

M. Ann Kuhn, M.D.

Appointments

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Credentials

BS: Biology/Chemistry, cum laude, West Virginia Wesleyan College, Buckhannon, West Virginia, 1985

MD: Marshall University School of Medicine, Huntington, West Virginia, 1996

Residency:

General Surgery, Ohio State University, Columbus, Ohio, 2001-2003
General Surgery, University of South Florida College of Medicine, Tampa, Florida, 1997-1999
Trauma/Research, Department of Pediatric Surgery, Children's Hospital, Columbus, Ohio, 2000-2001

Fellowship:

Pediatric Surgery, Oklahoma University, Oklahoma City, Oklahoma, 2003-2005
Wound Healing Research Fellowship, Institute For Tissue Regeneration, Repair, and Rehabilitation, Bay Pines Veterans Administration Medical Center, Bay Pines, Florida, 1999-2000

Certifications

Ohio, 2000

Professional Organization Memberships

American Medical Student Association, 1993
American Academy of Family Practice-Student Chapter, 1993
Alpha Omega Alpha, National Honor Medical Society, 1994
American College of Surgeons, Candidate, 1999
Association of Women Surgeons, Institutional Member, 1999

American Medical Association, 1999
The Zollinger Surgical Society, 2003

Honors and Awards

Outstanding Senior of the Year Award, 1985
Greek Woman of the Year Award, 1985
Who's Who Among Students in American Universities & Colleges
National Dean's List
Mortar Board
Phi Kappa Phi - Junior/Senior Honorary
Alpha Lambda Delta - Freshman/Sophomore Honorary
President, Beta Beta Beta - Biology Honorary
Alpha Omega Alpha, National Honor Medical Society
Watson Clinic Foundation Award for Scientific Achievement, 2000
Surgical Housestaff Officer of the Year, 2001
Grant Morrow III Resident/Fellow Research Prize, 2001
Resident of the Year, Department of Pediatric Surgery, 2001-2002
The Department of Surgery Student Teaching Award, 2002-2003

Publications

1. **M. A. Kuhn**, M.D., S. Singh, M.D., PhD, P. D. Smith, M.D., F. Ko, B.S., R. Falcone, B.S., W. G. Lyle, M.D., S. P. Maggi, M.D., K. E. Wells, M.D., M. C. Robson, M.D.
Periprosthetic Breast Capsules Contain The Fibrogenic Cytokines TGF_{β1} and TGF_{β2}
Suggesting Possible New Treatment Approaches. *Ann Plast Surg* 44:387-391, 2000.
2. P. D. Smith, M.D., **M. A. Kuhn**, M.D., M. G. Franz, M.D., T. L. Wachtel, M.D., T.E. Wright, M.D., M. C. Robson, M.D. Initiating The Inflammatory Phase Of Incisional Healing Prior To Tissue Injury. *J Surg Res* 92:11-17, 2000.
3. **M. A. Kuhn**, M.D., P. D. Smith, M.D., D. P. Hill, Pharm. D., F. Ko, B.S., D. D. Meltzer, B.S., R.N., J. S. VandeBerg, Ph.D., M. C. Robson, M. D. In Vitro Fibroblast-Populated Collagen Lattices (FPCLs) Are Not Good Models Of In Vivo Clinical Wound Healing. *Wound Rep Reg* 8:270-276, 2000.
4. M. G. Franz, M.D., **M. A. Kuhn**, M.D., K. Nguyen, B.S., X. Wang, M.D., Ph.D., F. Ko, B.S., T. E. Wright, M.D., M. C. Robson, M.D. A Biologic Approach to Prevention and Treatment of Incisional Hernias. *Surg Forum* 51:585-587, 2000.
5. L. L.Q. Pu, M.D., Ph.D., P. D. Smith, M.D., W. G. Payne, M.D., **M. A. Kuhn**, M.D., X. Wang, M.D., Ph.D., F. Ko, B.S., M. C. Robson, M.D. Overexpression of Transforming Growth Factor Beta-2 and Its Receptor in Rhinophyma: An Alternative Mechanism of Pathobiology. *Ann Plast Surg* 45:515-519, 2000.
6. E. L. Dupont, M.D., **M.A. Kuhn**, M.D., C. McCann, B.S., C. Salud, B.A., J. L. Spanton, ARNP, C.E. Cox, M.D. The Role of Sentinel Lymph Node Biopsy in Women Undergoing Prophylactic Mastectomy. *Am J Surg* 180:274-277, 2000.

7. M. G. Franz, M.D., **M. A. Kuhn**, M.D., T. E. Wright, M.D., T. L. Wachtel, M.D., M. C. Robson, M.D. The Use Of The Wound Healing Trajectory As An Outcome Determinant For Acute Wound Healing. *Wound Rep Reg* 8:511-516, 2000.
8. M. G. Franz, M.D., P. D. Smith, M.D., T. L. Wachtel, M.D., T. E. Wright, M.D., **M. A. Kuhn**, M.D., F. Ko, B.S., M. C. Robson. Fascial Incisions Heal Faster Than Skin: A Novel Model of Abdominal Wall Repair. *Surgery* 129:203-208, 2001.
9. **M. A. Kuhn**, M.D., P. D. Smith, T. L. Wachtel, M.D., T. E. Wright, M.D., Rogazewski, B.S., K. Nguyen, M.C. Robson, M.D., M. G. Franz, M.D. Abdominal Wall Repair is Delayed During Hepatic Regeneration. *J Surg Res* 95:54-60, 2001.
10. **M. A. Kuhn**, M.D., M. R. Moffitt, M.D., P. D. Smith, M.D., W. G. Lyle, M.D., F. Ko, B.S., D. D. Meltzer, B.S., R.N., M. C. Robson, M.D. Silicone Sheeting Decreases Fibroblast Activity And Downregulates TGF β ₂ In Hypertrophic Scar Model. *Int J Surg Inv* 2:467-474, 2001.
11. **M. A. Kuhn**, M.D., W. G. Payne, M.D., P. C. Kierney, M.D., L.L.Q. Pu, M.D., P. D. Smith, MD, F. Ko, B.S., X. Wang, Ph.D., M. C. Robson, M.D. Cytokine Manipulation of Explanted Dupuytren's Affected Human Palmar Fascia. *Int J Surg Inv* 2:443-456, 2001.
12. M. G. Franz, M.D., **M. A. Kuhn**, M.D., K. Nguyen, B.S., W. Wang, M.D., Ph.D., F. Ko, B.S., T. E. Wright, M.D., M. C. Robson, M.D. Transforming Growth Factor β ₂ Lowers the Incidence of Incisional Hernias. *J Surg Res* 97:109-116, 2001.
13. M. G. Franz, M.D., **M. A. Kuhn**, M.D., K. Nguyen, B.S., X. Wang, M.D., Ph.D., F. Ko, B.S., T. E. Wright, M.D., M. C. Robson, M.D. Early Biomechanical Wound Failure: A Mechanism for Ventral Incisional Hernia Formation. *Wound Rep Regen* 9:140-, 2001.
14. **M. A. Kuhn**, M.D., L. Page, M.D., K. Nguyen, B.S., F. Ko, B.S., X. Wang, Ph.D., T. L. Wachter, M.D., M. C. Robson, M.D. Basic Fibroblast Growth Factor in a Carboxymethylcellulose Vehicle Reverses the Bacterial Retardation of Wound Contraction. *Wounds* 13:73-80, 2001.
15. M. Michalsky, M.D., **A. Kuhn**, M.D., V. Mehta, Ph.D., G. Besner, M.D. HB Binding EGF-like Growth Factor (HB-EGF) Modulates Apoptosis in Intestinal Epithelial Cells In Vitro. *J Ped Surg* 36:1130-1135, 2001.
16. **M. A. Kuhn**, M.D., J. I. Groner. Fluid Resuscitation in the Pediatric Trauma Patient. *Trauma Reports* September, 2001.
17. **M. A. Kuhn**, M.D., X. Wang, Ph.D., W. G. Payne, M.D., F Ko, B.S., M. C. Robson, Robson, M.D. Tamoxifen Decreases Fibroblast Function and Downregulates TGF β ₂ in Dupuytren's Affected Palmar Fascia. *J Surg Res* 2002;103:146-152.
18. **M. A. Kuhn**, M.D., A. Shons, M.D., R. Miguel, M.D., P. Dyches, R.N., C. Cox, M.D. The Effect of Sentinel Node Selective Axillary Lymphadenectomy on the Incidence of Postmastectomy Pain Syndrome. *Cancer Control Journal*. 2001;8:427-430.

19. T. E. Wright, M.D., **M. A. Kuhn**, M.D., P. D. Smith, M.D., P. R. Sanberg, M.D., M. C. Robson, M.D., The Effects of Sertoli Cell-Conditioned Media on Wound Healing. *Int J Surg Inv* 2001; 3:21-30.
20. G. P. Ladwig, M. C. Robson, M.D., R. Liu, **M. A. Kuhn**, M.D., D. F. Muir, G. S. Schultz, M.D. Ratios of Activated Matrix Metalloproteinase-9 to Tissue Inhibitor of Matrix Metalloproteinase-1 in Wound Fluids are Inversely Correlated With Healing of Pressure Ulcers. *Wound Repair Regen* 2002;10:26-37.
21. **M. A. Kuhn**, M. D., G. Xia, M.D., Ph. D., G. E. Besner, M.D. Heparin Binding EGF-Like Growth Factor (HB-EGF) Decreases Oxygen Free Radical Production In Vitro and After Intestinal Ischemia-Reperfusion Injury. *Antioxid Redox Signal* 2002;4:639-646.
22. E. R. Haut, M.D., M. L. Nance, M.D., M. S. Keller, M.D., J. I. Groner, M.D., H. R. Ford, M.D., **A. Kuhn**, M.D., B. Tuchfarber, R.N., V. Garcia, M.D., C. W. Schwab, M.D., P. W. Stafford, M.D. Management of Penetrating Colon and Rectal Injuries in the Pediatric Patient. *Diseases of the Colon & Rectum* (in press)
23. D. A. Dubay, M.D., X. Wang, M.D., Ph.D., **M. A. Kuhn**, M.D., M. C. Robson, M.D., M. G. Franz, M.D. The Prevention of Incisional Hernia Formation Using a Delayed-Release Polymer of Basic Fibroblast Growth Factor. *Annals of Surgery* 2004;240:179-186.
24. B. H. Edil, M. D., D. W. Tuggle, M.D., S. Jones, R.N., Roxie Albrecht, M.D., **M. A. Kuhn**, M.D., P. C. Mantor, M.D., N. K. Puffinbarger, M.D. Pediatric Major Resuscitation – Respiratory Compromise as a Criterion for Mandatory Surgeon Presence. *Journal of Pediatric Surgery* 2005;40:926-928.
25. S. Manatt, M.D., J. B. Campbell, M.D., F. Ramji, M.D., **M.A. Kuhn, M.D.**, D. Frimberger, M.D. Inguinal Herniation of the Bladder in an Infant. *Canadian Journal of Urology* 2006;13:3057-3058.
26. Nuss D, **Kuhn MA**, Obermeyer RJ. Our approach: MIS repair of pectus excavatum. *Contemporary Surgery* 2007; 63(9):444-451.
27. Johnson K, Vaughan A, Derkay C, Welch JC, Werner A, **Kuhn MA**, et al. Microdebrider vs electrocautery: a comparison of tonsillar wound healing histopathology in a canine model. *Otolaryngol Head Neck Surg* 2008; Apr; 138(4):486-91.
28. Redlinger, Jr, RE, Rushing, GD, Moskowitz, AB, Kelly, Jr. RE, Nuss, D, **Kuhn, MA**, Obermeyer, RJ, Goretsky, MJ. Minimally Invasive Repair of Pectus Excavatum in Patients with Marfan Syndrome and Marfanoid Features. *Journal of Pediatric Surgery* 2010;45(1):193-199.

BOOK CHAPTERS

A. Kuhn, M.D., G. Besner, M.D. Breast Disorders in the Pediatric Patient. In: Mettei (Ed). Surgical Directives: Pediatric Surgery. Lippincott, Williams, & Wilkins. 2002; 701-705.

M. A. Kuhn, M.D., D. W. Tuggle, M.D., Abdominal Compartment Syndrome in the Pediatric Patient. In: Ivatury, Cheatham, Chang, Malbrane, Sugrue (Eds). Abdominal Compartment Syndrome. Eureka.com. 2005.

M. Ann Kuhn, M.D., D. Nuss, M.B., Ch.B. Thoracic Wall Deformities. In: Thoracic Wall Deformities – Diagnosis and Therapy. Springer. In press 2008.

M. Ann Kuhn, M.D., D Nuss, M.B., Ch.B. Pectus Deformities. In Fundamentals of Pediatric Surgery. Springer. In press 2008.

Abstracts and Presentations

1. C. E. Cox, M.D., **M. A. Kuhn, M.D.,** Meg Cass-Garcia, R.N., M.S.N, Chris Salud, B.A., E. Dupont, M.D. A New Technique: Isoperistaltic Continent Permanent Gastrostomy (Reverse Beck Tube). Poster presentation at the 68th Annual Meeting of the Southeastern Surgical Congress. Lake Buena Vista, Florida, February 5- 8, 2000.
2. **M. A. Kuhn, M.D.,** P. D. Smith, M.D., T. L. Wachtel, M.D., T.E.Wright, M.D., A Rogaczewski, B.S., K. Nguyen, B.S., M. C. Robson, M. D. Hepatic Regeneration Induces a Delay in Abdominal Wall Repair. Presented at the Resident’s Conference of the 61st Annual Meeting of The Society of University Surgeons. February 10-12, 2000.
3. L. E. Page, B.S., **M. A. Kuhn, M.D.,** F. Ko, B.S., X. Wang, Ph.D., M. C. Robson, M.D. Fibroblast Growth Factor Reverses the Bacterial Retardation of Wound Contraction. Winner of Watson Clinic Foundation Award for Scientific Achievement. Presented at the University of South Florida Student Research Day. February 10, 2000.
4. K. Nguyen, B.S., **A. Kuhn, M.D.,** X. Wang Ph.D., M.C. Robson, M.D., M. G. Franz, M.D. A Biological Approach to Prevention and Treatment of Incisional Hernias. Presented at the University of South Florida Student Research Day. February 10, 2000.
5. M. G. Franz, M.D., **M. A. Kuhn, M.D.,** T. E. Wright, M.D., P. D. Smith, M.D., T. L. Wachtel, M.D., A. Rogaczewski, B. S., K. Nguyen, M. C. Robson, M.D. Hepatic Regeneration Induces a Delay in Simultaneous Abdominal Wall Repair. Presented at the Association of VA Surgeons, Twenty-fourth Scientific Symposium. Seattle, Washington. April 8-11, 2000.
6. E. L. Dupont, M.D., **M.A. Kuhn, M.D.,** C. McCann, B.S., C. Salud, B.A., J. L. Spanton, ARNP, C.E. Cox, M.D. The Role of Sentinel Lymph Node Biopsy in Women Undergoing Prophylactic Mastectomy. Presented at the Annual Meeting of the American Society of Breast Surgeons, Charleston, South Carolina, April 13-16, 2000.
7. K. Nguyen, B.S., M. G. Franz, M.D., **A. Kuhn, M.D.,** M. C. Robson, M.D. A Novel Model for the Acceleration of Acute Abdominal Incisional Wound Healing with Slow-Release Polymer Basic Fibroblast Growth Factor Rods. Presented as an Honors Thesis at the University of South Florida, Tampa, Florida, May, 2000.
8. M. G. Franz, M.D., **M. A. Kuhn, M.D.,** K. Nguyen, B.S., X. Wang, M.D., Ph.D., F. Ko, B.S., T. E. Wright, M.D., M. C. Robson, M.D. A Biological Approach to Prevention And

Treatment of Incisional Hernias. Poster presentation at the First World Wound Healing Congress, Melbourne, Australia. September 10-13, 2000.

9. M. G. Franz, M.D., P. D. Smith, M.D., T. L. Wachtel, M.D., T. E. Wright, M.D., **M. A. Kuhn**, M.D., F. Ko, B.S., M. C. Robson. Fascial Incisions Heal Faster Than Skin: A New Model of Abdominal Wall Repair. Poster presentation at the First World Wound Healing Congress, Melbourne, Australia. September 10-13, 2000.
10. **M. A. Kuhn**, M.D., W. G. Payne, M.D., P. C. Kierney, M.D., L.L.Q. Pu, M.D., P. D. Smith, MD, F. Ko, B.S., X. Wang, Ph.D., M. C. Robson, M.D. Cytokine Manipulation of Explanted Dupuytren's Affected Human Palmar Fascia. Poster presentation at the First World Wound Healing Congress, Melbourne, Australia, September 10-13, 2000.
11. M. G. Franz, M.D., **M. A. Kuhn**, M.D., K. Nguyen, B.S., X. Wang, M.D., Ph.D., F. Ko, B.S., T. E. Wright, M.D., M. C. Robson, M.D. A Biological Approach to Prevention And Treatment of Incisional Hernias. Presented at the 55th Annual Surgical Forum, Chicago, Illinois, October 22-27, 2000.
12. M. G. Franz, M.D., **M. A. Kuhn**, M.D., K. Nguyen, B.S., X. Wang, M.D., Ph.D., F. Ko, B.S., T. E. Wright, M.D., M. C. Robson, M. D. Abdominal Wall Fascial Fibroblasts are More Active Than Dermal Fibroblasts Following Acute Wounding. Presented at the Annual Meeting of the Wound Healing Society, Toronto, Ontario, Canada, June, 2000.
13. **A. Kuhn**, M.D., M. Michalsky, M.D., S. Glenn, B.A., V. Mehta, Ph.D., G. Besner, M.D. Heparin-Binding EGF-Like Growth Factor Decreases Oxygen Free Radical Production. Presented at the Columbus Surgical Society Presidential Symposium, Columbus, Ohio, March 3, 2001.
14. **A. Kuhn**, M.D., M. Michalsky, M.D., S. Glenn, B.S., V. Mehta, Ph.D., G. Besner, M.D. The Effect of Heparin-Binding EGF-Like Growth Factor (HB-EGF) on Oxygen Free Radical Production in Leukocytes. Presented at the 32nd Annual Meeting of The American Pediatric Surgical Association, Naples, Florida, May 20-23, 2001.
15. **A. Kuhn**, M.D., S. Glenn, B.S., G. Besner, M.D. Heparin-Binding EGF-Like Growth Factor (HB-EGF) Decreases Oxygen Free Radical Production. Presented at the Children's Hospital Research Forum, Columbus, Ohio, May 31-June 1, 2001.
16. **A. Kuhn**, M.D., J. Hayes, Ph.D., W Bowen, J. Groner, M.D., D. Caniano. Saving Lives and Saving Dollars: The Efficacy of Passenger Restraints in Children Requiring Hospitalization for Motor Vehicle Crashes. Presented at the Children's Hospital Research Forum, Columbus, Ohio, May 31-June 1, 2001.
17. M. G. Franz, M.D., **M. A. Kuhn**, M.D., X. Wang, Ph.D., M.C. Robson, M. D. The Prevention of Acute Fascial Wound Failure. Presented at the European Tissue Repair Society, Cardiff, Wales, September 5-8, 2001.
18. **M. A. Kuhn**, M.D., G. Xia, M.D., G. E. Besner, M.D. The Effect of Heparin Binding EGF-Like Growth Factor (HB-EGF) on Ischemia/Reperfusion Injury-Induced Oxygen Free Radical Production in Rats. Presented at the American Academy of Pediatrics National

Conference and Exhibition Section on Surgery, San Francisco, California, October 19-24, 2001.

19. **A. Kuhn**, M.D., D. Tuggle, M.D., S. Jones, R.N., R. Albrecht, M.D., C. Mantor, M.D., N. Puffinbarger, M.D. Hyperglycemia and Infections in Pediatric Trauma Patients. Presented at the Region VI Resident Paper Competition, Dallas, Texas, November 7-8, 2003.
20. **A. Kuhn**, M.D., D. Tuggle, M.D., S. Jones, R.N., R. Albrecht, M.D., C. Mantor, M.D., N. Puffinbarger, M.D. Hyperglycemia and Infections in Pediatric Trauma Patients. Presented at the Thirty-Fourth Annual Meeting of the Western Trauma Association, Steamboat Springs, Colorado, February 22-27, 2004.