

CURRICULUM VITAE

Clifford W. Bogue, M.D.

Professor and Chair of Pediatrics, Yale School of Medicine
Chief Medical Officer, Yale-New Haven Hospital

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Yale School of Medicine
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Education: 1981 B.A., *With Distinction*, University of Virginia
1985 M.D., School of Medicine, University of Virginia
2015 Certificate, Emerging Leaders in Healthcare Executive Education Program, Yale School of Management
2016 Certificate, Advanced Emerging Leaders in Healthcare Executive Education Program, Yale School of Management

Career/Academic Appointments:

7/1985 - 6/1988 Resident, Pediatrics, Vanderbilt University Medical Center
7/1988 - 6/1989 Chief Resident, Pediatrics, Vanderbilt University Medical Center
7/1989 - 6/1993 Post-doctoral Fellow, Critical Care Medicine, Dept. of Pediatrics, Yale School of Medicine
7/1992 - 6/1993 Consultant in Pediatrics, Pediatric Intensive Care Unit, Yale-New Haven Hospital
7/1993 - 6/1994 Instructor, Dept. of Pediatrics, Yale School of Medicine
7/1994 - 6/2000 Assistant Professor of Pediatrics, Yale School of Medicine
7/2000 - 6/2003 Associate Research Scientist, Pediatrics, Yale School of Medicine
7/2003 - 6/2013 Associate Professor of Pediatrics, Yale School of Medicine
7/2013 - present Professor of Pediatrics, Yale School of Medicine

Administrative Positions:

7/1993 - 6/2003 Director, Pediatric Transport Service, Yale-New Haven Children's Hospital
7/2002 - 6/2003 Co-Director, Postdoctoral Training Grant *Development of Cardiovascular and Pulmonary Function* (T32), NHLBI/National Institutes of Health
7/2003 - 2/2005 Director, Pediatric Critical Care Medicine Fellowship Program, Yale School of Medicine
7/2003 - 6/2012 Program Director, Postdoctoral Training Grant *Development of Cardiovascular and Pulmonary Function* (T32 HL07272), NHLBI/National Institutes of Health

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|-------------------|---|
| 7/2004 – 4/2012 | Medical Director, Pediatric Intensive Care Unit, Yale-New Haven Children's Hospital |
| 7/2004 – 6/2015 | Director, Sec Ed 503 <i>Seminars in Pediatrics: Bedside to Bench</i> , Yale School of Medicine |
| 7/2008 – 6/2010 | Director, Pediatric Critical Care Medicine Fellowship Program, Yale School of Medicine |
| 9/2003 – 5/2015 | Chief, Section of Critical Care Medicine, Dept. of Pediatrics, Yale School of Medicine |
| 11/2008 – 8/2012 | Associate Chair (Strategic Planning), Dept. of Pediatrics, Yale School of Medicine |
| 11/2008 – 6/2015 | Director, Program in Vertebrate Development, Yale School of Medicine |
| 8/2010 – 8/2012 | Interim Chair, Pediatrics, Yale School of Medicine |
| 8/2010 – 8/2012 | Physician-in-Chief, Yale-New Haven Children's Hospital |
| 9/2010 – 6/2015 | Training Director, Child Health Research Center Grant Developmental Adaptation (K12 HD001401), NICHD |
| 8/2012 – 3/2015 | Vice Chair for Clinical Affairs, Department of Pediatrics, Yale School of Medicine |
| 7/2013 – present | Interim Chief, Section of Gastroenterology and Hepatology, Dept. of Pediatrics, Yale School of Medicine |
| 10/2014 – present | Chief Medical Officer (inaugural), Yale – New Haven Children's Hospital |
| 7/2015 – 7/2017 | Interim Chair, Pediatrics, Yale School of Medicine |
| 8/2017 – present | Chair, Pediatrics, Yale School of Medicine |

Board Certification:

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|------|---|
| 1986 | Diplomate, National Board of Medical Examiners |
| 1993 | Diplomate, American Board of Pediatrics, Sub-Board of Pediatric Critical Care Medicine (recertified 2001, 2009) |

Professional Honors & Recognition:

A. International/National/Regional

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|----------------|---|
| 2015 | M.A. <i>privatim</i> (Honorary), Yale University |
| 2013 | Elected, Secretary-Treasurer, Board of Trustees, International Pediatric Research Foundation |
| 2012 | Elected, Board of Trustees, International Pediatric Research Foundation |
| 2008 | Elected to membership, American Pediatric Society |
| 2007 | Senior Associate, King's College, University of Cambridge, Cambridge UK |
| 2007 | Visiting Scholar, CRC/Wellcome Trust Gurdon Institute, University of Cambridge, Cambridge, UK |
| 2004 – present | Best Doctors in America |
| 2003 – present | America's Top Pediatricians |
| 1998 | Child Health Research Fellow, Charles H. Hood Foundation |
| 1998 | NIH Young Investigator Award, Perinatal Research Society |
| 1997 | Elected to membership in the Society for Pediatric Research |
| 1995 | Parker B. Francis Fellow in Pulmonary Research |
| 1994 | Young Investigator Award, Eastern Society for Pediatric Research |

1989 Fellow, American Academy of Pediatrics

B. Local

2013 Norman J. Seigel Faculty Award, Dept. of Pediatrics, Yale School of Medicine, "To that member of the faculty who consistently displays high standards of patient care, generosity, collegiality and leadership."

2002 - present Fellow, Berkeley College, Yale University,
2000 Mae Gailani Junior Faculty Award, Dept. of Pediatrics, Yale School of Medicine, "in recognition of junior faculty whose dedication to research and patient care bespeaks the promise of this department."

1990 Pediatric Fellow Teaching Award, Department of Pediatrics, Yale University, New Haven, CT

Grant History:

Past Grants

Agency: NIH/NICHD
ID#: 5K12HD001401-12
Title: Developmental Adaptation
P.I.: Clifford Bogue, M.D.
Role: P.I.
Percent effort: 1.2 calendar months (10%)
Direct costs/yr: \$390,000
Total costs for project period: \$1,950,000
Project Period: 12/01/2010 – 11/30/2016 (NCE)

Agency: NIH/NHLBI
I.D.# 5 T32 HL07272 – 35
Title: "The development of cardiovascular and pulmonary function"
P.I.: Clifford Bogue, M.D.
Percent effort: 0.6 calendar months (5%)
Direct Costs/yr: \$300,000
Total Costs for project period: \$1,600,000
Project Period: 07/01/2007 – 06/30/2012

Agency: NIH/NIDDK
I.D.# 2R01DK061146-08
Title: "Hex – a homeobox gene essential for liver development"
P.I.: Clifford Bogue, M.D.
Percent effort: 1.8 calendar months (15%)
Direct Costs/yr: \$244,939
Total Costs for project period: \$824,822
Project Period: 09/25/2009 – 06/30/2012

Agency: PKD Foundation
I.D.# Research Grant

Title: "Mechanism of polycystic liver disease in Hhex mutant mice"
 P.I.: Clifford Bogue, M.D.
 Percent effort: 5%
 Direct Costs/yr: \$75,000
 Total Costs for project period: \$150,000
 Project Period: 02/01/2007 – 12/31/2009 (no cost extension until 8/10)

Agency: NIH/NIDDK
 ID# R56 DK061146-06
 Title: "Hhex – a homeobox gene essential for liver development"
 P.I.: Clifford Bogue, M.D.
 Percent effort: 20%
 Total Costs for Project Period: \$420,000
 Project Period: 07/1/06 – 06/30/09

Agency: NIH/NIDDK
 I.D.# P50 DK057328 (Yale PKD Center) – Pilot Project
 Title: "Hhex – a new gene involved in ciliary biogenesis"
 P.I.: Clifford Bogue, M.D.
 Percent effort: 5%
 Direct Costs/yr: \$19,000
 Total Costs for project period: \$38,000
 Project Period: 09/01/2006 – 08/31/2008

Agency: NIH/NIDDK
 ID# R01 DK061146
 Title: "Hhex – a homeobox gene essential for liver development"
 P.I.: Clifford Bogue, M.D.
 Percent effort: 25%
 Total Costs for Project Period: \$2,050,000
 Project Period: 07/1/01 – 06/30/06

Agency: Charles H. Hood Foundation
 ID# Research Grant
 Title: "The ontogeny of lymphocyte development"
 P.I.: Ramsay Fuleihan, M.D.
 Role on Project: Co-Investigator
 Percent effort: 5%
 Total Costs for Project Period: \$67,320
 Project Period: 07/1/02 – 06/30/03

Agency: NIH/NHLBI
 ID# K08 HL03471
 Title: "Hex expression and regulation in the developing lung"
 P.I.: Clifford W. Bogue, M.D.
 Percent effort: 75%
 Total Costs for Project Period: \$491,180

Project Period: 07/01/96 - 06/30/01
 Agency: NIDDK/NIH
 ID# P30-34989 (Yale Liver Center) – Pilot Project
 Title: “Hex localization and function in liver development”
 P.I.: Clifford W. Bogue, M.D.
 Percent effort: 5%
 Total Costs for Project Period: \$31,064
 Project Period: 09/01/00 - 08/31/01

Agency: NIDDK/NIH
 ID# P3034989 (Yale Liver Center) – Pilot Project
 Title: “Characterization of the *Hex* promoter in liver cells”
 P.I.: Clifford W. Bogue, M.D.
 Percent effort: 5%
 Total Costs for Project Period: \$31,064
 Project Period: 07/01/98 - 06/30/00

Agency: Charles H. Hood Foundation
 ID# Research Grant
 Title: “The Ontogeny of Lymphocyte Development”
 P.I.: Joseph B. Warshaw
 Role on Project: PI of subproject
 Percent effort: 5%
 Total Costs for Project Period: \$300,000
 Project Period: 01/01/98 – 12/31/00

Agency: American Lung Association
 ID# RG-059-N
 Title: “Hex Expression and Regulation in the Developing Embryo”
 P.I.: Clifford W. Bogue, M.D.
 Percent effort: 25%
 Total Costs for Project Period: \$50,000
 Project Period: 07/01/97 - 06/30/99

Agency: NIH/NICHD
 ID# P30 HD277757
 Title: “Developmental Adaptation”
 P.I.: Joseph Warshaw, M.D.
 Role: PI of subproject
 Percent effort: 25%
 Total Costs for Project Period: \$99,000
 Project Period: 12/01/95 - 11/30/97

Agency: Parker B. Francis Foundation
 ID# Fellowship Award
 Title: Developmental Regulation and Expression of Hex in the Lung
 P.I.: Clifford W. Bogue, M.D.

Percent effort: 75%
 Total Costs for Project Period: \$108,000
 Project Period: 07/01/95 - 06/30/98 (Relinquished after one year owing to receipt of K08 award)

Agency: Charles H. Hood Foundation
 ID#: Research Grant
 Title: "Expression and Regulation of Homeobox Genes in the Developing Lung"
 P.I.: Clifford W. Bogue, M.D.
 Percent effort: 25%
 Total Costs for Project Period: \$50,000
 Project Period: 07/01/94 - 07/01/96

Pending Grants

Agency: NIH/NICHD
 ID#: 5K12HD001401
 Title: Developmental Adaptation
 P.I.: Clifford Bogue, M.D.
 Role: P.I.
 Percent effort: 1.2 calendar months (10%)
 Direct costs/yr: \$390,000
 Total costs for project period: \$1,950,000
 Project Period: 12/01/2017 - 11/30/2022

Invited Lectures, Courses, Symposia:

- 2016 Yale School of Medicine, Department of Pediatrics, Special Lecture: "Collaborate, Innovate, Cure"
- 2015 UCLA, Department of Pediatrics, Los Angeles, CA, Pediatric Grand Rounds: "Academic Pediatrics Viewed Through Two Lenses: the Microscope and the Telescope"
- 2014 Children's Hospital Association Annual Leadership Conference, Palm Desert, CA. Educational Session: "Improving Access: Developing a Children's Hospital Network"
- 2014 University of Alabama - Birmingham, Birmingham, AL. Pediatric Grand Rounds: "Opportunities and Challenges for Growing an Academic Pediatric Department in the 21st Century or *What Keeps Deans, Chairs and CEOs Up at Night?*"
- 2013 Duke University, Department of Pediatrics, Durham, NC. Pediatric Grand Rounds: "Academic Pediatrics Viewed Through Two Lenses: the Microscope and the Telescope"
- 2013 University of Medicine and Dentistry of New Jersey, New Brunswick, NJ, Pediatric Grand Rounds: "Disorders of Liver and Biliary Tract Development - New Insights from the Laboratory"

- 2012 University of Massachusetts, Department of Veterinary and Animal Services Seminar, Amherst, MA : “Regulation of Hepatic Specification and Bile Duct Formation by *Hhex*”
- 2011 University of Tennessee Department of Pediatrics, Memphis, TN: “Investigating the Role of *Hhex* During Development - New Insights Into Mechanisms of Hepatobiliary Disease”
- 2011 Yale School of Medicine, New Haven, CT: “Investigating the Role of *Hhex* During Development - New Insights Into Mechanisms of Hepatobiliary Disease”
- 2010 Yale School of Medicine, New Haven, CT, Pediatric Grand Rounds: “State of the Department”
- 2010 Society for Critical Care Medicine 2010 Congress, Pediatric Refresher Course, Miami, FL: “Ventilator Weaning Protocols”
- 2008 Visiting Professor, University of Texas – Southwestern Dept. of Pediatrics, Dallas, TX: “New Insights into the Genetic Control of Hepatic Epithelial Differentiation and Morphogenesis”
- 2007 American Association for the Study of Liver Diseases Annual Meeting, Pediatric Symposium - *Fibrocystic Diseases of the Liver*, Boston, MA, Plenary Speaker: “Embryology and Development of the Ductal Plate”
- 2007 Institute of Liver Studies, King’s College Hospital, London, UK, Postgraduate Academic Research Seminar: “New Insights Into the Genetic Control of Hepatic Epithelial Morphogenesis”
- 2007 Cochin Institute Seminar, Paris France: “New Insights Into the Genetic Control of Hepatic Epithelial Morphogenesis”
- 2007 Christian de Duve Institute of Cellular Pathology Research Seminar, Université Catholique de Louvain, Brussels, Belgium: “New Insights Into the Genetic Control of Hepatic Epithelial Morphogenesis”
- 2007 MRC National Institute for Medical Research, Mill Hill, UK, Genetics and Developmental Biology Seminar: “New Insights Into the Genetic Control of Hepatic Epithelial Morphogenesis”
- 2007 University Hospital of Cologne, Cologne, Germany: “Tight Glucose Control in Critically Ill Children – Is it Ready for Prime Time?”
- 2007 Helios Klinikum, University of Witten/Herdecke, Wuppertal, Germany: “Tight Glucose Control in Critically Ill Children – Is it Ready for Prime Time?”
- 2007 University of Cambridge Developmental Biology Lecture Series, Cambridge UK: “ The homeobox gene *Hhex* has essential roles during liver development”

- 2006 CRC/Wellcome Trust Gurdon Institute of Cancer and Developmental Biology Research Seminar, University of Cambridge, Cambridge UK: “Conditional Mutagenesis Reveals Multiple Roles for the Homeobox Gene Hhex in Hepatobiliary Development”
- 2006 New York Pediatric Critical Care Society Meeting, New York, NY: “Tight Glucose Control in Critically Ill Children – Is it Ready for Prime Time?”
- 2006 Grand Rounds, Blythedale Children’s Hospital, Valhalla, NY: “Pediatric Parenteral Nutrition”
- 2006 FASEB Summer Research Conference - Liver Growth, Development and Disease, Snowmass, CO. Invited Speaker: “The Homeobox Gene Hhex is required for morphogenesis of the biliary tract “
- 2006 Yale Liver Center Research Seminar, Yale School of Medicine: “Conditional Mutagenesis Reveals Critical and Unexpected Roles for the Homeobox gene Hhex in Hepatobiliary Development”
- 2005 NACHRI Annual Meeting, Indian Wells, CA, Invited Symposium Speaker: “Pediatric Critical Care Response Team – A Success Story”
- 2005 15th International Society of Developmental Biologists Congress, Sydney, Australia, Invited Speaker: “Conditional Mutagenesis Reveals a Critical Role for the Homeobox Gene Hhex in Hepatocyte and Biliary Tract Development and Function”
- 2005 Pediatric Academic Societies’ Annual Meeting, San Francisco, CA., *Functional Genomics in the Mouse* Educational Workshop Speaker: “Mouse Mutagenesis Techniques”
- 2004 15th Annual Pediatric Critical Care Colloquium, New York, NY. Plenary Speaker: “Hepatopulmonary Syndrome”
- 2004 Kansas University Medical Center Department of Anatomy and Cell Biology Seminar: “The Homeobox Gene Hhex Plays Multiple Roles During Organogenesis”
- 2004 Department of Internal Medicine (Hematology) Research Conference, Yale School of Medicine: “Hhex – One Gene With Many Functions During Mouse Development”
- 2004 Pediatric Academic Societies’ Annual Meeting, San Francisco, CA., *Functional Genomics in the Mouse* Educational Workshop Speaker: “Mouse Mutagenesis Techniques”
- 2004 Pediatric Academic Societies’ Annual Meeting, San Francisco, CA, Plenary Speaker and Chair: “Lung Organogenesis – Vascular and Alveolar Interactions”
- 2003 Inaugural Joseph B. Warshaw Developmental Biology Symposium “The Cardiovascular System – From Development to Disease,” Speaker, Yale School of Medicine: “The Homeobox Gene Hhex and Cardiovascular Development”

- 2002 Vanderbilt University School of Medicine Pediatric Research Seminar: “The Homeobox Gene Hex Plays Multiple Roles During Organogenesis”
- 2002 University of Virginia School of Medicine Pediatric Research Conference: “The Homeobox Transcription Factor Hex is Necessary for Liver and Cardiovascular Development”
- 2002 Research Conference, Department of Pediatrics, Baylor College of Medicine, Houston, TX. Lecture title: “Hex – One Gene With Many Important Functions During Development”
- 2002 New Frontiers in Pediatric Critical Care Research, American Thoracic Society International Conference, Atlanta GA, Plenary Speaker: “Transcriptional Control of Lung and Cardiovascular Development”
- 2002 American Thoracic Society International Conference, Plenary Speaker, Pediatric Clinical Year In Review, Atlanta GA: “Embryonic Stem Cells and Their Future in Pediatric Pulmonary and Critical Care Medicine”
- 2001 Berkeley College Master’s Tea, Yale University, Panel Discussant: “Coming To Medicine”
- 2000 Duke University Pediatric Research Seminar: “Hex – One Gene With Many Important Functions During Development”
- 1999 Connecticut Thoracic Society Annual Lung Research Conference, Rocky Hill, CT. Invited Speaker: “Expression of the Homeobox Gene Hex During Lung Development”
- 1999 IPOKRATES Post-Graduate Seminar, Munich, Germany, Visiting Professor: “Contemporary and Experimental Techniques in Cardiorespiratory Support: Basis and Clinical Application”
- 1999 MRC National Institute for Medical Research, The Ridgeway, Mill Hill, London UK, Mammalian Development Seminar: “Hex and Liver Development”
- 1998 University of Utah Pediatric Research Seminar, Salt Lake City, UT: “The Function and Regulation of Hex During Development”
- 1998 NHLBI Workshop on Molecular Embryology of the Lung, Bethesda, MD, Panel Discussant.
- 1998 Yale Liver Center Research Seminar, Yale School of Medicine: “The Role of Hex in Liver Development and Function”
- 1998 Vanderbilt University School of Medicine Pediatric Research Seminar: “Hox Genes and Branching Morphogenesis in the Lung”
- 1998 Connecticut Thoracic Society Annual Lung Research Conference, Southbury, CT. Invited Speaker: “Expression of Hox Genes During Lung Morphogenesis”
- 1996 Pulmonary Lung Biology Research Conference, Department of Internal Medicine, Yale School of Medicine: “Hox Genes and Lung Development”

1993 The University of North Carolina Pediatric Research Conference: “Homeobox Genes and Lung Branching Morphogenesis”

1993 The University of Virginia Pediatric Research Conference: “Homeobox Genes and Lung Branching Morphogenesis”

Peer-Reviewed Presentations & Symposia Given at Meetings Not Affiliated With Yale:

International/National

2012 Annual Meeting, American Association for the Study of Liver Diseases, Boston, MA. Platform Presentation: “Differentiation of Mouse ES Cells to Hepatic Fate Requires Hhex, VEGF and SHH”

2012 Annual Meeting, American Association for the Study of Liver Diseases, Boston, MA. “Regulation of Apico-Basal Polarity in Polycystic Liver” (Presidential Poster of Distinction)

2012 FASEB Summer Research – Liver Biology: Fundamental Mechanisms and Translational Applications, Snowmass, CO. Invited Speaker: “Differentiation of Mouse Embryonic Stem Cells Toward Hepatic Endoderm Requires Signaling from the Homeobox Gene Hhex, VEGF and Sonic Hedgehog”

2012 FASEB Summer Research – Liver Biology: Fundamental Mechanisms and Translational Applications, Snowmass, CO. “The Homeobox Gene Hhex: Interlinking Cilia, Apico-Basal Polarity, and Polycystic Liver”

2011 Annual Meeting, Pediatric Academic Societies, Denver, CO: “Hhex Regulation of Early Hepatobiliary Differentiation”

2011 Annual Meeting, Pediatric Academic Societies, Denver, CO. Platform Presentation: “Disruption of Cardiovascular Development in an Endothelial-Specific *Hhex* Mutant”

2007 Annual Meeting, Pediatric Academic Societies, Toronto, Canada: “SNAP II Index: An Alternative to the COMFORT Scale in Assessing the Level of Sedation in Mechanically Ventilated Pediatric Patients”

2006 Annual Meeting, Pediatric Academic Societies, San Francisco, CA, Platform Presentation: “Conditional Mutagenesis of the Homeobox Gene Hhex Reveals Novel and Essential Roles in Development of the Liver and Extrahepatic Biliary Tract”

2006 FASEB Summer Research Conference - Liver Growth, Development and Disease, Snowmass, CO. Invited Speaker: “The Homeobox Gene Hhex is required for morphogenesis of the biliary tract”

2006 Annual Meeting, American Thoracic Society Meeting, San Diego, CA: “Unusual insight from clinician compliance with a bedside computerized Glucose/IV Insulin Infusion protocol”

- 2005 15th International Society of Developmental Biologists Congress, Sydney, Australia, Invited Speaker: "Conditional Mutagenesis reveals a critical role for the homeobox gene Hhex in hepatocyte and biliary tract development and function"
- 2005 Annual Meeting, Society for Developmental Biology, San Francisco, CA: "The homeodomain protein Hhex is a direct repressor of endothelial cell-specific molecule 1 (ESM-1)"
- 2005 National Association of Children's Hospitals Annual Meeting, Indian Wells, CA, Invited Symposium Speaker: "Pediatric Critical Care Response Team – A Success Story"
- 2004 Keystone Symposium on Cardiac Development and Congenital Heart Disease, Keystone, CO: "A null mutation of Hhex results in abnormal cardiac development, defective vasculogenesis and elevated VEGFA levels"
- 2003 Annual Meeting, Pediatric Academic Societies, Seattle, WA. Platform Presentation: "The role of Hex in embryonic myocyte development and function."
- 2002 Annual Meeting, Pediatric Academic Societies, Baltimore, MD. Platform Presentation: "The homeobox gene Hex is required for normal cardiovascular development"
- 2002 Annual Meeting, Pediatric Academic Societies, Baltimore, MD. Platform Presentation: "Impaired B cell development and function in mice with a targeted disruption of the homeobox gene Hex"
- 2002 Keystone Conference on Molecular Biology of the Heart, Keystone, CO. "The homeobox gene Hex is required for normal cardiovascular development"
- 2001 Annual Meeting, Society for Developmental Biology, Seattle, WA. "The homeobox gene Hex is necessary for liver and lung development"
- 2001 Annual Meeting, Pediatric Academic Societies, Baltimore, MD. Platform Presentation: "The homeobox gene Hex is necessary for liver development"
- 2000 Annual Meeting, Society for Developmental Biology, Denver, CO. "Immunocytochemical localization of Hex in cultured cells and mouse embryo"
- 2000 Annual Meeting of the American Thoracic Society, "Lung-specific regulation of the homeobox gene, Hex"
- 2000 Annual Meeting, Pediatric Academic Societies, Boston, MA. Platform Presentation: "Localization of Hex protein in developing mouse embryo"
- 1999 Annual Meeting, American Association for the Study of Liver Disease, Boston, MA. Platform Presentation: "HNF3b and GATA-4 transactivate the liver-enriched homeobox gene, Hex"

- 1999 Annual Meeting, Society for Developmental Biology, Charlottesville, VA. "Hex expression and regulation in the lung"
- 1999 Annual Meeting, Pediatric Academic Societies, San Francisco, CA. Platform Presentation: "Multiple factors regulate the promoter region of the liver-enriched orphan homeobox protein, Hex"
- 1998 Annual Meeting, American Association for the Study of Liver Disease, San Francisco, CA. Platform Presentation: "A liver-enriched homeobox protein, Hex, trans-activates the rat liver Na⁺/taurocholate cotransporter (NTCP) gene promoter and is downregulated by endotoxin and associated cytokines"
- 1998 Annual Meeting, American Thoracic Society, Platform Presentation: "Expression of the divergent homeobox gene Hex suggests an important role in organogenesis"
- 1998 Annual Meeting, Pediatric Academic Societies, New Orleans, LA. Platform Presentation: "The Na⁺-dependent bile acid cotransporter (NTCP) is a putative target gene for the liver-enriched, orphan homeobox protein, Hex"
- 1998 Annual Meeting, Pediatric Academic Societies, New Orleans, LA. Platform Presentation: "Hex expression during development suggests an important role in both gastrulation and organogenesis"
- 1997 Annual Meeting, Pediatric Academic Societies, Washington, DC. Platform Presentation: "Butyrate decreases homeobox gene expression in fetal rat lung in culture"
- 1996 Annual Meeting, Pediatric Academic Societies, Washington, DC. Platform Presentation: "Retinoic acid enhances surfactant gene expression"
- 1995 Annual Meeting, American Thoracic Society. "Expression of the homeobox gene Hex in developing lung"
- 1995 Annual Meeting, American Thoracic Society. "Hoxb gene expression in the developing foregut and lung"
- 1995 Annual Meeting, Pediatric Academic Societies, San Diego, CA. Platform Presentation: "Expression of Hoxb genes in the embryonic foregut and lung suggests an important role in lung development"
- 1995 Annual Meeting, Pediatric Academic Societies, San Diego, CA. Platform Presentation: "Expression of the homeobox gene Hex during fetal development"
- 1994 Annual Meeting, Eastern Society for Pediatric Research, New York, NY. Platform Presentation: "Expression of the homeobox gene Hex in the developing rodent lung"
- 1994 Annual Meeting, Pediatric Academic Societies, Seattle, WA. Platform Presentation: "Dexamethasone decreases Hox gene expression in the fetuses of diabetic rats"

- 1994 Annual Meeting, Pediatric Academic Societies, Seattle, WA. Platform Presentation: “Retinoic acid modulates surfactant gene expression and lung development in rat lung explants”
- 1993 Annual Meeting, Pediatric Academic Societies, Washington, DC. Platform Presentation: “Hox gene expression in fetal rat lung is altered by maternal diabetes”
- 1993 Annual Meeting, Pediatric Academic Societies, Washington, DC. Platform Presentation: “Hox gene expression in the developing lung”
- 1992 Annual Meeting, Pediatric Academic Societies, Baltimore, MD. Platform Presentation: “Stress ulcer prophylaxis and bacterial colonization: A prospective study”

PROFESSIONAL SERVICE

Peer Review Groups/Grant Study Sections

- 2014 Member, Special Emphasis Panel ZHD1 DRG-D, Collaborative Pediatric Critical Care Research Network, NICHD/NIH
- 2013 – present Member, Scientific Review Committee, Charles Hood Foundation
- 2012 Special Emphasis Panel ZRG1 EMNR-R, Translational Research in Pediatric and Obstetric Pharmacology, NIH
- 2012 – present Co-chair, Basic Cell – Genetics and Epigenetics National Peer Review Committee, AHA
- 2010 - present AHA National Peer Review Committee: Basic Cell – Genetics and Epigenetics
- 2010 Special Emphasis Panel ZDK1 GRB-N, NIDDK, NIH
- 2009 Special Emphasis Panel ZRG-1, NIDDK, NIH
- 2008 – 2009 AHA National Lung, Resuscitation, and Respiration Peer Review Committee
- 2003 Co-Chair, NEA-3 Study Section, American Heart Association
- 1999 – 2003 Member, American Heart Association CV/Renal/Lung Peer Review Committee
- External Reviewer: Charles Hood Foundation; Wellcome Trust, UK; Cancer Research UK; Canada Foundation for Innovation; Breast Cancer Campaign (UK), Patterson-Leet Trust

Journal Service

- 1996 – present Reviewer for *Development*, *FASEB J*, *Pediatric Research*, *Biochemical Journal*, *American Journal of Physiology – Lung*, *American Journal of Pathology*, *Atherosclerosis*, *Journal of Pediatrics*, *FEBS Letters*, *American Journal of Physiology – Gastrointestinal and Liver Physiology*, *American Journal of Respiratory Cell and Molecular Biology*, *PLOS*
- 2014 – present Section Editor, *Current Opinion in Pediatrics*

Professional Organizations

International Pediatric Research Foundation (owner of the journal *Pediatric Research*)

2013 – present Secretary-Treasurer, Board of Trustees

2012 – present Member, Board of Trustees

Society for Pediatric Research

2010 – 2014 Co-Chair, Philanthropy/Finance Committee

2006 – 2008 Chair, Medical Student and Housestaff Award Committee

2005 – 2008 Critical Care Representative, Council (elected)

2005 – 2008 Member, Finance Committee

2004 Member, Nominating Committee

Eastern Society for Pediatric Research

2003 – 2008 Member of Council (elected)

2002 – 2008 Member, Program Committee

BAA Network “Re-engineering Clinical Research in Critical Care,” (NIH/NHLBI)

2006 – 2008 Member, Steering Committee

2006 – 2008 Member, Publications Committee

American Academy of Pediatrics

2016 – present Chair, Committee on Pediatric Research

2016 – present Member, Pediatric Research in Outpatient Settings Network (PROS) Steering Committee

2013 – present Member, Committee on Pediatric Research

2008 – 2012 Chair, Subcommittee on Resident Research Grants, Committee on Pediatric Research

2007 – 2012 Liaison Member, Committee on Pediatric Research

Federation of Pediatric Organizations (FOPO)

2013 Participant, FOPO Visioning Summit

2012 – 2014 Member, Child Health Research and Training Workgroup

NIH Advisory Groups

2017 *All of Us* Research Program Child Enrollment Scientific Vision Working Group of the Advisory Panel

2017 Invited Participant, “Inclusion Across the Lifespan” NIH Workshop

Meeting Planning/Participation

2015 - 2017 Chair, Program Committee, Pediatric Academic Societies’ Meeting

2014 Chair, Planning Committee for Pediatric Clinical Trials Network Stakeholders’ Forum, American Academy of Pediatrics, Washington, DC

2013 Chair, Late-Breaker Platform Session, Pediatric Academic Societies’ Annual Meeting, Washington, DC

- 2012 – present Member, Operating Committee, Pediatric Academic Societies’ Meeting
- 2012 – 2015 Chair-elect, Pediatric Academic Societies’ Program Committee
- 2012 – present Member, Pediatric Academic Societies’ Program Committee
- 2010 Organizer, 3rd Joseph B. Warshaw Developmental Biology Symposium, Yale School of Medicine, New Haven, CT
- 2009 Chair, Critical Care Scientist Development Program Symposium, Pediatric Academic Societies’ Annual Meeting, Baltimore, MD
- 2008 Chair, Critical Care Platform Session, Pediatric Academic Societies’ Annual Meeting, Honolulu, HI
- 2008 Leader, Meet the Professor Breakfast (Critical Care), Pediatric Academic Societies’ Annual Meeting, Honolulu, HI
- 2008 Educational Workshop Organizer, Pediatric Academic Societies’ Annual Meeting, Honolulu, HI: “Frogs, Mice, and Fish – Using model organisms for gene discovery as a translational approach to human development”
- 2007 – 2009 Member, Pediatric Academic Societies’ Program Committee
- 2004 – 2005 Educational Workshop Organizer, Pediatric Academic Societies’ Annual Meeting, Washington, D.C.: “Functional Genomics in the Mouse”
- 2003 Organizer and Speaker, Inaugural Joseph B. Warshaw Developmental Biology Symposium “The Cardiovascular System – From Development to Disease,” Yale School of Medicine.
- 2002 Chair, Plenary Session, “Regenerative Medicine – From Stem Cells to Tissues” Pediatric Academic Societies Annual Meeting, Baltimore MD,
- 2002 Chair, Critical Care Platform Session, Pediatric Academic Societies Annual Meeting, Baltimore MD
- 2001 – present Abstract Reviewer, Pediatric Academic Societies’ Meeting
- 2001 – 2004 Member, Pediatric Academic Societies’ Program Committee
- 1998 Chair, Developmental Biology Platform Session Pediatric Academic Societies Annual Meeting, New Orleans, LA

Yale University Service

Medical School Committees

- 2015 – present Board of Permanent Officers, YSM
- 2015 – present Member, Board of Governors, YMG
- 2015 – present Member, Finance Committee, YMG
- 2013 Chair, Mechanisms of Treatment and Disease Goal Group, Curriculum Design Committee
- 2012 Co-Chair, YMG Facilities Evaluation Taskforce
- 2010 – 2012 Finance Committee, Yale Medical Group
- 2010 – 2012 Dean’s Advisory Committee
- 2004 – 2015 Member, M.D./Ph.D. Faculty and Admissions Committee
- 2004 – 2007 Member, Funds and Fellowship Committee
- 2004 – 2006 Yale Stem Cell and Regenerative Medicine Program Steering Committee
- 1998 – 2000 Member, Admissions Committee
- 1997 – 1999 Clinical Tutor, Doctor – Patient Encounter Course

Departmental Committees

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|-------------|--|
| 2012 – 2015 | Chair, Chief of Pediatric Neurology Search Committee |
| 2012 – 2015 | Chair, Chief of Neonatology-Perinatology Search Committee |
| 2011 – 2015 | Chair, Outpatient Operations Task Force/Committee |
| 2010 – 2011 | Chair, Chief of Cardiology Search Committee |
| 2005 – 2012 | Member, Inpatient Services Committee |
| 2004 – 2005 | Member, Fellowship Oversight Committee |
| 2003 – 2005 | Member, Clinical Services Committee |
| 2003 – 2004 | Member, Finance Committee |
| 2003 – 2004 | Member, Basic Science Research Committee |
| 2002 – 2004 | Chair, Pediatric Respiratory Medicine Faculty Search Committee |
| 2001 – 2002 | Member, Liaison Committee to Pediatric Chairman Search Committee |
| 2000 | Member, Committee to Review Basic Science Research |

Hospital Boards & Committees

| | |
|----------------|---|
| 2015 – present | Member, Senior Clinical Leadership Group |
| 2015 – present | Member, YNHHS Quality Leadership Council |
| 2012 - present | Member, YNHH Ambulatory Joint Planning Committee |
| 2012 – 2013 | Member, YNHH Clinical Redesign Steering Committee |
| 2010 – present | Member, YNHH Medical Board |
| 2010 – 2012 | Member, YNHH Medical Board Administrative Committee |
| 2010 – 2012 | Member, Children’s Hospital and Ambulatory Service Line Planning Committees |
| 2009 – 2012 | Member, YNHH Organ Donation Committee |
| 2009 – 2010 | Member, YNHH Electronic Medical Record Task Force |
| 2009 – present | Co-Chair, Children’s Hospital Executive Committee |
| 2006 – present | Member, Executive Children’s Hospital Operations Group |
| 2004 – 2012 | Chair, Pediatric ICU Executive Committee |
| 2004 – 2008 | Member, ICU Director’s Group |
| 2004 – 2008 | Chair, Pediatric ICU Performance Improvement Committee |
| 2004 – 2006 | Executive Steering Committee, Yale New Haven Children’s Hospital |
| 2003 – 2004 | WP-7 Renovation User’s Group |
| 2001 | Sedation Analgesia Council Subcommittee for Pediatric Sedation |
| 1994 – 1998 | Co-chair, Pediatric Code 7 Committee |
| 1993 – 1995 | Pediatric Quality Assurance Committee |

Public Service

| | |
|-------------|---|
| 2000 – 2007 | President, Board of Directors, Hope for New Haven, Inc. |
| 2011 – 2017 | Member, Board of Managers, U of Virginia Alumni Association |
| 2013 – 2017 | Member, Board of Directors, Jefferson Scholars Foundation (U of Virginia) |

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- I was a member of the Research Training Working Group

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RESEARCH TRAINEES

Past Trainees

Bidyut Ghosh, Ph.D. Training level: Post-doctoral fellow

Dates of training: 1/01/97 – 12/31/00

Previous degree: Ph.D., University of Calcutta

Project: *Hex* expression and function in the developing liver

Current Position: Asst Prof, Dept. of Surgery, Johns Hopkins Medical School

Eron Sturm Training level: Undergraduate student, Yale University

Dates of training: 6/97- 5/98

Previous degree: none

Project: *Hhex* expression during development

Current position: Cardiology Fellow, U Penn

Rocco Iannucci, M.D. Training level: Medical student

Dates of Training: 6/98 – 8/99

Previous Degree: BA

Project: *Hex* expression during lung development

Current Position: Child and Adolescent Psychiatrist

Gheorghe Ganea, M.D. Training level: Post-doctoral fellow

Dates of training: 6/98 – 7/00

Previous degree: MD, Institute of Medicine, Bucharest Romania

Project: Transcriptional regulation of *Hhex* in the lung epithelial cells

Current Position: Senior Attending Physician, St. Luke's Hospital, NY, NY

William McGrath Training level: Undergraduate student, Yale University

Dates of training: 6/99 – 5/00

Previous degree: none

Project: Expression of *Hhex* during embryonic development

Haifa Hallaq, Ph.D. Training level: Post-doctoral fellow

Dates of training: 7/01 – 6/03

Previous degree: PhD, Hebrew University, Jerusalem, Israel

Project title: Characterization of *Hhex*^{-/-} cardiovascular phenotype

Current position: Assistant Professor, Vanderbilt University Medical School

Sam Adefeyisan, M.D. Training level: Post-doctoral fellow (clinical)

Dates of training: 7/02 – 6/05

Previous degree: M.D., University of Ibadan, Nigeria

Project: Validation of the Use of Auditory Evoked Potentials for Monitoring Level of Sedation in Critically Ill Children

Current Position: Assistant Professor, Pediatrics and Anesthesiology, U Tenn School of Medicine

Rong Cong, MD, Ph.D. Training level: Post-doctoral fellow

Dates of training: 10/02 – 7/06

Previous degrees: MD/PhD, Tongji Medical University, China

Project: Identification of targets of the homeobox gene *Hhex*

Current Position: Research Associate, Yale University

Xiaobing Jiang, Ph.D. Training level: Post-doctoral fellow

Dates of training: 12/03 – 6/06

Previous degree: Ph.D. (Molecular Biology), University of So. California, Los Angeles, CA

Project: *Hhex* function in cardiovascular development

Current Position: Research Associate, U Penn Medical School

Michael Hunter, Ph.D. Training level: Post-doctoral fellow

Dates of training: 9/03 – 8/07

Previous degree: Ph.D. (Developmental Biology), University of Chicago, Chicago IL

Project: The role and regulation of *Hhex* in liver development

Current Position: Associate Research Scientist, Dept of Surgery, U of Chicago, Chicago, IL

Adam Chrisopher, BA Training level: Medical Student

Dates of training: 6/09 – 8/09

Previous Degree: BA, Cornell University, Ithaca NY

Project: Identification of Direct Targets of the Homeobox Gene *Hhex*

Current position: Pediatric Resident, Yale New Haven Hospital, New Haven, CT

Jennifer Seibyl Training level: High School Student

Dates of training: 6/10 – 8/10

Previous degree: none

Project: Effects of an endothelial-specific deletion of *Hhex*

Current Position: Undergraduate, Skidmore College, Saratoga Springs, NY

Maria Zoupa, Ph.D. Training level: Post-doctoral fellow

Dates of Training: 10/09 – 10/12

Previous degree: Ph.D. King's College, London, UK

Project: Role of *Hhex* in cardiovascular development

Current Position: Post-doctoral fellow, Biomedical Research Foundation Academy of Athens

Adam Arterbery, Ph.D. Training level: Post-doctoral Associate

Dates of Training: 7/09 – 07/14

Previous degree: Ph.D. Cornell University

Project: Mechanisms of early liver stem cell differentiation
 Current Position: Associate Research Scientist, Yale School of Medicine

Clinical Trainees

| Name | Years in Program | Current Position |
|-----------------------------------|-------------------------|--|
| Isaac Lazar, M.D. | 2001 – 2004 | Senior Physician, Soroka Hospital, Israel |
| Stefanie Breitenstein, M.D. | 2004 – 2006 | Medical Project Leader, Bayer Pharmaceuticals, Cologne, Germany |
| Federico Nieves, M.D. | 2004 – 2006 | Attending Physician, Case Western Reserve University, Memphis, TN |
| Michael Canarie, M.D. | 2004 – 2007 | Clinician, Pediatrics Yale School of Medicine, New Haven, CT |
| K. Claire White, M.D. | 2005 – 2007 | Hospitalist, Ped Crit Care Boston Children's Hospital Boston, MA |
| Claudiu Faraon-Pogaceanu, M.D. | 2006 – 2009 | Consultant, Pediatric Intensive Care Bristol Royal Hospital, Southampton, UK |
| Simon Li, M.D. | 2007 – 2010 | Assistant Professor, Pediatrics New York Medical College, Valhalla, NY |
| Sarah Kandil, M.D. | 2008 – 2011 | Assistant Professor, Pediatrics Yale University, New Haven, CT |
| Engin Deniz, M.D. | 2009 – 2012 | Instructor, Yale School of Medicine, New Haven, CT |
| Kimberly Marohn, M.D. | 2010 – 2013 | Assistant Professor, Pediatrics Tufts University School of Medicine Baystate Medical Center |
| Cecilia Thompson, M.D. | 2009 – 2012 | Assistant Professor, Pediatrics Mt Sinai School of Medicine New York, NY |
| Francis Ulmer, M.D. | 2009 – 2011 | Chief Medical Officer e-Health Corp Zurich, Switzerland |