

Appendix A

COLLEGE OF MEDICINE CURRICULUM VITAE

Robert D. Tucker, Ph.D., M.D.

July 2023

I. EDUCATIONAL AND PROFESSIONAL HISTORY

Education

1969	B.S. (Physics & Math)	University of Nebraska (Lincoln)
1975	Ph.D. (Biophysics)	University of Minnesota (Minneapolis)
1978	M.D.	University of Nebraska Medical Center (Omaha)

Post-Graduate Education

1978-79	Fellow, Health Computer Science	University of Minnesota
1980-83	Resident, Clinical Pathology	University of Minnesota

Academic Appointments

4/83-4/92	Assistant Professor (Pathology)	University of Iowa College of Medicine
4/91-4/92	Adjunct Assistant Professor	University of Iowa (Biomedical Engineering)
4/92-pres	Associate Professor (Pathology)	University of Iowa College of Medicine
4/92-pres	Adjunct Associate Professor	University of Iowa (Biomedical Engineering)

Other Employment

9/76-6/78	Research Coordinator (Pediatrics)	University of Nebraska Medical Center
9/78-1/83	Research Associate (Pathology)	University of Minnesota

Honors and Awards

1993	Biomedical Instrumentation and Technology Research Award; The most outstanding research manuscript of 1992; "Capacitive Coupled Stray Currents During Laparoscopic and Endoscopic Electrosurgical Procedures"	
2010	Honorary Professor, Universidad de San Martin Porres, Lima, Peru	
2010	Honorary Doctorate, Universidad de San Martin Porres, Lima, Peru	

II. TEACHING AT THE UNIVERSITY OF IOWA

Teaching Activities (Classroom, Seminar, or Teaching Lab)

Classroom

<u>Year</u>	<u>Course Title</u>	<u>Length</u>	<u>% Responsibility</u>	<u>No. of students</u>
1969-75	Undergraduate	16 hrs/wk/4qtrs	100	

1970-75	Physics Laboratory			
	Graduate Biophysics	4 hrs/wk/3qtrs	20	
1982	National Post	1 week	5 hrs	350
	Graduate Endoscopy			
1983	Pathology Resident Core	20 hrs	100	
1984	Pathology Resident	10 hrs/wk/8wks	100	1
	Elective, Geoff Jones			
1984	Pathology Resident	10 hrs/wk/5wks	100	2
	Elective, Brian Kay, Megan Danton			
1984	69:131 Medical Technology	2 hrs	100	15
1984	Pathology Resident Core	20 hrs	100	
1984	69:202 Systemic Pathology, Medical Student Selective	4 hrs	100	32
1985	Pathology Resident Core	20 hrs	100	
1985	69:202 Systemic Pathology, Medical Student Selective	4 hrs	100	32
1985	69:131 Medical Technology, Clinical Laboratory Science	2 hrs	100	15
1985	51:80 Biomedical Engineering, Biomedical Measurements	3 hrs	100	30
1986	Pathology Resident Core	8 hrs	100	
1986	69:202 Systemic Pathology, Medical Student Selective	2 hrs	100	16
1986	69:131 Medical Technology, Clinical Laboratory Science	2 hrs	100	15
1986	69:119 Medical Technology, Instrumentation in Clinical Laboratory Science	5 hrs	100	25
1986	51:80 Biomedical Engineering Biomedical Measurements	3 hrs	100	25
1987	Pathology Resident Core	8 hrs	100	
1987	69:131 Medical Technology, Clinical Laboratory Science	2 hrs	100	15
1987	69:119 Medical Technology, Instrumentation in Clinical Laboratory Science	4 hrs	100	25
1987	51:80 Biomedical Engineering, Biomedical Measurements	3 hrs	100	20
1987	51:91 Biomedical Engineering, Professional Seminar: Biomedical Engineering	3 hrs	100	25
1988	Pathology Resident Elective, Thuy-Lieu Vo	10 hrs/wk/5wks	100	1
1988	69:119 Medical Technology, Instrumentation in Clinical Laboratory Science	3 hrs	100	20
1988	51:80 Biomedical Engineering Biomedical Measurements	2 hrs	100	20

1988	50:198 Advances in Biomedical Studies	3 hrs	100	12
1988	69:202 Systemic Pathology, Medical Student Selective	3 hrs	100	24
1988	50:198 Advances in Biomedical Studies	2 hrs	100	12
1988	Pathology Resident Core	5 hrs	100	
1989	51:80 Biomedical Engineering	2 hrs	100	25
1989	69:119 Medical Technology	1 hr	100	24
1990	69:119 Medical Technology	1 hr	100	24
1990	69:202 Systemic Pathology, Medical Student Selective	2 hrs	100	16
1991	51:198 Advances in Biomedical Studies	1 hr	100	100
1991	69:202 Systemic Pathology, Medical Student Selective	2 hrs	100	16
1992	69:202 Systemic Pathology, Medical Student Selective	2 hrs	100	16
1992	69:133 Introduction to Human Pathology, Dental Student Case Analysis	1hr/week for 1 semester	100	25
1993	51:190 Biomedical Engineering	1 hr	100	60
1993	51:191 Biomedical Engineering	1 hr	100	40
1993	69:133 Introduction to Human Pathology, Dental Student Case Analysis	1hr/week for 1 semester	100	25
1994	51:070 Biomedical Engineering	1 hr	100	60
1994	69:133 Introduction to Human Pathology, Dental Student Case Analysis	1hr/week for 1 semester	100	25
1995	51:080 Biomedical Engineering	1 hr	100	40
1995	057:001 Engineer Honors Class	1 hr	100	25
1995	69:133 Introduction to Human Pathology, Dental Student Case Analysis	1hr/week for 1 semester	100	25
1996	69:133 Introduction to Human Pathology, Dental Student Case Analysis	1 hr/week for 1 semester	100	25
1997	69:133 Introduction to Human Pathology, Dental Student Case Analysis	1 hr/week for 1 semester	100	25
1998	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	75
1999	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	75
2000	51:191 Biomedical Engineering	2 hr	100	20

2000	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	75
2001	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	75
2001	51:91 Biomedical Engineering	2 hr	100	75
2001	51:191 Biomedical Engineering	1 hr	100	20
2002	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	75
2002	51:91 Biomedical Engineering	2 hr	100	75
2002	51:191 Biomedical Engineering	1 hr	100	20
2003	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2004	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2005	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2006	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2007	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2008	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2009	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2009	69:133 Introduction to Human Pathology, Course Director	1 semester	100	250
2010	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2010	69:133 Introduction to Human Pathology, Course Director	1 semester	100	250
2011	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2011	69:133 Introduction to Human Pathology, Course Director	1 semester	100	250
2012	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2012	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	250
2012	69:133 Introduction to Human Pathology, Lecturer	4 hr/1 semester	100	250
2012	69:240 Laboratory Medicine In Clinical Practice, Lecturer	4hr/1 semester	100	10
2013	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2013	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	280
2013	69:133 Introduction to Human Pathology, Lecturer	4 hr/1 semester	100	250

2013	69:240 Laboratory Medicine In Clinical Practice, Lecturer	6 hr/1 semester	100	10
2013	MedPath I, Lecturer	3 hr/semester	100	140
2014	69:133 Introduction to Human Pathology, Pharmacy	2 hr/week for 1 semester	50	100
2014	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	280
2014	69:133 Introduction to Human Pathology, Lecturer	3 hr/1 semester	100	250
2015	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2015	69:133 Introduction to Human Pathology, Lecturer	5 hr/1 semester	100	150
2016	69:240 Laboratory Medicine In Clinical Practice, Lecturer	4hr/1 semester	100	12
2016	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2016	69:133 Introduction to Human Pathology, Lecturer	5 hr/1 semester	100	150
2017	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2017	69:133 Introduction to Human Pathology, Lecturer	5 hr/1 semester	100	150
2018	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2018	69:133 Introduction to Human Pathology, Lecturer	11 hr/1 semester	100	150
2019	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2019	69:133 Introduction to Human Pathology, Lecturer	11 hr/1 semester	100	150
2020	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2020	69:133 Introduction to Human Pathology, Lecturer	11 hr/1 semester	100	150
2021	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2021	69:133 Introduction to Human Pathology, Lecturer	13 hr/1 semester	100	150
2022	69:133 Introduction to Human Pathology, Course Co-Director	1 semester	100	150
2022	69:133 Introduction to Human Pathology, Lecturer	13 hr/1 semester	100	150
2023	69:133 Introduction to Human Pathology, Lecturer	13 hr/1 semester	100	150

Seminars

<u>Year</u>	<u>Length</u>	<u>% Responsibility</u>	
1982	National Post Graduate Endoscopy Course, "The Physics of Electrosurgery"	5 hrs	100
1983	Medical Technology continuing education, "Laboratory Computing" (Invited)	1 hr	100
1983	Pathology Research "Biological Electrical Impedance"	1 hr	100
1984	Pathology Research "Radio Frequency Electrosurgery"	1 hr	100
1984	G.I. Research "Endoscopic Electrosurgery" (Invited)	2 hrs	100
1984	Undergraduate Biomedical Engineering "The Physics of Radio Frequency Electrosurgery" (Invited)	2 hrs	100
1984	Medical Technology continuing education "Future Changes in Lab Computing at UI Hospital" (Invited)	1 hr	100
1987	Pathology Grand Rounds "The New AP/CP Computer System"	1 hr	100
1990	Surgery Ground Rounds VAMC, Minneapolis "Electrosurgery: the Art and the Science" (Invited)	2 hrs	100
1990	Surgery Conference (U of IA) "Safe RF Electrosurgery"	2 hrs	100
1991	Gastroenterology Conference, Mayo, Rochester, MN "Bipolar electrosurgery in GI procedures" (Invited)	1 hr	100
1991	Surgery Grand Rounds, Lake Charles, LA "Laparoscopic Electrosurgery" (Invited)	2 hrs	100
1994	Gastroenterology Conference (U of IA) "Electrosurgery"	1 hr	100
1995	OB/Gyn Grand Rounds (U of IA) "Electrosurgical Laparoscopy"	1 hr	100
1995	Operating Room Nurses, CNE (U of IA) "Safe Electrosurgical	1 hr	100
1995	Operating Room Nurses, CNE	1 hr	100

	"Safe Electrosurgical Laparoscopy," Methodist Hospital, Minneapolis, MN		
1995	Urology Grand Rounds, "Thermal ablation to the prostate", Charité Hospital, Berlin, Germany	1 hr	100
1995	Surgery Grand Rounds, "Laparoscopic Electrosurgery: Methodist Hospital, Minneapolis, MN	1 hr	100
1997	Surgery Grand Rounds, "Laparoscopic Electrosurgery: Cottage Hospital Galesburg, IL	1 hr	100

Other Teaching Activities (not classroom or clinical)

1982	Development of National Post-graduate Endoscopy Course "Physics of Electrosurgery", New Orleans, LA; Dec 2-4, 1982		
1988	Pathology Medical Student Advisor Karl W. Biesemier, 4 th year med student Bernard J. Huston, 4 th year med student		
1988	Summer Student Training Program student, Karen Trees		
1988	CoSponsor of Otto Schmitt Lecture in Engineering		
1988	50:199 Advances in Biomedical Studies - Course Coordinator (Sept.-Dec.)		
1989	Co Advisor for senior project in Biomedical Engineering, Scott Ferguson		
1989	Summer Student Training Program student, Kurtis Kelly		
1990	Summer Student Training Program student, Garin Thomas		
1991	Summer Student Training Program student, Dan Putterman		
1991	Summer Student Training Program student, Ashish Patel		
1992	Summer Student Training Program student, Jason Christie		
1993	Summer Student Training Program student, Jason Christie		
1993-98	Medical Director, Clinical Laboratory Sciences Program		
1993-94	Course Director and Lecturer, National CME Course on Laparoscopic Electrosurgery and Laparoscopic Complications		
1993	Advisor for senior project in Biomedical Engineering, Jon Richardson		
1994	Advisor for senior project in Biomedical Engineering, Brad Johnson		
1994	Advisor for senior project in Biomedical Engineering, Brandlyn Hansen		
1994	CME post-graduate course, Operative Gynecology (Palm Beach, FL); faculty		
1995	Continuing Nursing Education Lecture for operating room nurses at U of IA Hospital, "Laparoscopic Electrosurgery"		
1995	CME post-graduate course, Progress in Gynecology (San Francisco, CA); faculty		
1995	CME post-graduate course, Endo Expo (Orlando, FL); Surgical Energy Source Course, co-moderator and faculty		
1995	Advisor for Honors project in Biomedical Engineering, Corey Mineck		
1995	Advisor for Honors project in Biomedical Engineering, Nate Fethke		
1995	Continuing Legal Education, Association of Trial Lawyers (New York, NY);		

faculty.

1995 CME post-graduate course, Endo Expo (Orlando, FL); co-moderator and faculty

1996 CME post-graduate course, Endo Expo (San Francisco, CA); co-moderator and faculty

1996 CME post-graduate course, Operative Gynecology (Washington DC); co-moderator and faculty

1996 CME post graduate course, Endo Exp (New York, NY); co-moderator and faculty

1997 CME post-graduate course, Advanced Gynecologic Surgery (Washington DC); co-moderator and faculty

1998 CME post-graduate course, Society for Gynecologic Oncologists (Orlando, FL); faculty

1999 CME post-graduate course, Society for Gynecologic Oncologists (San Francisco, CA); faculty

2004 Senior project supervisor, Department of Biomedical Engineering, University of Iowa; six undergraduate engineers.

2006 Senior project supervisor, Department of Biomedical Engineering, University of Iowa; three undergraduate engineers.

2007 Senior project supervisor, Department of Biomedical Engineering, University of Iowa; three undergraduate engineers.

2008 Senior project supervisor, Department of Biomedical Engineering, University of Iowa; three undergraduate engineers.

Masters' and Ph.D. Theses Directed and Postdoctoral Fellows Supervised

Residents:

Geoff Jones, M.D., Resident in Pathology, 1984.

Eight weeks individual instruction on computers in the Pathology Laboratory

Brian Kay, M.D., Resident in Pathology, 1984.

Five weeks individual instruction on computers in the Pathology Laboratory

Megan Danton, M.D., Resident in Pathology, 1984.

Five weeks individual instruction on computers in the Pathology Laboratory

Thuy-Lieu Vo, M.D., Resident in Pathology, 1988.

Five weeks individual instruction on computers in the Pathology Laboratory

Adelaide Gurwell, M.D., Resident in Pathology, 1991.

Eight weeks individual instruction on computers in the Pathology Laboratory

Neil Mittleberg, M.D., Resident in Urology, 1993-1994.

One year research; HSP, XRT & Hyperthermia

Ph.D. Thesis Directed

Joe Paulus, Ph.D. in Biomedical Engineering (co-advisor), 1989-1994

Masters' Thesis Directed

Scott Ferguson, M.S. in Biomedical Engineering (co-advisor), 1990-1992

Padmanabhan Iyer, M.S. in Biomedical Engineering (co-advisor), 1991-1993
Jason Case, M.S. in Biomedical Engineering (co-advisor), 1998-1999
Andrew Berthussen, M.S. in Biomedical Engineering (co-advisor), 1999-2001
Uyen Le, M.S. in Biomedical Engineering (co-advisor), 1999-2001
Tanner Hargens, M.S. in Biomedical Engineering (co-advisor), 2005-2006
Joel Anderson, M.S. in Biomedical Engineering (co-advisor), 2005-2006

Masters' Thesis Committee Member

Nitin Bhargava, M.S. in Biomedical Engineering, 1994

Post-Doctoral Fellows

Young Kon Kim, Ph.D.(BME), May 15, 1990 to September 15, 1990
Gyan Parida, Ph.D., (CE), January 15 to November 15, 1993
Joe Paulus, Ph.D., (BME), December 15, 1994 to 1998.

Senior Design Students, Biomedical Engineering

Joel Anderson, 2004-2005
Tanner Hargens, 2004-2005
Sara Welter, 2004-2005
Katie Ebbesen, 2004-2005
Joe Wickhard, 2004-2005
Natan Phiel, 2004-2005
John Beck, 2006-2007
Matt Riley, 2006-2007
Scott Bartolo, 2006-2007
Sara Stephensen, 2007-2008
Kevin Zeeck, 2007-2008
Stephanie Grabau, 2007-2008
Prescott Mackie, 2008-2009
Michael McGrath, 2008-2009
Brooks Wheelan, 2008-2009

Other Contributions to Institutional Programs

Course Director for National Continuing Medical Education Course
on Laparoscopic Electrosurgery, 1993-1994.

III. SCHOLARSHIP

Papers published or in press

1. Schmidt OH and Tucker RD. Human perception of moderate strength low frequency magnetic fields. IEEE Electromagnetic Compatibility 65-70, 1973.
2. Tucker RD. Human perception of moderate strength low frequency magnetic fields. PhD Thesis, June, 1976.

3. Tucker RD and Schmitt OH. Are we biologically responsive to magnetic fields of an A.C. powered city? *All Engin Med Biol* 18:411, 1976.
4. Tucker RD and Schmitt OH. Tests for human perception of 60 Hz moderate strength magnetic fields. Biologic Effects of Electric and Magnetic fields Associated with Proposed Project Seafarer, J. Wooland Hastings, Chairman, Committee on Biosphere Effects of Extremely Low Frequency Radiation, National Academy of Sciences, 413-440, 1977. (Invited)
5. Tucker RD and Schmitt OH. Tests for human perception of 60 Hz moderate strength magnetic fields. *IEEE Biomedical Engineering* 25:509-518, 1978. (Peer reviewed)
6. Tucker RD and Hudrlik TR. Computerized impedance bioassay for cystic fibrosis factor. *All Engin Med Biol* 21:224, 1979.
7. Tucker RD, Gibbs GE and Christensen M. Cystic fibrosis serum effect on the short circuit current on rat jejunum. *Pediatr Res* 13:1371-1374, 1979. (Peer reviewed)
8. Tucker RD, Hudrlik TR, Gibbs GE and Christensen M. The effect of serum from patients with pancreatic disease on the short circuit current of rat jejunum. *IEEE Biomedical Engineering* 26:607-613, 1979. (Peer reviewed)
9. Tucker RD, Schmitt OH, Sievert CE and Silvis SE. Progress toward the atlas of tissue impedivity. *All Engin Med Biol* 22:8, 1980.
10. Schmitt OH, Tucker RD and Holte JE. Utility ELF electric field measures for biophysical studies. *All Engin Med Biol* 22:6, 1980.
11. Tucker RD, Hudrlik TR, Ackerman E and Silvis SE. Automated impedance: A case study in microprocessor programming. *Comput Med Biol* 11:153-160, 1981. (Peer reviewed)
12. Tucker RD, Schmitt OH, Ellsworth SG and Silvis SE. The electrosurgery circuit and some of its ramifications. *Proc Assoc Advan Med Instrum* 17:125, 1982.
13. Tucker RD, Schmitt OH, Sievert CE, Ellsworth SG and Silvis SE. Targets of convenience for computer automated measurements of electrical tissue impedance spectra. *Proc Comput Appl Med Care* 6:1000-1006, 1982. (Peer reviewed)
14. Tucker RD. The physics and pitfalls of electrosurgery. National Postgraduate Endoscopy Course II. Techniques - Update and Problems: 1-7, 1982. Published by American Society for Gastrointestinal Endoscopy, Manchester, MA (Invited)
15. Schmitt OH, Tucker RD, Sievert CE and Silvis SE. A miniature current probe for measuring electrosurgical currents. *Med Instrum* 17:276-277, 1983. (Peer reviewed)
16. Tucker RD, Schmitt OH, Sievert CE and Silvis SE. Utilization of a microcomputer development system as a task dedicated laboratory computer. *Proc Comput Appl Med Care* 7:908-910, 1983. (Peer reviewed)
17. Tucker RD, Schmitt OH, Sievert CE and Silvis SE. Demodulated low frequency currents from electrosurgical procedures. *Surg Gynecol Obstet* 159:39-43, 1984. (Peer reviewed)
18. Tucker RD. Physics of electrosurgery. *Continuing Education for the Family Physician* 20(8):574-589, 1985. (Invited)

19. Tucker RD, Macht PMJ and Rowles TC. Converting RS-232-C to RS-422: A solution to long distance high speed data transmission. *Computers in Healthcare* 56-58, November 1985. (Peer reviewed)
20. Kramolowsky EV, Tucker RD, Maynard M and Nelson CMK. A comparison of formalin induced porcine ureteral strictures with human ureteral strictures. *Journal of Endourology* 2(3):271-277, 1988. (Peer reviewed)
21. Tucker RD, Kramolowsky EV, Bedell EA and Platz C. A comparison of urologic application of bipolar versus monopolar five French electrosurgical probes. *Journal of Urology* 141(3):662-665, 1989. (Peer reviewed)
22. Kramolowsky EV, Tucker RD and Nelson CMK. Management of benign ureteral strictures: open surgical repair or endoscopic dilation? *Journal of Urology* 141(2):285-286, 1989. (Peer reviewed)
23. Tucker RD and Silvis SE. Induced current on the guide wire during sphincterotomy. *Gastrointestinal Endoscopy* 35:45-47, 1989. (Peer reviewed)
24. Tucker RD, Stasz PS and Kramolowsky EV. A simple and inexpensive method for measuring electrosurgical variables. *Biomedical Instrumentation and Technology* 23(1):54-57, 1989. (Peer reviewed)
25. Kramolowsky EV and Tucker RD. Use of 5F Bipolar electrosurgical probes and endoscopic urologic procedures. *Journal of Urology* 143(2):275-277, 1990. (Peer reviewed)
26. Tucker RD, Kramolowsky EV and Platz CE. In vivo effect of five french bipolar and monopolar electrosurgical probes on the porcine bladder. *Journal of Urological Research* 18(4):291-294, 1990. (Peer reviewed)
27. Tucker RD, Platz CE, Sievert CE, Vennes JA and Silvis SE. In vivo evaluation of monopolar vs. bipolar electrosurgical polypectomy snares. *The American Journal of Gastroenterology* 85(10):1386-1390, 1990. (Peer reviewed)
28. Ren ZY, Tucker RD, Landas SK, Lubaroff DM, Sparrow HK and Loening SA. Regional hyperthermia combined with high energy shock wave treatment on Dunning prostate tumors. *Journal of Lithotripsy and Stone Disease* 2(3):211-219, 1990. (Peer reviewed)
29. Tucker RD, Sievert CE, Vennes JA and Silvis SE. Endoscopic radio frequency electrosurgery. *Gastrointestinal Endoscopic* 36(4):412-413, 1990. (Peer reviewed)
30. Tucker RD, Kramolowsky EV and Stasz P. Direct current potentials created by arcing during monopolar radio frequency electrosurgery. *Biomedical Instrumentation and Technology* 24(3):212-216, 1990. (Peer reviewed)
31. Kramolowsky EV and Tucker RD. The urologic application of electrosurgery. *The Journal of Urology*, 146:669-674, 1991. (Peer reviewed)
32. Tucker RD and Ferguson SD. Do surgical gloves protect staff during electrosurgical procedures? *Surgery*, 110(5):892-895, 1991. (Peer reviewed)
33. Tucker RD, Loening SA, Landas SK, Mardan AH, Ren ZY and Lubaroff DM. The in vivo effect of regional hyperthermia on Dunning R3327 prostatic tumor. *Prostate*, 18:321-329, 1991. (Peer reviewed)

34. Tucker RD, Benda JA, Mardan A and Engel T. The interaction of electrosurgical bipolar forceps and generators on an animal model of fallopian tube sterilization. *American Journal of Obstetrics and Gynecology*, 165(2):443-449, 1991. (Peer reviewed)
35. Tucker RD, Sievert CE, Vennes JA and Silvis SE. The interaction between electrosurgical generators, endoscopic electrodes and tissue. *Gastrointestinal Endoscopy*, 38(2):118-122, 1992. (Peer reviewed)
36. Tucker RD, Sievert CE, Platz CE, Vennes JA and Silvis SE. Bipolar electrosurgical sphincterotomy. *Gastrointestinal Endoscopy*, 38(2):113-117, 1992. (Peer reviewed)
37. Tucker RD, Loening SA, Landas S, Paulus JA, Ren ZY and Park JB. The effect of interstitial hyperthermia on the dunning prostate tumor model. *The Journal of Urology*, 147:1129-1133, 1992. (Peer reviewed)
38. Tucker RD. Radio frequency electrosurgery in laparoscopy. *Surgery Alert*, 8 (12):69-72, 1992. (Invited)
39. Tucker RD, Voyles CR and Silvis SE. Capacitive coupled stray currents during laparoscopic and endoscopic electrosurgical procedures. *Biomedical Instrumentation and Technology*, 26(4):303-311, 1992. (Peer reviewed)
40. Voyles CR and Tucker RD. Education and engineering solutions for potential problems with laparoscopic monopolar electrosurgery. *American Journal of Surgery*, 164:57-62, 1992. (Peer reviewed)
41. Johlin FC, Tucker RD and Ferguson SD. The effect of guide wires during electrosurgical sphincterotomy. *Gastrointestinal Endoscopy*, 38:536-540, 1992. (Peer reviewed)
42. Ferguson SD, Paulus JA, Tucker RD, Loening SA and Park JB. Effect of thermal treatment on heating characteristics of Ni-Cu Alloy for Hyperthermia: Preliminary Studies. *Journal of Applied Biomaterials*, 4:55-60, 1992. (Peer reviewed)
43. Tucker RD, Benda JA, Sievert CE and Engle T. The effect of bipolar electrosurgical coagulation waveform on a rat uterine model of fallopian tube sterilization. *Journal of Gynecological Surgery*, 8:235-241, 1992. (Peer reviewed)
44. Tucker RD and Hollenhorst MJ. Bipolar electrosurgical devices. *Endoscopic Surgery and Allied Technologies*. 1(2):110-113, 1993. (Peer reviewed)
45. Paulus JA, Tucker RD, Flanagan SW, Moseley PL, Loening SA and Park JB. Heat shock protein response in a prostate tumor model to interstitial thermotherapy; Implications for clinical treatment. *Prostate*. 23:263-270, 1993. (Peer reviewed)
46. Voyles CR and Tucker RD. Unrecognized hazards of surgical electrodes passed through metal suction-irrigation devices. *Surgical Endoscopy Ultrasound and Interventional Techniques*. 8(3):185-187,1994. (Peer reviewed)
47. Siegel JH, Veerappan A and Tucker R. Bipolar vs. monopolar sphincterotomy: a prospective trial. *American Journal of Gastroenterology*, 89(10):1827-1830,1994.
48. Baggish M and Tucker RD. A comparison of monopolar and bipolar electrosurgical scissors. *Fertility and Sterility*, 63(2):422-426, 1995. (Peer reviewed)
49. Tucker RD. Laparoscopic electrosurgical injuries: survey results and their implications. *Surgical Laparoscopy & Endoscopy*, 5(4):311-317,1995. (Peer reviewed)

50. Tucker RD. Laparoscopic electrosurgical complications and their prevention. AORN Journal, 62(1):1-13, 1995. (Invited)
51. Tucker RD. Laparoscopic electrosurgical complications: mal-practice or mal-occurrence. American Association of Trial Lawyers: Reference Materials Volume I:521-534, 1995. (Invited)
52. Tucker RD, Platz CE and Landas SK. A laparoscopic complication? A medical legal case analysis, Part I. Jnl Gynecol Surg, 11(2):113-121,1995. (Peer reviewed)
53. Tucker RD, Platz CE and Landas SK. A laparoscopic complication? A medical legal case analysis, Part II. Jnl Gynecol Surg, 11(3):185-192, 1995. (Peer reviewed)
54. Paulus JA, Richardson JS, Tucker RD and Park JB. Evaluation of Inductively Heated Ferromagnetic Alloy Implants for Therapeutic Interstitial Hyperthermia. IEEE Trans Biomed Engr, 43(4):406-413, 1996. (Peer reviewed)
55. Mittleberg KN, Tucker RD, Loening SA and Moseley PL. Effect of radiation and hyperthermia on prostate tumor cells with induced thermal tolerance and the correlation with HSP70 accumulation. Urologic Oncology, 2:146-151, 1996. (Peer reviewed)
56. Tucker RD, Platz CE and Landas SK. Histologic characteristics of electrosurgical injuries. Journal of American Association of Gynecologic Laparoscopists, 4(2):201-206, 1997. (Peer reviewed)
57. Paulus JA, Tucker RD, Loening SA, Flanagan SW. Thermal ablation of the canine prostate using interstitial temperature self-regulating seeds: A new treatment for prostate cancer. J Endourol, 11(4):295-300, 1997. (Peer reviewed)
58. Paulus JA, Parida GR, Tucker RD and Park JB. Corrosion analysis of NiCu and PdCo thermal seed alloys used as interstitial hyperthermia implants. Biomaterials, 18(24):1609-1614, 1997. (Peer reviewed)
59. Paulus JA, Tucker RD, Flanagan SW, and Loening SA. HSP 70 induction of thermotolerance following interstitial hyperthermia in the Dunning R3327 tumor. Urologic Oncology, 3:103-107, 1998. (Peer reviewed)
60. Tucker RD. Understanding electrosurgery. Contemporary Urology, 10(10):68-83, 1998. (invited)
61. Tucker RD, Platz CE, Huidobro C, Larson T. Use of permanent interstitial temperature self-regulating rods for ablation of prostate cancer. J Endourol, 14(6):511-517, 2000.
62. Case J, Tucker RD, Park J. Defining the heating characteristic of ferromagnetic implants using calorimetry. J Appl Biomater 53:791-798, 2000.
63. Uyen LT, Tucker RD, Park JB. The effect of cold work on the heating characteristics of thermal therapy implants. J Appl Biomater 63:24-30, 2002.
64. Tucker RD, Platz CE, Huidobro C and Larson T. Interstitial thermal therapy in patients with localized prostate cancer: Histologic analysis. Urol 60(1):166-169, 2002.
65. Berthusen AH, Tucker RD and Park JB. A field focusing device to increase power output of ThermoRod implants for the thermal ablation of tissue. J Appl Biomater 63(5):650-656, 2002.

66. Rehman J, Landman J, Tucker RD, Bostwick DG, Sundarum CP, and Clayman RV. Ferromagnetic self-regulating reheatable thermal rod implants for *in situ* tissue ablation. J Endourol 16(7):523-531, 2002.
67. Tucker RD. The use of interstitial temperature self-regulating thermal rods in the treatment of prostate cancer. J Endourol, 17(8):601-607, 2003.
68. Tucker RD, Huidobro C, Larsen T. The ablation of T1, T2 prostate cancer with permanent interstitial temperature self-regulating rods. J Endourol, 19(7):107-109, 2005.
69. Tucker RD. PlasmaCision electrosurgery for ENT applications: a review of the tissue effects. Technical White Paper Gyrus, Inc. 2007.
70. Tucker RD. The tissue effects of PlasmaCision electrosurgery. Technical White Paper Gyrus, Inc. 2008.
71. Morris KL, Tucker RD, Baron TH, and Song LM. Electrosurgery in Gastrointestinal Endoscopy: Principles to Practice. Am J Gastroenterol, 104(6):1563-1574, 2009.
72. Taub AF, Tucker RD, Palange A. Facial tightening with an advanced 4 MHz monopolar radiofrequency device. J of Drugs in Derm, 11(11):1288-1294, 2012.
73. Piskun G, Tucker RD. New bipolar tissue ligator combines constant tissue compression and temperature guidance: histologic study and implications for treatment of hemorrhoids. Medical Devices, 5:89-96, 2012.
74. Song L, Gostout C, Tucker R, Morris M, Bowers W, and Cattau E. Electrosurgery in gastrointestinal endoscopy: terminology matters. Gastrointestinal Endoscopy, 83(1):271-273, 2015.
75. Martin KE, Moore CM, Tucker RD, Fuchshuber P, and Robinson T. Quantifying inadvertent thermal bowel injury from the monopolar instrument. Surg Endosc, 30:4776–4784, 2016.

Books and/or Chapters

1. Tucker RD, Loening SA, Landas S, Paulus JA, and Park JB. Interstitial hyperthermia effect on the Dunning prostate tumor. Hyperthermia of the Prostate: State of the Art. KH Bichler, WL Strohmaier, DM Wilbert, Eds. 1992.
2. Tucker RD and Voyles CR. Laparoscopic electrosurgery: complications and prevention. Surgical Technology. M. Braverman and R. Tawes Eds., 1993.
3. Voyles CR and Tucker RD. Monopolar electrosurgery and laparoscopy. Chapter 4, Current Techniques in Laparoscopy. Brooks, Ed. Current Medicine, Philadelphia. 1994.
4. Tucker RD. The tissue effects of radiofrequency electrosurgical currents. Chapter 3, The Resectoscope. Bieber and Loffer, Eds. Blackwell Scientific, Cambridge. 1995.
5. Voyles CR and Tucker RD. Monopolar electrosurgery for laparoscopic colectomy. Chapter 9. Laparoscopic Colorectal Surgery. RM Jager, Ed. Churchill Livingstone, New York, 1995.

6. Tucker RD. Monopolar and bipolar electrosurgery and associated problems. Chapter 7. Smith's Textbook of Endourology. Smith, et al, Eds. Quality Medical Publishing, Inc., St. Louis, 1996.
7. Voyles CR and Tucker RD. Prevention and Management of Complications in Minimally Invasive Surgery. Chapter 4. RJ Lanza fame, Ed. Igaku-Shoin, New York, 1996.
8. Tucker RD and Baggish MS and Lomano JM. Diagnostic and Operative Hysteroscopy. Chapter 7. MS Baggish, Ed. Mosby, St. Louis, 1999.
9. Voyles CR and Tucker RD. Prevention and Management of Laparoscopic Surgical Complications. Chapter 3. MS Kavic, ed. Society of Laparoscopic Surgeons, Miami, 1999.
10. Tucker RD. Principles of electrosurgery. Chapter 9, 2nd Edition of Gastroenterologic Endoscopy. M. Sivac, Ed. W.B.Saunders, Philadelphia. 2000.
11. Tucker RD. The tissue effects of radiofrequency electrosurgical currents. The Resectoscope. Second Edition. _Bieber and Loffer, Eds. Blackwell Scientific, Cambridge. 2004.
12. Voyles CR and Tucker RD. Prevention and Management of Laparoscopic Surgical Complications. Chapter 7. Second Edition. MS Kavic, Ed. Society of Laparoscopic Surgeons, Miami. 2005.
13. Tucker RD. Monopolar and bipolar electrosurgery and their associated complications. Smith's Textbook of Endourology. Chapter 7. Second Edition. Smith, et al, Eds. Quality Medical Publishing, Inc., St. Louis. 2007.
14. Tucker RD and Baggish MS. Lasers and Electrosurgery in Hysteroscopy. Diagnostic and Operative Hysteroscopy. Chapter 10, Second Edition. MS Baggish, Ed. Mosby, St. Louis, 2005.

Abstracts (partial listing)

1. Tucker RD, Silvis SE, Schmitt OH, Sievert CE and Thorson B. Tissue identification by electrical impedance. *Gastroenterology* 80:1209, 1981.
2. Tucker RD. Electrosurgery: A case study in the medical application of a microcomputer development system. *Abstracts of the International Congress on Medical Instrumentation* :414, 1984.
3. Kramolowsky, EV, Tucker RD, Bedell EA and Platz C. The use of 5 French bipolar electrodes in endoscopic surgery. *Proc of 5th World Congress on Endourology and ESWL* 5:309, 1987.
4. Tucker RD, Kramolowsky EV and Platz C. Comparison of 5 French bipolar and monopolar electrodes. *Journal of Urology* 139(4,2):574, 1988.
5. Tucker RD, Kramolowsky E and Platz C. Endoscopic application of bipolar electrodes. *Proc of 6th World Congress of Endourology and ESWL* 6:057, 1988.
6. Kramolowsky EV and Tucker RD. Clinical urologic application of the 5 Fr bipolar electrode. *Journal of Urology* 141(4,2):1260, 1989.

7. Mardan AH, Tucker RD and Loening SA. Impact of hyperthermia on Dunning prostate tumors. *Journal of Urology* 141(4,2):1427, 1989.
8. Kramolowsky E, Tucker RD and Nelson CMK. Management of benign ureteral strictures: open surgical repair or endoscopic dilation? *J of Urology* 141(4,2):285-286, 1989.
9. Tucker RD and Loening SA. A bipolar electrosurgical TURP loop. *Proc of 7th World Congress of Endourology and ESWL* 7:248, 1989.
10. Tucker RD, Sievert CE, Platz C, Vennes J and Silvis SE. Comparison of monopolar vs. bipolar polypectomy snares. *Gastrointestinal Endoscopy* 36:223, 1990.
11. Sievert CE, Tucker RD, Platz C, Vennes J and Silvis SE. Comparison of monopolar vs. bipolar sphincterotomies. *Gastrointestinal Endoscopy* 36:223, 1990.
12. Ren Z, Loening SA and Tucker RD. Regional hyperthermia combined with high energy shock wave treatment on Dunning prostate tumors. *Journal of Endourology* 4(1):5134, 1990.
13. Tucker RD. A bipolar electrosurgical TURP loop. *Proc of 48th Mid-Atlantic Section of the American Urological Association* 48:158, 1990.
14. Tucker RD, Loening SA, Landas SK and Paulus JA. In vivo effect of regional hyperthermia on Dunning R3327 prostatic tumor. *Journal of Endourology* 5(1):S100, 1991.
15. Veerappan A, Siegel JH and Tucker RD. Does bipolar sphincterotomy reduce the incidence of pancreatitis? *The American Journal of Gastroenterology*, in press, 1991.
16. Tucker RD. Potential complications in laparoscopy. *Journal of Endourology* 6(4):S164, 1992.
17. Tucker RD. The use of new bipolar electrosurgery electrodes to prevent laparoscopic complications. *Internal Congress of Gynecologic Endoscopy* 21:245-247, 1992.
18. Paulus JA, Flanagan SW, Moseley PL, Loening SA and Tucker RD. HSP 70 response of the dunning prostate tumor model to hyperthermia/thermal therapy. *RRS/NAHS Meeting*, March 19-25, 1993.
19. Mittelberg K, Tucker R, Moseley P, Loening S and Wallen E. Heat shock protein production in heated and irradiated dunning tumor cells. *Society for Basic Urologic Research (SBUR) Spring Meeting*, May 13-14, 1994.
20. Tucker RD, Loening SA, Paulus JA, Flanagan SW and Moseley PL. The effect of hyperthermia on HSP production in murine and canine prostate models. *Joint meeting of the European Societies for Radiation Biology and Hyperthermic Oncology* - Amsterdam, The Netherlands, June 1-4, 1994.
21. Mittelberg K, Tucker R, Moseley P, Loening S and Wallen E. Heat shock protein production in heated and irradiated dunning tumor cells. *American Urological Association, Inc. Annual Meeting*, San Francisco, CA, 1994.
22. Kramolowsky E, Wood N, Nelson C and Tucker R. Outpatient fulguration of superficial bladder cancer in the free-standing surgical center. *American Urological Association, Inc. Annual Meeting*, San Francisco, CA, 1994.

23. Bieber EJ, Redwine DB, Tucker RD and Mittendorf R. An in vivo evaluation of the correlation between histologic and visually estimated zones of tissue injury created with monopolar electrosurgery. International Congress of Gynecologic Endoscopy AAGL 23rd Annual Meeting, October 19-23, 1994.
24. Bieber EJ, Redwine DB, Tucker RD and Mittendorf R. An in vivo evaluation of laparoscopic electrosurgical tissue injury. The American Fertility Society 50th Annual Meeting, November 5-10, 1994.
25. Tucker R, Paulus J, Park J, Loening S. Thermal ablation of the prostate using interstitial temperature self regulating seeds for the treatment of prostate cancer. Journal of Endourology, 10(1):S62, 1996.
26. Loening S, Tucker R. Treatment of prostate cancer by thermal ablation using interstitial temperature self-regulating seeds. Journal of Endourology, 11(1):S121, 1997.
27. Huidobro C, Larson T, Platz C, Tucker R. Thermal ablation of prostate tissue using thermal rods. Journal of Endourology, 12(1):s101, 1998.
28. Huidobro C, Larson T, Platz C, Tucker R. Ablation of the prostate using thermal rods. Journal of Endourology, 13(1):A97, 1999S
29. Tucker R, Huidobro C, Larson T. Thermal ablation of the prostate. J of Endourol 14(1):S, 2000.
30. Tucker R, Huidobro C, Larson T. The histologic analysis of thermal ablation of prostate cancer by thermal rods. European Urology, 38(S5): 2000.
31. Tucker R, Huidobro C, Larson T. The Thermal Ablation of Localized Prostate Cancer. European Urology, 39(S5):384, 2001.

Areas of Research Interest

1. Radio frequency devices in non-invasive, open, endoscopic, laparoscopic and arthroscopic procedures
2. RF tissue welding
3. Tissue reaction to RF currents
4. Tissue reaction to implantable devices

Current Projects

1. Radio frequency welding of meniscus

Manuscripts Reviewed

1. Segmental cable evaluation of somatic transients in hippocampal neurons (CA1, CA3 and Dentate). Biophysical Journal, 1984.
2. Delayed rectification in the cardiac purkinje fiber is not activated by intracellular calcium. Biophysical Journal, 1984.
3. Dielectric behavior of DNA solution at radio and microwave frequencies (at 20°C). Biophysical Journal, 1984.

4. Rotation of dielectrics in a rotating electric high frequency field. Model experiments and theoretical explanation of the rotation effect of living cells. Biophysical Journal, 1984.
5. Magnetic field interactions of human cadaver bone and cartilage. Biophysical Journal, 1984.
6. Electrical properties of the myotendon region of frog twitch m fibers measured in the frequency domain. Biophysical Journal, 1984.
7. Letter to the Editor: Comments on "Erythrocyte and ghost cytoplasmic resistivity and voltage-dependent apparent size". Biophysical Journal, 1985.
8. A critique of impedance measurement in cardiac tissue. Biophysical Journal, 1985.
9. Analysis of cell three dimensional locomotory vectors. Biophysical Journal, 1987.
10. Epithelial Impedance Analysis in Experimentally Induced Colon Cancer. Biophysical Journal, 1987.
11. A study on the electrical bio-impedance of tumors. Journal of Investigative Surgery, 1991.
12. Laparoscopic Use of Electrosurgery: A Safer System? Journal of Gynecologic Surgery, 1993.
13. The risks of laparoscopic electrosurgery. Emergency Care Research Institute, 1994.
14. Monopolar electrosurgical safety during laparoscopy. Emergency Care Research Institute, 1994.
15. A surgical model for vascular stents. Investigative Surgery, 1994.
16. Skin lesions from aggressive adhesive on Valleylab electrosurgical return electrodes. Emergency Care Research Institute, 1995.
17. A ferrite/metallic sheath thermoseed for interstitial therapies. IEEE trans Biomed Engr, 1996.
18. Sphincterotomy using bipolar electrosurgery. Gastrointestinal Endoscopy, 1996.
19. Surgical effectiveness of bipolar electrodes. Journal of Gynecologic Surgery, 1999.
20. Magnetic nanoparticles for interstitial thermotherapy-feasibility, tolerance and achieved temperatures. Int J Hyperthermia, 2006.
21. Protocol and manuscript reviewer for ECRI, 2012 to present.

Financial Resources

A. Federal

In Vitro Impedance Bioassay for the Cystic Fibrosis Factor (NIH #RO1-AM-25665), Principal Investigator, 1/79-12/80, \$180,000, 50% commitment.

Impedance and Computerized Electrocoagulation (NIH #RO1-AM-27140), Co-investigator, 7/80-11/82, \$150,000, 50% commitment.

Digestive Disease Core Center (NIH #AM-34986), Co-investigator, 10/84-10/86, \$2,188,185, 5% salary support with \$5,000 supply and equipment.

Veterans Administration, Principal Investigator, 1991-1992, \$20,000, equipment, supplies, graduate student support, animal costs, "Cooperative study on the effect of hyperthermia on tumor"

B. State

Interdisciplinary Research Assistantship Program, support for PhD student Joe Paulus, 1990-1991, \$12,000.

Development of Ferromagnetic Implants for Clinical Hyperthermia Treatment of Inoperable Tumors, Iowa Economic Development Grant, Co-investigator, 9/92-9/93, \$103,200, subcontract for \$49,900 including 5% salary support, graduate student support, materials and analytical analysis.

C. Other

Intel Corporation Hardware Grant, Principal Investigator, 1984-85, \$60,000 in supplies, software and equipment.

Norand, Principal Investigator, 6/84, \$10,000 of computer hardware; "Computer applications in medicine"

ReTech, Principal Investigator, 3/86-11/86, \$36,000 for equipment, supplies, travel and graduate student support; "Portable pH and fiber optic pressure monitoring system"

Everest Medical Corporation, Principal Investigator, Jan-Dec 1988, \$5,000 for equipment and supplies, "Radio Frequency electrosurgery"

Valleylab, Inc., Principal Investigator, June-Dec 1988, \$6,250, equipment and supplies, "Radio frequency electrosurgical tubal sterilization"

Valleylab, Inc., Principal Investigator, 1989, \$34,850 in equipment (Argon coagulator)

Everest Medical, Inc., Principal Investigator, 1989, \$5,000, equipment and supplies, "Radio Frequency Electrosurgery"

Everest Medical, Inc., Principal Investigator, 1990, \$25,000, equipment, supplies, graduate student support, animal costs, "Bipolar Radio Frequency Electrosurgery"

Valleylab, Inc., Principal Investigator, 1990, \$6,500, supplies, "Radio frequency electrosurgical tubal sterilization"

Everest Medical, Inc., Principal Investigator, 1991-92, \$25,000, equipment, supplies, graduate student support, animal costs, "Bipolar Radio Frequency Electrosurgery"

The Milheim Foundation, Principal Investigator, 1991-92, \$10,850, supplies, animal costs, "The effect of hyperthermia on the Dunning Prostate Tumor"

The Elsa U. Pardee Foundation, Principal Investigator, 1991-92, \$56,850, equipment, supplies, graduate student support, animal costs, "RF induced hyperthermia on a Prostate Tumor Model"

Hypertherm, Inc., Principal Investigator, 1994, \$15,000, supplies, animal costs, "Effect of Interstitial Hyperthermia on Prostate Models".

Pegasus Medical, Inc., Principle Investigator, 1996-97, \$50,000, supplies and post-doctoral support, "Testing Thermoseed for Interstitial Thermal Ablation of the Prostate."

Ablation Technologies, Principle Investigator, 1998-02, \$200,000, supplies and graduate and undergraduate student support, "Calorimetric Analysis of Thermorods for Interstitial Thermal Ablation of the Prostate."

Ablation Technologies, Principle Investigator, 2003-04, \$200,000, hardware grant, "Thermal treatment of soft tissue in various animal models."

Ablation Technologies, Principle Investigator, 2004-2006, \$16,000 student support, "Thermal treatment of soft tissue in various animal models."

Ablation Technologies, Principle Investigator, 2007, \$13,000, animal studies, "Thermal treatment of soft tissue in various animal models."

Medical Murray, Principle Investigator, 2007, \$5,000, animal studies, "Minimally invasive plastic surgery."

Ablation Technologies, Principle Investigator, 2008, \$30,500, animal studies, "Thermal treatment of soft tissue in various animal models."

Medical Murray, Principle Investigator, 2008, \$4,500, animal studies, "The thermal effects of radio frequency minimally invasive surgical devices."

Ablation Technologies, Principle Investigator, 2009, \$5,000, animal studies, "Thermal treatment of soft tissue in various animal models."

Medical Murray, Principle Investigator, 2009, \$38,000, animal studies, "The thermal effects of radio frequency minimally invasive surgical devices."

Ablation Technologies, Principle Investigator, 2010, \$5,000, animal studies, "Thermal treatment of soft tissue in various animal models."

Medical Murray, Principle Investigator, 2010, \$6,250, animal studies, "The thermal effects of radio frequency minimally invasive surgical devices."

Medical Murray, Principle Investigator, 2011, \$2,500, animal studies, "The thermal effects of radio frequency minimally invasive surgical devices."

Medical Murray, Principle Investigator, 2012, \$5,000, animal studies, "The thermal effects of radio frequency minimally invasive surgical devices."

Medical Murray, Principle Investigator, 2013, \$3,500, animal studies, "The thermal effects of radio frequency minimally invasive surgical devices."

National and International Presentations

1. International I.E.E.E. Electromagnetic Compatibility: Human perception of moderate strength low frequency magnetic fields. New York NY, June 20, 1973.
2. 29th Annual Alliance for Engineering in Medicine and Biology: Are we biologically responsive to magnetic fields of an A.C. powered city? Boston MA, November 9, 1976.
3. 32nd Annual Alliance for Engineering in Medicine and Biology: Computerized impedance bioassay for the cystic fibrosis assay. Denver CO, October 6, 1979.
4. 33rd Annual Alliance for Engineering in Medicine and Biology: Progress toward the atlas of tissue impedivity. Washington DC, October 1, 1980.

5. 17th Annual Association for the Advance of Medical Instrumentation: The electrosurgery circuit and some of its ramifications. San Francisco CA, May 10, 1982.
6. 6th Annual Computer Applications in Medical Care: Targets of convenience for computer automated measurements of electrical tissue impedance spectra. Washington DC, November 1 and 2, 1982.
7. Iowa Association of Blood Banks: Computers in the Blood Bank: Are they worth the trouble? Cedar Rapids IA, August 27, 1982. (Invited)
8. The American Society for Gastrointestinal Endoscopy, National Post-graduate Endoscopy Course: Electrosurgery: Physics and pitfalls. New Orleans LA, December 2-4, 1982. (Invited)
9. 7th Annual Computer Applications in Medical Care: Utilization of a microcomputer development system as a task dedicated laboratory computer. Baltimore MD, October 25 and 26, 1983.
10. International Congress on Medical Instrumentation: Electrosurgery, a case study in the medical application of a microcomputer development system. Amsterdam, Netherlands, May 27-30, 1984.
11. 34th Annual Association of Operating Room Nurses: Bipolar RF electrosurgery: a demonstration. Atlanta, GA, April 3-11, 1987.
12. 73rd Annual Congress of the American College of Surgeons: Demonstration of bipolar electrosurgery. San Francisco, CA, October 11-15, 1987.
13. 5th Annual World Congress on Endourology and ESWL. The use of five French bipolar electrodes in endoscopic surgery. Cairo, Egypt, November 1-4, 1987.
14. 9th Annual IEEE Biomedical Engineering: A unique electrosurgical active electrode with ultrasound. Boston, MA, November 13-16, 1987.
15. Belize City Hospital Surgery Seminar: Practical and safe RF electrosurgery. City Hospital, Belize City, Belize, Central America, January 11-12, 1988. (Invited)
16. 35th Annual Congress of Association of Operating Room Nurses: Bipolar RF electrosurgery: A practical demonstration. Dallas, TX, March 7-11, 1988.
17. 83rd Annual American Urological Association: Comparison of 5 Fr bipolar and monopolar electrodes. Boston, MA, June, 3-7, 1988.
18. 6th Annual World Congress on Endourology and ESWL: Endoscopic application of bipolar electrodes. Paris, France, September 1-2, 1988.
19. 2nd Annual Kinki Gastrointestinal Endoscopic Seminar: Bipolar vs. Monopolar electrosurgical polyp snare. Osaka, Japan, September 16-17, 1989. (Invited)
20. 7th Annual World Congress on Endourology and ESWL: A bipolar electrosurgical TURP loop. Kyota, Japan, Nov, 27-30, 1989.
21. 37th Annual Congress of Association of Operating Room Nurses: Radio frequency electrosurgery. Houston, TX, March 19-21, 1990. (Invited)
22. Digestive Disease Week: Comparison of monopolar and bipolar polypectomy snares. San Antonio, TX, May 13-16, 1990.

23. 8th Annual World Congress on Endourology and ESWL: Regional hyperthermia combined with high energy shock wave treatment on Dunning prostate tumors. Washington, DC, August 29-September 2, 1990.
24. 48th Annual Mid-Atlantic Section of the American Urological Association: Bipolar electrosurgical TURP loop. Richmond, VA, September 16-19, 1990.
25. International Workshop on Hyperthermia of the Prostate: The effect of interstitial hyperthermia on Dunning prostate tumor model. Tubingen, Germany, February 21-22, 1991. (Invited)
26. 9th Annual World Congress on Endourology and ESWL: In vivo effect of regional hyperthermia on Dunning R3327 prostatic tumor. Vienna, Austria, June 19-22, 1991.
27. 56th American College of Gastroenterology: Does bipolar sphincterotomy reduce the incidence of pancreatitis? Boston, MA, October 14-16, 1991.
28. 77th American College of Surgeons: Capacitive coupled currents in radio frequency electrosurgery during laparoscopy. Chicago, IL, October 21-24, 1991.
29. 42nd Congress of Japan Gastroenterological Endoscopy Society: The foundation and significance of endoscopic treatment with bipolar electrosurgery. Yokohama, Japan, November 25-29, 1991. (Invited)
30. Cancer Institute, George Washington Hospital: Techniques of Surgical Dissection. Washington DC, May 21-22, 1992. (Invited)
31. 10th Annual World Congress on Endourology and ESWL: Potential electrosurgical complications in laparoscopy. Singapore, September 3-6, 1992.
32. 21st International Congress of Gynecologic Endoscopy: The use of new bipolar electrosurgery electrodes to present laparoscopic complications. Chicago, IL, September 23-27, 1992.
33. Eli Lilly, Inc.: Biophysics of electrosurgery. Atlanta, GA, October 9, 1992. (Invited)
34. 78th Annual American College of Surgeons: Complications and prevention of monopolar laparoscopic electrosurgical complications. (Scientific exhibit) New Orleans, LA, October 11-16, 1992.
35. 25th Annual Postgraduate Course, American Fertility Society: Cutting edge technology. New Orleans, LA, October 31-November 1, 1992. (Invited)
36. Electrosurgery for the Endoscopic Surgeon: Advanced principles of electrosurgery and Bipolar electrosurgery when and why. Los Angeles, CA, January 9, 1993. (Invited, CME)
37. Electrosurgery for the Endoscopic Surgeon: Advanced principles of electrosurgery and Bipolar electrosurgery when and why. San Francisco, CA, February 27, 1993. (Invited, CME)
38. Electrosurgery for the Endoscopic Surgeon: Advanced principles of electrosurgery and Bipolar electrosurgery when and why. Seattle, WA, March 26, 1993. (Invited, CME)
39. Japanese Surgical Society: The use of new bipolar electrosurgical electrodes to prevent laparoscopic complications. Sendai, Japan, April 20-23, 1993. (Invited)
40. Electrosurgery for the Endoscopic Surgeon: Advanced principles of electrosurgery and Bipolar electrosurgery when and why. New Orleans, LA, May 22, 1993. (Invited, CME)

41. 26th Annual Postgraduate Course, American Fertility Society: Cutting edge technology, Toronto, Canada October 9-10, 1993. (Invited, CME)
42. 79th Annual American College of Surgeons: Laparoscopic electrosurgical complications and their prevention. (Scientific exhibit) San Francisco, CA, October 11-14, 1993.
43. Electrosurgery for the Endoscopic Surgeon: Advanced principles of electrosurgery and Bipolar electrosurgery when and why. Chicago, IL, October 23, 1993. (Invited, CME)
44. Electrosurgery for the Endoscopic Surgeon: Advanced principles of electrosurgery and Bipolar electrosurgery when and why. Honolulu, Hawaii, April 9, 1994. (Invited, CME)
45. Joint meeting of the European Societies for Radiation Biology and Hyperthermic Oncology: The effect of hyperthermia on HSP production in murine and canine prostate models. Amsterdam, Netherlands, June 1-4, 1994.
46. Operative Gynecology: Electrosurgery basics and Bipolar laparoscopic electrosurgical electrodes. Palm Beach, FL, July 16-19, 1994. (CME, invited).
47. Association of Trial Lawyers of America: Laparoscopic Electrosurgery. New York, NY. July 14-19, 1995. (CLE, invited)
48. Progress in Gynecology: Principles of Electrosurgery and Electrosurgical complications of operative endoscopy. San Francisco, CA. July 26-29, 1995. (CME, invited)
49. American Association of Gynecologic Laparoscopist's: Hazards associated with monopolar electrosurgical laparoscopy. Orlando, FL, November 11-14, 1995. (invited)
50. Endo Expo '95: Electrosurgery - Advanced Principles: complications and their avoidance. Orlando, FL, Dec. 7-9, 1995. (CME, invited)
51. Operative Hysteroscopy: Biophysics of Electrosurgery. Washington DC, Jan 25-27, 1996 (CME, invited)
52. European Society for Hyperthermic Oncology. Thermal ablation of the prostate. Rome, Italy. April 1-5, 1996.
53. Endo Expo '96: Prevention and management of surgical complications. San Francisco, CA. May 10-12, 1996. (CME, invited)
54. Endo Expo '96: Prevention and management of surgical complication. New York, NY. September 27-29, 1996. (CME, invited)
55. American Association of Gynecologic Laparoscopists: Safety of Bipolar Electrosurgery. Chicago, IL, September 25-28, 1996. (invited)
56. 14th World Congress on Endourology. Interstitial thermal ablation of prostate cancer. Melbourne, Australia, November 11-14, 1996.
57. Advanced Gynecologic Surgery: Electrosurgery-what you need to know. Washington DC, Jan 23-25, 1997. (CME, invited)
58. European Society for Hyperthermic Oncology. Thermal ablation: A new treatment for prostate cancer. Berlin, Germany. April 2-5, 1997. (Invited, keynote address)
59. American Urological Association. Thermal ablation using interstitial temperature self-regulating seeds to treat prostate cancer. New Orleans, LA. April 14-19, 1997.

60. 15th World Congress on Endourology. Thermal ablation of prostate cancer using temperature self-regulating interstitial seeds. Edinburgh, Scotland. August 31 to September 4, 1997.
61. American College of Surgeons. Safe Laparoscopic Electrosurgery. (Scientific Exhibit) Chicago, IL. October 10-14, 1997.
62. Society of Gynecologic Oncologists. Radio Frequency electrosurgery in Gynecology. Orlando, FL. February 7-11, 1998.
63. 16th World Congress on Endourology. Thermal ablation of prostate tissue using thermal rods. New York, NY, September 3-6, 1998.
64. American College of Surgeons. Biophysics of electrosurgery. Orlando, FL, October 24-30, 1998. (invited)
65. Society of Gynecologic Oncologists. Advanced Laparoscopic Techniques. San Francisco, CA, March 20-23, 1999. (invited)
66. European Urology Association. Treatment of Prostate Cancer with Thermal Ablation Rods. Stockholm, Sweden, April 7-11, 1999.
67. World Health Organization Prostate Cancer. Histologic Analysis of Thermal Ablation of Prostate Cancer. Paris, France, June 26-30, 1999.
68. World Congress on Endourology. Ablation of Prostate Cancer with Temperature Self-Regulating Rods. Rhodes, Greece, September 2-6, 1999.
69. International Society for Laparoendoscopic Surgeons. New Technologies in Urology. New York, New York, December 4-7, 1999. (invited)
70. World Congress on Endourology, PSA Changes After the Thermal Ablation of Prostate Cancer, Sao Paulo, Brazil, September 14-17, 2000.
71. International Society for Laparoendoscopic Surgeons. New Techniques in Minimal Invasive Surgery. Orlando, Florida, December 6-9, 2000. (invited)
72. European Association of Urology, The Thermal Ablation of Localized Prostate Cancer, Geneva, Switzerland, April 7-10, 2001.
73. 19th Japanese Hyperthermia Oncology. The Thermal Treatment of Prostate Cancer. Nagoya, Japan, September 12-14, 2002. (invited, keynote address).
74. International Society for Laparoendoscopic Surgeons. Use of a novel plasmakinetic bipolar forceps to occlude and transect renal vessels in a porcine model. Boston, Massachusetts, September 5-9, 2006.
75. 1st Central European Congress of Surgery. A new radiofrequency bipolar system for fusing arteries up to and including 8 mm in diameter. Prague, Checkoslovakia, April 23-26, 2008.
76. 1st Central European Congress of Surgery. A new radiofrequency bipolar system for fusing cystic ducts. Prague, Checkoslovakia, April 23-26, 2008.
77. 1st Central European Congress of Surgery. Histological evaluation of arterial seals produced by a new bipolar radiofrequency current system. Prague, Checkoslovakia, April 23-26, 2008.

78. 9th Congress of European Association of Gynecologists and Obstetricians. A new vessel sealing system: seal integrity and histology. Bari, Italy, May 4-7, 2008.
79. American Association of Gynecologic Laparoscopists: The Safe Use of Electrosurgery. Las Vegas, Nevada, September 19-21, 2008.
80. Surgical Techniques in Gynecology, Urogynecology and Pelvic Surgery. Fundamentals of Electrosurgery. Las Vegas, Nevada, March 26-28, 2010.
81. 15th Congreso Internacional de Ingenieria: Vision 2010, The Development of Medical Instruments, Lima, Peru, August 16-18, 2010.
82. 20th Congress of European Academy of Dermatology and Venereology, Universal radiofrequency system produces uniform skin temperatures for non-ablative wrinkle reduction and minimal tissue necrosis during surgical cutting. Lisbon, Portugal, October 20-24, 2011.
83. 70th Annual Meeting of the American Academy of Dermatology, Histology of fractionated CO2 laser wrinkle reduction and skin resurfacing in an animal model. San Diego, California, March 16-20, 2012.

Video

1. Voyles CR, Tucker RD. Essentials of Monopolar Electrosurgery for Laparoscopy produced with an accompanying teaching handbook, 1992.
2. Redwine DB, Bieber EJ, Tucker RD. Monopolar Electrosurgery: Histologic Quantification of Biophysical Effects, 1993.

Patents

1. Patent No. 5,197,940. Local application tumor treatment apparatus. Sievert CE, Tucker RD and Loening SA. 1993
2. Patent No. 5,429,583. Cobalt-palladium thermal seeds for treatment of tumors. Paulus JA and Tucker RD. 1995.
3. Patent No. 5,895,412. Device and method for sealing tissue. Tucker RD. 1999.
4. Patent No. 5,976,067. Combination radioactive and temperature self-regulating thermal seed implant for treating tumors. Tucker RD and Paulus JA. 1999.
5. Patent No. 6,074,337. Combination radioactive and temperature self-regulating thermal seed implant for treating tumors. Tucker RD and Paulus JA. 2000.
6. Patent No. 6,497,647. Radiation and thermal energy source. Tucker RD and Paulus JA. 2002.

IV. SERVICE

<u>Collegiate, University, University Hospitals, and National Committee</u>		<u>Level</u>
1984-88	Laboratory Information System Policy Committee (member)	Hospital
1984-87	Laboratory Information System Operational Committee (chairman)	Hospital
1984-87	Pathology Computer User Group (chairman)	Department
1984-88	Laboratory Information System Project Team (member)	Hospital
1986-88	Animal Care Advisory Committee (member)	University

<u>Collegiate, University, University Hospitals, and National Committee (cont.)</u>		<u>Level</u>
1987	Flow Cytometry Advisory Committee (member)	University
1987	Flow Cytometry Computer Subcommittee (chairman)	University
1988	Computer Resource Work Group (member)	Department
1988	Computer Operational Work Group (member)	Department
1988	Laboratory Handbook Work Group (member)	Department
1989	Computer Policy Committee (member)	Department

Other

1992-pres. Member of Editorial Board, Investigative Surgery

1999-pres. Clinical Study Coordinator: Thermal Treatment of Prostate Cancer

Expert in Medical-Legal and Patent Infringement Cases (in part)

1985	Fowler vs. Valleylab
1985-86	Hickman vs. Valleylab
1985-86	Kakascik vs. Valleylab
1985-86	Felice vs. Valleylab and Louisiana State University Medical Center
1986	Mabou vs. Valleylab
1987-88	Mulkey vs. East Jefferson General Hospital (New Orleans, LA)
1984-89	Volk, et al., vs. Valleylab and Life Instruments
1985-89	Crawford, et al., vs. Valleylab and University of Michigan
1985-89	Hautamaki vs. Virginia Regional Medical Center
1986-89	Baby Doe vs. Valleylab
1988-89	Porter vs. Rothhammer
1988-89	Perez vs. University of New Mexico
1988	Davis vs. Dennis
1990-92	Birtcher, Inc. vs. Beacon, Inc.
1992	Pfizer Inc. vs. Birtcher, Inc.
1992-93	Alderman vs. Schutt
1992-93	EP Technologies vs. Cardiorhythm
1992-93	Karl vs. Armstrong
1992-93	Schuette vs. Flora
1992	Wilson vs. Hixenbaugh
1993-94	Parrish vs. Gulf Coast Community Hospital
1993	Smith vs. State of Louisiana
1993	Dockter vs. Dakota Clinic and Mahoney
1993-94	Vyvyen vs. Wood
1994	Milusnic vs. Schorlemmer & Southern Colorado Heart & Lung, P.C.

1994-98	Brown vs. Valleylab Inc.
1994	Nickerson vs. Levesque
1994	Birtcher, Inc. vs. Aspen
1994	Crocker vs. Houston Co. Hospital et al
1994	Yost vs. Damero Hospital
1994-95	Harrison vs. Fisher
1994-95	Munroe vs. Winter Park Memorial Hospital
1994-95	Lindstrom vs. Davis
1994-96	Schumacher vs. Woltjen
1994-95	Davis vs. Hatch
1994-95	Keller vs. Mussio
1994-95	Belschner vs. Kopelove
1995-97	Womer vs. Rose Hospital
1995-97	Scott vs. Higgins
1995-96	Harders vs. Burke
1995-96	Perkins vs. Knudsen
1995-98	Stanley vs. Cincinnati Sub-Zero, Inc.
1995-98	Baribeau vs. Armstrong
1995-97	Johnson vs. Parra et al.
1995-97	Haveman vs. Nowzaradan & Barnes
1995	Cook vs. Yohe
1996-97	Welsh vs. Williamson
1996-97	Brown vs. Valone
1996-98	Pechacek vs. Dunn
1996	Ahmaditar vs. Circon
1996-99	Garcia vs. Teegarden
1996	Miller vs. Audubon Regional Medical Center
1996-97	Redmond vs. Memorial Hospital
1996-98	Woodruff vs. West Jersey Hospital
1996-98	Winters vs. Wright
1996-99	Hoodle vs. Freifeld
1997	Ramsey vs. Albuerne
1997	McMeans vs. Davis
1997-99	Urbano vs. St. Francis
1997-99	Sloop vs. Beckenhauer
1998	Ogbuagu vs. Brill
1998	Knight vs. Irwin
1998-99	Jacobs vs. Sackstein
1998-99	Arthrocare vs. Ethicon
1999	Strucker vs. Heal
1999	Griffin vs. Armstrong
1999-00	Smothers vs. Erie County Medical Center et al.
1999-00	Greco vs. Oliver
2000	Coleman vs. Austin
2001-03	Donaldson vs. Townsend
2001-03	Herzog vs. Arthrocare
2001	Oberman vs. Northwestern Hospital
2001-02	Sandoval vs. Northwestern Hospital
2001-02	Tiersky vs. Northwestern Hospital

2003-05	Sparks vs. Mena
2003	Catan vs. Dunn
2003-04	Draina vs.
2003-04	Donley vs. Khan, St Johns Med Center, Bausch & Lomb
2004-05	Perlman vs. Virtua
2005	Haskins vs. Sentara
2005-08	Adkins vs. Thermage
2005-06	Welling vs. Valleylab
2005-06	Cota vs. Arthrocare, NMH, Long
2005-07	Trudeau vs. Abington Memorial Hospital, et al.
2006-07	Fesko vs. UPMC Lee Regional Hospital
2006-08	Toney vs. Ashland Hospital
2006-07	Welling vs. Valleylab
2006-07	Tingey vs. Radionics
2006-07	Chachere vs. Rita Medical
2006-07	Thibodea vs. Sekkal
2007-08	Barbera vs. Mital, Rush Medical Center and J&J
2007-08	Blankenship vs. Fitzig et al.
2007-09	Rush vs. Baker
2008-09	Arthrocare vs. Gyrus
2008-09	Rydlewski vs. US Surgical
2008	Babcock vs. Downing
2008	Sanchez vs. Reinoso
2008	Class action vs. Guident
2009-10	Miller vs. Surgery Center of Ocala
2009-10	Rogers vs. DeRoyal
2010	Huber vs. Wolf
2010-2011	Bracewell vs. Schuessler
2010-2013	Buckingham vs. Jacobs
2010-2011	Applied Surgical, UAB et al vs. Stryker
2010-0211	Moore vs. USA
2010-2011	Engler vs. Valleylab
2011-2013	Morvil vs. Medtronic
2011-2014	Fox vs. Collins and Legacy Hospital
2011-2014	Dockery vs. Proffitt
2011-2014	Fernandez vs. Olympus
2011-2014	King vs. Wright
2012-2014	St. Jude vs. Medtronic
2012-2017	Sangalli vs. Medtronic
2013-2014	Perfect Surgical vs. Olympus
2014-present	C. R. Bard Mesh Products Liability Litigation
2015-2022	Grandolfo vs. Resurrection Medical Center et al.
2015-present	Hologic vs. Minerva
2016-2019	Syneron Medical vs. Invasix
2016-present	Udell vs. Martin
2016-2020	Zeto vs. Intuitive
2016-2018	Buress vs. Intuitive
2016	Dejarnett vs. Intuitive
2016-2017	Lutronic vs. BTL

2017-2019	Viveve vs. ThermiGen
2018-2021	O'Connell vs. Essentia
2018-present	Jenkins vs. CareFusion
2019-2021	Erbe vs. Olympus
2020-present	Ergler vs. Ethicon
2020-present	Avanos vs. Medtronic
2020-2021	Century vs. CardiQuip
2020-2021	Nelson vs. Mayo Clinic
2020-present	Ferreira vs. Medtronic
2021-2022	Inmode vs. Ilododa
2021-present	Cartessa vs. Synkloud
2022-present	ReCor vs. Medtronic

Consultant

1988	City Hospital, Belize City, Belize, Central America Designed and obtained equipment donations for two complete operating room electrosurgical set-ups; trained operating room staff on radio frequency electrosurgery
1988-90	Valleylab, Inc.; Boulder, CO Designed and performed bipolar and monopolar electrosurgical experiments
1987-2009	Everest Medical/Gyrus, Inc.; Minneapolis, MN Develop new surgical procedures for bipolar electrodes and perform bipolar electrosurgical experiment; FDA 510(k) submissions
1989	Expert Medical Witness for FDA, Washington, D.C. Gave testimony on electrosurgical tubal sterilization
1991	Expert Medical Witness for FDA, Washington, D.C. Gave testimony on electrosurgical side effects of tubal sterilization
1991-98	Member of Board of Directors for Electroscope, Inc.; Denver, CO
1993-95	President and CEO; Member of Board of Directors for Orion Surgical, Inc.; Minneapolis, MN
1994-05	Director of Research; Chief Scientific Officer; Member of Board of Directors for Ablation Technologies, San Diego, CA
1995	Expert Medical Witness for FDA, Washington, DC Gave testimony on collagen tissue welding by argon gas radiofrequency current
1996	Member of Board of Directors for MicroQuest, Inc; Minneapolis, MN
2007-09	Consultant Live Tissue Connect; Performed bipolar tissue welding in vitro and in vivo tissue welding tests; FDA 510(k) responsibilities
2007-09	President and CEO; Member of Board of Directors for Minimally Invasive Cosmetic Surgery (MICS) Medical
2009-11	President and CEO; Member of Board of Directors for SoftJoint, Inc.

2010-2015 Consultant Ellman; Performed bipolar instrument development and testing of non-invasive cosmetic surgery; FDA 510(k) responsibilities

Clinical Activities

- A. Managed laboratory computing for Pathology Department: 1983 - December 1987.
- B. Oversee day-to-day operation of the department's four computer systems which operate the Clinical Laboratory, DeGowin Blood Center and Anatomic Pathology.

These systems acquire in- and outpatient laboratory results and pass the information to the hospital computer system.

- C. Departmental security officer for the Hospital Information Systems
- D. Details of major clinical responsibilities are as follows:

- 1983-87 Managed two obsolete computer systems which served the Clinical Laboratory and the DeGowin Blood Center (as well as departmental research, the Laboratory Handbook and the Prairie Regional Blood Centers donor files). This required daily supervision and I was on 24 hour call, 7 days per week, every day I was in Iowa City.
- 1983 Managed and solved the major hardware failure on the DeGowin Blood Center computer system. Solving this problem saved all departmental research files, all Blood Center in-patient files and 37,000 donor files for the Prairie Regional Blood Centers (University Hospital, Mercy Hospital, Ottumwa, IA and Galesburg, IL Red Cross). This required two months.
- 1983 Specified, selected, and managed installation of new hard discs on the DeGowin Blood Center computer system; then managed the transfer of all data from the obsolete discs to the new discs. This required over one month.
- 1983 Initiated new, safer back-up procedure for the DeGowin Blood Center computer files.
- 1983-84 Managed and planned the new computer room and new cabling in Roy Carver Pavilion for the Laboratory and computer move from the Medical Research Center. This required over six months.
- 1983-87 Initiated the printing of many new specialty reports for the department, e.g., daily platelet utilization summary.
- 1983-84 Managed and improved procedures for the yearly printing of the Laboratory Handbook.
- 1984 Updated memory on the DeGowin Blood Center computer system. This required two months.
- 1984 Physically moved the computer system plus terminals and connected all users and autoanalyzers with 12 hours of down-time. (In a similar move the University of Minnesota Laboratory computer was not fully functional until three days post-move.)

- 1984-85 Participated in defining software requirements for the Request for Proposal (RFP) for a new AP/CP computer system. This required nine months.
- 1985 Wrote hardware requirements for the RFP for the new AP/CP computer system.
- 1985-86 Organized site visits and headed site visit teams for evaluation of AP/CP computer systems.
 - i. Emmerson Hospital, Boston, MA
 - ii. Lufkin Laboratory, Minneapolis, MN
 - iii. University of Wisconsin, Madison, WI
 - iv. University of Minnesota, Minneapolis, MN
 - v. Cleveland Clinic, Cleveland, OH
- 1985-86 Organized and demonstrated University of Arizona and Yale University computer systems via modem connection.
- 1986 Participated in the evaluation and ranking of the proposals to the RFP software requirements. This required three months.
- 1986 Evaluated and ranked all the proposals to the RFP hardware requirements. This required six weeks.
- 1986 Designed hardware configuration for new AP/CP computer system. This required three months.
- 1986-87 Developed hardware specifications and participated in the purchasing of AP/CP computer system hardware including computers, discs, networking hardware, printers, terminals, etc. This required three months.
- 1987 Participated in the installation of the new hardware and software for the AP/CP computer systems.

E. Laboratory Computing for Pathology Department, VAMC; 1993 to 1996.

F. Departmental Code Auditor 1015 to present.

Certification and Licensure

A. Certification:

	<u>Board</u>	<u>Date</u>	<u>Number</u>
1.	National Board of Medical Examiners	10/1/79	205939

B. Licensure

	<u>State</u>	<u>Date</u>	<u>Perm/Temp</u>	<u>Number</u>	<u>Renewal date</u>
1.	Iowa	1984	Permanent	23747	04/01/21

Professional Affiliations

- 1970 Institute of Electrical and Electronic Engineers
- 1985 Association for Advancement of Medical Instrumentation
- 1990 North American Hyperthermia Society
- 1990 American Medical Association

Home Address:

4008 Mehaffey LN NE
Solon, IA 52333

Expert report, deposition, or trial testimony in last 5 years

1. Grandolfo vs. Resurrection Medical Center et al. (2018-present)

NO. 17L11141

IN THE CIRCUIT COURT OF COOK COUNTY
COUNTY DEPARTMENT, LAW DIVISION

The case involves failure of an Ethicon Ligaclip which led to the death of Mrs. Grandolfo. I gave deposition testimony of the inadequacy of the IFU.

2. Viveve vs. ThermiGen, (2017-2019)

No. 2:16-CV-1189, Filed 10/21/16

DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS, MARSHALL DIVISION

This was a patent infringement case involving a RF device to reshape vaginal tissue. My testimony for ThermiGen compared the patent claims in areas including, in part: temperature effects on collagen, tissue impedance in general and in relation of RF temperature effects, device tissue temperature characteristics and FEA analysis of temperature models. I gave opinions on infringement as well as anticipation and obviousness in expert report and deposition.

3. Lutronic vs. BTL (2016-2017)

Invalidation trial Nos. 2016 Dang 1495 and 2016 Dang 1633 relating to Korean Patent No. 1,577,156

This case was a patent infringement on a PCT Korean patent litigated in the Czech Republic. I gave a report for BTL explaining the difference in capacitively versus inductively coupled RF currents and their tissue effects.

4. Buress vs. Intuitive (2016-2018)

Case No. CJ-11-4562

DISTRICT COURT OF OKLAHOMA COUNTY STATE OF OKLAHOMA

This case involved an undiagnosed perforation to the small bowel which occurred during a robotic assisted total vaginal hysterectomy. I provided a deposition for Mrs. Buress that the perforation was caused by a thermal injury.

5. Syneron Medical vs. Invasix (2016-2019)

Case No. 8:16-CV-143-DOC-KES

DISTRICT COURT CENTRAL DISTRICT OF CALIFORNIA

This was a patent case involving RF technology to treat skin in order to improve its esthetic appearance. I gave opinions on infringement as well as anticipation and obviousness for Invasix on: RF current flow in various layers of the skin, collagen thermal effects, tissue resistance, histology of RF thermal damage and comparison of

the physical and clinical characteristic of various devices. These opinions were in the form of an expert report and deposition.

6. Hologic vs. Minerva (2015-present)

Case NUMBER: 15-1031-JFB-SRF

DISTRICT COURT OF DISTRICT OF DELAWARE

This was a case involving competing uterine ablation devices. It started as Inter Partes Review and later included patent infringement; these cases involved sales injunction and patent anticipation and obviousness. I provided multiple expert reports, depositions and trial testimony.

7. C. R. Bard Pelvic Repair System Products Liability Litigation (2015-present)

MDL NO. 2187 2011

DISTRICT COURT FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

CHARLESTON DIVISION

This litigation involves many patients of which I have had about 25. It is a product liability case and I have given deposition opinions that the Bard mesh products, both abdominal and pelvic floor mesh, are safe and efficacious when implanted properly. I discussed the tissue reaction to polypropylene monofilament mesh and stated I have not seen any evidence that Bard mesh caused and alleged injuries.

8. Jenkins vs. CareFusion (2019-present)

NO. 15-CI-00250

COMMONWEALTH OF KENTUCKY

WARREN CIRCUIT COURT, DIVISION I

This case involves product liability of a medical device to perform circumcisions. I gave a deposition and opinioned the design of the device was unsafe and FDA regulations were violated.

9. Erbe vs. Olympus (2019-2020)

No. 337-TA-1182

UNITED STATES INTERNATIONAL TRADE COMMISSION

WASHINGTON, D.C. 20436

I gave a report and deposition on the allegation of infringement of five Erbe patents by Olympus. I testified that Olympus the RF argon endoscopic coagulators infringed on the Erbe patents.

10. Medtronic vs. Avanos (2019-present)

IPR Trial No. 2:19-CV-02754

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

This case is an Inter Partes Review in which Medtronic asserted the invalidity of multiple claims in an Avenos patent. The patent covers a RF probe that has cooling and temperature monitoring. I gave a report supportive of the Medtronic position.

11. Najera vs. Dignity Health St. Joseph Hospital (2022-present)

CASE NO.CV2020-092846

MARICOPA COUNTY, ARIZONA

This litigation involves is a medical malpractice case in which a perforation occurred on the inferior lateral aspect of the distal sigmoid and proximal rectum. I opined that the perforation was caused by a mechanical injury rather than a thermal burn or devascularization-type injury.

12. UDELL et al. vs. Hal Martin D.O. (2022-2023)

Case Number: CJ-2013-4240

DISTRICT COURT OF OKLAHOMA COUNTY, OKLAHOMA

This litigation involved is a medical malpractice case in which monopolar electrosurgery with saline irrigation was employed in a laparoscopic surgery that caused peripheral nerve damage in multiple patients.

CERTIFICATE OF SERVICE

I hereby certify that on May 6, 2025, copies of the foregoing EXHIBIT 1035 was served via electronic mail, as agreed to by counsel, upon the following counsel for the Patent Owner:

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Daniel Higgs dhiggs@lpiplaw.com

Kevin Laurence klaurence@lpiplaw.com

Derek Meeker dmeeker@lpiplaw.com

Joe Hawkins jhawkins@@lpiplaw.com

By: /Meg Cogburn/

Meg Cogburn

Senior Paralegal

Meunier Carlin & Curfman LLC