

**CURICULUM VITAE**  
**The Johns Hopkins University School of Medicine**

**NEIL A. GOLDENBERG, MD, PhD**

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Signature

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Date

**DEMOGRAPHIC AND PERSONAL INFORMATION**

**Current Appointments**

**University**

Associate Professor of Pediatrics and Medicine  
Divisions of Hematology  
Johns Hopkins University School of Medicine

Director of Research, All Children's Hospital Johns Hopkins Medicine  
(ACH JHM)  
Director, ACH JHM Clinical and Translational Research Organization  
Director, Pediatric Thrombosis Program (bi-campus), ACH JHM and  
Johns Hopkins Children's Center  
Co-Director, Pediatric Stroke Program, ACH JHM

**Other organizational/institutional**

Chief Research Officer, All Children's Research Institute

**Personal Data**

**Business Address**

501 6<sup>th</sup> Avenue South  
St. Petersburg, FL 33701

Email: [neil@jhmi.edu](mailto:neil@jhmi.edu)

Tel: (727) 767-6886 (assistant: Laurel McDevitt)

**Education and Training**

Undergraduate 1993 B.A., *Cum laude* WILLIAMS COLLEGE English

Graduate	1998	M.D., C.M.	MCGILL UNIVERSITY	Medicine
Internship	1999		UNIV.OF S. FLORIDA	Med-Peds
Residency	2002		UNIV.OF S. FLORIDA	Med-Peds
Fellowship	2005		UNIV.OF COLORADO	Peds Hem/Onc
Graduate	2008	Ph.D.	UNIV.OF COLORADO	Clinical Science

### Professional Experience

2005 – 2010	Assistant Professor of Pediatrics and Medicine, School of Medicine, University of Colorado and Health Sciences Center
2005 – 2011	Associate Director, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado
2005 – 2012	Attending Physician, Pediatric Hematology Service, Children’s Hospital Colorado
2005 – 2012	Co-director, Pediatric Thrombosis Program, Children’s Hospital Colorado
2006 – 2012	Founder and Co-director, Pediatric Stroke Program, Children’s Hospital Colorado
2006 – 2012	Attending Physician, Stroke Team, Children’s Hospital Colorado
2008 – 2010	Associate Director, Dept. of Medical Affairs, CPC Clinical Research
2008 – 2012	Director, Venous Thromboembolism Trials, CPC Clinical Research
2009 – 2010	Director, Dept. of Clinical Research, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado
2009 – 2012	Clinical Research Advisor, Fellowship Program, Pediatric Hem/Onc/BMT, University of Colorado School of Medicine
2010 – 2012	Associate Professor of Pediatrics and Medicine, University of Colorado Denver School of Medicine
2010 – 2012	Director, Dept. of Medical Affairs / Clinical Science and Safety, CPC Clinical Research
2011 – 2012	Director, Clinical Trials Organization, Children’s Hospital Colorado
2012 – present	Director of Research, All Children’s Hospital Johns Hopkins Medicine
2012 – present	Chief Research Officer, All Children’s Research Institute
2012 – present	Director, Pediatric Thrombosis Program (bi-campus), ACH JHM and Johns Hopkins Children’s Center
2012 – present	Co-Director, Pediatric Stroke Program, ACH JHM

## RESEARCH ACTIVITIES

Publications: Peer-reviewed Original Science Research [SEE ALSO EDUCATION SECTION FOR FURTHER PUBLICATIONS]

### Articles

1. Xu HM, Kolla SS, Goldenberg NA, and Studzinski GP. Resistance to 1,25-dihydroxyvitamin D3 of a deoxycytidine kinase-deficient variant of human leukemia HL60 cells. *Exp Cell Res* 1992; 203:244-50.
2. Goldenberg NA. Erratum: Scientific inquiry, the MJM, and tomorrow's physician scientist (McGill Journal of Medicine (1996)2:2(70)). *McGill Journal of Medicine*. 1997;3(1):74.
3. Goldenberg NA, Kahn SR, Solymoss S. Aberrant levels of von willebrand factor, thrombin-antithrombin complex, and plasminogen activator inhibitor are associated with venous thromboembolism in cancer. *Blood*. 2000;96(11 Part I):275a.
4. Goldenberg N, Kahn SR, and Solymoss S. Markers of coagulation and angiogenesis in cancer-associated venous thromboembolism. *J Clin Oncol* 2003; 21:4194-9.
5. Goldenberg N, Graham D, Liang X, and Hays T. Successful treatment of severe aplastic anemia in children using standardized immunosuppressive therapy with antithymocyte globulin and cyclosporine A. *Pediatr Blood Cancer* 2004; 43:718-22.
6. Goldenberg NA, Knapp-Clevenger R, Manco-Johnson MJ. Elevated plasma factor VIII and D-dimer levels and poor outcomes of thrombosis in children. *N Engl J Med* 2004; 351:1081-8.
7. Goldenberg NA, Hathaway WE, Jacobson L, Manco-Johnson MJ. A new global assay of coagulation and fibrinolysis. *Thromb Res* 2005; 116:345-356.
8. Goldenberg NA, Knapp-Clevenger R, Hays T, Manco-Johnson MJ. Lemierre's and Lemierre's-like syndromes in children: survival and thromboembolic outcomes. *Pediatrics* 2005; 116:e543-548.
9. Hall DA, Wadwa RP, Goldenberg NA, Norris J. Maternal cardiovascular risk factors for term neonatal seizures: a population-based study in Colorado 1989-2003. *J Child Neurol* 2006; 21:795-798.
10. Goldenberg NA, Hathaway WE, Jacobson L, McFarland K, Manco-Johnson MJ. Influence of factor VIII on overall coagulability and fibrinolytic potential of

haemophilic plasma as measured by global assay: monitoring in haemophilia A. *Haemophilia* 2006; 12:605-614.

11. Goldenberg NA, Durham JD, Knapp-Clevenger R, Manco-Johnson MJ. A thrombolytic regimen for high-risk deep venous thrombosis may substantially reduce the risk of post-thrombotic syndrome in children. *Blood* 2007; 110: 45-53.
12. Goldenberg NA, Bombardier C, Hathaway WE, McFarland K, Jacobson L, Manco-Johnson MJ. Influence of factor IX on overall plasma coagulability and fibrinolytic potential as measured by global assay: monitoring in haemophilia B. *Haemophilia* 2008; 14:68-77.
13. Goldenberg NA, Jacobson L, Hathaway H, Tripputi M, Primeaux J, Child J. *In vitro* stability of diluted dalteparin for pediatric use. *Ann Pharmacother* 2008; 42:511-515.
14. Young G, Albisetti M, Bonduel M, Brandao L, Chan A, Friedrichs F, Goldenberg N, Grabowski E, Heller C, Journeycake J, Kenet G, Krümpel A, Kurnik K, Lubetsky A, Male C, Manco-Johnson M, Mathew P, Monagle P, van Ommen H, Simioni P, Svirin P, Tormene D, Nowak-Göttl U. Impact of inherited thrombophilia on venous thrombo-embolism in children: a systematic review and meta-analysis of observational studies. *Circulation* 2008;118:1373-1382.
15. Young G, Becker S, Düring C, Friedrichs F, Goldenberg N, Kenet G, Manco-Johnson M, Scheffold C, Nowak-Göttl U. Influence of the factor II G20210A variant or the factor V G1691A mutation on symptomatic recurrent venous thromboembolism in children: an international multicenter cohort study. *J Thromb Haemost* 2009;7:72-9.
16. Alsultan A, Goldenberg NA, Kaiser N, Graham DK, Hays T. Tacrolimus as an alternative to cyclosporine in the maintenance phase of immunosuppressive therapy for severe aplastic anemia in children. *Pediatr Blood Cancer* 2009; 52:626-30.
17. Bernard TJ, Goldenberg NA, Tripputi M, Manco-Johnson MJ, Niederstadt T, Nowak-Göttl U. Anticoagulation in childhood-onset arterial ischemic stroke with non-moyamoya arteriopathy: findings from the Colorado and German (COAG) Collaboration. *Stroke* 2009; 40:2869-71.
18. Yee DL, Chan AKC, Williams S, Goldenberg NA, Massicotte MP, Raffini LJ. Thrombolysis for venous thromboembolism in infants and children: findings from a survey of pediatric hematology-oncology specialists. *Pediatr Blood Cancer* 2009; 53:960-6.

19. Ross C, Goldenberg NA, Hund D, Manco-Johnson MJ. Athletic participation in severe hemophilia: bleeding and joint outcomes in children on prophylaxis. *Pediatrics* 2009; 124:1267-72.
20. Goldenberg NA, Bernard TJ, Fullerton HJ, Gordon A, deVeber G. Antithrombotic treatments, outcomes, and prognostic factors in acute childhood-onset arterial ischemic stroke: International Pediatric Stroke Study findings. *Lancet Neurol* 2009; 8:1120-7.
21. Normann S, de Veber G, Fobker M, Langer C, Kenet G, Bernard TJ, Fiedler B, Sträter R, Goldenberg NA, Nowak-Göttl U. Role of endogenous testosterone concentration in pediatric stroke. *Ann Neurol* 2009; 66:754-8.
22. Goldenberg NA, Tripputi M, Crowther M, Abshire TC, DiMichele D, Manco-Johnson MJ, Hiatt WR. The "parallel-cohort RCT": Novel design aspects and application in the Kids-DOTT trial of pediatric venous thromboembolism. *Contemp Clin Trials* 2010; 31:131-3.
23. Goldenberg NA, Crowther MA. The "age" of understanding VKA dose. *Blood*. 2010;116(26):5789-5890.
24. Bernard TJ, Fenton LZ, Apkon SD, Boada R, Wilkening GN, Wilkinson CC, Soep JB, Miyamoto SD, Tripputi M, Armstrong-Wells J, Benke TA, Manco-Johnson MJ, Goldenberg NA. Biomarkers of hypercoagulability and inflammation in childhood-onset arterial ischemic stroke. *J Pediatr* 2010; 156:651-6.
25. Kenet G, Lütkehoff LK, Albisetti M, Bernard T, Bonduel M, Brandao L, Chabrier S, Chan A, deVeber G, Fiedler B, Fullerton HJ, Goldenberg NA, Grabowski E, Günther G, Heller C, Holzhauer S, Iorio A, Journeycake J, Junker R, Kirkham FJ, Kurnik K, Lynch JK, Male C, Manco-Johnson M, Mesters R, Monagle P, van Ommen CH, Raffini L, Rostásy K, Simioni P, Sträter RD, Young G, Nowak-Göttl U. Impact of thrombophilia on risk of arterial ischemic stroke or cerebral sinovenous thrombosis in neonates and children: a systematic review and meta-analysis of observational studies. *Circulation* 2010; 121:1838-47.
26. Iorio A, Halimeh S, Holzhauer S, Goldenberg N, Marchesini E, Marcucci M, Young G, Mannucci PM, Nowak-Göttl U. Rate of inhibitor development in previously-untreated hemophilia A patients treated with plasma-derived or recombinant factor VIII concentrates. A systematic review. *Thromb Haemost* 2010; 8:1256-65.
27. Calhoon MJ, Ross CN, Pounder E, Cassidy D, Manco-Johnson MJ, Goldenberg NA. High prevalence of thrombophilic traits in children with family histories of thromboembolism. *J Pediatr* 2010; 157:485-9.

28. Goldenberg NA, Donadini M, Kahn SR, Crowther M, Kenet G, Nowak-Göttl U, Manco-Johnson MJ. Pediatric post-thrombotic syndrome (PTS): A systematic review of frequency of occurrence, validity of outcome measures, and prognostic factors. *Haematologica* 2010; 95:1952-9.
29. Goldenberg NA, Pounder E, Knapp-Clevenger R, Manco-Johnson MJ. Validation of upper extremity post-thrombotic syndrome outcome measurement in children. *J Pediatr* 2010; 157:852-5.
30. Goldenberg NA, Spyropoulos AC, Halperin JL, Kessler CM, Schulman S, Turpie AGG, Skene AM, Cutler NR, Hiatt WR. Improving academic leadership and oversight in large industry-sponsored clinical trials: the ARO-CRO model. *Blood* 2011; 117:2089-92.
31. Goldenberg NA, Branchford B, Wang M, Ray C Jr, Durham JD, Manco-Johnson MJ. Percutaneous mechanical and pharmacomechanical thrombolysis for occlusive deep vein thrombosis of the proximal limb in adolescent subjects: findings from an institution-based prospective inception cohort study of pediatric venous thromboembolism. *J Vasc Interv Radiol* 2011; 22:121-32.
32. Simpson ML, Goldenberg NA, Jacobson LJ, Bombardier CG, Hathaway WE, Manco-Johnson MJ. Simultaneous thrombin and plasmin generation capacities in normal and abnormal states of coagulation and fibrinolysis in children and adults. *Thromb Res* 2011; 127:317-23.
33. Bernard TJ, Manco-Johnson MJ, Goldenberg NA. The roles of antomic factors, thrombophilia, and antithrombotic therapies in childhood-onset arterial ischemic stroke. *Thrombo Res.* 2011;127(1):6-12.
34. Bernard TJ, Manco-Johnson MJ, Lo W, Mackay M, Ganesan V, Goldenberg NA, Dowling M, Roach S, Tripputi M, Fullerton H, Furie K, Benseler S, Jordan L, Kirton A, de Veber G, Ichord R. Toward a Consensus-Based Classification of Childhood Arterial Ischemic Stroke. *Stroke* 2012; 43:371-7.
35. Kenet G, Aronis S, Berkun Y, Bonduel M, Chan A, Goldenberg NA, Holzhauer S, Iorio A, Journeycake J, Junker R, Male C, Manco-Johnson M, Massicotte P, Mesters R, Monagle P, van Ommen H, Rafini L, Simioni P, Young G, Nowak-Göttl U. Impact of persistent antiphospholipid antibodies on risk of incident symptomatic thromboembolism in children: a systematic review and meta-analysis. *Semin Thromb Hemost* 2011; 37:802-9.
36. Branchford BR, Mourani P, Bajaj L, Manco-Johnson MJ, Wang M, Goldenberg NA. Risk factors for the development of in-hospital venous thromboembolism in children: a case-control study employing diagnostic validation. *Haematologica* 2012; 97(4):509-15.

37. Allen SB, Goldenberg NA. Pain difference associated with injection of AbobotulinumtoxinA reconstituted with preserved saline and preservative-free saline: a prospective, randomized, side-by-side, double-blind study. *Dermatol Surg* 2012; 38(6):867-70.
38. Goldenberg NA, Krantz M, Hiatt WR. L-carnitine plus cilostazol versus cilostazol alone for the treatment of claudication in patients with peripheral artery disease: a multicenter randomized, double-blind, placebo-controlled trial. *Vasc Med* 2012;17:145-54.
39. Bombardier C, Villalobos-Menezes E, Ruegg K, Hathaway WE, Manco-Johnson MJ, Goldenberg NA. Monitoring hypercoagulability and hypofibrinolysis following acute venous thromboembolism in children: application of the CloFAL assay in a prospective inception cohort study. *Thromb Res* 2012; 130:343-9.
40. Pearson V, Ruzas C, Krebs NF, Goldenberg NA, Manco-Johnson MJ, Bernard TJ. Overweight and obesity are increased in childhood-onset cerebrovascular disease. *J Child Neurol* 2013; 28(4):517-9.
41. Manco-Johnson MJ, Wang M, Goldenberg NA, Soep J, Gibson E, Knoll C, Mourani PM. Treatment, survival, and thromboembolic outcomes of thrombotic storm in children. *J Pediatr* 2012; 161(4):682-8.
42. Hancock H, Wang MD, Gist K, Gibson E, Miyamoto SD, Mourani PM, Manco-Johnson MJ, Goldenberg NA. Cardiac findings and long-term thromboembolic outcomes following pulmonary embolism in children. *Cardiol Young* 2013; 23(3):344-52.
43. Holzhauer S, Goldenberg NA, Junker R, Heller C, Stoll M, Manner D, Mesters R, Kruempel A, Stach M, Nowak-Gottl U. Inherited thrombophilia in children with venous thromboembolism and the familial risk of thromboembolism: an observational study. *Blood* 2012; 120:1510-5.
44. Moruf A, Spyropoulos AC, Schardt TQ, Gibson E, Manco-Johnson MJ, Wang M, Goldenberg NA. Peri-procedural bridging with low molecular weight heparin in patients receiving warfarin for venous thromboembolism: a pediatric experience. *Thromb Res* 2012; 130(4):612-5.
45. Spyropoulos AC, Goldenberg NA, Kessler CM, Kittelson, Schulman S, Turpie AGG, Hiatt WR, Halperin JL. Comparative effectiveness and safety of the novel oral anticoagulants: Do the pivotal clinical trials point to a new paradigm? *J Thrombo Hemostasis*. 2012;10(12):2621-2624.
46. Goldenberg NA, Jenkins S, Jack J, Armstrong-Wells J, Fenton LZ, Stence NV,

- Oleszek J, Boada R, Wilkening GN, Wilkinson C, Soep JB, Miyamoto SD, Bajaj L, Mourani PM, Manco-Johnson MJ, Bernard TJ. Arteriopathy, D-dimer, and risk of poor neurologic outcome in childhood-onset arterial ischemic stroke. *J Pediatr* 2013; 162(5):1041-6.
47. Lyle CA, Gibson E, Lovejoy AE, Goldenberg NA. Acute prognostic factors for post-thrombotic syndrome in children with limb DVT: a bi-institutional cohort study. *Thromb Res* 2013; 131(1):37-41.
48. Lambers M, Goldenberg NA, Kenet G, Kirkham FJ, Manner D, Bernard T, Mesters RM, Junker R, Stoll M, Nowak-Göttl U. Role of reduced ADAMTS13 in arterial ischemic stroke: a pediatric cohort study. *Ann Neurol* 2013; 73(1):58-64.
49. Joachim E, Goldenberg NA, Bernard TJ, Armstrong-Wells J, Stabler S, Manco-Johnson MJ. The Methylenetetrahydrofolate Reductase Polymorphism (MTHFR c.677C>T) and Elevated Plasma Homocysteine Levels in a U.S. Pediatric Population with Incident Thromboembolism. *Thromb Res* 2013; 132(2):170-4.
50. Brock K, Goldenberg N, Graham DK, Liang X, Hays T. Moderate aplastic anemia in children: preliminary outcomes for treatment versus observation from a single-institutional experience. *J Pediatr Hematol Oncol* 2013;35(2):148-52.
51. Greene LA, Goldenberg NA, Simpson ML, Villalobos-Menuey E, Bombardier C, Acharya SS, Santiago-Borrero PJ, Cambara A, Dimichele DM. Use of global assays to understand clinical phenotype in congenital factor VII deficiency. *Haemophilia*. 2013; 19(5):765-72.
52. Goldenberg NA, Bernard TJ, Hillhouse J, Armstrong-Wells J, Galinkin J, Knapp-Clevenger R, Jacobson L, Marcovina SM, Manco-Johnson MJ. Elevated lipoprotein (a), small apolipoprotein (a), and the risk of arterial ischemic stroke in North American children. *Haematologica* 2013; 98(5):802-7.
53. Herson PS, Bombardier CG, Parker SM, Shimizu T, Klawitter J, Klawitter J, Quillinan N, Exo JL, Goldenberg NA, Traystman RJ. Experimental pediatric arterial ischemic stroke model reveals sex-specific estrogen signaling. *Stroke* 2013; 44(3):759-63.
53. Kittelson JM, Spyropoulos AC, Halperin JL, Kessler CM, Schulman S, Steg G, Turpie AG, Cutler NR, Hiatt WR, Goldenberg NA; Antithrombotic Trials Leadership and Steering (ATLAS) Group. Balancing risk and benefit in venous thromboembolism trials: concept for a bivariate endpoint trial design and analytic approach. *J Thromb Haemost* 2013; 11(8):1443-8.
54. Kenet G, Bidlingmaier C, Bogdanova N, Etingshausen CE, Goldenberg N, Gutsche S, Halimeh S, Holzhauser S, Kurnik K, Limperger V, Junker R, Nowak-Göttl U. Influence of factor 5 rs6025 and factor 2 rs1799963 mutation on inhibitor



development in patients with hemophilia A - an Israeli-German multicenter database study. *Thromb Res* 2014; 133:544-9.

55. Takemoto CM, Sohi S, Desai K, Bharaj R, Khanna A, McFarland S, Klaus S, Irshad A, Goldenberg NA, Strouse JJ, Streiff MB. Hospital-associated venous thromboembolism in children: incidence and clinical characteristics. *J Pediatr* 2014; 164:332-8.
56. Atchison CM, Arlikar S, Amankwah E, Ayala I, Barrett L, Branchford BR, Streiff M, Takemoto C, Goldenberg NA. Development of a new risk score for hospital-associated venous thromboembolism in non-critically ill children: Findings from a large single-institutional case-control Study. *J Pediatr* 2014; 165:793-8.
57. Amankwah EK, Atchison CM, Arlikar S, Ayala I, Barrett L, Branchford BR, Streiff M, Takemoto C, Goldenberg NA. Risk factors for hospital-associated venous thromboembolism in the neonatal intensive care unit. *Thromb Res* 2014; 134:305-9.
58. Goldenberg NA. Thrombosis and thrombophilia in children. *Clinical Advances in Hematology and Oncology*. 2014;12(11):773-776.
59. Mahajerin A, Branchford B, Amankwah EA, Raffini L, Chalmers E, VanOmmen CH and Goldenberg NA. Hospital-associated venous thromboembolism in pediatrics: a systematic review and meta-analysis of risk factors and risk assessment models. *Haematologica* 2015. [In press.]
60. Arlikar SJ, Atchison CM, Amankwah EK, Ayala IA, Barrett LA, Branchford BR, Streiff MB, Takemoto CM, Goldenberg NA. Development of a new risk score for hospital-associated venous thromboembolism in critically-ill children not undergoing cardiothoracic surgery. *Thromb Res*. 2015 May 3. Pii:S0049-3848(15)00208-X.
61. O'Brien SH, Yee DL, Lira J, Goldenberg NA, Young G. UNBLOCK: An open-label, dose-finding, pharmacokinetic and safety study of bivalirudin in children with deep vein thrombosis. *J Thromb Haemost* 2015 [in press].
62. Sidonio R, Lyle C, Goldenberg NA. New developments in pediatric thrombosis and anticoagulation. *Curr Opin Pediatr* 2015; 27:18-25.
63. Goldenberg NA, Everett AD, Graham D, Bernard TJ, Nowak-Göttl U. Proteomic and other mass spectrometry based “omics” biomarker discovery and validation in pediatric venous thromboembolism and arterial ischemic stroke: Current state, unmet needs, and future directions. *Proteomics Clin Appl* 2014; 8:828-36.

64. Gillespie M, Lyle C, Goldenberg NA. Update in pediatric venous thromboembolism. *Curr Opin Hematol* 2015. [In press.]
65. Vedantham S, Piazza G, Sista A and Goldenberg NA. Guidance for the Use of Thrombolytic Therapy for the Treatment of Venous Thromboembolism. *Journal of Thrombosis and Thrombolysis* 2015. [In press]

#### Reviews (including Book Chapters)

1. Goldenberg N. Elucidating angiogenesis: the role of endothelial cell proliferation, motility, and basement membrane proteolysis. *McGill J Med* 1995; 1:127-137.
2. Goldenberg N, Gold P. Carcinoembryonic antigen (CEA): past, present, and future. *McGill J Med* 1997; 3:46-66.
3. Goldenberg NA. Pediatric thrombosis: laboratory testing and clinical outcomes. *Ital J Pediatr* 2005; 31:310-313.
4. Goldenberg NA. Long-term outcomes of venous thrombosis in children. *Curr Opin Hematol* 2005; 12:370-376.
5. Goldenberg NA, Manco-Johnson MJ. Pediatric hemostasis and use of plasma components. *Best Pract Res Clin Haematol* 2006; 19:143-155.
6. Manco-Johnson MJ, Goldenberg NA, Use of Fresh Frozen Plasma and Plasma Proteins in Newborn Infants. *Haematologica Reports* 2006;2(10):71-74.
7. Ambruso DA, Hays T, Goldenberg NA. "Hematologic disorders." In: Hay W, ed. Current Pediatric Diagnosis and Treatment. 18th, 19th, 20<sup>th</sup>, 21<sup>st</sup> editions. New York, NY: McGraw-Hill, 2007, 2009, 2011, 2013.
8. Goldenberg NA, Bernard TJ. Venous thromboembolism in children. *Pediatr Clin North Am* 2008; 55:305-322.
9. Bernard TJ, Goldenberg NA. Arterial ischemic stroke in neonates and children. *Pediatr Clin North Am* 2008; 55:323-338.
10. Bernard TJ, Goldenberg NA\*, Armstrong-Wells J, Amlie-Lefond K, Fullerton H. Treatment of childhood arterial ischemic stroke. *Ann Neurol* 2008; 63:679-696. (\* Co-first author)
11. Goldenberg NA, Manco-Johnson MJ. Protein C deficiency. *Haemophilia* 2008; 14:1214-1221.

12. Goldenberg NA. Thrombophilia states and markers of coagulation activation in the prediction of outcomes of venous thromboembolism in children: a comparative analysis with respect to adult evidence. *Hematology Am Soc Hematol Educ Program* 2008; 236-244.
13. Pipe S, Goldenberg NA. “Acquired disorders of hemostasis.” In: Orkin SH, Ginsburg D, Nathan DG, Look AT, Fisher DE, and Lux SE, eds. *Nathan and Oski’s Hematology of Infancy and Childhood*. 7th, 8th editions. Cambridge, MA: Elsevier, 2008, 2014.
14. Goldenberg NA, Bernard TJ. Venous thromboembolism in children. *Hematol Clin North Am* 2010; 24:151-166.
15. Bernard TJ, Goldenberg NA. Pediatric arterial ischemic stroke. *Hematol Clin North Am* 2010; 24:167-180.
16. Grunzke M, Goldenberg NA. “Bleeding disorders.” In: Berman S, ed. *Pediatric Decision Making*. 5th edition. New York, NY: Elsevier, 2010.
17. Grunzke M, Goldenberg NA. “Venous thromboembolism.” In: Berman S, ed. *Pediatric Decision Making*. 5th edition. New York, NY: Elsevier, 2010.
18. Branchford B, Goldenberg NA. “Venous thromboembolism in children.” In: Elzouki, ed. *Textbook of Clinical Pediatrics*. 2nd edition. New York, NY: Elsevier, 2011.
19. Bernard TJ, Manco-Johnson MJ, Goldenberg NA. The roles of anatomic factors, thrombophilia, and antithrombotic therapies in childhood-onset arterial ischemic stroke. *Thromb Res* 2011; 127:6-12.
20. Lyle C, Bernard TJ, Goldenberg NA. Childhood-onset arterial ischemic stroke: a review of etiologies, antithrombotic treatments, prognostic factors, and priorities for future research. *Semin Thromb Hemost* 2011; 37:786-93.
21. Armstrong-Wells J, Goldenberg NA. Institution-based prospective inception cohort studies in neonatal rare disease research. *Semin Fetal Neonatal Med* 2011; 16:355-8.
22. Stence NV, Fenton LZ, Goldenberg NA, Bernard TJ. Craniocervical arterial dissection in children: diagnosis and treatment. *Curr Treat Options Neurol* 2011; 13:636-48.
23. Greene LA, Goldenberg NA. Deep vein thrombosis: thrombolysis in the pediatric population. *Semin Intervent Radiol* 2012; 29:36-43.

24. Bernard TJ, Armstrong-Wells J, Goldenberg NA. The institution-based prospective inception cohort study: design, implementation, and quality assurance in pediatric thrombosis and stroke research. *Semin Thromb Hemost* 2013; 39:10-4.
25. Goel R, Vedantham S, Goldenberg NA. Antithrombotic therapies: anticoagulation and thrombolysis. *Pediatr Clin North Am* 2013; 60:1463-74.
26. Lyle C, Goldenberg NA. “Venous Thromboembolic Disease.” In: da Cruz E, Ivy DD, Jagers J, Hraska V, ed. Pediatric Cardiology, Cardiac Surgery and Cardiac Intensive Care. London: Springer-Verlag, 2014.
27. Sharathkumar A, Goldenberg NA, Chan A. “Epidemiology, Etiology, and Pathophysiology of Infection-Associated Venous Thromboembolism in Children.” In: Goldenberg NA and Manco-Johnson MJ, eds. Pediatric Thrombosis Disorders. Cambridge University Press, 2014.
28. Nowak-Gottl U, Kenet G, Goldenberg NA. “Pediatric Thrombophilia Evaluation: Considerations for Primary and Secondary Venous Thromboembolism Prevention.” In: Goldenberg NA and Manco-Johnson MJ, eds. Pediatric Thrombosis Disorders. Cambridge University Press, 2014.
29. Young G, Goldenberg NA. “New Anticoagulants in Children: A review of recent studies and a look to the future.” In: Goldenberg NA and Manco-Johnson MJ, eds. Pediatric Thrombosis Disorders. Cambridge University Press, 2014.

#### Brief Communications and Letters

1. Righini M, Gregoire LG, Bounameaux H, Goldenberg NA, Manco-Johnson MJ. Venous thrombosis in children [3] (multiple letters). *New England J Med* 2004;351(23):2451-2452.
2. Goldenberg NA, Jacobson L, Manco-Johnson MJ. Duration of platelet dysfunction following a seven-day course of ibuprofen in healthy adults. *Ann Intern Med* 2005; 142:506-9. [Brief communication]
3. Bernard TJ, Goldenberg NA, Fullerton HJ, Gordon A, deVeber G. Prognostic predictors for outcome after childhood stroke – Authors’ reply. *Lancet Neurol* 2010;9(2):141-142.
4. Branchford BR, Gibson E, Manco-Johnson MJ, Goldenberg NA. Sensitivity of discharge diagnosis ICD-9 codes for pediatric venous thromboembolism is greater

than specificity, but still suboptimal for surveillance and clinical research. *Thromb Res* 2012; 129(5):662-3.

5. O'Brien, Kulkarni R, Wallace A, Hamblin F, Burr S, Goldenberg NA. Multicenter dose-finding and efficacy and safety outcomes in neonates & children treated with dalteparin for acute venous thromboembolism. *J Thromb Haemost* 2014; 12(11):1822-5. [Brief communication.]

#### PhD Thesis

Goldenberg NA. "Development of the Clot Formation and Lysis (CloFAL) Global Assay and its Application to the Investigation of Bleeding Disorders in Children and Adults". University of Colorado, Graduate Program in Clinical Sciences. May 2008.

#### Inventions, Patents, Copyrights

"Methods for a Global Assay of Coagulation and Fibrinolysis"

U.S. Patent disclosure # 11/575,853

Canadian patent pending

"Methods for a Simultaneous Thrombin and Plasmin Generation Assay"

U.S. Patent disclosure #

(Canadian disclosure pending)

#### Extramural and Intramural Funding

##### Current

6/1/2014 – 5/31/2017, ACH JHM Institution-wide Prospective Research in Early Determinants of Childhood Health Trajectories (PREDICT)

Institutional Research Grant Award

All Children's Hospital Foundation

Total direct costs: \$299,000

Goldenberg NA and Johnson S, co-PIs

Co-Principal Investigator

10/1/2013 – 9/31/2016, ACH JHM Institution-wide Prospective Inception Cohort and Biobanking Study of Children with Acute and Chronic Illnesses (iPICS)

Institutional Research Grant Award

All Children's Hospital Foundation

Total direct costs: \$298,000

Goldenberg NA, PI

Principal Investigator

6/1/2013 – 5/31/2016, Kids-DOTT trial

Institutional Research Grant Award

All Children's Hospital Foundation

Total direct costs: \$286,000  
Goldenberg NA, PI  
Principal Investigator

3/2015 – 2/2016, *Kids-DOTT Trial*  
Bridge Award  
American Society of Hematology  
Total direct costs: \$150,000  
Goldenberg NA, PI  
Principal Investigator

### Previous

7/1/2012 – 6/30/2015, *Planning grant for pediatric venous thrombolysis trial: PHLO*  
U34  
NIH NHLBI  
Manco-Johnson MJ, PI  
Co-Investigator and co-chair, Steering Ctte

12/1/2010 – 11/30/2014, *Diagnostic classification and biomarkers of hypercoagulability and inflammation in childhood-onset arterial ischemic stroke*  
K23  
NIH NHLBI  
Bernard TJ, PI  
Co-Investigator

5/1/2009 – 12/31/2013, *Kids-DOTT Trial*  
Investigator-Initiated Study Award  
Eisai, Inc.  
Total direct costs: \$391,217  
Goldenberg NA, PI  
Principal Investigator

4/1/2007 - 3/31/2012, *Clinical Investigation in Pediatric Thrombosis*  
1K23HL084055  
NIH NHLBI  
Total direct costs: \$687,595  
Goldenberg NA, PI (mentor: Manco-Johnson MJ)  
Principal Investigator

7/1/2007 - 6/30/2009, *Use of a Global Coagulation Assay and Comparative Proteomics in Hemophilia and von Willebrand Disease*  
Early Career Investigator Award  
Bayer Healthcare, Inc.  
Goldenberg NA, PI

Principal Investigator  
Total direct costs: \$165,098

7/1/2005 – 6/30/2007, *PediCathClot Trial*  
Scholar Award (Clinical/Translational Research category)  
American Society of Hematology  
Goldenberg NA, PI  
Principal Investigator  
Total direct costs: \$100,000

2004, *Kids-DOTT Trial*  
Thrombosis Studies Award  
Hemophilia and Thrombosis Research Society  
Goldenberg NA, PI  
Principal Investigator  
Total direct costs: \$35,000

7/1/2003 - 6/30/2006, *Development of a Global Assay of Coagulation and Fibrinolysis and Application in Bleeding and Prothrombotic Conditions*  
Training Award (Clinical Fellowship category)  
National Hemophilia Foundation  
Goldenberg NA, PI (mentor: Manco-Johnson MJ)  
Principal Investigator  
Total direct costs: \$181,818

7/1/2002 - 6/30/2003  
Training Award  
Ruth R. Kirschstein National Research Services Award  
Garcea R, PI  
Trainee  
Total direct costs: \$40,000

1997-1998, *Multicenter Investigation of Hypercoagulability and Angiogenic Factors in Cancer-Associated Deep Venous Thrombosis*  
Unrestricted Educational Grant  
Pharmacia and Upjohn  
Goldenberg, PI  
Principal Investigator (mentor: Solymoss S)  
Total direct costs: \$60,000 (CAN)

Awarded but declined\*:

7/1/2013 – 6/30/2018, Risk factors for hospital-acquired VTE in adult trauma patients



K23  
NIH NHLBI  
Cheng SS, PI  
Co-investigator/secondary mentor  
(\* Candidate moved to new institution)

#### Research Program Building / Leadership

2014 – present	Co-Director, ACH JHM “Designing Clinical Research” program
2014 – present	Scientific Chair, Tampa Bay Chapter, BioFlorida
2012 – present	Director of Research and Founder/Director of Clinical and Translational Research Organization (CTRO), All Children’s Hospital Johns Hopkins Medicine
2012 – present	Chief Research Officer, All Children’s Research Institute
2012 – present	Director, Pediatric Thrombosis Program (bi-campus), ACH JHM and Johns Hopkins Children’s Center
2012 – present	Co-Director, Pediatric Stroke Program, ACH JHM
2012 – present	Leader, ACH JHM Research Seminar Series
2012– present	Founder/Chair, ACH JHM Clinical and Translational Advisory and Mentorship (CTRAM) Forum
2012	Founder, Scientific Advisory and Mentorship Committee for Clinical Research, Department of Pediatrics, University of Colorado School of Medicine
2011- 2012	Interim Director, Clinical Trials Organization, Children’s Hospital Colorado
2010 – 2011	Director of Clinical Research, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado School of Medicine
2010 – 2012	Director, Department of Clinical Science and Safety, CPC Clinical Research (University of Colorado-affiliated Academic Research Organization)

2009 – 2012	Clinical Research Advisor, Hematology/Oncology/BMT Fellowship Program, Department of Pediatrics, University of Colorado School of Medicine
2008 – 2012	Director, Venous Thromboembolism Trials, CPC Clinical Research (University of Colorado-affiliated Academic Research Organization)
2008-2010	Associate Director, Department of Medical Affairs, CPC Clinical Research (University of Colorado-affiliated Academic Research Organization)
2006 – 2012	Founder and Co-Director, Pediatric Stroke Clinical and Research Program, Department of Pediatrics, University of Colorado School of Medicine
2005 – 2012	Co-Director, Pediatric Thrombosis Clinical and Research Program, Department of Pediatrics, University of Colorado School of Medicine

## EDUCATIONAL ACTIVITIES

### Educational Publications

#### Peer-Reviewed Original Educational Publications

1. Goldenberg NA, Kruse-Jarres R, Frick N, Pipe SW, Leissinger CA, Kessler CM. Outcomes of mentored, grant-funded fellowship training in hemostasis/thrombosis: findings from a nested case-control survey study. *Haemophilia* 2012; 18(3):326-31.

#### Peer-Reviewed Educational Publications—Consensus Statements, Expert Opinions

1. Jaff MR, McMurtry S, Archer SL, Cushman M, Goldenberg N, Goldhaber SZ, Jenkins JS, Kline JA, Michaels A, Thistlethwaite P, Vedantham S, White RJ, Zierler BK, on behalf of the American Heart Association Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation, Council on Peripheral Vascular Disease and the Council on Arteriosclerosis, Thrombosis and Vascular Biology. Management of massive and submassive pulmonary embolism, iliofemoral deep vein thrombosis, and chronic thromboembolic pulmonary hypertension: A scientific statement from the American Heart Association. *Circulation* 2011; 123:1788-830.

2. Mitchell LG, Goldenberg NA, Male C, Kenet G, Monagle P, Nowak-Göttl U; on behalf of the Perinatal and Paediatric Haemostasis Subcommittee of the SSC of the ISTH. Definition of clinical efficacy and safety outcomes for clinical trials in deep

venous thrombosis and pulmonary embolism in children. *J Thromb Haemost* 2011; 9:1856-8.

3. Monagle P, Chan AKC, Goldenberg NA, Ichord R, Journeycake J, Nowak-Gottl U, Vesely S. Antithrombotic Therapy in Neonates and Children: ACCP Evidence-Based Clinical Practice Guidelines (Ninth Edition). *Chest* 2012; 141(2 Suppl):e737S-801S.

4. Goldenberg NA, Brandao L, Journeycake J, Revel-Vilk S, Sharathkumar A, Kahn SR, Monagle P, Chan AK. Definition and standardization of pediatric lower extremity post-thrombotic syndrome. *J Thromb Haemost* 2012; 10:477-80.

5. Revel-Vilk S, Brandão LR, Journeycake J, Goldenberg NA, Monagle P, Sharathkumar A, Chan AK; Perinatal and Paediatric Haemostasis Subcommittee of the Scientific and Standardization Committee of the International Society on Thrombosis And Haemostasis. Standardization of post-thrombotic syndrome definition and outcome assessment following upper venous system thrombosis in pediatric practice. *J Thromb Haemost.* 2012;10(10):2182-5.

6. Kahn SR, Comerota AJ, Cushman M, Evans NS, Ginsberg JS, Goldenberg NA, Gupta DK, Prandoni P, Vedantham S, Walsh E, Weitz JI; on behalf of the American Heart Association Science Advisory and Coordinating Committee and the PVD Council. The Post-Thrombotic Syndrome: Evidence-based prevention, diagnosis, and treatment strategies. A Scientific Statement from the American Heart Association. *Circulation* 2014; 130(18):1636-61. PMID: 25246013.

### Monographs

1. Goldenberg NA, Manco-Johnson MJ. “Venous thromboembolism in children and young adults: An In-Depth Guide for Patients and Health Care Providers.” National Alliance for Thrombosis & Thrombophilia (NATT). 2009.

[www.stoptheclot.org/natt\\_publications](http://www.stoptheclot.org/natt_publications)

2. Goldenberg NA, Bernard TJ. “Ischemic Stroke in Children: An Overview for Patients and Health Care Providers.” The Children’s Hospital, Aurora, Colorado. 2009. [In press at <http://eames.thechildrenshospital.org:6300/psp/poprd/EMPLOYEE/EMPL/e/?url=http%3a%2f%2fplanetech%2fapps%2fcm%2fpages%2findex.cfm%3fRecordID%3d394>.]

3. Moll S, Goldenberg NA. “Protein C deficiency.” Clot Connect. 2011.

[www.clotconnect.org](http://www.clotconnect.org)

4. Goldenberg, NA. “Blood Clots in Children” Stop the Clot. 2014.

<http://www.stoptheclot.org/wp-content/uploads/2014/03/Children-and-Blood-Clots.pdf>

### Books, Textbooks

Goldenberg NA and Manco-Johnson MJ, eds. Pediatric Thrombotic Disorders. Cambridge University Press, 2014 [In press.]

### Other media—training video

Training video on standardized pediatric post-thrombotic outcome measurement. [www.kids-dott.net](http://www.kids-dott.net)

## Teaching

### Classroom Instruction

April 2005. “Thrombosis and Thrombophilia.” Lecturer. Core Lecture, Medical Student Curriculum, University of Colorado School of Medicine, Denver, CO, USA.

March 2007 – June 2012. “Overview of Pediatric Hematology.” Lecturer. Child Health Associate / Physician Assistant Program, University of Colorado School of Medicine, Aurora, CO, USA.

September 2008 – June 2012 (quarterly). “Clinical Trials Design.” Lecturer. Clinical Trials Core Training for Investigators and Study Coordinators, Colorado Clinical and Translational Research Institute. Denver Health Medical Center. Denver, CO, and University of Colorado School of Medicine, Aurora, CO, USA.

June 2011. “Clinical Trials Design, Execution, and Quality Assurance.” Lecturer. CLSC 6640: Introduction to Clinical Trials. University of Colorado Graduate School Program in Clinical Science, Aurora, CO, USA.

### Clinical and Research Instruction

(includes Resident and Fellow core lectures, Divisional lectures, Grand Rounds)

November 2004. “Improving Thrombotic Outcomes in Children: An Evidence-Based Approach.” Visiting Presenter. Special Seminar. Division of Hematology, Blood and Marrow Transplantation, Department of Pediatrics, Columbia University—Morgan Stanley Children’s Hospital, New York, NY, USA.

December 2004. “Improving Thrombotic Outcomes in Children: An Evidence-Based Approach.” Visiting Presenter. Grand Rounds. All Children’s Hospital, St. Petersburg, FL, USA.

December 2004. “Improving Thrombotic Outcomes in Children: An Evidence-Based Approach.” Visiting Presenter. Grand Rounds. Department of Pediatrics, University of South Florida, Tampa General Hospital, Tampa, FL, USA.

February 2005. "Improving Thrombotic Outcomes in Children: An Evidence-Based Approach." Visiting Presenter. Grand Rounds. Division of Hematology, St. Jude Children's Research Hospital, Memphis, TN, USA.

February 2005. "Established and Potential Roles of D-dimer in Evaluating and Monitoring Prothrombotic Risk." Presenter. University of Colorado Hemostasis and Thrombosis Conference. Denver, CO, USA.

July 2006. "Von Willebrand Disease: NIH Consensus Recommendations on Laboratory Issues and Management in Adults." Presenter. University of Colorado Hemostasis and Thrombosis Conference, University of Colorado Hospital. Denver, CO, USA.

August 2006. "Von Willebrand Disease: NIH Consensus Recommendations on Laboratory Issues and Management in Children." Presenter. University of Colorado Hemostasis and Thrombosis Conference, The Children's Hospital, Denver, CO, USA.

September 2006. "Diagnostic Evaluation, Management, and Outcomes of Venous Thromboembolism in Children and Young Adults." Presenter. Grand Rounds. Department of Pediatrics, UCDHSC and The Children's Hospital. Denver, CO, USA.

March 2007. "Critical Issues in Thrombophilia/Hypercoagulability Testing in Pediatrics: What the Laboratory Should Know." Lecturer. American Society of Clinical Pathology Teleconference.

April 2007. "Bleeding and Clotting in Pediatric Bone Marrow Transplant Patients." Presenter. Hem-Onc-Transplant (H.O.T) Days, Center for Cancer and Blood Disorders, The Children's Hospital, Denver, CO, USA.

April 2007. "Thrombosis and Stroke in the Neonate." Lecturer. Fellows' Conference, UCDHSC Dept. of Pediatrics, Division of Neonatology, The Children's Hospital, Denver, CO, USA.

May 2007. "Thrombophilia Testing in Pediatrics: An Overview and Approach for Residents." Lecturer. Pediatric Residents' Teaching Conference, Dept. of Pediatrics, UCDHSC and The Children's Hospital, Denver, CO, USA.

September 2007. "Management of Venous Thromboembolism in Children." Presenter. Region IV-N Annual Meeting of the CDC HTC Network. Charleston, SC, USA.  
September 2007.

October 2007. "Diagnostic Evaluation, Management, and Outcomes of Venous Thromboembolism in Children and Young Adults." Visiting Presenter. Grand Rounds, Department of Pediatrics, Johns Hopkins University. Baltimore, MD, USA.

January 2008. “Diagnostic Evaluation, Treatment, and Outcomes of Stroke in Children: Part I.” Co-lecturer (with Dr. Timothy Bernard of Child Neurology). Pediatric Residents’ Conference, Dept. of Pediatrics, UCD and The Children’s Hospital, Aurora, CO, USA.

January – May 2008. “Diagnostic Evaluation, Treatment, and Outcomes of Stroke in Children, and Development/Implementation of a New Institutional Clinical Care Pathway.” Co-Presenter (with Dr. Timothy Bernard of Child Neurology). Faculty Conference, Divisions of Emergency Medicine, Critical Care Medicine, Child Neurology, Hematology/Oncology/BMT, Department of Pediatrics, and Departments of Radiology and Neurosurgery (Neurosurgery Grand Rounds), UCD and The Children’s Hospital, Denver, CO, USA.

April 2008. “Challenges in Bleeding Disorder Evaluation in Children: Pitfalls of ‘Screening Coags’ in the Clinical Laboratory in the Absence of Robust Reference Ranges Derived from Evaluation in Healthy Children.” Presenter. University of Colorado Hemostasis and Thrombosis Conference—The Children’s Hospital. Aurora, CO, USA.

April 2008. “Diagnostic Evaluation, Treatment, and Outcomes of Stroke in Children: Part II.” Co-lecturer (with Dr. Timothy Bernard of Child Neurology). Pediatric Residents’ Conference. Dept. of Pediatrics, UCD and The Children’s Hospital, Aurora, CO, USA.

May 2008. “Application of the Clot Formation and Lysis (CloFAL) Global Assay to the Investigation of Bleeding Disorders in Children and Adults.” Guest Lecturer. UCD Transfusion Medicine Residency Program Lecture Series. Bonfils Blood Center, Aurora, CO, USA.

April 2009. “Thrombophilia States and Markers of Coagulation Activation as Prognostic Markers in Pediatric Venous Thromboembolism: A Comparative Analysis with Evidence in Adults.” Visiting Presenter. Hematology Rounds, Hospital for Sick Children. Toronto, ON, Canada. April 2009.

April 2009 - January 2010. “Diagnostic Evaluation, Treatment, and Outcomes of Pulmonary Embolism in Children, and Development/Implementation of New Institutional Clinical Care Pathways.” Presenter. Faculty Conferences, Divisions of Emergency Medicine, Critical Care Medicine, Cardiology, Hospitalist Medicine, and Hematology/Oncology/BMT, Department of Pediatrics, and Department of Radiology, UCD and The Children’s Hospital, Aurora, CO, USA.

July 2009, August 2010, August 2011. “Hematologic Emergencies: Massive Iliofemoral DVT, Pulmonary Embolism, and Stroke.” Lecturer. Fellows’ Teaching Conference. UCD Dept. of Pediatrics, Section of Hem/Onc/BMT, The Children’s Hospital, Aurora, CO, USA.

November 2009. “Diagnostic Evaluation, Treatment, and Outcomes of Deep Venous Thrombosis and Pulmonary Embolism in Children: Update and Development of Institutional Care Pathways”. Presenter. Nursing Supervisor’s Retreat. The Children’s Hospital, Aurora, CO, USA.

May 2010-February 2011. “Prevention of Venous Thromboembolism in Children and Development/Implementation of a New Institutional Clinical Care Pathway.” Presenter. Faculty Conferences, Divisions of Emergency Medicine, Critical Care Medicine, Cardiology, Hospitalist Medicine, and Hematology/Oncology/BMT, Department of Pediatrics, and Department of Radiology UCD and The Children’s Hospital, Aurora, CO, USA.

April 2011. “Childhood-Onset Arterial Ischemic Stroke.” Visiting Presenter. Visiting Lectureship in Hemostasis and Thrombosis, Division of Hematology/Oncology, Baylor College of Medicine/Texas Children’s Hospital. Houston, TX, USA.

September 2011. “Building Evidence Toward Risk-Stratified Therapeutic Approaches and Clinical Trials in Pediatric Venous Thromboembolism.” Visiting Presenter. Grand Rounds, Blood Center of Wisconsin. Milwaukee, WI, USA.

October 2012. “Design, Implementation, and Quality Assurance of the Institution-Wide Prospective Cohort Study.” Presenter. Grand Rounds, All Children’s Hospital Johns Hopkins Medicine, St. Petersburg, FL, USA.

January 2013. “Biostatistics 101 for the Clinical Researcher.” Co-lecturer (with Ernest Amankwah, PhD). Research Seminar Series, All Children’s Hospital Johns Hopkins Medicine, St. Petersburg, FL, USA.

March 2013. “Biostatistics 101 for the Clinical Researcher.” Co-lecturer (with Ernest Amankwah, PhD). Designing Clinical Research Program, All Children’s Hospital Johns Hopkins Medicine, St. Petersburg, FL, USA.”

May 2013. “Building Evidence Toward Risk-Stratified Therapeutic Approaches and Clinical Trials in Pediatric Stroke.” Visiting Presenter. Grand Rounds, Department of Pediatrics, Johns Hopkins University. Johns Hopkins Bloomberg Children’s Center, Baltimore, MD, USA.

September 2013. “Feasibility Analysis and Operational Needs Assessment in Pediatric Clinical and Translational Research.” Lecturer. Research Seminar Series, All Children’s Hospital Johns Hopkins Medicine, St. Petersburg, FL, USA.

October 2013. Thromboembolism in Children: State-of-the-Art in Patient Care, Quality and Research. Visiting Presenter. Grand Rounds, Department of Pediatrics, University of South Florida. Tampa General Hospital, Tampa, FL, USA.

November 2013. “Thromboembolism in Children and Young Adults: State-of-the-Art in Patient Care, Quality and Research.” Presenter Moffitt Cancer Center Grand Rounds. Tampa, FL, USA.

August 2014. “Career Development Pearls in Academic Medicine.” Resident’s Core Curriculum Conference. ACH JHM Pediatric Residency Program, ACH JHM, St. Petersburg, FL, USA.

#### CME Instruction

December 2004. “Improving Thrombotic Outcomes in Children: An Evidenced-Based Approach.” Visiting Presenter. Grand Rounds. All Children’s Hospital, St. Petersburg, FL, USA. December 2004.

May 2008. “The Role of Thrombolysis in High-Risk Deep Venous Thrombosis in Children.” American Society of Pediatric Hematology/Oncology Annual Meeting. Cincinnati, OH, USA. May 2008.

November 2008. “Diagnostic Evaluation, Management, and Outcomes of Venous Thromboembolism in Children.” Pediatric Education Series. Cheyenne Regional Medical Center. Cheyenne, WY, USA.

November 2008. “Thrombophilia Assessment in Pediatrics: the Who, What, When, Where, How...and Why.” Presenter. National Hemophilia Foundation Annual Meeting. Denver, CO, USA.

December 2008. “Thrombophilia States and Markers of Coagulation Activation in the Prediction of Outcomes of Venous Thromboembolism in Children: A Comparative Analysis with Respect to Adult Evidence.” Education Session. American Society of Hematology Annual Meeting. San Francisco, CA, USA.

April 2009. “Thrombophilia States and Markers of Coagulation Activation as Prognostic Markers in Venous Thromboembolism: Evidence in Adults and Children.” Visiting Presenter, Hematology Grand Rounds, McMaster University. Hamilton, ON, Canada. [With national webcast.]

April 2009. “Post-Thrombotic Syndrome in Children: A Review of the Evidence, and a Call-to-Action.” Presenter. Hemophilia and Thrombosis Research Society Annual Scientific Symposium. Chicago, IL, USA.

February 2011. “Venous thrombosis.” Lecturer. American Society of Pediatric Hematology/Oncology Board Review Course, Dallas, TX, USA.

February 2011. “Adult Complications in a Children’s Hospital: Development of Venous Thromboembolism and Stroke Clinical Care and Prevention Pathways.” (Co-presentation with The Children’s Hospital, Colorado, Chief Quality Officer Dan



Hyman, MD). Department of Pediatrics, UCD and The Children's Hospital, Aurora, CO, USA.

April 2011. "Duration of Anticoagulant Therapy for Venous Thromboembolism in Children: Principles, Evidence, and HTRS Clinical Trial." Presenter. Hemophilia and Thrombosis Research Society Annual Scientific Symposium. Chicago, IL, USA.

September 2011. "Pediatric Venous Thromboembolism." Presenter. Esoterix Annual Coagulation Symposium. Denver, CO, USA.

September 2013. "Academic & Industry Collaborations – From Bio Engineering to Population Health." Pediatric Perspective, Panelist. BioFlorida Conference. Tampa, FL, USA.

April 2014. "New Oral Anticoagulants in Adolescents." Presenter. Thrombosis & Hemostasis Summit of North America 2014. Chicago, IL, USA.

### Workshops

May 2005. "Development and Initial Clinical Results of the Clot Formation and Lysis (CloFAL) Global Assay." Presenter. Bleeding Disorders Workshop, American Society of Pediatric Hematology-Oncology Annual Meeting. Washington, D.C., USA.

June 2008. "Pediatric Perspectives." Presenter and Discussant. American Society of Hematology Workshop on Deep Venous Thrombosis Surveillance (response to Surgeon General's Call-to-Action). Washington, D.C., USA.

August 2009, August 2010. "Designing and Implementing an Institution-Based Prospective Inception Cohort Study: Key Tools for the Clinical Investigator." Lecturer. American Society of Hematology Clinical Research Training Institute. La Jolla, CA, USA.

August 2010. "Improving Academic Oversight of Industry-Sponsored Clinical Trials." Presenter and Discussant. Panel Discussion on Industry-Academia Relationships, American Society of Hematology Clinical Research Training Institute. La Jolla, CA, USA.

December 2011. "Feasibility and Accrual Issues in Clinical Trials." Presenter and Discussant. HTRS Workshop on Thrombosis Clinical Trials, American Society of Hematology Annual Meeting, San Diego, CA, USA.

February 2012. "Clinical Research Mentorship." Presenter and Discussant. Panel Discussion. Department of Pediatrics Faculty Mentorship Retreat. Department of Pediatrics, UCD, Aurora, CO, USA.

September 2014. “The Question.” Presenter and Discussant. ACH JHM Designing Clinical Research Program Retreat and Workshop. St. Petersburg, FL, USA.

September 2014. “Pediatric Antithrombotic Design, Execution, and Oversight: Key Concepts, Findings, and Lessons Learned.” Presenter and Discussant. Pediatric Anticoagulation Mini-Symposium. FDA Division of Hematology Products. Rockville, MD, USA.

December 2014. “Pilot/Feasibility Phase of the Kids-DOTT trial.” NHLBI Symposium on Pilot/Feasibility Studies, “How I Did It” Session. American Society of Hematology Annual Meeting. San Francisco, CA, USA.

#### Mentoring (pre-and post-doctoral)

##### Advisees

2006-2008. Christopher Bombardier, BS  
Summer research student (pre-medical)

2008-2010. Mindy (Grunzke) Simpson, MD  
(co-mentor with Dr. M. Manco-Johnson)  
Fellow, Section of Hem/Onc/BMT, Dept. of Pediatrics, UCD  
National Hemophilia Foundation Clinical Fellowship Award

2008-2010. Cassie Ross, BA  
Research student (pre-medical)

2008-2009. Beverly Thao  
Undergraduate internship

2008-2010. Timothy Bernard, MD  
Assistant Professor, Section of Child Neurology, Dept. of Pediatrics, UCD  
NIH NHLBI KL2—CCTSI

2008-2012. Emily Joachim, BS  
Summer research student (pre-medical) and medical student

2009-2013. Brian Branchford, MD  
(secondary mentor with Dr. J. DiPaola; chair, Scholarship Oversight Committee)  
Fellow, Section of Hem/Onc/BMT, Dept. of Pediatrics, UCD  
National Hemophilia Foundation Clinical Fellowship Award

2009-2012. Courtney Lyle, MD, MS (ClinSci)  
(secondary mentor with Dr. A. Lovejoy; member, Scholarship Oversight Committee)  
Fellow, Section of Hem/Onc/BMT, Dept. of Pediatrics, UCSD

Master's degree Program in Clinical Science  
National Hemophilia Foundation Fellowship Training Awardee (declined)

2009-2012. Jesse Hinckley--MD, PhD student.  
(member, PhD Committee)

2010-2012. Hayley Hancock, MD  
Resident, Dept. of Pediatrics, UCD

2010-2012. Lindsey Greene, MD  
(secondary mentor with Dr. D. DiMichele)  
Resident, Dept. of Pediatrics, Cornell University-Weill Medical College

2010-2012. Rachel Bercovitz, MD  
Fellow, Section of Hem/Onc/BMT, Dept. of Pediatrics, UCD  
Fellow, Transfusion Medicine Program, Dept. of Pathology, UCD  
Trainee, Amer Soc of Hematology Clinical Research Training Institute (2011)  
Assistant Professor, Dept. of Pediatrics, Medical College of Wisconsin

2011-2012. Alicia Moruf, MS  
Student, PharmD Program, UCD  
2012-present. Arash Mahajerin, MD  
(secondary mentor with Dr. D. Nugent)  
Assistant Professor  
Children's Hospital Orange County

2012-present. Christie Atchison, BS  
Medical student  
(mentor for Carolyn L. Kuckein Student Research Fellowship award, AOA)

2013-present. Sandra Brooks, MD  
Assistant Professor of Pediatrics (part-time), Division of Neonatology.

2014-present. Allison Fernandez, MD  
Assistant Professor of Anesthesia (part-time)

2014-present. Mirinda Gillespie, MD, ScM  
(Scholarship Advisor, ACH JHM Pediatric Residency Program)

Faculty/Mentor, American Society of Hematology Clinical Research  
Training Institutes in North America and Latin America (2008, 2009, 2010, 2012)

Faculty/Mentor, ACH JHM Designing Clinical Research Program  
(2012 - present)

## CLINICAL ACTIVITIES

### Certification

#### Medical Licensure

State of Colorado (2005-2012)

State of Montana (2006-2012)

State of Florida (2012 -)

#### Board Certification

American Board of Pediatrics (2002 -)

American Board of Internal Medicine (2002-2012)

American Board of Pediatrics – Hem/Onc/BMT (2009 -)

### Clinical (Service) Responsibilities

2005-2012 Hematology inpatient/consult Attending Physician 10% effort

2005 - Hematology outpatient\* Attending Physician 10% effort

\* Thrombosis, Stroke, +/- Hemostasis clinics

### Clinical Program Building / Leadership

2006 – 2012 Founder and Co-Director, Pediatric Stroke Clinical and Research Program, Department of Pediatrics, University of Colorado School of Medicine

2005 – 2012 Co-Director, Pediatric Thrombosis Clinical and Research Program, Department of Pediatrics, University of Colorado School of Medicine

2012 – Director, Pediatric Thrombosis Program (bi-campus), ACH JHM and Johns Hopkins Children’s Center

2012 – Co-Director, Pediatric Stroke Program, ACH JHM

## SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

### Leadership roles

Physician Co-Lead, Multidisciplinary Working Group on Arterial Ischemic Stroke Clinical Care Pathway and Stroke Alert System, ACH JHM (2014-present)

Hematology Physician Co-Lead (with Clifford Takemoto, MD), JHM Pediatric VTE Prevention Workgroup (2014-present)

Physician Lead, Multidisciplinary Working Group on Venous Thromboembolism Clinical Care Pathways, ACH JHM (2012-present)

Subject matter expert/physician co-leader, Venous Thromboembolism, Ohio Pediatric Safety Network, Hospital Acquired Conditions initiative (2011-2014)

Founder and Chair, Multidisciplinary Working Group on Venous Thromboembolism Clinical Care Pathways, Children's Hospital Colorado (2009-2012)

Co-Founder and Member, Stroke Council (formerly, Multidisciplinary Working Group on Arterial Ischemic Stroke Clinical Care Pathways), Children's Hospital Colorado (2008-2012)

Production of guidelines and/or protocols:

Institutional

2007-2008. Clinical Care Pathway for Diagnostic Evaluation and Management of Arterial Ischemic Stroke in Non-Neonatal Children.

Principal Author. 2% effort (unfunded).

Active, institution-wide at Children's Hospital Colorado, with EMR orderset. Shared with numerous pediatric hospitals internationally.

2008. Policy and Procedure on Anticoagulant Dosing and Monitoring in Children (National Safety Goals for Hospitals, Requirement 3E).

Co-author and Physician leader. 1% effort (unfunded).

Active, institution-wide at Children's Hospital Colorado, with EMR ordersets. Shared with numerous pediatric hospitals nationally.

2008-2009. Clinical Care Pathway for Diagnostic Evaluation and Management of Pulmonary Embolism in Children.

Principal Author. 2% effort (unfunded).

Active, institution-wide at Children's Hospital Colorado, with EMR orderset. Shared with numerous pediatric hospitals nationally.

2009-2010. Clinical Care Pathway for Diagnostic Evaluation and Management of Deep Venous Thrombosis in Children.

Principal author. 2% effort (unfunded).

Active, institution-wide at Children's Hospital Colorado, with EMR orderset. Shared with numerous pediatric hospitals nationally.

2010-2011. Clinical Care Pathway for Venous Thromboembolism Prevention in Children.

Principal author. 2% effort (unfunded).

Active, institution-wide at Children's Hospital Colorado, with EMR orderset. Shared with numerous pediatric hospitals nationally.

2011-2012. EMR-based pediatric venous thromboembolism risk screening tool and automated risk-assessment for use on daily inpatient rounds.

Project medical lead. 1% effort (unfunded).

Active in Pediatric Intensive Care Unit at Children's Hospital Colorado (pilot initiated June 4, 2012).

2013-present. EMR-based Clinical Care Pathway for Diagnostic Evaluation and Management of Deep Venous Thrombosis in Children. Implemented February 2015.

Principal Author. 1% effort (unfunded).

2013-present. EMR-based Hospital-Associated Pediatric Venous Thromboembolism Risk Assessment Module and Prevention Care Pathway.

Principal. 1% effort (unfunded).

2013-2014. ACH JHM Pharmacy Policy on Pediatric Anticoagulant Dosing and Monitoring.

Co-author. 1% effort (unfunded).

2014-present. EMR-based Clinical Care Pathway for Diagnostic Evaluation and Management of Arterial Ischemic Stroke in Non-Neonatal Children.

Co-Author (with Ryan Felling MD, JHU Child Neurology). 1% effort (unfunded). Collaborative with JHCC.

2014-present. EMR-based Clinical Care Pathway for Diagnostic Evaluation and Management of Pulmonary Embolism in Children.

Principal Author. 1% effort (unfunded).

### International

2009-2011. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Definition and Standardization of Endpoints in Pediatric Venous Thrombosis Trials.

Writing Group member.

2009-2012. American College of Chest Physicians Evidence-based Clinical Practice Guidelines on Antithrombotic and Thrombolytic Therapy.

Pediatric panelist and Writing Group member.

2010-2011. American Heart Association Scientific Statement on Management of Massive and Submassive Pulmonary Embolism, Iliofemoral Deep Vein Thrombosis, and Chronic Thromboembolic Pulmonary Hypertension. Writing Group member.

2010-2011. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Definition and Standardization of Endpoints in Pediatric Venous Thrombosis Trials. Writing Group member.

2010-2012. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Standardization of Definition and Outcome Measurement of Post-Thrombotic following Lower Limb Deep Venous Thrombosis in Children. Writing Group member.

2011-2012. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Standardization of Definition and Outcome Measurement of Post-Thrombotic following Upper Limb Deep Venous Thrombosis in Children. Writing Group member.

2012-2014. American Heart Association Scientific Statement on Post-Thrombotic Syndrome. Writing Group member.

2013-present. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Pulmonary Embolism in Children. Writing Group co-chair.

2013-present. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Arterial Thromboembolism in Children. Writing Group co-chair.

2013-present. International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Statement on Venous Thromboembolism Prevention in Children. Writing Group co-chair.

## ORGANIZATIONAL ACTIVITIES

### Institutional Administrative Appointments (committees)

2005, 2007, 2009, 2011. Chair, Search Committees on Clinical Research Associate Hires, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado School of Medicine.

2006-2008. Member, Search Committee on Hematology Faculty Hire, Section of Hem/Onc/BMT, Department of Pediatrics, University of Colorado School of Medicine.

2007. Chair, Search Committee on Coagulation Program Nurse/Nurse Practitioner Hire, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado School of Medicine.

2007-2008. Member, University of Colorado Health Sciences Center CTSA Grant Committee, Working Group on Research Education and Training, Subgroup on Clinical Trials Training Curriculum.

2007-2008. Member, Search Committee on Neuro-Oncology, Basic/Translational Research, and Coagulation Program Faculty Hires, Section of Hem/Onc/BMT, Department of Pediatrics, University of Colorado School of Medicine.

2008-2012. Member, Pediatric Scientific and Advisory Review Committee, Colorado Clinical Translational Sciences Institute (NIH CTSA award), University of Colorado School of Medicine.

2008-2012. Physician Leader, Advisory Committee on Anticoagulation Protocols (National Safety Goals for Hospitals, Requirement 3E), Children's Hospital Colorado

2009-2012. Clinical Research Advisor, Pediatric Hem/Onc/BMT Fellowship Program, Department of Pediatrics, University of Colorado School of Medicine.

2010. Chair, Search Committee on Clinical Research Manager Hire, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado School of Medicine.

2010. Member, Search Committee on Clinical Services Manager Hire, Mountain States Regional Hemophilia and Thrombosis Center, University of Colorado School of Medicine.



2011-2012. Member, Search Committee on Rheumatology Faculty Hire, Section of Rheumatology, Department of Pediatrics, University of Colorado School of Medicine.

2011-2012. Member, Fellowship Candidate Core Interview Committee, Section of Hem/Onc/BMT, Department of Pediatrics, University of Colorado School of Medicine.

2011-2012. Member, Research Compliance Committee, Children's Hospital Colorado.

2012. Member, Research Executive Steering Committee, Children's Hospital Colorado.

2012. Member, Search Committee on Chief Safety Officer / VP of Medical Affairs, ACH JHM.

2012-present. Chair, Search Committee on Director of Biomedical Informatics, ACH JHM.

2013-present. Chair. Search Committee on Director of JHM Pediatric Biorepository at ACH.

2013-present. Member, Search Committee on Director of Cancer and Blood Disorders Institute, ACH JHM.

2013-2014. Member, Search Committee on Director of Neuroscience Institute, ACH JHM.

2013-2014. Member, Search Committee on JHM Director of Metabolomics.

2013, 2014. Member, ACH JHM Pediatric Residency Program Interview Committee.

2013. Member, Clinical Genetics Faculty Search Committee, ACH JHM.

2013. Member, Hospitalist Interview Committee, ACH JHM.

2013. Member, Clinical Educator Faculty Interview Committee, General Pediatrics, ACH JHM.

2013. Member, Clinical Educator Faculty Interview Committee, Hospitalist, ACH JHM.

2013-present. Co-chair, ACH JHM Research Council. (Chair, Scientific Review Subcouncil; Co-chair, Research Informatics Subcouncil; Co-chair, Designing Clinical Research Program Subcouncil.

2013-present. Member/ACH JHM Representative, JHM Research Council, Data Trust Subcouncil.

2013-present. Member, ACH JHM Education Council.

2013-present. Member, ACH JHM Quality and Patient Safety Council.

2013-present. Member, ACH JHM Senior Leadership Council.

2014 Member, ACH JHM iPICS RFA Grant Review Committee

2014-present. Member, Specimen Access and Use Committee, and Executive Committee, JHM Pediatric Biorepository at ACH.

2015-present Member, Executive/Joint Committee, ACH JHM.

#### Editorial Activities

##### Editorial Board Appointments and Nominations

2011-present. Appointment. *Thrombosis Research*

2015. Nomination. *Journal of Pediatrics*

##### Peer Review (Ad Hoc):

*Lancet*

*Lancet Oncology*

*Circulation*

*Blood*

*Pediatrics*

*Journal of Thrombosis and Haemostasis*

*Thrombosis Research*

*Thrombosis and Haemostasis*

*Pediatric Blood and Cancer*

*Journal of Pediatric Hematology/Oncology*

*Journal of Pediatrics*

*Journal of Cerebral Blood Flow and Metabolism*

*American Journal of Cardiovascular Drugs*

*Cardiology in the Young*

*World Journal for Pediatric and Congenital Heart Surgery*

Abstract review committees (scientific meetings)

2012, 2013, 2014. Chair. ACH JHM Annual Research Symposium.

2006. American Society of Hematology Annual Meeting, Section on Pathophysiology of Thrombosis.

2014. Thrombosis and Hemostasis Summit of North America (THSNA).

2015. International Society of Thrombosis and Haemostasis (ISTH), Scientific and Standardization Committee.

Advisory Committees (including Clinical Trial leadership committees):

2007-2014. Member, Advisory Panel.  
Post-monitoring surveillance of celecoxib use in children.  
Pfizer, Inc.

2008-present. Chair, Steering Committee.  
Phase II trial of dalteparin for venous thrombosis in pediatric cancer (DaVINCI).  
CPC Clinical Research, on behalf of Eisai, Inc. and Pfizer, Inc.

2008-2011. Chair, Steering Committee.  
Double-blinded placebo-controlled randomized clinical trial of cilostazol plus L-carnitine in adult peripheral arterial disease (ECLECTIC).  
CPC Clinical Research, on behalf of Otsuka Pharmaceutical Company, Ltd.

2010-present. Co-Chair/member.  
Antithrombotic Trials Leadership and Steering (ATLAS) Group.  
CPC Clinical Research and Worldwide Clinical Trials.

2011-present. Chair, Independent Data Monitoring Committee.  
Pediatric apixiban development program.  
CPC Clinical Research, on behalf of Bristol-Myers Squibb and Pfizer, Inc.

2014-2015. Chair, Quality Oversight Committee.  
Double-blinded placebo-controlled randomized clinical trial of rivaroxaban for 35 days post-discharge in adult medically-ill hospitalized patients (MARINER).  
CPC Clinical Research on behalf of Janssen Pharmaceuticals.

2014-present. Co-chair, Steering Committee.  
Safety, efficacy and pharmacokinetics of two doses of Arixtra (fondaparinux sodium) versus standard of care in treatment of venous thromboembolism in pediatric patients.  
CPC Clinical Research on behalf of Glaxo Smith Kline.

## Professional Societies

1999-present. Member, American Academy of Pediatrics.

1999-2010. Member, American College of Physicians - American Society of Internal Medicine.

2003-present. Member, American Society of Hematology.

2003-present. Member, International Society on Thrombosis and Haemostasis.

2003-present. Member, American Society of Pediatric Hematology/Oncology.

2004-present. Member, Hemophilia and Thrombosis Research Society.

2009-present. Associate Member, American Heart Association.

2009-present. Member, Peripheral Vascular Disease Council, American Heart Association.

2010-present. Member, Society for Pediatric Research.

## Conference organizer, Session chair/moderator

2015 Nominee, Moderator. Pediatric Academic Society Annual Meeting.

2012, 2013, 2014. Moderator. ACH JHM Annual Research Symposium.

2006. Moderator, Simultaneous Oral Session on Risk Factors for Thrombosis, American Society of Hematology Annual Meeting.

2009. Moderator, Abstract Symposium on Neonatal and Childhood Stroke, International Society on Thrombosis and Haemostasis Annual Meeting.

## RECOGNITION:

### Awards, Honors

2003. Hemophilia and Thrombosis Research Society Thrombosis Trial Award

2003. American Society of Hematology Clinical Research Training Program

2003-2006. National Hemophilia Foundation Fellowship Award

2004-2006. American Society of Hematology Scholar Award

2012. Eberhard F. Mammen Excellence in Thrombosis and Haemostasis Award.

Invited Talks: see Teaching, above

#### Panels

2008. Panelist, Brain Committee, National Heart, Lung, and Blood Institute Conference on Clinical Research Priorities in Sickle Cell Disease.

2008, 2010. Pediatric Representative, Surgeon General's Workshops on Deep Vein Thrombosis Surveillance.

August 2008, August 2009, August 2010. Faculty/Mentor, American Society of Hematology Clinical Research Training Institute

2009-2012. Panelist, American College of Chest Physicians Evidence-based Clinical Practice Guidelines on Antithrombotic and Thrombolytic Therapy

2009-present. Panelist, International Society on Thrombosis and Haemostasis, Scientific and Standardization Committee, Subcommittee on Paediatric and Perinatal Haemostasis, Scientific Statement Writing Groups (3)

2010-2011, 2012-2014. Panelist, American Heart Association Peripheral Vascular Disease Council Scientific Statement Writing Groups (2)

#### Other Professional Accomplishments

2007-present. Overall Principal Investigator, Duration of Therapy for Thrombosis in Children (Kids-DOTT) Trial International randomized controlled clinical trial previously or currently funded through NIH NHLBI, Hemophilia and Thrombosis Research Society, Eisai, Inc., All Children's Hospital Foundation, and American Society of Hematology.