




Name	Rayne H. Rouce, MD	
Current Position	Associate Professor, Texas Children's Hospital	
Country	USA	
Major Field	Hematology-Oncology	

Educational Background

Undergraduate Education:

1999-2003 Xavier University of Louisiana
New Orleans, LA
Bachelor of Science in Biology, Chemistry, Spanish

Medical Education and Graduate Education:

2003-2007 The University of Texas Medical Branch at Galveston
Galveston, TX
Medicine

Post-Graduate Training:

2007-2010 The University of Texas Medical Branch at Galveston
Galveston, TX; Pediatrics
2010-2011 The University of Texas Medical Branch at Galveston
Galveston, TX; Pediatrics Chief Resident
2011-2014 Baylor College of Medicine, Texas Children's
Hospital, Houston, TX; Pediatric Hematology/Oncology

Professional Experience

2022-present Associate Professor, Tenure Track; Pediatrics,
Section of Hematology/Oncology
Texas Children's Cancer and Hematology Centers
Center for Cell and Gene Therapy
Baylor College of Medicine, Houston, TX

2023-present Associate Director Community Outreach and Engagement
Dan L Duncan Comprehensive Cancer Center
Baylor College of Medicine, Houston, TX

2015-2022 Assistant Professor, Pediatrics, Section of Hematology/Oncology
Texas Children's Cancer and Hematology Centers
Center for Cell and Gene Therapy
Baylor College of Medicine, Houston, TX

4/2019-present Associate Director of Community Engagement
BCM Office of Institutional Diversity, Inclusion, and Equity
Baylor College of Medicine, Houston, TX

2/2021- present Associate Director of Cell and Gene Therapy Clinical Research Operations, Texas Children's Cancer and Hematology Centers

2021-present Chief Diversity Officer
Center for Cell and Gene Therapy
Baylor College of Medicine, Houston, TX

Previous Faculty Position(s):

2014-2015 Instructor
Texas Children's Cancer and Hematology Centers
Center for Cell and Gene Therapy
Baylor College of Medicine, Houston, TX

7/2010-6/2011 Assistant Professor/Chief Resident
The University of Texas Medical Branch
Department of Pediatrics, Galveston, TX

Other Experience and Professional Memberships

American Society for Transplantation and Cellular Therapy (formerly ASBMT) Leadership Course, 2020

Baylor College of Medicine/Faculty Senate Faculty Development Leadership Course, 2019

National Research Mentoring Network Training, 2018

Faculty Inclusion Ambassador Diversity and Inclusion Training, 2018-2020

American Association for Cancer Research/American Society for Clinical Oncology Clinical Research Course, 2016

First Annual Immuno-Oncology Young Investigators Forum, 2015

American Society for Blood and Marrow Transplantation Clinical Training Research Course, 2014

American Society of Gene and Cellular Therapy Clinical Training Institute, 2014

Texas Children's Hospital Quality Improvement Course, 2012-2014

FACT Cellular Therapy Leadership Course – 101, 2014

Baylor College of Medicine, Department of Pediatrics Clinician-Educator Orientation, 2015

Main Scientific Publications

Full Papers Published in Peer-Reviewed Journals

Rouce RH, Nemecek E. Access offsets poverty in quest for CAR T cells. *Blood*. 2023;141(6):558-560. doi:10.1182/blood.2022018552

Schultz LM, Baggott C, Prabhu S, Pacenta HL, Phillips CL, Rossoff J, Stefanski HE, Talano JA, Moskop A, Margossian SP, Verneris MR, Myers GD, Karras NA, Brown PA, Qayed M, Hermiston M,

Satwani P, Krupski C, Keating AK, Wilcox R, Rabik CA, Fabrizio VA, **Rouce RH**, Chinnabhandar V, Kunicki M, Barsan VV, Goksenin AY, Li Y, Mavroukakis S, Egeler E, Curran KJ, Mackall CL, Laetsch TW. Disease Burden Affects Outcomes in Pediatric and Young Adult B-Cell Lymphoblastic Leukemia After Commercial Tisagenlecleucel: A Pediatric Real-World Chimeric Antigen Receptor Consortium Report. *J Clin Oncol*. 2022 Mar 20;40(9):945-955. doi: 10.1200/JCO.20.03585. Epub 2021 Dec 9. PMID: 34882493.

Brenner MK, Heslop HE. Long Term Follow-up for the Development of Subsequent Malignancies in Patients Treated with Genetically Modified IEs. *Blood*. 2022 Mar 24;blood.2022015728. doi: 10.1182/blood.2022015728. Epub ahead of print. PMID: 35325065.

Forbes LR, Eckstein OS, Gulati N, Peckham-Gregory EC, Ozuah NW, Lubega J, El-Mallawany NK, Agrusa JE, Poli MC, Vogel TP, Chaimowitz NS, Rider NL, Mace EM, Orange JS, Caldwell JW, Aldave-Becerra JC, Jolles S, Saettini F, Chong HJ, Stray-Pedersen A, Heslop HE, Kamdar KY, **Rouce RH**, Muzny DM, Jhangiani SN, Gibbs RA, Coban-Akdemir ZH, Lupski JR, McClain KL, Allen CE, Chinn IK. Genetic errors of immunity distinguish pediatric nonmalignant lymphoproliferative disorders. *J Allergy Clin Immunol*. 2022 Feb;149(2):758-766. doi: 10.1016/j.jaci.2021.07.015. Epub 2021 Jul 28. PMID: 34329649; PMCID: PMC8795244.

Vasileiou S, Lulla PD, Tzannou I, Watanabe A, Kuvalekar M, Callejas WL, Bilgi M, Wang T, Wu MJ, Kamble R, Ramos CA, **Rouce RH**, Zeng Z, Gee AP, Grilley BJ, Vera JF, Bollard CM, Brenner MK, Heslop HE, Rooney CM, Leen AM, Carrum G. T-Cell Therapy for Lymphoma Using Nonengineered Multiantigen-Targeted T Cells Is Safe and Produces Durable Clinical Effects. *J Clin Oncol*. 2021 Jan 28;JCO2002224. doi: 10.1200/JCO.20.02224. Epub ahead of print. PMID: 33507803.

Hsieh EM and **Rouce RH**. Chimeric antigen receptor T cells for mature B-cell lymphoma and Burkitt lymphoma. *Hematology Am Soc Hematol Educ Program*. 2020 Dec 4;2020(1):487-493. doi: 10.1182/hematology.2020000133. PMID: 33275669; PMCID: PMC7727550.

Agrusa JE, Scull BP, Abhyankar HA, Lin H, Ozuah NW, Chakraborty R, Eckstein OS, Gulati N, Fattah EA, El-Mallawany NK, **Rouce RH**, Dreyer ZE, Brackett J, Margolin JF, Lubega J, Horton TM, Bollard CM, Gramatges MM, Kamdar KY, McClain KL, Man TK, Allen CE. Defining the Inflammatory Plasma Proteome in Pediatric Hodgkin Lymphoma. *Cancers (Basel)*. 2020 Dec 2;12(12):3603. doi: 10.3390/cancers12123603. PMID: 33276546; PMCID: PMC7761312.

Pasquini MC, Hu ZH, Curran K, Laetsch T, Locke F, **Rouce R**, Pulsipher MA, Phillips CL, Keating A, Frigault MJ, Salzberg D, Jaglowski S, Sasine JP, Rosenthal J, Ghosh M, Landsburg D, Margossian S, Martin PL, Kamdar MK, Hematti P, Nikiforow S, Turtle C, Perales MA, Steinert P, Horowitz MM, Moskop A, Pacaud L, Yi L, Chawla R, Bleickardt E, Grupp S. Real-world evidence of tisagenlecleucel for pediatric acute lymphoblastic leukemia and non-Hodgkin lymphoma. *Blood Adv*. 2020 Nov 10;4(21):5414-5424. doi: 10.1182/bloodadvances.2020003092. PMID: 33147337; PMCID: PMC7656920.

Hsieh E, Scherer L, and **Rouce R**. Replacing CAR-T cell resistance with persistence by changing a single residue: small change, big impact. *J Clin Invest*. 2020 Jun 1;130(6):2806-2808. doi: 10.1172/JCI136872. PMID: 32364534

Rouce RH. The earlier the better: timely mitigation of CRS. *Blood*. 2019;134(24):2119–2120. doi:10.1182/blood.2019003618

Lapteva N, Gilbert M, Diaconu I, **Rouce R**, et al. T-Cell Receptor Stimulation Enhances the Expansion and Function of CD19 Chimeric Antigen Receptor-Expressing T Cells. *Clin Cancer Res*. 2019;25(24):7340–7350. doi:10.1158/1078-0432.CCR-18-3199

Quach D, Becerra Dominguez L, **Rouce R**, Rooney C. A strategy to protect off-the-shelf cell therapy products using virus-specific T-cells engineered to eliminate alloreactive T-cells. *J Transl Med* 2019 Jul 24;17(1):240. doi: 10.1186/s12967-019-1988-y.

Gruner SE, Sayeed H, Suarez-Ferguson L,...**Rouce R** et al. Ponatinib use in two pediatric patients with relapsed Ph + ALL with *ABL1* kinase domain mutations. *Pediatr Hematol Oncol.* 2019;36(8):514–519. doi:10.1080/08880018.2019.1656685

Sharma, S and **Rouce RH**. Are we there yet? The never-ending quest for an Epstein-Barr virus vaccine. *J Clin Invest.* 2019 Apr 15;130:1836-1838. Doi:10.1172/JCI128370.

Gomes-Silva D, Atilla E, Atilla PA, Mo F, Tashiro H, Srinivasan M, Lulla P, **Rouce RH**, Cabral JMS, Ramos CA, Brenner MK, Mamonkin M. CD7 CAR T cells for the therapy of Acute Myeloid Leukemia. *Mol Ther.* 2019 Jan 2;27(1):272-280. doi: 10.1016/j.ymthe.2018.10.001. Epub 2018 Oct 4.

McLaughlin, L. **Rouce, R**, et al. EBV/LMP-specific T cells Maintain Remissions of T and B cell EBV Lymphomas after Allogeneic Bone Marrow Transplantation. *Blood.* 2018. Sep 27.pii:blood-2018-07-863654

Ramos, C, **Rouce, R**, et al. In vivo fate and activity of second versus third-generation CD19-specific CAR-T cells in patients with B-cell non-Hodgkin lymphoma. *Molecular Therapy.* 2018 Dec 5;26(12):2727-2737. doi: 10.1016/j.ymthe.2018.09.009. Epub 2018 Sep 13.

Doherty E and **Rouce, RH**. Primed to Kill: CTV-1 Stimulated Haploidentical Natural Killer Cells for Consolidation of AML. *BBMT.* 2018 Jun 19. pii:S1083-8791(18)30333-1

Rezvani K, **Rouce RH**, Liu E, Shpall E. Engineering natural killer cells for cancer immunotherapy. *Molecular Therapy.* 2017 Aug 2;25(8):1769-1781.

Silva D., Srinivasan M...**Rouce, RH**..., Brenner M, Mamonkin M. CD7-edited T cells Expressing a CD7-specific CAR for the Therapy of T-cell Malignancies. *Blood.* 2017 Jul 20;130(3):285-296.

Tashiro H, Sauer T.....**Rouce, RH**..., Gottschalk S, Brenner M. Treatment of acute myeloid leukemia with T cells expressing chimeric antigen receptors directed to C-type lectin-like molecule 1. *Molecular Therapy.* 2017 Jul 1. pii: S1525-0016(17)30260-5.

Rouce RH, Heslop HE. Equal Opportunity CAR T cells. *Blood.* 2017 Jun 22;129(25):3275-3277.

Rouce, Rayne Helen et al. "Establishment of a Highly Characterized Third-Party Virus-Specific T Lymphocyte Bank for Treatment of EBV+ Lymphoma." *Biology of Blood and Marrow Transplantation* 22.3 (2016): S146–S146. Web.

Sharma, Sandhya, **Rouce Rayne** et al. "722. Overcoming EBV Tumor Specific T-Cell Anergy in Rapidly-Generated EBVST-Cells for Adoptive Transfer Therapy." *Molecular Therapy* 23 (2015): S288–S288. Web.

R. Rouce, S. Sharma, M. Huynh, and H. Heslop. Recent advances in T-cell immunotherapy for haematological malignancies. *British Journal of Haematology.* 2016 Nov 29.doi:10.1111/bjh.14470 [Epub ahead of print].

R. Rouce and H. Heslop. Forecasting Cytokine Storms with New Predictive Biomarkers. *Cancer Discov.* 2016 Jun;6(6):579-80. doi: 10.1158/2159-8290.CD-16-0493.

R. Rouce, H. Shaim, T. Sekine, G. Weber, S. Ku, B. Ballard, C. Bollard, K. Rabin, and K. Rezvani. The TGF- β /SMAD pathway is an important mechanism for NK-cell immune evasion in childhood B acute lymphoblastic leukemia. *Leukemia.* 2016 Apr;30(4):800-11. doi: 10.1038/leu.2015.327. Epub 2015 Dec 1.

R. Rouce and K. Rezvani. The application of natural killer (NK) cell immunotherapy for the treatment of cancer. *Frontiers Immunol.* 2015 Nov 17;6:578. doi: 10.3389/fimmu.2015.00578

Aguayo-Hiraldo P, Arasaratnam **R, Rouce RH**. Recent advances in the risk factors, diagnosis and management of Epstein-Barr virus post-transplant lymphoproliferative disease. *Bol Med Hosp Infant Mex*. 2016;73(1):31–40. doi:10.1016/j.bmhmx.2015.11.007

Rouce RH. More than Memory: Potential of Adaptive Natural Killer Cells. *Biol Blood Marrow Transplant*. 2015;21(9):1534–1536. doi:10.1016/j.bbmt.2015.07.014

Mamonkin M, **Rouce RH**, Tashiro H, Brenner MK. A T-cell-directed chimeric antigen receptor for the selective treatment of T-cell malignancies. *Blood*. 2015;126(8):983–992. doi:10.1182/blood-2015-02-629527

Rouce RH, Louis CU, Heslop HE. Epstein-Barr virus lymphoproliferative disease after hematopoietic stem cell transplant. *Curr Opin Hematol*. 2014;21(6):476–481. doi:10.1097/MOH.000000000000083

A. Khoder, A. Sarvaria, A. Alsuliman, ... **R. Rouce**, ... K. Rezvani. Regulatory B-Cells Are Enriched Within the IgM Memory and Transitional Subsets in Healthy Donors but Are Deficient in Chronic Graft-Versus-Host Disease. *Blood*. 2014 Sep 25;124(13):2034-45. doi: 10.1182/blood-2014-04-571125. Epub 2014 Jul 22.

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A. Moreira, **R. Rouce**, C.J. Richardson, and S. Jain. A Premature Neonate with Leukocytosis. *Journal of Clinical Pediatrics*, 2012 July

Papers In Preparation

R. Rouce, L. Hill....M. Brenner, M. Mamonkin. CD5 CAR T cells for T-cell Lymphoma.

R. Rouce, S. Sharma, A. Thakkar.....C.Rooney. An Off-the-Shelf Strategy for EBV+ Malignancies Outside of the Immediate Post-Transplant Setting.

K. Fousek, **R. Rouce**, N. Ahmed, S. Gottschalk, B. Savoldo, G. Dotti, C. Bollard, C., Ramos, C. Louis, C. Rooney, M. Brenner, H. Heslop. Safety of Multiple Doses of CAR T Cells.

Book Chapters

Rouce, RH, Jerkins, L, Rooney, C, and Bollard CM. 2020. Post-Transplant Lymphoproliferative Disorders. Chapter 15: Preventative and preemptive strategies for EBV infection and PTLN after hematopoietic stem cell transplantation. 2nd edition. Springer Nature Publishing

R. Rouce and Rachel Rau. Acute Lymphoblastic Leukemias. In Hematology: Basic Principles and Practice, 8th edition. Hoffman, 2020 (in press)

N. El-Mallawany, L. Forbes, **R. Rouce** and C. Allen. Lymphoproliferative Complications of Epstein-Barr Virus. In Hematology: Basic Principles and Practice, 8th addition. Hoffman, 2020 (in press)

Steffin DHM, Hsieh EM, and **Rouce RH**. Gene Therapy: Current Applications and Future Possibilities. *Adv Pediatr*. 2019;66:37–54. doi:10.1016/j.yapd.2019.04.001

R. Rouce and F. Huang. Oncological Emergencies. In: Surpure, JS, ed. *Synopsis of Pediatric Emergency Care*. PeePee Publishing, 2010