

Curriculum Vitae

State University of New York at Stony Brook
Department of Anesthesiology
Health Science Center, Level 4, Room 4-060
Stony Brook, New York 11794-8480

Name: **Tong Joo (TJ) Gan, MD, MBA, MHS, FRCA (UK), FRCA (Ire), Lic. Ac.**
Date and place of Birth: February 14, 1961, Malaysia
Office Phone Number: (631) 444-2979
Office Email: Tong.Gan@stonybrookmedicine.edu

Higher Education

(Including internship, residency and other format professional training)

<u>From</u>	<u>To</u>	<u>Degree & Date</u>	<u>Institution & Location</u>	<u>Field</u>
1981	1987	M.B., B.S.	1987 The London Hospital Medical College University of London	Medicine

Certifications & Licensure

(ECFMG, FLEX, National & Professional Boards & Licenses)

Date Agency

1992 Fellow of the Faculty of Anaesthetists, Royal College of Surgeon of Ireland
1992 Fellow of the Royal College of Anaesthetists of England
1993 Licentiate in Acupuncture, British College of Acupuncture
1994 Diplomate, USMLE
1997 Diplomate, American Board of Anesthesiology
2009 MHS, Masters, Clinical Research, Duke University
2009 MD (UK), Univ. of London (postgraduate)
2009 Recertification for American Board of Anesthesiology, November, 2009
2017 MBA, University of Massachusetts, Amherst, MA

Medical Licensure: State of North Carolina – 9300635
State of New York - 277514

Appointments

(Academic Appointments)

<u>Dates</u>	<u>To</u>	<u>Title</u>	<u>Status*</u>	<u>Institution & Location</u>
Feb.1987	Jan. 1987	House Officer		The London Hospital Cardio-thoracic and Vascular Surgery London
Aug.1987	Jan. 1988	House Officer		Internal Medicine Old Church Hospital Romford, Essex, England

Feb. 1988	July 1988	Senior House Officer Accident and Emergency Department London	The London Hospital
Aug. 1988	July 1989	Senior House Officer Department of Anesthesia	The London Hospital London
Aug. 1989	Aug. 1990	Senior House Officer Department of Intensive Care	The Middlesex Hospital London
Sept. 1990	Aug. 1991	Anesthetic Registrar	The Whittington and The Royal Northern Hospital, London
Sept. 1991	Aug. 1992	Anesthetic Registrar	The Middlesex Hospital London
March 1992	Aug. 1992	Anesthetic Registrar	University College Hospital London
Sept. 1992	Feb. 1993	Anesthetic Registrar	Royal National Orthopaedic Hospital, Middlesex
March 1993	Aug. 1993	Anesthetic Senior Registrar	Royal Brompton Heart and Lung Hospital, London Royal Free Hospital, London
Aug. 1993	Aug. 1994	Anesthesiology Fellow	Duke University Medical Center Durham, NC, USA
Sept. 1993	Aug. 1994	Associate in Anesthesiology	Duke University Medical Center, Durham, NC, USA
Aug. 1994	March 1999	Assistant Professor of Anesthesiology	Duke University Medical Center, Durham, NC, USA
April 1999	Aug. 2003	Associate Professor of Anesthesiology	Duke University Medical Center, Durham, NC, USA
Nov. 2001	Aug. 2014	Senior Research Fellow	Duke Center for Integrative Medicine
Sept. 2004	Aug. 2014	Professor of Anesthesiology with tenure	Duke University Medical Center, Durham, NC, USA
June 2007	Aug. 2014	Professor of Anesthesiology Vice-Chairman, Clinical Research and Faculty Development	Duke University Medical Center, Durham, NC, USA

May 2013	Aug. 2014	Associate Professor in Surgery	Duke University Medical Center, Durham, NC, USA
Sept. 2014	Present	Stony Brook School of Medicine Professor and Chairman Professor – Biomedical Informatics	Stony Brook University Medical Center Stony Brook, NY

Status: Voluntary (V) Salaried (S) Tenured (T)

Other Appointments
(Non-Academic)

<u>Dates</u>				
<u>From</u>	<u>To</u>	<u>Title</u>	<u>Status*</u>	<u>Institution & Location</u>

Leadership Role:

Department IRB Representative (1996-2014)
 Medical Director, Peri Anesthetic Care Unit (1999-2007)
 Director, Clinical Research (2000-2008)
 Founding Medical Director, Duke Clinical Anesthesia Research Endeavor (CARE) (2006-2008)
 Vice-Chairman, Clinical Research (2007-2014)
 Vice Chairman, Faculty Development (2009-2014)
 Chairman, Department Appointment, Promotion and Tenure Committee (2010-2014)

Committees:

National:

<u>Dates</u>				
<u>From</u>	<u>To</u>	<u>Title</u>	<u>Status*</u>	<u>Institution & Location</u>

American Society of Anesthesiologists (ASA):

2003	2017	Committee on Standards & Practice Parameters, Am. Soc. Of Anesthesiologists		
2003	Present	Committee on Refresher Courses, American Society of Anesthesiologists		
2005		Committee on Scientific Papers, American Society of Anesthesiologists		
2005	2006	Secretary, Society of Ambulatory Anesthesia		
2006	2007	Scientific Advisory Committee, American Society of Anesthesiologists		
2006	2007	Committee on Practice Management, American Society of Anesthesiologists		
2007	2008	Ex-Officio member Scientific Content Subcommittee on Ambulatory Anesthesia, American Society of Anesthesiologists		
2009		Committee on Anesthesia Subspecialties, American Society of Anesthesiologists		
2008	2009	Committee on Anesthesia Subspecialties, ASA		
2008	2012	Committee on Quality Management & Departmental Administration, ASA		
2008	2001	Committee on Ambulatory Surgical Care, American Society of Anesthesiologists		
2008	2014	Educational Track Subcommittee on Ambulatory Anesthesia, ASA		
2010		Committee on Droperidol, ASA		

2011		Adjunct member, Committee on Quality Management & Developmental Administration
Oct. 2013	Oct. 2014	Abstract Review Subcommittee on Outcomes and Database Research
2014	2015	Standards and Practice Parameters
2014	2015	Committee on Performance and Outcomes Management
2016	2017	Committee on Performance and Outcomes Measurement ASA
Oct. 2015	Oct. 2016	Abstract Review Subcommittee on Outcomes and Database Research
Oct. 2015	Oct. 2016	Abstract Review Subcommittee on Standards and Practice Parameters
Oct. 2015	Oct. 2016	Abstract Review Subcommittee on Performance and Outcomes
Oct. 2015	Oct. 2016	Educational Track Subcommittee on Ambulatory Anesthesia
Oct. 2016	Oct. 2017	Educational Track Subcommittee on Ambulatory Anesthesia

American Society for Enhanced Recovery (ASER)

2015	Present	President and Founder
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International Society of Anesthetic Pharmacology (ISAP):

2002	Present	Board of Directors, International Society of Anesthetic Pharmacology
2003		Treasurer, International Society of Anesthetic Pharmacology
2007	2008	President, International Society of Anesthetic Pharmacology
2008	2009	Immediate Past President, International Soc. of Anesthetic Pharmacology

Society for Ambulatory Anesthesia (SAMBA):

2000	Present	Committee for International Relations, SAMBA
2001	Present	Chair, Committee for Research, SAMBA
2002	Present	Board of Directors, SAMBA
2003		Committee on Electronic Newsletter, SAMBA
2003	Present	Committee on Development, SAMBA
2004	2005	Judicial Committee, SAMBA
2004	2005	Committee on Latin American Relations, SAMBA
2004	2005	Subcommittee on Scientific papers, SAMBA
2005		Ad Hoc Committee on Focused Topics, SAMBA
2005	2006	Task Force on Web Products, SAMBA
2005	2006	Committee on Finance & Budget, SAMBA
2005	2006	Executive Committee, SAMBA
2006	2007	Chair, Subcommittee on Ambulatory and Geriatric Anesthesia, SAMBA
2006	2007	Ex-Officio member Committee on Development, SAMBA
2006	2007	Ex-Officio member Committee on Scientific Papers, SAMBA
2006	2007	Ex-Officio member Committee on Finance, SAMBA
2006	2007	Ex-Officio member Committee on Mid-Year Meeting, SAMBA
2006	2007	Vice President, SAMBA
2006	2007	Ad Hoc Committee on Corporate Relations, SAMBA
2006	2007	Committee on Bylaws, SAMBA
2006	2007	Nominating Committee, SAMBA
2006	2007	Task Force on Benchmarking Project, SAMBA
2007		Chair, Committee for Annual Meeting, SAMBA
2007	2008	President Elect, SAMBA

2008		Subcommittee on Ambulatory and Geriatric Anesthesia, SAMBA
2008	2009	President, SAMBA
2009	2010	Chair, Committee on Nominations, SAMBA
2009	2010	Chair, Committee on Communications Oversight, SAMBA
2014	2015	Committee on Development
2014	2015	Task Force on Performance and Outcomes Management
2014	2015	SAMBA Board of Directors
2015	Present	SAMBA Task Force on Clinical Practice Guidelines

State:

North Carolina Alternate Delegate for the ASA (2003)
North Carolina Society of Anesthesiologists Legislative Committee (2006)

Awards:

Young Investigator Award 1995.
International Anesthesia Research Society (IARS) Clinical Scholar Research Award 1998.
Society for Technology for Anesthesia Annual Innovative Award 2002

Professional Practice & Services

<u>Date of Initial Membership</u>	<u>Organization</u>	<u>Location</u>
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Professional and Scientific Societies

<u>Organization</u>	<u>Dates of Initial Membership</u>	<u>Leadership Position(s)</u>
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Professional Membership: American Society of Anesthesiologists
International Anesthesia Research Society
Society of Ambulatory Anesthesia
Anesthetic Research Society, United Kingdom
American University of Anesthesiologists
International Society of Anesthetic Pharmacology
Fellow of the International Chinese Academy of Anesthesiology
American Society for Enhanced Recovery

University/Medical Center:

Divers Alert Network (1994-1998)
Advanced Cardiac Life Support (Instructor) (1994-2002)
Senior Departmental Representative, Institutional Review Board (1995-2016)
Hospital Wide Infusion Pump Selection Committee (2001)
PACU flow Improvement Task Force (2001-2002)
Perioperative Improvement Committee (2001-2002)
MS3 Mentor (2003–2014)
DCRI Faculty Member (2004–2014)

Journal Editorial Board

Executive Section Editor, Anesthesia & Analgesia
Clinical Research
The Open Anesthesiology Journal
Current Anesthesiology Reports
Perioperative Medicine
Current Opinion in Anesthesiology

Guest Editor

International Anesthesiology Clinics
Postoperative Nausea and Vomiting (Autumn 2003 issue)
Anesthesiology Clinics of North America
Ambulatory Anesthesia (Summer 2003 issue)
Current Opinion in Anesthesiology – Drugs in Anesthesia (2015 issue)

Guest Journal Reviewer

Journal of Clinical Anesthesia	1995 to present
Pharmacoeconomics	1995 to present
Anesthesiology	1997 to present
New England Journal of Medicine	1999 to present
Alternative Therapies in Health and Medicine	2000 to present
JAMA	2000 to present
Circulation	2002 to present
Drugs	2003 to present

Peer Reviewed Manuscripts:

1. **Gan TJ**, Miller RF, Webb AR, Russell RCG. Pheochromocytoma presenting as recurrent hyperamylasemia and multiple organ failure. Canadian Journal of Anaesthesia 1994;41:244-7.
2. **Gan TJ**, Collis R, Hetreed M. Double-blind comparison of ondansetron, droperidol and saline in the prevention of postoperative nausea and vomiting after major orthopedic surgery. Br J of Anaesth 1994;72: 544-7.
3. **Gan TJ**, Alexander R, Fennelly M and Rubin AP. Comparison of different methods of administering droperidol in patient-controlled analgesia in the prevention of postoperative nausea. Anesth Analg 1995;80:81-85.
4. **Gan TJ**, Glass PSA. Pharmacokinetic and pharmacodynamic aspects of intravenous anesthesia. Anesthetic Pharmacology Review. 1995;3:28-36.
5. **Gan TJ**, Quill TJ, Pressley C, Parrillo S, Glass PSA. A comparison of mivacurium dosage requirements during isoflurane and desflurane anesthesia. J Clin Anesth 1996;8:301-306.

6. **Gan TJ**, Ginsberg B, Grant AP, Glass PSA. Double-blind, randomized comparison of ondansetron and intraoperative propofol to prevent postoperative nausea and vomiting. *Anesthesiology* 1996;85:1036-1042.
7. Lubarsky DA, Glass PS, Ginsberg B, Dear GL, Dentz ME, **Gan TJ**, Sanderson IC, Mythen MG, Dufore S, Pressley C, Gilbert WC, White WD, Alexander ML, Coleman RL, Rogers M, Reves JG and the SWiPE group. The successful implementation of pharmaceutical practice guidelines: Analysis of associated outcomes and cost savings. *Anesthesiology* 1997;86:1018-1019.
8. Glass PSA, Howell SH, **Gan TJ**, Ginsberg B. How to manage drug interactions. *European Journal of Anaesthesiology* 1997;14:33-39.
9. **Gan TJ**, Ginsberg B, Glass PSA, Fortney J, Jhaveri R, Perno R. Opioid sparing effects of low dose infusion of naloxone in patient administered morphine sulfate. *Anesthesiology* 1997;87: 1075-81.
10. **Gan TJ**, Glass PSA, Howell ST, Canada A, Grant AP, Ginsberg B. Determination of plasma concentrations of propofol associated with 50% reduction in postoperative nausea. *Anesthesiology* 1997;87: 779-84.
11. **Gan TJ**, Glass PSA, Winsor A, Payne F, Rosow C, Sebel P, Manberg P. Bispectral index (BIS) monitoring allows faster emergence and improved recovery from propofol / alfentanil / nitrous oxide anesthesia. *Anesthesiology* 1997;87:808-15.
12. Fabling JM, **Gan TJ**, Guy J, Borel C, Warner D. Postoperative nausea and vomiting: A retrospective analysis in patients undergoing elective craniotomy. *Journal of Neurosurgical Anesthesia* 1997;9:308-12.
13. Glass PSA, **Gan TJ**, Howell SH, Ginsberg B. Drug interactions: volatile anesthetics and opioids. *J Clin Anesth* 1997;9:18-22.
14. Fortney J, **Gan TJ**, Graczyk S, Wetchler B, Melson T, Khalil S, McKenize R, Parrillo S, Glass PSA, Moote C, Wermeling D, Parasuraman TV, Duncan B, Creed M, S3a-409 AND s3a-410 Study Groups. A comparison of the Efficacy, Safety and Patient Satisfaction of Ondansetron Versus Droperidol as Antiemetics for Elective Outpatient Surgical Procedures. *Anesth Analg.* 1998;84: 731-8.
15. Chari RS, **Gan TJ**, Robertson KM, Greig PD, Clavien PA. Veno-venous by-pass in orthotopic liver transplantation: routine or selective use. *J Am Coll Surg.* 1998;186:683-90.
16. Iselin-Chaves I, Glass PSA, Sebel PS, Flaishon R, Howell S, **Gan TJ**, Sigl J, Ginsberg B. The effect of the interaction of propofol and alfentanil on recall, loss of consciousness and the bispectral index. *Anesth Analg* 1998; 87:949-955.
17. Glass PSA, **Gan TJ**, Howell SH. Remifentanil: A review of its pharmacokinetics and pharmacodynamics. *Anesth Analg* 1999;89:S7-S14.
18. **Gan TJ**, Bennett-Guerrero E, Phillips-Bute B, Wakeling H, Moskowitz DM, Olefulabi Y, Konstadt SN, Bradford C, Glass PSA, Machin SJ, Mythen MG and the Hextend study group. Hextend, a

physiologically balanced plasma expander for large volume use in major surgery: A randomized phase III clinical trial. *Anesth Analg* 1999;88: 992-8.

19. **Gan TJ**, Glass PSA, Sigl J, Sebel P, Payne F, Rosow C, Embree P. Women emerge from general anesthesia faster than men. *Anesthesiology* 1999;90:1283-7.
20. **Gan TJ**, El-Molem H, Ray J, Glass PSA. Patient-controlled antiemesis. *Anesthesiology* 1999;90:1564-1570.
21. Fleming NW, Chung F, Glass PSA, Kitts JB, Kirkegaard-Nielsen H, Gronert GA, Chan V, **Gan TJ**, Cicutti N, Caldwell JE. Comparison of the intubation conditions provided by rapacuronium (ORG 9487) or succinylcholine, in humans during anesthesia with fentanyl, and propofol. *Anesthesiology* 1999;91: 1311-7.
22. Soppitt AJ, **Gan TJ**, Sanderson I, Weatherwax K, Glass PSA. Duration and recovery profile of cisatracurium after succinylcholine during propofol and isoflurane anesthesia. *J Clin Anesth* 1999;11: 652-56.
23. Hill RP, Lubarsky DA, Phillips-Bute B, Fortney J, Creed M, Glass PSA, **Gan TJ**. Cost effectiveness of prophylactic antiemetic therapy with ondansetron, droperidol or placebo. *Anesthesiology* 2000;92: 958-67.
24. Fabling, JM, **Gan TJ**, El-Moalem H, Warner DS, Borel CO. A randomized, double-blind comparison of ondansetron, droperidol and placebo for prevention of postoperative nausea and vomiting after supratentorial craniotomy. *Anesth Analg* 2000;91:358-61.
25. Klein SM, Slaughter TF, Vail PT, Ginsberg B, El-Moalem HE, Alexander R, D'Ercole F, Greengrass R, Perumal T, Welsby I, Gan, TJ. Thromboelastography as a perioperative measure of anticoagulation resulting from low molecular weight heparin. *Anesth Analg* 2000;91:1091-5.
26. Soppitt AJ, Glass PSA, Howell S, Weatherwax K, **Gan TJ**. The use of propofol for its antiemetic effect: a survey of clinical practice in the United States. *J Clin Anesth* 2000;12:265-269.
27. Ginsberg B, Martin G, **Gan TJ**, Grichnik K, Jhaveri R, Siebert K, Sullivan F, Muir M, Glass PSA. Assessment of the relative clinical utility of sufentanil and morphine administered by patient controlled analgesia pumps following abdominal hysterectomy. *J Pharmaceutical Care in Pain & Symptom Control* 2001;8:1-13.
28. Iselin-Chaves I, El Moalem H, **Gan TJ**, Ginsberg B, Glass PSA. Changes in the auditory evoked potentials and the bispectral index following propofol or propofol and alfentanil. *Anesthesiology* 2000;92; 1300-1310.
29. **Gan TJ**, Sloan F, Dear G, El-Moalem H, Lubarsky DA. How much are patients willing to pay for avoidance of postoperative nausea and vomiting? *Anesth Analg*. 2001;92:393-400.
30. **Gan TJ**, Madan R, Alexander R, Jhaveri R, El-Moalem H, Weatherwax K, Glass PSA. Duration of action of vecuronium following an intubating dose of rapacuronium, vecuronium or succinylcholine. *Anesth Analg* 2001;92:1199-202.

31. Dexter F, **Gan TJ**, Naguib M, Lubarsky D. Cost identification analysis for succinylcholine. *Anesth Analg* 2001;92:693-699.
32. Habib A, **Gan TJ**. Combination therapy for postoperative nausea and vomiting – a more effective prophylaxis? *Ambulatory Surgery* 2001;9:59-71.
33. **Gan TJ**. Risk Assessment for the Management of Postoperative Nausea and Vomiting. *Clinical Research* 2001; 11:2-7.
34. Alexander R, Hill R, El-Moalem HE, **Gan TJ**. Remifentanyl prevents the hemodynamic response to orotracheal intubation. *J Applied Research* 2001;1: 144-48.
35. **Gan TJ**. Postoperative nausea and vomiting: can it be eliminated? *JAMA* 2002;287:1233-36.
36. Wilkes N, Woolf R, Powanda M, **Gan TJ**, Machin S, Webb A, Mutch M, Bennett-Guerrero E, Mythen M. Hydroxyethyl starch in balanced electrolyte solution (Hextend®)-pharmacokinetic and pharmacodynamic profiles in healthy volunteers. *Anesth Analg* 2002; 94:538-544.
37. Alexander R, El-Moalem HE, **Gan TJ**. Comparison of the morphine sparing effects of diclofenac sodium and ketorolac tromethamine after major orthopedic surgery. *J Clin Anesth* 2002; 14:187-92.
38. Schow A, Lubarsky D, Olson R, **Gan TJ**. Can succinylcholine be used safely in hyperkalemic patients? *Anesth Analg* 2002;95:119-122
39. **Gan TJ**, Franiak R, Reeves J. Comparison of ondansetron orally disintegrating tablet (ODT) versus placebo for the prevention of postdischarge nausea and vomiting following ambulatory surgery. *Anesth Analg* 2002; 94:1199-1200.
40. Moretti E, Robertson K, Tuttle-Newhall J, Clavien P, **Gan TJ**. Orthotopic liver transplant patients require less postoperative morphine than do patients undergoing hepatic resection. *J Clin Anesth* 2002; 14:416-420.
41. Martin G, Wakeling H, Bennett-Guerrero E, Mythen M, Robertson K, Kucmeroski D, **Gan TJ**. A prospective randomized comparison of thromboelastographic coagulation profile in patients receiving Hextend®, 6% hetastarch in saline or lactated ringer's during major surgery. *J Cardiothoracic and Vascular Anesthesia* 2002;16:441-446.
42. Fabling JM, **Gan TJ**, El-Moalem H, Warner DS, Borel CO. A Randomized, Double-Blinded Comparison of Ondansetron versus Placebo for Prevention of Nausea and Vomiting after Infratentorial Craniotomy. *J Neuro Surg Anesth* 2002;14:102-107.
43. Erb TO, Kanter RJ, Hall JM, **Gan TJ**, Kern FH, Schulman SR. Comparison of electrophysiologic effects of propofol and isoflurane-based anesthetics in children undergoing radiofrequency catheter ablation for supraventricular tachycardia. *Anesthesiology* 2002; 96: 1386-94.
44. Erb TO, Hall JM, Ing R, Kanter RJ, Kern FH, Schulman SR, **Gan TJ**. Postoperative Nausea and Vomiting in Children and Adolescents undergoing Radiofrequency Catheter Ablation: A Randomized Comparison of Propofol and Isoflurane based Anesthetics. *Anesth Analg* 2002; 95:1577-81.

45. **Gan TJ**, Soppitt A, Maroof M, El-Moalem, Robertson KM, Moretti E, Dwane P, Glass PSA and the Goal Directed Therapy Study Group. Goal directed intraoperative fluid administration reduces length of hospital stay after major surgery. *Anesthesiology* 2002; 97:820-6.
46. Moretti E, Robertson K, El-Moalem H, **Gan TJ**. Intraoperative colloid administration reduces postoperative nausea and vomiting and improves postoperative outcomes compared with crystalloid administration. *Anesth Analg* 2003;96:611-7.
47. **Gan TJ**, Ing R, Dear G, Wright D, El-Moalem H, Lubarsky D. How much are patients willing to pay to avoid intra-operative awareness? *J Clin Anesthesia* 2003;15:108-112.
48. Martin G, Glass PSA, Breslin DS, MacLeod DB, Sanderson IC, Lubarsky DA, Reves JG, **Gan TJ**. A study of anesthetic drug utilization in different age groups. *J Clin Anesthesia* 2003;15:194-200.
49. Habib A, **Gan TJ**. Pharmacotherapy of postoperative nausea and vomiting. *Expert Opin. Pharmacother* 2003;4:457-73.
50. Gan, TJ. Evidence-based management of post-operative nausea and vomiting. *Can J Anesth* 2003;50:R1-R4.
51. Shang A, **Gan TJ**. Optimizing postoperative pain management in the ambulatory patient. *CNS Drugs* 2003;63:855-867.
52. Apfelbaum J, Chen C, Mehta S, **Gan TJ**. Postoperative pain experience: results from a national survey suggest postoperative pain continues to be undermanaged. *Anesth Analg* 2003;97:534-40.
53. **Gan TJ**, Meyer T, Apfel CC, Chung F, Davis PJ, Eubanks S, Kovac A, Philip B, Sessler DI, Temo J, Tramer MR, Watcha M. Consensus guidelines for the management of postoperative nausea and vomiting. *Anesth Analg* 2003;97:62-71.
54. Habib AS, **Gan TJ**. Food and Drug Administration black box warning on the perioperative use of droperidol: a review of the cases. *Anesth Analg* 2003;96:1377-79.
55. Olson R, Schow A, McCann R, Lubarsky D, **Gan TJ**. Absence of adverse outcomes in hyperkalemic patients undergoing vascular access surgery. *Can J Anesth* 2003;50:553-557.
56. Moretti E, Robertson K, **Gan TJ**. The colloid crystalloid debate: Are we asking the right question? *TATM* 2003;5(4):378-391.
57. Joshi G, Viscusi E, **Gan TJ**, Minkowitz H, Cippolle M, Schuller R, Cheung R, Fort J. Effective treatment of laparoscopic cholecystectomy pain with intravenous followed by oral COX-2 specific inhibitor. *Anesth Analg* 2004;98:336-42.
58. Breslin D, Jiao K, Habib A, Schultz J, **Gan TJ**. Pharmacodynamic interactions between cisatracurium and rocuronium. *Anesth Analg* 2004;98:107-10.
50. **Gan TJ**, Joshi GP, Viscusi E, Cheung R, Dodge W, Fort J, Chen C. Preoperative parenteral parecoxib and follow-up oral valdecoxib reduces length of stay and improves quality patient recovery following laparoscopic cholecystectomy surgery. *Anesth Analg* 2004;98:1665-1673.

60. Habib A, El-Moalem H, **Gan TJ**. The efficacy of the 5-HT₃ receptor antagonists combined with droperidol for PONV prophylaxis is similar to their combination with dexamethasone. A meta-analysis of randomized controlled trials. *Can J Anesth* 2004;51:311-319. Accompanying editorial Tramer M. Rational control of PONV – the rule of three. *Can J Anesth* 2004;51:283-285.
61. Habib A, **Gan TJ**. Evidence-Based Management of Postoperative Nausea and Vomiting. *Can J Anesth* 2004;51:326-341. Accompanying editorial Tramer M. Rational control of PONV – the rule of three. *Can J Anesth* 2004;51:283-285.
62. Apfelbaum J, **Gan TJ**, Zhao S, Hanna DB, Chen C. Reliability and validity of the Perioperative opioid-related symptom distress scale. *Anesth Analg* 2004;99:699-709.
63. Habib A, **Gan TJ**. A Randomized Comparison of a Multimodal Management Strategy versus Combination Antiemetics for the Prevention of Postoperative Nausea and Vomiting. *Anesth Analg* 2004;99:77-81.
64. **Gan TJ**, Lubarsky D, Flood E, Thanh T, Mauskopf J, Mayne T, Chen C. Patient preferences for acute pain management. *BJA* 2004; 92:681-88.
65. Sebel P, Bowdle A, Ghoneim M, Rampil I, Padilla R, **Gan TJ**, Domino K. The Incidence of Awareness during Anesthesia: A Multicenter U.S. Study. *Anesth Analg* 2004;99:833-839.
66. **Gan TJ**, Jiao KR, Zenn M, Georgiade G. A randomized controlled comparison of electro-acupoint stimulation or ondansetron versus placebo for the prevention of postoperative nausea and vomiting. *Anesth Analg* 2004; 99:1070-5.
67. **Gan TJ**, Joshi G, Zhao S, Hanna D, Raymundo A, Cheung R, Chen C. Presurgical intravenous paracoxib sodium and follow-up oral valdecoxib for pain management after laparoscopic cholecystectomy surgery (LCS) reduces opioid requirements and opioid-related side effects. *Acta Anesthesiol Scand* 2004;48:1194-207.
68. Habib A, **Gan TJ**. The Effectiveness of Rescue Antiemetics Following Failure of Prophylaxis With Ondansetron, Droperidol or Placebo. *J Clin Anesthesia* 2005;17:62-65.
69. Grocott M, Mythen M, **Gan TJ**. Perioperative fluid management. *Anesth Analg* 2005;100:1093-1106.
70. **Gan TJ**. Selective serotonin 5-HT₃ receptor antagonists for postoperative nausea and vomiting: are they all the same? *CNS Drugs* 2005;19:225-238.
71. Dahm P, Yang B, Salmen C, **Gan TJ**. Radical perineal prostatectomy for the treatment of localized prostate cancer in morbidly obese patients. *J Urol* 2005;174: 131-134.
72. D'Angelo R, Philip B, **Gan TJ**, Kovac A, Hantler C, Doblal D, Melson T, Minkowitz H, Falby P, Coop A. A randomized, double-blind, dose-ranging, pilot study of intravenous granisetron in the prevention of postoperative nausea and vomiting in patients undergoing abdominal hysterectomy. *European Journal of Anaesthesiology* 2005;22:774-779.
73. **Gan TJ**, Coop A, Philip B, and the Kytril Study Group. A randomized, double-blind study of

granisetron plus dexamethasone vs. ondansetron plus dexamethasone to prevent post-operative nausea and vomiting in patients undergoing abdominal hysterectomy. *Anesth Analg* 2005;101:1323-1329.

74. Barbeito A, Muir H, **Gan TJ**, Reynolds J, Spahn T, White W, Schultz J. Use of a modifier reduces inconsistency in the ASA physical status classification system in parturients. *Anesth Analg* 2006;102:1231-3.
75. Welsby I, Jiao K, Ortel T, Brudney C, Roche A, Bennett-Guerrero E, **Gan TJ**. The kaolin-activated thromboelastograph predicts bleeding after cardiac surgery. *J Cardiothoracic and Vasc Anesth* 2006;20(4):531-5.
76. Habib AS, Itchon-Ramos N, Philips-Bute BG, **Gan TJ**, The Duke Women's Anesthesia Research Group. Transcutaneous acupoint electrical stimulation with the ReliefBand for the prevention of nausea and vomiting during and after cesarean section under spinal anesthesia. *Anesth Analg* 2006;102:581-4.
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32. Waldron NH¹, Miller TE, **Gan TJ**, Noninvasive cardiac output monitor for goal-directed fluid therapy: is it really an alternative? [*Anesth Analg*. 2015] A prospective comparison of a noninvasive cardiac output monitor versus esophageal Doppler monitor for goal-directed fluid therapy in colorectal surgery patients. [*Anesth Analg*. 2014] *Anesth Analg*. 2015 Jan;120(1):258. doi: 10.1213/ANE.0000000000000491. PMID: 25625273
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35. **Gan TJ**. What We Can Do to Reduce Opioid Overuse. *New York Times* 2016 September 6.

Newspaper and Website Reports

1. "Women wake up faster from anesthesia." www.allhealth.com/health/library/sexmatters.
2. "Study: Acupuncture helps ease post-surgical ills." [http://www.msnbc.msn.com/id/6073055/\(1 of 2\) \[9/25/04\]](http://www.msnbc.msn.com/id/6073055/(1%20of%202)[9/25/04])
3. "Duke study: Acupuncture best for post-op nausea." [http://www.heraldsun.com/durham/4-524660.html/\(1 of 3\) \[9/22/04\]](http://www.heraldsun.com/durham/4-524660.html/(1%20of%203)[9/22/04])
4. "Acupuncture moves toward the mainstream." <http://www.nytimes.com/id/2004/09/28/health/policy/28acup.html> [9/28/04]
5. "Acupuncture helps ease post-surgical ills." <http://www.reuters.com/newsArticle.jhtml?type> [9/22/04]

6. "Acupuncture helps post-surgery."
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8. "Better postoperative recovery." Bottom Line Health Newsletter. June 2005;Vol 19, No.6: pg.13
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Funded Projects

Principal Investigator

The role of propofol in postoperative nausea and vomiting.

Funds: Society of Ambulatory Anesthesia

Dates: 6/1995-7/1996

A phase III, double-blind, randomized comparative study evaluating the effect of two doses of dexmedetomidine versus placebo in adult patients undergoing elective major abdominal surgery.

Funds: Abbott

Dates: 11/1995-10/1996

Bispectral analysis for monitoring of anesthesia with isoflurane/fentanyl.

Funds: ASPECT

Dates: 10/1996-9/1997

A phase III, double-blind, randomized placebo-controlled study evaluating the safety and efficacy of dexmedetomidine when used as an anesthetic adjunct.

Funds: Abbott

Dates: 10/1996-9/1997

Ondansetron vs. placebo for prevention of PONV after infratentorial neurosurgery.

Funds: Glaxo Wellcome, Inc.

Dates: 10/1996 – 10/1998

Comparison of outcome variables in patients having major surgeries with the use of oesophageal Doppler monitor. A pilot study.

Funds: Deltex

Dates: 5/1997-9/1997

A prospective randomized study on outcome variables in patients having major surgeries with the use of esophageal Doppler monitor.

Funds: Deltex Inc

Dates: 1/1998-5/1999

Measurement of the anticoagulant effects of low-molecular weight heparin using thromboelastography.

Funds: Rhone Poulenc Rorer

Dates: 1/1998-1/1999

The onset, duration and recovery profile of two small doses of cisatracurium during isoflurane or propofol anesthesia.

Funds: Glaxo Wellcome

Dates: 9/1997-3/1998

The effect of intraoperative administration of Hextend™ versus 6% hetastarch in saline for the treatment of hypovolemia during major surgery

Funds: BioTime Inc.

Dates: 1/1997-10/1997

Postoperative morbidity questionnaire on patients receiving intraoperative Hextend™, 6% hetastarch in saline and lactate Ringer's

Funds: BioTime Inc.

Dates: 1/1997-10/1998

The effect of coagulation of Hextend™, 6% hetastarch in saline and lactate Ringer's as measured by thromboelastography during major surgery.

Funds: BioTime Inc.

Dates: 1/1997-10/1998

Comparison of ondansetron versus placebo in the prevention of postoperative nausea and vomiting after intracranial surgery.

Funds: Glaxo Wellcome

Dates: 10/1997-1/1999

The pharmacokinetics and pharmacodynamics of cisatracurium during the preanhepatic, anhepatic and postanhepatic phase of orthotopic liver transplantation.

Funds: Glaxo Wellcome

Dates: 10/1997-1/1999

A phase III, randomized, controlled, open-label, multi-center, parallel, group study designed to evaluate the safety and efficacy of Poly SFH-P injection in the total elimination of allogeneic red cell transfusion.

Funds: Northfield Laboratories, Inc.

Dates: 7/1998-present

An open evaluation of safety and efficacy of E-TRANS™ (fentanyl) for management of postoperative pain in elderly patients.

Funds: Alza Corporation

Dates: 9/2000 – 3/2001

An open evaluation of the efficacy and safety of E-TRANS™ (fentanyl) for the management of postoperative pain following short-stay surgical procedures.

Funds: Alza Corporation

Dates: 9/2000 – 4/2001

Enhancing the anesthetic recovery of the elderly.

Funds: International Anesthetic Research Society Clinical Scholar Award.

Dates: 1/1999 – 1/2001

A randomized, double-blind, phase 3, efficiency comparison of 10% Pentastarch in 0.9% sodium chloride vs. 0.9% sodium chloride for fluid resuscitation in surgical patients experiencing hypovolemic hypotension.

Funds: B. Braun Medical

Dates: 4/1999 – 5/2000

PCA morphine and Naloxone combination for postoperative analgesia.

Funds: Pain Therapeutics, Inc.

Dates: 4/1999 – 3/2000

Double-blind placebo controlled comparison of the efficacy of ondansetron ODT vs. placebo for the prevention of postoperative nausea and vomiting.

Funds: Glaxo Wellcome, Inc.

Dates: 4/1999 – 12/2000

A randomized, double-blind, placebo controlled dose ranging study of the analgesic efficacy and safety of single doses of Nabumetone q 0.9G, 1.35G, 1.8G and 2.25G, acetaminophen 1G plus oxycodone 10 mg (tylox) and placebo for the treatment of postoperative pain following lower abdominal surgery.

Funds: SmithKline Beecham Pharmaceuticals

Dates: 6/1999 – 1/2000

A research study to place a monetary value on the avoidance of intraoperative awareness.

Funds: Aspect Medical Systems

Dates: 7/1999 – 11/2000

A multi-center trial to evaluate the interaction of maintenance doses of rocuronium with an intubating dose of rapacuronium, rocuronium or succinylcholine.

Funds: Organon, Inc.

Dates: 5/2000 – 3/2001

The clinical use of Hextend® compared to 5% albumin in patients undergoing radical retroperitoneal prostatectomies.

Funds: Abbott Laboratories, Inc.

Dates: 4/2000 – 9/2001

A research study to place a monetary value on avoidance of succinylcholine related side effects.

Funds: Organon

Dates: 8/1999 – 11/2000

PentaLyte® dose escalation safety study.

Funds: BioTime, Inc.

Dates: 8/2000 – 11/2000

A prospective randomized comparison of remifentanyl versus fentanyl in the incidence of postoperative nausea and vomiting.

Funds: Abbott Laboratories

Dates: 11/2000 – 8/2003

An open label, randomized, comparative study to compare the effects of intubating doses of rapacuronium, rocuronium cisatracurium or succinylcholine on the clinical duration(s) of maintenance doses of cisatracurium or rocuronium under isoflurane anesthesia.

Funds: Abbott Laboratories

Dates: 11/2000 – 1/2002

A prospective, double blind, randomized comparison of remifentanyl and fentanyl during carotid endarterectomy.

Funds: Abbott Laboratories

Dates: 11/2000 – 10/2002

A comparison of cardiac output and stroke volume using esophageal doppler, non-invasive cardiac output monitor and PA catheter.

Funds: Novamatrix

Dates: 3/2001 – 3/2002

A multicenter, double-blind, randomized study of the efficacy and safety of a single dose of IV parecoxib sodium followed by up to seven days of oral valdecoxib for the pain following laparoscopic cholecystectomy.

Funds: G.D. Searle & Co.

Dates: 5/2001 – 1/2002

(AIM) Trial: A Prospective, Multicenter Study to Determine the Incidence of Awareness During Routine General Anesthesia with BIS Monitoring.

Funds: Aspect Medical System Awareness

Dates: 7/2001- 7/2002

Patient Treatment Preferences for Acute Post-operative Pain

Funds: Pharmacia

Dates: 11/2001 – 3/2003

A randomized, double-blind, parallel group, placebo controlled, pilot dose ranging study of intravenous Kytril® in the prevention of post-operative nausea and vomiting in patients undergoing abdominal hysterectomy.

Funds: Roche Laboratories, Inc.

Dates: 2/2002 – 8/2002

Blood management and outcomes in cardiac and orthopaedic surgery demonstration project.

Funds: Englewood Hospital and Medical Center

Dates: 4/2002 – 3/2003

Comparison of Transdermal Scopolamine patch, Zofran and Zofran/Transdermal Scopolamine Patch combination for the prevention of postoperative nausea and vomiting in the outpatient setting.

Funds: Novartis

Dates: 4/2002 - 8/2002

Patient's attitudes in the use of patient controlled analgesia.

Funds: Pfizer

Dates: 2/2002 - 3/2003

Double-blind multicenter study of the safety and efficacy of parecoxib followed by valdecoxib compared to placebo in general surgery patients for treatment of post-surgical pain.

Funds: Pharmacia

Dates: 10/2002 – 3/2003

Multiple dose randomized, double-blind, placebo controlled study of the analgesic efficacy and safety of valdecoxib compared to placebo in patients for treatment of post-surgical pain from laparoscopic cholecystectomy surgery.

Funds: Pharmacia and Upjohn

Dates: 2/2003 – 8/2003

A phase II, double-blind, randomized parallel group study of IV methylnaltrexone in the prevention of post-operative ileus.

Funds: Progenics

Dates: 3/2003 - 3/2005

A prospective, randomized, double-blind, non-inferiority study of granisetron plus dexamethasone versus ondansetron plus dexamethasone in the prevention of post-operative nausea and vomiting in patients undergoing abdominal hysterectomy.

Funds: Roche
Dates: 9/2003 – 9/2004

A Randomized, Double-Blind, Active Comparator-Controlled, Parallel-Group Study, Conducted Under In-House Blinding Conditions, to Examine the Safety, Tolerability, and Efficacy of 2 Doses of Aprepitant for the Prevention of Postoperative Nausea and Vomiting.

Funds: Merck
Dates: 10/2003 – 10/2006

Comparison of Granisetron and Promethazine or a Combination of Both for the Prevention of Post Discharge Nausea and Vomiting in Female Patients Undergoing Outpatient Laparoscopic Procedures.

Funds: Hoffman-La Roche, Inc.
Dates: 7/2004 – 8/2006

Parallel-Group Study, Conducted under In-house Blinding Conditions to Examine the Safety, Tolerability, and Efficacy of 2 Doses of MK-0869 for the Prevention of Postoperative Nausea and Vomiting.

Funds: Merck & Company
Dates: 11/2004 - 5/2005

A Randomized, Double-blind, Placebo Controlled, Multicenter Trial Comparing Transderm Scop (Transdermal Scopolamine Patch) Plus Zofran (Ondansetron) to Zofran (Ondansetron) Alone for the Prevention of Post-operative Nausea and Vomiting in the Outpatient Setting.

Funds: Baxter
Dates: 11/2004 - 2/2006

Cost Utility Analysis of Postoperative Nausea and Vomiting

Funds: Merck & Company, Inc,
Dates: 12/2004 – 1/2006

Comparison of the Safety and Efficacy of Patient Controlled Analgesia Delivered by Fentanyl HCl Transdermal System versus Morphine IV Pump for Pain Management after Non-emergent Abdominal or Pelvic Surgery.

Funds: Ortho-McNeil Pharmaceuticals
Dates: 12/2004 – 12/2005

A Pilot Study to Estimate the Variability of Selected Parameters when Either Pentalyte or 5% Albumin are used During and Immediately Following Cardiac Surgery in a Prospective, Blinded, Randomized Clinical Trial.

Funds: Biotime, Inc.
Dates: 1/2005 – 1/2007

A Multicenter, Randomized, Double-blind, Double-dummy, Placebo-controlled, Parallel Group, Phase II Study to Evaluate the Safety, Efficacy, and Pharmacokinetics of Oral (25 mg) and Intravenous (3 mg and 18 mg) Formulations of the Neurokinin-1-Receptor Antagonist, GW597599, when Administered with Intravenous Ondansetron Hydrochloride for the Prevention of Post-operative Nausea and Vomiting and Post-discharge Nausea and Vomiting in Female Subjects with Known Risk Factors PONV who are Undergoing Surgical Procedures Associated with an Increased Emetogenic Risk.

Funds: GlaxoSmithKline

Dates: 2/2005 - 2006

A Randomized, Double-blind, Multicenter, Parallel Group, Balanced, Stratified, Phase 3 Study to Evaluate the Efficacy and the Safety of Single IV Doses of Palonosetron 0.025 mg, 0.050 mg, and 0.075 mg versus Placebo in Outpatients to Prevent Post-Operative Nausea and Vomiting Following Elective Adbominal or Gynecological Laparoscopic Surgery.

Funds: PAREXEL

Dates: 9/19/2005 - 9/18/2008

A Randomized, Double-Blind, Active Comparator-Controlled, Parallel-Group Study Conducted under In-House Blinding Conditions, to Examine the Safety and Tolerability of IV MK-0517 for the Prevention of Postoperative Nausea and Vomiting.

Funds: Merck & Company, Inc.

Dates: 9/2005 – 8/2007

GSK NK1102552 Zofran PONV in female surgical subjects.

Fund: GlaxoSmithKline

Dates: 6/2006 – 6/2007

A Phase 3, open-label, single arm study to assess the safety of Aquavan® (fospropofol disodium) injection for minimal-to-moderate sedation in patients undergoing minor surgical procedures.

Fund: MGI Pharma

Dates: 9/1/2006 – 2/2008

Phase I - Safety, tolerability and pharmacokinetics of a single dose of Staccato™ fentanyl for inhalation in normal, healthy volunteers.

Funds: Alexza

Dates: 4/1/2006 - 4/5/2008

A phase 3, double-blind, randomized, parallel-group, placebo-controlled study of intravenous (IV) methylnaltrexone bromide (MNTX) in the treatment of post-operative ileus (POI).

Funds: Progenics Pharmaceuticals

Dates: 12/5/2006 - 12/31/2008

A Phase III, randomized, double-blind, placebo-controlled study evaluating the safety and efficacy of dexmedetomidine for sedation during monitored anesthesia care.

Funds: Hospira

Dates: 2/21/2007 - 2/20/2009

The impact of combined gabapentine and COX-2 use before surgery on post-operative outcomes.

Funds: Pfizer, Inc.
Dates: 4/4/2006 - 12/31/2007

Duke Anesthesia and sedation safety improvement initiative.

Funds: Aspect Medical Systems, Inc.
Dates: 1/26/2006 – 2/3/2010

A randomized, double-blind, active- and placebo-controlled study of the analgesic efficacy and safety of repeated dosing of two dose levels of DIC075V relative to parenteral ketorolac and placebo in patients with acute post-operative pain after abdominal or pelvic surgery

Funds: Javelin Pharmaceuticals, Inc
Date: 4/11/2007 - 4/10/2008

Study of intravenous methylnaltrexone (MOA-728) for the treatment of postoperative ileus following ventral hernia.

Funds: Wyeth Pharmaceuticals
Date: 7/5/2007 - 9/30/2008

Study of the efficacy and safety of lubiprostone in patients with opioid-induced bowel dysfunction.

Funds: Sucampo Pharmaceuticals
Date: 4/1/2008 – 3/31/2008

Simple TKA 311: Safety and efficacy of a single intraoperative administration of SKY0402.

Funds: Pacira Pharmaceuticals
Date: 8/22/2008 – 8/31/2009

Long-term safety/efficacy of lubiprostone in patients with opioid-induced bowel dysfunction.

Funds: Sucampo Pharmaceuticals
Date: 10/1/2008 – 9/30/2010

A double-blind, multi-center, randomized, stratified, parallel, 2-arm, phase 2 study to assess palonosetron vs. ondansetron as rescue in subjects that developed postoperative nausea and vomiting (PONV) in the postanesthesia care unit (PACU).

Funds: Eisai, Inc.
Date: 3/2009 – 12/2009

A randomized, double-blind, placebo-controlled, phase II study to assess the safety and efficacy of different doses of intravenous APD405 (buspirone hydrochloride given intravenously) for the prevention of postoperative nausea and vomiting (PONV).

Funds: Acacia, Inc.
Date: 4/2009 – 12/2009

Assessment of NICOM vs. esophageal Doppler monitor guided goal directed fluid therapy in the perioperative period.

Funds: Cheetah Medical
Date: 5/15/ 2010 – 3/31/2011

Study of LUSEDRA (Fospropofol Disodium) injection compared with propofol injectable emulsion.

Funds: Eisai, Inc.

Dates: 10/15/2010 – 10/14/2012
Trial to evaluate sufentanil NanoTab PCA System for P-Op pain in abdominal surgery.
Funds: AcelRx Pharmaceuticals
Date: 11/11/2011 – 11/30/2013

Enhanced Recovery Program Pilot Study: Identification of associations between anesthetic factors and adverse outcomes.

Funds: Premier, Inc.
Dates: 11/19/2011 – 12/31/2013

Study to evaluate intravenous CR845 in patients undergoing laparoscopic hysterectomy.

Funds: Cara Therapeutics
Dates: 7/20/2011 – 7/31/2013

Trial to evaluate the safety and efficacy of a shortened infusion time of intravenous ibuprofen.

Funds: Cumberland Pharmaceuticals
Dates: 1/6/2012 - 12/31/2013

Impact of opioid reduction strategy protocol on length of stay and complications in elective coloractal surgery patients.

Funds: Pacira Pharmaceuticals
Dates: 1/25/12 – 1/24/2013

Phase II study to assess intravenous APD421 for prevention of PONV.

Funds: Acacia
Dates: 2/23/2012 – 2/28/2013

ONU3704 – Trial of oxycodone/naloxone (OXN) tablets for chronic low back pain.

Funds: Purdue Pharma, LP
Dates: 7/1/2012 – 6/30/2014

ONU3705 – Trial of oxycodone/laoxone tablets in opioid-induced constipation in low back pain.

Funds: Purdue Pharma, LP
Dates: 7/1/2012 – 6/30/2014

Clinical and economic impact of replacing first generation high MW hydroxyethyl starch with Voluven at a large medical center.

Funds: Fresenius Kabi AG
Dates: 7/15/2012 – 8/31/2015

RECITE: Residual Curarization and its incidence at tracheal extubation in the United States.

Funds: Merck & Company
Dates: 9/1/2012 – 11/30/2013

Triple Low Confirmation Collaboration.

Funds: Covidien, Ltd

Dates: 7/1/2010 – 4/30/2014

Event Adjudication for 5945-OIC-12-02, 5945-OIC-12-03, 5945-OIC-12-04, 5945-OIC-12-05.

Funds: INC Reseach

Dates: 1/15/2003 – 3/6/2015

National Principal Investigator

A Phase 2, Randomized, Double-blind, Placebo-controlled, Escalating Dose-response trial of Intravenous Adenosine for Perioperative Analgesia in Females Undergoing Abdominal Hysterectomy or Myomectomy.

Funds: Xsira Pharmaceuticals

Dates: 8/29/2005 - 8/28/2008

SaVVI Study - Randomized evaluation of arterial pressure based cardiac output for goal-directed perioperative therapy.

Funds: Edwards Life Sciences

Date: 6/15/2006 – 10/2008

A randomized, placebo-controlled, double-blind, proof-of-concept, dose-ranging study comparing ascending single dose oral rolapitant monotherapy and single dose intravenous ondansetron monotherapy for the prevention of postoperative nausea and vomiting.

Funds: Schering-Plough Research Institute

Date: 6/2007 - 6/14/2008

Bupivacaine effectiveness and safety in SABER™ Trial (BESST)

Funds: Durect, Inc.

Dates: 12/2009 – 3/2011

Korean enhanced recovery strategy for colorectal surgery (KEROS)

Funds: Fresenius Kabi AG

Dates: 8/1/2012 – 7/31/2014

Total Principal Investigator Funding of \$23,688,993

Co-Investigators

Assessment of effectiveness of a single dose dolasetron mesylate in treating postoperative nausea and vomiting.

Funds: Hoechst Marion Roussel, Inc

Dates: 10/1993-10/1994

Assessment of effectiveness of a single dose dolasetron mesylate in preventing postoperative nausea and vomiting in patients undergoing gynecologic laparoscopic surgery.

Funds: Hoechst Marion Roussel, Inc

Dates: 10/1993-10/1994

Evaluation of the intubating conditions provided with ORG 9487 and succinylcholine.

Funds: Organon
Dates: 11/1995-10/1996

Development of methods to objectively value intangible elements of health care.

Funds: Glaxo Wellcome
Dates: 1/1998-present

Genetics, inflammation and post-op cognitive dysfunction.

Funds: Dept. of Health and Human Services – NIH
Dates: 12/1/1999 – 11/30/2004

Pentalyte vs. albumin in cardiac surgery.

Funds: Biotime
Dates: 1/15/2005 – present

A phase 3, randomized, double-blind, dose-controlled study to assess the efficacy and safety of Aquavan® (fospropofol disodium) injection for minimal-to-moderate sedation in patients undergoing flexible bronchoscopy.

Funds: MGI Pharma
Dates: 9/1/2006 - present

Evaluation of a Minimally Invasive Cardiac Output Monitoring Device in Septic and Heart Failure Patients

Funds: Retia Medical
Dates: 12/4/2012 – 12/31/2014

Training Program Participant:

Integrated training in Anesthesiology research.

Funds: NIH
Dates: 7/1/2011 – 6/30/2014

Post-Doctoral Trainees & Mentees

Howard Wakeling, M.B., F.R.C.A., M.R.C.P., Visiting Associate, 8/1996-1/1998

Ratan Alexander, M.B., F.R.C.A., Visiting Associate, 1/1997-4/1998

Jennifer M. Fabling, M.D., Neuroanesthesia Fellow, 1/1996-1/1998

Robert Hill, M.B., F.R.C.A., Visiting Associate, 1/1997-8/1998

Andrew Soppitt, M.B., F.R.C.A., M.R.C.P., Visiting Associate, 1/1998-6/1999

Gavin Martin, M. B., F.R.C.A., Associate, 7/1998-present

David Wright, M.B.,F.R.C.A., Associate, 7/1999-7/2011

Ashraf Habib, M.B.,F.R.C.A., Associate, 7/2000-present

Dara Breslin, M.B., Ch.B., Associate, 9/2001 - 7/2006

David Cameron, MD, Associate, 5/2002 – 3/2003

Sonya McKinlay, M.B., Ch.B., Associate, 7/2002 – 6/2003

Kok Yuen Ho, M.B., B.S., MMed, Fellow, 8/2005 – 7/2006

Kui Ran Jiao, M.D., Research Fellow, 1/2001 – 8/2004

Yan Xia Sun, M.D., Research Fellow, 1/2006 – 12/2007

Tim Miller, M.B., ChB, Assistant Professor, 2008 - present

Ronald Olson, MD, Associate Professor, 2010 - present

Third Year Medical Students Mentored

Aaron Skolnik, 8/1/2013 – 7/31/2015
Ming Juan Tan, 8/1/2013 – 7/31/2014
Lawrence Law, 8/1/2013 – 7/31/2014
Theresa Crowgey, 9/1/2012 – 7/31/2013
Katie Yang, 8/1/2011 - 7/31/2012
Nathan Waldron, 8/1/2010 – 7/31/2011
Megan Champion, 8/1/2008 – 7/31/2010
Tina Le, 8/1/2009 – 7/31/2010
Elizabeth Malinzak, 8/1/2007 - 8/1/2008
John Dubose, 8/1/2006 - 8/1/2007
Lisa Jones, 8/1/2004 - 7/1/2005
Israel Nosnik, 8/1/2005 - 8/1/2006

International Visiting Professor Programs

1. Choices of intraoperative fluids. Oxford University, United Kingdom. May, 1997.
2. Intraoperative hemodynamic monitoring. Siriraj Hospital, Mahidol University, Bangkok, Thailand, November, 1997.
3. Concept of general anesthesia. University of Malaya, Kuala Lumpur, Malaysia, December, 1997.
4. Monitoring depth of anesthesia. National University Hospital, Singapore. December, 1998.
5. Perioperative fluid management. Chulalongkorn Hospital, Chulalongkorn University, Bangkok, Thailand, December, 1997.
6. Intraoperative Fluid management. University Kebangsaan, Malaysia. July, 1999
7. Intraoperative fluid management and choices of fluids. Royal North Shore Hospital, University of Sydney, Sydney, NSW, Australia. October 7, 2003.
8. Fluid management. An update. St. Vincent's Hospital, Sydney University, NSW, Australia., October 8, 2003.
9. Determining volume responsiveness. National University Hospital, Singapore. February 9, 2007.
10. The role of minimally invasive cardiac output monitoring for fluid management. Tan Tock Seng Hospital, Singapore. June 14, 2007
11. The role of minimally invasive cardiac output monitoring for fluid management. Singapore General Hospital, Singapore. June 15, 2007.
12. The role of minimally invasive cardiac output monitoring for fluid management. Changi General Hospital, Singapore. June 15, 2007.
13. The use of cardiac output devices for fluid management. Seoul, S. Korea. July 9, 2007.
14. The role of minimally invasive cardiac output monitoring for fluid management. Beijing, PR China.

July 12, 2007.

15. The role of minimally invasive cardiac output monitoring for fluid management. Shanghai, PR China. July 13, 2007.
16. 1) Perioperative fluid management and postoperative outcomes. 2) Postoperative Nausea and Vomiting: Current challenges and management strategies. Toronto Western Hospital, Toronto, Canada. October 25-26, 2007.
17. Recent advances in volume therapy. National University Hospital and Singapore General Hospital, Singapore. March 31 and April 1, 2009.
18. 1) Acute pain management – it's the multimodal story witchcraft? 2) Can we make nausea a thing of the past? Auckland City Symposium, Auckland, New Zealand. March 20, 2010.
19. Current Controversies in Perioperative Fluid Management. University Medical Center Groningen. Groning, The Netherlands. March 24, 2011.
20. Perioperative Fluid Optimization: Aquatic Assassins? University of Strasbourg, France. July, 2012
21. Perioperative Fluid Management. Aquatic Assassins? Harold Griffith Memorial Lecture & Faculty Dinner. McGill Department of Anesthesia, Quebec, Canada. April, 2013
22. ERAS, Ventilation and Anesthesia, IRCAD Course, Strasbourg, France, September 26, 2015

National Visiting Professor Programs

1. Update on neuromuscular blocking drugs. University of Florida, Jacksonville, FL. August, 1996.
2. Management of postoperative symptoms. University of North Carolina, Chapel Hill, NC April, 1999.
3. Plasma volume expander: The millennium perspective. Yale University, New Haven, CT. February, 2000.
4. 1) Update in neuromuscular blocking agents. 2) Plasma volume expanders. The millennium perspective. University of Texas, El Paso, TX. July, 2000.
5. Postoperative nausea and vomiting. An update. Yale University, New Haven, CT. January, 2002.
6. 1) Intraoperative fluid management. 2) Zero incidence of PONV. Is it possible? State University of New York, Upstate Medical Center, Syracuse, NY. October, 2002
7. New perspective in the management of postoperative nausea and vomiting. Miami University School of Medicine, Miami, FL. December, 2002.
8. 1). Intraoperative fluid management. Is there a right way? 2). Zero incidence of PONV. Is it possible? Washington University School of Medicine, St. Louis, MO. February, 2003.
9. 1). Intraoperative fluid management 2). Postoperative nausea and vomiting. State University of New

York at Stony Brook. Stony Brook, NY. April, 2003.

10. Postoperative nausea and vomiting in ambulatory surgery. Beth Israel Deaconess Medical Center, Harvard Medical School, Boston MA. September, 2003.
11. Consensus panel guidelines on postoperative nausea and vomiting. Rush_Presbyterian-St. Luke's Medical Center, Rush Medical College and University, Chicago, IL. October, 2003.
12. Common complications following ambulatory anesthesia. Northwestern University, Chicago, February, 2004
13. Post-op pain. University of South Florida, Tampa. March, 2004.
14. Johns Hopkins University School of Medicine, Department of Anesthesiology & Surgery, Baltimore, MD. August 2-3, 2004.
15. Perioperative fluid management. Albany Medical Center, Albany, NY, September, 2004.
16. Consensus panel recommendations for the management of PONV. West Virginia University, Morgantown WV. June 1, 2005.
17. Consensus panel recommendations for the management of PONV. Annual Bookatz Lecture. Baylor University Medical Center, Dallas, TX, August 2005.
18. Consensus panel recommendations for the management of perioperative nausea and vomiting. University of Cincinnati, Cincinnati, OH. April 26, 2006.
19. Consensus panel recommendations for the management of perioperative nausea and vomiting. St. Judes Children's Research Hospital. November 2, 2006.
20. Postoperative nausea and vomiting: current challenges and methods for management. MD Anderson, Houston, TX. June 6, 2007.
21. 1) Perioperative Fluid Management and Postoperative Outcomes. 2) Postoperative Nausea and Vomiting: Current Challenges and Management Strategies Toronto Western Hospital. Toronto, Canada. October 25-26, 2007.
22. 1) Consensus Panel Recommendations for the Management of PONV. 2) What's New in Perioperative Fluid Management? Cleveland Clinic. Cleveland. OH. August 19-21, 2008.
23. Management of Postoperative Nausea and Vomiting in an Ambulatory Setting. Hospital for Special Surgery, NYC, NY. January 29, 2009.
24. Consensus Panel Recommendations for the Management of PONV. Medical University of South Carolina, Charleston, SC. February 17, 2009.
26. Perioperative Fluid Management. Is There a Right Way? 2) Consensus Panel Recommendations for the Management of PONV. UCLA, Los Angeles, CA. April 28 & 29, 2009.

27. Postoperative Nausea and Vomiting – Consensus Panel Recommendations. Ohio State University. Columbus, OH. May 27, 2010.
28. Management of Hemodynamically Unstable Patient. 2) PONV, SAMBA Consensus Panel Recommendation. Oregon Health & Science University. Portland, OR. August 2, 2010.
29. Management of Postoperative Pain, Nausea and Vomiting in Ambulatory Surgery. 2) Goal Directed Fluid Administration. Does it Improve Outcome? Children’s Hospital of Philadelphia. Philadelphia, PA. August 18 & 19, 2010.
30. Is Monitoring Depth of Anesthesia a Waste of Time? Inova Fairfax Hospital. Falls Church, VA. September 7, 2011.
31. Enhanced Recovery after Surgery (ERAS). Is it Just a Nice Idea? U.C. Davis. Sacramento, CA. December 3-4, 2012.
32. Enhanced Recovery Program: Tapping the Low Hanging Fruits, Memorial Sloan Kettering Grand Rounds Visiting Professor, New York, NY, Monday, December 7, 2015
33. Presentation to Brookdale University Hospital Grand Rounds, Brooklyn, NY, December 17, 2015
34. Anesthesiology and Pain Management Grand Rounds
Lectureship – National Visiting Professor, UT Southwestern Medical Center, Dallas, TX
January 20, 2016
35. Enhanced Recovery Program. Are you missing out on the opportunity? Columbia University, College of Physicians & Surgeons, New York, NY. February 4, 2016
36. Elements of Enhanced Recovery Protocol: Are they Evidence Based?
Perioperative Fluid Management: a 2016 Perspective
University of Alabama, 44th Annual Anesthesiology Review Course, Birmingham, AL.
February 20, 2016

Selected International Invited Lectures

1. Anesthetic depthometer, facts or fantasy? ASEAN Society of Anesthesiologists Biannual Conference, Chiang Mei, Thailand. December, 1997.
2. What's new in postoperative nausea and vomiting. Malaysian Society of Anesthesiologists, Kuala Lumpur, Malaysia. December, 1997.
3. What is new in the treatment of postoperative nausea and vomiting? ASEAN Society of Anesthesiologists Biannual Conference, Chiang Mei, Thailand. December, 1997.
4. Propofol. Milk of antiemesis? European Society of Anesthesiologists. Barcelona, Spain. April, 1998.
5. Monitoring anesthetic depth. Have we found the "holy grail"? Singapore Academy of Medicine and Singapore Society of Anesthesiologists. December, 1998.
6. 1) Morbidity following ambulatory surgery. 2) Optimizing sedation and analgesia for your patient. 3) Debate: Patients for short day care procedures do not require perioperative intravenous fluids. 4) Debate: Single agent anaesthesia for ambulatory surgery: intravenous is better than inhalational. The Eleventh ASEAN Congress of Anaesthesiologists. Malaysia. July, 1999.
7. 1) In search of the ideal antiemetic. 2) Pain relief in the early post-operative period. The millenium perspective. Second Congress of the Asian Oceanic Society for Intravenous Anaesthesia. Melbourne Australia. October, 1999.
8. 1) Intravenous Fluid Therapy. 2) Is Hextend the Solution? Current Controversies in Anaesthesia and Peri-Operative Medicine. Dingle, Co. Kerry, Ireland. October, 1999.
9. Plasma volume expander. World Congress of Anesthesiologists. Montreal, Canada. June, 2000.
10. Plenary Session: Evidence-based Management of Post-operative Nausea and Vomiting. Canadian Anesthesiologists' Society 59th Annual Meeting. Ottawa, Ontario. June 21, 2003.
11. Effective post-operative pain management: Early treatment and sustained administration. The European Federation of the International Association for the Study of Pain Chapters, Prague, Czech Republic September 2-6, 2003
12. Plenary Session: 1) Consensus on the Management of PONV. 2) Role of Acupuncture in Anaesthesia. 3) COX-2 Inhibitors. Combined Scientific Meeting in Anaesthesiology 2003. Hong Kong. September 26-28, 2003.
13. 1) New concepts in perioperative fluid management. 2) Benefits of TIVA. 3) COX-2 inhibitors. 4) Management of PONV. Australian Society of Anesthesiologists Guest of Honor, Melbourne, Australia. October 2-5, 2003.
14. Post-operative nausea and vomiting. Ontario Perianesthesia Nurses Association, 18th Annual Conference, Toronto, Canada. October 25, 2003.

15. 1) Rol de los inhibidores de la COX-2 en el paciente ambulatorio. 2) Analgesia multimodal. Dolor agudo postoperatorio y postraumático. Bogota, Columbia August 27 & 28, 2004.
16. New approach in surgical pain management. The Annual Meeting of Department of Anesthesiology, Faculty of Medicine, Chiangmai University. Bangkok, Thailand. July 20, 2005.
17. New approach in surgical pain management. 30th Annual Scientific Meeting of the Royal College of Surgeons of Thailand/15th Asian Congress of Surgery. Chombur, Pattaya, Thailand. July 22, 2005.
18. 1) Evidence based management of PONV in ambulatory anesthesia. 2) Monitoring intraoperative awareness. 34th Argentine Congress of Anesthesiology. Buenos Aires, Argentina. September 2005.
19. Post-operative nausea and vomiting. Anesthesiology Association of Cundinamarca, SCA. Association of Colombian Anesthesiology and Reanimation. SCA 2005 Course Ambulatory Surgery Update. Bogota, Columbia. November 4, 2005.
20. The Choice of Fluid for the Perioperative Period. Annual Meeting of the Korean Society of Anesthesiologists. Jeju, Republic of Korea. November, 2005.
21. Clinical application of arterial pressure-based cardiac output monitoring. Japan Society of Clinical Anesthesiology, Kobe Japan. May 30 - June 3, 2006.
22. 1) Consensus guidelines on the management of PONV. 2) Perioperative fluid management: the science and art. XXXII Curso Annual De Actualizacion en Anestesiologia y Medicina Perioperatoria. Mexico City, Mexico June 8-10, 2006.
23. Goal directed fluid administration perioperative perspectives. The Great Fluid Debate: A state of the art review of plasma volume expanders and fluid management. Royal Society of Medicine, London, UK. August 3-4, 2006
24. 1) Strategies for perioperative fluid management and choice of fluid. 2) Anesthesia for ambulatory surgery. Beijing Tongren Anesthesia Conference. Beijing, PR China. September 23 - 27, 2006.
25. The role of minimally invasive cardiac output monitoring in improving perioperative outcome. Criticare 2007: International Critical Care Congress & 13th Annual Conference of the Indian Society of Critical Care Medicine. Cochin India. February 10, 2007.
26. 1) Current trends in volume therapy: an American perspective. 2) Goal-directed volume therapy in surgical patients. Fresenius Kabi Advanced Course in Transfusion Alternatives (FRACTA). Havana, Cuba. April 24-26, 2007.
27. The role of minimally invasive cardiac output monitoring for fluid management. 5th National Conference on Intensive Care. Kuala Lumpur, Malaysia. June 22, 2007.
28. Management of postoperative nausea and vomiting. Siem Reap, Cambodia. November 9, 2007.
29. Cardiovascular Monitoring. 15th ASEAN Congress of Anaesthesiologists. Pattaya City, Thailand. November 11, 2007.

30. Rational Approach to Anti-emetic Therapy. International Society of Anesthetic Pharmacology 2008 Cape Winelands Conference. Stellenbosch, SA. February 29, 2008.
31. 1) PONV in Day Surgery – Ensuring the Patient Goes Home. 2) Minimally Invasive CO Monitoring – The End of the PA Catheter?” Singapore-Duke Anesthesia and Critical Care Update 2008. Singapore. April 5-6, 2008.
32. 1) Consensus Panel Recommendation for the Management of Postoperative Nausea and Vomiting. 2) Hemodynamic Monitoring Guiding Fluid Management. The Satellite Meeting of International Society for Anaesthetic Pharmacology (Combined with the Annual Meeting of Chinese Association of Anesthesiologists). Chongqing, China. April 13, 2008.
33. 1) Consensus Panel Recommendation for the Management of Postoperative Nausea and Vomiting. 2) Goal Directed Perioperative Fluid Management. 3) Pain Management in Ambulatory Patients. 4) What’s New in Neuromuscular Blocking and Reversal Agents? New Horizons in Anesthesiology. Cozumel, Mexico. March 21-25, 2009.
34. 1) Advances in volume monitoring. 2) Volume therapy and coagulation. 3) Restrictive or liberal therapy? 4) Normal saline is abnormal. 2009 FRACTA Meeting. Kuala Lumpur, Malaysia. April 13 & 14, 2009.
35. 1) Goal-directed fluid therapy: Does it work and what should you use. 2) PONV and ambulatory anaesthesia: State of the art. ANZCA ASM 2009 Anaesthesia: Branching Out. Cairns, Australia. May 2-6, 2009.
36. 1) Guidelines for management of PONV. 2) Use of opioids for acute pain. 3) Fast tract recovery. 38th Congress Argentina Society of Anesthesiologists. Cordoba, Argentina. September 1-6, 2009.
37. 1) Acute pain management – is this the multimodal story witchcraft? 2) Can we make nausea a thing of the past? Auckland City Symposium. Auckland, New Zealand. March 20, 2010.
38. 1) Post-op bowel dysfunction: can we do better? 2) Recent advances in volume therapy. 3) Update on postoperative nausea and vomiting. Duke Singapore Anesthesia Update. Singapore. September 18, 2010.
39. 1) Postoperative Nausea and Vomiting: Is the Problem Solved? 2) Post-operative Analgesia – New Pharmacologic Modalities. World Anesthesia Congress. Rome, Italy. April 13, 2011.
40. “Colloid or Crystalloid: Any Differences in Outcomes?” Refresher Course Lecture. IARS Annual Meeting. Vancouver, BC. May 21, 2011.
41. Early Goal Directed Therapy in Perioperative Fluid Management. Sarawak General Hospital. Sarawak, Malaysia. June 16, 2011.
42. Perioperative Fluid Optimization and Clinical Outcomes. 2012 FRACTA Japan. Tokyo, Japan. February 18 – 19, 2012.
43. 1) Liberal vs Restricted Fluid Regime in Bowel Surgery. 2) Ambulatory Panel: State of the Art in Ambulatory Practice. World Congress of Anaesthesiologists Meeting. Buenos Aires, Argentina. March 25-30, 2012.

44. 1) Intraoperative Haemodynamic Monitoring and Surgical Outcome. 2) Enhanced Recovery after Surgery – Evidence and Implementation. Malaysian Society of Anaesthesiologists Annual Scientific Meeting. Kuantan, Pahang, Malaysia. April 19-22, 2012.
45. Enhanced Recovery After Surgery (ERAS). A New Paradigm for Surgical Patients. Chinese Society of Anesthesiology Meeting. Chongqing, China. September 1, 2012.
46. Postoperative Nausea and Vomiting. 1st ERAS Congress. Cannes, France. October 5-7, 2012.
47. 1) Perioperative Fluid Management: Aquatic Assassins. 2) Management of Postoperative Nausea and Vomiting: New Information & New Strategy. 15th Annual Conference: Challenges for Clinicians. St. John, VI. Jan 22-23, 2013.
48. How can we be Smarter in Acute Pain Management. McGill University. Montreal, Canada. April 25, 2013.
49. What is Enhanced Recovery? Guangdong General Hospital, China, March 10, 2015
50. Goal Directed Fluid Therapy, Zhujiang Hospital of Nanfang Medical University, March 11, 2015
51. What is Enhanced Recovery? First Affiliated Hospital of Chongqing University, March 12, 2015
52. Perioperative Goal Directed Fluid Therapy in Elderly Surgical Patients, CSA, China, September, 11, 2011
53. ERAS, Ventilation and Anesthesia, IRCAD, Strasbourg, France, September 26, 2015
54. Enhanced Recovery Program. A New Paradigm for Perioperative Care. Windsor Regional Hospital, Windsor, ON, Canada, February 11, 2016

Selected National Invited Lectures

1. Peri Anesthesia Annual Conference, University of North Carolina, Chapel Hill, North Carolina. April, 1998.
2. New alternatives in the management of postoperative nausea and vomiting. Wisconsin Association of Nurse Anesthetists, Stephen's Point, WI. September, 1998.
3. New development in the management of postoperative nausea and vomiting. Nashville Society of Nurse Anesthetists, Nashville, TN. October, 1998.
4. Novel approaches to postoperative nausea and vomiting. Society of Intravenous Anesthesia Annual Meeting. Orlando, FL. October, 1998.
5. 1) New alternatives for postoperative nausea and vomiting. 2) Advances in Inhalation Anesthesia. Second Annual North Alabama Anesthesia Update. Huntsville, AL. March, 1999.

6. Influence of Age on Surgical Outcomes. GRASP Lecture. Duke University medical Center, Durham, NC. June, 1999.
7. New developments in the management of Post-operative nausea and vomiting. Idaho Association of Nurse Anesthetists Spring Conference. Boise, ID. May, 1999.
8. 1) BIS monitoring in anesthesia practice. 2) The utilization of novel drug delivery systems in anesthesia. The Seventeenth Annual Clemson University Smoky Mountain Conference for Nurse Anesthetists. Gatlinburg, TN. June, 1999.
9. 1) Treatment trends for postoperative nausea and vomiting. 2) Drug interactions and their implications for the clinicians. Annual meeting of the Oklahoma Society of Anesthesiologists. Los Colinas, TX. August, 1999.
10. Acupuncture. 4th Annual Integrative Medicine Conference. Duke Integrative Medicine, Duke University, Research Triangle Park, NC. October, 1999.
11. PONV: Assessing the Risk Factors and Treatment Options. Milwaukee Society of Anesthesia. Milwaukee, WI. February, 2000.
12. Plasma Volume Expanders: The Millenium Prespective. Illinois Society of Anesthesiologists Oakbrook, IL. October, 2000.
13. Novel approaches in assessing risk of PONV and management strategies. An educational symposium, Intravenous Anesthesia Research Society 75th Clinical and Scientific Congress. Ft. Lauderdale, FL. March, 2001.
14. Risk assessment of PONV. American Society of Peri-Anesthesia Nurses 20th National Convention. Boston, MA. April, 2001.
15. Applications of acupuncture in the OR. Duke Center for Integrative Medicine. Durham, NC. February, 2002.
16. Monitored anaesthesia care. International Society for Anaesthetic Pharmacology (ISAP) panel held at the 76th International Anesthesia Research Society (IARS) Annual Meeting. San Diego, CA. March, 2002.
17. Intraoperative fluid management and choice of fluids. Refresher Course held at the American Society of Anesthesiologists (ASA) 2002 Annual Meeting. Orlando, FL. October 2002.
18. 1) Recovery of elderly patients from ambulatory surgery. 2) Panel Session: Geriatric anesthesia: Big problems with little cases. American Society of Anesthesiologists (ASA) 2002 Annual Meeting. Orlando, FL. October, 2002.
19. 1) Monitored anesthesia care. 2) COX-2 analgesics. 3) What is new in the management of PONV. 4) Controversies in outpatient anesthesia. New Horizons in Anesthesiology, Steamboat Springs, CO and April 5-11, 2003, Cozumel, Mexico. February 9-14, 2003.

20. 1) Update on the management of PONV. 2) Monitoring depth of anesthesia. 3) The role of COX-2 in acute pain management. Colorado Review of Anesthesia (CRASH), Vail CO. February 22-28, 2003.
21. Perioperative use of opioids and opioid antagonists. 5th International Congress on Ambulatory Anesthesia, (SAMBA), Boston, MA. May 8-11, 2003
22. The clinical pharmacology of HES and pentastarch. NATA First North American Symposium, San Francisco, CA. June 13-14, 2003.
23. Intraoperative fluid management and choice of fluids. Refresher Course held at the American Society of Anesthesiologists (ASA) 2003 Annual Meeting. San Francisco, CA. October 2003.
24. CNS plasticity and central sensitization: Prevention of the development of chronic pain. 67th Annual American College of Rheumatology Scientific Meeting, Orlando FL. October 25, 2003.
25. Perioperative fluid management. Is there a right way? Atlanta Society of Anesthesiologists, October, 2003.
26. Represent Society of Ambulatory Anesthesia (SAMBA) to present evidence at the FDA Anesthetic Life Support Drugs Advisory Committee on the discussion of the cardiac toxicity of droperidol. November, 2003.
27. 1) Fluid Management and Choice of Fluids 2) Consensus Panel on the Management of Postoperative nausea and Vomiting. 12th Annual Anesthesia Symposium, Colorado Springs, Colorado, April 30 - May 1, 2005.
28. Effective Strategies to Minimize PONV in the Ambulatory Surgery Patient. SAMBA Satellite Symposium - 20th Annual SAMBA Meeting, Scottsdale AZ, May 12-15, 2005.
29. Consensus Panel Recommendations for the Management of PONV. Grand Rounds Lecture at West Virginia University Department of Anesthesiology. Morgantown, WV. June 1, 2005.
30. 1) Consensus Panel Recommendations for the Management of PONV. 2) What's New in Anesthetic Pharmacology. 3) Perioperative Hemodynamic Monitoring and Fluid Management Strategy. 4) Adjunctive Analgesics - An Opportunity to Improve Postoperative Pain Relief. Duke Winter Anesthesia & Critical Care Review. Park City, UT. March 5 & 6, 2007.
31. Consensus Guidelines and Recommendations for the Management of PONV. North Carolina Society of Anesthesiologists Annual Meeting. Asheville, NC. September 30, 2007.
32. Management of Postoperative Nausea and Vomiting. ASA Annual Meeting, San Francisco, CA, October 16, 2007.
33. New Neuromuscular Blocking Drugs and Reversal Agents. Tennessee Society of Anesthesiologists. Nashville, TN. February 16, 2008.
34. Goal Directed Therapy – When, How and What to Use? Great American Fluid Debate. Sonoma, CA. March 26-28, 2008.

35. Consensus Panel Recommendations for Management of PONV. Refresher Course Lecture at the IARS Annual Meeting. San Francisco, CA. March 28-31, 2008.
36. 1) PONV: Will we ever get rid of it? 2. New Opioid Analgesic Preparation. 11th Annual Duke Cardiothoracic & Regional Update. Hilton Head, SC. July 8-9, 2008.
37. Consensus Panel Recommendations for the Management of PONV. Cleveland Clinic. Cleveland, OH. August 20, 2008.
38. 1) The Evolution of Multimodal Management Strategies for Postoperative Ileus: The Latest Clinical Evidence. 2) Patient Scenarios for Postoperative Ileus and Expert Faculty Guidance on Clinical Assessment, Monitoring and Treatment. Academy of Medical-Surgical Nurses Meeting. Nashville, TN. October 4, 2008
39. Management of PONV. Refresher Course Lecture at American Society of Anesthesiologists Annual Meeting. Orlando, FL. October 16-21, 2008.
40. Will NK1 Antagonists Have a Role in my Practice? Postgraduate Assembly in Anesthesiology. New York City, NY. December 12-16, 2008.
41. Management of Postoperative Nausea and Vomiting in an Ambulatory Setting. Hospital for Special Surgery. New York City, NY. January 29, 2009.
42. Consensus Panel Recommendations for the Management of PONV. Medical University of South Carolina. Charleston, SC. February 17, 2009.
43. Consequences of Hypovolemia: Theories and Basic Science. Great American Fluid Debate. San Diego, CA. March 12, 2009.
44. Recommendations for the Management of PONV. IARS Annual Meeting. San Deigo, CA. March 15, 2009.
45. Consensus Panel Recommendations for the Management of PONV. UCLA. Los Angeles, CA. April 28-29, 2009.
46. Practical Considerations for the Society for Ambulatory Anesthesia PONV Consensus Guidelines. AANA Symposium. San Diego, CA. August 10, 2009.
47. Effective Management of PONV and Pain in Ambulatory Settings. Refresher Course Lecture at American Society of Anesthesiologists Annual Meeting. New Orleans, LA. October 15 – 21, 2009.
48. Effective Management of PONV. 6th Annual Anesthesiology Convention. Puerto Rico. November 5-8, 2009.
49. 1) Postoperative nausea and vomiting. 2) What Anesthesiologists need to know about acupuncture. 3) New drugs in anesthesia. 3rd Annual Emerging Technologies in the OR. Lake Buena Vista, FL. June 9-10, 2010.

50. Effective Strategies for Acute Pain Management. 8th Annual Need to Know of Ortho Conference. Greensboro, NC. September 2, 2010.
51. Effective Management of Pain and PONV in Ambulatory Surgery. Refresher Course Lecture. 2010 American Society of Anesthesiologists Annual Meeting. San Diego, CA. October 15-19, 2010.
52. PONV: Can we ever get rid of it? University of Miami. Miami, FL. November 4, 2010.
53. New Advances in Non-Invasive Cardiac Output Monitoring. Does it Improve Outcome? Cleveland Society of Anesthesiologists Meeting. Cleveland, OH. November 6, 2010.
54. PONV: Systematic Risk Assessment and Appropriate Preventive Treatments. Satellite Symposium at Postgraduate Assembly in Anesthesiology. New York City, NY. December 12, 2010.
55. 1) Minimally Invasive Cardiac Output Monitors. 2) Effective Opioid Adjuncts in Ambulatory Surgery. 3) Perioperative Fluid Management: Voodoo or Science. 4) Postoperative Nausea and Vomiting... Yes, There are New Strategies. CSA Winter Hawaiian Seminar. Ka'anapali Beach, Maui. January 23-28, 2011.
56. 1) Crystalloids and Colloids – Is There Still a Controversy? 2) Practical Application of GDT in Clinical Settings. Goal Directed Therapy Symposium. Newport Beach, CA. June 4 & 5, 2011.
57. PONV: How Far Have We Come? The American Association of Nurse Anesthetists Annual Meeting. Boston, MA. August 9, 2011.
58. 1) Perioperative Fluid Optimization with Goal Directed Therapy. 2) RCL: Effective Management of Pain, PONV, & Opioid Side Effects in Ambulatory Surgical Patients. American Society of Anesthesiologists Annual Meeting. Chicago, IL. October 13-18, 2011.
59. Perioperative Fluid Management – Voodoo or Science? Presbyterian Anesthesia Associates Fall Conference. Charlotte, NC. October 29, 2011.
60. Analgesia Management for the Perioperative Patient. WakeMed Health & Hospitals. Raleigh, NC. December 22, 2011.
61. 1) “Starches – New Developments” 2) “Minimally invasive cardiac monitors”. Winter Anesthesia & Critical Care Review. Park City, UT. March 6-9, 2012.
62. New Options in Plasma Volume Expansion in the OR & ICU. University of Tennessee Medical Center. Knoxville, TN. May 2, 2012.
63. Perioperative Fluid Management: Aquatic Assassins? Annual IARS Meeting. Boston, MA. May 18 – 21, 2012.
64. PONV Guidelines. Annual SAMBA Meeting. Miami, FL. May 3-5, 2012.
65. Perioperative Hemodynamic Optimization – Is it Ready for Prime Time? Third Annual State of the Science Symposium. Miami, FL. June 9, 2012.

66. 1) HES – Ideal Fluid or a Dangerous Solution? 2) Advances in Postoperative Surgery. Rewriting the Textbook. . 5th Annual Emerging Technologies in the OR and Great Fluid Debate. Lake Buena Vista, FL. June 11 – 15, 2012.
67. PONV and the use of Transderm Scop. University of Vermont. Burlington, VT. July 18, 2012.
68. PONV and the use of Transderm Scop. Cedar Sinai Medical Center. Los Angeles, CA. August 29, 2013.
69. Non-opioid Options for the Management of Post-surgical Pain. Fairview Hospital. Cleveland, OH. September 19, 2012.
70. Effective Management of Pain, PONV and other Opioid Related Side Effects in Ambulatory Surgical Patients. American Society of Anesthesiologists Annual Meeting. Washington, DC. October 13 – 17, 2012.
71. The Role of Perioperative Fluid Management and Patient Outcome. Mid Michigan Medical Center. Midland, MI. December 3, 2012.
72. Controversies in Perioperative Fluid Management. NJ Medical School, Newark, NJ. March 6, 2013.
73. Enhanced Recovery after Surgery (ERAS) Program: Can You Afford Not to Adopt It??. University of Miami. Miami, FL. June 13, 2013.
74. Enhanced Surgical Recovery Program: The Role of the Anesthesiologist, Moderator/Speaker, IARS Meeting and International Science Symposium, May 18, 2014, Montreal, Canada.
75. Bupivacaine Reduced Pain Intensity for 72 Hours Following Abdominal Surgery Relative to Bupivacaine HCl, ASA, New Orleans, LA, Oct. 11, 2014.
76. Effective Management of Pain, PONV and Common Adverse Effects of Ambulatory Surgical Patients, ASA, New Orleans, LA, Oct. 12, 2014.
77. EXPAREL: A Novel Liposomal Extended-Release Bupivacaine Formulation, ASA, New Orleans, LA, Oct. 13, 2014.
78. Novel Antiemetics. Are they better than what we have?, ASA, New Orleans, LA, Oct. 14, 2014.
79. Effective Management of Pain, PONV and Common Adverse Effects in Ambulatory Surgical Patients, ASA Meeting, New Orleans, LA, Oct. 11-15, 2014.
80. Fluid Management in Surgical Patients – An Integral part of the ERAS Strategy. Annual Whitacre CME Lecture and Dinner, Cleveland, OH, Nov. 1, 2014.
81. How to Create an Effective Mentorship Program, PGA Conference, FAER Scientific Panel, Marriott Marquis, NY, Dec. 13, 2014.
82. Evolving Role in Perioperative Care and Transderm Scope, Transderm Scope Speaker Dinner, New York, NY, Dec. 12, 2014.

83. Lecture on Enhanced Recovery, Melville, NY, Jan. 12, 2015.
84. Review Course Lecture on Enhanced Recovery after Surgery (ERAS), 2015 Annual International Anesthesia Research Society (IARS), Honolulu, HI, March 22, 2015.
85. Evolving Role in Perioperative Care and Transderm Scop, Garden City, NY, March 25, 2015.
86. SAMBA 30th Annual Meeting, General Session 4: Post-operative/Recovery Room, Update on PONV, Scottsdale, AZ, April 23, 2015.
87. SAMBA 30th Annual Meeting, Consult the Expert: Update on PONV – Dr. Gan, Scottsdale, AZ, April 24, 2015.
88. Consult the Expert: Update on PONV, SAMBA, Scottsdale, AZ, April 24, 2015.
89. Successful Pain and Opioid Reduction Strategies. ERAS Congress, Washington, DC, May 8-12, 2015.
90. Enhanced Recovery and Fluid Management, Radnor, PA, May 18, 2015.
91. Goal Directed Fluid Therapy: An Integral Part of the Enhanced Recovery Program, Troy, MI, June 24, 2015.
92. Enhanced Recovery after Surgery: The Role of Multimodal Pain Management, Second Annual Perioperative Surgical Home Summit, Huntington Beach, CA, June 27, 2015.
93. The Use of Multimodal Analgesia in Treating Acute Pain: A Focus on Quality of Patient Care, Garden City, NY, August 24, 2015.
94. Enhanced Recovery after Surgery-A Look into the Future of Perioperative Care, ASA, San Diego, CA, October 26, 2015.
95. Enhanced Recovery Program. Tapping the Low Hanging Fruits to Improve Outcomes, ASA, San Diego, CA, October 27, 2015.
96. Pulse Pressure and Postoperative Acute Kidney Injury after Noncardiac Surgery, ASA, San Diego, October 27, 2015.
97. The Use of Multimodal Analgesia in Treating Acute Pain: A Focus on Quality of Patient Care, St. Francis Hospital, Hartford, CT, November 10-11, 2015.
98. Presentation TITLE? to Forest Hills Hospital Faculty, Capital Grille Restaurant, Garden City, NY, November 18, 2015.
99. Consensus Guidelines for the Management of PONV, CSA Fall Anesthesia Conference, Kuai, Hawaii, November 2, 2015.

100. Non-Opioid Analgesics: Recipes for Success, CSA Fall Anesthesia Conference, Kuai, Hawaii, November 2, 2015.
101. Advanced Hemodynamic Monitors: Do We Need Them? CSA Fall Anesthesia Conference, Kuai, Hawaii, November 3, 2015.
102. Controversies in Perioperative Fluid Management, CSA Fall Anesthesia Conference, Kuai, Hawaii, November 4, 2015.
103. The Use of Multimodal Analgesia in Treating Acute Pain: A Focus on Quality of Patient Care, New York, NY, December 12, 2015.
104. Clinical Considerations in Modern Inhaled Anesthetics, New York, NY, December 13, 2015.
105. The Use of Multimodal Analgesia in Treating Acute Pain: A Focus on Quality of Patient Care, Cleveland, OH, February 10, 2016.
106. Presentation on Enhanced Recovery, Cleveland Clinic, Cleveland, OH, February 11, 2016.

National Panels

1. Panel on Ambulatory Anesthesia Research, "Analgesics and Outcome after Ambulatory Anesthesia: Is There an Association?" SAMBA Mid-Year Meeting, October 22, 2004, Las Vegas, NV.
2. New Opioid Panel Discussion. IARS 79th Clinical & Scientific Congress, Honolulu, Hawaii, March 11, 2005.
3. Point-Counterpoint: "The Black Box Warning on Droperidol should be Removed", ASA Meeting, Chicago, IL, October 16, 2006.
4. Panel: Pharmacoeconomics and Evidence-Based Practice: Dispelling Practice Myths and Urban Legends, "Older Antiemetics are Dangerous and Should Not Be Used", ASA Meeting, Chicago, IL, October 17, 2006.
5. Adverse Drug Reactions. IARS Meeting, Orlando, FL, March 24, 2007.
6. SAMBA Controversies in Ambulatory Anesthesia. "The Role of Non-Opioid Analgesics in Ambulatory Patients", IARS Meeting, Orlando, FL, March 25, 2007.
7. General Session 5: "Do I Really Need a New Anti-Emetic?" SAMBA 22nd Annual Meeting, San Diego, CA, May 6, 2007.
8. Point Counterpoint Moderator: "Controversies in the Management of PONV. ASA Annual Meeting, San Francisco, CA, October 13, 2007.
9. Panel: Noninvasive cardiac output: myth or reality? "Pressure Wave Analysis Techniques, ASA Annual Meeting, San Francisco, CA, October 14, 2007.
10. Panel: Minimally Invasive Cardiac Output Technology, "Flow-based Cardiac Output Monitoring", ASA Annual Meeting, San Francisco, CA, October 15, 2007.
11. Panel: New Frontiers in Anesthetic Pharmacology. IARS Annual Meeting. San Francisco, CA. March 28 – 31, 2008.
12. Panel: New Pharmacology Options in Ambulatory Surgery. ASA Annual Meeting, Orlando, FL. October 16-21, 2008.
13. Panel: SAMBA – Hot Issues in Ambulatory Anesthesia. Panel: The Great American Fluid Panel, Goal Directed Fluid Management. IARS Annual Meeting. San Deigo, CA. March 13-16, 2009.
14. Panel: Enhancing Recovery in Open Abdominal Surgery. Panel: Translating Research into Ambulatory Anesthesia Practice. American Society of Anesthesiologists Annual Meeting. New Orleans, LA. October 15 – 21, 2009.
15. Panel: Improving Outcomes in Colorectal Surgical Patients. Panel: Opioid Adjuncts in Ambulatory Practice. American Society of Anesthesiologists Annual Meeting. San Diego, CA. October 15-19, 2010.

16. Panel: Multimodal Therapies – “What is the Optimal Multimodal Approach to Managing PONV? and Consult the Experts “PONV”. SAMBA Annual Meeting. San Antonio, TX. May 4-7, 2011.
17. 1) Perioperative Outcomes. What are Important and How to Reduce Them? 2) Tracking Outcomes in the ASC – What’s in it for Me? American Society of Anesthesiologists Annual Meeting. Chicago, IL. October 13-18, 2011.
18. 1) Which Fluid Should I Use? 2) Goal Directed Therapy. Winter Anesthesia & Critical Care Review. Park City, UT. March 6-9, 2012.
19. 1) Controversies in Fluid Management, Fluid Debate. 2) Perioperative Care of Patients Undergoing Major Surgery. 5th Annual Emerging Technologies in the OR and Great Fluid Debate. Lake Buena Vista, FL. June 11 – 15, 2012.
20. 1) The Role of Non-opioid Analgesic Adjuncts. Should I Incorporate the Following Drugs into my Ambulatory Anesthesia Practice? 2) Outcomes in Anesthesia: What Have We Learned. 3) Optimization of the High Risk Surgery Patient: How can we Improve Postoperative Outcome? 4) Applied Cardiovascular Physiology in the ICU. American Society of Anesthesiologists Annual Meeting. Washington, DC. October 13 – 17, 2012.
21. 1) Update on Acute Pain Management. 2) Anesthetic Considerations for Ambulatory Surgery. 66th Annual Postgraduate Assembly in Anesthesiology. New York City, NY. December 14 – 18, 2012.
22. How can Anesthesiologists Improve Outcomes? American Society of Anesthesiologists Annual Meeting. San Francisco, CA. October 15, 2013.
23. Novel Drugs in Ambulatory Practice. How Would They Change Your Practice? American Society of Anesthesiologists Annual Meeting, New Orleans, LA. Oct. 11-15, 2014.
24. Exparel: A Novel Liposomal Extended-Release Bupivacaine Formulation. American Society of Anesthesiologists Annual Meeting, New Orleans, LA. Oct. 11-15, 2014.
25. Sedation for Procedures: Personnel Driven?, PGA Conference, 31st Annual R.W. Robertazzi Memorial Panel: Current Controversies in the Art and Science of Anesthesiology, New York, NY, December 12, 2015.
26. Scientific Panel, Optimizing Postoperative Care, PGA Conference, New York, NY, December 15, 2015.

Department Grand Round

1. What have we learned after 1001 papers on postoperative nausea and vomiting? Department of Anesthesia, Duke University Medical Center, Durham, North Carolina. June, 1998.
2. Acupuncture: from basic science to clinical practice. Hyperbaric Grand Rounds. Duke University Medical Center. Durham, North Carolina. March, 2002.
3. Update on management of PONV. Department of Urology Grand Rounds. Duke University Medical Center, Durham, North Carolina. September, 2002.

4. IRB Issues. Department of Anesthesia, Duke University Medical Center, Durham, North Carolina. June 18, 2003.
5. Perioperative Fluid Management. Department of Anesthesia, Duke University Medical Center, Durham, North Carolina. August 13, 2003.
6. Novel Anesthetic Drugs and Delivery Systems. Department of Anesthesia, Duke University Medical Center, Durham, North Carolina. May 1, 2013.
7. Good to Great. A Journey, Not a Destination, Department of Anesthesiology, Stony Brook University, Stony Brook, NY, September 24, 2014
8. State of the Department, Department of Anesthesiology, Stony Brook University, Stony Brook, NY, December 2, 2015

Duke Outreach Program

1. Update on acute pain. Four County Medical Society, Henderson, North Carolina. November, 1997.
2. New alternatives in the management of postoperative nausea and vomiting. Elm City, NC. November, 1998.

Residents and Medical Students Lectures

1. Does naloxone have opioid sparing effects? Pain Conference. Duke University Medical Center, Durham, NC. January 1997.
2. Board Preps. Duke University Medical Center, Durham, NC. June, 1997.
3. Intravenous anesthetics. Resident lecture. Duke University Medical Center, Durham, NC. August, 1997.
4. Postoperative nausea and vomiting. Causes and treatment. Resident lecture. Duke University Medical Center, Durham, NC. February, 1999.
5. IRB – Human studies. AEP lecture for medical students. Duke University Medical Center, Durham, NC. October, 1999.
6. PACU problems. CA-1 resident lecture. Duke University Medical Center, Durham, NC. July, 2000.
7. IRB – Human studies. AEP lecture for medical students. Duke University Medical Center, Durham, NC. September, 2000.
8. Clinical research asking and answering cool pharmacologic questions in the operating room. Resident lecture. Duke University Medical Center, Durham, NC. February, 2001.
9. Applications of acupuncture. DCIM lecture for medical students. Duke University Medical Center, Durham, NC. April, 2001.

10. Applications of acupuncture. DCIM lecture for medical students. Duke University Medical Center, Durham, NC. February, 2002.
11. Management of PONV. Lecture for Nurse Anesthetist Students. Duke University Medical Center, Durham, NC. April 2, 2003.
12. PONV. Resident lecture. Duke University Medical Center, Durham, NC. May 14, 2003.
13. BIS. Resident lecture. Duke University Medical Center, Durham, NC. August 27, 2003.
14. Role of COX-2 in pain management. Duke University Medical Center, Durham, NC. November 10, 2003.
15. Management of PONV. Lecture for Nurse Anesthetist Students. Duke University Medical Center, Durham, NC. March 15, 2004.
16. Fluids. Resident lecture. Duke University Medical Center, Durham, NC. November 10, 2004.
17. Management of PONV. Lecture for Nurse Anesthetist Students. Duke University Medical Center, Durham, NC. April 20, 2005.
18. What's New in Perioperative Fluid Management. Cleveland Clinic. Cleveland, OH. August 20, 2008.
19. Perioperative Fluid Management. Is There a Right Way? UCLA. Los Angeles, CA. April 28, 2009.
20. Cardiac Output Monitors. CA 2/3 Lecture. Duke University Medical Center, Durham, NC. August 15, 2012.
21. Picking and Developing a Research Career Focus and Making it Relevant to Clinicians. Fellow Lecture. Duke University Medical Center, Durham, NC. October 25, 2012.