

KATRINA M. HAWLEY

Née: Katrina L. Maxcy

Mailing Address

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EDUCATION

University of Chicago, Chicago, IL 2022

PhD, Cancer Biology

Dissertation: Inhibition of FOXP3 by Stapled Alpha-Helical Peptides Dampens Regulatory T Cell Function

Princeton University, Princeton, NJ 2014

AB, Molecular Biology

Senior Thesis: Characterization of HCMV Clinical Strains in Epithelial Cells

RESEARCH EXPERIENCE

Memorial Sloan Kettering Cancer Center, New York, NY 2022-present

Postdoctoral Fellow

Advisor: Andrea Schietinger, Associate Member, Immunology Program, SKI

University of Chicago, Chicago, IL 2016 - 2022

Graduate Researcher

Advisor: James LaBelle, Director, Hematopoietic Stem Cell Transplantation Program, Department of Pediatrics

- ◇ Designed stapled alpha-helical peptides (SAHs) against two protein-protein interactions of FOXP3, leading to the filing of an international patent.
- ◇ Performed biochemical characterization to identify SAHs with on-target activity against FOXP3.
- ◇ Validated SAHs able to dampen regulatory T cell suppressive function.

Massachusetts General Hospital, Boston, MA / Broad Institute, Cambridge, MA

2014 - 2016

Research Technician II

Advisor: David Scadden, Gerald and Darlene Jordan Professor of Medicine, Harvard Stem Cell Institute

- ◇ Executed small molecule screens to identify agents triggering myeloblast differentiation as part of a collaboration between the Broad Institute and Bayer.
- ◇ Identified anti-leukemic activity of lead compounds in murine leukemia models and patient-derived xenograft models.
- ◇ Completed CRISPR screen to identify lead compound mechanism of action; identified to be through inhibition of dihydroorotate dehydrogenase resulting in attenuated uridine biosynthesis.

Princeton University, Princeton, NJ 2012 - 2014

Undergraduate Research Assistant

Advisor: Thomas Shenk, James A. Elkins Jr. Professor in the Life Sciences, Department of Molecular Biology

- ◇ Systematically analyzed variance in patterns of replication and viral gene expression between clinical and laboratory strains of Human Cytomegalovirus.

Harvard T.H. Chan School of Public Health, Boston, MA

Summer 2011

Undergraduate Summer Research Assistant

Advisor: Frank Sacks, Professor of Cardiovascular Disease Prevention, Department of Nutrition

- ◇ Studied effects of diet on acute and long-term lipoprotein function, specifically the altered kinetics of apolipoprotein E-mediated cholesterol metabolism.

Arizona State University, Tempe, AZ

Summer 2011

Undergraduate Summer Research Assistant

Advisor: Rajeev Misra, Associate Professor, Biodesign Institute

- ◇ Examined mechanisms of iron homeostasis in *E. coli*.

PUBLICATIONS

- ◇ Schnorenberg MR, **Hawley KM**, et al. Targeted Polymersome Delivery of Stapled Peptides for Drugging the p53:BCL-2-Family Axis in DLBCL. Manuscript in revision.
- ◇ **Hawley KM**, et al. Inhibition of FOXP3 by Stapled Alpha-Helical Peptides Dampens Regulatory T Cell Function. 2022. PNAS.
- ◇ Sykes DB, Martinelli MM, Negoro P, Xu S, **Maxcy KL**, Timmer K, Viens AL, Alexander NJ, Atallah JP, Snarr B, Baistrocchi S, Atalah NJ, Hopke A, Scherer A, Rosales I, Irimia D, Sheppard D, Mansour MK. Transfusable Neutrophil Progenitors as Cellular Therapy for the Prevention of Invasive Fungal Infections. 2022. Journal of Leukocyte Biology. PMID: 35355310
- ◇ Ludwig LM, **Hawley KM**, Banks DB, Thomas-Toth AT Blazar BR, McNerney ME, Levenson JD, and LaBelle JL. Venetoclax Imparts Distinct Cell Death Sensitivity and Adaptivity Patterns in T cells. 2021. Cell Death Dis. PMID: 34707089
- ◇ Ludwig LM*, **Maxcy KL***, LaBelle JL. Flow Cytometry-Based Detection and Analysis of BCL-2 Family Proteins and Mitochondrial Outer Membrane Permeabilization (MOMP). 2019. Methods Mol Biol. PMID: 30535999
- ◇ Sykes DB, Kfoury YS, Mercier FE...**Maxcy KL**...Schreiber SL, Scadden DT. Inhibition of Dihydroorotate Dehydrogenase Overcomes Differentiation Blockade in Acute Myeloid Leukemia. 2016. Cell. PMID: 27641501

HONORS AND AWARDS

- ◇ Robert C. and Mary Jane Gallo Scholarship (2019 - 2020), University of Chicago.
- ◇ The Ruth L. Kirschstein Research Training Grant (T32) (2017 - 2019), University of Chicago.

POSTERS

- ◇ Society for Immunotherapy of Cancer
2020 Annual Meeting
Inhibition of FOXP3 by Stapled Alpha-Helical Peptides Dampens Regulatory T Cell Function
- ◇ University of Chicago, Pritzker School of Molecular Engineering
UChicago-AbbVie Oncology Symposium 2019
Inhibition of FOXP3 by Stapled Alpha-Helical Peptides Dampens Regulatory T Cell Function

- ◇ University of Chicago, Department of Pediatrics
Pediatrics Research Day 2018 - 2019
Inhibition of FOXP3 by Stapled Alpha-Helical Peptides Dampens Regulatory T Cell Function
- ◇ University of Chicago, Committee on Cancer Biology
Cancer Biology Training Consortium Annual Retreat (2017 - 2019)
Targeting Regulatory T Cells by Disrupting the FOXP3:NFAT Protein-Protein Interaction
- ◇ University of Chicago, Committee on Cancer Biology
T32 Day (2018)
Targeting Regulatory T Cells by Disrupting the FOXP3:NFAT Protein-Protein Interaction
- ◇ Princeton University
Topics in Undergraduate Medical Research (2013-2014)
Characterization of HCMV Clinical Strains in Epithelial Cells
- ◇ Harvard T.H. Chan School of Public Health
Summer Internship in Biological Sciences in Public Health (2012)
Investigating the role of non-integral ApoE on HDL metabolism

TEACHING/MENTORSHIP

- ◇ I-Corps Fellow: I-Corps Program (2020) Polsky Center for Entrepreneurship and Innovation, University of Chicago.
- ◇ Graduate Teaching Assistant: BIOS 25308 (2018) Heterogeneity in Human Cancer: Etiology and Treatment.
- ◇ Graduate Teaching Assistant: CABI 39000 (2017-2018) Introduction to Experimental Cancer Biology.
- ◇ Graduate Mentor (2017-2022): Mentored four undergraduate students.

LEADERSHIP

- ◇ Graduate Council – Co-President (2019-2020), University of Chicago
- ◇ Graduate Council – Vice President of Community (2018-2019), University of Chicago
- ◇ Graduate Council – Social Chair (2017-2018), University of Chicago
- ◇ The Colonial Club – President (2013-2014), Princeton University

PROFESSIONAL AFFILIATIONS

- ◇ Society for Immunotherapy of Cancer (2020-2022).
- ◇ University of Chicago Comprehensive Cancer Center (2020-2022)
- ◇ American Association for Cancer Research (2018-2022)

PERSONAL INTERESTS

- ◇ Music: Oboe and English Horn - UChicago Symphony Orchestra, Princeton University Orchestra, community orchestras
- ◇ Volunteering: Rainbow Animal Assisted Therapy - Misericordia Home for Developmental Disabilities, Chicago
- ◇ Volunteering: Big Brothers, Big Sisters of America - Chicago, Boston
- ◇ Athletics: 4x marathon runner - Berlin, Boston, Chicago, New York City