3): 521-527, 2007.

### ***Specific studies:***

-Solid Organ Transplantation in HIV: Multi-Site Study. I am the lead liver pathologist for all sites and developed the data form for liver biopsy analysis. I will review all study cases as the central-review pathologist to confirm consistency of data collection. These patients have very complex patterns of liver injury, including mixed lesions. These include atypical patterns of viral disease, rejection, and drug reactions to antiviral therapy that make diagnosis particularly difficult. I am one of the very few liver pathologists in the world who has experience in this area.

-Womens Interagency HIV Study. This is also a multi-site study, and I am working with local UCSF physicians Norah Terrault, Marion Peters, and Phyllis Tien. I am the local pathologist who evaluates and scores the liver biopsies. These patients also have complex liver pathology that need my expertise for interpretation.

-Vira-Hep C study. This study tries to define the response rates of anti-viral therapy in African-Americans as compared to Caucasians. I'm working with UCSF physician Norah Terrault. I am the local pathologist who evaluates and scores the liver biopsies.

-Natural history of HCV: living versus cadaver donor. This study is comparing the progression of HCV after transplantation for these two donor types. I am working with UCSF physicians Chris Freise and Norah Terrault.

-Thymoglobulin Induction therapy with a calcineurin-inhibitor sparing regimen in liver transplant patients. This study evaluates the safety of this therapy and the outcome. Sponsored by Genzyme corporation. I am the consultant pathologist for the UCSF trial, headed by Dr Chris Freise.

-Non-invasive evaluation of pathology and prediction of outcome in nonalcoholic fatty liver disease: role of MR imaging and spectroscopy. Application for funding submitted by PI A Qayyum in Radiology. I will assist in evaluating the liver biopsies.

-Outcome of hepatocellular carcinoma in the liver transplant patient. One publication has already been completed, but further related studies are ongoing to evaluate the relationship of the degree of necrosis in HCC that has been embolized/treated prior to transplant.

Pertinent publication: Yao FY, Ferrell L, Bass NM, Ashcer NL, Roberts JP. Liver transplantation for hepatocellular carcinoma: Comparison of the proposed UCSF criteria with the Milan criteria and the Pittsburgh modified TNM criteria. Liver Transplantation, 8:765-774, 2002.

-Reliability of the pathologic diagnosis of rejection versus hepatitis C in the post-transplant setting, reliability and clinical correlation of chronic rejection, collaboration with Dr. Sandy Feng at UCSF. Other related studies are planned.