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Mayo Clinic
Department of Oncology
200 First Street SW
Rochester, MN 55905



POSITIONS

	Mayo Clinic Rochester, MN Department of Oncology Division of Clinical Oncology	Assistant Professor	January, 2022 – Current	Gastrointestinal Cancer Care Team
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EDUCATION

	Mayo Clinic Rochester, MN Clinical Investigator Program	Fellowship	July, 2018 – December, 2021	Hematology & Oncology
	Mayo Clinic Rochester, MN Clinical Investigator Program	Residency	June, 2015 – June, 2018	Internal Medicine
	University of Illinois College of Medicine Chicago, IL Medical Scientist Training Program	M.D., Ph.D.	June, 2009 – May, 2015	Medical School, Microbiology & Immunology
	University of Illinois Urbana-Champaign, IL	B.S.	June, 2004 – May, 2008	Molecular & Cellular Biology

HONORS AND AWARDS

2008	Suma Cum Laude, University of Illinois, Urbana-Champaign, IL
2008	James Scholar, University of Illinois, Urbana-Champaign, IL
2008	Bronze Tablet Scholar, University of Illinois, Urbana-Champaign, IL
2010	Craig Fellowship Research Award, University of Illinois, Chicago, IL
2015	Gold Humanism Honor Society, University of Illinois, Chicago, IL
2015	Edward P. Cohen Research Award, University of Illinois, Chicago, IL
2017	Mangan Award for Excellence in Primary Care, Mayo Clinic, Rochester, MN
2019	MSCO Outstanding Fellow Award, Minnesota Society of Clinical Oncology, Rochester, MN
2019	ASH Abstract Achievement Award, American Society of Hematology, Orlando, FL
2020	MSCO Outstanding Fellow Award, Minnesota Society of Clinical Oncology, Rochester, MN
2020	Cancer Center Eagles Fellowship Award, Rochester, MN
2020	Top Performing Provider Award, Mayo Clinic, Rochester, MN
2021	Mayo Foundation Scholar, Mayo Clinic, Rochester, MN
2021	Top Performing Provider Award, Mayo Clinic, Rochester, MN
2022	ASCO Conquer Cancer Young Investigator Award, Alexandria, VA
2023	Gerstner Family Career Development Award, Rochester, MN

RESEARCH EXPERIENCE

University of Illinois College of Medicine, Chicago, IL

2010 to 2015

Doctoral Candidate, Bellur S. Prabhakar, Ph.D.

- Skills: Tissue culture, Western blot, RT-PCR, qPCR, transfection, lentiviral vector transduction, flow cytometry, apoptosis assays, microRNA sequencing and knockdown assays, murine xenograft drug studies.
- Studied interactions between aerobic glycolysis and extrinsic apoptosis to enhance treatment of colon cancer.

Mayo Clinic, Rochester, MN

2018 to 2021

Post-Doctorate, Martin E. Fernandez-Zapico, M.D.

- Skills: ChIP-qPCR, co-immunoprecipitation, reporter assays, 3C-PCR, RNA-seq, ChIP-seq.
- Involved with several projects investigating epigenetic and transcriptional regulation of pancreatic cancer.

PROFESSIONAL ACTIVITIES

<i>Position</i>	<i>Dates</i>
• Treasurer, International Society for Evolution, Ecology, and Cancer	February 11, 2025 - 2027
• Hem/Onc Fellowship Career Development Basic/Translational Research Pathway Champion	January, 2023 – Current
• <i>Pancreatology</i> Editorial Board	February, 2023 - Current
• Biospecimen Access Committee for Pancreas Research Member	October, 2022 – Current
• Mayo Medical Editor	October, 2022 – Current
• Pancreas Science Program Medical Oncology Representative	February, 2022 – Current
• Peer Reviewer for <i>Scientific Reports</i> , <i>Pancreatology</i>	February, 2016 – Current

PROFESSIONAL AFFILIATIONS

- International Society of Ecology and Evolution of Cancer, 2019-Present
- American Association of Cancer Research, 2020-Present
 - Tumor Microenvironment Working Group
 - Cancer Evolution Working Group
- American Society for Clinical Oncology, 2020-Present
- American Pancreatic Association, 2021-Present
- European Society for Medical Oncology, 2024-Present
- Society for Mathematical Biology, 2024-Present

TEACHING AND MENTORSHIP EXPERIENCE

Teaching

<i>Institution</i>	<i>Course</i>	<i>Duties</i>	<i>Dates</i>
Mayo Clinic Graduate School of Biomedical Sciences	Introduction to Cancer Biology I (BMB 5000)	Facilitate interactive lectures and journal clubs related to the oncogene section of the course	December, 2019 – Current
	Molecular Mechanisms of Disease (CORE 6510)	Facilitate interactive lectures and journal clubs related to the pancreas section of the course	May, 2018 – Current
Mayo Clinic Hematology/Oncology Fellowship Program	Medical Oncology Core Curriculum	1- Treatment of pancreatic cancer. 2- Approach to interpreting cancer genomic reports.	March, 2022 – Current
Mayo Clinic Internal Medicine Residency Program	Hepatopancreatobiliary Cancers	Lecture on the work-up and management of HPB cancers.	March, 2025 – Current

Medical Students, Residents and Fellows Advised

<i>Name</i>	<i>Role</i>	<i>Date Graduated</i>
M Deniz Toruner	Computer Science Major at Brown	2020 – 2023
	Medical Student at Brown	2023 – current
	• Basaviah/Ganesan Family Medical Student Research Fund	
	• “Best Clinic Research Poster Presentation Award” at Brown Medical School’s 18 th Academic Symposium	
Khalid Jazieh, M.B.B.S.	Hematology & Oncology Fellow Mayo	2022 – 2025
Alexander Xiao, M.D., M.B.A.	Senior Associate Consultant Mayo	2025 – current
	Internal Medicine Resident Mayo	2022 – 2024
Zafar Siddiqui, M.D.	Hematology & Oncology Fellow Mayo	2024 – current
	Internal Medicine Resident Mayo	2023 – 2025
	Hematology & Oncology Fellow MD Anderson	2025 – current
Andrea Maraone	Summer Research Exploration Program (SREP)	2024 – current
Miranda Lin	Internal Medicine Resident Mayo	2024 – current

Doctoral Students Advised

<i>Name</i>	<i>Thesis Title</i>	<i>Date Graduated</i>
Glancis Luzeena Raja Arul	“KMT2D Histone Methyltransferase Mediates Response to Chemotherapy in Pancreatic Ductal Adenocarcinoma”	July 26, 2023

Masters Students Advised

<i>Name</i>	<i>Thesis Title</i>	<i>Date Graduated</i>
Ashley Sigafoos	“Hedgehog/GLI Signaling Pathway: Transduction, Regulation, and Implications for Disease”	December 9, 2021
Mohamud Kodah	“Single Cell Sequencing Technologies Overview in Myeloid Neoplasm”	December 15, 2023

CLINICAL TRIAL EXPERIENCE

<i>Study</i>	<i>Sponsor</i>	<i>Role</i>
<i>Forthcoming</i>		
• OSCAR II (NCT006655142): The ONCObind CTC Removal Study	ExThera Medical Corporation	Mayo Rochester PI
• ASCEND (NCT05042128): Gemcitabine and Nab-Paclitaxel With LSTA1 (Certeptide) or Placebo in Patients With Untreated Metastatic Pancreatic Ductal Adenocarcinoma	Lisata Therapeutics, Inc.	Mayo Rochester PI
<i>Ongoing</i>		
• RASolute 302 (NCT06625320): A Phase 3 Multicenter, Open-label, Randomized Study of RMC-6236 versus Investigator's Choice of Standard of Care Therapy in Patients with Previously Treated Metastatic Pancreatic Ductal Adenocarcinoma (PDAC)	Revolution Medicines	Mayo Rochester PI
• PRISM-1 (NCT06608927): A Randomized, Placebo-Controlled, Double-Blind, Multicenter, Phase 3 Trial of Quemliclustat and Chemotherapy Versus Placebo and Chemotherapy in Patients with Treatment-Naïve Metastatic Pancreatic Ductal Adenocarcinoma	Arcus Biosciences	Mayo Rochester PI
• IMM1104-101 (NCT05585320): Phase 1/2a, Open-Label, Multicenter, Nonrandomized, Safety, Safety and Anti-tumor Activity Study of IMM-1-104, a Novel Oral Dual MEK1/2 Inhibitor in Participants with Previously Treated RAS-Mutated Advanced or Metastatic Solid Tumors	Immuneering Corporation	Mayo Rochester PI
<i>Completed</i>		
• ELI-002-201 (NCT05726864): First in Human Phase 1/2 Trial of ELI-002 7P Immunotherapy as Treatment for Subjects with Kirsten Rat Sarcoma (KRAS)/Neuroblastoma RAS Viral Oncogene Homolog (NRAS) Mutated Pancreatic Ductal Adenocarcinoma (PDAC) and Other Solid Tumors.	Elicio Therapeutics	Mayo Rochester PI
• Actuate 1801 (NCT03678883): Phase 1/2 Study of 9-ING-41, a Glycogen Synthase Kinase-3 Beta (GSK-3B) Inhibitor, as a Single Agent and Combined with Chemotherapy, in Patients with Refractory Hematologic Malignancies or Solid Tumors	Actuate Therapeutics	Mayo Rochester PI
• CRDF-001 (NCT04752696): A Phase 2 Study of Onvansertib in Combination with Nanoliposomal Irinotecan, Leucovorin, and Fluorouracil for Second-Line Treatment of Patients with Metastatic Pancreatic Ductal Adenocarcinoma	Cardiff Oncology	Mayo Rochester PI

BIBLIOGRAPHY

Peer Reviewed Original Articles

- Chandra S, Halfdanarson TR, Carlson EE, Rabe KG, Mahipal A, Majumder S, et al. Discordant risk factors between pancreatic neuroendocrine neoplasms and pancreatic ductal adenocarcinoma. *Endocr Relat Cancer*. 2025 (accepted).
- Flores LF, Marks DL, Vera RE, Sigafos AN, Tolosa EJ, Almada LL, et al. Emerin is an effector of oncogenic KRAS-driven nuclear dynamics in pancreatic cancer. *J Clin Invest*. 2024 (submitted).
- Leiting JL, Alva-Ruiz R, Yonkus JA, Abdelrahman AM, Lynch IT, Carlson DM, et al. Molecular KRAS ctDNA predicts metastases and survival in pancreatic cancer: A prospective cohort study. *Ann Surg Oncol*. 2025.
- Gleeson FC, Dunleavy KA, Levy MJ, **Carr RM**, Hartgers ML, Kottschade LA, et al. Incidence and effect duration of immune checkpoint inhibitors-related pancreas adverse events. *Pancreas*. 2024;53(7):e627-e629.
- Sigafos AN, Tolosa EJ, **Carr RM**, Fernandez-Barrena MG, Almada LL, Pease DR, et al. KRAS promotes GLI2-dependent transcription during pancreatic carcinogenesis. *Cancer Res Commun*. 2024;4(7):1677-1689.
- Desai A, Xiao AH, Choi D, Toruner MD, Walden D, Halfdanarson TR, et al. Molecular characterization and therapeutic opportunities in KRAS wildtype pancreatic ductal adenocarcinoma. *Cancers (Basel)*. 2024;16(10):1861.
- Gatenby RA, Luddy KA, Teer JK, Berglund A, Freischel AR, **Carr RM**, et al. Lung adenocarcinomas without driver genes converge to common adaptive strategies through diverse genetic, epigenetic, and niche construction evolutionary pathways. *Med Oncol*. 2024;41(6):135.
- Hogenson TL, Xie H, Phillips WJ, Toruner MD, Li JJ, Horn IP, et al. Culture media influences patient-derived organoid ability to predict therapeutic responses in gastrointestinal cancers. *JCI Insight*. 2022;7(22):e158060.
- Binder M, **Carr RM**, Lasho TL, et al. Oncogenic gene expression and epigenetic remodeling of cis-regulatory elements in ASXL1-mutant chronic myelomonocytic leukemia. *Nat Comm*. 2022;13:1434.
- **Carr RM**, Vorobyev D, Lasho T, et al. RAS mutations drive proliferative chronic myelomonocytic leukemia via a KMT2A-PLK1 axis. *Nat Comm*. 2021;
- Abeykoon JP, Wu X, Nowakowski KE, Desari S, Paludo J, Weroha SJ, et al. Salicylates enhance CRM1 inhibitor antitumor activity by induction of S-phase arrest and impairment of DNA-damage repair. *Blood*. 2021;137(4):513-523.
- Pietrobono S, Anichini G, Sala C, Manetti F, Almada LL, Pepe S, et al. ST3GAL1 is a target of the SOX2-GLI1 transcriptional complex and promotes melanoma metastasis through AXL. *Nat Commun*. 2020;11(1):5865.
- Mangaonkar AA, Reichard KK, Binder M, Coltro G, Lasho TL, **Carr RM**, et al. Bone marrow dendritic cell aggregates associate with systemic immune dysregulation in chronic myelomonocytic leukemia. *Blood Adv*. 2020;4(21):5425-5430.
- Montagnani V, Maresca L, Apollo A, Pepe S, **Carr RM**, Fernandez-Zapico ME, et al. E3 ubiquitin ligase PARK2, an inhibitor of melanoma cell growth, is repressed by the oncogenic ERK1/2-ELK1 transcriptional axis. *J Biol Chem*. 2020;295(47):16-58-16071.
- **Carr RM**, Duma N, McCleary-Wheeler AL, et al. Targeting of the Hedgehog/GLI and mTOR pathways in advanced pancreatic cancer, a phase 1 trial of vismodegib and sirolimus combination. *Pancreatol*. 2020;20:1115-1122.
- Tolosa EJ, Fernandez-Barrena MG, Iguchi E, McCleary-Wheeler AL, **Carr RM**, Almada LL, et al. GLI1/GLI2 functional interplay is required to control Hedgehog/GLI targets gene expression. *Biochem J*. 2020;477(17):3131-3145.
- Buradkar A, Bezerra E, Coltro G, Lasho TL, Fine CM, Gangat N, et al. Landscape of RAS pathway mutations in patients with myelodysplastic syndrome/myeloproliferative neoplasm overlap syndromes: a study of 461 molecularly annotated patients. *Leukemia*. 2021;35(2):644-649.
- DiFilippo EC, Coltro G, **Carr RM**, Mangaonkar AA, Binder M, Khan SP, et al. Spectrum of abnormalities and clonal transformation in germline RUNX1 familial platelet disorder and genomic comparative analysis with somatic RUNX1 mutations in MDS/MPN overlap neoplasms. *Leukemia*. 2020;34(9):2519-2524.
- **Carr RM**, Romecin Duran PA, Tolosa EJ, et al. The extracellular sulfatase SULF2 promotes liver tumorigenesis by stimulating assembly of a promoter-looping GLI1-STAT3 transcriptional complex. *J Biol Chem*. 2020;295:2698-2712.
- Coltro G, Antelo G, Lasho TL, Finke CM, Pardani A, Gangat N, et al. Phenotypic correlates and prognostic outcomes of TET2 mutations in myelodysplastic syndrome/myeloproliferative neoplasm overlap syndromes. A comprehensive study of 504 adult patients. *Am J Hematol*. 2020;95(4):E86-E89.

- McCleary-Wheeler AL, **Carr RM**, Palmer SR, et al. Phase 1 trial of vismodegib and erlotinib combination in metastatic pancreatic cancer. *Pancreatology*. 2020;20:101-109.
- Mangaonkar AA, Swoboda DM, Coltro G, Lasho TL, Novotny PJ, Pophali P, et al. Clinicopathologic characteristics, prognostication and treatment outcomes for myelodysplastic/myeloproliferative neoplasm, unclassifiable (MDS/MPN-U): Mayo Clinic-Moffitt Cancer Center study of 135 consecutive patients. *Leukemia*. 2020;34(2):656-661.
- Haddox CL, **Carr RM**, Abraham RS, et al. Phenotypic heterogeneity associated with germline GATA2 haploinsufficiency: a comprehensive kindred study. *Leuk Lymphoma*. 2019;60:3282-3286.
- Egan JB, Marks DL, Hogenson TL, Vrabel AM, Sigafos AN, Tolosa EJ, et al. Molecular modeling and functional analysis of exome sequencing-derived variants of unknown significance identify a novel, constitutively active FGFR2 mutant in cholangiocarcinoma. *JCO Precis Oncol*. 2017;PO.17.00018.
- **Carr RM**, Qiao G, Qin J, et al. Targeting the metabolic pathway of human colon cancer overcomes resistance to TRAIL-induced apoptosis. *Cell Death Discov*. 2016;2:16067.
- Li LC, Wang Y, **Carr R**, Haddad CS, Li Z, Qian L, et al. IG20/MADD plays a critical role in glucose-induced insulin secretion. *Diabetes*. 2014;63(5):1612-1623.
- Li P, Jayarama S, Ganesh L, Mordi D, **Carr R**, Kanteti P, et al. Akt-phosphorylated mitogen-activated kinase-activating death domain protein (MADD) inhibits TRAIL-induced apoptosis by blocking Fas-associated death domain (FADD) association with death receptor 4. *J Biol Chem*. 2010;285(29):22713-22722.

Published Reviews

- Raja Rul GL, Toruner MD, Gatenby RA, **Carr RM**. Ecoevolutionary biology of pancreatic ductal adenocarcinoma. *Pancreatology*. 2022;22(6):730-740.
- **Carr RM**, Jin Z, and Hubbard J. Research on anal squamous cell carcinoma: Systemic therapy strategies for anal cancer. *Cancers (Basel)*. 2021;13:2180.
- **Carr RM** and Patnaik MM. Genetic and epigenetic factors interacting with clonal hematopoiesis resulting in chronic myelomonocytic leukemia. *Curr Opin Hematol*. 2020;27:2-10.
- Kozub MM, **Carr RM**, Lomberg GL, et al. LSD1, a double-edged sword, confers dynamic chromatin regulation but commonly promotes aberrant cell growth. *F1000Res*. 2017;6:2016.
- **Carr RM**, Enriquez-Hesles E, Olson RL, et al. Epigenetics of cancer-associated muscle catabolism. *Epigenomics*. 2017;9:1259-1265.

Published Editorials / Commentaries

- **Carr RM** and Fernandez-Zapico ME. It takes a village to overcome KRAS dependence in pancreatic cancer. *Cancer Discov*. 2020;10:910-912.
- **Carr RM** and Fernandez-Zapico ME. Toward personalized TGFB inhibition for pancreatic cancer. *EMBO Mol Med*. 2019;11:e11414.
- **Carr RM** and Fernandez-Zapico ME. Pancreatic cancer microenvironment, to target or not to target? *EMBO Mol Med*. 2016;8:80-82.

ABSTRACTS & POSTERS

Poster, “Measuring pancreatic cancer spatial conformation to predict recurrence risk after total neoadjuvant therapy.”

ASCO Annual Meeting, May 3-June 1, 2025

Poster, “The landscape ecology of DCIS: Microenvironmental drivers of recurrence and progression to breast cancer.”

ASCO Annual Meeting, May 3 – June 1, 2025

- Presented by Luis Cisneros, Ph.D.

Poster, “Preliminary results from the randomized phase 2 study (1801 Part 3B) of elraglusib in combination with gemcitabine/nab-paclitaxel (GnP) versus GnP alone in patients (pts) with previously untreated metastatic pancreatic ductal adenocarcinoma (mPDAC),” ASCO Annual Meeting, May 30-June 3, 2025

- Presented by Dr. Devalingam Mahalingam

Poster, “Tumor spatial configuration predicts pancreatic cancer recurrence risk after total neoadjuvant therapy,” AACR Annual Meeting, April 25-30, 2025

- Presented by Andrea Maraone

Poster, “Phase II study of niraparib and dostarlimab for the treatment of germline or somatic homologous recombination repair mutated (HDR) metastatic pancreatic cancer,” ASCO Gastrointestinal Cancers Symposium, January 23-25, 2025

- Presented by Dr. Khalid A. Jazieh

Poster, “Investigation of the association of CTRB2 exon 6 deletion with time to progression and overall survival in pancreatic ductal adenocarcinoma,” ASCO Gastrointestinal Cancers Symposium, January 23-25, 2025

- Presented by Dr. Zafar Siddiqui

Poster, “Development of a novel individualized prognostic AI pipeline for pancreatic ductal adenocarcinoma (PDAC),” Brown University Warren Alpert Medical School, 18th Academic Symposium, November 12, 2024

- Presented by M Deniz Toruner.

- Awarded “Best Clinical Research Poster Presentation Award”.

Poster, “Dissecting the pancreatic cancer microenvironment with landscape ecology,” AACR Special Conference on Evolutionary Dynamics, December, 2023

- Presented by M Deniz Toruner.

Poster, “Molecular and clinical characteristics of patients with KRAS mutated pancreatic ductal adenocarcinoma,” AACR Special Conference on Pancreatic Cancer, September, 2023

- Presented by Alex Xiao

Poster, “Molecular characteristics and clinical outcomes of KRAS mutant subtypes in pancreatic ductal adenocarcinoma,” ASCO, June, 2023

- Presented by Alex Xiao

Poster, “Trial in progress: Phase II study of niraparib and dostarlimab for the treatment of germline or somatic homologous recombination repair mutated metastatic pancreatic cancer,” ASCO Gastrointestinal Cancers Symposium, February, 2023

Poster, “Modeling adaptive therapy for gastrointestinal malignancies,” AACR Evolutionary Dynamics in Carcinogenesis and Response to Therapy, March 14, 2022

- Presented by Luzeena Raja Arul

Poster, “Clinical categorization of chronic myelomonocytic leukemia into proliferative and dysplastic subtypes correlates with distinct genomic, transcriptomic and epigenomic signatures,” 62nd ASH Annual Meeting & Exposition, December 7, 2019

- Awarded “Abstract Achievement Award”

Poster, “The histone methyltransferase KMT2A acts as a mediator of oncogenic RAS-driven proliferative chronic myelomonocytic leukemia,” Minnesota Society of Clinical Oncology Fall Conference, September 26, 2019

Poster, “GLI1/GLI2 functional interplay is required for GLI2-induced pancreatic cancer initiation,” AACR Pancreatic Cancer: Advances in Science and Clinical Care, September 21, 2018

Poster, “The extracellular sulfatase SULF2 requires the transcription factor GLI1 to promote liver tumorigenesis,” 4th Midwest Tumor Microenvironment Meeting, May 22, 2018

PRESENTATIONS & INVITED LECTURES

Invited Lecture, “Cancer Pathways and Molecular Genetics,” 9th Annual Mayo Clinic Hematology & Oncology for Nurse Practitioners and Physician Assistants, August 23, 2025

Invited Lecture, “Pancreatic Cancer,” Mayo Clinic GI and HPB Cancer Allied Health Education Series, April 14, 2025

Invited Lecture, “Precision Treatment of GI Cancer,” AlliedOne Developments in Gastrointestinal Disease Series, April 22, 2025

Invited Lecture, “Genomics for the Hematologist/Medical Oncologist,” Mayo Clinic Hematology & Oncology Board Review, February 3-7, 2025

Invited Lecture, “Genetic Testing in Oncology Practice,” Post-ASCO Mayo Oncology Review, July 20, 2024

Invited Lecture, “New Strategies in Pancreatic Cancer Treatment,” 3rd Annual GI Pancreas CME course, April 19, 2024

Oral Presentation, “Evolutionary Ecology of Pancreatic Cancer,” Mayo GI/HPB Disease Group Retreat, Thursday March, 2023

Oral Presentation, “Spectrum of abnormalities and clonal transformation in germline RUNX1 FPDMM and a comparative analysis with somatic RUNX1 mutations in myeloid neoplasms,” RUNX1 Research Program 3rd Annual Scientific Conference, October 23, 2019

Oral Presentation, “A novel GLI1-STAT3 transcriptional complex acts as effector of the extracellular sulfatase, SULF2, to promote liver tumorigenesis,” 5th Midwest Tumor Microenvironment Meeting, May 20, 2019

Oral Presentation, “2-Deoxy-D-Glucose Sensitizes Colorectal Cancer Cells to TRAIL-induced Apoptosis,” American Physician Scientist Association 9th Annual Meeting, April 27, 2013.

Oral Presentation, “Inhibition of pro-survival factor MADD (MAP kinase activating death domain) in human colorectal cancer,” American College of Surgeons 97th Annual Clinical Congress, October 24, 2011

RESEARCH GRANTS AWARDED

Active Grants

<i>Role</i>	<i>Funding Source</i>	<i>Project Title</i>	<i>Dates</i>
PI	Advanced Clinical Trials and Translational Sciences (ACTS) Research Program Strategic Pilot Study Grants	Advancing prognostic modeling in pancreatic ductal adenocarcinoma: Tumor landscape analysis of AI-driven tissue and cell-level segmentation	January-December, 2025
PI	Gerstner Family Career Development Award	Evolutionary ecology of pancreatic cancer	2023-2025
PI	Grand Forks Endowed Clinician Career Development Award Fund in Cancer Research	Histone lysine methyltransferase MLL1/2-Taspase1 axis in pancreatic cancer pathogenesis	2023-2026

Completed Grants

<i>Role</i>	<i>Funding Source</i>	<i>Project Title</i>	<i>Dates</i>
PI	Office of Core Shared Services Early-Stage Investigator Research Award	Spatial single cell immunophenotyping of the pancreatic cancer tumor microenvironment	2023
PI	Elsa U Pardee Foundation	Epigenetics of pancreatic cancer	2023-2024
PI	Center for Clinical and Translational Science Small Grants Program	Use of digital pathology and machine learning to predict clinical outcomes of surgically resected pancreatic cancer	2022-2023
PI	ASCO Conquer Cancer Young Investigator Award	Use of transcriptomic signatures to predict personalized gemcitabine sensitivity in pancreatic cancer treatment	2022-2023
Co-Mentor	Minnesota Colorectal Cancer Research Foundation	Modeling adaptive therapy for metastatic colorectal cancer	2021-2022
PI	Eagle Funds for Cancer Research	Epigenetics of chronic myelomonocytic leukemia	2020-2021
Co-I	Hepatobiliary SPORE Development Research Program	Targeting the cholangiocarcinoma epigenome	2019-2020



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