CURRICULUM VITAE

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Citizenship: United States

Education:

1980	B.S. (Natural Sciences, summa cum laude), University of Akron, Akron, Ohio
1984	M.D., Northeastern Ohio Universities College of Medicine, Rootstown, Ohio

Brief Chronology of Employment:

1984 - 1988	Residency, Combined Pediatrics/Internal Medicine; Children's Hospital Medical Center of Akron/Akron General Medical Center, Akron, Ohio
1989 – 1992	Fellowship, Pediatric Hematology/Oncology; Pediatric Branch, NCI, NIH, Bethesda, MD
1992-1996	Investigator, Experimental Immunology Branch, NCI, NIH
1996-1998	Investigator, Pediatric Oncology Branch, NCI, NIH
1998-2003	Principal Investigator, Tenure Track, Pediatric Oncology Branch, NCI, NIH
2003-2015	Tenured Principal Investigator and Head, Immunology Section, Pediatric Oncology Branch, NCI, NIH
2005	Deputy Branch Chief, Pediatric Oncology Branch, NCI, NIH
2005-2008	Acting Branch Chief, Pediatric Oncology Branch, NCI, NIH
2008-2015	Chief, Pediatric Oncology Branch, NCI, NIH
2016-2018	Endowed Professor of Pediatrics and Medicine, Stanford University
2018-present	Ernest and Amelia Gallo Family Professor and Professor Pediatrics and Medicine, Stanford University

Military Service:

1980-2010	United States Public Health Service, Captain 0-6, retired

Hospital Appointments and Major Leadership Positions:

2016-present	Associate Director, Stanford Cancer Institute
2016-2023	Lucile Packard Children's Hospital Attending Physician
2016-present	Co-Leader, Cancer Immunology Program, Stanford Cancer Institute
2016-present	Member, Immunology Program, Stanford University
2016-present	Director, Parker Institute for Cancer Immunotherapy, Stanford University School of Medicine
2017-present	Founding Director, Stanford Center for Cancer Cell Therapy

2020-2022 Co-Executive Director, Laboratory for Cell and Gene Medicine, Stanford School of Medicine

Other Professional Positions:

2017 Scientific Founder, Lyell Immunopharma
2020 Scientific Founder, CARGO Therapeutics (previously Syncopation Life Sciences)
2021-2023 Board Member, CARGO Therapeutics (previously Syncopation Life Sciences)
2021 Scientific Founder, Link Cell Therapies
2022-2025 Board Member, Link Cell Therapies
2023-2024 Scientific Founder, GBM NewCo
2024 Founder and Chief Executive Officer, ACCESSforKIDS

Medical License and Board Certification:

1984-2017 Ohio
1994-2017 Maryland
1994-2005 District of Columbia
2015-present California
1989-present American Board of Internal Medicine, Unlimited Certification
1989-2023 American Board of Pediatrics
1992-2023 American Board of Pediatric Hematology/Oncology

Honors and Other Special Recognition:

1980 Summa Cum Laude, University of Akron
1984 Alpha Omega Alpha Honorary Medical Society
1988 Chief Resident, Internal Medicine, Akron General Medical Center
1997 Intramural Research Award, National Cancer Institute
1999 Intramural Research Award, National Cancer Institute
2000 Distinguished Clinical Teacher Award, NIH
2000 Intramural Research Award, National Cancer Institute
2001 Bench-to-Bedside Research Award, Co-Principal Investigator, NIH
2003 Mentor of Merit, NIH Fellows Committee, NIH
2003 PHS Commendation Medal
2003 NCI Director's Award
2004 Distinguished Alumni Award, NEOUCOM
2004 NIH Technology Transfer Award
2005 Bench-to-Bedside Research Award, Principal Investigator, NIH
2005 American Society of Clinical Investigation
2006-2019 Best Doctors in America
2007 NIH Merit Award
2009 Alex Koufos Memorial Lectureship, Akron Children's Hosp, Akron, OH
2010 NCI Director's Award
2011 The Vineberg Lectureship, Montreal Children's Hospital Grand Rounds, Montreal, Quebec
2012 How! How! Award, Special Love, Inc.
2012 Great Teacher Lecture Awardee, National Institutes of Health

2013	NIH Director's Award
2013	Alexandra Scott Lectureship in Pediatric Oncology, Children's Hospital of Philadelphia
2015	NIH G. Burroughs Mider Lecture, (Honoring Distinguished NIH Intramural Research Scientist)
2015, 2016	Chair-Elect, Pediatric Cancer Working Group, AACR
2015	Association of American Physicians
2015	William Hathaway Visiting Professor Award, University of Colorado
2016	Nitschke-Kaskake Visiting Professorship, Oklahoma City Children's Hospital
2017	Stephen Max Memorial Lecture, University of Maryland
2017, 2018	Chair, Pediatric Cancer Working Group, AACR
2017	Warren Sutow Distinguished Lecture, MD Anderson Cancer Center
2018	BJ Kennedy Keynote Lecturer, Masonic Cancer Center, Minneapolis, MN
2018	Top 10 Clinical Research Award for New CAR-T Cell Therapy for Relapsed Leukemia
2019	Lila and Murray Gruber Memorial Cancer Research Award and Lectureship, American Academy of Dermatology
2019	FDA Distinguished Lecturer
2019	Best Postdoctoral Mentor Award, Stanford Graduate Program in Immunology
2021	AACR-St. Baldrick's Foundation Award for Outstanding Achievement in Pediatric Cancer Research
2021	Fellow of the American Association of Cancer Research
2021	AACR Team Science Award to the St. Baldrick's-StandUp2Cancer Team
2021	Richard V. Smalley Award and Lectureship, The Society for the Immunotherapy of Cancer's "most prestigious award to a clinician/scientist and luminary in the field who has significantly contributed to the advancement of cancer immunotherapy research"
2021	American Society for Clinical Oncology Pediatric Oncology Award and Lecture
2022	American Association for Cancer Research Academy of Fellows
2022	Nobility in Science Award, Sarcoma Foundation of America
2022	National Academy of Medicine
2023	Edward Netter Leadership Award, Alliance for Cancer Gene Therapy
2023	George Stamatoyannopoulos Award Lecture, American Society for Gene and Cell Therapy
2023	Till & McCulloch Award Lecture, Cell Therapy Transplant Canada
2023	Top 20 Most Influential Women in Biopharma, Endpoints News
2023	Fellow of the Academy of Immunooncology, Society for the Immunotherapy of Cancer
2023	Pantheon Award Finalist, California Life Sciences
2024	Almanac of Women Leaders in Pediatric Oncology, International Society of Pediatric Oncology
2024	R. Lois Murphy Award, Memorial Sloan Kettering Cancer Center
2025	Griemm Lectureship in Molecular and Cellular Oncology, University of Chicago
2025	Lloyd Old Award, Cancer Research Institute/AACR for outstanding and innovative research that has had a major impact on the cancer field and has the potential to stimulate new directions in cancer immunology

2025	Italian-American Cancer Foundation Prize for Excellence in Medicine the Clinical Sciences, New York, NY
2025	Drukier Lecturer, Weill Cornell Children's Health Research Institute
2025	Board of Directors, American Association for Cancer Research

Societies:

American Association of Immunologists
American Society of Clinical Investigation
Alpha Omega Alpha Honorary Medical Society
American Association for Cancer Research
American Society of Hematology
American Society for Pediatric Hematology/Oncology
American Society for Clinical Oncology
Henry Kunkel Society
Association of American Physicians
Society for the Immunotherapy of Cancer
Fellows of the American Association for Cancer Research
National Academy of Medicine
Fellow of the Academy of Immuno-oncology

National and International Conference Organizer/Session Chair (selected):

1997	Co-Chair, Simultaneous Session on Immunopathology American Society of Hematology
1999	Chair, Symposium on Thymic Aging, FASEB/AAI, Washington D.C.
2000	Chair, Clinical Immunology Society, Third HIV Immune-based Therapies Workshop, Washington, D.C.
2001	Co-Chair, Simultaneous Session on Experimental Transplantation American Society of Hematology
2002	Co-Chair, Session on Clinical Immunology/Rheumatology/Cytokine Signaling, Pediatric Academic Societies Annual Meeting
2002	Chair, Plenary Session, Symposia on Cytokines in Cancer, Combined NCI/EORTC Congress, Frankfurt, Germany
2007	Chair, Educational Session on Ewing's Sarcoma, American Society of Clinical Oncology
2007	Conference Organizer, Nobel Mini-Symposium, IL-7 In Health and Disease, Stockholm, Sweden
2007	Co-Chair, Cytokine Session, International Society for the Biologic Therapy of Cancer National Meeting, Boston, MA
2007	Program Committee, NCI Symposium on Cancer and Inflammation, Bethesda, MD
2007, 08	Chair, Session on Lymphocyte Biology, American Society of Hematology
2007	Advisory Committee, NCI Immunotherapy Workshop
2008	Conference Organizer, 1st International Conference on Immunotherapy in Pediatric Oncology, Bethesda, MD
2008	Program Committee, NCI Symposium on Immunotherapy

2010	Program Committee, NCI Symposium on Inflammation and Cancer
2010	Conference Organizer, 2nd International Conference on Immunotherapy in Pediatric Oncology, Houston Texas
2011	Member, American Society of Hematology Scientific Committee on Immunology and Host Defense
2012	Vice-Chair, American Society of Hematology Scientific Committee on Immunology and Host Defense
2012	Conference Organizer, 3rd International Conference on Immunotherapy in Pediatric Oncology, Frankfurt, Germany
2013	Chair, American Society of Hematology Scientific Committee on Immunology and Host Defense
2014	Scientific Program Committee: American Association for Cancer Research meeting on Hematologic Malignancies, 2014
2015	Chair, Immunology Scientific Program Committee, AACR Annual Meeting
2015	Conference Organizer, 4th International Conference on Immunotherapy in Pediatric Oncology, Seattle, WA
2016-2017	Co-Chair, Program Committee, AACR Annual Meeting
2017	Co-Chair, Program Committee, AACR-NCI-EORTC Molecular Targets Meeting
2017	Co-Chair, Program Committee, Society for Immunotherapy of Cancer
2018	Co-Chair, Program Committee, AACR Annual Meeting
2018	Co-Chair, Program Committee, Society for Immunotherapy of Cancer
2018	Program Committee, CRI-CIMT-EATI-AACR
2019	Meeting Co-Chair, Special Conference Pediatric Cancer, AACR
2019	Meeting Co-Chair, Cell Therapies for Cancer, AACR
2019	Program Committee, American Association for Cancer Research Annual Meeting
2019	Co-Chair, Keystone Conference, Immunotherapy of Cancer
2020	Co-Chair, Keystone Symposia, Cell Therapy: Cancer and Beyond

National/International Advisory Boards, Committees, Grant Reviews (non-profit, selected):

1995	Swiss National Science Foundation
1996	Study Section, R21 Program in Human Immunology, Office of AIDS Research
2001-2002	American Society of Hematology, Abstract Reviewer
2001-02	Executive Board/Steering Committee, Federation of Clinical Immunology Societies (FOCIS)
2001-02	Chair, Tumor Immunology Subcommittee, Clinical Immunology Society
2002	Ad hoc Member, Biologic Response Modifiers Advisory Committee, Food and Drug Administration
2002	Comitato Telethon Fondazione Onlus, Italy
2002	Dutch Cancer Society, The Netherlands
2003	Member, Biologic Response Modifiers Advisory Committee, Food and Drug Administration
2003	American Society of Hematology, Abstract Reviewer
2005	Genome Institute of Canada
2005	Centre National de la Recherche Scientifique, Paris, France
2006,07	Grant Review, University of Minnesota
2006-09	American Society of Oncology Cancer Education Committee

2006	Leader, Pediatric Oncology Education Track, American Society of Clinical Oncology
2007	American Society of Hematology, Abstract Reviewer
2007	La Fondation des Gouverneurs de l'espoir for Ewing Family Tumors Research
2007	European Research Council, Grant Review
2007-2010	Scientific Advisory Board, MidWest Athletes Against Cancer
2008	Alex's Lemonade Stand
2009	Alex's Lemonade Stand
2008	Israel Science Foundation
2008	FDA DNA Advisory Committee
2008	Coordinating Reviewer, Lymphocyte Section, American Society of Hematology
2009-2014	Chair, Medical Advisory Board, Children's Cancer Foundation
2010-2012	External Advisory Board, Program Project Grant, University of Minnesota
2010-2012	External Advisory Board, Program Project Grant, Baylor College of Medicine
2011	Vice Chair, American Society of Hematology, Scientific Committee on Immunology and Host Defense
2012	Ad hoc Advisory Board, St. Baldrick's
2012	AACR Career Development Award, Pediatrics
2012	Chair, Scientific Advisory Board, MidWest Athletes Against Cancer
2012-13	Chair, Scientific Committee on Immunology and Host Defense, American Society of Hematology,
2012	Genome Quebec, Genome Canada, Advisory Board
2012-14	St. Baldrick's
2012	American Society of Hematology: Career Development Awards
2013	Chair, Scientific Advisory Board, Midwest Athletes Against Cancer
2014	External Advisory Board, St. Anna Kinderspital, Vienna Austria
2013-14	Immunology Steering Committee, American Association for Cancer Research
2014, 15	Alex's Lemonade Stand
2014	Solving Kids Cancer
2014-15	Chair, Program Committee on Immunology, AACR Program Committee
2014, 15	AACR Lloyd Old Award in Cancer Immunology, Selection Committee
2015-present	Hyundai Hope on Wheels Medical Advisory Board
2016	ASH Committee on Scientific Affairs
2018-present	Foundation for NIH Trailblazer Prize Jury
2019	AACR Cancer Progress Report 2019 Steering Committee
2019-2023	Scientific Committee, Cancer Research UK, Grand Challenges
2019-2025	External Advisory Board, Human Oncology and Pathogenesis Program, Memorial Sloan Kettering Cancer Center
2019-2022	External Advisory Board, University of Colorado Comprehensive Cancer Center
2019-present	Szent-Gyorgyi Prize Selection Committee
2020	SPORE Study Section, National Cancer Institute
2020-present	External Advisory Board, Dana Farber Cancer Institute
2020-present	American Cancer Society Brightedge Fund, Advisory Council
2020-present	AACR Oncology Development Fund Investment Advisory Committee
2023	Chair, Lloyd Old Award in Cancer Immunology, Selection Committee
2025	Board of Directors, American Association for Cancer Research

2025	Strategic Advisory Committee, American Association for Cancer Research
2025	Steering Committee, AACR Pediatric Cancer Report

Local Advisory Boards, Committees (non-profit, selected):

1999-2001	Intramural Advisory Board, National Cancer Institute
1997	Search Committee, Vaccine Research Center, NIAID
1998-2000	NCI Intramural Advisory Board
2000	NIH Study Section, Program Project Grants NHLBI, Transplantation Biology
2002-03	Steering Committee, NIH Immunology Interest Group
2002-present	Steering Committee, NCI Immunology Faculty
2002-07	Data Safety and Monitoring Board, Adolescent Medicine Trials Network, National Institute of Child Health
2003-2012	Preceptor, NIH Clinical Research Training Program
2001	Progress Review Group on Sarcomas, National Cancer Institute
2004	NIH Representative, NIH Director's Advisory Board for Open Access Policy to Scientific Literature
2004-present	Steering Committee, NCI Center of Excellence in Immunology
2004-08	NIH Central Tenure Committee
2005-present	NCI Clinical Review Panel
2005	NCI Center for Cancer Research, Advisory Board
2005-06	Clinical Executive Committee, NIH NCI
2005, 2006	Reviewer, NCI Director's Award
2006	Search Committee, Chief of Medical Oncology Branch, National Cancer Institute
2006, 2007	Reviewer, Sallie Rosen Kaplan Award
2006	Search Committee, Chief of Laboratory of Pathology, National Cancer Institute
2006	Co-Chair, Work Group, Trans-NIH Research Initiative
2006	Advisory Board, Trans-NIH Translational Initiative in Immunology
2007	Search Committee, Tenure Track in Pediatric Rheumatology, NIAMS
2007	Search Committee, Head, Cell Processing Section, Department of Transfusion Medicine, NIH Clinical Center
2007	Operational Review Team, Department of Laboratory Medicine, NIH Clinical Center
2007	Search Committee, Tenure Track in Surgery, NCI
2007	Search Committee, Tenure Track in Cancer and Inflammation, NCI
2007	Search Committee, Tenure Track in National Human Genome Research Institute
2008-12	Advisory Board for Clinical Research, NIH Clinical Center
2007-10	Advisor to Deputy Director on Intramural Research, Trans-NIH Intramural Research Initiatives
2010	Search Committee, Tenure Track in Laboratory of Tumor Immunology and Biology, NCI
2010-12	Steering Committee, NIH Immunology Interest Group
2010-13	Bench-to-Bedside Review Team, NIH
2011	Chair, Search Committee, Tenure Track in Experimental Transplantation and Immunology Branch, NCI

2012	Search Committee, Tenure Track in Dermatology, NCI
2011-12	Advisor to Deputy NCI Director, National Cancer Institute, Provocative Questions
2012-14	Executive Committee, Medical Research Scholars Program, NIH
2012-13	Executive Committee, Provocative Questions, NCI
2014-present	Center for Cancer Research Science Board
2014	Long-term Visioning Committee, National Cancer Institute
2014	Pediatric Visioning Committee, NIH Clinical Center
2015	Long-term Visioning Committee, National Institutes of Health
2018-present	Academic Review and Promotion Committee, Department of Pediatrics, Stanford School of Medicine
2018	Chair, Search Committee, Department of Neurosurgery, Stanford School of Medicine
2019-present	Dean's Executive Committee, Stanford School of Medicine
2020-2021	Diversity, Equity and Inclusion Committee, Stanford Program in Immunology
2020-present	Search Committee, Bone Marrow Transplantation and Cell Therapy Division, Stanford School of Medicine
2021	Search Committee, Pediatric Hematology/Oncology/SCT Division, Stanford School of Medicine

Patents/Provisional and Patents Pending:

2005	A Peptide Epitope and Improvement Thereof Inducting T Cell Immunity to Alveolar Rhabdomyosarcoma in HLA-B7 positive Individuals. Patent issued: 7,867,977 (US, 2011).
2008	Survivin Specific T Cell Receptors For Immunotherapy of Cancer, U.S. Patent Application No. 61/140,338 filed 2008.
2012	Anti-CD22 Chimeric Antigen Receptors, Patent# 9868774
2013	M971 Chimeric Antigen Receptors, US Patent # 100720782013
2013	Immunogenic Peptides And Methods Of Use For Treating And Preventing Cancer, Berzofsky et al, U.S. Patent # 9206245
2013	Immunogenic Peptides And Methods Of Use For Treating And Preventing Cancer, Berzofsky et al, U.S. Patent # 20140141004
2014	ALK Antibodies, Conjugates and Chimeric Antigen Receptors, Publication # 20160280798
2015	Anti-CD276 polypeptides, proteins and chimeric antigen receptors. Patent # 9790282
2015	Dual Specific Anti-CD22-Anti-CD19-Chimeric Antigen Receptors, US Patent # 10738116
2015	Anti-CD276 Chimeric Antigen Receptors, US Patent Application No 62/216,447 filed September 10, 2015
2017	Compositions and Methods for Treatment of Cancers Harboring an H3K27M Mutation. Filed 7/12/18, Patent #: 11,433,098
2017	Methods to prevent T-cell exhaustion and improve CAR-T cell immunotherapy with small molecules, Provisional 62/479,930; PCT/US2018/025394, Filed 03/30/2018
2017	Methods of Treating T Cell Exhaustion by Inhibiting Modulating T Cell Receptor Signaling, PCT/US2018/025459, Filed 03/30/2018, Publication # 20200101108

2017 Methods of Treating T Cell Exhaustion by Inhibiting Modulating T Cell Receptor Signaling, PCT/US2018/025394, Filed 03/30/2018
2017 Compositions and Methods for Inhibiting T Cell Exhaustion, Provisional 62/599,299, Filed 12/15/2017; 62/738,687, 9/28/2018; PCT/US2018/065801 Filed 12/14/18.
2018 Bicistronic Chimeric Antigen Receptors and their Uses, Patent Application No 20200147134
2018 Chimeric Antigen Receptor Polypeptides and Methods of Using Same, Provisional 62/694,830, Filed 7/6/2018
2018 SMASh_CARs: A "drug off" chemogenetic system for regulating CAR T-cell therapy, Provisional 62/694,830, Filed 7/6/2018
2018 Small Molecule Modulators of chimeric antigen receptor (CAR) T cells, Provisional 62/752,401 Filed 10/30/2018
2018 SNIP: A "drug on" chemogenetic system for regulating of CAR T-cell therapy PCT/US2019/064722. Filed 12/6/2019
2019 Therapeutic Antigen Binding Proteins Specific For CD93 and Methods of Use Thereof, Provisional 62/813,009, Filed 03/02/19, Publication # 20220133794
2019 Regulatable Cell Surface Receptors and Related Compositions and Methods, Provisional 62/776,250, Filed 12/06/2018
2019 Enhancement of Polypeptides and Chimeric Antigen Receptor (car) via Hinge Domains, Provisional 62/844,683. Filed 05/07/2019
2019 Chimeric Antigen Receptors Targeting Glycipan-2, Provisional 62/844,695, Publication# 20220315665, Filed 05/07/2019
2019 STASH Tag: A chemigenetic system for control of protein localization, PCT/US2020/055057
2020 Optimized CAR T cell hinge regions enhance CAR functionality, PCT/US2020/031728, Filed 05/06/20, Publication #: 20220218751
2020 CARs Engineered to Overcome Loss of CD58, PCT 62/976,997
2020 Immune cells with increased glycolytic flux, Filed 7/9/2020, 63/049,946
2020 Novel T-Cell Specificities and Uses Thereof, Filed 4/4/20, 63/014,960
2020 Injectable Hydrogels for Adoptive Cell Therapy in Solid Tumors, Filed 10/20/20, 63/094,243.
2020 Methods For Diagnosing Or Treating Conditions Or Optimizing Therapeutic Efficacy Of Car-T Cells Therapies, 18/251,697.
2021 Method to Enhance CAR T Efficacy through Adenosine Deaminase Overexpression 63/238,756, Filed 8/20/21
2021 NOT-gated CAR T Cells to Ameliorate On-target, Off-tumor Toxicity of CAR T Therapy, Filed, 63/244,636, Filed 9/15/212020
2023 Enhanced and specific CAR signaling molecules, Filed 823/23, 18/547,652
2023 Immune cells with alleviated mediator complex activity, Filed 5/23/23, 18/251,696.
2023 Cell Selection Methods and Related Compositions, Filed 9/28/23, 18/284,827.
2023 Cell-free method to predict responses to CAR-T cell therapies and screen for biomarkers, Filed 4/12/23, 18/248,757.
2023 Epstein Barr Virus -specific T cells and their therapeutic use in lung cancer, Filed 9/1/23, 18/548,765.
2023 Methods to improve CAR T cell efficacy and safety by modulating mediators of phagocytosis, Filed 10/30/23, 18/288,913.

2023 Supplementation with inosine improves CAR-T cell metabolism and anti-tumor effects, Filed 7/7/23, 118/881,674.
2023 Synergistic Enhancement of Cancer Treatments: Converging Anti-CD47 and CAR T Cell Therapies, 63/441,637, filed 1/27/23.
2023 Chimeric Cytokine Receptors for Enhancing the Efficacy of Cell Therapies, 19/104,149. Filed 8/25/23.
2023 A multiplexed RNA regulation platform for primary immune cell engineering, 19/102, 637. Filed 8/24/23.
2023 Efficient Homology-Independent Solution for Precise Targeted DNA Insertions in Human T-cells, 19/135,745, Filed 12/14/23.
2024 Advancing CAR-T Cell Therapies with Memory-Like Traits 18/855,242. Filed 10/8/24
2024 Trivalent CAR-T Cells for Targeting of Cancerous Hematopoietic Cells, 63/575,589. 4/5/24.
2025 Regulating CAR-T cell function with endogenous proteases. 63/787,591. Filed 4/11/25.
2025 Fully Human CD19-Targeted CAR T Cells for Cancer Treatment, 63/754,370, Filed 2/5/25.
2025 Multi-Pass Scaffold Technology for Modular CAR T-Cell Therapies, 63/850,338. Filed 7/24/25.
2025 Enhancing CAR T-Cell Therapy for Solid Tumors with Multi-Specific Engineering and Exhaustion Resistance, 63/820,519, Filed 6/9/25.
2025 Rapid Programmable CAR-T Cell Engineering Platform Using Antigen-Targeted Lentiviral Delivery for Same-Day In Vivo and Ex Vivo T Cell Modification, 63/794,747, Filed 5/25/25.
2025 Developing cross-reactive B7H3-targeting CAR-T cells for enhanced preclinical cancer models, 63/792,092, Filed 4/21/25.
2025 Chimeric receptors for tissue-specific sensing and immune cell activation.
2025 Composition and Methods for Selective Expansion of CAR-T Cells Made in vivo or ex-vivo with the IL9R. 63/794,887, Filed 4/25/25.
2025 Interleukin-7 Conjugated Lipid Nanoparticles To Improve MRNA Delivery To T Cells For In Vivo T Cell Engineering, Imaging And Chimeric Antigen Receptor-T Cell Therapy, 63/879,236, Filed 9/10/25.

Sponsored Research Awards:

2003-2007 *Principal Investigator*, Preclinical and Clinical Study of Anti-TR1 (TRAIL-R1) and Anti-TR2 (TRAIL-R2) in Ewing's Sarcoma, Human Genome Sciences, Inc.
2004-2010 *Principal Investigator*, NIH CRADA, Phase I Study of r-hIL-7 (CYT 99 007) for Treatment of Refractory Solid Tumors with Cytheris, LLC.
2012-2016 *Principal Investigator*, NIH CRADA, Development of New Lentiviral-Based Chimeric Antigen Receptors (CARs) Targeting Cell Surface Proteins for the Treatment of B-Cell Malignancies, Opus Inc.
2013-2016 *Principal Investigator*, M-CRADA, Study of AP1903 as a Dimerizing Agent to induce Apoptosis of T cells Expressing a GD2.z.28.OX40.1CD9 Chimeric Antigen Receptor, Bellicum Pharmaceuticals

2016-2018 *Principal Investigator*, Sponsored Research Award, Enhancing CAR Responses to Solid Tumors by Modulating Immunosuppression and Exhaustion, Bluebird Bio

2017-2019 *Principal Investigator*, Sponsored Research Award, Assessment of in vitro and in vivo Activity of hDHFR/PDE5-Regulated CARs, Obsidian Therapeutics

2020-present *Principal Investigator*, Sponsored Research Award, Engineering Enhanced Potency CAR T cells, Lyell Immunopharma

2022-2023 *Principal Investigator*, Sponsored Research Award, Epigenetic Editing of Engineered T Cells, Tune Therapeutics

Clinical Protocol Leadership/IND Sponsorship:

1997-2002 *Principal Investigator*, NCI Protocol 97-C-0050, A Pilot Study of Tumor Specific Peptide Vaccination with IL2, with or without Autologous T Cell Transplantation in Patients with Recurrent Pediatric Sarcomas

1997-2005 *Principal Investigator*, NCI Protocol 97-C-0052, A Pilot Study of Autologous T Cell Transplantation with a Vaccine Driven Expansion of Anti-Tumor Effectors After Cytoreductive Therapy in Metastatic Pediatric Sarcomas

2001-2004 *Principal Investigator*, NCI Protocol 01-C-0037, Late Effects of Treatment in Survivors of Pediatric Sarcomas

2007-2009 *Principal Investigator*, NCI Protocol 02-C-0259, Pilot Study of Allogeneic Blood Stem Cell Transplantation in Patients with High Risk and Recurrent Pediatric Sarcomas.

2003-2009 *Protocol Chairperson*, NCI Protocol 03-C-0152, A Phase I Trial of Subcutaneous rhIL7 (Cyt-99-007) in Refractory Non-hematologic Malignancies.

2004-2015 *Principal Investigator*, NCI Protocol 04-CN-135, Prospective Evaluation of the Prognostic Relevance of PCR Positivity in Blood and Bone Marrow in Non-Metastatic Ewings Sarcoma. A Companion Biology Study to COG AEWS0031.

2007-2011 *Principal Investigator*, NCI Protocol 07-C-0040, "A Phase I Trial of Monoclonal Antibody HGS-ETR2 in Patients with Refractory Pediatric Solid Tumors".

2007-2015 *Principal Investigator*, NCI Protocol 07-C-0206, "A Pilot Study Of Tumor Vaccination In Patients With Neuroblastoma And Pediatric Sarcomas And Altered T Cell Homeostasis".

2007-2015 *IND Sponsor*, Tumor Purged/CD25+ Depleted Lymphocytes with Tumor Lysate/KLH Pulsed Dendritic Cell Vaccine

2010-2015 *IND Sponsor*, KT64.4-1BBL aAPC + rhIL15 Expanded Allogeneic NK Cells after T Cell Depleted Allogeneic PBSCT

2011-2015 *IND Sponsor*, Anti-CD19 CAR T Cells for Refractory B Cell Malignancies

2007-2010 *Principal Investigator*, NCI Protocol 08-C-0007, “A Phase I Trial of Ipilimumab in Patients with Refractory Pediatric Cancer”

2011-2015 *Principal Investigator*, NCI Protocol 11-C-0113, A Pilot Study of Genetically Engineered NY-ESO-1 Specific T Cells in HLA-A2+ Patients with Synovial Cell Sarcoma

2013-2015 *IND Sponsor*, Autologous NK Cells Plus rhIL15 for Refractory Pediatric Solid Tumors

2013-2015 *IND Sponsor*, Anti-GD2.28.z.OX40.ICD9 (anti-GD2 CAR) retroviral transduced autologous peripheral blood lymphocytes, AP1903 dimerizing agent for the

	treatment of GD2+ Pediatric Sarcomas
2013-2015	*Principal Investigator,* A Phase I Trial of T Cells Expressing an anti-GD2 Chimeric Antigen Receptor in Children and Young Adults with Non-neuroblastoma, GD2+ Solid Tumors
2014-Present	*Study Chair*, A Phase 1/2 Study Of Nivolumab In Children And Adolescents With Recurrent Or Refractory Solid Tumors As A Single Agent And In Combination With Ipilimumab, Translational Children's Oncology Group Trial
2017-Present	*IND Sponsor*, Autologous T Cells Transduced with Bivalent Lentiviral Vector (CD19/22.BB.z) Chimeric Antigen Receptor (CAR)
2017-Present	*Principal Investigator*, Phase 1 Dose Escalation Study of CD19/CD22 Chimeric Antigen Receptor (CAR) T Cells in Children and Young Adults with Recurrent or Refractory B Cell Malignancies, Stanford University
2020-Present	*IND Sponsor,* Autologous T-Cells transduced with retroviral vector (14g2a-GD8.BB.z.iCasp9) expressing GD2 chimeric antigen receptor; and chemotherapy
2022-Present	*IND Sponsor,* Autologous T-cells Transduced with Lentiviral Vector Expressing B7-H3 Targeting Chimeric Antigen Receptor (Ef1a-CAR276.CD8.BB.z); Administered via Locoregional Infusion into CNS (Intracerebroventricular and/or Intratumoral)
2024-Present	*IND Sponsor,* Autologous T-cells Transduced with Lentiviral Vector (Ef1a-CAR276) Expressing B7-H3 Targeting Chimeric Antigen Receptor (B7-H3CART); Administered by intravenous (IV) or intraperitoneal (IP) infusion
2024-Present	*IND Sponsor*, Ef1a-CAR276 Chimeric Antigen Receptor (B7-H3CAR) lentiviral transduced autologous peripheral blood lymphocytes (B7-H3CART**)**
2025-Present	*IND Sponsor*, Phase 1 Clinical Trial of GPC2 Chimeric Antigen Receptor T (GPC2-CAR T) Cells for Relapsed or Refractory Medulloblastoma in Children and Young Adults

Editorial Responsibilities:

2001-2006	Editorial Board, Clinical Immunology
2002-2008	Editorial Board, BLOOD
2002-2005	Editorial Board, Medical Immunology
2003-2010	Editorial Board, Biology of Blood and Marrow Transplantation
2004-2010	Editorial Board, Molecular Cancer Therapeutics
2004-2009	Editorial Board, Pediatric Blood and Cancer
2004-2010	Editorial Board, Pediatric Hematology/Oncology
2004-2010	Editorial Board, Liddy Shriver Sarcoma Initiative
2007-2011	Associate Editor, Journal of Pediatric Hematology/Oncology
2008-2014	Associate Editor, BLOOD
2009	Editor, Pediatric Clinics of North American, Bone Marrow Transplantation
2011-2015	Founding Editor-in-Chief, Frontiers in Pediatric Oncology
2016-2018	Cancer Today, Editorial Advisory Board
2019	Associate Editor, Cancer Immunology Research
2020-present	Editorial Board, *Cell*

Ad hoc reviews: New England Journal of Medicine, Nature, Science, Nature Medicine, Nature

Bioengineering, Nature Reviews Immunology, PNAS, Immunity, Journal of the National Cancer Institute, Journal of Clinical Investigation, Journal of Experimental Medicine, Journal of Immunology, Cancer, Cancer Research, Journal of Clinical Oncology, European Journal of Immunology, Journal of Leukocyte Biology, International Journal of Pediatric Hematology/Oncology, Bone Marrow Transplantation, Immunology Today, American Journal of Pediatric Hematology/Oncology, Journal of Infectious Diseases, Cell Death and Differentiation, AIDS

Teaching and Mentoring (selected):

Postdoctoral Fellows	Years	Current Position
Theresa Goletz	1997-1999	Vice President, Cancer Immunology & Immune Modulation, Boehringer Ingelheim
Manoj Sinha	1999-2001	Biologist, New York University
Philomena Medeiros	1999-2000	Attending Pathologist, University of Lisbon, Portugal
H. Udo Kontny	1998-2001	Head, Section on Pediatric Hematology/Oncology, Aachen Germany
Margret Merino	1998-2001	Product Reviewer, US Food and Drug Administration
Hua Zhang	1999-2004	Vice President, VP and Chief Scientific Officer at SPH Biotherapeutics (HK) Hong Kong
Fraia Melchionda	2001-2004	Assoc Professor, University of Bologna, Italy
Melinda Merchant	1999-2004	Chief Medical Officer, Normunity
Terry Fry	1997-2002	Charles C. Gates Endowed Chair in Regenerative Medicine and Professor of Pediatrics, Univ of Colorado School of Medicine; Executive Director Gates Institute, Director of Cancer Immunotherapy at University of Colorado School of Medicine
Martin Guimond	2003-2008	Asst. Professor, University of Montreal, Canada
Kristen Snyder	2003-2007	Attending Physician, Children's Hospital of Philadelphia
Aviva Krauss	2005-08	Product Reviewer, US Food and Drug Administration
Yongzhi Cui	2006-2010	Study Physician, Astra Zeneca
Christian Capitini	2006-11	Professor and Chief, Div of Pediatric Hematology/Oncology, Acting Director, U of Wisc Cancer Cancer
Najat Boujkouj	2008-10	Assoc Director Pediatric Office of Therapeutic Products, US Food and Drug Administration
Jeremy Edwards	2008-10	Attending Physician, Tripler Army Base, Honolulu, HI
Steven Highfill	2010-2014	Director, Process Dev, Center for Cell Engineering, National Institutes of Health
M. Eric Kohler	2013-2014	Asst. Professor of Pediatrics, Univ of Colorado School of Medicine
Daniel Trey Lee	2009-2015	Director of Pediatric BMT, Assoc. Professor, University of Virginia
Robbie Majzner	2014-2019	Associate Professor, Harvard Medical School, Director Pediatric/Young Adult Cancer Cell therapy Program
Samuel Haile	2014-2017	Director, Cell Biology, Kite Pharma, San Francisco
Sabine Heitzeneder	2014-2023	Taube Distinguished Scholar for Pediatric Immunotherapy, Asst. Professor, Stanford University
Rachel Lynn	2016-2018	Assoc Director Research, Lyell Immunopharma
Evan Weber	2016-2021	Asst. Professor, University of Pennsylvania
Dorota Klysz	2017-2021	Clinical Data and Biomarker Specialist, Miltenyi Biotec
Johanna Theruvath	2017-2022	Medical Director, Miltenyi Biotec
Meena Kadapakkum	2017-2020	Asst. Professor, Pediatric Hematology/Oncology, UCLA
Diane Tseng	2017-2020	Asst. Professor, Medical Oncology, University of Washington
Zinaida Good	2018-present	Asst. Professor, Stanford University
Sneha Ramakrishna	2018-present	Asst. Professor, Stanford University

Hima Abunathan	2018-2021	Scientist, Personalis
Rebecca Richards	2018-2022	Asst. Professor, Univ of Wisconsin
Valentine Barsan	2019-2022	Adjunct Professor, UCSF, Investor, Softbank Investor Advisers
Matt Frank	2019-present	Asst. Professor, Stanford University
Amaury Leruste	2018-2021	Institut Curie
Hyatt Balke Want	2020-2023	Asst. Professor, University of Cologne
Cecilia Romello	2020-present	Senior Scientist, Seismic Therapeutic
Louai Labanieh	2022-2024	Asst. Professor, Mt. Sinai College of Medicine
Sean Yamada-Hunter	2020-2025	Asst. Professor, UCLA
Naiara Martinez-Velez	2020-present	Postdoctoral Fellow, Stanford University
Yiyun Chen	2021-present	Postdoctoral Fellow, Stanford University
Adria Canellas	2023-present	Postdoctoral Fellow, Stanford University
Diren Usta	2023-present	Postdoctoral Fellow, Stanford University
Alex Salter	2024-present	Postdoctoral Fellow/Medical Oncology Fellow, Stanford University
Dehua Bi	2024-present	Postdoctoral Fellow, Stanford University
Bronte Manouk Verhoeven	2025-present	
Akram Hamad	2025-present	

Doctoral Students

Melissa Hazen	2000-2001	Asst. Professor of Pediatrics, Boston Children's Hospital
Sarah Taylor Tasian	2001-2002	Associate Professor of Pediatrics, Children's Hospital of Philadelphia
Achiamah Osei-Tutu	2002-2003	Dermatologist, Private Practice, New York City
Jessica Karl Shand	2003-04	Associate Professor of Pediatrics, Health Humanities and Bioethics, Univ. of Rochester
Tom Krupica	2004-06	Gastroenterologist, Winchester, VA
Eunice Rhee	2006-07	Neonatology, Kaiser Permanente, Los Angeles
Haven Garber	2007-08	Asst. Member, MDACC
Natasha Fewkes Carter	2008-12	Dermatology, Comprehensive Dermatology Group
Wangko Lundstrom	2009-2012	Head of Analytics, Octopharma, Sweden
Sneha Ramakrishna	2010-11	Asst. Professor, Stanford University
Martha Amoako	2010-11	Pediatric Anesthesia, Johns Hopkins
Will Babbitt	2011-12	General Pediatrics
Tasha Lin	2011-12	Medical Oncologist, Marina del Rey
Adrienne Long	2011-15	Fellow, Pediatric Hematology/Oncology, Stanford University
Nick Tschernia	2013-14	Physician-Scientist, Early Investigator, Center for Cancer Research, National Cancer Institute
Justin Arredondo-Guerrero	2017-2024	Postdoctoral Fellow, Baylor College of Medicine
Louai Labanieh	2017-2025	Asst. Professor, Mt. Sinai School of Medicine
Victor Tieu	2019-2023	Scientist, Site Therapeutics, San Francisco
Katherine Murphy	2019-2023	Research Scientist, Kite Pharma
Vandon Duong	2019-2025	Principal, Data Collective Venture Capital
Tara Murty	2019-present	MSTP Student, Biophysics, Stanford
Jeremy Bjelajac	2021-present	Doctoral Student, Stem Cell Biology, Stanford
Kylie Burdsall	2021-present	MSTP Student Cancer Biology, Stanford
Quenton Bubb	2021-present	MSTP Student Stem Cell Biology, Stanford
Alex Doan	2020-present	General Surgery Resident, Stanford University
Audre Pontzer May	2022-present	Doctoral Student, Immunology, Stanford
William Wang	2023-present	Medical Student, Stanford University

Pre- & Post-baccalaureates

Matthew Milliron, MD	2003-04	Anesthesiologist, Charleston, SC
Varun Khanna, MD	2004-05	Asst. Professor of Cardiology, Univ of Oklahoma
Sarah G. Mitchell, MD	2004-05	Asst. Professor Pediatrics, Winship Cancer Institute Emory College of Medicine
Dave Grindler MD	2005-06	Otolaryngologist, Kaiser Permanente, Colorado
Rachelle Veenstra PhD	2006-07	PRA Health Sciences, Raleigh-Durham
Jeff Leong, MD/PhD	2007-08	Resident in Internal Medicine, Univ of California, Irvine,
Ryan Murphy	2008-08	Medical Student, University of California, San Diego
Joanna Meadors Hales MD	2008-10	Pediatrics, Asheville, NC
Janna Minehart MD	2012	Residency, Internal Medicine, Univ of Pennsylvania
Waleed Haso MD	2011-2014	Senior Scientist, Kite Pharma
Alec Walker	2013-2015	Postdoctoral Researcher, Harvard Medical School
Jillian Smith MD	2013-2015	Pediatric Hematology/Oncology, Children's National Medical Center
Skylar Reitburg	2017-2019	Life Science Research Professional, Stanford University
Jake Lattin	2018-2019	Medical Student, St. Louis University
Brooke Vittemberga	2016-2019	Medical Student, UCSF
Panos Vandris	2018-2021	Masters Student, Stanford University
Jennifer Hamad	2021-2025	Life Science Research Professional, Stanford University

Thesis Committees:

2002	Outside Expert, Thesis Committee, Rockefeller University
2002	Outside Expert, Thesis Committee, Rush University
2016-2020	Surya Murty, Stanford Bioengineering Graduate Program
2017-2020	Benson George, Stanford Stem Cell Program
2017-2020	Chris Mount, Stanford Cancer Biology Program
2017-2018	Salil Bhate, Stanford Immunology Program
2017-2019	Phoebe Yi, Stanford Stem Cell Program
2016-2021	David Gennert, Genetics Program
2018-2024	Tim Keyes, Stanford Cancer Biology Program
2020-present	Nishant Mehta, Stanford Bioengineering Program
2022-present	Sarah Sackey, Stanford Immunology Program
2022-2024	Lehi Acosta-Alvarez, Stanford MSTP Program
2022-2024	Meelad Amouzgar, Stanford Immunology Program
2023-2025	Jaclyn Ng, Stanford Cancer Biology Program
2019-2025	Valentino Sudaryo, Stanford Immunology Program
2022-present	Nick Phillips, Stanford Cancer Biology Program
2024	Reece Akana, Stanford Cancer Biology Program
2024-present	Crystal Chen, Stanford Chemical Engineering Program
2024-present	Emma Heaton, Stanford Cancer Biology Program
2024-present	Jacqueline Ng, Stanford Cancer Biology Program

Stanford Didactic Teaching:

2016, 2018-20	Stanford Undergraduate Human Biology
2017-19	Stanford Advanced Immunology (Immunol 202)

2017-21 Stanford Tumor Immunology and Immunotherapy (CBIO 275/Immuno275)
2018-20 Stanford Advanced Immunology (Immunol 202)
2018 Stanford Bioengineering
2022 Stanford MSTP Retreat Keynote
2023 MED251 Class (A to Z of Translational Medicine)
2024 Stanford Bioengineering
2024 Stanford Summer BioX

Consulting:

2016-2018 Scientific Advisory Board, Glaxo-Smith-Kline Cell and Gene Therapy
2016 Scientific Advisory Board, Glaxo-Smith-Kline Cancer Cell Therapy
2016-2018 Chair, Scientific Advisory Board, Adaptimmune LLC
2016 Scientific Advisory Board, Servier, Pfizer
2016-2019 Scientific Advisory Board, Unum Therapeutics
2016 Scientific Advisory Board, NKarta Therapeutics
2016, 2019 Scientific Advisory Board, Roche
2016-2018 Scientific Advisory Board, Vor Pharmaceuticals
2018-present Scientific Advisory Board, Apricity Health
2018 Consultant, TPG
2018 Scientific Advisory Board, Allogene
2018 Scientific Advisory Board, Bryologyx
2018 Scientific Advisory Board, PACT Pharma
2018-2023 Scientific Advisory Board, Nektar
2019, 2021 Bristol Myers Squibb
2019-present Lyell Immunopharma
2019-2022 Scientific Advisory Board, Neommune Tech
2020-present Scientific Advisory Board, Immatics
2021-present Red Tree Ventures
2021-2022 Co-Chair, Scientific Advisory Board, Glaxo-Smith-Kline Cell and Gene Therapy
2021-present Scientific Advisory Board, Ensoma
2021-2023 Scientific Advisory Board, Mammoth Biosciences
2021-2025 Syncopation Life Sciences/CARGO Therapeutics
2022-present Link Cell Therapies
2022-present BrightEdge Venture Fund, American Cancer Society
2022-present Immatics
2024-present Astra Zeneca
2025 Grace Science
2025 Nektar
2025 Kite Pharma

Invited Lectures (selected):

1995 SPIRAT/NCDDG HIV Conference on Novel HIV Therapies: From Discovery to Clinical Proof-of-Concept, Bethesda, MD
1996 Keystone Symposia on Blood and Bone Marrow Transplantation, Keystone, CO
1996 NIH Grand Rounds

1996 Second Annual NIH Immunology Retreat, Airlie, VA
1997 Third Annual NIH Immunology Retreat, Immune Tolerance Session, Airlie, VA
1997 *Plenary Session*, Intl. Workshop on HIV Drug Resistance, St. Petersburg, FLA
1997 Fourth International Symposium, Biologic Therapy of Cancer-From Basic Research to Clinical Application, Munich, Germany
1997 Aaron Diamond AIDS Research Center, Seminar Series, New York, NY
1997 Karmanos Cancer Institute Oncology Grand Rounds, Detroit, MI
1997 NIH Immunology Interest Group, Bethesda, MD
1998 Fourth Annual Translational Research Symposia, Antiretroviral Therapy, San Francisco, CA
1998 Pediatric Oncology Group, Biologic Response Modifiers Section, St. Petersburg, FLA
1998 Pediatric AIDS Clinical Trials Group, Leadership Retreat, San Diego, CA
1998 AIDS Clinical Trials Group, Leadership Retreat, San Diego, CA
1998 American Association of Immunologists, Aging Symposia, FASEB, San Francisco, CA
1998 Clinical Immunology Society, HIV Workshop, FASEB, San Francisco, CA
1998 *Plenary Session*, Fifth Conference on Retroviruses and Opportunistic Infections, Chicago, IL
1999 Infectious Disease Society of America, Philadelphia, PA, Symposia on Immune Reconstitution,
1999 Plenary Session on Targeted Therapy, Intl. Society of Pediatric Oncology/American Society of Pediatric Hematology Oncology, Montreal, Canada
1999 Institute of Virology, Immune Reconstitution in HIV Symposia, Bethesda, MD
1999 Children's Hospital of Philadelphia, Philadelphia, PA, Leukemia Interest Group,
1999 *Plenary Session*, Experimental Biology, Clinical Immunology Society, Immune Reconstitution, Washington DC
1999 Immunology Grand Rounds, Cornell University Medical Center, New York City
1999 Johns Hopkins University School of Medicine, Hematopoiesis Society
2000 Immunology Lecture Series, Dept. of Pathology, Case Western Reserve University, Cleveland, OH
2000 Dept of BMT and Pediatric Oncology, University of Bologna, Bologna Italy,
2000 Department of Pediatric Oncology, Kinderspasse, Vienna Austria,
2000 Allogeneic BMT, Forbeck Foundation, Hilton Head, SC,
2000 First International Ewings Sarcoma Symposia, Warrenton, VA
2000 New York Society of Physicians and Surgeons, Tumor Immunology, New York, NY
2000 National Institute of Arthritis and Musculoskeletal Diseases, Stem Cell Research: Potential and Promise, Bethesda, MD
2000 American Academy of Immunology, Clinical Immunology Society Symposium, Seattle, WA
2000 *Plenary Session*, Immune Reconstitution, American Society for BMT Annual Meeting, Anaheim, CA
2000 Grand Rounds, Dept. of Pediatrics, Memorial Sloan Kettering Cancer Center, New York, NY
2001 Immunology Faculty Seminar Series, NCI,
2001 Immunology Interest Group Seminar Series, NIH,
2001 *Plenary Session*, Scientific Subcommittee on Pediatric Hematology, American Society of Hematology, Orlando, FLA

2001 Pre-meeting Symposium on HIV Immunotherapy Federation of Clinical Immunology Societies (FOCIS), Boston, MA
2001 Office of AIDS Research Advisory Board, National Institutes of Health
2001 *Plenary Session*, Keystone Symposia on HIV Pathogenesis; Keystone CO
2001 Dept. of Immunology Lecture Series, Mayo Clinic, Rochester, Minnesota,
2001 Department of Bone Marrow Transplantation Lecture Series, University of Minnesota, Minneapolis, Minnesota
2002 Immunology Faculty Seminar Series, NCI
2002 National Childhood Cancer Foundation, Gold Ribbon Days, "New Therapeutic Strategies for Pediatric Cancer", Washington DC
2002 *Plenary Session*, Cytokines and Cancer, NCI-EORTC, Frankfurt Germany
2002 Department of Pediatrics, University of Rochester, Rochester, NY
2002 Oncology Grand Rounds, Immune Based Therapies in Pediatric Oncology Baylor College of Medicine, Texas Children's Hospital, Houston TX
2002 Immunology Seminar Series, IL-7 Based Therapeutic Strategies St. Jude Children's Research Hospital, Memphis, Tennessee
2002 Cytokine Modulation of Immune Reconstitution, NHLBI Conference on Immune Reconstitution post-Allogeneic BMT, Bethesda, MD
2002 Second International Conference on Ewings Sarcoma, Hanover, NH
2002 CFAR Conference, Case Western Reserve University, Cleveland, OH
2003 *Plenary Session* on Hematopoietic Stem Cell Transplantation, International Society of Cell Therapy, Phoenix, AZ
2003 Symposium for Practicing Physicians, Focus on Immunotherapy, National Cancer Institute, Bethesda, MD
2003 Topic Symposium on Immune Reconstitution, Pediatric Academic Society/American Society of Pediatric Hematology/Oncology, Seattle, WA,
2003 Symposium, Immunology and Immunotherapy of Pediatric Malignancies, American Society of Pediatric Hematology/Oncology, Seattle, WA
2003 *Plenary Session*, Keystone Symposia on HIV Immunopathology, Banff, Canada
2003 *Keynote Speaker*, Regional Cancer Consortium, Ohio State University, Columbus, OH
2003 Virology Faculty Retreat, Gamma C Cytokines as Vaccine Adjuvants, Bethesda, MD
2003 NIH Cytokine Interest Group Symposia on Lymphocyte Homeostasis, Frederick, MD
2004 Session Chair on Bone Marrow Transplantation, International Congress of Immunology, Montreal Quebec
2004 Immune Reconstitution after BMT, Summer Immunology Conference, FASEB, Snowmass, CO
2004 *Keynote Speaker*, European Society of Pediatric Bone Marrow Transplantation, Immune Reconstitution: Current Concepts, Holland
2004 NIH Director's Series, T Cell Homeostasis
2004 NIH Recombinant DNA Advisory Board, External Expert, The Immune Response to Lymphopenia
2005 IL7 in Tumor Immunotherapy, Keystone Symposia on Tumor Immunology, Keystone, CO
2005 Major Symposia on Lymphocyte Homeostasis, American Academy of Immunology, San Diego, CA
2005 3rd International Conference on Ewing's Sarcoma, Dallas, TX

2005 NCI Center for Cancer Research Grand Rounds, Bethesda, MD
2005 NCI Translational Immunology Related to Cancer, Bethesda, MD
2005 Nobel Forum, Maintenance of Long-Term Immunity in Man, Karolinska Institute, Stockholm, Sweden
2005 Department of Pediatric Oncology, Karolinska Institute, Stockholm Sweden
2005 International Society for the Biologic Therapy of Cancer, Alexandria Virginia
2006 International Tumor Vaccine Symposium, Hasumi Foundation, Bethesda, MD
2006 American Society of Bone Marrow Transplantation, Honolulu, Hawaii
2006 Children's Oncology Group, Educational Session, Immunotherapy in Pediatric Oncology
2006 American Society of Gene Therapy, Symposia on Regulatory T cells, Baltimore, MD
2006 American Society of Clinical Oncology, Discussant, Scientific Session
2006 American Society for Veterinary Clinical Oncology, Tucson, Arizona
2007 NCI Science Writer's Series, Second Malignant Neoplasms
2007 4th Annual Cellular Therapy Symposium, Regensburg Germany
2007 NCI Executive Committee, Scientific Presentation
2007 Dana Farber Cancer Institute, Transplantation Grand Rounds, Boston, MA
2007 American Society for Pediatric Hematology/Oncology, Pediatric Academic Society, Toronto, Canada
2007 Rolduc, Conference in Basic Immunology, The Netherlands
2007 American Society of Clinical Oncology, Session Chair, Chicago, IL
2007 American Society of Clinical Oncology, Meet-the-Professor, Chicago, IL
2007 Cytokine Interest Group, National Institutes of Health
2007 *Keynote Speaker*, Midwest Athletes Against Cancer Scientific Symposium, University of Wisconsin, Milwaukee
2007 Nobel Mini-Symposium, IL-7 in Health and Disease, Stockholm Sweden
2007 NIH Research Festival
2007 NHLBI Grand Rounds, Bethesda, MD
2007 International Society for Biologic Therapy of Cancer, Boston, MA
2007 Ethics Grand Rounds, NIH Clinical Center
2007 Howard Hughes Cloister Program Seminar Series, Bethesda, MD
2008 International Society for Biologic Therapy of Cancer, Rockville, MD
2008 Oncology Grand Rounds, Washington Hospital Center, Washington DC
2008 Ewing's Sarcoma 4th International Symposium, Dartmouth College
2008 American Society of Pediatric Hematology/Oncology, Cincinnati, OH
2008 Rita Zaizov Honorary Symposium, Schneider Children's Hospital, Tel Aviv, Israel
2008 Oncology Congress, San Francisco, CA
2008 Knight's Fellows Presentation, NIH
2008 NCI Center for Excellence in Immunology Immunotherapy: Realizing the Promise
2008 Walter Reed Army Research Institute
2009 Food and Drug Administration, CBER, Seminar Series
2009 MD Anderson Cancer Center, Pediatric Grand Rounds, Houston, TX
2009 Visiting Professor, Institute of Molecular Medicine, University of Lisbon, Portugal
2009 *Plenary Session* on GVHD, Tandem Meetings for ASBMT/ISBMT, Tampa Florida
2009 Discussant, American Society of Clinical Oncology
2009 University of Minnesota, Grand Rounds, Minneapolis, MN
2009 Targeted Therapies for Childhood Cancer, Georgetown University, Washington DC

2009 University of Montreal, Hospital Massoneuve-Rosemont Scientific Advisory Board
2009 Memorial Sloan Kettering Cancer Center, National Conference on Desmoplastic Small Round Cell Tumor, New York, NY
2009 *Alex Koufos Memorial Lecture*, Akron Children's Hospital, Akron, OH
2009 Frontiers in Immunology, National Institutes of Health, Bethesda, MD
2009 Ethical and Regulatory Aspects of Clinical Research, NIH Clinical Center, Investigator Panel
2010 Children's Hospital, University of Cincinnati
2010 American Society for Pediatric Hematology/Oncology, Major Symposium, Montreal Canada
2010 Federation of Clinical Immunology Societies, Boston, MA
2010 Cell and Gene Therapy Group, Baylor College of Medicine/Texas Children's Hospital
2010 ATTACK Conference, Montpelier, France
2010 2nd International Conference on Immunotherapy in Pediatric Oncology, Houston, TX
2011 *The Vineberg Lecture*, Montreal Children's Hospital Grand Rounds, Montreal, Quebec
2011 American Society of Clinical Oncology
2011 Advances in Immunotherapy for Cancer, Center for Cancer Research, Bethesda MD
2011 Cooperative Immunotherapy Network (CITN), IL-7 Overview, Bethesda, MD
2012 Howard Hughes Research Institute Cloister Program, Bethesda MD
2012 *Keynote Speaker*, Texas Children's Hospital Cancer Center, Houston, TX
2012 Sarcoma Foundation of America, New York, NY
2012 NCI Center of Excellence in Immunology, Bethesda, MD
2012 2nd Berlin Symposium on Adoptive T Cell Therapy, Berlin, Germany
2012 Canadian Society of Immunology, St. Johns, Newfoundland
2012 3rd International Conference on Immunotherapy in Pediatric Oncology, Frankfurt Germany
2012 University of Birmingham, Birmingham England
2012 San Raffaele Institute, Milan, Italy
2012 *NIH Great Teachers Lecture*, Bethesda, MD
2012 Washington Academy of Sciences, Washington DC
2013 American Society for Bone Marrow Transplantation, Salt Lake City, Utah
2013 NIH Translational Research Interest Group
2013 Van Andel Research Institute, Grand Rapids, MI
2013 Meet-the-Expert, American Association for Cancer Research
2013 Cleveland Clinic Foundation, Immunology Research Seminar, Cleveland, OH
2013 Dana Farber Cancer Institute, Pediatric Hematology/Oncology Grand Rounds
2013 American Association of Immunologists, Major Symposium, Honolulu, HI
2013 American Society of Clinical Oncology, Chicago, IL
2013 Children's Oncology Group, Minneapolis, MI
2013 FDA-RAC T Cell Immunotherapies, Bethesda, MD
2013 Hyundai Childhood Cancer Advocacy Event, US Capitol, Washington DC
2013 Childhood Congressional Caucus, US Capitol, Washington DC
2013 CureSearch Symposium, Washington DC
2013 Human Immunology Symposium, Blood Research Institute, Milwaukee, WI
2013 International Sarcoma Conference, New York, NY
2013 American Assoc for Cancer Research, Pediatric Cancer at the Crossroads, San Diego, CA

2013 Educational Session, American Society of Hematology, New Orleans, LA
2013 Alexandra Scott Lectureship, Children's Hospital of Philadelphia
2014 StandUp2Cancer Scientific Summit, Pasadena, CA
2014 Grand Rounds, National Heart, Lung and Blood Institute, Bethesda MD
2014 Roswell Park Cancer Institute, Buffalo, NY
2014 17th US-Japan Meeting on Chimeric Antigen Receptor T cells for Cancer Therapy, Bethesda, MD
2014 St. Jude Research Hospital, Memphis, TN
2014 American Association for Cancer Research, Meet-the-Expert, San Diego, CA
2014 American Association for Cancer Research, Educational Session, San Diego, CA
2014 Congressional Briefing, Rayburn Office Building, Washington DC, "Making Research Count For Patients: A Continual Pursuit"
2014 Four Diamonds Pediatric Cancer Center, Hershey, PA
2014 Advances in Neuroblastoma *Keynote Address*, Cologne, Germany
2014 Aspen Cancer Conference, Aspen, CO
2014 Children's National Medical Center, Center for Cancer and Immunology Research, Washington DC
2014 Pediatric Bone Marrow Transplant Consortium, Dallas, TX
2014 Immunohematology Symposium, National Institutes of Health
2014 Cancer Immunotherapy: Delivering the Promise; National Institutes of Health
2014 Walter Reed Army Medical Center, Dept of Medicine, Research Seminar
2014 NCI Council of Research Advocates, Bethesda, MD
2014 Hyundai Hope-on-Wheels, Thought Leaders Summit, Washington DC
2014 Second Military Medical School, Shanghai, China
2014 Lucille Packard Hospital at Stanford, Palo Alto, CA
2015 Google-X Immunology Summit, Mountain View CA
2015 SU2C Scientific Summit, Santa Monica, CA
2015 G. Burroughs Mider Lecture, Bethesda MD
2015 Adaptimmune Inc., Oxford, England
2015 University of California San Francisco, Breakthroughs in Cancer Immunotherapy
2015 St. Jude VIVA Forum, Singapore
2015 Children's Oncology Group, Genomics of Sarcoma, Philadelphia, PA
2015 AACR Major Symposium, Tumor Microenvironment, Philadelphia PA
2015 American Society of Pediatric Hematology/Oncology, Phoenix, AZ
2015 American Society of Clinical Oncology, CARs for Solid Tumors, Chicago, IL
2015 American Society of Gene Therapy, New Orleans, LA
2015 Children's Hospital of Cincinnati, Transplant Grand Rounds
2015 NCI Targeting Rhabdomyosarcoma Workshop, Rockville, MD
2015 American Society of Clinical Oncology, Discussant, Pediatric Oncology
2015 University of Wisconsin Cancer Center, Grand Rounds
2015 *Keynote Address*, Case Western Reserve Cancer Center/Cleveland Clinic Foundation, Annual Retreat
2015 *Plenary Session*, AACR-EORTC Molecular Targets Conference, Boston, MA
2015 Solid Tumor Grand Rounds, St. Jude Children's Research Hospital, Memphis, TN
2015 American Association of Cancer Institutes, Washington DC
2015 Coalition Against Childhood Cancer Annual Summit, Washington DC

2015 Medimmune Inc, Gaithersburg, MD
2015 4th International Conference on Immunotherapy in Pediatric Oncology, Seattle, WA
2015 University of Colorado, Division of Pediatric Hematology/Oncology Visiting Professorship
2015 AACR Special Conference on Pediatric Oncology, Ft. Lauderdale, FL
2015 Scientific Subcommittee Session, American Society of Hematology, Orlando, FL
2016 *Nitschke-Kaskake Lecture*, Oklahoma City Children's Hospital
2016 Sanford-Burnham Cancer Institute, La Jolla, CA
2016 AACR Sarcoma Educational Session, New Orleans, LA
2016 AACR Meet-the-Expert, New Orleans, LA
2016 NCI Cancer Center Retreat, Bethesda, MD
2016 *Keynote Address*, Children's Tumor Foundation, Austin, TX
2016 *Keynote Address*, Stanford Cancer Institute Retreat
2016 American Society of Hematology, San Diego, CA
2016 Society for Immunotherapy of Cancer, Washington DC
2016 New York Academy of Sciences, Frontiers in Immunotherapy, New York, NY
2017 Royal Academy of Physicians, London, England
2017 *Plenary Lecture*, American Association for Cancer Research, National Meeting
2017 *Stephen Max Memorial Lecture*, University of Maryland
2017 Cancer Cell Symposia, Inflammation and Immunity, San Diego, CA
2017 *Keynote Speaker*, Nordic Oncology Society, Stockholm, Sweden
2017 *Keynote Speaker*, American Radium Society, Colorado Springs, CO
2017 University of Michigan Cancer Center, Grand Rounds, Ann Arbor, MI
2017 *Warren Sutow Distinguished Lecture*, MD Anderson Cancer Center, Houston, TX
2017 National Cancer Institute, Cancer Immunology & Immunotherapy: From Conception to Delivery
2017 International Society of Pediatric Oncology, Washington DC
2017 *Plenary Session*, AACR Special Conference on Pediatric Oncology, Atlanta, GA
2017 American Society of Hematology, Scientific Subcommittee, Atlanta, GA
2017 American Society of Hematology, Special FDA Symposium, Atlanta, GA
2018 MidWinter Conference of Immunologists, Asilomar, CA
2018 Keystone Symposia, T Cell Dysfunction in Cancer, Breckenridge, CO
2018 Keystone Symposia, Emerging Cellular Therapies, Keystone, CO
2018 Keystone Symposia, Cancer Immunotherapy, Keystone, CO
2018 *BJ Kennedy Keynote Lecture in Medical Oncology, Univ of Minnesota*
2018 *Chair, Plenary Session, AACR National Meeting*
2018 Major Symposia, AACR National Meeting
2018 Kaiser Permanente National Oncology Conference, San Francisco
2018 Presidential Plenary Lecture, International Society of Cell Therapy, Montreal, CA
2018 Keynote Lecture, Mammalian Synthetic Biology Workshop 5.0, Harvard Medical School
2018 Advances in Neuroblastoma Research, Immunology Workshop, San Francisco
2018 Cell Biology Symposium, Toronto Hospital for Sick Kids, Toronto, CA
2018 *Keynote Lecture*, Adolescent and Young Adult Leukemia Symposium, University of Chicago
2018 Stanford Big Data/Precision Health Conference
2018 British Columbia Cancer Agency, *Discovery Talk*

2018 Charbonneau Cancer Institute, Calgary, Alberta
2018 Curious2018, Future InSight, Merck/Nature, Darmstadt Hesse Germany
2018 *Abelson Lecture*, Seattle Children's Hospital, Seattle, WA
2018 CRI-CIMT-EATI-AACR, New York, NY
2018 *Keynote Lecture*, UCSF Women in Immunology Symposium
2019 UCLA Clinical and Translational Science Institute, *Distinguished Speaker Series*, Los Angeles, CA
2019 ACDRS-NIH Workshop: Cell Based Immunotherapy: From Bench to Bedside and Beyond, Bethesda, MD
2019 7th *ACCELERATE* Pediatric Oncology Conference, Brussels Belgium
2019 Roche iPODD Cancer Immunotherapy Advisory Board, Zurich, Switzerland
2019 American Association of Cancer Research, *Opening Plenary Session*
2019 *Lila and Murray Gruber Cancer Research Award Lecture*, American Academy of Dermatology, Washington DC
2019 Keystone Conference Cancer Immunotherapy: Mechanistic Insights to Improve Clinical Benefit, Whistler, Canada
2019 Greehey Children's Cancer Research Institute, San Antonio, Texas
2019 *The Neerhout Lecture*, Oregon Health and Science University, Portland, Oregon
2019 Stanford Drug Discovery Symposium, Stanford, CA
2019 Stanford Founding Grant Society, Stanford, CA
2019 US Food and Drug Administration, Distinguished Lecturer
2019 Pediatric Oncology Drug Advisory Committee, US Food and Drug Administration,
2019 University of Wisconsin Carbone Cancer Center Retreat, Madison, Wisconsin
2019 *Opening Keynote Lecture*, AACR Special Conference on Cellular Therapies, San Francisco, CA
2019 AACR Special Conference on Pediatric Oncology, Montreal Canada
2019 Korean Association of Immunologists, Immuno-oncology Symposium, Seoul Korea
2019 Nature Conference, Translating Cell and Gene Therapies, Guangzhou, China
2019 *Plenary Session*, AACR-NCI-EORTC, Boston, MA
2019 *Keynote Speaker*, Stanford University Dept of Pathology, Annual Retreat
2019 US House of Representatives, Immunotherapy for Cancer, Washington DC
2019 Cancer Moonshot Collaborative Meeting, Bethesda, MD
2019 *Opening Keynote*, AACR Special Conference on Tumor Immunology and Immunotherapy, Boston, MA
2019 Society for the Immunotherapy of Cancer, Washington DC
2020 Stand Up 2 Cancer, Annual Symposium
2020 European Hematology Association-EBMT 2nd Annual Symposium on CAR Therapies, Sitges, Spain
2020 *Plenary Session*, Keystone Symposia on Emerging Cell Therapies: Cancer and Beyond, Banff, Canada
2020 *Plenary Session*, American Society for Transplantation and Cell Therapy, Orlando, FL
2020 Keynote Speaker, IO360, New York, NY
2020 Cell Symposium, San Francisco, Ca
2020 New York Academy of Sciences, Virtual Symposium
2020 Nature, Science Asia Conference, Virtual Symposium
2020 Yale Center for Immunooncology, Virtual Symposium

2020 Beth Israel-Deaconess Cancer Center Symposium, Horizons in Targeted and Immune Based Therapies, Virtual Symposium
2020 St. Jude Children's Research Hospital, Science of Pediatric Cancer Series, Virtual Symposium
2020 International Society for Pediatric Cancer (SIOP) Annual Meeting, Virtual Symposium
2020 American Society of Hematology, ASH-EHA Joint Symposium, Virtual Symposium
2020 *Keynote Lecture*, NCI Workshop on Cell Based Therapy for Solid Tumors, Virtual Symposium
2021 StandUp2Cancer Virtual Gathering, *Keynote Address*
2021 American Society for Transplantation and Cell Therapy, Virtual
2021 NIH Distinguished Lecture, Virtual
2021 American Association for Cancer Research, St. Baldrick's Award for Achievement in Pediatric Cancer Research, Virtual
2021 Broad Institute, Scientific Seminar Series, Virtual
2021 Cleveland Clinic, Science of Pediatric Cancer, Virtual
2021 Mayo Clinic, Postdoctoral Fellows Invited Speaker, Virtual
2021 American Society for Clinical Oncology, Pediatric Oncology Award Lecture, Virtual
2021 Accelerate Forum on CAR-T Cells, Virtual
2021 New York Academy of Science, *Keynote Address*, Virtual
2021 Toronto Hospital for Sick Kids, Special Seminar, Virtual
2021 United States Patent and Trademark Office Seminar, Virtual
2021 Stanford Community Advisory Board, Immunotherapy for Breast Cancer, Virtual
2021 CureSearch Summit, Virtual
2021 St. Baldrick's Summit, Virtual
2021 Massachusetts Institute of Technology, Virtual Seminar Series
2021 Hope for ATRT Summit
2021 AACR Keynote Special Seminar on Immunotherapy
2021 Baylor Center for Cell and Gene Therapy, Virtual Seminar
2021 St. Jude Seminar on Immunotherapy, Virtual
2021 Washington University in St. Louis, Immunology Seminar Series, Virtual
2021 UCSF Immunology Seminar Series, Virtual
2021 Smalley Award Lecture, Society for Immunotherapy of Cancer, Washington DC
2021 UCSD Bioengineering Seminar Series, Virtual
2021 European CAR T Cell Conference, Utrecht, Netherlands, Virtual
2021 American Society of Hematology Workshop on Lymphomas, Virtual
2022 Session Chair, Major Symposium, American Association for Cancer Research, New Orleans LA
2022 Opening Keynote, Keystone Symposia on Emerging Cell Therapies
2022 Plenary Presentation, CTI360 Congress, Virtual
2022 Pediatric Center of Excellence, United States FDA
2022 4th EuroCART Cell Conference, Virtual
2022 Georgetown University School of Medicine, Virtual
2022 University of Wisconsin
2022 AACR, Major Symposia
2022 University of Pittsburgh, Virtual Scientific Seminar
2022 Onco Cell Therapy Summit, Boston, MA

2022 China Cancer Immunotherapy Workshop, Virtual
2022 Opening Keynote, CICON-AACR, New York, NY
2022 NCI Scientific Symposium, Virtual
2022 Weinberg Lecture, University of Chicago
2023 Opening Keynote, Keystone Symposia on Emerging Cell Therapies, Banff Canada
2023 Inspired Symposium, NIH, Virtual
2023 AACR, Educational Symposium on Immunotherapy for Pediatric Cancers
2023 New York Academy of Sciences, Virtual
2023 Keynote, Joint ASTCT-EBMT Scientific/Translational Meeting, Sitges, Spain
2023 Till and McCulloch Award Lecture, Cell Therapy & Transplant, Canada, Halifax
2023 John Stam Award Lecture, American Society for Gene and Cell Therapy, Los Angeles CA
2023 Cellicon Valley, Virtual
2023 European Society of Hematology, Sitges, Spain
2023 Bristol Myers Squibb II-ON, Philadelphia, PA
2023 Opening Keynote, AACR Special Conference on Immunology and Immunotherapy, Toronto Ontario

Interviews, Broadcast and Alternative Media:

2007 Appearance/Interview Nancy Snyderman Show, NBC News, Childhood Cancer
2008 Appearance/Interview NBC Today Show, Stand Up to Cancer Kickoff
2010 Inside NCI Videocast: http://www.cancer.gov/ncicancerbulletin/090710/page4
2012 ABC News.com Twitter Chat on Cancer In Young Adults
2012 NCI Videocast: Promises and Challenges of Pediatric Cancer Research: http://www.youtube.com/watch?v=p9ogazC4qzE
2013 Webinar, Chimeric Antigen Receptors, NCI Pediatric and Adolescent Solid Tumor Steering Committee
2013 BLOOD Journal, Meet the Editors, https://www.youtube.com/watch?v=d9n1-io0Y90
2013 Q&A: Crystal Mackall, John Maris on Pediatrics, Cancer Discovery, 2013:961.
2016 American Society of Hematology, Passing the Checkpoint With New Approaches to Immunotherapy, https://www.youtube.com/watch?v=E-EIcVnkvRo
2016 Stanford Frontiers in Medicine, https://www.youtube.com/watch?v=E-EIcVnkvRo
2017 Podcast, Stanford Medicine, https://med.stanford.edu/news/all-news/one-to-one/2016/new-hope-in-treating-cancer.html
2017 ABC7 News: https://www.youtube.com/watch?v=UTQEp3rZFqw
2018 Cancer Immunotherapy with Crystal Mackall, Facebook Live, Stanford University Health Matters
2018 Top 10 Clinical Research Award Video: https://www.clinicalresearchforum.org/page/NewCARTcell
2018 Stanford Big Data: https://www.youtube.com/watch?v=8vu21cCbUtE
2021 Emerson Collective Demo Day: https://ecdemoday.com/
2023 SITC Fireside Chat with Dr. Crystal Mackall: https://www.youtube.com/watch?v=J0qEtYGa15M

2023 BioCentury, a cell therapy innovators view on decision-making. https://www.biocentury.com/article/647431/crystal-mackall-a-cell-therapy-innovator-s-view-on-decision-making
2024 Stanford MedCast, Transforming Pediatric Cancer Care: What's Next? https://stanford.cloud-cme.com/course/courseoverview?P=0&EID=52112
2024 VITALs, Northeastern Ohio Medical College, https://www.youtube.com/watch?v=WGsUtB62YMc

Community Service:

1989-1999 Medical Staff, Camp Fantastic for Children with Cancer
1990-1994 Volunteer, Dinner Program for Homeless Women Washington DC,
Bd. of Directors, Dinner Program for Homeless Women, Washington, DC
1992 Team Leader, AIDSWALK, Washington D.C.
1994 Guest Lecturer, Mautner Project for Women with Cancer
2000 Executive Board, PTO, Grace Episcopal Day School
2002-2003 Science Fair Judge, Grace Episcopal Day School
2006-2008 Diversity Committee, Grace Episcopal Day School
2008-2013 Medical Staff, Camp Fantastic for Children with Cancer
2013-present Communications Director, Walt Whitman Fighting Vikings Football
2014 Speaker, Frontiers in Biology for High School Students
2016-present Advisory Board, KidsvCancer Compassionate Use Navigator

Active Support

Project Title: Outstanding Investigator Award Next Generation Immunotherapies for Pediatric Cancers
Project Number: R35CA283888
Role on Project: PI
Percent Time on Project: 50%
Total Award (for all years): $6,526,496
Project Dates: 07/01/2024-06/30/2031
Aims of the Project: This proposal seeks to discover new principles and develop new therapies to harness the immune system for the treatment of children's cancers.

Project Title: Next Generation GPC2-CARs for Medulloblastoma
Project Number: 1UG3CA297747-01
Role on Project: PI
Percent Time on Project: 15%
Total Award (for all years): $9,556,521
Project Dates: 12/01/2024-11/30/2029
Aims of the Project: This proposal will develop and test a novel, potency enhanced GPC2-CAR T cell Therapy that shows impressive efficacy in preclinical models of MB in patients with replaces/refractory MB.

Project Title: Programming Modified Immune Cells to Safely Eradicate Cancer, Weill West Coast Cancer Hub
Funding Agency Name: Weill Foundation
Role of Project: Co-PI
Percent Time on Project: 0% effort allocated on this award
Total Award (for all years): $8,000,000
Project Dates: 9/1/25-8/31/27
Aims: Develop curative T cell therapies for solid tumors—rooted in patient data and powered by advanced gene editing, molecular engineering, and AI-driven discovery.

Project Title: Multimodal AI Modeling of T Cell Therapies to Predict Patient Response and Nominate Advanced Cell Design Strategies
Funding Agency: National Institutes of Health
Role on Project: PI
Percent Time on Project: 4% effort allocated on this award
Total Award (for all years): ~$4,000,000
Project Dates: 2/3/25-2/3/27

Project Title: Synthetic T Cell Therapy Against Recurrent Pediatric Brain Tumors (STAR)
Funding Agency Name: St. Jude Children's Research Hospital/ Alliance for Cancer Gene Therapy
Role on Project: Site PI
Percent Time on Project: 1%
Total Award (for all years): $375,000
Project Dates: 1/01/2024-12/31/2026

Title: Phase 1 Clinical Trial of Autologous GD2 Chimeric Antigen Receptor T Cells for Diffuse Intrinsic Pontine Gliomas and Spinal Diffuse Midline Glioma
Project Number: CLIN2-12595
Name of PD/PI: Mackall, Crystal
Source of Support: California Institute for Regenerative Medicine
Project/Proposal Start and End Date: 10/01/2021 - 12/31/2025
Total Award Amount (including Indirect Costs): $11,998,310

Title: Developing Safe and Effective GD2-CAR T Cell Therapy for Diffuse Midline Gliomas
Project Number: 1 R01 CA263500-01
Name of PD/PI: Mackall, Crystal
Source of Support: National Institutes of Health
Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 08/06/2021 - 07/31/2026
Total Award Amount (including Indirect Costs): $3,294,656

Attacking the Immunopeptidome of Ewing Sarcoma
Major Goals: This proposal conducts the work needed to take discoveries from the benchto-bedside by developing T cells expressing IGF2BP1- and LIPI-specific T cell receptors (TCRs) optimized for potency and vetted for safety

*Status of Support: Active
Project Number: 1U01CA281865-01
Name of PD/PI: Mackall, Crystal
*Source of Support: NIH
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 09/11/2023-07/31/2028
* Total Award Amount (including Indirect Costs): $3,258,475

*Title: Translating SNIP-CAR: A Regulatable CAR Targeting B7H3
Major Goals: Conduct IND enabling studies to support a clinical trial of a B7H3-CAR T cells that can be regulatable by an FDA approved small molecule.
*Status of Support: Active
Project Number: N/A
Name of PD/PI: Mackall, Crystal
*Source of Support: Alliance for Cancer Gene Therapy
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 5/01/2023-04/30/2025
* Total Award Amount (including Indirect Costs): $500,000

*Title: Engineering multimodal immunotherapies against small-cell neuroendocrine tumors
Major Goals: N/A
*Status of Support: Active
Project Number: N/A
Name of PD/PI: Sage, Julien and Mackall, Crystal
*Source of Support: Mark Foundation for Cancer Research
*Primary Place of Performance: Stanford University
Project/Proposal Start and End Date: 10/01/2023-09/30/2026
* Total Award Amount (including Indirect Costs): $3,000,000
* Person Months (Calendar/Academic/Summer) per budget period.

*Title: Master Collaboration Agreement for Cancer Immunology 1.1
Major Goals: The Parker-Stanford partnership will create a powerful synergy that will enable the deep scientific and clinical resources within Stanford Medicine to be rapidly and efficiently translated into new immunotherapies for patients with cancer
*Status of Support: Active
Project Number: MCA 1.1
Name of PD/PI: Mackall, Crystal
*Source of Support: Parker Institute for Cancer Immunotherapy (PICI)
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 12/18/2023-12/17/2028
* Total Award Amount (including Indirect Costs): $1,565,161
* Person Months (Calendar/Academic/Summer) per budget period.

*Title: Targeted modulation of the tumor microenvironment using engineered T cells
Major Goals: Enhance the potency of engineered cells for solid cancers by 1) protecting T cells from macrophage-mediated phagocytosis and 2) optimizing regulated secretion of proteins

within the tumor microenvironment that reduce immune suppression and/or augment tumor cell kill.
*Status of Support: Active
Project Number: C-04110
Name of PD/PI: Mackall, Crystal
*Source of Support: Parker Institute for Cancer Immunotherapy
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 1/01/2024-12/17/2028
* Total Award Amount (including Indirect Costs): $1,254,829
* Person Months (Calendar/Academic/Summer) per budget period.

*Title: Phase I Clinical Trial of Locoregionally Delivered Autologous B7-H3CART in Adults with Recurrent GBM
Major Goals: Our goals are to demonstrate safety and feasibility of administering B7H3.BB.z.CAR T cells in adult patients with the first recurrence of GBM, to define the recommended phase 2 dose for efficacy testing, to provide preliminary efficacy data in the GBM cohort, and to identify correlatives of an effective antitumor response following B7H3-CART therapy for GBM.
*Status of Support: Active
Project Number: CLIN2-15094
Name of PD/PI: Thomas, Reena
*Source of Support: California Institute for Regenerative Medicine
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 11/01/2023-10/31/2027
* Total Award Amount (including Indirect Costs): $11,999,991
* Person Months (Calendar/Academic/Summer) per budget period.

Discovering and Exploiting Mechanisms of Neuroblastoma Therapy Resistance
Major Goals: The major goals of this project are to develop cell-based immunotherapies for the treatment of neuroblastoma
*Status of Support: Pending
Project Number: GRT-00000636 / PO# 20213670 Renewal
Name of PD/PI: Maris, John
*Source of Support: Children's Hospital of Philadelphia
Prime Sponsor: National Institutes of Health
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 09/01/2023 – 8/31/2028
* Total Award Amount (including Indirect Costs): $1,758,574

Title: Bone Marrow Grafting and Cellular Therapy for Leukemia and Lymphoma
Major Goals: The major goals of this project are to optimize CAR based therapies for B cell malignancies
Project Number: 2P01 CA049605-34A1
Name of PD/PI: Robert Negrin, David Miklos
Role: Project PI
*Source of Support: National Institutes of Health

*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 09/16/2025 – 09/15/2030
Total Award Amount (including indirect costs): $15,147,979

Title: St. Baldrick's Foundation Empowering Pediatric Immunotherapies for Childhood Cancer Team (SBF-EPICC Team)
Major Goals: This proposal builds upon increasing understanding of the biology of CAR T cells and emerging next generation designs and platforms to deliver next generation GD2-CAR T cells with enhanced potency suitable for clinical testing in pediatric H3K27M gliomas.
*Status of Support: Pending
Project Number: N/A
Name of PD/PI: Mackall, Crystal
*Source of Support: Children's Hospital of Philadelphia/St. Baldrick's Foundation
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 06/1/2022-5/31/2025
* Total Award Amount (including Indirect Costs): $150,000
* Person Months (Calendar/Academic/Summer) per budget period.

Title: Stanford Cancer Institute
Project Number: P30CA124435
Name of PD/PI: Artandi, S.
Source of Support: NIH
Primary Place of Performance: Stanford University
Project/Proposal Start and End Date: 06/01/2022 - 05/31/2027
Total Award Amount (including indirect costs): $21,118,265

Research Support (Selected last 10 yrs, Completed)

Title: Discovery and Development of Optimal Immunotherapeutic Strategies for Childhood Cancers
Project Number: U54 CA232568-01
Name of PD/PI: Maris, John
Role: Project Co-PI
Primary Sponsor: National Institutes of Health
Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 09/20/2018 - 06/30/2023
Total Award Amount (including Indirect Costs): $2,504,697

*Title: Bone Marrow Grafting and Cellular Therapy for Leukemia and Lymphoma
Major Goals: The major goals of this project are to optimize CAR based therapies for B cell malignancies
Project Number: 2P01 CA04960529A1
Name of PD/PI: Robert Negrin
Role: Project PI
*Source of Support: National Institutes of Health
*Primary Place of Performance: Stanford University, California

Project/Proposal Start and End Date: 09/16/2019 – 08/31/2024
Total Award Amount (including indirect costs): $13,637,063

*Title: Modulating Exhaustion to Enhance the Efficacy of CAR T Cell Therapeutics
*Status of Support: InActive
Project Number: n/a
Name of PD/PI: Mackall, Crystal
*Source of Support: Lyell
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 10/01/2020 – 09/30/2024
* Total Award Amount (including Indirect Costs): $12,000,000

*Title: Brain Tumor Immunotherapy Research
Project Number: N/A
Name of PD/PI: Mackall, Crystal and Monje, Michelle
*Source of Support: Goldhirsh-Yellin Foundation
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 07/01/2022-06/30/2025
* Total Award Amount (including Indirect Costs): $450,000

Title: Development of Novel CAR-T Therapies at Stanford Center for Cancer Cell Therapy
*Status of Support: Active
Project Number: AGREEMENT 01
Name of PD/PI: Mackall, Crystal
*Source of Support: Tune Therapeutics
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 1/23/2023-4/30/2024
* Total Award Amount (including Indirect Costs): $500,000

GD2-CAR T cell therapy for Oligodendroglioma
*Status of Support: Active
Project Number: N/A
Name of PD/PI: Monje, Michelle and Mackall, Crystal
*Source of Support: Oligo Nation
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 02/01/2023-1/31/2025
* Total Award Amount (including Indirect Costs): $200,000

*Title: B2B and Back: CD22 and CD19/22 CAR immunotherapies for childhood leukemia
Major Goals: The major goals of this project are to define the effect of manufacturing platforms on CAR T cell immunotherapeutic potential and to develop a predictive model of clinical response using antigen-dependent CAR activity. I am an extramural associate investigator in this grant.
*Status of Support: Active
Project Number: U54 CA232568-01 Supplement
Name of PD/PI: Maris, John

*Source of Support: Children's Hospital of Philadelphia
Primary Sponsor: National Institutes of Health
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 01/01/2022 - 8/31/2023
* Total Award Amount (including Indirect Costs): $236,100

Title: Homology-independent targeted insertion (HITI) enables guided anti-GD2 CAR knock-in and efficient manufacturing of non-viral CAR T cells
Major Goals: The goal of this project is to use an efficient and fully non-viral manufacturing process using CRISPR/Cas9 transgene knock-in for targeted genomic insertion of an anti GD2 CAR DNA sequence.
*Status of Support: Active
Project Number: University Research Agreement - SPO 299962
Name of PD/PI: Mackall, Crystal
*Source of Support: Stanford Innovative Medicines Accelerator
*Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 04/01/2023 - 03/31/2024
* Total Award Amount (including Indirect Costs): $100,000

Title: Pediatric Cancer Immunotherapy Trials Network
Project Number: 2UM1CA154967-07
Name of PD/PI: Davidson, Nancy
Source of Support: Cancer Immunotherapy Trials Network Central Operations and Statistical Center (Subaward)
Prime Sponsor: National Institutes of Health
Primary Place of Performance: Stanford University, California
Project/Proposal Start and End Date: 9/01/2017 – 08/31/2023
Total Award Amount (including Indirect Costs): $1,457,768
Title: (CIMACs) Cancer Immune Monitoring Center at Stanford

2UM1CA154967-07 (PI: Cheever) 10/01/2017 – 09/30/2021
NIH/NCI $8,000,000 TDC
Pediatric Cancer Immunotherapy Trials Network
Aim/Goal: I lead the pediatric multi-institutional clinical trial consortium that will undertake studies of immune based therapies.
Role: Ped-CITN Inaugural Chair

5P30CA124435 Administrative Supplement (PI: Mackall) 09/1/2019 – 08/31/2021
NIH/NCI $319,489
Developing Methods for Clinical Scale A2AR Gene Editing of CAR T Cells to Enhance Efficacy Against Solid Tumors
Aim/Goal: The goal of this proposal is to develop GMP Scale and Grade techniques to generate CAR T cells with deletions of the A2AR gene for enhanced efficacy against solid tumors.
Role: PI

5U01FD005978-04 (PI: Altman) 09/01/2019 – 08/31/2020

FDA/ University of California, San Francisco $191,084 TDC/yr
Development of New Machines Learning Algorithms to Quantify Treatment Effectiveness and Adverse Outcomes.
Aim/Goal: Oversee the creation and deployment of the federated algorithm.
Role: AI

U01-FP00013560_SUB80_01 (PI: Hawkins) 01/01/2016 – 07/31/2021
NCI Children's Oncology Group $15,000 TDC/yr
Aim/Goal: I serve as Principal Investigator for the Phase I Clinical Trial of Nivolumab conducted via the COG Phase I Consortium.
Role: Study Chair

The Leukemia & Lymphoma Society (PI: Majeti) 07/01/2018 – 06/30/2021
Development of CAR T Cells Targeting AML Stem Cells $180,018
Aim/Goal: To generate CAR constructs targeting CD93 and assess their activity and to investigate the activity of CD93 CAR T cells against human AML in vitro and in vivo.
Role: AI

Alliance for Cancer Gene Therapy (PI: Mackall) 09/01/16 - 09/01/19
GD2 Chimeric Antigen Receptor Therapy for Osteosarcoma $137,880 TDC/yr

Aim/Goal: The goal of this project is to conducst preclinical IND enabling studies to support a clinical trial of an optimized chimeric antigen receptor targeting GD2 in pediatric and young adult patients with osteosarcoma and neuroblastoma.
Role: PI

Emerson Collective (PI: Mackall) 09/01/16 - 09/01/18
$88,785/year
Identification of Novel Exhaustion Checkpoints in CAR Expressing T Cells Using CRISPR/Cas9 Gene Disruption

Bluebird Bio (PI: Mackall) 11/1/2016 – 10/31/2017
Enhancing CAR Responses to Solid Tumors by Modulating Immunosuppression and Exhaustion
Role: PI

Stand Up to Cancer (PI: Mackall) 7/1/2016 – 6/30/2018
Phil Sharpe Award for Scientific Collaboration
The goal of this project is to conduct correlative science on a clinical trial of nivolumab in children with biallelic mismatch repair deficiency.
Role: PI

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