

Curriculum Vitae

Earl A. Gage, MD

Education

1997	BS	Brigham Young University – Provo, Utah Graduated <i>cum laude</i> with a degree in zoology and minor in Italian
2001	MD	University of Texas Southwestern Medical Center - Dallas, Texas

Post Doctoral Training

2001 - 2002	Intern in General Surgery - Indiana University School of Medicine – Indianapolis, Indiana
2002 - 2006	Resident in General Surgery - Indiana University School of Medicine - Indianapolis, Indiana
2006 - 2007	Chief Resident in General Surgery – Indiana University School of Medicine – Indianapolis, Indiana
2007 - 2009	Fellow in Plastic and Reconstructive Surgery – Cleveland Clinic Foundation – Cleveland, Ohio
2009 - 2010	Fellow in Craniofacial Surgery with Jeff Fearon, MD at Medical City Dallas – Dallas, Texas

Certifications

American Board of Plastic Surgery	Expires 12/31/2021
American Board of Surgery – certificate #52868	Expires 07/01/2018

Medical Licensure

State of Indiana Physician Medical License
State of Ohio Physician Medical License
State of Texas Physician Medical License
State of North Carolina Medical License
State of Missouri Medical License

Professional Experience

2012 – present	Mercy Kids Plastic Surgery – Mercy Hospital St Louis, MO
2010 – 2012	Assistant Professor of Surgery – UNC Hospitals (Plastic & Reconstructive Surgery/Craniofacial Surgery)
2003 – 2007	Cardiovascular Critical Care resident moonlighter, Methodist Hospital – Indianapolis, Indiana
2000 – 2001	Gross Anatomy Teaching Assistant - University of Texas Southwestern Medical Center – Dallas, Texas
1995 – 1996	Accounting Intern Folio Corporation - Provo, Utah

Languages

Italian and Spanish

Awards and Scholarships

1991 – 1997	Recipient – Brigham Young University Trustee Scholarship
1995 – 1997	Recipient – Orange Memorial Hospital Corporation Undergraduate Health Professions Academic Scholarship
1999	Finalist Award – University of Texas Southwestern Medical Center Student Research Forum
1997 – 2001	Recipient – Orange Memorial Hospital Corporation Graduate Health Science Academic Scholarship
2004	Recipient – American Association for Cancer Research Astra Zeneca Scholar-in-Training Award
2005	Poster of Distinction Award – Digestive Disease Week Chicago, Illinois
2006	Elected Honorary Housestaff Member of Alpha Omega Alpha Honor Medical Society

Research Experience

1998	Research Intern University of Texas Southwestern Medical Center
2003 – 2004	Research Fellow Indiana University School of Medicine, Department of Surgery

Oral Presentations

1. “Changes in thymic function with age and during the treatment of HIV infection.” University of Texas Southwestern Medical Center Medical Student Research Forum held in Dallas, Texas, spring 1999.
2. “Role of NF- κ B in hepatocellular carcinoma – Preliminary data.” Presented at the Indiana University School of Medicine Surgical Research Forum, held December 17, 2003.
3. “Characterization of a novel MEK inhibitor (PD181461) which inhibits human hepatocellular carcinoma growth in vitro and in vivo.” Presented at the 95th Annual Meeting of the American Association for Cancer Research held in Orlando, Florida March 27-31, 2004.
4. “NF- κ B and cyclooxygenase-2 inhibitors provide synergistic inhibition of hepatocellular carcinoma cellular proliferation possibly through modulation of IKB α .” Presented at the Indiana Chapter of the American College of Surgeons annual meeting held in Bloomington, Indiana, April 22-24, 2004.
5. “Post mastectomy breast reconstruction.” Grand Rounds, Indiana University Department of Surgery, December 6, 2006.
6. “Non-syndromic craniosynostosis.” Grand Rounds, Cleveland Clinic Department of Plastic and Reconstructive Surgery, January 9, 2008
7. “Breast reconstruction: current practice and future directions.” Grand Rounds, Cleveland Clinic Department of Plastic and Reconstructive Surgery, March 12, 2008.
8. “CT angiogram in deep inferior epigastric perforator flap breast reconstruction.” Presented at the Ohio Valley Society of Plastic Surgeons annual meeting held in Cleveland, Ohio, May 16-18, 2008.
9. “Preservation of the nipple-areolar complex in nipple sparing mastectomy: an aesthetic evaluation of 139 patients.” Presented at the ASPS Senior Resident’s Conference in Austin, Texas, January 15-17, 2009.

10. "Preservation of the nipple areolar complex: A subjective and objective review of aesthetic outcomes following nipple-sparing mastectomy." Presented at the American Association of Plastic Surgeons annual meeting held in Rancho Mirage, California, March 21-25, 2009.
11. "Melanoma and Congenital Pigmented Nevi" Selected Readings resident education conference, UNC division of plastic surgery, October 5, 2010.
12. "Vascular Anomalies" Presentation to the Cutting Edge of Pediatrics held at University of North Carolina's Friday Center for Continuing Education, Chapel Hill, North Carolina, October 8, 2010.
13. "Pediatric Vascular Anomalies: diagnosis and management." Selected Readings resident education conference, UNC division of plastic surgery, October 12, 2010.
14. "Syndromic Craniosynostoses and Hemifacial Microsomia." Selected Readings resident education conference, UNC division of plastic surgery, October 26, 2010.
15. "Craniosynostosis and Positional Plagiocephaly" Pediatric Grand Rounds, Wakemed Hospital, Raleigh, North Carolina, November 17, 2010.
16. "Limited Reduction Cranioplasty for Hydrocephalic Macrocephaly." Presented at the annual meeting of the American Association of Plastic Surgeons held in Boca Raton, Florida, April 11-13, 2011.
17. "Syndromic Craniosynostosis." Presented at UNC Department of Surgery Grand Rounds, June 29, 2011.

Poster Presentations

1. **Gage EA**, Ralstin MC, Patel A, Yip-Schneider MT, Lillemoe KD, Schmidt CM. NF- κ B and cyclooxygenase-2 inhibitors provide synergistic inhibition of hepatocellular carcinoma cellular proliferation possibly through modulation of IKB α . Presented at Digestive Disease Week 2004 held in New Orleans, Louisiana – May 15-20, 2004.
2. Ralstin MC, **Gage EA**, Yip-Schneider MT, Wiebke EA, Lillemoe KD, Schmidt CM. NF- κ B and COX-2 inhibitors provide complementary growth inhibition in human hepatocellular carcinoma through apoptosis and cyclin1 mediated G0/G1 arrest. Presented at Digestive Disease Week 2005 held in Chicago, Illinois – May 14-19, 2005.
3. Wentz SC, Yip-Schneider MT, **Gage E**, Wang Y, Klein PJ, Wiebke EA, Schmidt CM. Sulindac decreases N-nitrosobis(2-oxypropyl)amine-induced intrahepatic cholangiocarcinoma formation in hamsters. Presented at 97th annual meeting of the American Association for Cancer Research held in Washington, DC – March 2006.

Abstracts

1. Choi JN, Albertin F, Wiesehauer CA, Yip-Schneider MT, **Gage E**, Klein PJ, Wang Y, Schmidt CM. Doxorubicin's effect on MEK-ERK signaling predicts its efficacy in HCC. In Proceedings of the Annual Meeting of the Society of University Surgeons Resident's Conference – February 2004.
2. **Gage EA**, Wiesener CA, Choi JN, Klein PJ, Yip-Schneider MT, Wang Y, Albertin F, Sebolt-Leopold JS, Schmidt CM. Characterization of a novel MEK inhibitor (PD181461) which inhibits human hepatocellular carcinoma growth in vitro and in vivo. In Proceedings of the American Association for Cancer Research – March 2004.

3. **Gage EA**, Ralstin MC, Patel A, Yip-Schneider MT, Lillemoe KD, Schmidt CM. NF- κ B and cyclooxygenase-2 inhibitors provide synergistic inhibition of hepatocellular carcinoma cellular proliferation possibly through modulation of IKB α . In Proceedings of the Digestive Disease – May 2004.
4. Choi JN, Albertin F, Klein PJ, Wang Y, Yip-Schneider MT, **Gage EA**, Wiesenbauer CA, Wiebke E, Lillemoe KD, Schmidt CM. Doxorubicin's effect on MEK activity predicts its chemotherapeutic response in hepatocellular carcinoma. In Proceedings of the 90th Annual Clinical Congress of the American College of Surgeons – October 2004.
5. Klein PJ, Wiesenbauer CA, Choi JN, **Gage EA**, Hennig M, Zeni A, McCune K, Wait A, Wiebke EA, Schmidt CM. Hep3B human hepatocellular carcinoma cells exhibit resistance through increased phospho-ERK signaling after long-term exposure to MEK inhibitors. Presented at IU Cancer Center Annual Meeting – 2004
6. Wentz SC, Yip-Schneider MT, **Gage E**, Wang Y, Klein PJ, Wiebke EA, Schmidt CM. Sulindac decreases N-nitrosobis(2-oxypropyl)amine-induced intrahepatic cholangiocarcinoma formation in hamsters. In Proceedings of the American Association for Cancer Research – March 2006.
7. Wentz SC, Yip-Schneider MT, **Gage E**, Wang Y, Klein PJ, Wiebke EA, Schmidt CM. Sulindac decreases N-nitrosobis(2-oxypropyl)amine-induced precancerous hepatocellular lesion formation in hamsters. Submitted to the 92nd annual clinical congress of the American College of Surgeons to be held in Chicago, Illinois – October 2006.

Journal Articles

1. Douek DC, McFarland RD, Keiser PH, **Gage EA**, Massey JM, Haynes BF, Polis MA, Haase AT, Feinberg MB, Sullivan JL, Jamieson BD, Zack JA, Picker LJ, Koup RA. Changes in thymic function with age and during the treatment of HIV infection. *Nature*. 396(6712):690-5, 1998 Dec 17.
2. Klein PJ, Schmidt CM, Wiesenbauer CA, Choi JN, **Gage EA**, Yip-Schneider MT, Wang Y, Omer C, Sebolt-Leopold JS. The effects of a novel MEK inhibitor (PD181461) on MEK-ERK signaling and growth in human hepatocellular carcinoma. *Neoplasia*. 8(1):1-8, 2006 Jan.
3. **Gage EA**, Ralstin MC, Yip-Schneider MT, Klein PJ, Schmidt CM. Parthenolide cooperates with NS398 to inhibit growth of human hepatocellular carcinoma cells through effects on apoptosis and G₀/G₁ cell cycle arrest. *Molecular Cancer Research*. 4(6):387-99, 2006 Jun.
4. **Gage EA**, Jones G, Powelson JA, Johnson MS, Goggins WC, Fridell JA. Treatment of enterocutaneous fistula in pancreas transplant recipients using percutaneous drainage and fibrin sealant: three cases. *Transplantation*. 82(9):1238-40, 2006 Nov.
5. Fridell JA, **Gage EA**, Powelson JA, Goggins WC. Complex arterial reconstruction for pancreas transplantation in patients with advanced atherosclerosis. *Transplantation*. 83(10):1385-8, 2007 May.
6. Djohan R, **Gage E**, Bernard S. Breast reconstruction options following mastectomy. *Cleveland Clinic Journal of Medicine*, supplement . 75(1): S17-23, 2008 Mar.

7. Wentz SC, Yip-Schneider MT, **Gage EA**, Saxena R, Badve S, Schmidt CM. Sulindac prevents carcinogen-induced intrahepatic cholangiocarcinoma formation in vivo. *Journal of Surgical Research*. 157(1):e87-95, 2009 Nov.
8. Pryor L, **Gage E**, Langevin CJ, Herrera F, Breithaupt A, Gordon CR, Afifi A, Zins JE, Meltzer H, Gosman A, Cohen S, Holmes R. Review of Bone Substitutes. *Craniofacial Trauma Reconstruction* 2009;2:151-160.
9. Djohan R, **Gage E**, Gatherwright J, Pavri S, Firouz J, Bernard S, Yetman R. Patient satisfaction following nipple-sparing mastectomy and immediate breast reconstruction: An 8-year outcome study. *Plastic and Reconstructive Surgery*. 2010; 125(3):818-829.
10. **Gage E**, Swift D, Sacco D, Fearon JA. Limited reduction cranioplasty for the treatment of hydrocephalic macrocephaly. *Plastic and Reconstructive Surgery* 2011; 128(6): 1272-1280.

Book Chapters

1. **Gage E** and Broadie T. "Multiple Endocrine Neoplasia." In: Micon L, Azuaje R, Tevar A. *Surgery Review Illustrated*. McGraw-Hill, New York, New York, 2005.
2. Djohan R, **Gage E**, Bernard S. "Chapter 8 - Microsurgical Techniques." In: Siemionow M and Eifenmann-Klein M. *Plastic and Reconstructive Surgery*. Springer-Verlag, London. 2010, pp 89-100.
3. **Gage E**, Langevin CJ, Papay F. "Chapter 11 - Biomaterials in Craniofacial Reconstruction." In: Siemionow M and Eifenmann-Klein M. *Plastic and Reconstructive Surgery*. Springer-Verlag, London. 2010, pp 125-36.
4. Langevin CJ, **Gage E**, Papay F. "Chapter 19 - Craniofacial clefting syndromes." In: Siemionow M and Eifenmann-Klein M. *Plastic and Reconstructive Surgery*. Springer-Verlag, London. 2010, pp 253-64.

Professional Affiliations

2002 – present	Candidate – American College of Surgeons
2005 – present	Member – American Medical Association
2010 – present	Member – American Society of Maxillofacial Surgeons
2011 – present	Member – American Cleft Palate – Craniofacial Association
2012 – present	Member – American Society of Plastic Surgeons

Volunteer Activities

1992 – 1994	Volunteer missionary service in Northern Italy and Southern Switzerland
1995 – 1997	Management staff volunteer – Utah Special Olympic Games
1999 – 2001	Organizer/lecturer – UT Southwestern Sexually Transmitted Disease Awareness lecture series
2005 - 2007	Youth soccer coach – Pike Youth Soccer Recreation League – Indianapolis, Indiana
2007	Youth soccer coach – Cleveland Heights Youth Soccer League – Cleveland Heights, Ohio.
2010 - 2012	Youth soccer coach – Chapel Hill YMCA youth soccer league – Chapel Hill, NC

2010 - 2012	Assistant youth baseball coach – Carrboro Parks and Recreation Fall Youth Baseball League – Carrboro, NC
2011 - 2012	Assistant youth baseball coach – Carrboro Parks and Recreation Spring Youth Baseball League – Carrboro, NC
2011	Youth soccer coach – Chapel Hill YMCA youth soccer league – Chapel Hill, NC
2011, 2012	Rotaplast craniofacial surgery medical mission trip – Iquique, Chile

Personal Interests

Running, triathlons, scouting, youth sports, foreign medical mission work, learning languages