

CURRICULUM VITAE
BRIAN M. BLOCK, M.D., Ph.D.

Current Appointment: Instructor, Johns Hopkins University School of Medicine

Address: Johns Hopkins Hospital
Department of Anesthesiology and Critical Care Medicine
Division of Pain Medicine
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Education and Training

B.S. Engineering, 1990. The University of Michigan. Ann Arbor, Michigan. Engineering Science:
Bioengineering Option

Ph.D., 1996. Case Western Reserve University School of Medicine, Department of Neurosciences.
Cleveland, Ohio. Thesis: Ion permeation in the M-type and Delayed Rectifier Potassium
Channels of Bullfrog Sympathetic Neurons. Advisor: Stephen W. Jones (Department of
Physiology & Biophysics).

M.D., 1998. Case Western Reserve University School of Medicine. Cleveland, Ohio.

Internal Medicine Internship, 1998-99. MetroHealth Medical Center. Cleveland, Ohio.

Anesthesiology Residency, 1999-2002. Johns Hopkins University. Baltimore, Maryland.

Regional Anesthesia and Acute Pain Management Fellowship, 2001-2 (CA-3 Fellowship).
Johns Hopkins University. Baltimore, Maryland.

Pain Medicine Fellowship, 2002-3. Johns Hopkins University. Baltimore, Maryland.

Professional Appointments

Instructor, The Johns Hopkins University,
Department of Anesthesiology and Critical Care, Division of Pain Medicine.
550 N Broadway St, Suite 301, Baltimore, MD 21205

RESEARCH ACTIVITIES

Peer-Reviewed Journal Publications

- Block BM**, Barry SR, Faulkner JA. Aminophylline increases submaximum power but not intrinsic velocity of shortening of frog muscles. *J Appl Physiol*. 1992;73:71-74.
- Block BM**, Jones SW. Ion permeation and block of M-type and delayed rectifier potassium channels: whole cell recordings from bullfrog sympathetic neurons. *J Gen Physiol*. 1996;107:473-488.
- Block BM**, Jones SW. Delayed rectifier of bullfrog sympathetic neurons: ion-ion competition, asymmetric block, and effects of ions on gating. *J Physiol (Lond)*. 1997;499:403-416.
- Block BM**, Stacey WC, Jones SW. Surface charge and lanthanum block of calcium current in bullfrog sympathetic neurons. *Biophys J*. 1998;74:2278-2284.
- Block BM**, Sirio CA, Cooper GS, DiGiuseppe DL, Rosenthal GE. Use of intensive care-specific interventions in major teaching and other hospitals: a regional comparison. *Crit Care Med*. 2000;28:1204-7.
- Block BM**, Liu SS, Rowlingson AJ, Cowan AR, Cowan JA, Wu CL. Efficacy of postoperative epidural analgesia: a meta-analysis. *JAMA*. 2003;290:2455-2463.
- Liu SS, **Block BM**, Wu CL. Effects of perioperative central neuraxial analgesia on outcome after coronary artery bypass surgery: A meta analysis. *Anesthesiology*. In press.

Invited Reviews and Case Reports

- Block BM**, Wu CL. Pain and Sleep. *Interntl J Pain Med Pall Care*. 2001;1:56-61.
- Block BM**, Christo PJ. Ketamine Analgesia for the Opioid-Tolerant Cancer Patient. *Interntl J Pain Med Pall Care*. 2003;2:71-74.
- Pierre HL, **Block BM**, Wu CL. Difficult removal of a wire-reinforced epidural catheter. *Journal of Clinical Anesthesia*. 2003;15:140-1.
- Block BM**, Hurley RW, Raja SN. Mechanism-based therapies for pain. *Drug News Perspect*. In press.
- Hobelmann JG, Grabow TS, Murphy KJ, **Block BM**. Sacroiliac Joint Arthralgia and Injection using Computed Tomographic (CT) Guidance. *In review*.

Book Chapters

- Block BM**, Fleisher LA. 2002. Calcium deficiency. In: Roizen MF, Fleisher LA, editors. *Essence of Anesthesia Practice*. Philadelphia: WB Saunders.

Letters

Block BM. Best methods available for postoperative pain. *Wall Street Journal*. Jan 30, 2004.

Wu CL, **Block BM**, Liu SS, Rowlingson AJ, Cowan AR, Cowan JA. Parenteral vs epidural analgesia for postoperative pain-reply. *JAMA*. 2004; 291: 1198.

Abstracts

Block BM, Faulkner JA. After-loaded and quick-released force-velocity relationships of frog skeletal muscles. *Biophys J*. 1990;57:552a.

Block BM, Jones SW. Lanthanum blockade of N-type calcium current in bullfrog sympathetic neurons. *Biophys J*. 1993;64:A319.

Block BM, Jones SW. Ion permeation in delayed rectifier and M-type potassium currents in bullfrog sympathetic neurons. *Biophys J*. 1995;68:A42.

Block BM, Jones SW. Delayed rectifier currents in bullfrog sympathetic neurons with intracellular Cs⁺. *Biophys J*. 1996;70:A188.

Block BM, Stacey WC, Jones SW. Effect of ionic strength on lanthanum block of calcium current in bullfrog sympathetic neurons. *Biophys J*. 1998;74:A245.

Block BM, Elkassabany N, Naqibuddin M, Frassica FJ, Lietman SA, Raja SN, Frank SM, Wu CL. Effect of postoperative epidural analgesia on lower extremity blood flow: a randomized controlled trial. *Reg Anesth Pain Mgmt*. 2002.

Grant Sponsorship and Sponsored Research

Oral rofecoxib (VIOXX) use for ambulatory orthopedic surgery: a double-blinded, placebo-controlled trial. Merck & Co Medical School Grant Program, \$25,000 total funding.
PI: Brian M. Block, no percent effort specified.

Other Ongoing Research Grants and Projects

Efficacy of Transdermal Fentanyl for Chronic Neuropathic Pain. Co-PI, Funding: Janssen Pharmaceuticals.
STARTSTIM Study, Clinical Investigation of Spinal Cord Stimulation for the Treatment of Refractory Angina.
Investigator.

Fellowships and Grants

Undergraduate Student Biomedical Research Program Fellowship, 1989. The University of Michigan.

Medical Scientist Training Program Fellowship, 1990-8. Case Western Reserve University School of Medicine

Abbott Postgraduate Anesthesia Fellowship, 2002-2003. Johns Hopkins University.

EDUCATIONAL ACTIVITIES

Teaching

Graduate and Medical School Lectures

Teaching Assistant, 1994-6; CWRU Neurobiology Laboratory Course

Instructors: Hillel Chiel and Stephen W. Jones

Perioperative Outcomes and Anesthetic Technique. Lecture given to Department of Surgery, Johns Hopkins University. Baltimore, MD, given 2001

Epidural Anesthesia and Analgesia. Lecture given to Perioperative Nursing, Johns Hopkins Hospital. Baltimore, MD, given 2001

Interventional Cancer Pain Management. Lecture given to Department of Oncology, Johns Hopkins Hospital, Baltimore, MD, given 2003.

Mechanisms and Treatment of Pain, for Johns Hopkins University School of Medicine medical students on anesthesiology elective, given 2002-3 and 2003-4 academic years.

CME

Urine Toxicology and Compliance Monitoring in Chronic Pain Patients, Johns Hopkins Multidisciplinary Pain Medicine Update, Orlando, FL. 2003.

Clinical Instruction

Attending physician 2003-4, teaching residents and fellows in clinical anesthesiology and pain medicine.

Ad Hoc Reviewer

Anesthesiology, 2001, 2003.

Clin J. Pain, 2001.

International Journal of Pain Medicine and Palliative Care, 2001.

J. Clin Anesthesia, 2001.

MD Consult Web Services, 2003.

CLINICAL ACTIVITIES

Licensure

Maryland Medical License: D58724

DEA License: obtained, number available on request

Board Certification

American Board of Anesthesiology, 2003

Added Certification in Pain Medicine: eligible, board exam not yet taken.

ORGANIZATIONAL ACTIVITIES

Division/Department Duties

Director of Pain Education: develop and maintain didactic curriculum for residents and fellows, coordinate weekly lecture series.

Professional Society Memberships-Current

American Medical Association

American Society of Anesthesiologists

American Society of Regional Anesthesia and Pain Medicine

International Association for the Study of Pain

North American Spine Society

North American Neuromodulation Society

RECOGNITION

Honors and Awards

Tau Beta Pi, (Engineering Honor Society). 1989.

Outstanding Student in Engineering Science Award, The University of Michigan, 1990.

Summa Cum Laude, The University of Michigan, 1990.

AOA prize for Student Research at the Irwin H. Lepow Student Research Day, CWRU School of Medicine, 1996.

Alpha Omega Alpha, (Medical Honor Society), 1998.

The Noether Memorial Fund Award for Excellence in the Area of Therapeutics, CWRU School of Medicine, 1998.

OTHER

Outside Interests: Cycling, cooking.

Current Research Projects

Rofecoxib use in ambulatory surgery.

Pain management after ambulatory surgery can be problematic. Analgesia must provide effective pain relief without causing sedation, nausea or vomiting, and thus promote rapid patient discharge. Non-steroidal anti-inflammatory drugs, ketorolac in particular, are an important component in postoperative pain control for ambulatory surgery. Ketorolac has been shown to improve postoperative pain, nausea, vomiting, opioid use, and speed discharge to home in ambulatory surgery, however ketorolac can cause bleeding and renal insufficiency. The recently released cyclooxygenase-2 specific inhibitors may provide pain relief without these side effects. In a randomized, placebo-controlled trial, I am giving oral rofecoxib to patients prior to outpatient arthroscopic knee surgery done under general anesthesia. I am measuring both early and late postoperative opioid requirements, pain ratings, incidence of nausea and vomiting, patient satisfaction, and time until discharge to home. (Supported by a grant from Merck & Co.)

Use of Transdermal Fentanyl for neuropathic pain

Recent controlled studies indicate that oral opioids can relieve or reduce neuropathic pain. I am collaborating on a study of the use of transdermal fentanyl for the treatment of chronic neuropathic pain. We are enrolling patients with three different neuropathic pain states: chronic post amputation pain, post herpetic neuralgia or small fiber neuropathy. The subjects will then use transdermal fentanyl in an open-label, pre/post comparison of pain rating and cognitive effects. Pain is being assessed multiple times daily with the use of home monitoring. I hope to show that chronic use of this drug will ameliorate these difficult pain states. (Supported by a grant from Janssen).