

CURRICULUM VITAE

Name: MICHAEL G. HUGHES, MD

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Education

Institution/Location	Years	Degree/Date	Field of Study
Wake Forest University	1989 – 1993	BA 5/1993	English
Wake Forest University SOM	1994 - 1999	MD	Medicine
Walter Reed Army Inst of Res, Assist	1993 – 1994		Research
Natl Inst of Hlth Med Stu Res Fellow	1995 Summer		Research
AHA Med Stu Res Fellow	6/1997– 6/1998		Research

Internship

Univ of Virginia	General Surgery	Virginia	7/1999 – 6/2000
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Residencies or Post Doctoral

Univ of Virginia	General Surgery Resident	Virginia	7/2000 – 6/2001
Amer Soc of Transplant Surgeons--Roche	Transplant Surg Research Fellow		7/2001 – 6/2003
Univ of Virginia	General Surgery Resident	Virginia	7/2003 – 6/2006
Univ of Minnesota	Multi-Organ Abdominal Transplant Surgery Fellow		7/2006 – 6/2008

Specialty/Board Certification

Licensure: Michigan **Date:** Present

Intramural Grants/amount of award:

Medical School

1. National Institute of Health Research Fellowship (\$2000) 1995
2. Lifeline Foundation Research Fellowship (\$2000), "Contribution of Artery Wall Fibrosis to Restenosis After Angioplasty" 1998-99
3. American Heart Association Research Scholarship (\$18,000) 1998-99
Residency
4. American Society of Transplant Surgeons-Roche Surgical Scientist Scholarship (\$70,000) 2002-2004

Awards, Honors, Membership in Honorary Societies:

Undergraduate

1. Student Government Representative
2. Judiciary Committee Member
3. Alpha Epsilon Delta, National Honor Society
4. Sigma Tau Delta, National Honor Society
5. Graduated Cum Laude

Medical School

1. National Institute of Health Research Fellowship (\$2000) 1995
2. North Carolina Medical Society Delegate 1995
3. American Medical Association Alternate Delegate 1995
4. Alpha Omega Alpha (selected as a Junior) 1997
5. Student Delegate to the American College of Surgeons 1998
6. President Alpha Omega Alpha (local chapter) 1998
7. Lifeline Foundation Research Fellowship (\$2000), "Contribution of Artery Wall Fibrosis to Restenosis After Angioplasty" 1998-99
8. Association for Academic Surgery Research Award, "Hyaluronan is Induced by Arterial Injury and Promotes Collagen Gel Contraction by Smooth Muscle Cells and Adventitial Fibroblasts" 1998-99
9. Richard L. Burt Research Achievement Award 1999
10. American Heart Association Research Scholarship (\$18,000) 1998-99

Residency

1. University of Virginia Surgical Resident Research Day Award 2002
2. Society of Critical Care Medicine Surgical Specialty Award, "Impact of an ICU rotating empiric antibiotic schedule on the development of infections on the non-ICU ward," February 2002
3. American Society of Transplant Surgeons-Roche Surgical Scientist Scholarship (\$70,000) 2002-2004
4. Pfizer Award for Scholastic Achievement (\$2000) 2004
5. Nominated for Consultant of the Year Award by the Emergency Department 2004

Lectures and Presentations

Submitted presentations (e.g., abstract or paper presentations)

1. Hughes MG, Mondy JS, Geary RL. Remodeling and Restenosis are Associated with Changes in Arterial Collagen Deposition. Association for Academic Surgery annual meeting, Seattle, WA, November, 1998. Association for Academic Surgery Research Award.
2. Hughes MG, Wong JA, Gotow L, Wagner WD, Geary RL. Hyaluronan is Induced by Arterial Injury and Promotes Collagen Gel Contraction by Smooth Muscle Cells (SMC) and Adventitial Fibroblasts: Potential Role in Post-Angioplasty Restenosis. Experimental Biology '99 Meeting, Washington, DC, 1999. FASEB J 1999;13 (Part 1): A42.
3. Hughes MG, Wong JA, Gotow L, Wagner WD, Geary RL. Hyaluronan is induced by arterial injury and promotes collagen gel contraction by smooth muscle cells (SMC) and adventitial fibroblasts: potential role in post-angioplasty remodeling and restenosis. J Vasc Surg 1999; 29:1150.
4. Wong JM, Hughes MG, Wagner WD, Geary RL: Hyaluronan is induced by arterial injury and promotes CD44-mediated smooth muscle cell contraction of collagen gels: potential role in restenosis. Cardiovasc Surg 2000; 7:749-750.
5. Hughes MG, Raymond DP, Evans HL, Pelletier SJ, Crabtree TD, Pruett TL, Sawyer RG. Impact of an ICU rotating empiric antibiotic schedule on the development of infections on the non-ICU ward. Society of Critical Care Medicine Congress, San Diego, CA, February 2002. Crit Care Med 2001;29(12S):A8. Society of Critical Care Medicine Surgical Specialty Award.
6. Evans HL, Raymond DP, Hughes MG, Pelletier SJ, Crabtree TD, Pruett TL, Sawyer RG. Anaerobic Blood Culture Utility in Surgical Patients with Infection. Society of Critical Care Medicine Congress, San Diego, CA, February 2002. Crit Care Med 2001;29(12S):A108.
7. Pelletier SJ, Thayer WP, Hughes MG, Evans HL, Raymond DP, Sanfey HA, Pruett TL, Sawyer RG. Increased Morbidity and Mortality from Infection for Living Donor Liver Transplant Recipients. American Transplant Congress, April 2002.
8. Hughes MG, Evans HL, Lightfoot L, Claridge JA, Raymond DP, Pelletier SJ, Crabtree TD, Pruett TL, Sawyer RG. Does Prior Transfusion Worsen Outcomes from Infection in Surgical Patients? 1ST Joint Meeting Surgical Infection Society (SIS) & Surgical Infection Society Europe (SIS-E), Madrid, Spain, May 2002. Surg Infections 2002;3(1):72.

9. Evans HL, Hughes MG, Raymond DP, Volles DF, Pelletier SJ, Crabtree TD, Pruett TL, Sawyer RG. Comparison of Dual- Versus Single-Antibiotic Rotation Strategies in a Surgical Intensive Care Unit. 1ST Joint Meeting Surgical Infection Society (SIS) & Surgical Infection Society Europe (SIS-E), Madrid, Spain, May 2002. *Surg Infect.* 2002 Mar;3(1):76.
10. Hughes MG, Chong TW, Smith RL, Evans HL, Camden JR, Sawyer RG, Rudy CK, Pruett TL. HCV binding of allografts immediately after liver transplantation is quasispecies specific. International Liver Transplantation Meeting, Chicago IL, June 2002.
11. Hughes MG, Rudy CK, Evans HL, Pelletier SJ, Raymond DP, Crabtree TD, Sawyer RG, Pruett TL. Hepatitis C Virus (HCV) Binding and Subsequent Infection of Liver Allografts After Transplantation is Quasispecies Specific. American Association for the Study of Liver Diseases Liver Meeting, Boston MA, October 2002.
12. Smith RL, Evans HL, Hughes MG, Chong TW, Pruett TL, Sawyer RG. *Stenotrophomonas maltophilia* and *Acinetobacter* spp: Pathogens or colonizers. Society of Critical Care Medicine Congress, San Antonio, TX, January 2003. *Crit Care Med* 2003;30(12S):A111.
13. Evans HL, Hazen KC, Smith RL, Chong TW, Hughes MG, Raymond DP, Pelletier SJ, Crabtree TD, Pruett TL, Sawyer RG. Routine Anaerobic Blood Culture: Is It Useful? Society of Critical Care Medicine Congress, San Antonio, TX, January 2003. *Crit Care Med* 2003;30(12S):A110.
14. Hughes MG, Evans HL, Smith RL, Chong TW, Pruett TL, Sawyer RG. Transfusion predicts mortality for trauma but not for non-trauma infected surgical patients. Society of Critical Care Medicine Congress, San Antonio, TX, January 2003. *Crit Care Med* 2003;30(12S):A58.
15. Evans HL, Shaffer MM, Hughes MG, Smith RL, Chong TW, Pruett TL, Sawyer RG. Contact Isolation in Surgical Patients: A Barrier to Care? Society of University Surgeons Meeting, Houston, TX, February 2003.
16. Smith RL, Du K, Chong TW, Hughes MH, Evans HL, Rudy CK, Raymond DP, Pelletier SJ, Pruett TL, Sawyer RG. CpG oligonucleotides associated with an immunomodulatory role in LPS-stimulated human whole blood. American Association of Immunologists 2003 Annual Meeting.
17. Hughes MG, Evans HL, Smith RL, Chong TW, Raymond DP, Pruett TL, Sawyer RG. Does fungal infection worsen outcomes from infection among surgical patients? 23rd Annual Meeting of the Surgical Infection Society (SIS), San Antonio, TX, April 2003. *Surg Infections* 2003;4(1):125.

18. Evans HL, Milburn ML, Hughes MG, Smith RL, Chong TW, Raymond DP, Pelletier SJ, Pruett TL, Sawyer RG. Nature of GNR Antibiotic Resistance in Antibiotic Rotation. 23rd Annual Meeting of the Surgical Infection Society (SIS), San Antonio, TX, April 2003. *Surg Infections* 2003;4(1):125.
19. Smith RL, Chong TW, Hughes MG, Evans HL, Raymond DP, Pelletier SJ, Pruett TL, Sawyer RG. Multiple sites of infection: predictor of mortality or just another indicator of illness severity. 23rd Annual Meeting of the Surgical Infection Society (SIS), San Antonio, TX, April 2003. *Surg Infections* 2003;4(1):101.
20. Hughes MG, Chong TW, Smith RL, Evans HL, Camden JR, Sawyer RG, Rudy CK, Pruett TL. Do both serum and blood cell derived HCV quasispecies infect allografts early after liver transplantation International Liver Transplantation Society Meeting, Barcelona, Spain, June 2003.
21. Hughes MG, Chong TW, Smith RL, Evans HL, Camden JR, Sawyer RG, Rudy CK, Pruett TL. Serum Compartmentalization of Hepatitis C Virus (HCV) Quasispecies. American Association for the Study of Liver Diseases Liver Meeting, Boston, MA, October 2003.
22. Smith RS, Evans HL, Chong TW, Hughes MG, Raymond DP, Pelletier SJ, Popovsky K, Bledsoe K, Volles D, Scheld M, Pruett TL, Sawyer RG. Quarterly Vancomycin/Linezolid Reduced Resistant Gram-positive Infections in an Intensive Care Unit. Meeting program, 41st Meeting of IDSA, San Diego, CA, October 2003, A548.
23. Evans HL, Lefrak SN, Lyman J, Smith RL, Chong TW, McElearney ST, Saalwachter AR, Hughes MG, Raymond DP, Pruett TL, Sawyer RG. The Cost of Gram Negative Resistance. 33rd Society of Critical Care Medicine Congress, Orlando FL, February 2004. *Crit Care Med.* 2004 Dec;31(12S):A247.
24. Smith RL, Chong TW, Evans HL, McElearney SN, Saalwachter AR, Hughes MG, Raymond DP, Pruett TL, Sawyer RG. Ventilator-associated pneumonia in the surgical intensive care unit: impact of trauma on prognosis. Society of Critical Care Medicine's 33rd Critical Care Congress. February, 2004.
25. Hughes MG, Chong TW, Smith RL, Evans HL, Camden JR, Sawyer RG, Rudy CK, Pruett TL. Hepatitis C Viral Quasispecies Selectivity of Allograft Infection after Liver Transplantation. Society of University Surgeons, St. Louis, MO, February 2004.
26. Smith RL, Chong TW, Hedrick TL, Hughes MG, Raymond DP, Du K, Rudy CK, Pruett TL, Sawyer RG. Immunomodulation with Cytosine-Guanine (CpG) containing oligodeoxynucleotides: stimulatory, inhibitory, or both? Society of University Surgeons 2004 Meeting. February, 2004.

27. Smith RL, Chong TW, Evans HL, Hughes MG, McElearney ST, Saalwachter AR, Raymond DP, Pruett TL, Sawyer RG. Increasing numbers of acquired infections portend worse outcomes for the surgical intensive care unit patient. Southeastern Surgical Society Annual Meeting. February 2004.
28. Smith RL, Chong TW, Hughes MG, Evans HL, McElearney, Saalwachter AR, Hedrick TL, Du K, Rudy CK, Pruett TL, Sawyer RG. Stimulation of human whole blood with immunomodulatory oligodeoxynucleotides alters neutrophil activation and life span. 6th World Congress on Shock, Trauma, Sepsis, and Inflammation. March, 2004.
29. Hughes MG, Chong TW, Smith RL, Evans HL, Camden JR, Sawyer RG, Rudy CK, Pruett TL. Hepatitis C Viral Quasispecies Selectivity of Allograft Infection after Liver Transplantation. American Transplant Congress, Boston, MA, May 2004.
30. Smith RL, Chong TW, Du K, Hughes MG, Evans HL, Hedrick TL, McElearney ST, Saalwachter AR, Pruett TL, Sawyer RG. Immunomodulatory DNA sequences enhance neutrophil activation in the LPS-stimulated human whole blood model. 24th Annual Meeting of the Surgical Infection Society (SIS), Indianapolis, IN, May 2004.
31. Evans HL, Saalwachter AS, McElearney ST, Smith RL, Chong TW, Hughes MG, Raymond DP, Pruett TL, Sawyer RG. Sex Hormones and Infectious Outcomes in Surgical Patients. 24th Annual Meeting of the Surgical Infection Society (SIS), Indianapolis, IN, April 2004. *Surg Infect.* 2004 May;5(1):97-98.
32. McElearney ST, Evans HL, Smith RL, Saalwachter AR, Chong TW, Hughes MG, Raymond DP, Pruett TL, Sawyer RG. Recapture of Favorable Infection Rates with Reintroduction of Quarterly Two-drug Antibiotic Rotation Against Gram-Negative Organisms. *Surg Infect.* 2004 May;5(1):91-2.
33. Hughes MG, Chong TW, Smith RL, Evans HL, Camden JR, Sawyer RG, Rudy CK, Pruett TL. CD81 Message and Protein Expression in Allografts after Liver Transplantation. International Liver Transplantation Society, Kyoto, Japan, June 2004.
34. Hughes MG, Chong TW, Smith RL, Evans HL, Sawyer RG, Pruett TL, Brayman KL. Excellent Short Term Results for Pancreatic Transplantation with Rabbit Anti-Lymphocyte Globulin and Intravenous Heparin. International Pancreas and Islet Transplantation Association, Geneva, Switzerland, May 2005.
35. Smith RL, Chong TW, Hedrick TL, McElearney ST, Hughes MG, Evans HL, Sawyer RG, Pruett TL. Does BMI affect infection-related outcomes in the ICU? *Surg Infect.* 2006 April;7(2).

36. Hughes MG, Prabhakaran S, Gross E, Nguyen T, Garcia-Roca R, Gillingham K, Humar A, Gruessner R, Sutherland D, Matas A, Kandaswamy R. Comparison of Outcomes for Three Laparoscopic Donor Nephrectomy Techniques: Hand-assist vs. Pure vs. Robotic-Assist. American Transplant Congress, San Francisco, CA, May 2007.
37. Hughes MG, Gruessner A, Gross E, Nguyen T, Garcia-Roca R, Kandaswamy R, Humar A, Payne W, Gruessner R. Long Term Outcomes of Liver Transplantation in Pediatric Patients for Biliary Atresia, Fulminant Hepatic Failure, Metabolic Disorders, and Primary Malignancy. American Transplant Congress, San Francisco, CA, May 2007.
38. Hughes MG, Gruessner A, Gross E, Nguyen T, Garcia-Roca R, Sharp H, Kandaswamy R, Humar A, Payne W, Gruessner R. Long-Term Outcomes for 42 Liver Transplants in Pediatric Patients with Alpha-1-antitrypsin Deficiency: A Single Center Experience. American Transplant Congress, San Francisco, CA, May 2007.
39. Hughes MG, Gruessner A, Gross E, Nguyen T, Garcia-Roca R, Kandaswamy R, Humar A, Payne W, Gruessner R. When and What to Transplant for Oxalosis: Long-Term Results of 37 Transplants (Kidney Transplant Alone, Simultaneous Liver and Kidney Transplant, and/or Pre-emptive Liver Transplant Prior to End Stage Renal Disease) at a Single Center. International Liver Transplantation Society. Rio de Janeiro, Brazil, June 2007.
40. Hughes MG, Gruessner A, Gross E, Nguyen T, Garcia-Roca R, Kandaswamy R, Humar A, Payne W, Gruessner R. Forty Two Pediatric Liver Transplants for Alpha-1-antitrypsin Deficiency: Long-Term Outcomes at a Single Center. International Liver Transplantation Society. Rio de Janeiro, Brazil, June 2007.

Publications

Peer Reviewed Journal Articles: Published or accepted for publication in final form

1. Travis JA, Hughes MG, Wong JM, Wagner WD, Geary RL: Hyaluronan enhances contraction of collagen by smooth muscle cells and adventitial fibroblasts. Role of CD44 and implications for constrictive remodeling. *Circ Res* 2001;88:77-83.
2. Hughes MG, Sawyer RS. Fungal Infections in Trauma and Burn Patients. *Current Treatment Options in Infectious Diseases* 2001; 3:499-505.
3. Evans HL, Shaffer MM, Hughes MG, Smith RL, Chong TW, Raymond DP, Volles DF, Pelletier SJ, Pruett TL, Sawyer RG. Contact Isolation in Surgical Patients: A Barrier to Care? *Surgery* 2003; 134(2).

4. Hughes MG, Evans HL, Lightfoot L, Chong TW, Smith RL, Raymond DP, Pelletier SJ, Claridge JA, Pruett TL, Sawyer RG. Does Prior Transfusion Worsen Outcomes from Infection in Surgical Patients? *Surgical Infections* 2003; 4(4): 335-344.
5. Hughes MG, Raymond DP, Evans HL, Smith RL, Chong TW, Pruett TL, Sawyer RG. Effect of an ICU Rotating Empiric Antibiotic Schedule on the Development of Hospital-acquired Infections on the Non-intensive Care Unit Ward. *Crit Care Med* 2004; 32(1): 53-60.
6. Hughes MG, Rudy CK, Chong TW, Smith RL, Evans HL, Iezzoni JC, Sawyer RG, Pruett TL. E2 Quasispecies Specificity of Hepatitis C Virus Association with Allografts Immediately after Liver Transplantation. *Liver Transplantation* 2004; 10(2): 208-216.
7. Smith RL, Chong TW, Hughes MG, Hedrick TL, Evans HL, MacElerney ST, Salwaacher AR, Raymond DP, Du K, Rudy CK, Pruett TL, Sawyer RG. Impact of Immunomodulatory Oligodeoxynucleotides on Cytokine Production in the Lipopolysaccharide-Stimulated Human Whole Blood Model. *Surgery* 2004; 136 (2): 464-472
8. Evans HL, Milburn ML, Hughes MG, Smith RL, Chong TW, Raymond DP, Pelletier SJ, Pruett TL, Sawyer RG. Nature of gram-negative rod antibiotic resistance during antibiotic rotation. *Surg Infect (Larchmt)*. 2005;6(2):223-31.
9. Hughes MG, Chong TW, Smith RL, Evans HL, Pruett TL, Sawyer RG. Comparison of fungal and nonfungal infections in a broad-based surgical patient population. *Surg Infect (Larchmt)*. 2005 Spring;6(1):55-64.
10. Hughes MG, Chong TW, Smith RL, Evans HL, Iezzoni JC, Sawyer RG, Rudy CK, Pruett TL. HCV infection of the transplanted liver: changing CD81 and HVR1 variants immediately after liver transplantation. *Am J Transplant*. 2005 Oct;5(10):2504-13.
11. Chong TW, Smith RL, Hughes MG, Camden J, Rudy CK, Evans HL, Sawyer RG, Pruett TL. Primary human hepatocytes in spheroid formation to study hepatitis C infection. *J Surg Res*. 2006 Jan;130(1):52-7. Epub 2005 Sep 8.
12. Stiles BM, Reece TB, Hedrick TL, Garwood RA, Hughes MG, Dubose JJ, Adams RB, Schirmer BD, Sanfey HA, Sawyer RG. General surgery morning report: a competency-based conference that enhances patient care and resident education. *Curr Surg*. 2006 Nov-Dec;63(6):385-90.
13. Evans HL, Lefrak SN, Lyman J, Smith RL, Chong TW, McElearney ST, Schulman AR, Hughes MG, Raymond DP, Pruett TL, Sawyer RG. Cost of Gram-negative resistance. *Crit Care Med*. 2007 Jan;35(1):89-95.