

Name	Challice Bonifant, MD, PhD
Current Position & Affiliation	Assistant Professor of Oncology, Johns Hopkins University School of Medicine
Country	USA
Major Field	Pediatric Hematopoietic Transplantation and Cell Therapy

Educational Background

Undergraduate

1995-1999 BS, Chemistry, Minor, Mathematics. Wake Forest University, Winston-Salem, NC, *cum laude*
 1999-2001 Fellowship, Cancer Research Training Award (CRTA) Pre-doctoral Fellowship, National Cancer Institute, Frederick, MD

Doctoral/Graduate

2001-2009 MD, PhD, Tumor Biology. Georgetown University School of Medicine, Washington, DC, *cum laude* Thesis Advisor: Todd Waldman, MD, PhD

Postdoctoral

2009-2010 Internship, Pediatrics. Johns Hopkins School of Medicine, Baltimore MD
 2010-2012 Residency, Pediatrics. Johns Hopkins School of Medicine, Baltimore MD
 Program Director: Julia McMillan, MD
 2012-2015 Fellowship, Pediatric Hematology/Oncology. Baylor College of Medicine, Texas Children’s Hospital, Houston, TX
 Program Director: David Poplack, MD. Research Mentor: Stephen Gottschalk, MD

Professional Experience

2015-2016 Clinical Lecturer in Pediatrics, Hematology/Oncology, University of Michigan, Ann Arbor, MI
 2016-2018 Assistant Professor of Pediatrics, Hematology/Oncology, University of Michigan, Ann Arbor, MI
 2019-present Assistant Professor of Oncology and Pediatrics, Pediatric Oncology, Johns Hopkins University School of Medicine, Baltimore, MD

Other Experience and Professional Memberships

06/2022-present Director, Pediatric CAR-T cell Program, Pediatric Oncology, Johns Hopkins Hospital
 07/2024-present Leader, Cell Therapy Forum, Johns Hopkins University School of Medicine
[Advisory Committees, Review Groups/Study Sections](#)
 2021 Member, NICHD LRP Review Group



2021-present Alex's Lemonade Stand Foundation for Childhood Cancer, "A" Award Study Section

2021-present Standing Member, American Cancer Society Immunology and Blood Cell Development Study Section

2022-present Member, Children's Cancer Research Foundation Advisory Committee

2024-present Member, Ulman Foundation Medical Advisory Board

Professional Societies

2009-2015 American Academy of Pediatrics, Member

2012-present American Society of Hematology

2012-present Member

2012-2015 Member, Trainee Council

2016-2019 Member, Committee on Communications

2019-2021 Member, Women in Hematology Working Group

2015-present American Society for Transplantation and Cell Therapy (formerly American Society for Blood and Marrow Transplantation), Member

2024-present Member, Committee on Awards Steering Committee

Main Scientific Publications

1. **Bonifant CL**, Szoor A, Torres D, Joseph N, Velasquez MP, Iwahori K, Gaikwad A, Nguyen P, Arber C, Song XT, Redell M, Gottschalk S: CD123-Engager T Cells as a Novel Immunotherapeutic for Acute Myeloid Leukemia. *Mol Ther* 24(9):1615-26, 01/2016. PM27401038
2. Zolov SN, Rietberg SP, **Bonifant CL**: Programmed cell death protein 1 activation preferentially inhibits CD28. CAR-T cells. *Cytotherapy* 20(10):1259-1266, 10/2018. PM30309710
3. Krawczyk E, Zolov SN, Huang K, **Bonifant CL**. T-cell activity against AML improved by dual-targeted T cells stimulated through T-cell and IL7 receptors. *Cancer Immunol Res.* 7(4):683-692. 02/2019. PM30782669
4. Christodoulou I, Ho, WJ, Marple, A, Ravich, JW, Tam, A, Rahnema, R, Fearnow, A, Rietberg, C, Yanik, S, Solomou, E, Varadhan, R, Koldobskiy, MA, **Bonifant CL**. Engineering CAR-NK cells to secrete IL15 sustains their anti-AML functionality, but is associated with systemic toxicities. *J Immunother Cancer.* 2021 Dec; 9(12):e003894. PMID: 34896980
5. Christodoulou I, Rahnema R, Ravich JW, Seo J, Zolov SN, Marple AN, Markovitz DM, **Bonifant CL**. Glycoprotein targeted CAR-NK cells for the treatment of SARS-CoV-2 infection. *Frontiers in Immunology.* 2021 Dec 23, 12:763460. doi: 10.3389/fimmu.2021.763460. PMID: 35003077
6. Ravich JW, Huang S, Zhou Y, Brown P, Piu C, Inaba H, Cheng C, Gottschalk S, Triplett BM, **Bonifant CL***, Talleur AC*. Impact of High Disease Burden on Survival in Pediatric Patients with B-ALL Treated with Tisagenlecleucel. *Transplant Cell Ther.* 2022 Feb; 28(2):73.e1-73.e9. PMID: 34875402 *co-corresponding authorship
7. Vorri SC, Holl NJ, Leeming M, Apostolova P, Marple A, Ravich JW, Canbaz A, Rahnema R, Choe J, Modi A, Fearnow AD, Walsh STR, Pearce EL, Varadhan R, **Bonifant CL**. Activation of Cell Intrinsic Signaling in CAR-T cells via a Chimeric IL7R Domain. *Cancer Res Commun.* 2024 Aug 26. doi:10.1158/2767-9764.CRC-24-0286. PMID: 39186002.



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8. Rahnama R, Kizerwetter M, Yang H, Christodoulou I, Guaraca C, Holl N, Choe J, Vorri SC, Zinsky M, Jones DG, Garcia Espinoza N, Kuo Y-H, Zahurak M, Varadhan R, Spangler J, **Bonifant CL**. Single-Chain Variable Fragment Affinity Tuning Can Optimize Anti-AML CAR-NK Cell Functionality. *J Immunother Cancer*. 2025 Feb 6;13(2):e010763. doi: 10.1136/jitc-2024-010763. PMID: 39915004. *Highlighted in Commentary: Liao Y, Cairo MS. CAR-NK's balancing act: when scFv affinity is not too tight, not too loose... but just right? J Immunother Cancer*. 2025; 13:e012139. doi: 10.1136/jitc-2025-012139
 9. Naik S, Aplenc R, Baumeister S, Becilli M, Bhagwat A, **Bonifant CL**, Budde L, Chein C, Curran K, Daniyan A, Dreyzin A, Gardner R, Ghorashian S, Gottschalk S, Hill L, Kohler M, Lamble A, Locatelli F, Mamomkin M, Omer B, Park J, Quintarelli C, Rambaldi B, Richards R, Sallman D, Sauer T, Shah N, Subklewe M, Summers C, Tasian S, Taylor N, Tettamanti S, Verneris M, Velasquez MP, Gill S. International Consensus Guidelines for the Conduct and Reporting of CAR-T cell Clinical Trials In AML. *Blood Adv*. *In press*.
 10. Holl NJ, Fearnow A, Christodoulou I, Vorri SC, Rahnama R, Choe J, Ghosal A, Ng W, Vyas V, Song HW, Varadhan R, **Bonifant CL**. Early cytokine and chemokine signals shape the anti-Acute Myeloid Leukemia activity of bispecific engager-secreting T cells. *Haematologica*. 2025 *In press*.
 11. Wobma H, Ardoin SP, **Bonifant CL**, Cooper JC, Kim H, Sadun R, Lewandowski L, Keller M, Colbert RA, Edens C, DeQuattro K, Driest K, Shalen J, Stojkic I, Knight A, Annesley C, Torok KS, Elgarten CW, Onishi T, Jackson SW, Prockop S, Shah NN, Integrated Multidisciplinary Pediatric Autoimmunity and Cell Therapy (IMPACT) Working Group, Ardalan K, Lamb, M. CAR T cell therapy for children with rheumatic disease: the time is now. *Nat Rev Rheumatol*. 2025 Aug;21(8):494-506. doi: 10.1038/s41584-025-01272-3. Epub 2025 Jul 2. PMID: 406036292025
 12. Dreyzin, A, Holtzman NG, **Bonifant CL**. CD123-targeted immunotherapeutic approaches in Acute Myeloid Leukemia. *Br J Haematol*. 2025 Jul 24. doi: 10.1111/bjh.70019. Online ahead of print. PMID: 40707180
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