

HARRY C. SAX, M.D.

Department of Surgery
The Miriam Hospital
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Providence, RI 02906

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EDUCATION

Northwestern University
Evanston, Illinois
9/75 - 6/78 - B.A. - Biology

Johns Hopkins University
Baltimore, Maryland
9/78 - 6/82 - M.D.

William E. Simon School of Business Administration
Health Care Leadership Program
University of Rochester
11/98 – 6/99

POSTGRADUATE TRAINING

Residency
Intern and Resident in General Surgery
University of Cincinnati Medical Center
Cincinnati, Ohio
7/1/82 - 6/30/84
7/1/86 - 6/30/89

Fellowship
Clinical and Research Fellow
Nutritional Support Service
Department of Surgery
University of Cincinnati Medical Center
Cincinnati, Ohio
7/1/84 - 6/30/86

POSTGRADUATE HONORS AND AWARDS

Postdoctoral Fellowship awards

NIH - USPHS Award #HG-07460 Lipids - Atherosclerosis
Fellowship, University of Cincinnati, 1984

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

Licensure: New York - 178362
Ohio – 50495
Rhode Island -11880

Board Certification: American Board of Surgery - 1990
Re-certification 1999
American Board of Surgery - Critical Care – 1991

ACADEMIC APPOINTMENTS

2005- Professor of Surgery
Brown Medical School

2005- Adjunct Professor of Surgery
University of Rochester School
Of Medicine and Dentistry

2001 - 2005 Professor of Surgery (with unlimited tenure)
University of Rochester School
of Medicine and Dentistry

1995 - 2001 Associate Professor of Surgery
University of Rochester School
of Medicine and Dentistry

1989 - 1995 Assistant Professor of Surgery
University of Rochester School
of Medicine and Dentistry

2004-2005 Adjunct Instructor
Rochester Institute of Technology
Physician Assistants Program

HOSPITAL APPOINTMENTS

6/1/2005 -	Surgeon-in-Chief, The Miriam Hospital Providence, RI
1989 - 2005	Medical Director, Adult Nutritional Support Service Strong Memorial Hospital
1991 - 1992	Director, Surgical Intensive Care Unit Strong Memorial Hospital
1999-2003	Chief, Section of Gastrointestinal Surgery Strong Memorial Hospital
2001-2005	Surgery Department Promotions Committee Strong Memorial Hospital
2001-2005	Chair, General Surgery Appointments Committee Strong Memorial Hospital
2001- 2002	Acting Chief, Division of General Surgery Strong Memorial Hospital
2004-2005	Acting Chief, Division of Colorectal Surgery Strong Memorial Hospital

MEMBERSHIP IN SOCIETIES

Monroe County Medical Society 1990 -
Continuing Medical Education Committee -
1992 - 1998

Rochester Surgical Society 1990 -
Executive Committee 1991 - 1998
President Elect 1994 - 1996

President 1996 – 1998

Rochester Individual Practice Association

Board of Directors 1993 – 1999, 2001-2005

Demand Management Committee 1994 - 1996

Chair, Nominating Committee 1997 - 1998

Finance Committee 1997-

New York State Medical Society 1990 -

Crossbridge Physicians, Inc. Board of Directors – 2001-
2005

American Board of Surgery

Associate Examiner 1996, 2001

American College of Surgeons 1989 - Fellow 1992

Surgical Education and Self-Assessment Program
(SESAP-10), contributing editor. 1998

Upstate New York Chapter

Young Surgeon Representative 1997-1998

Councilor 1998-

American Society for Nutritional Sciences (FASEB)2000-

American Society for Parenteral and Enteral Nutrition 1986

–

VARs Award Committee 2000-2001

Dudrick Awards Committee 2004 –

Association for Academic Surgery 1987 -

Committee on Education 1992 - 1994

Committee on Issues 1994 - 1996

Nominating Committee - 1997

Central Surgical Association 1994 –

Society of Laparoendoscopic Surgery 2000 -

Society for Surgery of the Alimentary Tract 1993 -

Abstract Review Committee 2001, 2002

Society of University Surgeons 1996 –

Executive council 2004-

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Pollack IP, Robin A, and Sax HC: The effect of argon laser trabeculectomy on the medical control of primary open angle glaucoma. Ophthalmology 90(7):785-789, 1983.
2. Waymack JP, Metz J, Garnett D, Sax HC, and Alexander JW: Effect of immunomodulators on macrophage function in burned animals. Surg Forum 36:110-112, 1985.
3. Bower RH, Talamini MA, Sax HC, Hamilton F, and Fischer JE: Postoperative enteral versus parenteral nutrition: a randomized controlled trial. Arch Surg 121:1040-1045, 1986.
4. Sax HC, Talamini MA, Brackett K, and Fischer JE: Hepatic steatosis in total parenteral nutrition: failure of fatty infiltration to correlate with abnormal serum hepatic enzyme levels. Surgery 100:697-704, 1986.
5. Sax HC, Warner BW, Talamini MA, Hamilton FN, Bell RH, Fischer JE, and Bower RH: Early total parenteral nutrition in acute pancreatitis: Lack of beneficial effects. Am J Surg 153:117-124, 1987.
6. Lang CL, Johnson DW, Sax HC, and Bower RH: Total parenteral nutrition in pregnancy; A case report. J Ped Perinatal Nutr 1:61-66, 1987.
7. Sax HC, Talamini MA, Hasselgren PO, Rosenblum L, Ogle CK and Fischer JE: Increased synthesis of secreted hepatic proteins during abdominal sepsis. J Surg Res 44:109-116, 1988.
8. Sax HC, Hasselgren PO, Talamini MA, Edwards LL, Fischer JE: Amino acid uptake in isolated, perfused liver: effect of trauma and sepsis. J Surg Res 45:50-55, 1988.
9. Fowl RJ, Martin KD, Sax HC, Kempczinski RF: Use of autologous, spiral vein grafts for vascular reconstructions in contaminated fields. J Vasc Surg 44:442-446, 1988.
10. Nussbaum MS, Warner BW, Sax HC, Fischer JE: Transduodenal sphincteroplasty and transampullary septotomy for biliary dyskinesia and sphincter fibrosis. Am J Surg 157:38-43, 1989.
11. Alexander JW, Gonce SJ, Miskell PW, Sax HC, Peck MD: A new model for studying nutrition in peritonitis: the adverse effect of overfeeding. Ann Surg 209:334-340, 1989.
12. Blebea J, Sax HC, Ouriel K: Superior mesenteric artery syndrome after end-to-side aortofemoral bypass. J Vasc Surg 11:726-727, 1990.
13. Sarac TP, Sax HC, Doerr R, Yuksel U, Pulli R, Caruano J: Preoperative fasting improves survival after 90% hepatectomy. Surg Forum 42:153-156, 1991.

14. Illig KA, Ryan CK, Hardy DJ, Rhodes J, Locke W, Sax HC: Total parenteral nutrition-induced changes in gut mucosal function: atrophy alone is not the issue. Surgery 112:631-637, 1992.
15. Lord LM, Weiser-Maimone A, Pulhamus M, Sax HC: Comparison of weighted versus unweighted enteral feeding tubes for efficacy of transpyloric intubation. JPEN 17:271-273, 1993.
16. Sarac TP, Sax HC, Doerr R, Yuksel UK, Pulli R, Caruana JC: Preoperative fasting improves survival following 90% hepatectomy in the rat. Arch Surg 129:729-733, 1994.
17. Sarac TP, Souba WW, Miller JN, Ryan CK, Koch M, Bessey PQ, Sax HC: Starvation induces differential small bowel luminal amino acid transport. Surgery 116:679-686, 1994.
18. Sarac TP, Souba WW, Seydel A, Ryan CK, Miller JH, Bessey PQ, Sax HC: Massive enterectomy alters brush border amino acid and glucose transport. Surg Forum 45:184-187, 1994.
19. Ryan CK, Sax HC: Evaluation of a carboxymethylcellulose sponge for prevention of postoperative adhesions. Am J Surg 169:154-160, 1995.
20. Seydel AS, Sickel JZ, Warner ED, Sax HC: Extrapelvic endometriosis: Diagnosis and treatment. Am J Surg 171: 239-241, 1996.
21. Sarac TP, Seydel AS, Ryan CK, Bessey PQ, Miller JH, Souba WW, Sax HC: Sequential alterations in gut mucosal amino acid and glucose transport after 70% small bowel resection. Surgery 120:503-508, 1996.
22. Sax HC, Illig KA, Ryan CK, Hardy DJ: Low-dose enteral feeding is beneficial during total parenteral nutrition. Am J Surg 171:587-590, 1996.
23. Seydel AS, Miller JH, Sarac TP, Ryan CK, Chey WY, Sax HC: Octreotide diminishes luminal nutrient transport activity which is reversed by epidermal growth factor. Am J Surg 171:267-271, 1996.
24. Illig KA, Schmidt E, Cavanaugh J, Krusch DA, Sax HC: Are prophylactic antibiotics required for elective laparoscopic cholecystectomy? J Am Col Surg 184:353-356, 1997.
25. Iannoli P, Miller JH, Ryan CK, Ziegler TR, Sax HC: Human growth hormone induces system B transport in short bowel syndrome. J Surg Res 69:150-158, 1997.
26. Iannoli P, Miller JH, Ryan CK, Gu LH, Ziegler TR, Sax HC: Epidermal growth factor and human growth hormone accelerate adaptation after massive enterectomy in an additive, nutrient-dependent, and site-specific fashion. Surgery 122:721-729, 1997.

27. Ryan CK, Miller JH, Seydel AS, Sax HC. Epidermal growth factor and neurotensin induce microvillus hypertrophy following massive enterectomy. J Gastrointest Surg 1:467-473, 1997.
28. Iannoli P, Miller JH, Ryan CK, Sax HC: Glucocorticoids upregulate intestinal nutrient transport in a time-dependent and substrate-specific fashion. J Gastrointest Surg. 2:449-457, 1998.
29. Iannoli P, Miller JH, Sax HC: Epidermal growth factor and human growth hormone induce two sodium-dependent arginine transport systems following massive enterectomy. JPEN 22:326-330, 1998
30. Iannoli P, Miller JH, Ryan CK, Sax HC: Enterocyte nutrient transport is preserved in a rabbit model of acute intestinal ischemia. JPEN 22:387-392, 1998.
31. Wang HT, Miller JH, Avissar NE, Sax HC: Amino acid transport after massive enterectomy is dependent on the site of resection. Surg Forum 49:166-168, 1998.
32. Wang HT, Miller JH, Avissar NE, Sax HC: Small bowel adaptation is dependent on site of massive enterectomy. J Surg Res. 84:94-100, 1999.
33. Iannoli P, Miller JH, Wang HT, Bode B, Souba WW, Avissar NE, Sax HC: Characterization of the leucine transport system in human and rabbit small intestine. Metabolism 48: 1432-1436, 1999.
34. Avissar NE, Wang HT, Miller J, Iannoli P, Sax HC: EGF receptor is increased in rabbit BBM after small bowel resection. Dig Dis Sci 45: 1145-1152, 2000.
35. Ray EC, Avissar NE, Salloum R and Sax HC: Growth hormone and epidermal growth factor alter the relative contributions of intestinal glutamine transport systems. Surg. Forum 52; 5-6, 2001.
36. Wang HT, Sax HC: Incidental appendectomy in the laparoscopic era. J Am Col of Sur 192:182-188, 2001.
37. Avissar NA, Ziegler TR, Wang HT, Gu LH, Miller JH, Iannoli P, Leibach FH, Ganapathy V, Sax HC: Growth factors regulation of rabbit Na⁺-dependent neutral amino acid transporter ATB⁰ and oligopeptide transporter 1 mRNAs expression after massive enterectomy. JPEN 25: No.2, 65-72, 2001.
38. Avissar NA, Ryan CK, Ganapathy V, Sax HC: Na⁺-dependent neutral amino acid transporter ATB⁰ is a rabbit epithelial brush border protein. Am J Physiol. Cell Phys 281:C963-971, 2001.
39. Ray EC, Avissar NE, Sax HC: Growth hormone and epidermal growth factor alter the relative contribution of intestinal glutamine transport systems. Surg Forum 52:5-6, 2001.

40. Ray EC, Avissar NE, Vukcevic D, Toia L, Berlanga-Acosta J, Sax HC: Growth hormone and epidermal growth factor together enhance two Na⁺ dependent GLN transporters in remnant small bowel. J Surg Res, 113:257-263, 2003.
41. Ray EC, Nickels M, Sayeed S, Sax HC: Predicting success after gastric bypass – role of psychosocial and behavioral factors. Surgery, 134:555-564, 2003.
42. Jonas CR, Gu LH, Nkabyo Y, Mannery YO, Avissar NE, Sax HC, Jones DP, Ziegler TR: Glutamine and KGF each regulate extracellular thiol/disulfide redox and enhance proliferation in Caco-2 cells. Am J Physiol. Reg IntegrComp Physio, 285:R1421-1429, 2003.
43. Avissar NE, Ziegler TR, Toia I, Gu L, 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, 2004.
44. Ray EC, Avissar NE, Salloum R, Sax HC: Growth hormone and epidermal growth factor upregulate specific sodium-dependent glutamine uptake systems in human intestinal C2Bbe1 cells. J Nutr 135:14-18, 2005
45. Avissar NE, Toia L, Sax HC: Epidermal growth factor and/or growth hormone induce differential, side specific signal transduction protein phosphorylation in enterocytes. JPEN, 29:322-336, 2005.

Other Peer-Reviewed Publications

1. Sax HC, Talamini MA, and Fischer JE: Special Article: Clinical use of branched-chain amino acids in liver disease, sepsis, trauma and burns. Arch Surg 121:358-366, 1986.
2. Sax HC, and Hurst JM: Fluoroscopic placement of nasoenteric tubes in critically ill patients. Crit Care Med 15:802-803, 1987.
3. Warner BW, Sax HC, Fischer JE: Tailoring nutritional support for specific tissues and organs. Curr Surg 45(1): 2-6, 1988.
4. Hasselgren PO, Pedersen P, Sax HC, Warner BW, Fischer JE: Current concepts of protein turnover and amino acid transport in liver and skeletal muscle during sepsis. Arch Surg 123:992-999, 1988.
5. Hasselgren PO, Pedersen P, Sax HC, Warner BW, Fischer JE: Review: methods for studying protein synthesis and degradation in liver and skeletal muscle. J Surg Res 45:389-415, 1988.
6. Sax HC and Bower RH: Hepatic complications of total parenteral nutrition. JPEN 12:615-618, 1988.

7. Sax HC: Practicalities of lipids: ICU, immune disease, and vascular disease. JPEN 14:223S-225S, 1990.
8. Sax HC, Penn I: Zollinger-Ellison syndrome. Contemp Surg 36:43-46, 1990
9. Sax HC: Somatostatin in the management of gastrointestinal fistulas (Current Summary). JPEN 16:290-291, 1992.
10. Sax HC: Composition of fat in enteral diets can influence outcome in experimental peritonitis (Current Summary). JPEN 16:87, 1992.
11. Sax HC: Clinical and metabolic efficacy of glutamine - supplemented parenteral nutrition after bone marrow transplantation (Current Summary) JPEN 16:589-590, 1992.
12. Sax HC: Upregulation of nutrient transport in fetal rabbit intestine by transamniotic substrate administration (Current Summary). JPEN 17:96-97, 1993.
13. Sax HC, Adams JT: The fate of the spilled gallstone. Arch Surg 128:469, 1993.
14. Sax HC: Effect of total parenteral nutrition on amino acid and glucose transport by the human small intestine (Current Summary). JPEN 18:86, 1994.
15. Sax HC: Effective total parenteral nutrition plus morphine on bacterial translocation in rats (Current Summary). JPEN 18:380-381, 1994.
16. Sax, HC: Editorial Comments: Total parenteral nutrition-associated liver dysfunction. Nutrition 10(3):264-265, 1994.
17. Sax HC: Gastric acid secretion and vitamin B₁₂ absorption after vertical roux-en-y gastric bypass for morbid obesity (Current Summary) JPEN 18:470, 1994.
18. Sax HC: Arginine stimulates wound healing and immune function in elderly human beings (Current Summary) JPEN 18:559-560, 1994.
19. Sax HC: Limited review: Colonic ischemia after aortic reconstruction. Curr Surg 51:416-419, 1994.
20. Sax HC: Chronic abdominal pain - differential diagnosis. Prim Care Update for Ob/Gyns 1:122-125, 1994.
21. Sax HC: Long-term morbidity following jejunioileal bypass: The continuing potential need for surgical reversal (Current Summary) JPEN 19:328-329, 1995.
22. Sax HC: TPN-induced sympathetic activation is related to diet, bacterial translocation, and an intravenous line (Current Summary) JPEN 19:419-420, 1995.

23. Sax HC: New treatment for patients with short bowel syndrome: growth hormone, glutamine and a modified diet. (Current Summary). JPEN 20:375-376, 1996.
24. Wang HT, Miller JH, Iannoli P, Sax HC: Intestinal Adaptation and Amino Acid Transport Following Massive Enterectomy. Frontiers in Bioscience. 1:116-122, 1997.
25. Lord LM, Schaffner R, Decross AJ, Sax HC: Management of the patient with short bowel syndrome. AACN Clinical Issues 11: 604-618, 2000.
26. Sax, HC: The future for the patient with severe short gut syndrome. Nutrition. 16:618-619, 2000.
27. Sax HC: Effect of immune enhancing formulas in general surgery patients JPEN 25: S19-S23, 2001.
28. Ray EC, Avissar NE, Sax HC: Growth factors and enterocyte signal transduction. Am J.Surg, 183: 361-371, 2002.
29. Sax, HC: Are dietary fats antitumor agents? JPEN 26:290, 2002.
30. Ray EC, Avissar NE, Sax HC: Methods used to study intestinal nutrient transport: past and present. J. Surg Res 108: 180-190, 2002.
31. Wooley J, Sax HC Understanding indirect calorimetry – a practical approach. Nutr Clin Pract, 18:434-439, 2003.
32. Sax HC Immunonutrition in upper gastrointestinal surgery. Nutr Clin Pract 20:540-543, 2005.

Books and Book Chapters

1. Sax, H.C. and Warner, B.W. Nutrition. In M.S. Nussbaum (Ed.), The Mont Reid Handbook. Chicago: Year Book Medical Publishers, 1987. Pp. 32-48.
2. Sax, H.C. Nutritional Support in Pancreatitis. In C. L. Lang (Ed.), Nutritional Support in Critical Care. Rockville, MD: Aspen Publishers, Inc., 1987. Pp. 265-273.
3. Sax, H.C. and Fischer, J.E. Malnutrition. In T.L. Dent, J. S. Kukora, T. J. Leibrandt (Eds.), Surgical Tips. New York: McGraw-Hill Book Co., 1988. Pp. 137-161.
4. Sax, H.C. and Hasselgren, P.O. Indications. In J. E. Fischer (Ed.), Total Parenteral Nutrition. Boston: Little, Brown & Co., 2nd Edition, 1991. Pp. 3-11.

5. Sax, H.C. and Souba, W.W.: Enteral and Parenteral Feedings: Guidelines and Recommendations. In L. C. Corman (Ed.), Medical Clinics of North America. Philadelphia: W. B. Saunders Company, 1993. Pp. 863-880.
6. Sax, H.C.: Complications of Total Parenteral Nutrition and Their Prevention. In J.L. Rombeau (Ed.), Clinical Nutrition Parenteral Nutrition. Philadelphia: W. B. Saunders Company, 2nd edition, 1993. Pp. 367-381.
7. Sax, H.C.: Metabolic Response to Injury. In E.G. Ford, R. Andrassy (Eds.), Pediatric Trauma: Initial Assessment and Management. New York: W.B. Saunders Co. 1994. Pp. 361-367.
8. Lord, L.M. and Sax, H.C.: The Role of the Gut in Critical Illness. In J. M. Clochesy (Ed.), AACN Clinical Issues in Critical Care Nursing. Philadelphia: J. B. Lippincott Company, 1994. Pp. 450-458.
9. Sax, HC: Early nutritional support in critical illness is important. Critical Care Clinics of North America. 12:660-661, 1996.
10. Sax HC, Souba WW: Nutritional Goals and Macronutrient Requirements. ASPEN Nutrition Support Practice Manual. 2-1 to 2-5, 1998.
11. Sax, HC: Nutritional Support in the Critically Ill. in Cameron JL Current Surgical Therapy. 6th Edition. New York: Mosby, 6th edition, 1998 pp 1143-1145.
12. Wang HT, Sax HC: Total Parenteral Nutrition: Effects on the Small Intestine, In JL Rombeau (Ed.), Clinical Nutrition: Parenteral, 3rd edition New York; W.B. Saunders Co. 2001 pp 353-365.
13. Iannoli P, Sax HC: Abdominal Adhesions, in Cameron JL Current Surgical Therapy. St. Louis: Mosby 7th Edition, 2001 pp 174-177.
14. Salloum R, Sax HC: Parenteral Nutrition in Adults. Conn's Current Therapy Philadelphia: Elsevier, 2003 pp668-675.
15. Lipp J, Sax HC: Novel Immune Nutrients in Critical Illness in Cresci G, ed Nutrition Support for the Critically Ill Patient. Boca Raton: Taylor and Francis, 2005 pp: 173-189.

Other Non-Peer Reviewed Publications

1. Sax HC: Can early enteral feeding reduce postoperative sepsis and multiple organ failure? A review of recent studies. JCCN 1:5-14, 1993.

2. DeLegge MH, Sax HC, Zaloga GP: An illustrated guide to enteral access, Part 2: Practical aspects of specific techniques. JCCN 3:26-36, 1996.
3. Sax, HC: Improving outcomes with immunonutrition. JCCN 4:25-32, 1997.
4. Sax, HC: Improving clinical outcomes in the intensive care unit with immunonutrition. JCCN 5:25-32. 1998.
5. Sax HC and Bower RH: A method for securing nasoenteric tubes in uncooperative patients. Surg Gynecol Obstet 164:471-472, 1987.
6. Pata JM, Sax HC. Ventilatory status and patient diagnosis (letter). J Am Diet Assoc 91:1378, 1991.
7. Sax HC: A simple endoscopic technique for nasoenteric feeding tube placement (letter). J Am Coll Surg 181:109-110, 1995.
8. Perkins F, Jones J, Rodeout KH, Sax H: Symposium: postoperative pain management according to protocols at the University of Rochester. Contemp Surg 49:91-103, 1996.

INVITED PRESENTATIONS

1. Update on Enteral Nutrition, Surgical Grand Rounds, Strong Memorial Hospital, January 20, 1990, Rochester, New York.
2. Practicalities of Lipids: Autoimmune Disease, ICU Patient, Vascular Disease, Advances in Nutritional Pharmacology Symposium, January 24, 1990, Salt Lake City, Utah.
3. Advances in Enteral Nutrition, Upstate New York Society for Parenteral and Enteral Nutrition Annual Meeting, April 26, 1990, Rochester, New York
4. GI Immunity and Nutrition, Nutrition Symposium, Flushing Hospital, May 24, 1990, Flushing, New York.
5. Preserving the Gut Mucosal Barrier and Immune Response, Western Michigan Dietetic Association, November 6, 1990, Grand Rapids, Michigan.
6. Postoperative Nutritional Support, Vermont Dietetics Committee Symposium, November 9, 1990, Burlington, Vermont.

7. Nutrition and the Immune System, Rochester General Hospital, November 13, 1990, Rochester, New York.
8. Nutritional Support in the Critically Ill ICU Patient, Visiting Professor, Department of Surgery, University of Texas, January 3, 1991, Houston, Texas.
9. Surgical Nutrition, Visiting Professor, Department of Surgery Keesler Air Force Base Hospital, February 21, 1991, Biloxi, Mississippi.
10. Nutrition in the Critically Ill Patient, National Dietetics Month Symposium, Highsmith-Rainey Memorial Hospital, March 12, 1991, Fayetteville, North Carolina.
11. Update - Surgical Nutrition, Upstate New York Chapter, American College of Surgeons, May 10, 1991, Rochester, New York.
12. Peripheral Total Parenteral Nutrition, Annual Meeting, Illinois Family Practice Association, August 2, 1991, Chicago, Illinois.
13. Parenteral Nutritional Support in the ICU Patient, Second Annual Meeting, Michigan Society for Parenteral and Enteral Nutrition, September 21, 1991, Traverse City, Michigan.
14. Nutritional Support in Pancreatitis, Wisconsin Society for Parenteral and Enteral Nutrition, Medical College of Wisconsin, September 26, 1991, Milwaukee, Wisconsin.
15. Nutritional Support in Catabolic Patients, Wisconsin Society for Parenteral and Enteral Nutrition, Medical College of Wisconsin, September 27, 1991, Milwaukee, Wisconsin.
16. Decision Making in Critical Care Nutrition, Upstate New York Chapter - Society for Parenteral and Enteral Nutrition, Cornell University, October 26, 1991, Ithaca, New York
17. Nutritional Support in the Critically Ill, Visiting Professor, Harper Hospital/Wayne State College of Medicine, February 15, 1992, Detroit, Michigan.
18. Enteral vs. Parenteral Nutrition, Visiting Lecturer, Department of Nutrition and Family Studies, Andrews University, March 11, 1992, Berrien Springs, Michigan.
19. Parenteral Nutrition and Gut Barrier Translocation, Contemporary Issues in Nutrition Support - 1992, The Western New York Consortium for Nutrition Support, March 12, 1992, Buffalo, New York.
20. Nutritional Support in the Critically Ill, Visiting Professor, Department of Surgery, University of Vermont School of Medicine, March 18, 1992, Burlington, Vermont.
21. The Glutamine Issue in Nutritional Support of Oncology Patients at conference on A Nutritional Approach for Oncology Patients, April 30, 1992, Pittsford, New York.

22. Critical Care Nutrition, Symposium on Critical Care, University of Rochester, May 15, 1992, Rochester, New York.
23. Nutrition in Surgical Management, Fourth Clinical Meeting of Chief Surgical Residents, October 9, 1992, New Orleans, Louisiana.
24. Support of the Trauma Patient: Access for Enteral Feeding, and Nutritional Support of the Critically Ill Patient, Annual Nutrition Symposium, University of Alabama, November 6, 1992, Birmingham, Alabama.
25. Early Postoperative Feeding in Surgical and Critically Ill Patients, Visiting Professor, McLaren Regional Medical Center, Michigan State University, College of Human Medicine, January 7, 1993, Flint, Michigan.
26. Surgical Nutrition, and Enterocutaneous Fistulas and the Short-Gut Syndrome, Visiting Professor, Department of Surgery, University Hospital, University of Puerto Rico, January 14, 1993, San Juan, Puerto Rico.
27. Methods for Optimizing the Outcome of Nutritional Support, Postgraduate course: Monitoring and Managing Nutritional Support in Critical Care, American Society for Parenteral and Enteral Nutrition, 17th Clinical Congress, February 14, 1993, San Diego, California.
28. Indications for Home TPN, National Medical Care League of IV Therapy Education, March 23, 1993, Pittsburgh, PA.
29. Surgical Nutrition, Surgical Grand Rounds, University of Rochester Medical Center, June 5, 1993, Rochester, New York.
30. Nutritional Support of the Critically Ill Patient, North Texas Society for Parenteral and Enteral Nutrition, July 21, 1993, Dallas, Texas.
31. Enterocutaneous Fistula and the Short Bowel Syndrome, Iowa Chapter A.S.P.E.N., September 10, 1993, Des Moines, Iowa.
32. Nutritional Support of the Critically Ill Patient, Visiting Professor, Baylor University Medical Center, October 6, 1993, Dallas, Texas.
33. Nutritional Support of the Trauma and Critical Care Patient, Visiting Professor, Cooper Trauma Center, University of Medicine and Dentistry of New Jersey, October 7, 1993, Camden, New Jersey.
34. Gut Translocation, The First International Critical Care Symposium on the Niagara Frontier, October 8, 1993, Niagara Falls, New York.

35. Immunonutrition, Great Basin ASPEN Chapter of NW Nevada, October 23, 1993, Reno, Nevada.
36. Improving Outcome in Critical Care: Nutritional Immunology, 76th Annual American Dietetics Association Meeting, Breakfast with the Experts program, October 26, 1993, Anaheim, California.
37. Early Enteral Feeding - What to Feed, When to Feed, and How to Obtain Access, Visiting Professor, University of Arizona Medical Center, October 27, 1993, Tuscon, Arizona.
38. Immunonutrition, Arkansas A.S.P.E.N. Chapter Meeting, November 4, 1993, Little Rock, Arkansas.
39. Early Post Operative Feeding, Visiting Professor, University of Arkansas Hospital, November 4, 1993, Little Rock, Arkansas.
40. Early Post Operative Feeding in the Critically Ill Patient, Surgical Grand Rounds, Allegheny General Hospital, December 7, 1993, Pittsburgh, PA.
41. Therapy of the Short-Gut Syndrome, Surgical Grand Rounds, University of South Alabama, January 13, 1994, Mobile, AL.
42. Practical Aspects of Immunonutrition, The Second Annual Meeting of Master Clinical Dietitians, January 29, 1994, San Antonio, Texas.
43. The Impact of Nutrition on Immune Function, Postgraduate Course, 18th Clinical Congress American Society for Parenteral and Enteral Nutrition, January 30, 1994, San Antonio, Texas.
44. Immunonutrition, Scientific presentations to Visiting Buffalo Surgical Society at University of Rochester Medical Center, February 25, 1994, Rochester, New York.
45. Early Enteral Feeding, The Genesee Hospital, March 15, 1994, Rochester, New York.
46. Nutrition in the Post Operative Patient, Surgical Grand Rounds, Louisiana State University Medical Center, April 6, 1994, New Orleans, Louisiana.
47. Nutrition in the Post Operative Patient, Surgical Conference, Ochsner Medical Foundation, April 7, 1994, New Orleans, Louisiana.
48. Early Postoperative Feeding in the Critically Ill Patient, Medical Grand Rounds, St. Mary's Hospital, April 12, 1994, Rochester, New York.
49. Early Post Operative Feeding of the Critically Ill Patient, Visiting Professor, Duke University Medical Center, April 14, 1994, Durham, North Carolina.

50. Early Post Operative Feeding of the Surgical Patient, Visiting Professor, Eastern Virginia Medical School, Norfolk General Hospital, April 15, 1994, Norfolk, Virginia.
51. Nutritional Support in the Trauma Patient, Visiting Professor, Montreal General Hospital, May 5, 1994, Montreal, Quebec.
52. Early Enteral Feeding in the Critical Care Patient, Management of Complex Enterocutaneous Fistula, Throckmorton Surgical Society, Surgical Symposium on Critical Care, May 6, 1994, Iowa Chapter- American College of Surgeons, Des Moines, Iowa.
53. Early Post Operative Feeding of the Surgical Patient, Surgical Grand Rounds, St. Francis Medical Center, University of Medicine and Dentistry of New Jersey, May 25, 1994, Trenton, New Jersey.
54. Immunocompetence and Improving Clinical Outcomes, The North Carolina Dietetic Association Annual Meeting, June 7, 1994, Greensboro, North Carolina.
55. Surgical Nutrition, Visiting Professor, Roper Hospital, University of South Carolina, June 8, 1994, Charleston, South Carolina.
56. Early Post Operative Feeding of the Critically Ill and Surgical Patients, Visiting Professor, McMaster University Hospital, September 21, 1994, Hamilton, Ontario.
57. Early Post Operative Feeding of the Critically Ill and Surgical Patients, United Health Services Hospitals - Wilson Hospital, September 29, 1994, Johnson City, New York.
58. Early Post Operative Feeding, Consensus Conference of the Connecticut Society of Parenteral and Enteral Nutrition, November 12, 1994, Rocky Hill, CT.
59. The Benefits of Enteral Feeding vs. Parenteral Feeding, Mobile Surgical Society, January 12, 1994, Mobile, AL.
60. Assessing Clinical Outcomes - Do In Vitro Changes Reflect Real-life Results? 19th Clinical Congress, American Society Parenteral and Enteral Nutrition, January 16, 1995, Miami Beach, Florida.
61. Visiting Professor, University of Hawaii, February 16 - 22, 1995, Honolulu, Hawaii.
62. Nutritional Support in the Critically Ill, Ithaca Dietician's Meeting, March 21, 1995, Ithaca, New York.
63. New Advances of Nutrition Support, Nutrition Day Seminar, Andrews University, March 30, 1995, Berrien Spring, Michigan.

64. Advances in Nutritional Support, Mercy-Memorial Medical Center, March 30, 1995, St. Joseph, MI.
65. Short-Gut Syndrome, Visiting Professor, Medical College of Virginia, Division of Gastroenterology, April 17, 1995, Richmond, Virginia.
66. Enterocutaneous Fistulas and the Short-Gut Syndrome, Grand Rounds, University of Massachusetts Medical Center, May 24, 1995, Worcester, Massachusetts.
67. Update on Surgical Nutrition, Auburn Memorial Hospital, June 26, 1995, Auburn, New York.
68. Short-Gut Syndrome, and Achieving Enteral Access, Surgical ICU Conference, University of Minnesota, July 6, 1995, Minneapolis, Minnesota.
69. Hormonal Manipulation of Small Bowel Adaptation, 16th Annual Gut Hormone Symposium, July 25, 1995, Florissant, Colorado.
70. Nutrition in the 90's. Butterworth Hospital, Michigan State University, September 13, 1995, Grand Rapids, Michigan.
71. Marriott Clinical Update, Park Ridge Education Center, September 15, 1995, Rochester, New York.
72. Improving Clinical Outcomes with Immunonutrition, The Fourth Annual Meeting of Master Clinical Dietitians, January 13, 1996, Washington, D.C.
73. Critical Care I: Nutrition Support of the Critical Care Patient, Post Graduate Course # 2, January 14, 1996, Forging an Alliance: The Nurse Practitioner/Doctor Relationship, The Nurse Practitioner as a Physician Extender: One Surgeon's View, January 17, 1996, 20th Clinical Congress, American Society Parenteral and Enteral Nutrition, Washington, D.C.
74. Cost Effectiveness of Nutritional Support, Medical Grand Rounds, Park Ridge Hospital, January 30, 1996, Rochester, New York.
75. Symposium, North PA Dietetic Association, February 1, 1996, Erie, Pennsylvania and Improving Patient Outcomes in the Critically Ill Patient, Health Center Grand Rounds, Veteran Affairs Medical Center, and Grand Rounds, St. Vincent Health Center, February 2, 1996, Erie, Pennsylvania.
76. Early Postoperative Feeding, Surgical Grand Rounds, Fitzgerald Mercy Hospital, March 14, 1996, Darby, Pennsylvania.
77. Early Enteral Feeding and Access, Grand Rounds, Nassau County Medical Center, East Meadow, NY, December 18, 1996.

78. Control Group Issues/Other Problems With Prospective Randomized Controlled Trials, Presented at American Society for Parenteral and Enteral Nutrition, 21st Clinical Congress, San Francisco, CA, January 16, 1997.
79. Nutrition Support - A Practical Approach. Seminar, Martin Memorial Medical Center, Stuart, FL, March 27, 1997.
80. Options in Management of Short-Gut Syndrome, Central New York Surgical Society Spring Meeting, Syracuse, NY, April 3, 1997.
81. Current and Future Nutritional Therapy in the United States, Korean Study Group of Surgical Metabolism and Nutrition, Seoul, Korea, September 25, 1998.
82. Moderator: Inflammatory Bowel Disease, International Symposium: Growth Factors and Nutrients in Intestinal Health and Disease, Osaka Japan. November 3, 1998.
83. Clinical Nutrition. Surgical Grand Rounds, Strong Memorial Hospital. December 9, 1999
84. Nutrition Support in the Hospitalized Patient. Medical Grand Rounds, Strong Memorial Hospital. March 16, 2000.
85. Enterocutaneous Fistulas and the Short-Gut Syndrome, Medical College of Georgia, Augusta. May 5, 2000.
86. Therapy of Enterocutaneous Fistulas and the Short Gut Syndrome, Grand Rounds, Department of Surgery, University of Oklahoma. September 13, 2000.
87. Physiology of Nutrient Transport. Western New York Dietetic Association, Buffalo, New York. October 5, 2000.
88. Therapy of Enterocutaneous Fistulas and the Short Gut Syndrome. Mid-Atlantic Society for Parenteral and Enteral Nutrition, Greensboro, NC. October 6, 2000.
89. Perioperative Nutrition in the Patient with Gastrointestinal Disease. Post Graduate Course, American College of Surgeons, Clinical Congress, Chicago, IL. October 22, 2000.
90. Lessons from the Cockpit; The Surgical Team and Crew Resource Management. Surgery/Anesthesiology Grand Rounds, University of Rochester. November 2, 2000.
91. Enterocutaneous Fistulas. Medical/Surgical Grand Rounds. Hermanos Ameijeiras Clinical Surgical Hospital, Havana, Cuba. March 29, 2001.
92. Lessons from the Cockpit: the Surgical Team and CRM. Sacramento Surgical Society, Visiting Professor, University of California, Davis. June 7-8, 2001.

93. Parenteral Research. Harvard Medical School Nutrition CME Course. November 4-6, 2001.
94. Short Gut Syndrome – Options and Traps – Surgery Grand Rounds. University of Rochester January 10, 2002
95. Intravenous Access Devices. Nutrition for the Practicing Clinician. American Society for Parenteral and Enteral Nutrition. San Diego, CA February 22, 2002.
96. Use of Immune Enhancing Formulas in General Surgery. American Society for Parenteral and Enteral Nutrition. San Diego, CA February 25, 2002.
97. Lessons from the Cockpit: the Surgical Team and CRM. Visiting Professor, University of South Florida, Tampa June 14, 2002.
98. Predicting Success After Gastric Bypass – Behavioral Factors. Northeast Regional Symposium on Obesity. Rochester, NY September 26, 2002.
99. Bariatric Surgery- Yes or No? Arnot Ogden Medical Center, Elmira, NY November 9, 2002.
100. Course Director – Teambuilding in the OR – It’s More than CRM URMC, March 8, 2003
101. What Can Aviation Teach Medicine About Safety? Greater Rochester Quality Council. May 29, 2003.
102. Lessons from the Cockpit: The Surgical Team and Crew Resource Management. Visiting Professor, Emory University, Atlanta. September 24-26, 2003.
103. NIH Research Initiatives in Bariatric Surgery 2nd Northeast Regional Symposium on Obesity. Rochester, NY October 2, 2003.
104. Course Director – Lessons from the Cockpit – What Aviation Can Teach Medicine about Teambuilding and Safety URMC, November 15, 2003.
105. Trophic Factor Modulation of Adaptation Upstate NY ASPEN Annual Meeting. Rochester, NY November 20, 2003.
106. NIDDK/ASPEN Intestinal Failure Workshop Moderator – “Novel Trophic Factors in Gut Failure. Las Vegas, NV February 7, 2004.
107. Course Director – Lessons from the Cockpit – What Aviation Can Teach Medicine about Teambuilding and Safety URMC, March 9, 2004; October 13, 2004 March 16, 2005.
108. Lessons from the Cockpit: Improving Surgical Team Performance; Options in the Therapy of Morbid Obesity. Visiting Professor, Cleveland Clinic Foundation, Cleveland. August 24-25, 2004.

109. What Can Aviation Teach Medicine About Team Building and Safety? Surgery Grand Rounds Brown University School of Medicine September 30, 2004.
110. Surgical Options in the Treatment of Obesity – Infertility Update, University of Rochester, November 2, 2004
111. Bariatric Surgery - NYSPANA postoperative nurses conference. Rochester, February 5, 2005.
112. Lessons from Aviation – Patient Safety University of Buffalo Medical Grand Rounds February 16, 2005.
113. Lessons from the Cockpit ; Options in the Therapy of Short Bowel Syndrome. Visiting Professor Department of Surgery Berkshire Medical Center, Pittsfield, MA August 19, 2005.
114. Integrating Checklists into the OR – Lessons from Aviation AORN Boston, MA October 15, 2005.
115. Lower Gastrointestinal Bleeding – Etiology and Epidemiology. Post graduate Course, American College of Surgeons Clinical Congress. San Francisco, CA October 17, 2005.
116. Teambuilding and Simulation – Lessons from Aviation. American College of Surgeons Clinical Congress San Francisco, CA October 19, 2005.
117. Evidence – based Nutrition Support – Specialty IV formulations and the Morbidly Obese. American College of Surgeons Clinical Congress, October 19, 2005.

GRANTS

CL0600-004:

A Study of the Efficacy & Safety of Teduglutide in
Subjects with Parenteral Nutrition Dependent Short Bowel
Syndrome

NPS Alexis

04/07/04 - 12/31/06

Amino Acid Transport After Small Bowel

Resection, National Institutes of Health/National Institute
of Diabetes and Digestive and Kidney Diseases-
R01-DK47989

04/01/00-1/31/06

Direct \$1,517,384 Total \$2,453,897

Principal Investigator

Amino Acid Transport After Small Bowel Resection
National Institutes of Health/National Institute of Diabetes
and Digestive and Kidney Diseases -
1R29 DK47989-01A1
9/30/94 - 9/30/99
Direct \$349,705 Total \$545,540
Principal Investigator

Effects of Enteral and Parenteral Nutrients on the Rodent
Gut
Ross Laboratories 9/81 - 9/92
Principal Investigator
\$9,800.00

Basic Science Research Grant - 5-27192
University of Rochester 1/90 - 1/91
Principal Investigator
\$7,300.00

UNIVERSITY TEACHING ROLES

Medical Students	Monthly didactic sessions with 3 rd year students during surgery rotation. Direct mentorship of 1-2 3 rd year students during each surgery rotation—office experience, operating room, wards. 20 hours/week Surgical Nutrition lecture, 2 nd year interest group. Dysmetabolic syndrome Bench to Bedside 3 rd year students. Fluid and Electrolyte Lecture 3 rd year students.
Graduate Students	Jen-nie Miller MS – support of her research project while in my laboratory as a technician. Member, dissertation committee.

Residents Direct supervision and teaching of residents on Gold surgical service. Perioperative and operative experience 30 hours/week, daily rounds

Post Doctoral Fellows

1991-1993 Karl A. Illig, MD, Associate Professor of Surgery and Chief of Vascular Surgery. University of Rochester.

1993-1995 Timur Sarac, MD, Associate Professor of Surgery, Cleveland Clinic Foundation.

1994-1995 Anna S. Seydel, MD, Clinical Assistant Professor of Surgery, UCSD.

1995-1997 Pasquale Iannoli, MD Clinical Assistant Professor of Surgery, University of Rochester.

1997-1999 Howard Wang, MD, Fellow in Plastic Surgery, Duke University Medical Center.

1999-2001 Edward Ray MD, Chief Resident, University of Rochester