

CURRICULUM VITAE

Lawrence Brian Afrin, B.S., M.D.

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Citizenship: United States

MEDICAL LICENSURE AND CERTIFICATION:

State Board of Medical Examiners of South Carolina, Permanent License (issued 8/15/89)

Drug Enforcement Administration (DEA) License (issued 7/1/88)

South Carolina Department of Health and Environmental Control (SC DHEC) License (issued 7/1/88)

National Board of Medical Examiners (NBME), Certified Diplomate (as of 6/30/89)

American Board of Internal Medicine (ABIM), Previously Certified Diplomate in Internal Medicine (as of 9/25/91; certificate expired 12/31/2001)

American Board of Internal Medicine (ABIM), Certified Diplomate in Medical Oncology (as of 11/7/95; recertified 11/04, effective through 12/31/15)

American Board of Internal Medicine (ABIM), Certified Diplomate in Hematology (as of 11/20/96; recertified 11/04, effective through 12/31/16)

National Institutes of Health, Licensed Investigator

American Red Cross, Certified in Basic Cardiac Life Support (8/06-8/10)

EXAMINATION RECORD:

American Board of Internal Medicine, Certifying Examination in Hematology, 11/96, 11/04

American Board of Internal Medicine, Certifying Examination in Medical Oncology, 11/95,
11/04

American Board of Internal Medicine, Certifying Examination in Internal Medicine, 9/91

National Boards Part III, 3/89

National Boards Part II, 9/87

National Boards Part I, 6/86

FACULTY APPOINTMENTS:

May 2003 to present:

Associate Professor in Medicine
Medical University of South Carolina
Division of Hematology/Oncology
Department of Medicine
College of Medicine
(Also Faculty, College of Graduate Studies, July 1998-present)
Charleston, SC

Three half-days of teaching general hematology/oncology clinic per week, one half-day of private general hematology/oncology clinic per week, plus five one-month rotations on MUSC hematology and oncology inpatient and consult services. Teaching of hematology/oncology fellows, internal medicine housestaff, and medical students, including regular participation as instructor in sophomore Physical Diagnosis course and junior Professor Rounds course. Developer and webmaster of web sites and numerous web applications for the Hollings Cancer Center, the MUSC Division of Hematology/Oncology, and the MUSC Office of Graduate Medical Education. Continuing to serve as Director of the Hematology/Oncology Division's Fellowship Training Program, leading efforts to secure full ACGME/RRC and ABIM reaccreditation in 2003 and 2009. Additional research and administrative responsibilities as outlined below.

July 1996 to May 2003:

Assistant Professor in Medicine
Medical University of South Carolina
Division of Hematology/Oncology
Department of Medicine
College of Medicine
(Also Faculty, College of Graduate Studies, July 1998-present)
Charleston, SC

One half-day of private general hematology/oncology clinic per week, one half-day of teaching general hematology/oncologic clinic per week, plus 2-4 one-month rotations on MUSC hematology/oncology inpatient and consult services. Teaching of hematology/oncology fellows, internal medicine housestaff, and medical students, including regular participation as instructor in sophomore Physical Diagnosis course. Developer and webmaster of web sites and numerous web applications for the Hollings Cancer Center, the MUSC Division of Hematology/Oncology, the Physicians Research Network, the ACT! (About Clinical Trials!) Project, the South Carolina Cancer Research Consortium, and the South Carolina Department of Mental Health's Deaf Services Program. Appointed Director of the Hem/Onc Division's Fellowship Training Program effective 9/1/97, led efforts to secure in 1998 full 4-year ACGME/RRC reaccreditation (previous accreditation 3 years with warning). Additional research and administrative responsibilities as outlined below.

July 1995 to June 1996:

Instructor in Medicine
Medical University of South Carolina
Division of Hematology/Oncology
Department of Medicine
College of Medicine
Charleston, SC

Total 1½ days of general hematology/oncology clinic per week, plus 2-3 one-month rotations on MUSC hematology/oncology inpatient services. Also, medical oncologist for the MUSC Hollings Cancer Center's Multidisciplinary Prostate Cancer Clinic (½ day of clinic per week). Teaching of hematology/oncology fellows, internal medicine housestaff, and medical students. Research and administrative responsibilities as outlined below.

July 1994 to June 2005 and July 2006 to present:

Senior Physician-IT Liaison and Director, MUHA e-CareNet Project
Medical University Hospital Authority
Medical University of South Carolina
Charleston, SC

Principal point of contact between CCIT and the MUSC physician staff. Chaired institutional Clinical Information Systems Steering Committee, 1999-2003. Advised physicians, information technology staff, and Medical Center administrators on matters related to information technology in medicine. Assisted various teams in the development of MUSC's new clinical systems including clinical documentation, electronic order entry, clinical data mining, etc.

June 2003 to the present:

Director, Information Technology
Office of Graduate Medical Education
Medical University of South Carolina (MUSC)

Coordination of development of information technology and information systems throughout the MUSC GME enterprise comprised of approximately 50 ACGME-accredited residency and fellowship training programs.

July 2002 to June 2006:

Director, Information Technology and Telemedicine
Holling Cancer Center (HCC)
Medical University of South Carolina (MUSC)

Direct supervision of 3.0 FTE, plus coordination of 3.0 other FTE, in the operation and development of the HCC's information systems. Also serve in this role as Director of the HCC's Telemedicine Initiative and as the HCC's Chief Information Systems Architect, responsible for the design and implementation of Center-wide integrated information systems in support of the HCC's missions and its quest for designation by the National Cancer Institute as a Comprehensive Cancer Center. Position closed out in June 2006 as HCC Director closed out entire HCC Office of Information Technology.

MEDICAL PRACTICE/STAFF APPOINTMENTS:

July 1995 to Present:

Member, Active Medical Staff
Medical University Hospital,
Veterans Administration Medical Center,
Charleston Memorial Hospital
Charleston, SC

August 1995 to June 1996:

Associate Member
Hollings Cancer Center
Medical University of South Carolina
Charleston, SC

July 1996 to Present:

Full Member
Hollings Cancer Center
Medical University of South Carolina
Charleston, SC

July 1998 to February 2009:

Member, Active Medical Staff
East Cooper Regional Medical Center
Mt. Pleasant, SC

POST-GRADUATE MEDICAL TRAINING:

July 1994 to June 1995:

Research Fellowship
Medical University of South Carolina
Division of Hematology/Oncology
Department of Medicine
College of Medicine
Charleston, SC

Primary work was development of the Physicians' Research Network project, a World Wide Web/Internet-based computerized system for facilitating intra- and extra-institutional access to clinical trial protocols and other clinical research resources.

July 1991 to June 1994:

Clinical Fellowship
Medical University of South Carolina
Division of Hematology/Oncology
Department of Medicine
College of Medicine
Charleston, SC

Awarded three consecutive American Cancer Society Clinical Oncology Fellowships for 1991-92, 1992-93, and 1993-94. Third year was principally a year of research in recombinant genetic engineering of immunotoxins, performed under the direction of Arthur E. Frankel, M.D., won first place in state ACP Associates Research Competition 1993.

July 1988 to June 1991:

Categorical Internal Medicine Residency
Medical University of South Carolina
Department of Medicine
College of Medicine
Charleston, SC

MEDICAL EDUCATION:

August 1984 to May 1988:

Medical University of South Carolina (MUSC)
College of Medicine
Charleston, SC
Degree: M.D.

Special activities included various research projects and participation in the 1988 "Computer Applications in Clinical Medicine" summer elective program at the National Institutes of Health.

UNDERGRADUATE EDUCATION:

August 1981 to May 1984:

Clemson University
Clemson, SC

Degree: Bachelor of Science in Computer Science, *summa cum laude*, with Departmental Honors, minor in Chemistry.

Notes: Valedictorian (class of approx. 1,200), GPR 4.00, freshman year exempted via Advanced Placement credit, honors included: Dean's List all 6 semesters; Outstanding Sophomore in Computer Science; Outstanding Senior in Computer Science; Tau Sigma Epsilon Academic Achievement Award; Poole Scholarship (full 4-year all-expenses-paid academic achievement-based scholarship awarded by Clemson); Member, Phi Kappa Phi national honor fraternity. Activities included memberships and elected officerships in a variety of general academic, major-related, and premedical-related campus organizations.

Summer 1981:

College of Charleston
Charleston, SC
Calculus I and II.

August 1977 to June 1981:

Hanahan High School
Hanahan, SC

Notes: Valedictorian (class of approx. 200). Activities included memberships and elected officerships in many campus organizations. Numerous school-related academic honors as well as awards in local and state-wide academic competitions.

EMPLOYMENT EXPERIENCE:

September 1999 to December 2004:

Member, Scientific Advisory Board
Fast Track Systems, Inc.
San Mateo, California

Advised the company (developer of clinical trials informatics products and services) on clinical and other informatics/scientific affairs.

November 1985 to present:

Vice President of Systems
Professional Processors, Inc.
Hanahan, SC

Managing all technical operations and some administrative aspects of this medical transcription service company, including equipment budgeting, purchasing, installation, and maintenance; software development; employee training; and marketing.

May 1984 to present:

Independent Computer Systems Consultant
Hanahan, SC and Mt. Pleasant, SC

Providing consulting services to numerous private and institutional clients, including Clemson University, the federal government (Department of Defense), and Wall Street firms, regarding all aspects of information technology (purchasing, installation, development, maintenance, trouble-shooting, hardware, software, etc.).

August 1981 to May 1984 (except summers):

Computer Operator
Clemson University
Clemson, SC

Served as principal operator of several different computer centers on the Clemson campus, maintaining the equipment in working order as well as providing software development assistance to the clientele (mostly fellow students).

November 1981 to May 1984 (except summers):

Computer Programmer
Clemson University
Clemson, SC

Served as principal (and, until near graduation, only) programmer on a multi-million dollar Department of Computer Science project contracted by the Department of Defense. Responsibilities included managing all day-to-day operations; supervising as well as performing all software development; providing input to senior project management on purchasing and budgeting; training employees; installing, maintaining, and trouble-shooting equipment; planning, supervising, and performing research tasks; attending regional and national conferences; et al.

April 1980 to August 1981; Summers, 1982-1983:

Computer Programmer
Department of Family Medicine
Medical University of South Carolina
Charleston, SC

Responsibilities included designing, implementing, and maintaining software systems to facilitate daily operations at the Family Medicine Center. Also assisted senior personnel in research efforts in areas such as natural language interfaces, artificial intelligence, and medical decision-making.

Summers 1981-1982:

Course Instructor in Computer Science
Governor's School of South Carolina
Charleston, SC

Responsibilities included design and teaching of a course as well as specific lessons and laboratory projects which introduced interested students to computer science. (The South Carolina Governor's School at the time was an intensive, six-week, mid-summer, governor's office-sponsored program held at the College of Charleston providing 200 of the state's top-performing high school seniors exposure to an annually changing variety of advanced topics and fields not typically explored at the secondary school level.)

1978 to August 1981:

Computer Operator
College of Charleston
Charleston, SC

Responsibilities of this part-time volunteer position included maintenance of the College's computer facilities; light administrative duties; providing software development assistance to students; and occasionally designing, implementing, and maintaining software systems to facilitate management functions as well as daily operations.

CURRENT APPROVED AND PENDING GRANT SUPPORT AND RESEARCH PROJECTS:**December 2009 to present:**

Characterization of Previously Unsuspected Prophylactic Pentamidine Toxicities Potentially Mediated by Cytochrome p450 2C19 Polymorphisms in Allogeneic Stem Cell Transplant Patients: A Retrospective Study (investigator-initiated).

January 2009 to present:

A Randomized, Double-blind, Placebo-controlled Study of the JAK Inhibitor INCB018424 Tablets Administered Orally to Subjects with Primary Myelofibrosis (PMF), Post-Polycythemia Vera-Myelofibrosis (PPV-MF) or Post-Essential Thrombocythemia Myelofibrosis (PET-EF), Incyte Corporation.

November 2004 to present:

Software for Development of a Comprehensive Cancer Center, \$50,000 (materials) annually, renewable in perpetuity, Microsoft Corporation.

PAST GRANT SUPPORT:

MUSC Terminus of the South Carolina Videoconferencing Corridor, \$594,000, Duke and Fullerton Foundations, 1/04-12/06, FUNDED (co-P.I.).

Development of a Multi-Institutional Hematology/Oncology Fellowship Training Program, \$15,000, Fullerton Foundation, 1/05-12/05, FUNDED (P.I.).

Use of the MUSC Hollings Cancer Center Support Group Webcasting Service for the MUSC Implantable Cardiac Defibrillator Support Group, \$5,000, Medtronic Corporation, 1/05-12/05, FUNDED (P.I.).

Hollings Cancer Center Biostatistics and Informatics Core Development Grant, \$969,000 (direct \$682,131), U.S. Department of Energy (DE-FG02-01ER63121), 5/1/02-6/30/05, FUNDED (principal investigator, 50% effort).

Supplement to Hollings Cancer Center Biostatistics and Informatics Core Development Grant, \$20,000 direct, 12/1/02-6/30/05, FUNDED (principal investigator, 50% effort).

Supplement to Hollings Cancer Center Biostatistics and Informatics Core Development Grant, \$156,000 direct, 6/1/03-6/30/05, FUNDED (principal investigator, 50% effort).

Extension to Coastal Cancer Control Project, Telemedicine Section, \$400,000 direct, U.S. Department of Defense grant #N000149611298, 9/1/02-8/31/03.

Clinical Repository Data Mining as a Means of Identifying Feasible Clinical Trials and Improving Clinical Trial Accrual, \$161,563, FastTrack Systems, Inc., 9/1/00-8/31/02 (P.I.).

Coastal Cancer Control Project, Telemedicine Section, \$4,014,723 (direct \$3,069,511), U.S. Department of Defense grant #N000149611298, 9/1/98-8/31/02 (co-investigator, 5% support, 11/1/01-8/31/02).

U.S. Department of Commerce/NIST Advanced Technology Program, "Healthcare Information Infrastructure Technology (HIIT)", \$2,706,512, 3/95-3/99. Role: Co-Principal Investigator of the MUSC/Coleman Research Corporation "spoke" of this multi-spoke \$18M+ collaborative project involving federal and state government agencies, industry, and academia.

Coleman Research Corporation and the MUSC Environmental Hazards Assessment Program. Phase I of the MUSC PRN (Physicians' Research Network) project, a World Wide Web/Internet-based computerized system for facilitating intra- and extra-institutional access to clinical trials and other research activities. Total \$300,000 (both sponsors), 7/1/95-6/30/97. Additional seed funds of approximately \$50,000 for the period 9/1/94-6/30/97 provided by the MUSC Hollings Cancer Center's Clinical Trials Program.

Educating Patients About Clinical Trials via the World-Wide Web: A Pilot, \$4,000, Ortho Biotech, 6/1/96-7/31/96 (Robert K. Stuart, P.I.).

Educating Patients About Clinical Trials via the World-Wide Web: Production System Development, \$125,000, Ortho Biotech, 1/1/97-12/31/97 (P.I.).

Infrastructure Development for Extranet-Based Coordination of Wide-Area Clinical Trials (continuation), \$20,000, South Carolina Department of Mental Health, 10/15/99-11/14/01 (P.I.).

Infrastructure Development for Extranet-Based Coordination of Wide-Area Clinical Trials, \$20,000, South Carolina Department of Mental Health, 10/15/97-11/14/99 (P.I.).

ACT! — About Clinical Trials: A Web-Based Method for Educating Patients About Clinical Trials via the World-Wide Web: Continued Production System Development, \$125,000, Ortho Biotech, 1/1/98-12/31/98 (P.I.).

ACT! — About Clinical Trials: A Web-Based Method for Educating Patients About Clinical Trials via the World-Wide Web: Continued Production System Development, \$150,000, Ortho Biotech, 1/1/99-12/31/99 (P.I.).

Improving Public Awareness of Clinical Trials and Health Matters via Internet Technologies, \$25,000, Sara Lee Corporation, 1/1/98-12/31/98 (P.I.).

Development of an Internet-Accessible Interface to a Hematopathology Teaching Slide Collection, \$5,600, Ortho Biotech, 1/1/98-12/31/98 (P.I.).

SELECTED PAST RESEARCH PURSUITS:

Assessment of Handwashing Performance by Attending Physicians in Inpatient Environments Before and After a Novel Handwashing Performance Improvement Intervention, 3/06-2/08.

Clinical Investigator, various protocols with the Cancer and Leukemia Group B (1995-2001), Southwestern Oncology Group (2001-present), Radiation Therapy Oncology Group (1995-present), National Surgical Adjuvant Breast and Bowel Project (1995-present), various pharmaceutical firms (1995-present), local investigators (1995-present)

Primary developer, MUSC Hematology/Oncology Fellowship Recruitment Management System, 7/06-present.

Primary developer, MUSC/HCC Informal Second Opinion Telemedicine Service, 7/03-2/05

Primary developer/programmer, MUSC/HCC Support Group Webcasting Service, 7/03-12/05

Primary developer, MUSC-USC Virtual Hallway for Promoting Inter-institutional Research Collaboration, 3/03-present

Primary developer/programmer, American Medical Informatics Association Internet Working Group Resource Library, 11/03-present

Primary developer/programmer, MUSC/HCC Coverage Tracking System, 9/03-present.

Primary developer/programmer, MUSC/HCC On-Line GME Resource Library, 9/03-present.

Project director/lead designer, MUSC Clinical Protocol Point-of-Care Access System, 6/03-present.

Primary developer/programmer, Hollings Cancer Center Clinical Trial Discovery Web Service, 2/03-present.

Project director, MUSC E*Value (electronic residency management system) enterprise-wide deployment project, 4/02-present.

Primary developer/programmer, Hollings Cancer Center Central Entity Tracking database and associated applications, 2/02-present.

Developer/programmer, Hollings Cancer Center Clinical Trials Office database and associated applications, 2/02-present.

Developer/programmer, MUSC Division of Hematology/Oncology Conference Attendance Tracking System, 2/02-present.

Primary developer/programmer, Hollings Cancer Center ConstructionCam, 11/01-present.

Primary developer/programmer, Hollings Cancer Center On-Line Tumor Board system, 6/01-present.

Primary developer/programmer, MUSC Conference Attendance Tracking system, 11/01-present, now used by MUSC Hematology/Oncology, Pathology, Pediatrics, Neurosciences, and Family Medicine.

Primary developer/programmer, Hollings Cancer Center Breast Cancer Program database and associated applications, 7/01-present.

Primary developer/programmer, MUSC Tissue Bank database and associated applications, 7/01-present.

Primary programmer/developer, "PalmOacis" tool for accessing the "Oacis" core MUSC clinical information system from handheld computing devices (10/00-present).

Primary programmer/developer, "PalmOversite" tool for accessing MUSC's "Oversite" ambulatory appointment scheduling system from handheld computing devices (1/01-present).

Prosorba vs. IVIG — developed protocol and assembled multi-institutional group for Phase IV clinical trial of Prosorba vs. IVIG in adult steroid-refractory chronic severe ITP, 4/92-5/95, 2/96-present. Sponsor: Cypress Bioscience. Trial ran from 3Q96 to 3Q97, involved 25

centers. Sponsor closed trial due to poor accrual and other research developments in ITP therapeutics. Funding to MUSC: \$38K.

Engineering, expression, and characterization of ricin fusion immunotoxins — 7/93-8/94 — bench research in the laboratory of Dr. Arthur Frankel (MUSC Division of Hematology/Oncology and the Hollings Cancer Center) to genetically re-engineer the potent plant toxin ricin into a highly specific, targeted antineoplastic toxin. Two papers published, first place award in statewide research competition.

HALF — conducted the analysis of the data gathered in a five-year prospective non-randomized MUSC Division of Hematology/Oncology chemotherapy protocol for metastatic breast and GI tract cancer using hydroxyurea, allopurinol, leucovorin, and 5-fluorouracil.

Non-bacterial antibiotics in bone marrow transplant patients — conducted an extensive literature review and produced a series of internal division "guidelines" papers for prophylactic use of antifungal and antiviral agents in bone marrow transplant patients.

SPECIFIC TEACHING ACTIVITIES:

Faculty, MUSC Medicine Careers Academy, 2009.

Advisor, Masters in Clinical Research Thesis Committee for Keisuke Shirai, M.D., "Phase II Study of Abraxane in Head and Neck Cancer," Department of Biometry and Epidemiology, MUSC College of Graduate Studies, 2007-2009.

Nominee, Excellence in Teaching Award, MUSC Department of Internal Medicine, January-June 2008.

Nominee, Excellence in Teaching Award, MUSC Department of Internal Medicine, July-December 2007.

Member, Oncology Training Programs Subcommittee, American Society of Clinical Oncology, 7/07-6/10

Question Writer, American Board of Internal Medicine Hematology Board Certification Exam, 2006.

Attendee, "Board Examination Question-Writing Workshop," co-sponsored by the American Society of Hematology, the American Society for Clinical Oncology, and the National Board of Medical Examiners, Las Vegas, NV, September 15, 2006.

Tutorial Instructor, "Rapid Development of Mobile Applications: Theory and Practice," American Medical Informatics Association 2004 Annual Symposium, San Francisco, CA, September 7, 2004.

- Tutorial Instructor, “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2003 Annual Symposium, Washington, DC, November 9, 2003.
- Lecturer, “Introduction to Clinical Information Systems,” in master’s course Introduction to Biomedical Informatics, MUSC College of Graduate Studies, December 9, 2002.
- Tutorial Instructor, “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2002 Annual Symposium, San Antonio, TX, November 10, 2002.
- Tutorial Instructor, “Building Dynamic, Enterprise Resource-Integrated Web Applications: Theory and Practice with Cold Fusion,” American Medical Informatics Association 2002 Annual Symposium, San Antonio, TX, November 9, 2002.
- Lecturer, “Overview of Clinical Information Systems,” in master’s course Contemporary Topics in Clinical Research, MUSC, April 18 and 25, 2002.
- Tutorial Instructor, “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2001 Annual Symposium, Washington, DC, November 4, 2001.
- Lecturer, “Overview of Clinical Information Systems,” in master’s course Contemporary Topics in Clinical Research, MUSC, March 8, 2001.
- Lecturer, “Introduction to Clinical Information Systems,” in master’s course Introduction to Biomedical Informatics, MUSC, February 12 and 14, 2001.
- Lecturer, “Medical Therapy for Advanced Prostate Cancer,” MUSC Internal Medicine Residents’ Lecture Series, March 2, 2000.
- Principal advisor, Doctoral Thesis Committee for Sami Shaban, “Deriving Clinical Trial Management Systems from Metadata,” Department of Biometry and Epidemiology, MUSC College of Graduate Studies, 1998-99.
- Primary Hematology/Oncology lecturer, “Professor Rounds,” 6 times per year to groups of MUSC third-year medical students, 2005-present.
- Lecturer, “Leukemia and Lymphoma,” 6 times per year to groups of MUSC third-year medical students, 1997-2005.
- Lecturer, “Leukemia, Lymphoma, and Myeloma,” annual lecture series for MUSC Physician’s Assistant trainees, 1997-2000.
- Faculty, Computer Skills Workshops for Physicians (CME Course), Medical University of South Carolina, Charleston, SC, November 14-15, 1997.

Guest Lecturer, Management Information Systems, Furman University undergraduate students. Two-hour presentation: Information Systems in Medicine: Patient Care, Research, and Educational Applications. Hollings Cancer Center, April 11, 1997, Charleston, South Carolina.

Guest Lecturer, Health Administration Information Management, MUSC graduate health administration students. Two-hour presentation: Use of the Information Highway in Patient Care. Hollings Cancer Center, February 10, 1997, Charleston, South Carolina.

Preceptor, Introduction to Clinical Reasoning IV, MUSC second-year medical students, Spring Semester 1995, 1997-Present.

Occasional annual lecturer, "Overview of Clinical Information Systems," in master's course Special Topics in Health Administration, MUSC College of Allied Health Professions, 1995-present.

PUBLICATIONS:

Books:

Simone JV, Afrin LB, Byers T, et al. (Institute of Medicine Committee on Assessing Improvements in Cancer Care in Georgia), *Assessing the Quality of Cancer Care: An Approach to Measurement in Georgia* (Eden J, Simone JV, eds.), The National Academies Press, Washington, DC, 2005.

Chapters:

Afrin L, Clark F, Waller J, Cawley P, Hartzog T, Daniels M, Campbell D. If It Ain't Broke, Don't Fix It: Replacing an HIS. In Leviss J, ed. *H.I.T. or Miss: Lessons Learned from Health Information Technology Implementations*. American Health Information Management Association, Washington, DC, 2010.

Afrin LB, del Bene VM. Physician Workstations. In *Health Care Information Management Systems: A Practical Guide*, 2nd Edition (Ball M, Douglas J, Albright J, and Simborg D, eds.), New York, Springer-Verlag, 1995.

Peer-Reviewed Papers:

Afrin LB. Burning Mouth Syndrome: A New Extraoral Explanation? *J Pub Health Dent*, submitted May 2010.

Afrin LB. Mast Cell Activation Disorder Masquerading as Pure Red Cell Aplasia. *Intl J Hematol*, in press.

- Afrin LB. Fatal Copper Deficiency from Excessive Use of a Popular Zinc-Based Denture Adhesive. *American Journal of Medical Sciences*, in press.
- Afrin LB. Lessons from Incongruence of Symptoms and Test Results: Mast Cell Activation Disorder Presenting as Polycythemia. In draft for submission to *Am J Hematol* June 2010.
- Afrin LB. Value of Preemptive CYP2C19 Genotyping in Allogeneic Stem Cell Transplant Patients Considered for Pentamidine Administration. *Bone Marrow Transpl*, submitted May 2010.
- Afrin LB. Fulminant Wilson's Disease Presenting as Non-Immune Hemolysis and Severe Hypophosphatemia: Case Report and Review of the Literature. In draft.
- Aravapalli A, Meyers K, Afrin L, Comerford L. Not a Common Drug Overdose: Severe GI Toxicity from Aripiprazole due to a Cytochrome p450 2D6 Polymorphism. *Proc Southern Hospital Medicine Conference*, 2009.
- Serber ER, Finch NJ, Afrin LB, Greenland WJ. Using a Webcasting Support Service: Experiences of In-Person Attendees of an Implantable Cardioverter Defibrillator Support Group. *Heart and Lung* 2010 Mar/Apr;39:94-104.
- Demiris G, Afrin LB, Courtney KL, Goossen W, Lovis C, Lynch C, Sondhi M, Speedie S, Vimarlund V. Patient-centered applications: use of information technology to promote disease management and wellness – a white paper by the AMIA Knowledge in Motion Working Group. *J Amer Med Info Assoc* 2008 Jan/Feb;15(1):8-13.
- Afrin LB, Arana GW, Medio F, Ybarra A, Clarke H. Improving Oversight of the Graduate Medical Education Enterprise: One Institution's Strategies and Tools. *Acad Med* 2006 May;81(5):419-425.
- Finch N, Afrin LB. Using a Support Group Webcasting Service: Experiences of Patients and Caregivers with Implantable Defibrillators. *Proceedings of the Florida International University School of Nursing's Annual Research Conference: Improving Health Care Quality Through Research*, October 21, 2005, Miami, FL.
- Afrin LB. A Century of General Medicine in South Carolina, 1905-2005. *J South Carolina Med Assoc* 2005 Jun; 100(6):107-112 (invited lead article for the centennial JSCMA issue).
- Afrin LB, Greenland J, Finch N. Improved Patient Support through Support Group Webcasting: A Feasibility Assessment. *Proc Thirty-Eighth Annual Hawaii Intl Conf Sys Sci*, 2005:138.
- Onitilo A, Lin Y, Okonofua E, Afrin L, Tilley B. Race, Education and Knowledge of Bone Marrow Registry: Indicators of Willingness to Donate Bone Marrow Among African Americans and Caucasians. *Transplantation Proc* 2004 Dec;36(10):3212-3219.

Afrin LB, Oates JC, Daniels MS. Open EMR Architecture Advantages for Clinical Trial Accrual. Annual Symposium of the American Medical Informatics Association, *Proc Amer Med Info Assoc*, Washington, D.C., November 10, 2003 (nominated for “Best Paper – Applied Informatics” award).

Stahl DC, Evans Jr. RM, Afrin LB, DeTeresa RM, Ko D, Mitchell K. Web Services-Based Access to Local Clinical Trial Databases: A Standards Initiative of the Association of American Cancer Institutes. Annual Symposium of the American Medical Informatics Association, *Proc Amer Med Info Assoc*, Washington, D.C., November 10, 2003 (nominated for “Best Paper – Applied Informatics” award).

Afrin LB, Daniels MS. Open Architecture Advantages for EMR-PACS Integration. Toward an Electronic Patient Record (TEPR) 2003 Annual Meeting, May 12, 2003, San Antonio, TX.

Afrin LB, Oates JC, Daniels MS. Open EMR Architecture Advantages for Clinical Trial Accrual. Toward an Electronic Patient Record (TEPR) 2003 Annual Meeting, May 13, 2003, San Antonio, TX.

Kokko H, Hall PD, Afrin LB. Fentanyl-associated syndrome of inappropriate antidiuretic hormone secretion. *Pharmacotherapy* 2002;22(9):1188-92.

Ergul S, Lal A, Afrin L, Frei-Lahr D. Primary Mediastinal Large B-Cell Lymphoma. *Southern Med J* 2002 Sep;95(9):1005-7.

Afrin LB, Ergul SM. Medical Therapy of Prostate Cancer: 1999. *J South Carolina Med Assoc* 2000;96(2):77-84.

Afrin LB. Tumor Boards on the Intranet: Decreasing Administration, Increasing Education. *J Registry Management*, 1997;24:128-132.

Afrin L, Kuppuswamy V, Slater B, Stuart R. The Physicians Research Network: Improved Access to Information about Clinical Trials. *Carolina Health Services and Policy Review*, 1997;4:127-143.

Afrin L, Kuppuswamy V, Slater B, Stuart R. Electronic Clinical Trial Protocol Distribution via the World-Wide Web: Reducing Costs and Errors, Improving Accrual, and Saving Trees. *Journal of the American Medical Informatics Association*, 1997;4:25-35. (Selected for republication in the International Medical Informatics Association’s 1998 Yearbook of Medical Informatics.)

Tagge E, Chandler J, Harris B, Czako M, Marton L, Willingham M, Burbage C, Afrin L, Frankel A. Preproridin expressed in *Nicotiana tabacum* cells in vitro is fully processed and biologically active. *Protein Expression and Purification*, 1996;8:109-18.

Afrin LB, Frankel A, Gulick H, Willingham M, Vesely J. Expression of oligohistidine-tagged ricin B chain in *Spodoptera frugiperda*. *Bioconjug Chem* 1994;5:539-46.

Frankel A, Roberts H, Gulick H, Afrin L, Willingham M, Vesely J. Expression of ricin B chain in *Spodoptera frugiperda*. *Biochem J* 1994;303:787-94.

Afrin LB, Stuart RK. Medical therapy of prostate cancer. *J South Carolina Med Assoc* 1994;90:205-58.

Ornstein SM, Markert GP, Johnson AH, Rust PF, Afrin LB. The effect of physician personality on laboratory test ordering for hypertensive patients. *Med Care* 1988 June;26(6):536-43.

Ornstein S, Johnson A, Markert G, Afrin L. Association between family medicine residents' personality and laboratory test-ordering for hypertensive patients. *J Med Educ* 1987 July;62(7):603-5.

Non-Peer Reviewed Papers, Articles, Letters, Podcasts:

Afrin LB. Public Policy and Ethical Issues in Mobile Computing for Disease and Wellness Management. An invited podcast prepared for the series, "IT and Patient Empowerment," developed by the Knowledge-in-Motion Working Group of the American Medical Informatics Association, introduced at <http://www.amia.org/mbrcenter/wg/kim/documents.asp> and accessed directly at http://www.amia.org/podcasts/mp3/kim/kim_3_medinfo2007.mp3, initially placed on-line on October 25, 2007.

Afrin LB, Evans RM, Mitchell K, DeTeresa RM, Ko D, Stahl DC. Improving the Automated Discovery of Clinical Trials via Web Services: Progress on a Standards Initiative of the Association of American Cancer Institutes. http://www.aaci-cancer.org/pdf/2005_informatics.pdf, last accessed December 23, 2007.

Afrin LB. Web Access to the ASH Slide Bank. *Blood* 93(7):April 1, 1999, pp. 2425-6.

Afrin LB. Medical Informatics: A New Specialty for the '90s and Beyond. *Medical Alumni Today*, Summer 1996.

Peer-Reviewed Abstracts and Posters:

Shirai, K, O'Brien P, Afrin L, Day TA, Gillespie B, Sharma A, Wilhoit C, Saddoughi S, Senkal CE, Hannun YA, Ogretmen B, Chaudhary U. Clinical phase II trial for the treatment of recurrent head and neck cancers with gemcitabine and doxorubicin combination: from the sphingolipid-signaling bench to the bedside. Presented at the 2007 Annual Hollings Cancer Center Research Retreat, Charleston, SC, November 16, 2007.

Demiris G, Afrin LB, Courtney KL, Goossen W, Lovis C, Lynch C, Sondhi M, Speedie S, Vimarlund V. Patient-centered applications and mobile health: use of information technology to promote disease management and wellness – a white paper by the American Medical Informatics Association's Knowledge in Motion Working Group. *Proc Intl Med*

Info Assoc 2007, workshop presentation (Aug 19) at MedInfo 2007, Brisbane, Australia, August 19-24, 2007.

Finch N, Afrin LB. Using a Support Group Webcasting Service: Experiences of Patients and Caregivers with Implantable Defibrillators. Sigma Theta Tau Honor Society of Nursing, 38th Biennial Convention, November 14, 2005, Indianapolis, IN.

Afrin LB, Greenland J, Finch N. Support Group Webcasting: A Feasibility Assessment. 2005 Annual Symposium of the American Medical Informatics Association.

Afrin LB, Fowler S. Improved Inter-Institutional Research Collaboration via a Virtual Hallway. 2005 Annual Symposium of the American Telemedicine Association, April 19, 2005, Denver, CO.

Afrin LB, Greenland J, Finch N. Improved Patient Support through Support Group Webcasting: A Feasibility Assessment. 2005 Annual Symposium of the American Telemedicine Association, April 20, 2005, Denver, CO.

Afrin L, Greenland J, Brown A, Frankis M, Strange C. Telemedicine-Based Access to Second Opinions for the Elderly. 2005 Annual Symposium of the American Telemedicine Association, April 18-19, 2005, Denver, CO.

Finch N, Afrin LB. Using a Support Group Webcasting Service: Experiences of Patients and Caregivers with Implantable Defibrillators. Sigma Theta Tau Honor Society of Nursing, Annual South Carolina Chapter Meeting, February 26, 2005, Columbia, SC.

Afrin L, Greenland J, Brown A, Frankis M, Strange C. Telemedicine-Based Access to Second Opinions for the Elderly. 2004 Annual Symposium of the American Medical Informatics Association, September 2004, San Francisco, CA.

Afrin LB. Web-Based Training Program Resource/Productivity Library. 2004 Annual Meeting of the Association of American Medical Colleges' Group on Information Resources, May 3, 2004, Salt Lake City, UT.

Afrin LB. DeTMan: A Decision Tree Manager for Web and PDA Environments. American Medical Informatics Association 2003 Annual Symposium, November 11, 2003, Washington, DC.

Cancellaro TA, Johnson GM, Afrin LB. Scanning In Versus Signing In: More Efficient Tracking of Resident Conference Attendance. American Academy of Pediatrics 2003 Annual Meeting, November 1-5, 2003, New Orleans, LA.

Afrin LB. Tracking Residents' Conference Attendance: A Reliable Solution At Last? American Association of Medical Colleges Group on Information Resources 2003 Annual Meeting, March 25, 2003, San Antonio, TX (won third prize).

Ebeling MD, Boyd CK, Agbor-Tabi DA, Afrin LB. Delivering Data Mining without the Warehouse: MUSC's Experience. American Medical Informatics Association 2002 Annual Symposium, November 12, 2002, San Antonio, TX.

Afrin LB. Tracking Residents' Conference Attendance: A Reliable Solution At Last? American Medical Informatics Association 2002 Annual Symposium, November 11, 2002, San Antonio, TX.

Kokko H, Hall PD, Afrin LB. Fentanyl Associated Syndrome of Inappropriate Antidiuretic Hormone Secretion. American College of Clinical Pharmacy Spring Meeting, April 7-10, 2002, Savannah, GA.

Afrin LB, Daniels MS. PALMER: PalmOS-Based Access to the Enterprise Clinical Data Repository and Clinical Documentation Assistant. American Medical Informatics Association 2001 Annual Symposium, November 6, 2001, Washington, DC.

Afrin LB. Feasibility of Direct Patient Use of PDA-Based Surveys. American Medical Informatics Association 2001 Annual Symposium, November 5, 2001, Washington, DC (invited for re-presentation at Healthcare Information Systems Society 2002 Annual Symposium, January 2002, Atlanta, GA).

Afrin LB, Quattlebaum TG. Integration of Enterprise Ambulatory Appointment Scheduling with Portable Digital Assistant Calendaring. American Medical Informatics Association 2001 Annual Symposium, November 6, 2001, Washington, DC.

Agbor-Tabi D, Boyd CK, Afrin LB. Challenges in Using an Enterprise Clinical Data Repository for Research. American Medical Informatics Association 2001 Annual Symposium, November 6, 2001, Washington, DC.

Afrin LB, Shaban S, Adelman C, et al. How Useful is the Web for Clinical Trial Accrual? Three Years of Experience with ACT! American Medical Informatics Association 2000 Annual Symposium, Los Angeles, CA.

Afrin LB. A Better Blue Book: A Web-Based Residency Procedure Log System. American Medical Informatics Association 2000 Annual Symposium, Los Angeles, CA.

Afrin LB. The Electronic Medical Record at the Medical University of South Carolina: Successful Integration of Multiple Commercial "Best of Breed" Systems. American Medical Informatics Association 1999 Annual Symposium, Washington, DC.

Afrin LB. Improved Access to Hematopathology Teaching Images. Proceedings of the American Medical Informatics Association 1998 Annual Symposium, Orlando, Florida, p. 965 (poster presentation).

Afrin LB. Web/Java-Based Access to and Analysis of a Library of Clinical Outcomes Databases. American Medical Informatics Association Fall 1997 Symposium, Nashville, Tennessee, p. 838 (poster presentation).

Afrin LB, Gentry JR, Stuart RK. Web-Based Clinical Trials Information for Patients: An Accrual Aid? American Medical Informatics Association Fall 1997 Symposium, Nashville, Tennessee, p. 902 (poster presentation).

Afrin LB. Tumor Boards on the Intranet: Streamlining Administrative Tasks and Improving Tumor Board Educational Value. American Medical Informatics Association, Spring 1997 Congress, slide presentation May 30, 1997, San Jose, California.

Afrin LB. Improving Care for Cancer Patients: Customized Chemotherapy Consent Forms On-The-Fly. American Medical Informatics Association, Spring 1997 Congress, slide presentation May 30, 1997, San Jose, California.

Afrin L, Kuppuswamy V, Slater B, Stuart R. The Physicians Research Network (PRN): Paperless Protocol Distribution for Clinical Trials. American Medical Informatics Association, Spring 1996 Congress, slide presentation June 7, 1996, Kansas City, Missouri.

PROFESSIONAL PRESENTATIONS:

“The Bane of the Modern Clinician: Bridging the Data-Knowledge Divide.” Invited keynote address, Oacis User Group 2009 Annual Meeting, Charleston, SC, April 27, 2009.

“The Path to Progress Is Not Always a Straight Line: A Review of MUSC’s EMR Work (ca. 1970 - Present).” Oacis User Group 2008 Annual Meeting, Montreal, Quebec, June 4, 2008.

“Public Policy and Ethical Issues in Patient-Centered Applications and Mobile Health: Use of Information Technology to Promote Disease Management and Wellness.” MedInfo 2007 (triennial meeting of the International Medical Informatics Association), Brisbane, Australia, August 19, 2007.

“Carts and Horses: Questing for Interoperability Among U.S. Electronic Medical Record Systems While Still Struggling for Operability.” Oacis User Group 2007 Annual Meeting, Adelaide, Australia, August 14, 2007.

“Using a Support Group Webcasting Service: Experiences of Patients and Caregivers with Implantable Defibrillators.” Sigma Theta Tau Honor Society of Nursing, 38th Biennial Convention, November 14, 2005, Indianapolis, IN (co-author N. Finch presenting).

“Using a Support Group Webcasting Service: Experiences of Patients and Caregivers with Implantable Defibrillators.” Proceedings of the Florida International University School of Nursing’s Annual Research Conference: Improving Health Care Quality Through Re-search, October 21, 2005, Miami, FL (co-author N. Finch presenting).

- “Hot Topics in Medical Informatics: 2005.” Internal Medicine Grand Rounds, Medical University of South Carolina, May 17, 2005, Charleston, SC.
- “Improved Inter-Institutional Research Collaboration via a Virtual Hallway.” 2005 Annual Symposium of the American Telemedicine Association, April 19, 2005, Denver, CO.
- “Improved Patient Support through Support Group Webcasting: A Feasibility Assessment.” 2005 Annual Symposium of the American Telemedicine Association, April 20, 2005, Denver, CO.
- “Using a Support Group Webcasting Service: Experiences of Patients and Caregivers with Implantable Defibrillators.” Alpha Xi-Sigma Theta Tau Honor Society of Nursing, Annual South Carolina Chapter Meeting, February 26, 2005, Columbia, SC (co-author N. Finch presenting).
- “Electronic Residency Management System Implementation from Soup to Nuts.” 2004 Annual Meeting of the Alliance for Academic Internal Medicine, October 16, 2004, Nashville, TN.
- “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2004 Annual Symposium (tutorial), September 7, 2004, San Francisco, CA.
- “Open EMR Architecture Advantages for Clinical Trial Accrual.” Oacis User Group 2004 Annual Meeting, May 25, 2004, San Francisco, CA.
- “Electronic Residency Management System Implementation from Soup to Nuts.” 2004 Annual Meeting of the Association of American Medical Colleges’ Group on Information Resources, May 3, 2004, Salt Lake City, UT.
- “How to Implement an Electronic Residency Management System: from Soup to Nuts.” 2004 Annual Meeting of the Association of American Medical Colleges’ Group on Resident Affairs, April 18, 2004, Vancouver, BC.
- “Open Electronic Medical Record Architecture Running on the Sun Platform: A Case Study.” Health Information Management Systems Society 2004 Annual Symposium, February 25, 2004, Orlando, Florida.
- “Open EMR Architecture Advantages for Clinical Trial Accrual.” American Medical Informatics Association 2003 Annual Symposium, November 10, 2003, Washington, DC.
- “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2003 Annual Symposium (tutorial), November 9, 2003, Washington, DC.

- “Open EMR Architecture Advantages for Clinical Trial Accrual.” Toward an Electronic Patient Record (TEPR) 2003 Annual Meeting, May 13, 2003, San Antonio, TX.
- “Open Architecture Advantages for EMR-PACS Integration.” Toward an Electronic Patient Record (TEPR) 2003 Annual Meeting, May 12, 2003, San Antonio, TX.
- “Electronic Systems for Tumor Board Management and Tumor Registry Data Mining at MUSC,” South Carolina Cancer Registrars Association Spring 2003 Educational Conference, April 3, 2003, Charleston, SC.
- “Use of PDAs in Learning and Teaching,” MUSC Apple Tree Society, March 5, 2003, Charleston, SC.
- “Building Dynamic, Enterprise Resource-Integrated Web Applications: Theory and Practice with ColdFusion,” American Medical Informatics Association 2002 Annual Symposium (tutorial), November 9, 2002, San Antonio, TX.
- “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2002 Annual Symposium (tutorial), November 10, 2002, San Antonio, TX.
- Invited Expert/Facilitator on Clinical Trials Informatics, “Automation-Based Methods of Finding Patients for Clinical Trials,” American Medical Informatics Association 2002 Spring Symposium, May 20-22, 2002, Scottsdale, AZ.
- “Medical Informatics Update 2001: Pleasure, Pain, and Promises,” Medical University of South Carolina Department of Internal Medicine Grand Rounds, September 18, 2001, Charleston, SC.
- “Using eTechnologies to Add Value for the Clinical Trial Investigator,” Second Annual Conference on Web-Based Clinical Trials: Apply Wireless and Internet Technologies to Improve Trial Efficiency, September 10-12, 2001, Philadelphia, PA.
- “Rapid Development of Mobile Applications: Theory and Practice,” American Medical Informatics Association 2001 Annual Symposium (tutorial), November 4, 2001, Washington, DC.
- “Management of Hormone-Refractory Prostate Cancer: 2001,” University of South Carolina Department of Internal Medicine Grand Rounds, Richland Memorial Hospital, January 4, 2001, Columbia, South Carolina.
- Speaker, “Management of Androgen-Independent Prostate Cancer,” and Panelist, Prostate Cancer Forum, Carolina Urological Association Meeting, August 21, 1999, Charleston, South Carolina.

Keynote Address, "Oacis at MUSC: Our Emerald Centerstone," Oacis Healthcare User Group 1999 Annual Meeting, April 13, 1999, Kiawah Island, South Carolina.

Computer and Internet Skills for Physicians. Twenty-First Annual Carolina Cup Symposium: Update '99 in Clinical Pediatrics and Family Medicine, March 26, 1999, Columbia, South Carolina.

Panelist, "PACS: A 'How To' Conference." March 16, 1999, Charleston, South Carolina.

Information Technology and Doctors. Maryland Society of Healthcare Information Systems Management, March 11, 1999, Baltimore, Maryland.

Using Cold Fusion as an Application Development Tool in Healthcare. Internet Working Group, American Medical Informatics Association 1998 Annual Symposium, November 10, 1998, Orlando, Florida.

Dissemination of Clinical Information on the Web: Computer Skills for Practicing Physicians CME Course Lecture. Medical University of South Carolina, July 18, 1998, Charleston, South Carolina.

The Search for Signs of Intelligent Data on the Net: Tips for Clinicians on Locating Useful On-Line Biomedical Information. The South Carolina Cancer Center, June 24, 1998, Columbia, South Carolina.

Web-Based Clinical Trials Information for Patients and the Public. Hollings Cancer Center Citizens Advisory Council, Hollings Cancer Center, Medical University of South Carolina, June 19, 1998, Charleston, South Carolina.

Web-Based Clinical Trials Information for Patients and the Public. Research Committee, Institute of Psychiatry, Medical University of South Carolina, June 16, 1998, Charleston, South Carolina.

Web-Based Clinical Trials Information for Patients and the Public. Hollings Cancer Center Board of Directors, Hollings Cancer Center, Medical University of South Carolina, June 12, 1998, Charleston, South Carolina.

Tumor Boards on the Intranet: Decreasing Administration, Increasing Education. South Carolina Cancer Registrars Association, Spring Educational Conference, March 26, 1998, Shaw Air Force Base, Columbia, South Carolina.

Dissemination of Clinical Information on the Web: Computer Skills for Practicing Physicians CME Course Lecture, Medical University of South Carolina, November 15, 1997, Charleston, South Carolina.

The Search for Signs of Intelligent Data on the Net: Tips for Clinicians on Locating Useful On-Line Biomedical Information. Research Grand Rounds, Medical University of South Carolina, October 14, 1997, Charleston, South Carolina.

Medicine and the Net: 1997. Montgomery Cancer Center Lecture Series, Capital City Club, August 28, 1997, Montgomery, Alabama (via Ortho Biotech Distinguished Faculty Program).

Protein A Column. Workshop on Autoimmune (Idiopathic) Thrombocytopenic Purpura: Pathogenesis and New Approaches to Therapy, sponsored by the National Heart, Lung, and Blood Institute of the National Institutes of Health, Bethesda, Maryland, August 18-19, 1997.

ACT! — About Clinical Trials! Presentation and Interview on the Midday Show, WCSC-TV (Channel 5), June 26, 1997, Charleston, South Carolina.

Information Systems at the Hollings Cancer Center. Presentation to the Hollings Cancer Center's Board of Directors and Citizens Advisory Committee, Hollings Cancer Center, June 13, 1997, Charleston, South Carolina.

Internet-Based Access to Clinical Data. Spring 1997 Conference of the South Carolina Health Information Management Association, April 30, 1997, Ralph H. Johnson Veterans Affairs Medical Center, Charleston, South Carolina.

Improving Access to Clinical Data: Applications of Internet Technology in Intranet Environments. Hematology/Oncology Grand Rounds. Presentation at the University of Alabama at Birmingham Comprehensive Cancer Center, January 24, 1997, Birmingham, Alabama.

Medicine and the Net: 1996. Second Annual Symposium of the Diabetes Initiative of South Carolina. Presentation at the Mills House Hotel, September 27, 1996, Charleston, South Carolina.

Electronic Systems for Medical Records and Clinical Trials: Integration Possibilities and Realities. Presentation at City of Hope National Medical Center, August 8, 1996, Duarte, California.

Interesting Times Ahead: Integrating Technology into the Oncologist's Day-to-Day Practice. Presentation at City of Hope National Medical Center, August 8, 1996, Duarte, California.

The Physicians Research Network: Potential Applications in Psychiatry. Presentation to the research staff of the Medical University of South Carolina Institute of Psychiatry, July 8, 1996, Charleston, South Carolina.

The Physicians Research Network. Presentation to the Hollings Cancer Center External Scientific Advisory Board, June 24, 1996, Charleston, South Carolina.

The Physicians Research Network: A World-Wide Web Interface to the OACIS Clinical Data Repository. Presentation at the OACIS Quality Council Spring 1996 meeting, May 4, 1996, Pasadena, California.

Medicine and the Net: 1996. Medical University of South Carolina Department of Internal Medicine Grand Rounds presentation, April 9, 1996, Charleston, South Carolina.

The Physicians Research Network in the Multi-Center Clinical Trial Environment. Presentation at the Carolinas Childrens Cancer Consortium Spring Meeting, March 23, 1996, Charleston, South Carolina.

Panelist, "Healthcare Information Security and Confidentiality," Offsite Conference of the Healthcare Information Infrastructure Technology program, March 21, 1996, Jekyll Island, Georgia.

Physicians Research Network (PRN) Security. Presentation at Offsite Conference of the Healthcare Information Infrastructure Technology program, March 21, 1996, Jekyll Island, Georgia.

Research Uses of Clinical Data Repositories: Panning for Gold in Them Thar Terabytes. Presentation at Oacis Healthcare Systems, Inc.-sponsored conference on academic uses of OACIS clinical data repositories, March 9, 1996, Greenbrae, California.

OTHER SCHOLARLY ACTIVITIES:

Member, Editorial Board, *International Journal of Medical Informatics*, January 2009-December 2011.

Member, Editorial Advisory Board, *Oncology Net Guide*, January 2009-present.

Member, Editorial Advisory Board, *Oncology & Biotech News*, 2009-present.

Member, Editorial Advisory Board, *Contemporary Oncology*, 2009-present.

Invited Member, Graduate Medical Education Advisory Committee, Southern Medical Association, 9/08-present.

Invited Member, Oncology Training Programs Subcommittee, American Society of Clinical Oncology, 2007-2010.

Associate Editor for Electronic Publishing, *Journal of the South Carolina Medical Association*, 2/02-present.

Invited Reviewer, *Journal of the American Academy of Dermatology*, 1996, 1997, 1998.

Invited Reviewer, *Artificial Intelligence in Medicine*, 2002.

Volunteer Reviewer, *MedInfo: The World Triennial Health Informatics Congress*, 2001, 2004, 2007, 2010.

Volunteer Reviewer, *Annual Symposium of the American Medical Informatics Association*, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004.

Invited Reviewer, *Annual Symposium of the American Medical Informatics Association*, 2005, 2006, 2007, 2008, 2009, 2010.

Invited Reviewer, *International Conference of the European Federation for Medical Informatics (MIE)*, 2003, 2004, 2005, 2007, 2008.

Invited Reviewer, Protocol Review Committee, Clinical Trials Office, Hollings Cancer Center, 2001-present.

Session Chair, "WWW Interfaces to Healthcare Data" (Session S44), Fall 1997 Symposium of the American Medical Informatics Association, October 28, 1997.

Invited Reviewer, IDEAS Grant Program, Medical University of South Carolina, 1997, 1999.

Judge, Medical Informatics Awards, Medical University of South Carolina Student Research Day 1997, 1998.

Member, Editorial Research Panel, *Healthcare Informatics*, 2003.

Invited Reviewer, *Journal of the American Medical Association*, 2003.

Invited Reviewer, *The American Journal of the Medical Sciences*, 2006, 2007, 2008, 2009.

Invited Reviewer, International Conference on Education, Training, and Informatics: ICETI 2010.

Invited Reviewer, *Journal of the International Medical Informatics Association*, 2004, 2006, 2007, 2008, 2009, 2010.

Invited Reviewer, *Biomed Central Journal of Medical Informatics and Decision Making*, 2007, 2008.

Invited Reviewer, *International Journal of Pharmaceutical Medicine*, 2007.

Panelist, "Advanced Use of the Internet for Clinical Purposes", 1995 South Carolina AHEC (Area Health Education Consortium) Annual Meeting/Family Practice Residents Meeting, North Myrtle Beach, South Carolina, March 3-5, 1995.

"Engineering, Expression, and Characterization of Oligohistidine-Tagged Ricin B Chain" -- presented at the Associates Research Competition of the South Carolina Chapter of the American College of Physicians, Charleston, SC, May 13, 1994. (Won first prize; presentation repeated at the SC ACP's Annual Meeting, Kiawah Island, SC, September 25, 1994.)

Various journal article presentations and discussions in Hematology/Oncology Journal Club every 2-3 months.

Working demonstrations of the OACIS clinical information system to site visitors from various major medical institutions.

Mucormycosis: a current summary. Presented May 24, 1989 to the Outpatient Service, Veterans Administration Medical Center, Charleston, SC.

Current concepts in cancer pain control. Presented July 19, 1989 to the Outpatient Service, Veterans Administration Medical Center, Charleston, SC.

Clinical Points: Male Breast Cancer. Case presentation on October 24, 1989 at Department of Medicine Grand Rounds, Medical University of South Carolina, Charleston, SC, with clinical points discussion by Charlie Graham, M.D., Department of Hematology/Oncology.

Idiopathic hypertrophic subaortic stenosis. Case presentation on March 29, 1990 at Cardiology Division Weekly Conference, Medical University of South Carolina, Charleston, SC, with clinical points discussion by James Spann, M.D., Blase Carabello, M.D., Bruce Usher, M.D., and W. L. Ballard, M.D., all from the Division of Cardiology.

Mitral regurgitation. Case presentation on February 21, 1991 at Cardiology Division Weekly Conference, Medical University of South Carolina, Charleston, SC, with clinical points discussion by Michael Zile, M.D., Blase Carabello, M.D., and Dale Cannon, M.D., all from the Division of Cardiology.

A survey of the state of the art in the use of somatostatin in the treatment of certain gastrointestinal problems. Presented December 13, 1986 to the Surgery Service, Veterans Administration Medical Center, Charleston, SC.

Hematology in pregnancy. Presented April 23, 1987 to the Obstetrics Service, Medical University Hospital, Medical University of South Carolina, Charleston, SC.

An overview of some less frequent pediatric solid tumors. Presented December 8, 1987 to the Hematology/Oncology Service, Medical University Hospital, Medical University of South Carolina, Charleston, SC.

DOCTORAL AND MASTERS CANDIDATES SUPERVISION:

Keisuke Shirai, M.D., Masters of Science in Clinical Research, MUSC, 2007-2009.

Sami Shaban, Ph.D. in Medical Informatics, MUSC, 1998-1999.

PROFESSIONAL ORGANIZATION MEMBERSHIPS:

American Society of Clinical Oncology (Member, 1993-present)

American Society of Hematology (Member, 1995-present)

American Medical Informatics Association (Member, 1996-present; Web Liaison for the

Knowledge-in-Motion Working Group, 3/04-present)

American College of Physicians (Member, 1991-present)

South Carolina Medical Association (Member, 1991-present)

South Carolina Oncology Society (Member, 2010-present)

Charleston County Medical Society (Member, 1991-present; Alternate Delegate to the South Carolina Medical Association, 1997-99)

INTRAMURAL COMMITTEE MEMBERSHIPS & OTHER INSTITUTIONAL ACTIVITIES:

MUSC Oacis Discharge Summary Oversight Committee (chair, 7/09-present)

MUSC Medication Reconciliation Oversight Committee (7/09-present)

MUSC Biomedical Informatics Faculty Charter Member (9/08-present)

MUSC Biomedical Informatics Steering Committee (member, 9/08-present)

MUSC Hollings Cancer Center Protocol Review Committee (10/04-present)

MUSC Hollings Cancer Center Cancer Program Committee (11/03-present)

MUSC Biomolecular Computing Resources Advisory Committee (9/02-present)

MUSC Hollings Cancer Center Expansion Facility Operations Task Force (4/02-present)

MUSC Hollings Cancer Center Clinic Relocation Task Force (2/02-present)

MUSC Hollings Cancer Center P-30 Grant Planning Committee (11/01-present)

MUSC Physicians Information Council (1/05-present)

MUSC Clinical Information Management Council (6/01-12/04)

MUSC Hollings Cancer Center Bioinformatics Program Organizing Committee (6/01-present)

MUSC Graduate Medical Education Committee (representing Internal Medicine subspecialty training programs, 3/01-present)

MUSC Educational Policy Council (representing the College of Medicine, 7/03-present)

MUSC University-Wide Information Technology Steering Committee (10/98-12/04)

MUSC Informatics 2000 (ITSC subcommittee; 6/99-12/99)

MUSC Clinical Information Systems (CIS) Steering Committee (general CIS oversight, including development of MUSC's "Emerald" electronic medical record; member, 2/94-12/04; chairman, 3/99-12/04)

MUSC Core Clinical Systems Steering Committee (CIS subcommittee; chairman; 5/97-12/04)

MUSC Health Information Systems Advisory Committee (4/01-present)

MUSC Biomedical Informatics Program Organizing Committee (6/99-present)

MUSC Search Committee for Biomedical Informatics Program Faculty (6/00-present)

MUSC Transcription Task Force (9/00-12/04)
MUSC Task Force on the Feasibility of an Electronic Central Resource Scheduling Facility
(member, 6/98)
MUSC Task Force on Effort Reporting (member, 10/98-12/04)
MUSC Electronic Medical Record Project Communications Committee (5/97-12/04)
MUSC University Planning Committee, Working Group on Strategic Planning for Health Care
Services (1/97-12/04)
MUSC Medical Records Committee, Ad Hoc Working Group on Medical Records Systems in
the New Ambulatory Care Facility (8/96-1/97)
MUSC Department of Internal Medicine Information Technology Strategic Planning Committee
(4/96-12/96)
MUSC Partnering Negotiating Team, Information Technology Working Group (10/95-12/96)
MUSC Ad Hoc Working Group to Revise Policy on Research Use of Clinical Data (7/95-12/98)
MUSC College of Medicine Strategic Planning Committee, Working Group on Medical
Informatics (5/95-12/96)
MUSC Oncology Operations Committee (7/95-12/04)
MUSC Partnering Analysis Team, Information Systems Task Force (1/95-7/95)
MUSC Hollings Cancer Center and Division of Hematology/Oncology webmaster (9/94-present)
MUSC Information Systems Strategic Planning Advisory Committee (1/94-6/94)
MUSC Data Security Task Force of the Clinical Information System Committee (Chairman)
(2/94-5/97)

EXTRAMURAL COMMITTEE MEMBERSHIPS & ACTIVITIES:

Oncology Training Programs Subcommittee, American Society of Clinical Oncology, 7/07-6/10
Diversity in Oncology Mentoring Program Task Force, American Society of Clinical Oncology,
2/10-6/10
Speaker Board, South Carolina Area Health Education Consortium, 2010-present
National Institute of Mental Health Study Section for Proposals for a National Coordination
Office for the National NeuroAIDS Tissue Consortium (1/03-3/03)
Institute of Medicine National Cancer Policy Board Advisory Panel for the Georgia Cancer
Coalition Project (1/03-6/03)
Institute of Medicine Committee on Assessing Improvements in Cancer Care in Georgia
(member, 10/03-8/04)
Governor's Blue Ribbon Panel on University Research Programs, State of Virginia, 7/03 (invited
on recommendation of the National Research Council)
Charleston County Medical Society Website Committee (1/03-present)
South Carolina Cancer Research Consortium Faculty Advisory Committee (5/97-6/05, including
webmaster responsibilities)
OACIS Quality Council (MUSC representative, 10/93-present)
OACIS User Group (MUSC representative, 10/92-present; Board of Directors (Director of
Product Advisory), 4/03-4/05, 4/09-4/11)

COMMUNITY SERVICE:

Science advisor, Charleston Collegiate School (Johns Island, SC), 2006-present

Science fair project supervisor, Academic Magnet High School (North Charleston, SC), 2009-present

Mentor/research supervisor for South Carolina Governor's School Summer Research Program students engaged in summer research projects, 1997-present

Mentor for Clemson University undergraduate students pursuing a career in medicine, 1997-present

Shadowing mentor for Charleston County Academic Magnet High School students interested in careers in medicine, 2008-present.