

**Anthony D. Sung, MD**  
**Assistant Professor of Medicine, Tenure Track**  
**Division of Hematologic Malignancies and Cellular Therapy**  
**Associate Director, Duke Microbiome Center**  
**Duke University School of Medicine**

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### **Education and Training**

<b>Stanford University</b> Degree: BS, Science, Technology, & Society	Stanford, CA 2000 – 2002 2003 – 2004
<b>Deep Springs College</b> Degree: n/a	Deep Springs, CA 2002 – 2003
<b>Harvard Medical School</b> Degree: MD with Honors	Boston, MA 2004 – 2008
<b>Johns Hopkins Hospital</b> Intern and Resident, Internal Medicine	Baltimore, MD 2008 – 2011
<b>Duke University School of Medicine</b> Fellow, Hematology/Oncology	Durham, NC 2011 – 2014

### **Certifications**

Board Certified, American Board of Internal Medicine	2011-present
Board Certified, American Board of Hematology	2017-present
Medical Licensure: North Carolina License # 2014-01237	

### **Positions and Employment**

<b>Duke University School of Medicine, Department of Medicine</b> <b>Division of Hematologic Malignancies and Cellular Therapy</b> Assistant Professor, Tenure Track	Durham, NC 2017 – Present
<b>Duke University School of Medicine, Duke Microbiome Center</b> Associate Director	Durham, NC 2017 – Present
<b>Duke University School of Medicine, Department of Medicine,</b> <b>Division of Hematologic Malignancies and Cellular Therapy</b> Medical Instructor	Durham, NC 2014-2017

### **Consultant Appointments**

**2017 – Present** Special Government Employee and Ad Hoc Voting Member, Oncologic Drugs Advisory Committee (ODAC), Federal Drug Administration (FDA)

## Professional Awards and Special Recognitions

<b>2001</b>	Crohn's and Colitis Foundation of America Student Research Fellowship Award
<b>2002-2003</b>	Full Scholarship, Deep Springs College
<b>2003-2004</b>	Barry M. Goldwater Scholarship (established by U.S. Congress)
<b>2005</b>	Pasteur Summer Research Fellowship
<b>2008</b>	M.D. with Honors, Harvard Medical School, Boston, MA
<b>2009</b>	Basic Student Teaching Award, Department of Medicine, Johns Hopkins Hospital
<b>2010</b>	Certificate of Excellence in Teaching, Johns Hopkins University School of Medicine
<b>2012</b>	Selected to attend the American Association for Cancer Research (AACR) 21st Annual Aspen Workshop: Molecular Biology in Clinical Oncology
<b>2013</b>	Selected to attend The Future of Stem Cell Transplantation: 2nd Annual Mentoring Program for Stem Cell Transplant Fellows
<b>2013</b>	Duke University Hematology/Oncology 25th Annual Fellow Research Retreat Best Presentation by a Second Year Fellow
<b>2013</b>	Selected to attend the American Society of Blood and Marrow Transplantation Clinical Research Training Course
<b>2013-2014</b>	Center for Thrombotic & Hemostatic Disorders Young Investigator Translational Research Skills Development Award
<b>2013-2014</b>	American Society of Hematology Research Training Award for Fellows
<b>2013-2014</b>	Leukemia & Lymphoma Society New Idea Award
<b>2015</b>	American Society for Blood and Marrow Transplantation (ASBMT) New Investigator Award
<b>2017</b>	Finalist, Damon Runyon Clinical Investigator Award
<b>2018-2020</b>	Damon Runyon-Rachleff Innovation Award
<b>2019-2021</b>	American Society of Hematology Scholar Award

## Organizations and Activities

<b>2003</b>	Member, Budget Advisory Committee, Deep Springs College
<b>2004-2008</b>	Alternate Member, Partners Human Research Committee (IRB), Panel A, Brigham and Women's Hospital
<b>2009-2011</b>	Member, Department of Medicine Quality Improvement Committee, Johns Hopkins Hospital
<b>2011-present</b>	Member, American Society of Hematology
<b>2011-present</b>	Member, American Society of Clinical Oncology
<b>2012-present</b>	Member, American Society for Blood and Marrow Transplantation
<b>2013-present</b>	Reviewer, Biology of Blood and Marrow Transplantation
<b>2014-present</b>	Member, American Academy of Home Care Medicine
<b>2016-present</b>	Member, Duke Cancer Institute
<b>2016-present</b>	Member, Duke Center for the Genomics of Environmental Systems (now Duke Microbiome Center)
<b>2016-present</b>	Member, Planning Committee for Department of Medicine Fellows' Retreat
<b>2017-present</b>	Member, Alliance for Clinical Trials in Oncology Cancer in the Elderly Committee
<b>2017-present</b>	Member, Alliance for Clinical Trials in Oncology Digital Health Working Group
<b>2017-present</b>	Member, Alliance for Clinical Trials in Oncology Young Investigator Committee
<b>2018-present</b>	Member, Protocol Writing Committee, Bone Marrow Transplant Clinical Trials Network (BMT CTN)

## Teaching Responsibilities and Continuing Education

<b>2015-present</b>	Faculty, Southeastern Fellows Research Skills and Training Workshop, Duck, NC
<b>2016-present</b>	Faculty, Duke-National University of Singapore Research Skills Workshop, Singapore
<b>2016-present</b>	Lecturer, Duke University School of Medicine, First Year Medical Student Course on "Molecules, Cells, and Tissues", Lecture on "Chronic Myelogenous Leukemia and Imatinib: A Paradigm for Translational Medicine"
<b>2017-present</b>	Preceptor, Cancer Care Experience, preceptor for 2 <sup>nd</sup> year medical students, Duke University School of Medicine
<b>2017-present</b>	Rotation Director, Adult Blood and Marrow Transplantation, Hematology/Oncology Fellowship, Duke University School of Medicine, Durham, NC

## Mentoring Activities

<u>Name</u>	<u>Position at Time of Mentorship</u>	<u>Dates</u>	<u>Current Position</u>
Alyssa Bernanke	medical student	9/1/13-6/30/14	MD/PhD candidate, Duke
Julia Messina	fellow, infectious diseases	7/1/15-8/1/18	Medical Instructor, Duke
Tara Dalton	masters student -> CRS	1/1/17-06/01/18	MD candidate, Duke
Wei Huang	post-doc	7/1/17-2/28/19	Consultant, McKinsey
Jill Thompson	masters student -> CRS	1/1/18-present	ongoing
Vinay Giri	medical student	1/1/18-present	ongoing
Madhu Eluri	resident, internal medicine	1/1/18-present	ongoing
Ko Ko Maung	fellow, hematology/oncology	7/1/18-present	ongoing

## Research Interests

Hematopoietic stem cell transplantation (HCT), with a focus on preventing complications such as infections, gastrointestinal toxicity, and graft-versus host disease (GVHD) through modulation of the microbiome; delivery of care such as home-based HCT and mHealth, medication adherence and behavioral economic incentives; costs associated with HCT, novel cellular therapies; research encompasses murine, phase 1, phase 2, and correlative studies.

## Grants (Active)

5P30-AG028716-13 NIA Duke Claude D. Pepper Older Americans Independence Center Research Education Component Scholar	Sung, Anthony (PI) 7/1/18 – 6/30/20
<b>REC Project Title: High intensity interval training to improve pre- and peri-transplant function and outcomes</b> The goal is to determine the impact of pre-transplant high intensity interval training on pre- and peri-transplant functional status and transplant outcomes.	
N/A Memorial Sloan Kettering Cancer Center <b>MSKCC Microbiota</b> Our goal is to collect and analyze stool samples from hematopoietic stem cell transplant patients to understand how the gut microbiome impacts transplant outcomes.	Sung, Anthony (PI) 4/27/18 – 4/26/19
1UG3-TR002448-01 National Center for Advancing Translational Science <b>AZD9668 and Neutrophil Elastase Inhibition to Prevent Graft-versus-Host Disease</b> Our goal is to use a preclinical model to test the hypothesis that AZD9668 prevents GVHD. Positive results would support phase 1b and 2 clinical trials. As part of this preclinical trial, we will determine the role of HS, desmosine (an elastin degradation product) and other potential biomarkers of NE activity and GVHD to support future clinical trials. Role: Co-investigator	Chao, Nelson (PI) 4/1/18 – 3/31/22
N/A Enterome, Inc. <b>Evaluation of the effect of EB8018 on an acute murine model of GvHD</b> Our goal is test EB8018, a FimH antagonist, and its ability to prevent or reduce graft-versus-host disease.	Sung, Anthony (PI)
N/A Merck <b>Impact of Clinically Significant Cytomegalovirus Infection and Its Sequelae on Medical Resource Use, Costs, and Outcomes in Patients Undergoing Allogeneic Hematopoietic Cell Transplantation</b> The goal of this investigator-initiated study is to determine costs and outcomes associated with cytomegalovirus infection.	Sung, Anthony (PI) 1/25/18 – 1/1/23
Damon Runyon-Rachleff Innovation Award Damon Runyon Cancer Research Foundation	Sung, Anthony (Co-PI) 1/1/18 – 12/31/19

### **Personalized Prebiotics to Optimize Microbiota Metabolism and Improve Transplant Outcomes**

This proposal is the first to attempt personalizing prebiotic therapies based on a subject's microbiota. This approach is expected to preserve a patient's microbiota during HCT, and ultimately lower risk of infection, GVHD, and disease relapse.

5U01-AI133604-02

NIAID

Chao, Nelson (PI)

7/1/17-6/30/22

### **Mitigators of Radiation-Induced Endovascular Injury: Targeting Tie2 and Thrombocytopenia**

The goal is to determine if a Tie2 inhibitor or platelet substitute, individually or combined, can mitigate radiation-induced endothelial injury.

Role: Co-investigator

Fund to Retain Clinical Scientists

Doris Duke Charitable Foundation

Sung, Anthony (PI)

11/1/16-12/31/18

### **In-home allogeneic stem cell transplantation to preserve the gut microbiota and prevent GVHD**

This award is given as a supplement to expand the scope of 5KL2TR001115-03

5R01-CA203950-03

NCI

Chao, Nelson (PI)

5/1/16-4/30/21

### **Patient-centered home-based hematopoietic stem cell transplantation**

The goal is to determine the impact of patient-centered home-based hematopoietic stem cell transplantation on graft-versus-host disease in a randomized phase 2 trial.

Role: Co-investigator

1R01HL124112-01A

NHLBI

Jenq, Robert (PI)

8/15/15-5/31/20

### **Microbiota-focused Strategies to Mitigate GVHD**

The project aims to study the effects of intestinal flora composition on GVHD, to evaluate strategies to treat microbiota injury and GVHD, and to develop strategies to prevent microbiota injury in allo BMT patients.

Role: Site PI

N/A

Novartis

Sung, Anthony (Primary PI)

12/1/13-12/31/18

### **Prevention of Gastrointestinal Toxicity from Total Body Irradiation or High Dose Chemotherapy with SOM 230**

The goal of this multi-institutional investigator-initiated phase 2 study is to determine if SOM 230 (pasireotide), administered prior to and concurrently with myeloablative conditioning, can prevent gastrointestinal toxicity and graft-versus-host disease after allogeneic hematopoietic stem cell transplantation.

## **Grants (Pending)**

1U01-CA236727-01

NIAID

Chen, Benny (PI)

4/1/19 – 3/31/20

### **A novel nanoparticle platelet analogue for severe thrombocytopenia**

The goal is to evaluate a fibrinogen-coated nanoparticle for prevention of thrombocytopenia-related bleeding.

Role: Co-Investigator

1R21-CA239025-01

NCI

Sung, Anthony (PI)

4/1/19 – 3/31/21

### **The impact of the hematopoietic stem cell transplant care environment on the microbiome and predictive biomarkers**

This projects evaluates the interaction between the microbiome, bacterial metabolites, and other predictive biomarkers of hematopoietic stem cell transplant, comparing the impact of different care environments (inpatient, outpatient).

1R01-CA230039-01 (Smith)

NCI

Smith, Sophia (PI)

4/1/19 – 3/31/24

### **A SMART Design to Facilitate PTSD Symptom Management Strategies Among Cancer Survivors**

The goal of this study is to use novel mobile health (mHealth) behavioral intervention approaches to enable Hematopoietic stem cell transplant (HCT) patients to effectively manage their symptoms and, in turn, improve their ability to engage in physical activity that can improve prognosis, quality of life, and survival.

Role: Co-Investigator

1R01-CA238931-01  
NCI

Zhang, Jennifer (PI)  
4/1/19 – 3/31/24

**Exploring the Role of Skin Cells in Cutaneous GVHD**

This study evaluates the role of keratinocytes and the MEC pathway in cutaneous GVHD.

1R21-CA223419-01A1  
NCI

Zhang, Jennifer (PI)  
12/1/18 – 11/30/20

**Keratinocyte targeted strategies for treatment of cutaneous GVHD**

This study evaluates drugs targeting keratinocytes and the potential to prevent cutaneous GVHD.

1R21-CA235083-01  
NCI

Kelleher, Sarah  
9/1/18 – 8/31/20

**Development and Pilot Testing of a Hybrid In Person and mHealth Coping Skills Training Intervention for Symptom Management and Daily Steps in Stem Cell Transplant Patient**

This study develops in person and mobile health (mHealth) behavioral training strategies to address symptom management in stem cell transplant patients.

240837

Alliance for Clinical Trials in Oncology

Sung, Anthony (PI)  
8/1/18-7/31/19

**Pre- and Peri-Transplant Optimization Program (PPOP) to Improve Patient Function and Hematopoietic Stem Cell Transplant**

This study couples patient navigation with a pre- and peri-transplant optimization program to improve pre-transplant function in transplant patients.

**Grants (Past)**

5KL2TR001115-03  
NCATS

Sung, Anthony (PI)  
7/1/15-6/30/18

Duke CTSA Research Career Development Award (Duke CTSA KL2)

**KL2 Project Title: In-home allogeneic hematopoietic stem cell transplantation to preserve the gut microbiota and prevent graft-versus-host disease**

The goal is to determine if in-home care can improve outcomes after hematopoietic stem cell transplantation by allowing patients to stay at home and thereby preserve their natural gut microbiota. This project will also explore additional explanatory mediators such as nutrition, social support, and exercise.

N/A  
Collective BioTherapy, Inc.

Sleasman, John (PI)  
07/01/15 – 06/30/18

**Targeting Regulatory B10 cells for Treating Graft Versus Host Disease and Immunodeficiency**

The purpose for this study is to develop regulatory B10 cells as a novel cellular therapy for graft-versus-host disease and immunodeficiency.

Role: Co-investigator

HHSN272201400034C  
DHHS/NIH

Chen, Benny (PI)  
9/1/14-8/31/16

**A Novel Nanoparticle Platelet Analogue for Radiation-Induced Thrombocytopenia**

The goals of this project are to: 1) Determine whether Fibrinoplate-S can be used to rescue animals from lethal doses of irradiation, 2) Delineate the mechanisms by which Fibrinoplate-S prevents death from bleeding after lethal irradiation and 3) Test this hypothesis in a nonhuman primate model of radiation injury.

Role: Co-investigator

NIA-8998-14

Sung, Anthony (PI)

**A Novel Fibrinogen-Coated Nanosphere for Treatment of Thrombocytopenia**

The goal is to establish the efficacy of fibrinogen-coated nanospheres in preventing bleeding related to thrombocytopenia and elucidate the hemostatic mechanisms by which this occurs.

Research Training Award-Fellow  
American Society of Hematology

Sung, Anthony (PI)  
7/1/2013-6/30/2014

**Memory T Cells in Allogeneic Hematopoietic Stem Cell Transplantation**

The goal is to determine the maximum tolerated dose of a naïve T-cell depleted donor lymphocyte infusion (DLI) following HLA-matched and HLA-mismatched, allogeneic stem cell transplantation. We will assess the GVHD-inducing potential and monitor the impact this DLI will have on post-transplant immune recovery.

Young Investigator Translational Research Skills Development Award  
Duke Center for Thrombotic and Hemostatic Disorders

Sung, Anthony (PI)  
6/1/2013-5/31/2014

**A Novel Fibrinogen-Coated Nanosphere for Treatment of Thrombocytopenia**

The goal is to establish the efficacy of fibrinogen-coated nanospheres in preventing bleeding related to thrombocytopenia and elucidate the hemostatic mechanisms by which this occurs.

T32 HL007057-37  
NHLBI

Telen, Marilyn (PI)  
7/1/12-6/30/13, 7/1/14-6/30/15

**Transfusion Medicine and Hematology**

Basic and clinical research training to physicians and scientists on problems related to hematologic diseases, including the science of transfusion, cellular therapy, and hematopoietic stem cell transplantation.

Role: Trainee

**Publications**

1. **Sung AD**, Anderson ME, Zurakowski Z, Hornicek FJ, Gebhardt MC. Unicameral bone cyst: a retrospective study of three surgical treatments. *Clin Orthop Relat Res.* 2008 Oct;466(10):2519-26. PMID 18679761. PMCID: PMC2584314
2. **Sung AD**, Cheng S, Moslehi J, Scully EP, Prior JM, Loscalzo J. Hepatocellular carcinoma with intracavitary involvement: a case report and review of the literature. *Am J Cardiol.* 2008 Sept 1;102(5):643-5. PMID 18721529
3. **Sung AD**, Collins MC, Smith AK, Sanders AM, Quinn MA, Block SD, Arnold RM. Crying, stress, and sadness: experiences and attitudes of third year medical students and interns. *Teach Learn Med.* 2009 Jul;21(3):180-7. PMID 20183336
4. Dezern AE, **Sung A**, Kim S, Smith BD, Karp JE, Gore SD, Jones RJ, Fuchs E, Luznik L, McDevitt M, Levis M. Role of allogeneic transplant for FLT3/ITD acute myeloid leukemia: outcomes from 133 consecutive newly diagnosed patients from a single institution. *Biol Blood Marrow Transplant.* 2011 Sept;17(9):1404-9. PMID 21324374. PMCID: PMC3110512.
5. Evans MW, **Sung AD**, Gojo I, Tidwell M, Greer J, Levis M, Karp J, Baer MR. Risk assessment in human immunodeficiency virus-associated acute myeloid leukemia. *Leuk Lymphoma.* 2012 Apr;53(4):660-4. PMID 21942284
6. **Sung AD**, Rizzieri D, Li Z, Beaven AW. Bortezomib combined with rituximab, fludarabine, mitoxantrone, and dexamethasone (R-VFND) for the treatment of relapsed/refractory follicular lymphoma. *J Clin Trials.* 2012 Aug;2(3):120. DOI:10.4172/2167-0870.1000120
7. **Sung AD**, Grima DT, Bernard LM, Brown S, Carrum G, Holmberg L, Horwitz ME, Liesveld JL, Kanda J, McClune B, Shaughnessy P, Tricot GJ, Chao NJ. Outcomes and costs of autologous stem cell mobilization with chemotherapy plus G-CSF versus G-CSF alone. *Bone Marrow Transplantation.* 2013 Nov; 48(11): 1444-9. PMID: 23749109. PMCID: PMC3797171.

8. Wild D, **Sung AD**, Cardona D, Cirricione C, Sullivan K, Detweiler C, Shealy M, Balmadrid B, Rowe KL, Chao N, Piryani S, Karimabad HM, Martin P, Poleski M. The Diagnostic Yield of Site and Symptom-Based Biopsies for Acute Gastrointestinal Graft-Versus-Host Disease: A 5-Year Retrospective Review. *Dig Dis Sci*. 2016 Mar;61(3):806-13. doi: 10.1007/s10620-015-3938-8. Epub 2015 Nov 4. PMID: 26537485
9. **Sung AD\***, Sung JA\*, Thomas S, Hyslop T, Gasparetto C, Long G, Rizzieri DA, Sullivan KM, Corbet K, Broadwater G, Chao NJ, Horwitz ME. Universal surgical mask usage reduces the prevalence of parainfluenza virus 3 in adult recipients of hematopoietic stem cell transplantation. *Clin Infect Dis*. 2016 Aug 1. Pii: ciw451. [Epub ahead of print] PMID: 27481873 \*These authors contributed equally to this manuscript
10. Green MM, Chao N, Chhabra S, Corbet K, Gasparetto C, Horwitz A, Li Z, Venkata JK, Long G, Mims A, Rizzieri D, Sarantopoulos S, Stuart R, **Sung AD**, Sullivan K, Costa L, Horwitz M, Kang Y. Plerixafor (a CXCR4 antagonist) following myeloablative allogeneic hematopoietic stem cell transplantation enhances hematopoietic recovery. *J Hematol Oncol*, accepted for publication. *J Hematol Oncol*. 2016 Aug 17;9(1):71. PMID: 27535663
11. Sivaraj D, Green MM, Li Z, **Sung AD**, Sarantopoulos S, Kang Y, Long GD, Horwitz ME, Lopez RD, Sullivan KM, Rizzieri DA, Chao NJ, Gasparetto C. Outcomes of Maintenance Therapy with Bortezomib after Autologous Stem Cell Transplantation for Patients with Multiple Myeloma. *Biol Blood Marrow Transplant*. 2016 Nov 14. pii: S1083-8791(16)30488-8. doi: 10.1016/j.bbmt.2016.11.010. [Epub ahead of print] PMID: 27856369
12. Peled J, Devlin S, Staffas A, Lumish M, Khanin R, Littmann ER, Ling L, Kosuri S, Maloy M, Slingerland JB, Ahr KF, Porosnicu Rodriguez KA, Shono Y, Slingerland AE, Docampo MD, **Sung AD**, Weber D, Alousi AM, Gyurkocza B, Ponce D, Barker JN, Perales M, Giralt SA, Taur Y, Pamer EG, Jenq RR, van den Brink MR. Intestinal microbiota and relapse after hematopoietic-cell transplantation. *J Clin Oncol*. 2017 Mar 15;JCO2016703348. [Epub ahead of print] PMID: 28296584
13. Anand S, Thomas S, Hyslop T, Adcock J, Corbet K, Gasparetto C, Lopez R, Long GD, Morris AK, Rizzieri DA, Sullivan KM, **Sung AD**, Sarantopoulos S, Chao NJ, Horwitz ME. Transplantation of Ex Vivo Expanded Umbilical Cord Blood (NiCord) Decreases Early Infection and Hospitalization. *Biol Blood Marrow Transplant*. 2017 Apr 6. PMID: 28392378
14. Anand S, Thomas S, Corbet K, Gasparetto C, Long GD, Lopez R, Morris AK, Rizzieri DA, Sullivan KM, **Sung AD**, Sarantopoulos S, Chao NJ, Horwitz ME. Adult Umbilical Cord Blood Transplantation Using Myeloablative Thiopeta, Total Body Irradiation, and Fludarabine Conditioning. *Biol Blood Marrow Transplant*. 2017 Jul 17. pii: S1083-8791(17)30577-3. doi: 10.1016/j.bbmt.2017.06.027. [Epub ahead of print] PMID: 28729147
15. Guo M, Chao NJ, Li JY, Rizzieri DA, Sun QY, Mohrbacher A, Krakow EF, Sun WJ, Shen XL, Zhan XR, Wu DP, Liu L, Wang J, Zhou M, Yang LH, Bao YY, Dong Z, Cai B, Hu KX, Yu CL, Qiao JH, Zuo HL, Huang YJ, **Sung AD**, Qiao JX, Liu ZQ, Liu TQ, Yao B, Zhao HX, Qian SX, Liu WW, Forés R, Duarte RF, Ai HS; Microtransplantation Interest Group. HLA-Mismatched Microtransplant in Older Patients Newly Diagnosed With Acute Myeloid Leukemia: Results From the Microtransplantation Interest Group. *JAMA Oncol*. 2017 Sep 14. doi: 10.1001/jamaoncol.2017.2656. [Epub ahead of print] PMID: 2891043
16. O'Sullivan ML, Shelby RA, Dorfman CS, Kelleher SA, Fisher HM, Rowe Nichols KA, Keefe FJ, **Sung AD**, Somers TJ. The effect of pre-transplant pain and chronic disease self-efficacy on quality of life domains in the year following hematopoietic stem cell transplantation. *Support Care Cancer*. 2018 Apr;26(4):1243-1252. doi: 10.1007/s00520-017-3947-6. Epub 2017 Nov 9. PMID: 29124418
17. **Sung AD**, Hassan S, Cardona DM, Wild D, Nichols KR, Mehdikhani H, Balmadrid B, Detweiler CJ, Shealy M, Cirricione C, Li Z, Poleski M, Dalton TE, Siamakpour-Reihani S, Chao NJ, Sullivan KM. Late Gastrointestinal Complications of Allogeneic Hematopoietic Stem Cell Transplantation in Adults. *Biol Blood Marrow Transplant*. 2018 Apr;24(4):734-740. doi: 10.1016/j.bbmt.2017.12.772. Epub 2017 Dec 12.
18. DeFilipp Z, Peled JU, Li S, Mahabamunuge J, Dagher Z, Slingerland AE, Del Rio C, Valles B, Kempner ME, Smith M, Brown J, Dey BR, El-Jawahri A, McAfee SL, Spitzer TR, Ballen KK, **Sung AD**, Dalton TE, Messina JA, Dettmer K, Liebisch G, Oefner P, Taur Y, Pamer EG, Holler E, Mansour MK, van den Brink MRM, Hohmann E, Jenq RR, Chen YB.

Third-party fecal microbiota transplantation following allo-HCT reconstitutes microbiome diversity. *Blood Adv.* 2018 Apr 10;2(7):745-753. doi: 10.1182/bloodadvances.2018017731. PMID: 29592876

19. Cardona DM, Detweiler CJ, Shealy MJ, **Sung AD**, Wild DM, Poleski MH, Balmadrid BL, Cirrincione CT, Howell DN, Sullivan KM. Use of the National Institutes of Health Consensus Guidelines Improves the Diagnostic Sensitivity of Gastrointestinal Graft-Versus-Host Disease. *Arch Pathol Lab Med.* 2018 Apr 26. doi: 10.5858/arpa.2017-0054-OA. [Epub ahead of print] PMID: 29697275

20. Messina JA, Sinha R, Starr K, Arshad M, Alexander BD, Chao NJ, **Sung AD**. Clinical and Genomic Characterization of Recurrent Enterococcal Bloodstream Infection in Patients With Acute Leukemia. *Open Forum Infect Dis.* 2018 May 5;5(6):ofy107. doi: 10.1093/ofid/ofy107. eCollection 2018 Jun. PMID: 29977964

21. Detweiler CJ, Mueller SB, **Sung AD**, Saullo JL, Prasad VK, Cardona DM. Brincidofovir (CMX001) Toxicity Associated With Epithelial Apoptosis and Crypt Drop Out in a Hematopoietic Cell Transplant Patient: Challenges in Distinguishing Drug Toxicity From GVHD. *J Pediatr Hematol Oncol.* 2018 Aug;40(6):e364-e368. doi: 10.1097/MPH.0000000000001227. PMID: 29846280

22. Spees L, Martin PL, Kurtzberg J, Stokhuyzen A, McGill L, Prasad VK, Driscoll TA, Parikh SH, Page KM, Vinesett R, Severyn C, **Sung AD**, Proia AD, Jenkins K, Arshad M, Steinbach WJ, Seed PC, Kelly MS. Reduction in Mortality after Umbilical Cord Blood Transplantation in Children over a 20-Year Period (1995-2014). *Biol Blood Marrow Transplant.* 2018 Nov 24. pii: S1083-8791(18)30751-1. doi: 10.1016/j.bbmt.2018.11.018. [Epub ahead of print] PMID: 30481599

23. Wong HY, **Sung AD**, Lindblad KE, Sheela S, Roloff GW, Rizzieri D, Goswami M, Mulé MP, Ramos NR, Tang J, Thompson J, DeStefano CB, Romero K, Dillon LW, Kim DY, Lai C, Hourigan CS. Molecular Measurable Residual Disease Testing of Blood During AML Cytotoxic Therapy for Early Prediction of Clinical Response. *Front Oncol.* 2019 Jan 15;8:669. doi: 10.3389/fonc.2018.00669. eCollection 2018. PMID: 30697529

## Reviews

1. **Sung AD**, Chao NJ. Concise Review: Acute Graft-Versus-Host Disease: Immunobiology, Prevention, and Treatment. *Stem Cells Trans Med.* 2013 Jan; 2(1):25-32. PMID 23283494. PMCID: PMC3659744.

2. Rein LA, **Sung AD**, Rizzieri DA. New Approaches to manipulate minimal residual disease after allogeneic stem cell transplantation. *Int J Hematol Oncol.* 2013;2(1):1-20. PMID: 24303095. PMCID: PMC3841006.

3. **Sung AD**, Chao NJ. Acute graft-versus-host disease: Are we close to bringing the bench to the bedside? *Best Pract & Res: Clin Hematol* 2013 Sep;26(3):285-92. PMID: 24309532. PMCID: PMC3867819.

4. Krakow EF, Ai HS, Shaffer B, Delisle JS, Hu KX, **Sung AD**. Do we need full donor chimerism? How alloreactive cell therapies without substantial engraftment might treat hematologic cancers. *Curr Drug Targets.* 2015 Mar 3. PMID: 25738297

5. Andermann TM, Peled JU, Ho C, Reddy P, Riches M, Storb R, Teshima T, van den Brink MRM, Alousi A, Balderman S, Chiusolo P, Clark WB, Holler E, Howard A, Kean LS, Koh AY, McCarthy PL, McCarty JM, Mohty M, Nakamura R, Rezvani K, Segal BH, Shaw BE, Shpall EJ, **Sung AD**, Weber D, Whangbo J, Wingard JR, Wood WA, Perales MA, Jenq RR, Bhatt AS; Blood and Marrow Transplant Clinical Trials Network. The Microbiome and Hematopoietic Cell Transplantation: Past, Present, and Future. *Biol Blood Marrow Transplant.* 2018 Jul;24(7):1322-1340. doi: 10.1016/j.bbmt.2018.02.009. Epub 2018 Feb 19. PMID: 29471034

## Chapters in Books

1. **Sung AD**, Kang Y, Chao NJ (2015). Immune Reconstitution. In *Hematopoietic Stem Cell Transplantation: A Handbook for Clinicians, 2<sup>nd</sup> Edition*. Ed. John R. Wingard, Dennis A. Gastineau, Helen L. Leather, et al. American Association of Blood Banks (AABB)

## Selected Poster and Oral Abstracts



1. **Sung AD**, Anderson ME, Zurakowski Z, Hornicek FJ, Gebhardt MC. Unicameral bone cyst: a retrospective study of three surgical treatments. Oral presentation at the Annual Meeting of the Musculoskeletal Tumor Society, Key West, FL, June 10, 2006
2. **Sung AD**, Collins MC, Smith AK, Sanders AM, Quinn MA, Block SD, Arnold RM. Crying, stress, and sadness: experiences and attitudes of third year medical students and interns. Oral presentation at the Annual Meeting of the Society for General Internal Medicine, Toronto, Canada, April 26, 2007.
3. **Sung AD**, Sung JA, Chute JP, Gasparetto C, Long G, Rizzieri DA, Sullivan KM, Corbet K, Hars V, Lan L, Broadwater G, Chao NJ, Horwitz ME. Surgical Mask Usage Reduces the Incidence of Parainfluenza Virus 3 in Recipients of Stem Cell Transplantation. Oral presentation at the Annual Meeting of the American Society of Hematology, Atlanta, GA, December 10, 2012.
4. **Sung AD**, Yen RC, DeOliveira D, Jiao Y, Piryani S, Bernanke A, Hall S, Klemp K, Arepally GM, Hoffman M, Ortel TL, Chao NJ, Chen BJ. Fibrinogen Coated Nanospheres Prevent Thrombocytopenia-related Bleeding. Oral presentation at the Annual Meeting of the American Society of Blood and Marrow Transplantation, San Diego, CA, February 12, 2015.
5. **Sung AD**, Cardona DM, Rowe K, Mehdikhani H, Detweiler CJ, Shealy M, Wild D, Poleski M, Cirrincione C, Li Z, Chao NJ, Sullivan KM. Late Gastrointestinal Complications of Allogeneic Hematopoietic Stem Cell Transplantation. Poster presentation at the Annual Meeting of the American Society of Blood and Marrow Transplantation, San Diego, CA, February 12, 2015.
6. **Sung AD**, Shah N, Jonassaint JC, Romero K, Dalton T, Nichols KR, Fish L and Chao NJ, *Patient Interest in and Feasibility of a Mobile Health App to Support Patients Undergoing Hematopoietic Stem Cell Transplantation*. Poster presentation at the Annual Meeting of the American Society of Hematology, Atlanta, GA, December 9, 2017.
7. Messina JA, **Sung AD**, Chao NJ, and Alexander BD. *The Timing and Epidemiology of Enterococcus Faecium and E. Faecalis Bloodstream Infections (BSI) in Patients with Acute Leukemia Receiving Chemotherapy*. Poster presentation at the Annual Meeting of the American Society of Hematology, Atlanta, GA, December 9, 2017
8. Huang W, Bush A, Chao NJ, Chen BJ, and **Sung AD**, *Syngeneic Fecal Microbiota Transplant Effectively Attenuated Graft-Versus-Host Disease after Bone Marrow Transplantation in Mice*. Poster presentation at the Annual Meeting of the American Society of Hematology, Atlanta, GA, December 11, 2017.
9. **Sung AD**, de Castro CM, LeBlanc TW, Long GD, Adams DB, Brander DM, Dave S, Diehl LF, Doan PL, Therese Hennig T, Kang Y, McKinney MS, Rein LAM, Sipkins DA, Yang Y, Chao NJ, and Rizzieri DA, *Clinical Outcomes of Microtransplantation for Older Adults with Acute Myeloid Leukemia*. Poster presentation at the Annual Meeting of the American Society of Hematology, Atlanta, GA, December 11, 2017.
10. **Sung AD**, Nichols KR, Messina JA, Romero K, Dalton T, Bush A, Covington M, Shelby R, Frith J, Gasparetto CJ, Horwitz ME, Long GD, Lopez R, Rizzieri DA, Sarantopoulos S, Sullivan K, and Chao NJ. *Hematopoietic Stem Cell Transplantation at Home*. Oral presentation at the Annual Meeting of the American Society of Hematology, Atlanta, GA, December 11, 2017.

#### **Reviewer (manuscript)**

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|----|---------------------------------------------|--------------|
| 1. | Biology of Blood and Marrow Transplantation | 2013-Present |
| 2. | Radiation Research                          | 2016-Present |
| 3. | Open Forum Infectious Diseases              | 2017-Present |

#### **Reviewer (grants)**

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|----|---------------------------------|------|
| 1. | National Science Centre, Poland | 2018 |
| 2. | Health Review Board, Ireland    | 2019 |

## **Federal Drug Administration (FDA) Oncologic Drug Advisory Committee (ODAC) Meetings**

1. Voting Ad Hoc Member, July 11, 2017 ODAC Meeting, BLA 761060, Mylotarg (gemtuzumab ozogamicin), Applicant: Wyeth Pharmaceuticals Inc., a subsidiary of Pfizer Inc.
2. Voting Ad Hoc Member, March 7, 2018 ODAC Meeting, BLA 125557, Blincyto (blinatumomab), Applicant: Amgen, Inc.

## **Invited Lectures and Presentations**

1. Warren Alpert Medical School of Brown University, “*Novel Therapies in Myeloid Malignancies*”. 04/06/ 2016”
2. Washington University School of Medicine “Fibrinogen-coated nanospheres prevent thrombocytopenia-related bleeding”, 05/17/2016
3. NIH Chronic GVHD Study Group Intramural Retreat, NIH Stone House, Bethesda, MD., “*Targeting Neutrophil Elastase to Prevent and Treat GVHD*”. 02/06/2018,
4. Cincinnati Children’s Hospital Medical Center, monthly Translational Cancer Research Seminar Series, “*Home-Based Hematopoietic Stem Cell Transplantation*”. 05/31/2018.