January 31, 2022

CURRICULUM VITAE
Patrick T. McGann, MD MS

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EDUCATION

Undergraduate	College of the Holy Cross, 1998-2002 Bachelor of Arts: Biopsychology, Cum Laude
Medical School	Tufts University School of Medicine, 2002-2006 Medical Degree
Other Degrees	Baylor College of Medicine, 2011-2013 Master of Science in Clinical Investigation
	University of Cincinnati College of Medicine, 2016-2022 (expected) PhD, Molecular, Cellular, and Biochemical Pharmacology

POSTGRADUATE TRAINING

Residency	MassGeneral Hospital for Children 175 Cambridge Street, Boston, MA 02114 Pediatrics, 2006-2009
Fellowship	St. Jude Children's Research Hospital 262 Danny Thomas Place, Memphis, TN 38105 Pediatric Hematology/Oncology, 2009 – 2011
	Baylor College of Medicine and Texas Children's Hospital 6621 Fannin Street, Houston, TX 77030 Pediatric Hematology/Oncology, 2011– 2012

POSTGRADUATE HONORS AND AWARDS

American Society of Hematology Abstract Achievement Award, 2011

American Society of Hematology Clinical Research Training Institute, 2012

Cincinnati Children's Hospital Procter Scholar Award, 2014

American Society of Hematology Scholar Award, 2020

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

Massachusetts State Physician License #238429, 2008 – 2009

Tennessee State Physician License #45058, 2009 – 2012

Texas State Physician License #BP10039343 (Training) and #P2897 (Full), 2011– 2015

Ohio State Physician License #35.122790, 2014 – 2022

Rhode Island Medical License #MD17928 (CMD17928), 2021

Board Certified in General Pediatrics, American Board of Pediatrics. 2009

Board Certified in Pediatric Hematology/Oncology, American Board of Pediatrics, 2013

ACADEMIC APPOINTMENTS

Assistant Professor of Pediatrics, Baylor College of Medicine, 2012 – 2013

Assistant Professor of Pediatrics, Cincinnati Children's Hospital Medical Center and University of Cincinnati College of Medicine, 2013 – 2017

Associate Professor of Pediatrics, Cincinnati Children's Hospital Medical Center and University of Cincinnati College of Medicine, 2017 – 2021

Associate Professor of Pediatrics and Medicine, Alpert Medical School of Brown University, 2021 – Present

HOSPITAL APPOINTMENTS

Attending Physician, Hematology/Oncology, Texas Children's Hospital, 2012 – 2013

Director, Angolan Sickle Cell Initiative, Texas Children's Hospital, 2012 – 2013

Attending Physician, Urgent Care, Cincinnati Children's Hospital, 2014 – 2021

Attending Physician, Hematology/Oncology, Cincinnati Children's Hospital, 2013 – 2021

Attending Physician, Hematology/Oncology, Hasbro Children's Hospital/RI Hospital, 2021 –

Attending Physician, Hematology/Oncology, Women and Infant's Hospital, 2021 –

Director, Lifespan Pediatric and Adult Hemoglobinopathies Program, 2021 –

OTHER APPOINTMENTS

Executive Committee, Section on Global Health, American Academy of Pediatrics, 2014 – 2018

Chair, Global Pediatric Hematology/Oncology Special Interest Group, American Society of Pediatric Hematology/Oncology (ASPHO), 2014 – 2022

Study Section Member, Point of Care Diagnosis for Sickle Cell Disease, National Heart, Lung, and Blood Institute, Special Emphasis Panel ZHL1 CSR-C(M1), 2016

Study Section Member, Sub-Saharan Africa Consortium for Sickle Cell Disease, National Heart, Lung, and Blood Institute, Special Emphasis Panel ZHL1 CSR-C(O1), 2016

Study Section Member, Data Coordinating Center for Sub-Saharan Africa Consortium, Sub-Saharan Africa Consortium for Sickle Cell Disease, National Heart, Lung, and Blood Institute, Special Emphasis Panel ZHL1 CSR-C(O1), 2016

Chair, Section on Global Child Health, American Academy of Pediatrics, 2018 – 2022

Member, Committee on Blood Disorders in Children, American Society of Hematology, 2018 –

Editorial Board, *Pediatric Blood and Cancer*, 2018 – Present

Study Section Member, Rare Disease Cohorts in Heart, Lung, Blood and Sleep Disorders, National Heart, Lung, and Blood Institute, Special Emphasis Panel ZHL1 CSR-C(F1), 2019

Steering Committee Member, Microfluidics for Hematology, Chemical and Biology Microsystems Society, 2019 – 2020

Study Section Member, R13 Conference Grants, National Heart, Lung, and Blood Institute, Special Emphasis Panel ZHL1 CSR-C(F1), 2020

Study Section Member, Sickle Pan-African Consortium, National Heart, Lung, and Blood Institute, Special Emphasis Panel ZHL1 CSR-B(F1), 2020

Invited Member, American Society of Hematology Anti-Racism Task Force, 2020 –

Study Section Member, Science of Implementation in Health and Healthcare, NIH, 2021

HOSPITAL COMMITTEES

Pediatric Residency Program, Candidate Interviewer and Faculty Advisor, Cincinnati Children's Hospital Medical Center, 2014 – 2021

Pediatric Hematology/Oncology Fellowship Program, Candidate Interviewer and Selection Committee, Cincinnati Children's Hospital Medical Center, 2014 – 2021

Co-Director, Global Health Residency Pathway, Cincinnati Children's Hospital, 2017 – 2021

Grant Review Committee, Strauss Award for Fellows, Cincinnati Children's, 2017 – 2021

Grant Review Committee, Global Research Opportunities Worldwide (GROW) Grant Program for Residents, Cincinnati Children's Hospital Medical Center, 2018 – 2021

MEMBERSHIP IN SOCIETIES

American Academy of Pediatrics, 2006 – Present

American Academy of Hematology, 2009 – Present

American Society of Pediatric Hematology/Oncology, 2009 – Present

American Society of Clinical Pharmacology and Therapeutics, 2017 – Present

PUBLICATIONS LIST

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. **McGann PT**, McDade J, Mortier NA, Combs MR, Ware RE. IgA-mediated autoimmune hemolytic anemia in an infant. *Pediatr Blood Cancer*. 2011; 56(5):837-9. PMID: 21370419.
2. **McGann PT**, Howard TA, Flanagan JM, Lahti JM, Ware RE. Chromosome damage and repair in children with sickle cell anaemia and long-term hydroxycarbamide exposure. *Br J Haematol*. 2011; 154(1):134-40. PMID: 21542824.
3. **McGann PT**, Despotovic JM, Howard TA, and Ware RE. A novel laboratory technique demonstrating the influences of RHD zygosity and the RhCcEe phenotype on erythrocyte D antigen expression. *Am J Hematol* 2012; 87(3): 266-271. PMID: 22121029.
4. **McGann PT**, Flanagan JM, Howard TA, Dertinger SD, He J, Kulharya A, Thompson BW, and Ware RE. Genotoxicity associated with hydroxyurea exposure in infants with sickle cell anemia: Results from the BABY-HUG phase III clinical trial. *Pediatr Blood Cancer* 2012; 59(2):254-257. PMID: 22012708.
5. Despotovic JM, **McGann PT**, Smeltzer MP, Aygun B and Ware RE. RHD zygosity predicts degree of platelet response to anti-D immune globulin treatment in children with immune thrombocytopenia. *Pediatr Blood Cancer* 2013; 60(9):E106-108. PMID: 23712954.
6. **McGann PT**, Ferris MG, Ramamurthy, U, Santos, B, Bernardino L, and Ware RE. A prospective newborn screening and treatment for sickle cell anemia in the Republic of Angola. *Am J Hematol* 2013; 88(12): 964-969. PMID: 24038490.
7. **McGann PT**, Tshilolo L, Santos B, Tomlinson GA, Latham T, Aygun B, et al. Hydroxyurea therapy for children with sickle cell anemia in sub-Saharan Africa: Rationale and design of the REACH trial. *Pediatr Blood Cancer* 2016;63(1):98104. PMID: 26275071
8. **McGann PT**, Grosse SD, Santos B, de Oliveira V, Bernardino L, Kassebaum NJ, Ware RE, Airewele GE. A cost-effectiveness analysis of a pilot neonatal screening program for sickle cell anemia in the Republic of Angola. *J Pediatr* 2015;167(6):1314-9. PMID: 26477868
9. **McGann PT**, Tyburski EA, de Oliveira V, Santos B, Ware RE, Lam WA. An accurate and inexpensive color-based assay for detecting severe anemia in a limited-resource setting. *Am J Hematol* 2015;90(12):1122-7. PMID 26317494.

10. Dong M, **McGann PT,** Mizuno T, Ware RE, Vinks AA. Development of a Pharmacokinetic-Guided Dose Individualization Strategy for Hydroxyurea Treatment in Children with Sickle Cell Anemia. *Br J Pharmacol* 2016; 81(4):742752. PMID: 26615061.
11. **McGann PT**, Schaefer BA, Maniagua M, Howard TA, Ware RE. Characteristics of a rapid, point-of-care lateral flow immunoassay for the diagnosis of sickle cell disease. *Am J Hematol* 2016; 91(2):205-10. PMID: 26537622.
12. Niss O, Chonat S, Dagaonkar N, Almansoori MO, Kerr K, Rogers ZR, **McGann PT**, Quarmyne MO, Risinger M, Zhang K, Kalfa TA. Genotype-phenotype correlations in hereditary elliptocytosis and hereditary pyropoikilocytosis. Blood Cells Mol Dis. 2016 Oct;61:4-9. doi: 10.1016/j.bcmd.2016.07.003. Epub 2016 Jul 17. PMID:27667160; PMCID: PMC5098801.
13. Marahatta A, Megaraj V, **McGann PT**, Ware RE, Setchell KD. Stable-Isotope Dilution HPLC-Electrospray Ionization Tandem Mass Spectrometry Method for Quantifying Hydroxyurea in Dried Blood Samples. Clin Chem. 2016 Dec;62(12):1593-1601. PubMed PMID: 27694393.
14. Smart LR, Ambrose EE, Raphael KC, Hokororo A, Kamugisha E, Tyburski EA, Lam WA, Ware RE, **McGann PT**. Simultaneous point-of-care detection of anemia and sickle cell disease in Tanzania: the RAPID study. Ann Hematol. 2017 Nov 16. doi:10.1007/s00277-017-3182-8. PubMed. PMID: 29147848.
15. Boucher AA, Pfeiffer A, Bedel A, Young J, **McGann PT.** Utilization trends and safety of intravenous iron replacement in pediatric specialty care: A large retrospective cohort study. Pediatric blood & cancer. 2018; 65(6):e26995. PubMed PMID: 29369486.
16. Gladding SP, **McGann PT**, Summer A, Russ CM, Uwemedimo OT, Matamoros Aguilar M, Chakraborty R, Moore M, Lieh-Lai M, Opoka R, Howard C, John CC. The Collaborative Role of North American Departments of Pediatrics in Global Child Health. Pediatrics. 2018; 142(1). PubMed 29895523.
17. Dong M, **McGann PT,** Mizuno T, Ware RE, Vinks AA. Model-based dosing with concentration feedback as an integral part of personalized hydroxycarbamide management. British journal of clinical pharmacology. 2018; 84(7):1410-1412. PubMed PMID: 29667224; PubMed Central PMCID: PMC6004494
18. **McGann PT,** Williams TN, Olupot-Olupot P, Tomlinson GA, Lane A, Luís Reis da Fonseca J, Kitenge R, Mochamah G, Wabwire H, Stuber S, Howard TA, McElhinney K, Aygun B, Latham T, Santos B, Tshilolo L, Ware RE. Realizing effectiveness across continents with hydroxyurea: Enrollment and baseline characteristics of the multicenter REACH study in Sub-Saharan Africa. Am J Hematol 2018; 93(4):537-545. NIHMSID: NIHMS933689. PMID: 29318647.
19. **McGann PT,** Williams AM, Ellis G, McElhinney KE, Romano L, Woodall J, Howard TA, Tegha G, Krysiak R, Lark RM, Ander EL, Mapango C, Ataga KI, Gopal S, Key NS, Ware RE, Suchdev PS. Prevalence of inherited blood disorders and associations with malaria and anemia in Malawian children. Blood advances. 2018; 2(21):3035-3044. PubMed PMID:30425067; PubMed Central PMCID: PMC6234379.
20. Tshilolo L, Tomlinson G, Williams TN, Santos B, Olupot-Olupot P, Lane A, Aygun B, Stuber SE, Latham TS, **McGann PT**, Ware RE; REACH Investigators. Hydroxyurea for Children with Sickle Cell Anemia in Sub-Saharan Africa. N Engl J Med. 2019 Jan 10;380(2):121-131. doi: 10.1056/NEJMoa1813598. Epub 2018 Dec 1. PMID: 30501550; PMCID: PMC6454575.

21. Risinger M, Christakopoulos GE, Schultz CL, **McGann PT,** Zhang W, Kalfa TA. Hereditary elliptocytosis-associated alpha-spectrin mutation p.L155dup as a modifier of sickle cell disease severity. Pediatr Blood Cancer. 2019; 66(2):e27531. PubMed PMID: 30393954.
22. Gurunathan A, Tarango C, **McGann PT**, Niss O, Quinn CT. Non-transfusion dependent β-Thalassemia Because of a Single β-Thalassemia Mutation and Coinherited α-Globin Gene Triplication: Need for Increased Awareness to Prevent Incorrect and Delayed Diagnosis. J Pediatr Hematol Oncol. 2019 Apr 8.
23. Ware RE, **McGann PT**, Quinn CT. Hydroxyurea for children with sickle cell anemia: Prescribe it early and often. Pediatr Blood Cancer. 2019 Aug;66(8):e27778.
24. **McGann PT**, Niss O, Dong M, Marahatta A, Howard TA, Mizuno T, Lane A, Kalfa TA, Malik P, Quinn CT, Ware RE, Vinks AA. Robust clinical and laboratory response to hydroxyurea using pharmacokinetically guided dosing for young children with sickle cell anemia. Am J Hematol. 2019 Aug;94(8):871-879.
25. Farrell AT, Panepinto J, Desai AA, Kassim AA, Lebensburger J, Walters MC, Bauer DE, Blaylark RM, DiMichele DM, Gladwin MT, Green NS, Hassell K, Kato GJ, Klings ES, Kohn DB, Krishnamurti L, Little J, Makani J, Malik P, **McGann PT**, Minniti C, Morris CR, Odame I, Oneal PA, Setse R, Sharma P, Shenoy S. End points for sickle cell disease clinical trials: renal and cardiopulmonary, cure, and low-resource settings. *Blood Adv* 2019; 3(23):4002-4020.
26. **McGann PT**, Niss O, Dong M, Marahatta A, Howard TA, Mizuno T, Lane A, Kalfa TA, Malik P, Quinn CT, Ware RE, Vinks AA. Robust clinical and laboratory response to hydroxyurea using pharmacokinetically guided dosing for young children with sickle cell anemia. *Am J Hematol*. 2019 Aug;94(8):871-879. doi: 10.1002/ajh.25510. Epub 2019 Jun 12. PMID: 31106898; PMCID: PMC6639795.
27. Perez-Plazola MS, Tyburski EA, Smart LR, Howard TA, Pfeiffer A, Ware RE, Lam WA, **McGann PT**. AnemoCheck-LRS: an optimized, color-based point-of-care test to identify severe anemia in limited-resource settings. *BMC Med*. 2020 Nov 16;18(1):337. doi: 10.1186/s12916-020-01793-6. PMID: 33190639; PMCID: PMC7667733.
28. Karkoska K, Quinn CT, Clapp K, **McGann PT**. Severe infusion-related reaction to crizanlizumab in an adolescent with sickle cell disease. *Am J Hemato*l 2020 Dec;95(12):E338-E339. doi: 10.1002/ajh.26002. Epub 2020 Sep 30. PMID: 32945013.
29. Dong M, **McGann PT**. Changing the Clinical Paradigm of Hydroxyurea Treatment for Sickle Cell Anemia Through Precision Medicine. *Clin Pharmacol Ther*. 2020 Sep 1. doi: 10.1002/cpt.2028. Epub ahead of print. PMID: 32869281.
30. Meier ER, Creary SE, Heeney MM, Dong M, Appiah-Kubi AO, Nelson SC, Niss O, Piccone C, Quarmyne MO, Quinn CT, Saving KL, Scott JP, Talati R, Latham TS, Pfeiffer A, Shook LM, Vinks AA, Lane A, **McGann PT**. Hydroxyurea Optimization through Precision Study (HOPS): study protocol for a randomized, multicenter trial in children with sickle cell anemia. Trials. 2020 Nov 27;21(1):983. doi: 10.1186/s13063-020-04912-z. PMID: 33246482; PMCID: PMC7691962.
31. Sadaf A, Seu KG, Thaman E, Fessler R, Konstantinidis DG, Bonar HA, Korpik J, Ware RE, **McGann PT**, Quinn CT, Kalfa TA. Automated Oxygen Gradient Ektacytometry: A Novel Biomarker in Sickle Cell Anemia. Front Physiol. 2021 Mar 25;12:636609. doi: 10.3389/fphys.2021.636609. PMID: 33841173; PMCID: PMC8027356.

32. Karkoska KA, Haber K, Elam M, Strong S, **McGann PT**. Academic Challenges and School Service Utilization in Children with Sickle Cell Disease. J Pediatr. 2020 Dec 1:S0022-3476(20)31474-8. doi: 10.1016/j.jpeds.2020.11.062. Epub ahead of print. PMID: 33275983.
33. Karkoska K, Quinn CT, Niss O, Pfeiffer A, Dong M, Vinks AA, **McGann PT**. Hydroyxurea improves cerebral oxygen saturation in children with sickle cell anemia. Am J Hematol. 2021 Feb 3. doi: 10.1002/ajh.26120. Epub ahead of print. PMID: 33534136.
34. Boucher AA, Bedel A, Jones S, Lenahan SF, Geer R, **McGann PT**. A retrospective study of the safety and efficacy of low molecular weight iron dextran for children with iron deficiency anemia. Pediatr Blood Cancer. 2021 Jul;68(7):e29024. doi: 10.1002/pbc.29024. Epub 2021 Mar 26. PMID: 33769677.
35. Sadaf A, Quinn CT, Korpik JB, Pfeiffer A, Reynaud M, Niss O, Malik P, Ware RE, Kalfa TA, **McGann PT**. Rapid and automated quantitation of dense red blood cells: A robust biomarker of hydroxyurea treatment response. Blood Cells Mol Dis. 2021 Sep;90:102576. doi: 10.1016/j.bcmd.2021.102576. Epub 2021 May 11. PMID: 34020272.
36. Quinn CT, Niss O, Dong M, Pfeiffer A, Korpik J, Reynaud M, Bonar H, Kalfa TA, Smart LR, Malik P, Ware RE, Vinks AA**, McGann PT**. Early initiation of hydroxyurea (hydroxycarbamide) using individualised, pharmacokinetics-guided dosing can produce sustained and nearly pancellular expression of fetal haemoglobin in children with sickle cell anaemia. Br J Haematol. 2021 Aug;194(3):617-625. doi: 10.1111/bjh.17663. Epub 2021 Jul 5. PMID: 34227124; PMCID: PMC8319147.

OTHER PEER-REVIEWED PUBLICATIONS

1. **McGann PT**, Ware RE. 50 years ago in The Journal of Pediatrics: Overwhelming infection in children following splenectomy. *J Pediatr* 2010; 157(2):202.
2. McDade J, **McGann PT**. 50 Years Ago in The Journal of Pediatrics: Autohemolytic anemia in young infants. *J Pediatr* 2011; 159(1):69.
3. **McGann PT**, Ware RE. Hydroxyurea for sickle cell anemia: what have we learned and what questions still remain? *Curr Opin Hematol*. 2011 May;18(3):158-65. PMID: 21372708.
4. **McGann PT,** Bernardino L, Anemia falciforme: um grande problema de saúde pública em Angola. *Jornal Angolano de Medicina* 2013; 1(2).
5. **McGann PT**. Sickle Cell Disease: An Underappreciated and Unaddressed Contributor to Global Childhood Mortality. *J Pediatr* 2014;165(1):18-22. PMID: 24630351.
6. **McGann PT.** Improving survival for children with sickle cell disease: newborn screening is only the first step. *Paediatr Int Child Health* 2015 May 2. PMID: 25936732.
7. **McGann PT** and Ware RE. Hydroxyurea Therapy for Sickle Cell Anemia. *Expert Opin Drug Saf* 2015;14(11):1749-58. PMID 26366626.
8. **McGann PT.** Improving Survival for children with sickle cell disease: newborn screening is only the first step. *Paediatr Int Health* 2015; 35(4):285-286. PMID:26744151
9. **McGann PT.** Hydroxyurea for abnormal TCDs: safe to switch? *Blood* 2016; 127(14):1738-40. PMID 27056994.
10. **McGann PT**. Time to invest in sickle cell anemia as a global health priority. *Pediatrics* 2016; 137(6). PMID 27244863.
11. **McGann PT**, Hernandez AG, Ware RE. Sickle cell anemia in sub-Saharan Africa: advancing the clinical paradigm through partnerships and research. Blood. 2017 Jan 12;129(2):155-161. doi: 10.1182/blood-2016-09-702324. Epub 2016 Nov 7. PubMed PMID: 27821508; PubMed Central PMCID: PMC5234214.

12. **McGann PT**, Hoppe C. The pressing need for point-of-care diagnostics for sickle cell disease: A review of current and future technologies. Blood Cells Mol Dis.2017 Sep;67:104-113. doi: 10.1016/j.bcmd.2017.08.010. Epub 2017 Aug 8. PubMed PMID: 28844459.
13. Ware RE, **McGann PT**, Quinn CT. Hydroxyurea for children with sickle cell anemia: Prescribe it early and often. *Pediatr Blood Cancer*. 2019 Aug;66(8):e27778. doi: 10.1002/pbc.27778. Epub 2019 Apr 30. PMID: 31038282.
14. Vawter-Lee M, **McGann PT**. The Increasing Global Burden of Childhood Disability: A Call for Action. *Pediatrics*. 2020 Jul;146(1):e20201119. doi: 10.1542/peds.2020-1119. Epub 2020 Jun 17. PMID: 32554519.
15. Power-Hays A, **McGann PT**. When Actions Speak Louder Than Words - Racism and Sickle Cell Disease. *N Engl J Med.* 2020 Nov 12;383(20):1902-1903. doi: 10.1056/NEJMp2022125. Epub 2020 Sep 1. PMID: 32871062.
16. Weyand AC, **McGann PT**. Eliminating race-based reference ranges in haematology: a call to action. Lancet Haematol. 2021 Jun;8(6):e462-e466. doi: 10.1016/S2352-3026(21)00106-X. PMID: 34048684.
17. Dexter D, **McGann PT**. The promise and role of point of care testing to reduce the global burden of sickle cell disease through early diagnosis and linkage to care. Br J Haematol. 2021 Aug 2. doi: 10.1111/bjh.17678. Epub ahead of print. PMID: 34340260.
18. Karkoska K, **McGann PT.** How I approach disease-modifying therapy in children with sickle cell disease in an era of novel therapies. *Pediatric Blood and Cancer*, 2021 (in press)

BOOKS AND BOOK CHAPTERS

1 **McGann PT**. Hematology/Oncology Chapter, Pocket Pediatrics: The Massachusetts General Hospital for Children Handbook of Pediatrics. Lippincott Williams & Wilkins, 2009.
2 **McGann PT**, Nero AC, Ware RE. Current Management of Sickle Cell Anemia. In: Weatherall D, Schecter AN, Nathan DG, eds. Hemoglobin and Its Diseases. New York, NY; Cold Spring Harbor Laboratory Press; 2013. PMID: 23709685.
3 **McGann PT**, Nero AC, Ware, RE. Clinical Features of β-thalassemia and Sickle Cell Disease. In: Malik P and Tisdale J, eds. Gene and Therapies for Beta-Globinopathies.
4 **McGann PT,** Ware RE. Blood Disorders in the Fetus and Newborn. In: Kliegman et al. Nelson Textbook of Pediatrics, Edition 21; Philadelphia, PA; Elsevier, Philadelphia, A, 2019.

ABSTRACTS

1. **McGann PT**, Howard TA, Flanagan JM, Lahti JM, Ware RE. Chromosome Damage and repair in children with sickle cell anemia and long-term hydroxyurea exposure. American Society of Pediatric Hematology and Oncology 24th Annual Meeting, Baltimore, MD, Oral Platform Session, April 2011.
2. **McGann PT**, McDade J, Howard TA, Ware, RE. Erythrocyte Rh(D) antigen expression is influenced by RHD zygosity. American Society of Hematology and Oncology 24th Annual Meeting, Baltimore, MD, April 13-16, 2011.

3. **McGann PT,** Flanagan JM, Howard TA, Dertinger SD, He J, Kulharya AS, Thompson BW, Ware RE. Genotoxicity associated with hydroxyurea exposure in infants with sickle cell anemia: Results from the BABY-HUG Phase III clinical trial. American Society of Hematology 53rd Annual Meeting, San Diego, CA, Oral Abstract, December 2011.
4. **McGann PT** and Ware RE. Angolan Newborn Screening Program: Preliminary Report. Plenary Session and Oral Presentation – National Conference on Blood Disorders in Public Health and the Global Sickle Cell Disease Network Conference, March 14-15, 2012. Atlanta, GA.
5. **McGann PT,** de Oliveira V, Howard TA, Kirk SE, Hansbury E, Ferris MG, Ware RE. Cost and Reliability of Two Methods of Hemoglobin Identification for Sickle Cell Newborn Screening in the Republic of Angola. American Society of Hematology 54th Annual Meeting, Atlanta, GA, Poster Abstract, December 2012.
6. **McGann PT**, Macosso P, de Oliveira V, Hansbury EN, Howard TA, Santos B, Kirk SE, Ramamurthy U, Ferris MG, Bernardino L, Luis AR, and Ware RE. Operational successes and challenges of a pilot newborn screening program for sickle cell anemia in Angola. 3rd International Symposium of Sickle Cell Disease in Central Africa, June 1-2, 2012, Dar-es-Salaam, Tanzania.
7. **McGann PT,** Ferris, MG, Macosso P, de Oliveira V, Ramamurthy U, Luis AR, Bernardino L, Ware RE. A Prospective Pilot Newborn Screening and Treatment Program for Sickle Cell Anemia in the Republic of Angola. American Society of Hematology 54th Annual Meeting, Atlanta, GA, Oral Abstract, December 2012.
8. **McGann PT** behalf of the Angolan Sickle Cell Initiative. Development and Implementation of a Newborn Screening Program in Angola: The Path Towards a National Strategy. 4th Annual Central African Sickle Cell Research Meeting (REDAC), Yaounde, Cameroon, Oral Abstract, June 13-15, 2013.
9. **McGann PT,** Muhongo MN, McGann EA, de Oliveira V, Santos B, Ware RE**.** Successful Outcomes of an Infant Sickle Cell Clinic in Luanda, Angola. American Society of Hematology 55th Annual Meeting, New Orleans, LA, December 2013.
10. **McGann PT**, Santos B, de Oliveira V, Bernardino L, Ware RE, Grosse SD. Cost Effectiveness of Neonatal Screening For Sickle Cell Disease In The Republic Of Angola. American Society of Hematology 55th Annual Meeting, New Orleans, LA, December 2013.
11. **McGann, PT**, Stuber S, Santos B, et al. Realizing Effectiveness Across Continents with Hydroxyurea: The REACH Trial. 2nd Global Congress of Sickle Cell Disease, Rio de Janeiro, Brazil. November 2014.
12. **McGann PT,** Sparreboom A, Mortier NA, Aygun B, Howard TA, Nottage K, and Ware RE. Hydroxyurea Pharmacokinetics for Predicting Maximum Tolerated Dose in Children with Sickle Cell Anemia. American Society of Hematology 56th Annual Meeting, San Francisco, CA, December 2014.
13. **McGann PT,** Tyburski E, Ware RE, and Lam W. An Accurate and Rapid Color-Based Point-of-Care Assay for the Detection of Severe Anemia in Low Resource Settings. American Society of Hematology 56th Annual Meeting, San Francisco, CA, December 2014.
14. **McGann PT, Dong M, Ware RE, Vinks AA.** Pharmacokinetics-Based Individualized Dosing Strategy to Predict Maximum Tolerated Dose of Hydroxyurea in Children with Sickle Cell Anemia, American Society of Hematology, 57th Annual Meeting, Orlando, FL, December 2015.

15. Niss O, Chonat, S, Kerr, K, **McGann P,** Almansoori MA, Quarmyne M, Zhang K, Kalfa TA. Genotype-Phenotype Correlations in Hereditary Elliptocytosis (HE) and Hereditary Pyropoikilocytosis (HPP), American Society of Hematology, 57th Annual Meeting, Orlando, FL, December 2015
16. **McGann PT,** Schaefer BA, Paniagua MC, Howard TA, Ware RE. Accuracy of a Rapid and Simple Point-of-Care Test for Sickle Cell Disease, American Society of Hematology, 57th Annual Meeting, Orlando, FL, December 2015
17. **McGann PT,** Williams AM, McElhinney KE, Romano L, Woodall J, Howard TA, Ellis G, Mapango C, Chilima B, Ware RE, Suchdev PS**.** Genetic Causes of Anemia in Malawian Children Less Than 5 Years of Age: Results from the Malawi Demographic and Health Survey, American Society of Hematology, 58th Annual Meeting, San Diego, CA, December 2016.
18. **McGann PT,** Dong M, Marahatta A, Howard TA, Mizuno T, Kalinyak KA, Kalfa TA, Malik P, Niss O, Quinn CT, Ware RE, Vinks AA**.** Individualized Dosing of Hydroxyurea for Children with Sickle Cell Anemia Using a Population Pharmacokinetic-Based Model: The TREAT Study. American Society of Hematology, 58th Annual Meeting, San Diego, CA, December 2016.
19. **McGann PT,** Dong M, Mizuno T, Marahatta A, Ware RE, Vinks AA. Individualized Dosing of Hydroxyurea for Children with Sickle Cell Anemia Using a Pharmacokinetic-based Model; the TREAT Study. American Society for Clinical Pharmacology & Therapeutics Annual Meeting, Washington DC, March 2017.
20. Smart LR, Ambrose EE, Raphael KC, Hokororo A, Tyburski E, Lam WA, Ware RE, **McGann PT.** Simultaneous Point-of-Care Detection of Anemia and Sickle Cell Disease in Tanzania: The RAPID Study. American Society of Hematology, 59th Annual Meeting, Atlanta, GA, December 2017.
21. **McGann PT,** Niss O, Dong M, Marahatta A, McElhinney KL, Howard TA, Mizuno T, Kalfa TA, Kalinyak K, Malik P, Quinn CT, Ware RE, Vinks AA. Personalized Hydroxyurea Dosing to Reduce Time to MTD and Optimize the HbF Response: Results from the TREAT Study. American Society of Hematology, 59th Annual Meeting, Atlanta, GA, December 2017.
22. Niss O, Cole-Jenkins C, Davis B, Brooks T, Woolery K, Fetters T, Rollins J, **McGann PT,** Kalinyak K. Prevention of Acute Chest Syndrome By Implementing a Standardized Process to Improve Incentive Spirometry Use in Hospitalized Patients with Sickle Cell Disease. American Society of Hematology, 59th Annual Meeting, Atlanta, GA, December 2017.
23. Quinn CT, Hausfeld A, Pfeiffer A, Niss O, Ware RE, **McGann PT.** Neuroprotective Effects of Hydroxyurea in Sickle Cell Anemia: Maintenance of Normal Cerebral Oxygenation. American Society of Pediatric Hematology/Oncology Annual Meeting, Pittsburgh, PA, May 2018.
24. Gurunathan A, Tarango C, **McGann PT,** Quinn CT. Delayed or Incorrect Diagnosis of β-thalassemia: α-globin Gene Triplifcation as a Covert Genetic Modifier. American Society of Pediatric Hematology/Oncology Annual Meeting, Pittsburgh, PA, May 2018.
25. **McGann PT,** Niss O, Dong M, Marahatta A, Mizuno T, Kalinyak KK, Kalfa TA, Malik P, Quinn CT, Ware RE, Vinks AA. Clinical and Laboratory Benefits of Early Initiation of Hydroxyurea with Pharmacokinetics Guided Dosing for Young Children with Sickle Cell Anemia. American Society of Hematology, 60th Annual Meeting, San Diego, CA, December 2018.

26. Perez-Plazola M, Tyburski E, Smart LR, Howard TA, Perier S, Ware RE, Lam WA, **McGann PT.** A Simple, Rapid, and Inexpensive Color-Based Hemoglobin Assay as a Robust Screening Test for Severe Anemia in Limited Resource Settings. American Society of Hematology, 60th Annual Meeting, San Diego, CA, December 2018.
27. Quinn CT, Niss O, Pfeiffer A, Korpik J, Bonar H, Reynaud R, Ware RE, **McGann PT.** Pharmacokinetics-Guided Dosing of Hydroxyurea Can Achieve Near-Pancellular Fetal Hemoglobin Expression in Sickle Cell Anemia: F-Cell Analysis As a Benchmark for Disease-Modifying Therapy. American Society of Hematology, 61st Annual Meeting, Orlando, FL, December 2019.
28. Thomas R, **McGann PT,** Beck A, Pfeiffer A, James KM. Characterization of Community-Based Socioeconomic Factors, Utilization, and Adherence in Children with Sickle Cell Disease. American Society of Hematology, 61st Annual Meeting, Orlando, FL, December 2019.
29. Karkoska K, Haber K, **McGann PT**. Academic Challenges and Concerns for Children with Sickle Cell Disease: Analysis of a Hospital-Based School Intervention Program. American Society of Hematology, 61st Annual Meeting, Orlando, FL, December 2019.
30. Odame J, Pfeiffer A, **McGann PT.** Peripheral Blood Smears and Laboratory Trends as Hydroxyurea Adherence tools for Sickle Cell Anemia. American Society of Pediatric Hematology/Oncology Annual Meeting, Virtual, May 2020.
31. Karkoska KA, Todd KE, Clapp K, Fenchel L, Kalfa TA, Malik P, Quinn CT, Ware RE, **McGann PT.** Increased Hydroxyurea Prescribing Practices over Ten Years with Improved Clinical Outcomes in Children with Sickle Cell Anemia: A Single Center's Experience. American Society of Hematology, 62nd Annual Meeting (Virtual), December 2020.
32. Sadaf A, Quinn CT, Korpik JB, Pfeiffer A, Reynaud M, Niss O, Malik P, Ware RE, Kalfa TA, **McGann PT.** Rapid and Automated Quantitation of Dense Red Blood Cells: A Robust Biomarker of Therapeutic Response to Early Initiation of Hydroxyurea in Young Children with Sickle Cell Anemia. American Society of Hematology, 62nd Annual Meeting (Virtual), December 2020.
33. Aygun B, Tomlinson GA, **McGann PT**, Tshilolo L, Williams TN, Olupot-Olupot P, Santos B, Stuber SE, Lane A, Latham T, Ware RE. Optimizing Hydroxyurea Therapy with Reduced Laboratory Monitoring for Children with Sickle Cell Anemia in Sub-Saharan Africa: The Reach Experience. American Society of Hematology, 62nd Annual Meeting (Virtual), December 2020.
34. Santos B, Nakafeero M, Lane A, Tshilolo L, Williams TN, Olupot-Olupot P, Adams J, Aygun B, Stuber SE, Tomlinson G, Latham T, **McGann PT**, Ware RE. Building Capacity and Assessing Stroke Risk with Transcranial Doppler Ultrasonography in Sub-Saharan Africa: The Reach Experience. American Society of Hematology, 62nd Annual Meeting (Virtual), December 2020.
35. Karkoska K, Todd K, Niss O, Clapp K, Fenchel L, Kalfa T, Malik P, Quinn CT, Ware RE, **McGann PT.** Implementation of Near-universal Hydroxyurea Uptake Among Children With Sickle Cell Anemia. American Society of Pediatric Hematology/Oncology Annual Meeting, Virtual, May 2021.

INVITED PRESENTATIONS
Local/Regional

1. Nationwide Children's Hospital Pediatric Hematology Grand Rounds, Sept. 24, 2014
   Strategies to Address the Global Burden of Sickle Cell Anemia
2. Hematology Grand Rounds, Cincinnati Children's Hospital, 2014-2021 (Annually)
   Clinical Management of Sickle Cell Anemia
3. Cincinnati Children's Hemoglobinopathy Counselor Course, 2016-2021 (Annually)
   Clinical Management of Sickle Cell Anemia
4. Cincinnati Children's Hemoglobinopathy Counselor Course, 2016-2021 (Annually)
   Genetics and Hematology
5. Cincinnati Children's Hemoglobinopathy Counselor Course, 2016-2021 (Annually)
   COVID-19 and Sickle Cell Disease
6. Cincinnati Children's Child Health Research Career Development Day, January 29, 2016
   Hydroxyurea therapy for children with sickle cell anemia in sub-Saharan Africa
7. Cincinnati Children's Adherence Center Grand Rounds, March 25, 2016
   Hydroxyurea for Sickle Cell Anemia: A Picture is Worth a Thousand Words
8. Cincinnati Public Health Nursing Education Symposium, September 14, 2018
   Sickle Cell Disease: An Overview and Public Health Implications
9. Sickle Treatments and Outcomes Research in the Midwest (STORM) ECHO, Sept 20, 2018
   Bacterial Infection in Sickle Cell Disease; Risks, Prevention, and Management
10. Cincinnati Children's Hospital Patient Webinar, August 22, 2020
    Back to School Recommendations for Sickle Cell Disease and COVID-19
11. Cincinnati Children's Hospital World Sickle Cell Day Webinar, June 19, 2021
    What is Different About Hemoglobin SC?
12. Cincinnati Children's Nursing Education Event, March 17, 2021
    Race, Racism, and Sickle Cell Pain
13. Pediatric Grand Rounds, Cincinnati Children's Hospital, August 31, 2021
    Equity and Equality Rounds: A Case Based Discussion of Racism and Sickle Cell Disease

National

1. CDC Public Health Webinar Series, January 23, 2014
   An Overview of Sickle Cell Disease in Angola
2. American Society of Pediatric Hematology/Oncology Annual Meeting, May 11, 2016
   Global Opportunities in Pediatric Hematology
3. Red Cell Club Annual Meeting, October 28, 2017
   Optimizing HbF Responses for Children with Sickle Cell Anemia through Personalized Hydroxyurea Dosing
4. Southeastern Pediatric Research Conference, June 8, 2018
   Optimization of hydroxyurea therapy for children with sickle cell anemia using a novel pharmacokinetics-guided personalized dosing strategy
5. Centers for Disease Control and Prevention, Nutrition Group Education Series, June 7, 2018
   Global Blood Disorders: A Research Approach to Improving Diagnosis, Management, and Outcomes

6. American Society of Hematology Satellite Symposium, December 5, 2018
   Pharmacokinetic Modeling and Precision Dosing of Hydroxyurea
7. MassGeneral Hospital for Children Pediatric Resident Noon Conference, April 12, 2019
   Sickle Cell Anemia: Improving Outcomes in the US and Across the World
8. American Society of Pediatric Hematology/Oncology Annual Meeting, May 2, 2019
   Global Blood Disorders: A Research Approach to Improving Diagnosis, Management, and Outcomes
9. North Star Reach Summer Education Event, October 8, 2020
   Racism and Sickle Cell Disease: A Time for Action
10. GRNDaD SPEAKS Seminar Series, February 8, 2021
    Optimization of Hydroxyurea through Precision Medicine
11. Cayenne Wellness 13th Annual Sickle Cell Educational Seminar, September 16, 2021
    Race and Sickle Cell Disease

International

1. Arab Health Congress, Dubai, January 28, 2014
   Sickle Cell Disease and Hemoglobinopathies for the Primary Care Provider
2. 2nd Global Congress on Sickle Cell Disease, Rio de Janeiro, Brazil, Nov 10, 2014
   An accurate and rapid color-based point-of-care assay for the detection of severe anemia in low resource settings
3. REDAC Central African Sickle Cell Symposium, Antananarivo, Madagascar, June 13, 2018
   Newborn Screening in Africa: Successes and Challenges
4. AfroSickleNet Meeting, Chicago, IL, June 3, 2019
   Realizing Effectiveness Across Continents with Hydroxyurea (REACH): A Prospective Multi-National Trial of Hydroxyurea for Sickle Cell Anemia in sub-Saharan Africa
5. Annual Sickle Cell Disease and Thalassemia Conference (ASCAT), October 22, 2019
   Hydroxyurea for Sickle Cell Anemia: US Perspectives and a Personalized Dosing Model
6. REDAC Central African Sickle Cell Symposium, Virtual, February 12, 2021
   Hydroxyurea for Sickle Cell Disease
7. REDAC Central African Sickle Cell Symposium, Virtual, February 12, 2021
   Sickle Cell Disease and the COVID-19 Pandemic
8. Irish Blood Transfusion Service Education Series, March 15, 2021
   An Overview of Sickle Cell Disease
9. International Pediatric Stroke Organization Conference, July 21, 2021
   The Brain and Sickle Cell Disease: An Ounce of Prevention is Worth a Pound of Cure

GRANTS

Completed:

1. National Institutes of Health Ruth L. Kirschstein National Research Service Award
   Investigation of *RHD* zygosity and response to anti-D immune globulin for children with immune thrombocytopenia
   Grant Covered 100% of Fellow Salary
   Role: Principal Investigator
   2010 – 2011

2. Thrasher Research Fund Early Career Award
   Determination of Pneumococcal Serotypes Among Angolan Children with Invasive Pneumococcal Disease
   Direct Costs: $25,000
   Role: Principal Investigator
   2012 – 2013

3. Procter Scholar Award, Cincinnati Children's Hospital Medical Center
   A Phase I/II Study of Hydroxyurea for Angolan Children with Sickle Cell Anemia
   Direct Costs: $100,000 x 2 years = $200,000 Total
   Role: Principal Investigator
   2014 – 2016

4. Research Innovation and Pilot Grant, Cincinnati Children's Hospital
   Pharmacokinetics of Hydroxyurea for Children with Sickle Cell Anemia in Jamaica
   Direct Costs: $75,000
   Role: Principal Investigator
   2017 – 2018

5. COVID-19 Research Innovation and Pilot Grant, Cincinnati Children's Hospital
   Pharmacokinetics of Hydroxyurea for Children with Sickle Cell Anemia in Jamaica
   Role: Principal Investigator
   Direct Costs: $75,000
   2020 – 2021

6. NIH – National Heart, Lung, and Blood Institute (K23 HL128885)
   Therapeutic Response Evaluation and Adherence Trial: A Prospective Study of Hydroxyurea for Children with Sickle Cell Anemia
   Direct Costs: $910,194
   Role: Principal Investigator
   2015 – 2021

<u>Current</u>:

1. National Institutes of Health Loan Repayment Program (L40 HL124407)
   Optimizing the Use of Hydroxyurea for Children with Sickle Cell Anemia in the US and Africa
   Role: Principal Investigator:
   2014 – 2022

2. Doris Duke Charitable Foundation Sickle Cell/Advancing Cures (# 2017090)
   Maximizing Fetal Hemoglobin Responses to Hydroxyurea using Precision Medicine
   Direct Costs: $330,000 x 3 years ($990,000) with $70,000 COVID-19 Extension
   Role: Principal Investigator (20% FTE)
   Dates: 2018 – 2022

3. NIH – National Heart, Lung, and Blood Institute (U01 HL133883)
   Realizing Effectiveness Across Continents with Hydroxyurea (REACH)
   Direct Costs: $2,873678
   Role: Co-Investigator (10% FTE)
   Dates: 2017 – 2022

4. American Society of Hematology (ASH) Faculty Scholar Award
   Hydroxyurea Pharmacokinetics in Adults with Sickle Cell Anemia
   Direct Costs: $150,000
   Role: Principal Investigator (10% FTE)
   Dates: 2020 – 2023

5. NIH – National Heart, Lung, and Blood Institute (U01HL157872)
   Promoting Utilization and Safety of Hydroxyurea Using Precision in Africa
   Direct Costs: $1,731,330
   Role: Principal Investigator (50% FTE)
   Dates: 2021 – 2026

6. NIH – National Institute of Child Health and Development (R21HD107675)
   Developmental Pharmacology of Hydroxyurea Across the Age Span for the Treatment of Sickle Cell Anemia
   Direct Costs: $300,000
   Role: Principal Investigator (MPI, 20% FTE)
   Dates: 2021 – 2023

TEACHING, ADVISING and MENTORING ROLES

Teaching

Monthly Sickle Cell Overview Lecture
2nd Year Rotating Pediatric Residents, Cincinnati Children's Hospital, 2014 – 2021

Sickle Cell Disease Overview – Fellow Bootcamp, 2014 – 2021 (Annual)

Sickle Cell Disease – Pediatric Residency Noon Conferences, 2014 – 2021 (Annual)

Global Health and Hematology, Pediatric Residency Noon Conferences, 2014 – 2021 (Annual)

Cincinnati Children's Hospital Pulmonary Fellows Lecture, 2015 – 2021 (Annual)
Pulmonary Complications of Sickle Cell Disease

Monthly Global Health Resident Pathway Lectures, 2017 – 2021 (Annual)

Erythrocytes and Neonates
NICU Fellow Lecture Series, Annually, 2018 – 2021 (Annual)

Pediatric Residency Noon Conferences, 2018 – 2021 (Annual)

Cytopenias and Bone Marrow Failure

Evaluation of Peripheral Blood Cytopenias: When Should I Worry?
Resident Noon Conference, December 10, 2020

Clinical teaching at the bedside and in the clinic for medical students, residents, nurse practitioners and fellows

Mentees

1. Marina Perez-Plazola, Undergraduate Summer Research, 2018
   Funding: CCHMC Summer Undergraduate Research Fellowship (SURF) Program
   Research Project: Evaluation of a Rapid, Color-based Point-of-Care test for Anemia
   Current Position: 3rd Year Medical Student, Washington University in St. Louis

2. Tarun Aurora, MD, Pediatric Resident, 2018 – 2020
   Funding: CCHMC Global Research Opportunities Worldwide (GROW) Award
   Research Project: Evaluation of Mobile App for the Diagnosis of Anemia in Uganda
   Current Position, 2nd Year Fellow, St. Jude Children's Research Hospital

3. Luke Smart, MD, Pediatric Hematology/Oncology Fellow, 2018 – 2020
   Funding: Thrasher Early Career Award
   Research Project: Point-of-Care tests for Anemia and Sickle Cell Disease in Tanzania
   Current Position: Assistant Professor of Pediatrics, Cincinnati Children's Hospital

4. Kristine Karkoska, MD, Pediatric Hematology/Oncology Fellow, 2018-2021
   Funding: Fellowship Program
   Research Project: Neurocognition and Sickle Cell Disease
   Current Position: Assistant Professor, University of Cincinnati College of Medicine

5. Halimat Olaniyan, Medical Student, 2020-2021
   Funding: ASH Minority Medical Student Award Program
   Research Project: Comparison of Point-of-Care Tests for Sickle Cell Disease
   Current Position: 3rd Year Medical Student, Univ. of Cincinnati College of Medicine

6. Alexander Power-Hays, MD, Pediatric Hematology/Oncology Fellow, 2020-2023
   Funding: Fellowship Program
   Research Project: Racism and Health Disparities in Sickle Cell Disease
   Current Position: 3rd Year Fellow, CCHMC Pediatric Hematology/Oncology Program

7. Alison Celello, MD, Pediatric Resident, 2019-2022
   Funding: CCHMC Global Research Opportunities Worldwide (GROW) Award
   Research Project: Point-of-Care testing for Iron Deficiency in the US and Globally
   Current Position: 3rd Year Pediatrics Resident, CCHMC