


The Johns Hopkins University School of Medicine

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**DEMOGRAPHIC AND PERSONAL INFORMATION**

**Current Appointments**

- 1991-2014 Chief, Cardiac Anesthesia, ACCM, The Johns Hopkins University School of Medicine
- 1988-Present Member Departmental Residency Recruitment/Interview Committee
- 2001-Present Joint Appointment Associate Professor, Surgery, The Johns Hopkins University School of Medicine
- 2002-Present Professor, Cardiac Anesthesia, ACCM, The Johns Hopkins University School of Medicine
- 2004-2014 Executive Vice-Chair, ACCM, The Johns Hopkins University School of Medicine
- 2007-Present Chair, ACCM Associate Professor’s Faculty Development/Mentoring Committee
- 2007-Present ACCM representative Clinical Practice Administration
- 2009-Present ACCM representative Medical School Council / Faculty Senate
- 2012-2014 Fellowship Director, Cardiothoracic Anesthesia, ACCM, The Johns Hopkins University School of Medicine
- 2012-2014 Chair Ad-hoc, CRNA Transition Committee
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**Education and Training:**

| Year      | Degree/Certificate Institution  | Discipline                 |
|-----------|---|----------------------------|
| 1972-1975 | University College Cork/National University of Ireland  | Pre-Clinical Basic Science |
| 1975-1976 | B.Sc. (Honors), University College Cork/National University of Ireland<br>(Mentors: Professor J. Sheehan and Professor J.W. Hall) | Physiology                 |
| 1976-1979 | M.B.,B.Ch.,B.A.O.(Honors Degree) University College Cork/National University of Ireland   |                            |
| 1979-1980 | Internship, Cork University Hospital  | Internal Medicine          |
| 1980-1982 | Senior House Officer, Cork University Hospital  | Internal Medicine          |

1982-1985 Resident, Department of Anesthesiology/Critical Care Medicine (ACCM), Anesthesiology  
The Johns Hopkins University School of Medicine, Baltimore, Maryland

1985-1986 Chief Resident, ACCM, The Johns Hopkins Univ. School of Medicine, Baltimore, Maryland

1985-1986 Fellow, Division of Cardiac Anesthesia, ACCM, The Johns Hopkins University School of  
Medicine, Baltimore, Maryland (Director, Dr. T. Blanck)

1985-1987 Research Fellow, ACCM, The Johns Hopkins Univ. School of Medicine, Baltimore, Maryland  
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### Professional Experience:

1975-1978 Instructor, Physiology, University College Cork/National University of Ireland

1975-1979 Instructor, Life Sciences, Regional College, Cork, Ireland

1986-1987 Instructor, Cardiac Anesthesia, ACCM, The Johns Hopkins University School of Medicine

1987-1991 Assistant Professor, Cardiac Anesthesia, ACCM, Johns Hopkins Univ School of Medicine

1990-1996 Fellowship Director, Cardiac Anesthesia, ACCM, Johns Hopkins Univ School of Medicine

1991-2002 Associate Professor, Cardiac Anesthesia, ACCM, Johns Hopkins Univ School of Medicine

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2008-2010 Fellowship Director, Cardiothoracic Anesthesia, ACCM, Johns Hopkins Univ School of Medicine

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### Publications: Peer-reviewed

1. Hall WJ, **Nyhan D**. Effect of phenylbutazone on salt and water fluxes across guinea-pig ileum. *Irish J Med Sci* 145:300, 1976.
2. **Nyhan D**, Bredin C, Quigley C. Acute respiratory failure in pregnancy due to staphylococcal pneumonia. *Irish Med J* 76:320, 1983.
3. **Nyhan D**, Geller HS, Goll HM, Murray PA. Pulmonary vasoactive effects of exogenous and endogenous AVP in conscious dogs. *Am J Physiol* 251:H1009-H1016,1986.
4. Goll HM, **Nyhan D**, Geller HS, Murray PA. Pulmonary vascular responses to angiotensin II and captopril in conscious dogs. *J Appl Physiol* 61:1552-1559,1986.
5. **Nyhan D**, Clougherty PW, Goll HM, Murray PA. Bradykinin actively modulates pulmonary vascular pressure-cardiac index relationships in conscious dogs. *J Appl Physiol* 63:145-151, 1987.
6. **Nyhan D**, Clougherty PW, Murray PA. AVP induced pulmonary vasodilation during specific V<sub>1</sub> receptor block in conscious dogs. *Am J Physiol* 253:H493-H499,1987.
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8. Geller HS, **Nyhan D**, Goll HM, Clougherty PW, Murray PA. Combined neurohumoral block modulates pulmonary vascular P/Q relationship in conscious dogs. *Am J Physiol* 255:H1084-H1090, 1988.
9. Chen BB, **Nyhan D**, Goll HM, Clougherty PW, Fehr HM, Murray PA. Pentobarbital anesthesia modifies pulmonary vasoregulation after hypoperfusion. *Am J Physiol* 255:H569-H576,1988.
10. **Nyhan D**, Goll HM, Chen BB, Fehr DM, Clougherty PW, Murray PA. Pentobarbital alters pulmonary vascular response to neural antagonists. *Am J Physiol* 256:H1384-H1392,1989.
11. Weiss ME, **Nyhan D**, Peng Z, Horrow JL, Lowenstein E, Hirshman C, Adkinson NF. Association of protamine IgE and IgG antibodies with life-threatening reactions to intravenous problems. *N Eng J Med* 320:886-892, 1989.
12. **Nyhan D**, Weiss M, Hirshman CA. Immunologic aspects of anesthetic agents. *Anesth Rev* 16:10-18,1989.
13. **Nyhan D**, Chen BB, Fehr DM, Goll HM, Murray PA. Pentobarbital augments pulmonary vasoconstrictor response to cyclooxygenase inhibition. *Am J Physiol* 257:H1140-H1146,1989.
14. Dull DL, Eichhorn JH, **Nyhan D**, Orkin FK, Schwid HA. Safety in anesthesia. *Anesthesia Patient Safety Foundation Report* 4:37-48, 1989.
15. Chen BB, **Nyhan D**, Fehr DM, Goll HM, Murray PA. Halothane anesthesia causes active flow-independent pulmonary vasoconstriction. *Am J Physiol* 259:H74-H83, 1990.
16. Rock P, Beattie C, Kimball AW, **Nyhan D**, Chen BB, Fehr DM, Derrer SA, Parker SD, Murray PA. Halothane alters the oxygen consumption-oxygen delivery relationship compared with conscious state. *Anesthesiology* 73:1186-1197, 1990.
17. Fehr DM, **Nyhan D**, Chen BB, Murray PA. Pulmonary vasoregulation by cyclooxygenase metabolites and angiotensin II after hypoperfusion in conscious pentobarbital-anesthetized and halothane-anesthetized dogs. *Anesthesiology* 75:257-267,1991.
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24. Murray PA, Fehr DM, Chen BB, Rock P, Esther JW, Desai PM, **Nyhan D**. Differential effects of general anesthesia on cGMP-mediated pulmonary vasodilation. *J Appl Physiol* 73:721 -727,1992.

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64. Kim JH, Bugaj LJ, Oh YJ, Bivalacqua TJ, Ryoo S, Soucy KG, Santhanam L, Webb A, Camara A, Sikka G, **Nyhan D**, Shoukas AA, Iliès M, Christianson DW, Champion HC, Berkowitz DE. Arginase inhibition restores NOS coupling and reverses endothelial dysfunction and vascular stiffness in old rats. *J Appl Physiol*. 2009 Oct;107(4):1249-57. Epub 2009 Aug 6.
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## **BOOK CHAPTERS:**

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2. **Nyhan D**. Anesthesia management of patients with a cyanotic congenital heart disease requiring cardiac surgery. *Curr Pract Anesth*, 1987.
3. **Nyhan D**. Anesthesia for patients undergoing repair of transposition of the great vessels. In: *Current Practice in Anesthesiology*. BC Decker, 2nd Edition; pp 125-130,1990.
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8. **Nyhan D**. Single (including common) ventricle. IN: *Essence of Anesthesia Practice*. MF Roizen, LA Fleisher, eds. WB Saunders, Philadelphia; page 294, 1997.
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19. **Nyhan D**, BlanckTJJ. Cardiac physiology. IN: Mechanisms of Anesthetic Action, 2<sup>nd</sup> Edition. IN: *Basic and Applied Science for Anesthesia*. HC Hemmings, Jr., PM Hopkins, eds. CV Mosby, London; Chapter 39.
20. Stepan J, Berkowitz DE, Martinez E, **Nyhan D**. Diastolic heart function and the elderly. IN: *Aging and Anesthesia*. F Sieber, ed. McGraw-Hill, Philadelphia, Chapter 16, 2006.
21. Simmonds P, **Nyhan D**, Berkowitz DE. Cardiovascular pharmacological agents. IN: *The Johns Hopkins Manual of Cardiac Surgical Care, 2<sup>nd</sup> Edition*. Eds. JV Conte, WA Baumgartner, SG Owens, T Dorman. Elsevier, Philadelphia, PA. Chapter 2, 2008.
22. Dorman T, **Nyhan D**. Postoperative hemodynamic management. IN: *The Johns Hopkins Manual of Cardiac Surgical Care, 2<sup>nd</sup> Edition*. Eds. JV Conte, WA Baumgartner, SG Owens, T Dorman. Elsevier, Philadelphia, PA. Chapter 9, 2008.
23. Grogan K, **Nyhan D**, Berkowitz D. Pharmacology of anesthetic drugs. IN: *Cardiac Anesthesia, 5<sup>th</sup> Edition*. JA Kaplan, D Reich, S Konstade, C Lake, eds. Elsevier/Saunders, New York. Chapter 7, 2008.
24. Mitter N, **Nyhan D**, Berkowitz D. Pharmacology of anesthetic drugs. IN: *Cardiac Anesthesia, 6<sup>th</sup> Edition*. JA Kaplan, D Reich, S Konstade, C Lake, eds. Elsevier/Saunders, New York. Chapter 7, 2009.
25. Hensley N, **Nyhan D**, Berkowitz D. Pharmacology of anesthetic drugs. IN: *Cardiac Anesthesia, 7<sup>th</sup> Edition*. JA Kaplan, D Reich, S Konstade, C Lake, eds. Elsevier/Saunders, New York. Chapter 7, 2012.

**MONOGRAPH:**

1. **Nyhan D**. Editor: Perioperative Care of the Cardiopulmonary-Compromised Patient. IN *Problems in Anesthesia*. Lippincott-Raven. August, 2001.

**GRANT SUPPORT**

**Previous Grant Support:**

- |           |   |
|-----------|---|
| 2010-2014 | NIH/NHLBI<br>Transglutaminase 2 S-Nitrosylation: Role in Age-Related Vascular Stiffness<br>PI: Dan Berkowitz<br>Co-I: Daniel Nyhan  |
| 2006-2011 | NIH/NIA<br>Aging, Fitness, & Failure: Mechanisms of Diastolic Dysfunction<br>PI: Artin Shoukas<br>Co-I: Daniel Nyhan  |
| 2005-2009 | National Aeronautics and Space Administration<br>Ionizing Radiation and its Effects on Cardiovascular Function in the Context of Space Flight<br>PI: Dan E. Berkowitz<br>Co-I: Daniel Nyhan |

- 2004-2008 National Space Biomedical Research Institute  
Mechanics of Cardiovascular Deconditioning  
PI: Artin Shoukas  
Co-I: Daniel Nyhan
- 2003-2008 National Institutes of Health  
Arginase and the Aging Cardiovascular System  
PI: Dan Berkowitz  
Co-I Daniel Nyhan
- 2001 Women's Board of the Johns Hopkins Hospital  
Effects of ATP-Sensitive Potassium Channel Activation Inhibition with Diazoxide on the Complications of Cardiac Surgery and Cardiopulmonary Bypass;  
PI: Daniel Nyhan
- 2001 Department of Anesthesiology/Critical Care Medicine  
Effects of ATP-Sensitive Potassium Channel Activation Inhibition with Diazoxide on the Complications of Cardiac Surgery and Cardiopulmonary Bypass;  
PI: Daniel Nyhan
- 1989-1991 The Johns Hopkins Medical Institutions Career Development Award (CDA): Pulmonary Vascular Effects of Cardiopulmonary Bypass;  
PI: Daniel Nyhan
- 1990-1991 Organon Pharmaceuticals: Hemodynamic and Pharmacodynamic Effects of High Dose Vecuronium in Patients Undergoing Myocardial Revascularization;  
PI: Daniel Nyhan
- 1990-1991 The Johns Hopkins Medical Institution Institutional Research Project Grant: Pulmonary Vascular Effects of Cardiopulmonary Bypass;  
PI: Daniel Nyhan
- 1990-1992 Winthrop Pharmaceuticals: Pulmonary Vascular Effects of Amiodarone;  
PI: Daniel Nyhan
- 1990-1995 NIH Clinical Investigator Award (CIA): Pulmonary Vascular Effects of Cardiopulmonary Bypass;  
P.I.: Daniel Nyhan
- 1996-1999 American Heart Association - Maryland Affiliate Pulmonary Vascular Effects of Cardiopulmonary Bypass,  
P.I.: Daniel Nyhan, M.D.

## **EDUCATIONAL ACTIVITIES**

### **National:**

- 1988-Present Multiple Grand Rounds, ACCM, The Johns Hopkins Medical Institutions
- 1988-Present Multiple Grand Rounds, Division of Cardiac Surgery, The Johns Hopkins Medical Institutions
- 1988-Present School of Perfusion Lecturer, The Johns Hopkins Medical institutions
- 1988-Present Physiology Courser Lecturer for Medical Students, The Johns Hopkins Medical institutions
- 1988-Present Multiple Departmental and Cardiac Subspecialty Lecturers each year within ACCM and its subspecialty teaching programs, The Johns Hopkins Medical institutions

1988 ASA Regional Refresher Course Lecturer, Washington, DC. "Acid-Base Management During Hypothermia"

1989 ASA Annual Meeting, Chairperson, Scientific Session, New Orleans, LA

1989 Visiting Professor, Dept Anesthesiology, Uniformed Services Med Center, Bethesda, MD

1989 Visiting Professor, Department of Anesthesiology, Fairfax Medical Center, Fairfax, VA

1992 Visiting Professor, Department of Anesthesiology, Uniformed Services Medical Center, Bethesda, MD

1992 Visiting Professor, Department of Anesthesiology, Cornell Medical Center, New York, NY

1994 Visiting Professor, Department of Anesthesiology, University of Illinois, Urbana, IL

1994 Visiting Professor, Department of Anesthesiology, Massachusetts Gen. Hosp, Boston, MA

1995 Visiting Professor, Department of Anesthesiology, Fairfax Medical Center, Fairfax, VA

1996 Visiting Professor, Department of Anesthesiology, University of Texas, Galveston, TX

1999 Chairman, Educational Symposium, Society of Cardiovascular Anesthesiologists, Chicago, IL

2000 Visiting Professor, Department of Anesthesiology, Vanderbilt University, Nashville, TN

2000 Invited Speaker, Association of Cardiovascular Anesthesiologists, San Francisco, CA

2010 Invited Speaker, Association of Cardiovascular Anesthesiologists, San Francisco, CA

2010 Visiting Professor, Cleveland Clinic Foundation, Cleveland, OH

2011 Visiting Professor, New York University School of Medicine, New York, NY

**International:**

1991 World Congress of Anesthesia, The Hague, Netherlands, "Current Concepts in CPR"

1991 World Congress of Anesthesia, The Hague, Netherlands, "Cardiac Electrophysiology, Interpretation and Significance"

1997 Invited Keynote Speaker, Association of Anesthetists and Intensivists of Ireland

2007 Invited Speaker, Association of Cardiovascular Anesthesiologists, Montreal, Canada

2007 Invited Speaker, FESBE-Federacao de Sociedades de Biologia Experimental, Brazil

2009 Invited Speaker, Biennial Meeting, University College Cork , Ireland

2010 Invited Speaker, The 3<sup>rd</sup> Annual Meeting of Chinese Society of Anesthesiology on Organ Transplantation, The International Conference on Anesthesia Research and Clinical Management of Organ Transplantation, Hangzhou, China, April 2010.

2010 Invited Speaker, Winter College Lecture, Dublin, Ireland, November, 2010

2011 Invited Speaker, SENS5, Queens College, Cambridge, UK, August, 2011

**MENTORED FELLOWS/JUNIOR FACULTY:**

1990-1992 William Peterson, M.D.

1991-1993 Gregory Trempey, M.D.; Eric Shampaine, M.D.; Maureen Del Re, M.D.; Glenn Gilmore, M.D.

1992-1993 Harry Greenspun, M.D.; Marvin Appel, M.D.; Vivian Hou, M.D.

1992-1994 Christopher McQuitty, M.D.; Lee Wallace, M.D.; Ronald Bank, M.D.

1994-1995 Jeffrey Balsler, M.D.

1996-1998 Wendy Bernstein, M.D.; MaryBeth Brady

1997-1998 Mary Louise Roper, M.D.; Ahmad Chaudhry, M.D.

1998-2000 Mary Wheeler, M.D.

1999-2000 Peter Jiang, M.D.; Charles Lancelotta, M.D.

2000-2001 Gary Kaneshige, M.D.

2000-2001 Stephen Aufderheide, M.D.; Chistos Kountentis, M.D.

2001-2002 Rojack Tan, M.D.; Wei Dong Gao, M.D.; Mike Faulkner, M.D. (ICU & Cardiac)

2001-2003 Ala Haddadin, M.D. (ICU & Cadiac)

2002-2003 Edward Verde, M.D. (ICU & Cadiac); James Weller, M.D.

2003-2004 Kelly Grogan, M.D.; Matthew Caldwell, M.D.; Izumi Harukuni, M.D.

2004-2005 Prasert Sawasdiwpachai, M.D. (ICU & Cardiac)

2005-2006 Muhammad Durrani, M.D.; Paul Simmonds, M.D.

2006-2007 Nicholas Mantel, M.D.; Jay Levine, M.D.; Brenda MacKnight, M.D.; James DeMeester, M.D.

2007-2008 Roy Kan, M.D.; Michelle Isac, M.D.; Ana Fernandez, M.D.

2008-2009 Mohammed Ojodu, M.D.; Vischaslau Barodka, M.D.; Leo Hsiao, M.D.; Alexis Bilbow, M.D.

2009-2010 Tricia Desvarieux, M.D.; Rabi Panigrahi, M.D.; Darcy Towsley, M.D.; Michele Sumler, M.D.

2010-2011 Charles Brown, M.D.; John Coleman, M.D.; Romeo Kaddoum, M.D.; Rosanne Sheinberg, M.D.

2011-2012 Robert Black, M.D.; Sanjay Dwarakanath, M.D.; Adam Evans, M.D.; Nadia Hensley, M.D.; Neadum Odum, M.D.

2012-2013 Vivek Arora, M.D.; Jennifer Dietrich, M.D.; Steve Gibson, M.D.; Michael Mantinan, M.D.; Jochen Steppan, M.D.

2013-2014 Engy Hanna, M.D.; Zhao Yang, M.D.; Candice Morrissey, M.D.; Devon Jeffers, M.D.; Laeben Lester, M.D.

2014-2015 Ami Naik, M.D.; Farrah Sajan, M.D.; John McNeil, M.D.; Megan Kostibas, M.D.; Heather Kaiser, M.D.; Zahra Malik, M.D.

**RECOGNITION; Awards, honors;**

- 1975 Welcome Trust Medical Scholarship, Medical Research Council
- 1975 Welcome Trust Medical Scholarship, Medical Research Council
- 1975 Henry Hutchinson Scholarship, Pharmacology, National University of Ireland
- 1977 College Scholar, University College, Cork, National University of Ireland
- 1977 College Scholar, University College, Cork, National University of Ireland
- 1984 Merel Harmel Resident of the Year, Dept.of ACCM, JHU Sch Med, Baltimore, Maryland
- 2013 Distinguished Scholar Award, University College Cork Medical School

**EDITORIAL ACTIVITIES:**

Editorial Board, *Journal of Cardiothoracic and Vascular Anesthesia*

Consultant/Reviewer - Anesthesiology

Ad hoc reviewer for the following journals:

Anesthesia and Analgesia

European Journal of Pharmacology

Journal of Applied Science

American Journal of Physiology

**CLINICAL ACTIVITIES/CERTIFICATIONS:**

- 1979 Education Commission for Foreign Medical Graduates
- 1980 Visa Qualifying Examination (V.Q.E.) (London)
- 1982 M.R.C.P.I. Member, Royal College of Physicians, Ireland
- 1983 F.L.E.X. (Massachusetts)
- 1984 Maryland License
- Maryland Drug License
- DEA License
- 1986 Anesthesiology Board Certification – Diplomate, American Board of Anesthesiologists
- 2012 Advanced Perioperative Transesophageal Echocardiography

## **ORGANIZATIONAL ACTIVITIES**

### **Professional Societies**

American Society of Anesthesiologists

Association of Cardiovascular Anesthesiologists

Association of University Anesthesiologists: Educational Committee Member

Council on Circulation Research

Maryland/DC Society of Anesthesiologists

Royal College of Physicians of Ireland

Society for Cardiovascular Anesthesia: Education Committee 1998-2000

## **SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES**

### **Production of guidelines and/or protocols:**

2009    Garnered ACGME Accreditation for Cardiothoracic Anesthesia Fellowship Program

20013    Service / Patient Care Safety in Cardiovascular Anesthesiology

- Multiple initiatives including institution of VAD protocols, glycemic protocols, etc.
- Educational/Orientation/Safety program for cohort of CRNA providers in CVDL/EP