

Edward C. Ray, MD, FACS

LICENSURE & CERTIFICATION

Diplomate, American Board of Surgery (2007, recertified 2014)
 Diplomate, American Board of Plastic Surgery (2009)
 Medical Licenses in New York and California
 Undersea and Hyperbaric Medicine Society certified

EDUCATION

1998	Doctor of Medicine	Mayo Medical School (<i>Rochester, MN</i>)
1994	Bachelor of Arts (Chemistry & Biochemistry) <i>cum laude, with distinction, Dean Scholar, Honors Research Program</i>	Cornell University (<i>Ithaca, NY</i>)

POST-DOCTORAL TRAINING

2015 - 2016	<i>Microsurgery Fellowship</i>	Memorial Sloan-Kettering Cancer Center <i>New York, NY</i>
2005 - 2008	<i>Plastic & Reconstructive Surgery Residency</i>	University of Southern California Keck School of Medicine <i>Los Angeles, CA</i>
2000 - 2002	<i>Post-Doctoral Research Fellowship</i> EGF, hGH, intestinal amino acid transporters	University of Rochester Medical School Department of Surgery <i>Rochester, NY</i>
1998 - 2005	<i>General Surgery Residency</i>	University of Rochester, Strong Memorial Hospital Dept of Surgery <i>Rochester, NY</i>

HOSPITAL APPOINTMENTS

2016 - present	Cedars-Sinai Medical Center (<i>Los Angeles, CA</i>)	Medical Staff, Division of Plastic Surgery
2015 - 2016	Memorial Sloan-Kettering (<i>New York, NY</i>)	Instructor, Plastic & Reconstructive Surgery
2008 - 2015	Duke Regional Hospital (<i>Durham, NC</i>)	Medical Staff, Division of Plastic Surgery
2008 - 2015	North Carolina Specialty Hospital (<i>Durham, NC</i>)	Medical Staff, Plastic Surgery

ADMINISTRATIVE LEADERSHIP POSITIONS

2013 - 2015	<i>Chairman, Department of Surgery</i>	Duke Regional Hospital (<i>Durham, NC</i>)
2012 - 2013	<i>Vice-Chairman, Department of Surgery</i>	Duke Regional Hospital (<i>Durham, NC</i>)
2013 - 2015	<i>Medical Council Member</i>	Duke Regional Hospital (<i>Durham, NC</i>)
2013 - 2015	Peer Review Committee	Duke Regional Hospital (<i>Durham, NC</i>)
2013 - 2015	OR Governance Committee	Duke Regional Hospital (<i>Durham, NC</i>)
2009 - 2015	Medical Executive Committee	North Carolina Specialty Hosp (<i>Durham, NC</i>)
2003 - 2005	Graduate Medical Education Committee	University of Rochester (<i>Rochester, NY</i>)

PROFESSIONAL SOCIETIES

2010 - present	American Society of Plastic Surgeons
2010 - present	American College of Surgeons (Fellow)

CHARITABLE AND VOLUNTEER WORK

2010 - 2015	<i>Plastic Surgeon Volunteer</i>	Project C.A.R.E. (ASPS)
2010 - 2015	<i>Physician Volunteer</i>	NC State Emergency Response Team
2009 - 2011	<i>Member, Board of Governors</i>	Operation Smile Carolinas Chapter
2007	<i>Regan Fellow (Inaugural Class)</i>	Operation Smile 25th Anniversary <i>Mission to Manila, Philippines</i>

CONSULTING AND ADVOCACY WORK

2013 - 2015	Professional Reviewer for NC Medical Board
2013	Conceived and helped establish NC Specialty Hospital Hyperbaric and Wound Center
2013 - 2014	Consultant for Musculoskeletal Tissue Foundation
2010 - 2011	ASPS Legislative Advocacy Program

HONORS & AWARDS

2008	Winner, Best Paper, ASPS/PSEF Senior Residents Conference (Baltimore, MD) <i>Immediate Reconstruction of a Nonreplantable Thumb Amputation by Great Toe Transfer</i>
2004	Yearbook of Surgery: research paper on hGH/EGF and amino acid transporters selected for publication
1997	Harry N. Hoffman II Humanitarian Scholarship recipient (Mayo Clinic)
1994	Phi Beta Kappa Honor Society (Theta Chapter, Cornell University)
1993 - 1994	Biochemistry Honors Research Program (Cornell University)
1990 - 1994	Dean's Scholars Program (Cornell University)

SOCIETY COMMITTEES

2015 - 2016	ASPS/PSEF, Bylaws Committee
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BOOK CHAPTERS

Disa J, Farhang H and Ray EC, "Delayed Tissue Expander Breast Reconstruction," Chapter for Operative Techniques in Plastic Surgery, (Kevin Chung, Charles Thorne, Arun Gosain, et al., Eds.) in press.

Disa, J and Ray, EC, "Scalp Reconstruction," Invited Chapter revision for 2nd edition of Operative Plastic Surgery (Gregory R.D. Evans, Ed.), in press.

Matros, E and Ray EC, "Head and Neck Reconstruction," Invited Chapter revision for Jatin Shah's 5th edition of Head and Neck Surgery and Oncology, in press.

Ray, EC, Schoeniger LO, "The Cost of Minimally Invasive Surgery," (Invited Chapter for Minimally Invasive Surgical Oncology, 1st Ed.).

PEER-REVIEWED PUBLICATIONS

Ray, EC, Wu T, Nazarian-Mobin S, Reinisch J, Urata M, "Review of Options for Burned Ear Reconstruction" *J. Craniofacial Surg.* 21(4): 1165-9, (2010).

Ray, EC, Sherman, R, Stevanovic, M, "Immediate Reconstruction of a Nonreplantable Thumb Amputation by Great Toe Transfer," *Plast. Recon. Surg.*, 123(1): 259-267 (January 2009).

Lehfeldt, M, Ray, EC, Sherman R, "MOC-PS(SM) CME Article: Treatment of Flexor Tendon Laceration." in *Plast. Recon. Surg.*, 121(4) Supplement:1-12, (April 2008).

Ray, EC, Avissar, NE, Salloum, R, and Sax, HC, "Growth Hormone (GH) and Epidermal Growth Factor (EGF) Upregulate Specific Sodium Dependent Glutamine (Gln) Uptake Systems in Human C2_{BB}e1 Cells," *J. Nutr.*, 135(1): 14-18 (Jan 2005).

Avissar, NE, Ziegler, TR, Toia, L, Gu, LH, Ray, EC, Berlanga-Acosta, J, Sax, HC, "ATB⁰/ASCT2 Expression in Residual Rabbit Bowel Is Decreased after Massive Enterectomy and Is Restored by Growth Hormone Treatment," *J. Nutr.* 134: 2173-2177 (Sep 2004).

Ray, EC, Schoeniger, LO, "Hepatocellular Carcinoma," *Prob. Gen. Surg.* 21(1): 1-15 (2004).

Ray, EC, Nickels, MW, Sayeed, S, Sax, HC, "Predicting Success After Gastric Bypass: Role of Psychological and Behavioral Factors," *Surgery* 134(4): 555-563 (2003).

* Ray, EC, Avissar, NE, Vukcevic, D, Toia, L, Ryan, CK, Berlanga-Acosta, J, Sax, HC, "Growth Hormone and Epidermal Growth Factor Together Enhance Amino Acid Transport Systems B^{0,+} and A in Remnant Small Intestine after Massive Enterectomy," *J. Surg. Res.* 113(2): 257-263 (2003).

(*): Selected for Year Book of Surgery; (Copeland, EM, ed.) Mosby. Manchester, U.K., September 2004.

Ray, EC, Avissar, N, Sax, H, "Methods Used to Study Intestinal Nutrient Transport: Past and Present," [Review], *J. Surg. Res.* 108:180-190 (2002).

Ray, EC, Avissar, NE, Sax, HC, "Growth factor regulation of enterocyte nutrient transport during intestinal adaptation," [Review], *Am. J. Surg.* 183(2): 361-371 (2002).

Landis, ME, Ray, EC, Gloviczki, P, Miller, VM, "Effects of Dietary L-arginine on Structure and Function of Flow-Restricted Vein Grafts," *J. Vasc. Surg.* 33(4): 829-839 (2001).

Ray, EC, Landis, ME, Miller, VM, "Effects of Dietary L-arginine on Reactivity of Canine Coronary Arteries," *Vasc. Med.* 4(4): 211-217 (1999).

Ray, EC, "NMR of Spider Silk" *Cornell University Biochemistry Honors Program Thesis*, Ithaca, New York (1994).

Simmons, A, Ray, E, Jelinski, LW, "NMR Studies of Spider Dragline Silk," *Polym. Prepr., Am. Chem. Soc., Div. Polym. Chem.* 35(2) 421-422 (1994).

Simmons, A, Ray, E, Jelinski, LW, "Solid State ¹³C NMR of *Nephila clavipes* Dragline Silk Establishes Structure and Identity of Crystalline Regions," *Macromolecules*, 27: 5235-5237 (1994).

Xia, Y, Farquhar, T, Burton-Wurster, N, Ray, E, Jelinski, LW, "Diffusion and Relaxation Mapping of Intact Cartilage and Cartilage Explants Using MR Microscopic Imaging," *Magn. Reson. Med.* 31: 273-282 (1994).

McNamee, SG, Ober, CK, Jelinski, LW, Ray, E, Xia, Y, Grubb, D, "Toward Single Fiber Diffraction of Spider Dragline Silk from *Nephila clavipes*," in *Silk Polymers: Materials Science and Biotechnology*, ACS Symp. Ser. 544 (Kaplan, D, Adams, WW, Farmer, B, and Viney, C, eds.) 176-184 (1994).

INVITED PRESENTATIONS

Ray, EC. "Pressure Ulcers and How to Manage Them," Duke Regional Hospital Medical Staff Grand Rounds (Duke University Health System, June 6, 2012).

Ray, EC. "Chest Wall Reconstruction," Duke Regional Hospital (Duke University Health System) Surgery Grand Rounds (April 28, 2009).

Ray, EC. "Pressure Ulcer Management," Duke Regional Hospital (Duke University Health System) Surgery Grand Rounds (March 31, 2009).

Ray, EC. "Breast Reconstruction: Past, Present and Future," Duke Regional Hospital (Duke University Health System) Surgery Grand Rounds (January 13, 2009).

PRESENTATIONS, POSTERS & ABSTRACTS

Ray, EC, Stevanovic, M, Sherman, R. "Acute Thumb Reconstruction With Great Toe Transfer," presented at the North Carolina Society of Plastic Surgeons Annual Meeting in Chapel Hill, NC (September, 2008).

Ray, EC, Stevanovic, M, Sherman, R. "Immediate Thumb Reconstruction With Great Toe Transfer After Acute Injury," presented at the 25th Annual Bernard G. Sarnat Plastic Surgery Conference in Los Angeles, CA (June 28, 2008).

Ray, EC, Stevanovic, M, "Immediate Thumb Reconstruction With Great Toe Transfer After Acute Injury," presented at the ASPS Senior Resident Conference in Washinton D.C. (January 31, 2008).

Ray, EC, Magee W, Kulber D, "Use of Alloderm in First Webspace Reconstruction" presented at the Southern California Chapter of the American College of Surgeons Meeting in Santa Barbara, California (January 21, 2007).

Ray, EC, Nickels, MW, Sayeed, S, Sax, HC, "Predicting Success After Gastric Bypass: Role of Psychological and Behavioral Factors" presented at the 60th Annual Central Surgical Association Meeting in Toronto, Ontario (March 20, 2003).

Ray, EC, Avissar, NE, Vukcevic, D, Toia, L, Ryan, CK, Berlanga-Acosta, J, Sax, HC, "Growth Hormone and Epidermal Growth Factor Together Enhance Amino Acid Transport Systems B^{0,+} and A in Remnant Small Intestine after Massive Enterectomy," presented at the 36th Annual Association for Academic Surgery Meeting in Boston, Massachusetts (November 7, 2002).

Salloum, R, Avissar, NE, Patel, S, Ray, EC, Hamilton, DE, Sax, HC, "Modulation of epidermal growth factor (EGF) receptor phosphorylation in hypoxic colon cancer cells *in vitro*" poster presented at the Society of Surgical Oncology 55th Annual Cancer Symposium in Denver, Colorado (March 2002).

Ray, E, Avissar, N, Sax, H, "Growth Hormone and Epidermal Growth Factor Alter the Relative Contribution of Intestinal Glutamine Transport Systems," presented at the Clinical Congress of the American College of Surgeons 87th Surgical Forum in New Orleans, Louisiana (October 8, 2001).

Ray, E, Sax, H, Avissar, N, "Growth Hormone and Epidermal Growth Factor Upregulate Specific Sodium-Dependent Glutamine Transport Systems in C2_{BBc1}," presented at the Summer 2001 FASEB Meeting on Transporter Biology in Tucson, Arizona (July 23, 2001).

Ray, EC, Landis, ME, Miller, VM, "Effects of Dietary L-arginine on Reactivity of Canine Coronary Arteries," poster presented at the International Symposium on Mechanisms of Vasodilation in Maastricht, Netherlands (July 1997).