

CURRICULUM VITAE
WILLIAM RUSSELL DOUGHERTY, MD, FACS

EDUCATION

High School: Chatsworth High School, Chatsworth, California
June, 1973

College: University of California, Santa Cruz
Santa Cruz, California
Majors: Physics, Chemistry, and Biology
June, 1979

Medical School: University of Southern California
Los Angeles, California
MD
May, 1985

Internship: LAC+USC Medical Center,
General Surgery
July, 1985-June, 1986

Residencies: LAC+USC Medical Center
General Surgery
July, 1986-June, 1990

Honors and Awards
College: USC Division of Plastic Surgery
Plastic Surgery
July, 1990-June, 1992
Honors in Biology Dissertation
University of California, Santa Cruz
Santa Cruz, California
June, 1979

Honors in Physics Thesis
University of California, Santa Cruz
Santa Cruz, California
December, 1979

Honors in Triple Major:
Physics/Chemistry/Biology
University of California, Santa Cruz
Santa Cruz, California
June 13, 1980

Medical School: Dean's Award for Academic Excellence
University of Southern California
Los Angeles, California
May, 1982

NIH Student Research Fellowship
University of Southern California
Los Angeles, California
June, 1984-September, 1984

Alpha Omega Alpha Honor Society (3rd Year)
University of Southern California
Los Angeles, California
June, 1984

Merck Award for Academic Excellence
University of Southern California
Los Angeles, California
May, 1985

Residency: Outstanding Craniofacial Paper Award
Plastic Surgery Senior Residence Conference
Montreal, Canada
May 1992

USC Faculty: Outstanding Faculty Teaching Award
USC School of Medicine
November 1997

Licensure: **Kansas** # 04-33575
issued 01/2009 expires 6/ 2010
Arkansas #E-5152
issued 04/13/2007 expires 2/28/ 2009
Tennessee #38986
issued 09/22/2004 expires 2/28/ 2010
Pennsylvania #MD 071147-L
issued 06/30/2000 expires 12/31/2010
California # G058600,
issued 09/15/1986 expires 2 /28/ 2010

Advanced Trauma Life Support (ATLS)
ATLS Instructor - July 1993
Advanced Burn Life Support (ABLS)
ABLS, expires June 2010

Board Certification:

American Board of Surgery, Certificate # 36331
June 11,1991; 1991-2001; Oct 19, 2001; 2001-2012

Certificate of Added Qualification
In Surgical Critical Care # 1146
October 22,1993; 1993-2004, Oct 22, 2003; 2003-2014

American Board of Plastic Surgery Certificate # 4643,
November 12, 1994 Lifetime

PROFESSIONAL BACKGROUND

Academic Appointments:

Assistant Professor of Surgery
University of Kansas
Department of Surgery
Feb 2009 to present

Associate Professor of Surgery
University of Arkansas for Medical Sciences
Department of Surgery
July 2007 to June 2008

Associate Professor of Surgery
Vanderbilt University
Department of Surgery and Plastic Surgery
Director VUMC Wound program
September, 2004 to June 2007

Instructor of Surgery
Penn State College of Medicine
Department of Surgery
June, 2000 to July, 2004

Assistant Professor of Surgery
University of Southern California
Los Angeles, California
Department of Surgery
July, 1992-June, 2000

Assistant Professor of Biomedical Engineering
University of Southern California
Los Angeles, California
Department of Biomedical Engineering
Department of Surgery
January, 1995-2003

Hospital Appointments:

Kansas University Medical Center
University of Kansas
Kansas City, Kansas
Feb 2009 to present

University Hospital
University of Arkansas for Medical Sciences
Little Rock, Arkansas
July 2007 to June 2008

Arkansas Children's Hospital
Little Rock, Arkansas
July 2007 to June 2008

Vanderbilt University Medical Center
and Children's Hospital
Director VUMC Wound Program
Attending VUMC Regional Burn Center
September, 2004 to June 2007

Lehigh Valley Hospital Network
Director, Regional Burn Center at LVH
Allentown, Pennsylvania
Active Staff, June, 2000- June, 2004

LAC+USC Medical Center
Los Angeles, California
Active Staff, June, 1992-June, 2000

University of Southern California
University Hospital
Los Angeles, California
Active Staff, June, 1992-June, 2000

Kenneth Norris Jr. Cancer Hospital
Los Angeles, California
Active Staff, June, 1992-June, 2000

City of Hope National Medical Center
Duarte, California
Consultant Staff, June, 1992-June, 2000

Torrance Memorial Medical Center Burn Unit
Associate Director
Torrance, California
Active Staff, June, 1996-May, 1997

Specific Teaching Responsibilities:

UAMS Medical Center
Plastic and Reconstructive Surgery 2007 to 2008

Arkansas Children's Hospital
Burn Surgery/ Hand Surgery/ Plastic Surgery

UAMS / ACH

Formal lectures, conferences bedside rounds, operating room instruction, seminars:
Core curriculum lectures to general surgery residents and interns
Medical students on wound healing, burns and plastic Surgery topics
Grand Rounds Lectures
Daily ICU attending rounds with surgical residents and interns,
Weekly Morbidity and Mortality conference for surgery residents and interns

Specific Administrative Responsibilities:

Vanderbilt University Medical Center
Director VUMC Wound Program 2004 -2007

Lehigh Valley Hospital
Director Regional Burn Center at LVH 2000-2004
Member infection control committee 2000-2004

LAC+USC Medical Center
Associate Director, LAC+USC Burn Unit 1992-1995
Surgery Resident Advisor 1992-2000
Chief of Trauma "A" Service 1992-1994
Associate Chief of Trauma "C" Service 1994-2000
Chairman LAC Re-engineering 1998-2000
Committee: Cellulitis

USC School of Medicine
President of the student body 1982-1983
Director of Research Division of Plastic Surgery 1992-1999
Medical Student Advisor 1993-2000
USC ad hoc Committee on Technology Transfer 1993-present
Interviewer USC Medical School 1994-present

Admissions Committee	
Member Year VI Curriculum Committee	1994-2000
Faculty Home Mentor Program Participant	1996-2000
Institutional Animal Care and Use Committee Member	1998-2000

Torrance Memorial	
Associate Director Torrance Memorial Burn Unit	1996-1997

<u>National</u>	
USC School of Medicine's Representative to the AAMC: The Organization of Student Representatives	1981-1985
American Burn Association: Committees:	1993-present
Organization for Delivery of Burn Care Research Committee	1994-1998 1999-2003
Government Affairs	2003-2005
Reviewer for Veterans Administration for Scientific Merit Grants	1999-present

Other Employment or Activities:

<u>Fellowship</u>	Undergraduate Teaching Fellowship UC Santa Cruz, CA	1976-1979
<u>Engineer</u>	Hewlett-Packard Opto-electronics Palo Alto, CA	1979-1980
<u>Physicist</u>	Stanford Linear Accelerator Center (SLAC), Stanford University DOE High Energy Physics Laboratory	1980-1982

SOCIETY MEMBERSHIPS

<u>Local</u>		
J.B. Lynch Society		2004
Los Angeles Surgical Society		1994
Los Angeles Academy of Medicine		1995

<u>National</u>		
Association for the Advancement of Wound Care		2006

Wilderness Medicine Society	1998
American College of Surgeons, Fellow	1996
American Society of Plastic Surgeons	1996
American Burn Association	1993
Society of Critical Care Medicine	1992
Advancing Science, Service Society	1985
Alpha Omega Alpha	1984

HOSPITAL COMMITTEES

LAC+USC Pressure Sore Committee	1995-2000
Continuing Quality Improvement Committee	1992-2000
Chairman, LAC Re-engineering Committee: Cellulitis	1998-2000
LVHN Infection Control Committee	2000-2004

CONSULTANTSHIPS

Legal Medical Expert, Burns, Trauma and Plastic Surgery	1993- present
Maret Corporation	1995-1999
Thermal Medical Imaging Inc.	1997-1999
Avocet	2002- present
Integra life sciences	2003- present
Smith & Nephew	2001-present

RESEARCH ACTIVITIES

Areas of Interest

Burn Wound Healing
Alloplastic reconstruction of the facial skeleton and soft tissues
Tissue Engineering / Synthetic Skin / Soft tissue
Hydrogel Polymers Implants for Breast and Soft Tissue Augmentation
Percussive ventilation in inhalation burn injury, trauma, and sepsis
Non Invasive Monitoring of Human Physiologic Conditions
Electrical Injury
Facial and Hand Burn Reconstruction
Burn Wound treatment with synthetic skin substitutes
High Frequency Percussive Ventilation in Trauma, Burn and Sepsis

Research Grants

“Tracheal Reconstruction Using a Ciliated Prefabricated Free Flap”
Professional Staff Association, LAC+USC Medical Center
Principal Investigator: **WR Dougherty** - \$10,000
Awarded – September 1993

“Temovate Treatment of the Burn Wound Contracture Release”
International Association of Fire Fighters (IAFF)
Burn Research Foundation
Principal Investigator: **WR Dougherty** - \$19,500

Awarded – April 1995

“B-Mode Ultrasound Imaging for the Assessment of the Severity of Burn Trauma”

The Whitaker Foundation

Principal Investigator: **WR Dougherty** - \$209,939

Awarded – July 1996

“Synthesis Development, testing of novel Hydrogel Polymers Implants for Breast and Soft Tissue Augmentation”

HydroTech Surgical Corporation

Principal Investigator: **WR Dougherty** - \$10,000

Awarded – May 1997

“Clinical Study of the Screening of Breasts for Identification of Suspicious Tissue Using Clinical Exam and Mammography With and Without the TMI Computerized Thermal Imaging”

Thermal Medical Imaging

Principal Investigator: **WR Dougherty** - \$390,000

Awarded – August 1997

BIBLIOGRAPHY

PEER REVIEW

1. Brar HS, Kjos SL, **Dougherty WR**, Do YS, Tam HB, Hsueh WA: Increased fetoplacental active renin production in pregnancy induced hypertension. *Am J Obst Gyn* 157(2): 363-7, August 1987.
2. Wellisz TZ, Rechnic M, **Dougherty WR**, and Sherman R: Coverage of bilateral lower extremity calcaneal fractures with osteomyelitis using a single split free gracilis muscle transfer. *Plastic Reconst Surg* 85(3):457-60, March 1990.
3. Wellisz TZ, **Dougherty WR**, and Gross JE: Application for the Medpor Porous Polyethylene Flexblock Implant. *J Craniofacial Surg* 3(2): 101-7, September 1992.
4. Wellisz TZ, **Dougherty WR**: The role of alloplastic skeletal modification in the reconstruction of facial burns. *Ann Plas Surg* 30(6): 531-6, June 1993.
5. **Dougherty WR**, Wellisz TZ: The natural history of alloplastic implants in orbital floor reconstruction: an animal model. *J Craniofacial Surg* 5(1): 26-32, February 1994.
6. Couldwell WT, Chen TC, Weiss MH, and **Dougherty WR**: Cranioplasty with the Medpor porous polyethylene flexblock implant. *J Neurosurg* 81(3): 483-6, September 1994.

7. Kuhn JA, Wagman LD, Lorant JA, Grannis FW, Dunst M, **Dougherty WR**, and Jacobs DI: Radical forequarter amputation with hemithoracectomy and free extended forearm flap: technical and physiologic considerations. *Ann Surg Oncol* 1(4): 353-9, July 1994.
8. Demetriades D, Berne TV, Belzberg H, Asensio J, Cornwell EE III, **Dougherty WR**, Alo K, DeMeester TR: The impact of a dedicated trauma program on the outcome of severely injured patients. *Arch Surg* 130(2): 216-20, February 1995.
9. **Dougherty WR**, Chalabian JR: Skin substitutes. *Western J Med* 162:540-1, June 1995.
10. Ginsburg GT, **Dougherty WR**, Sank A: Mesenchymal commitment to digital joint development. *Ann Plas Surg* 35:95-104, 1995.
11. Cornwell EE, Belzberg H, and Berne TV, **Dougherty WR**, Morales IR, Asensio J, Demetriades D: The pattern of fungal infections in critically ill surgical patients. *Amer Surg* 61(10): 847-50, October 1995.
12. **Dougherty WR**: Discussion: Poly (1-Lactide) Implants for repair of human orbital floor defects: clinical and magnetic resonance imaging evaluation of long-term results. *J Maxillofacial Surg* 54:13, 1996.
13. **Dougherty WR**, Waxman K: The complexities of managing severe burn with associated trauma. *Surg Clin North Am* 76(4): 923-58, August 1996.
14. Shindo M, Nalbone VP, and **Dougherty WR**: Necrotizing fasciitis of the face. *Laryngoscope* 107(8): 1071-9, August 1997.
15. DeCherney AH, **Dougherty WR**, Felix JC, Rodgers KE, Girgis W, Abiko M, and DiZerega GS: Expression of cyclin protein after thermal skin injury in a guinea pig model. *J Burn Care Rehab* 18(4): 292-8, July-August 1997.
16. Rodgers KE, DeCherney AH, St Amand KM, **Dougherty WR**, Felix JC, Girgis W, DiZerega GS: Histologic alterations in dermal repair after thermal injury effects of topical angiotensin II. *J Burn Care Rehab* 18(5): 381-8, September-November 1997.
17. Sotiropoulos G, Kilagblian T, **Dougherty WR**, Henderson SO: Cold injury from pressurized liquid ammonia: a report of two cases. *Journal of Emergency Medicine*. 16(3): 409-12, 1998 May-Jun.
18. Parisky Y, Skinner KA, Cothren R, DeWitney RL, Birbeck JS, Rich JK, and **Dougherty WR**: Computerized thermal breast imaging revisited: an adjunctive tool to mammography. *Proceedings of 20th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, pages 919-921, November 1998.
19. Shoemaker WC, Belzberg H, Wo CC, Milzman DP, Pasquale MD, Baga L, Fuss MA, Fulda GJ, Yarbrough K, Van DeWater JP, Ferraro PJ, Thangathurai D, Roffey P, Velmahos G, Murray JA, Asensio JA, ElTawil K, **Dougherty WR**, Sullivan MJ,

Patil RS, Adibi J, and James CB: Multicenter study of noninvasive monitoring systems as alternatives to invasive monitoring of acutely ill emergency patients. *Chest* 114(6): 1643-52, December 1998.

20. Okuyama N, Roda N, Sherman R, Guerrero A, **Dougherty WR**, Nguyen T, DiZerega G, and Rodgers K: Angiotensin II improves random flap viability in a rat model. *Annals of Plastic Surgery* Volume 42(3): 313-19, March 1999.
21. Velmahos G, Chan L, Tatevossian R, Cornwell EE, **Dougherty WR**, Escudero J, Demetriades D: High frequency percussive ventilation improves oxygenation in patients with adult respiratory distress syndrome: *Chest*. 116(2): 440-6, 1999 Aug.
22. Cornwell EE, **Dougherty WR**, Berne TV, Velmahos G, Murray J, Chahwan S, Belzberg H, Falabella A, Asensio J, Demetriades D: Duration of antibiotic prophylaxis in high-risk penetrating abdominal trauma patients: a prospective randomized trial: *Journal of Gastrointestinal Surgery*. 3(6): 648-53, 1999 Nov-Dec.
23. **Dougherty WR**, Lee RC: Static electric field interaction with tissues.[comment]. *Plastic & Reconstructive Surgery*. 104(7): 2329-31, 1999 Dec.
24. Heinle EC, **Dougherty WR**, Garner WL, Reilly DA: The use of 5% mafenide acetate solution in the postgraft treatment of necrotizing fasciitis. *Journal of Burn Care & Rehabilitation*. 22(1): 35-40, 2001 Jan-Feb.
25. Skinner KA, Silberman H, **Dougherty WR**, Gamagami P, Waisman J, Sposto R, Silverstein MJ: Breast cancer after augmentation mammoplasty. *Annals of Surgical Oncology*. 8(2): 138-44, 2001 Mar.
26. Liu JK, Gottfried ON, Cole CD, **Dougherty WR**, Couldwell WT: Porous polyethylene implant for cranioplasty and skull base reconstruction. *Neurosurg Focus*. 2004 Mar 15;16(3):ECP1.
27. Amani H, **Dougherty WR**, Blome-Eberwein S, and: Use of Transcyte to Treat Burns Reduces LOS in Burns of All Size and Etiology. *Burns*. 32(7): 828–832 2006 Nov

ARTICLES IN PREPARATION

1. **Dougherty WR**, Shehada REN: Ultrasound method for the investigation of the non-newtonian characteristics of blood under pulsatile flow conditions. *Rheology*.
2. **Dougherty WR**, Shehada REN: Deviations of the Womersly Model in characterizing the pulsatile flow of the whole blood. *IEEE*.

PEER REVIEW THESIS

1. Dougherty WR: Picosecond LASER spectroscopy and two photo fluorescence. (Senior thesis: Physics and Chemistry), 1979 Dec.

BOOK CHAPTERS

1. **Dougherty WR** and Nguyen T: Plastic Surgery. Naude GP, Bongard FS, Demetriades D (eds): Trauma secrets: questions you will be asked Hanley & Belfus, Inc. Medical Publishers, pp. 181-195, 1998.
2. Mlakar J and **Dougherty WR**: Reconstruction of the Burned Hand. Herndon D (eds): Total Burn Care (3rd edition) WB Saunders pp. 626-655, 2002
3. **Dougherty WR** and Spence RJ: Reconstruction of the face /cheek: acute and delayed. Sood R (eds) Achauer & Sood's Burn Surgery: Reconstruction and Rehabilitation (1st edition) Elsevier pp 234-253, 2006
4. **DoughertyWR** and Coleman JJ: Reconstruction of burns of the lower extremity. Sood R (eds) Achauer & Sood's Burn Surgery: Reconstruction and Rehabilitation (1st edition) Elsevier pp 325-338, 2006
5. **DoughertyWR** Mlakar J and Shack RB: Reoperative Surgery Following Excision and Grafting of Upper Extremity Burns. Shack (2008) Reoperative Plastic Surgery (in Press)

ABSTRACTS

1. **Dougherty WR**, Wellisz TZ: Alloplastic implants in orbital floor reconstruction: an animal model. American Society of Plastic and Reconstructive Surgeons, Senior Resident Conference, Montreal, Canada, May 12, 1992.
2. Ginsburg GT, **Dougherty WR**: Pediatric hand burns: epidemiologic variables, clinical signs, and treatment which affect outcome. Southern California Chapter, American College of Surgeons Annual Meeting, Newport, California, January 19, 1994.
3. Ginsburg GT, **Dougherty WR**: Predicting pediatric boutonniere deformities based on initial assessment of the severely burned hand. Southern California Chapter, American College of Surgeons Annual Meeting, Newport, California, January 19, 1994.
4. Ginsburg GT, **Dougherty WR**, Sank A: Origins of cellular joint commitment during hand development, American Association for Hand Surgery, 25th Anniversary Meeting, Marco Island, Florida, January 15, 1995.
5. Cornwell EE, Belzberg H, Berne TV, **Dougherty WR**, Morales IR, Asensio J, Demetriades D: The pattern of fungal infections in critically ill surgical patients, Southern California Chapter, American College of Surgeons Annual Meeting, Indian Wells, California, January 20, 1995.

6. **Dougherty WR**, Ginsburg GT: Bloodletting into the 21st century: and old technique revisited, Southern California Chapter, American College of Surgeons Annual Meeting, Indian Wells, California, January 22, 1995.
7. **Dougherty WR**, Gross J, Chandrasekhar B, Chun J, Sherman R: Total scalp avulsion and replantation. Southern California Chapter, American College of Surgeons Annual Meeting, Indian Wells, California, January 22, 1995.
8. Rodgers KE, DeCherney AH, St Amand KM, **Dougherty WR**, Felix JC, Girgis WW, DiZerega GS: Mechanistic studies of the acceleration of burn wound healing after topical angiotensin II (AII) treatment. American Burn Association 29th Annual Meeting, New York, New York, March 19-22, 1997.
9. **Dougherty WR**, Blome-Eberwein SA: Predicting boutonniere deformity in the severely burned pediatric hand based on initial assessment and early intervention. American Burn Association 29th Annual Meeting, New York, New York, March 19-22, 1997.
10. Nguyen TT, Brody GS, Mueller GP, **Dougherty WR**, Merszei JD: Aesthetic resurfacing of burn scar deformity. American Burn Association 30th Annual Meeting, Chicago, Illinois, March 18-21, 1998.
11. Jaibaji M, **Dougherty WR**, Bland A, Jacobus A, Cashett T, Nguyen TT: Multiple antibiotic resistant organisms in burn patients treated with cephalosporins. American Burn Association 30th Annual Meeting, Chicago, Illinois, March 18-21, 1998.
12. Skinner KA, Parisky Y, Silberman H, Cothorn R, Hamm R, DeWitney RL, Conti PS, **Dougherty WR**: Digital imaging: a novel breast imaging modality that can increase the specificity of mammography, Society of Surgical Oncology, March 4-7, 1999.
13. **Dougherty WR**, Shehada REN: Assessment of the severity of burn trauma: phase I ultrasonic measurement of RBC aggregation. Plastic Surgery Research council Meeting, 44th Annual Meeting, Philadelphia, PA, May 22-25, 1999.
14. **Dougherty WR**, Shehada REN: Ultrasonic measurement of RBC aggregation for the assessment of the severity of burn trauma, Whitaker Foundation, Bio-Medical Engineering Conference, Tory Pines, CA, Aug. 13-15, 1999.
15. Amani H, MD, Blome-Eberwein S, MD and **Dougherty WR**: Use of Transcyte® to Treat Burns Reduces LOS in Burns of All Size and Etiology. Vancouver, BC ABA 2004

SCIENTIFIC PRESENTATIONS

1. Trauma and Burns: Osler Family Practice Review Course, San Francisco, California, May, 1993.
2. Trauma and Burns: Osler Family Practice review Course, San Francisco, California, May, 1994.
3. Diaphragmatic Trauma: University of Southern California, Trauma /Critical Care Symposium, Los Angeles, California, June 16-17, 1996.
4. Burns: The First 30 Minutes: University of Southern California, Department of Emergency Medicine, Los Angeles, California, November 28, 1994.
5. Burns and Hand Evaluation: University of Southern California, Occupational Therapy Symposium, Los Angeles, California, December 5, 1994.
6. Origins of Cellular Joint Commitment during Hand Development: American Association for Hand Surgery, 25th Anniversary Meeting, Marco Island, Florida, January 1, 1995.
7. The Pattern of Fungal Infections in Critically Ill Surgical Patients: Southern California Chapter, American College of Surgeons Annual Meeting, Indian Wells, California, January 22, 1995.
8. Bloodletting Into the 21st Century: An Old Technique Revisited: Southern California Chapter, American College of Surgeons Annual Meeting, Indian Wells, California, January 22, 1995.
9. Total Scalp Avulsion and Replantation: Southern California Chapter, American College of Surgeons Annual Meeting, Indian Wells, California, January 22, 1995.
10. Epidemiology/Social Issues: Pre Hospital & Early Hospital Management: Critical Care: Chest & Neck Trauma: Unusual Trauma Cases: Multi-Trauma & Critical Care, Chile, December 11-19, 1997.
11. Diaphragmatic Injuries: USC Trauma Symposium, Pasadena, CA, June 12, 1996.
12. Mechanistic studies of the acceleration of burn wound healing after topical Angiotensin II (AII) treatment: American Burn Association 29th Meeting, New York, New York, March 19-22, 1997.
13. Predicting boutonniere deformity in the severely burned pediatric hand based on initial assessment and early intervention: American Burn Association 29th Annual Meeting, New York, New York, March 19-22, 1997.
14. Aesthetic Resurfacing of Burn Scar Deformity: American Burn Association 30th Annual Meeting, Chicago, Illinois, March 18-21, 1998.

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15. Multiple antibiotic resistant organisms in burn patients treated with cephalosporins: American Burn Association 30th Annual Meeting, Chicago, Illinois, March 18-21, 1998.
16. Plastic Surgery in Trauma: USC Trauma Symposium, Pasadena, CA, June 12, 1998.
17. Clinical and Experimental Uses of Medpor: Plastic Surgery Education Foundation, Biomaterials Conference, Boston, Massachusetts, Oct. 2-33, 1998.
18. Acute Burn Care: Medical Mission and Visiting Professor Kenyatta, National Hospital, Kenya, January 30, 1999.