

Daniel Spakowicz — Curriculum Vitae

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Current Position

Assistant Professor, Division of Medical Oncology, The Ohio State University Wexner Medical Center, Columbus, Ohio (2022–present)

Education

2017–2018 — MS, Biomedical Informatics, Yale University, New Haven, CT

2007–2013 — Ph.D., Biophysics, Yale University, New Haven, CT

2000–2004 — B.S., Biochemistry and Ecology, University of Minnesota, Minneapolis, MN

Academic Appointments

2022–present — Assistant Professor, Division of Medical Oncology
The Ohio State University Wexner Medical Center
Columbus, Ohio

2018–2022 — Research Assistant Professor, Division of Medical Oncology
The Ohio State University Wexner Medical Center
Columbus, Ohio

Professional Positions and Experience

2015–2018 — National Library of Medicine Postdoctoral Fellow in Biomedical Informatics, Yale University, New Haven, CT

2014–2015 — Postdoctoral Research Associate, Jackson Laboratory, Farmington, CT, and Yale University, New Haven, CT

2013–2014 — Instructor, Molecular Biophysics and Biochemistry 230: Rainforest Expedition and Laboratory, Farmington, CT and Yale University, New Haven, CT

2007–2013 — Graduate Student, Mol. Biophysics and Biochem, Yale University, New Haven, CT

2004–2007 — Junior Researcher, Dept. of Biophysics, University of Minnesota, Minneapolis, MN

Honors and Awards

2026 — Midwest Microbiome Symposium Excellence in Mentoring Award

2026 — Voices of Pelotonia Cohort

2026 — Leadership Education through Advanced Practice 2026 Cohort

2025 — Mentoring Honorarium, Center for Cancer Mentoring, Education, Leadership and Oncology-Related Training

2024 — American Cancer Society Research Scholar

2023 — Mentor of the Year, The Ohio State University Comprehensive Cancer Center (shared)

2023 — American Lung Association Innovator Award

2023 — Invited Speaker Travel Award, Oncology Research Information Exchange Network Annual Meeting

2022 — Mentor of the Year, The Ohio State University Comprehensive Cancer Center

2022 — Aspen Cancer Fellow

2022 — First Place Presentation Award, Ohio SuperComputing Center Annual Meeting

2022 — Invited Speaker Travel Award, Oncology Research Information Exchange Network Annual Meeting

2021 — Career Development Award, National Institutes of Aging

2020 — Nye-Raden Cancer Research Scholar

2020 — Finalist, OSU Innovator of the Year

2019 — Young Investigator in Immuno-Oncology Research Award

2018 — Pelotonia New Investigator Award

2015 — National Library of Medicine Postdoctoral Fellowship

2012 — Poster Award - Yale Molecular Biophysics and Biochemistry, Yale University, New Haven, CT

2011 — Poster Award - Yale Climate and Energy Institute Conference, Yale University, New Haven, CT

2011 — Yale Excellence in Teaching Award, Yale University, New Haven, CT

Grants and Contract Awards

(Total number: 35, as PI: 21)

(Total Direct Costs: \$28,137,714)

2026 (4, as PI = 2)

\$1,800,000

10/01/2026 – 09/30/2028 · \$75,000 — 2026 Spielman Fund Bridge-to-Impact Clinical Trial Award (AWD-122995; Non-OSP; Co-PI: Spakowicz)

Ohio State University Internal Award

The Vaginal Microbiome as a Biomarker of Vaginal Health in Women with Breast Cancer

01/01/2026 - 12/31/2027 · \$275,000 — R21CA2973842 (PI: Spakowicz, Bradley, Zhu)

National Cancer Institute

Lachnospiraceae characterization to affect diet-mediated improvement of cancer treatment outcomes

Goal: To determine how Lachnospiraceae alters cancer immunotherapy outcomes and to identify potential biotherapeutic targets. Specifically, the project aims to identify and isolate Lachno genes associated with tumor reduction and to test the causal relationship between these isolates, their metabolites, and ICB response using preclinical mouse models.

07/01/2026 – 06/30/2027 · \$50,000 — Harold and Barbara Rosenbaum Family Foundation Cervical Cancer Diversity in Prevention & Clinical Research Grant (PI: O'Connor)

Foundation for Women's Cancer

Probiotic and Dietary Fiber Supplementation to Potentiate Immunotherapy Response in Cervical Cancer

Goal: To examine how specific beneficial gut bacteria and dietary fiber work together to improve the body's response to immunotherapy in cervical cancer. This translational research will provide mechanistic insights to inform future clinical trials testing diet- and microbiome-based strategies to amplify the magnitude of immunotherapy benefit and to improve outcomes for patients fighting cervical cancer.

Role: Mentor

07/01/2026 – 06/30/2030 · \$1,400,000 — Ovarian Cancer Clinical Trial Academy – Early-Career Investigator Award (PI: Chambers)

Department of War Ovarian Cancer Research Program

Modulating the Microbiome to Transform Platinum-Based Care in Ovarian Cancer

Goal: The objective of the PRO-PLATINUM trial is to determine whether probiotic supplementation during platinum-based chemotherapy can improve outcomes in patients with OC by altering the gut and vaginal microbiome

Role: Mentor

2025 (3, as PI = 1)

\$105,000

12/01/2025 – 11/30/2026 · \$50,000 — Stephanie Spielman Research Funds (PI: Spakowicz, Jhawar, Myers)

The Ohio State University Comprehensive Cancer Center

Spatial association of tumor microbes and the tumor microenvironment in breast cancer subtypes

Goal: To understand how the tumor microbiome affects treatment outcomes in breast cancer.

05/01/2025 - 04/30/2026 · \$30,000 — Radiation Oncology Departmental Seed Grant (PIs: Quick and Pitter)

Vaginal DHEA for Women with Gynecologic and Gastrointestinal Cancer After Radiation

Goal: To evaluate the effect of vaginal dehydroepiandrosterone (DHEA) alters the vaginal microbiome in a way that affects treatment outcomes and toxicity following pelvic radiation.

Role: Co-Investigator

06/01/2025 – 05/31/2027 · \$25,000 — Wendy Brewster, MD, PhD Accelerator (PI: Chambers)

Foundation for Women's Cancers

"PROPLATINUM Study: Leveraging microbes to improve women's cancer outcomes"

Goal: To assess whether a probiotic supplement will improve treatment outcomes in the context of platinum-based therapies for gynecologic cancers

Role: Co-Investigator

2024 (8, as PI = 5)

\$1,703,316

12/13/2024 - 02/11/2025 · \$196,000 — FastTrack Program Grant (PI: Presley)

Bristol Myers Squibb

"LiveWellLung: A Prehabilitation Education and Intervention Program Prior to Lung Cancer Surgery"

Goal: To reduce the incidence of post-surgical complications through pre-treatment lifestyle-based modifications including those expected to operate via the microbiome.

Role: Co-Investigator

11/01/2024 – 12/31/2025 · \$15,000 — CCC Transitional Therapeutics FY25 seed award (PIs: Vershraegen, Spakowicz, Presley, and Burd)

The Ohio State University Comprehensive Cancer Center

Investigation of Age-Specific Effects of Indole Supplementation on Immune Function and irAE Development

Goal: To establish a mouse model to study how microbes and microbial metabolites affect immune checkpoint-derived colitis and pneumonitis.

11/1/2024 – 10/31/2026 · \$75,000 — CFAES-CCC-FFH Joint Seed Grant (PIs: Belury, Spakowicz, Pyter)

The Ohio State University

"Prevention of Cancer Cachexia by Dietary Naringenin: Impact on the Gut-Brain Axis"

Goal: To understand how a naringenin dietary supplement affects cancer treatment outcomes in model systems.

10/1/2024 -02/2025 · \$20,000 — 2024 Breast Cancer Translational Research Program Team Science Pilot Grant (PIs: Spakowicz, Jhawar)

The Ohio State University Comprehensive Cancer Center

"Spatial Association of Tumor Microbes and the Tumor Microenvironment in Breast Cancer Subtypes"

Goal: To use spatial transcriptomics and in situ hybridization approaches to relate microbes to tumor microenvironment features in different breast cancer subtypes.

07/01/2024-06/30/2026 · \$405,316 — R21CA294050 (PI: Tabung)

National Cancer Institute

Role of the inflammatory dietary pattern in gut and colon tissue microbiomes and impact on survival outcomes among colorectal cancer patients

Goal: To determine the gut microbial profile of an inflammatory dietary pattern (EDIP) among CRC patients, characterize the EDIP-related microbiome and immune cell profiles in the CRC TME, and determine their impact on CRC survival outcomes for the first time.

Role: Co-Investigator

03/01/2024 -2/28/2028 · \$792,000 — Research Scholar (RSG-23-1023205) (PI: Spakowicz)

American Cancer Society

Lifestyle-based microbiome modification in older adults to promote response to immunotherapy

Goal: To understand the causal mechanisms by which the exercise-modified microbiome affects the response to cancer treatment with immune checkpoint inhibitors.

01/01/2024 – 12/31/2024 · \$50,000 — SIGMA Nursing Research Grant (PI: Han)

Oncology Nursing Foundation

Social determinants of health and race effects on the microbiome and gastro-intestinal toxicity in colorectal cancer

Goal: Investigate the use of gut microbiome-immune interactions to prevent and manage GI symptom toxicity for 5-fluoro-uracil-based chemotherapy in colon cancer patients.

Role: Co-Investigator

04/01/2024 – 03/31/2025 · \$150,000 — Chief of Science Seedling (PIs: Spakowicz, Bradley, Zhu)

Air Force Research Lab

Next-Generation Culturomics: Cultivation of uncultured gut microbes to optimize warfighter health and performance

Goal: To establish methods for cultivating microbes from complex communities for use in experiments to establish causality and as future therapeutics.

2023 (4, as PI = 1)

\$20,762,481

09/14/2023 - 08/31/2028 · \$19,962,481 — U54CA287392 (PI: Wagener)

National Cancer Institute

The Ohio State University tobacco center of regulatory science (OSU-TCORS)

Goal: This project aims to support FDA regulation of new nicotine-containing products by contributing to the understanding of their health and behavioral effects. Dr. Spakowicz will support a project exploring the effect of new nicotine products on the oral microbiome and host markers of inflammation.

Role: Co-Investigator

07/01/2023 – 06/30/2025 · \$150,000 — Innovator Award (104661) (PI: Spakowicz)

American Lung Association

Adenosine as a mediator of tumor and tumor-microbe interactions in non-small cell lung cancer

Goal: To understand how microbial purine excretion in the gut and tumor affects immunotherapy treatment outcomes.

02/01/2023-01/31/2027 · \$450,000 — Early Career Investigator Grant

Ovarian Cancer Research Alliance

The Impact of Gut Microbiome and Probiotics on Chemotherapy Response in Ovarian Cancer Patients

Goal: To use the prospective collection of gut microbiome samples in a patient cohort and pre-clinical models to assess the microbes associated with chemotherapy response and resistance in ovarian cancer and how outcomes may be altered with probiotics.

Role: Co-Investigator

01/01/2023 – 12/31/2024 · \$200,000 — National Comprehensive Cancer Center Network/AstraZeneca (PI: Alamadi)

Improving the Quality of Care and Application of Best Practices in the Treatment of Patients with Small Cell Lung Cancer

The Impact of Area Deprivation Index on Clinical Outcomes for Extensive Stage Small Cell Lung Cancer

Goal: To use retrospective databases and molecular data to understand how socioeconomic and environmental factors influence outcomes in small-cell lung cancer.

Role: Co-Investigator

2022 (4, as PI = 2)

\$500,000

10/01/2022 – 09/30/2024 · \$50,000 — Oncology Nursing Science Grant (PI: Arthur)

The Oncology Nursing Foundation

The Vaginal Microbiome as a Biomarker of Vaginal Health in Women with Breast Cancer

Goal: To collect longitudinal vaginal microbiome samples in women receiving hormone therapy for breast cancer and evaluate the extent to which the microbiome can be used to predict treatment outcomes.

Role: Co-Investigator

07/01/2022 – 6/30/2024 · \$200,000 — Discovery Catalyst Award (PI: Bittoni)

American Lung Association

BEFIT: An exercise intervention study in a cohort at high risk for developing lung cancer

Goal: To assess the feasibility of an exercise intervention in a high-risk cohort and estimate the effect on blood markers of inflammation and the microbiome.

Role: Co-Investigator

07/01/2022 – 6/30/2023 · \$50,000 — Sarcoma Foundation of America Research Award (PIs: Spakowicz, Tinoco)

Sarcoma Foundation of America

The sarcoma tumor microbiome as a therapeutic target

Goal: to survey the tumor microbiome in sarcoma and explore its use as a clinical biomarker of treatment response for immunotherapy.

01/01/2022 – 12/31/2023 · \$200,000 — Pelotonia Population Health Award (PIs: Spakowicz, Zhu)

Pelotonia Non-profit Research Foundation

Dietary interventions to modify the response to immunotherapy: a companion assessment within the NutriCare Study

Goal: To identify changes to the gut microbiome associated with a three-month, three meals-per-day dietary intervention and to establish the causal effect of the changes to the microbiome on the response to immunotherapy in preclinical models.

2021 (4, as PI = 3)

\$3,891,093

07/01/2021 – 06/30/2026 · \$562,750 — K01AG070310 Mentored Career Development Award (PI: Spakowicz)

NIH-National Institutes on Aging

The microbiome in older adults with lung cancer association of treatment regimens and diet with protective microbial profiles

Goal: To define the microbiomes of older adults with lung cancer, modify the microbiomes to promote response using dietary interventions, and study the causal mechanisms using pre-clinical models.

07/01/2021-06/30/2023 · \$118,008 — OSU Department of Internal Medicine Seed Grant (PI: Malalur, Spakowicz)

Circulating microbial DNA as a non-invasive biomarker for colorectal cancer

Goal: To develop methods for non-invasive prediction of cancer, treatment or outcomes using blood-based analysis of microbial DNA.

02/01/2021-01/31/2026 · \$3,023,907 — 1R01CA248741-01A1 (PI: Carbone, Dikov)

NIH-NCI

Targeting immunosuppressive adenosine in patients with metastatic non-small cell lung cancer

Goal: To evaluate (1) the safety and tolerability of combination PBF-1129 with nivolumab, (2) the correlation between immunological parameters and adenosine generation, the microbiome and signaling, and (3) the efficacy of PBF-1129 in targeting adenosine-mediated immunosuppression.

Role: Co-Investigator

01/01/2021-12/31/2023 · \$186,428 — Pelotonia Clinical Trial Award (PI: Spakowicz, Arthur)

Pelotonia Non-profit Research Foundation

The vaginal microbiome as a biomarker of pelvic health and patient-reported outcomes in women receiving pelvic radiation.

Goal: This award aims to correlate the microbiome with patient reported outcomes following pelvic radiation. All microbiome processing, data generation, analysis and integration will be performed in my lab.

2020 (6, as PI = 4)

\$425,896

11/01/2020-05/31/2021 · \$7,896 — 2020 Intramural Supportive Care Pilot Research Award (PI: Spakowicz, Arthur)

OSU Comprehensive Cancer Center Intramural Research Program

Preliminary studies of the vaginal microbiome as a biomarker of pelvic health and patient-reported outcomes in women receiving pelvic radiation.

Goal: This award will fund the collection of microbiome samples as part of a study of patient reported outcomes aims to modify the microbiome with the eventual goal of tailoring gut flora to match desired outcomes in terms of response to treatment or to promote health All microbiome processing, data generation, analysis and integration will be performed in my lab.

08/01/2020-07/31/2021 · \$20,000 — Pilot Grant Award (PI: Mo)

OSU Department of Biomedical Informatics

The Epigenetic Landscape and Correlation with Microbiome in the Early Onset Colorectal Cancer

Goal: To explore associations between intra-tumor microbes and epigenetic modifications with early onset colorectal cancer using publicly available and the oncology research information exchange network data.

Role: Co-Investigator

07/01/2020-06/30/2022 · \$98,000 — Nye-Rayden Cancer Research Award (PI: Spakowicz)

OSU Division of Medical Oncology

Increasing response to immunotherapy through diet-based alterations of the microbiome: a mouse validation study

Goal: This proposal will bridge the ongoing BE WELL trial to cancer ICI response in preclinical models. Specifically, we will determine whether the microbiome shifts elicited by BRB in the clinical study affect response ICIs in a mouse model of lung cancer. We will also use metagenomics and metabolomics to evaluate the mechanism by which the foods lead to microbial community changes.

07/01/2020-06/30/2022 · \$100,000 — Research Award Seed Grant (PI: Jin, Spakowicz)

OSU Division of Medical Oncology

The Epigenetic Landscape and Correlation with Microbiome in the Early Onset Colorectal Cancer

Goal: To observe the correlations between the tumor microbiome and methylation in colorectal cancer as a potential mechanism for the rise in early onset colorectal cancer.

01/01/2020-06/30/2022 · \$200,000 — Young Investigator Research Award in Immuno-oncology (PI: Spakowicz)
LCFA-BMS/ILC Foundation

Evaluating modifiable biomarkers for the prediction of immunotherapy response and toxicity

Goal: This award is to evaluate the predictive strength of the microbiome and physical activity for cancer treatment responses, relative and in addition to tumor biomarkers such as PD1/PDL1 and tumor mutational burden. The hope is that, because these biomarkers can be modified, we will estimate to what extent the response to treatment can be altered by controlling these two variables.

2019 (6, as PI = 5)

\$425,928

12/14/2019-05/31/2020 · \$15,000 — Secondary Analysis of Existing Datasets (PI: Spakowicz, Mo)

2019 CCTS Pilot Translational & Clinical Studies Program

Exogenous sequences in unmapped transcriptome data from the ORIEN consortium

Goal: With this award, we will create a computational pipeline to process and analyze tumor biopsy RNAseq data collected at the OSU Comprehensive Cancer Center and members of the ORIEN consortium. We will link microbes with immune cell profiles and expression to predict treatment outcomes.

09/01/2019-08/31/2020 · \$25,000 — Foods for Health (FFH) Discovery Theme Seed Grants (PI: Zhu, Spakowicz, Ma)
Internal OSU

Food Products for the Targeted Enrichment of Gut Microbes

Goal: With this award we will set up a model gut system to rapidly assess the effects of food molecules on microbial communities in vitro. In addition, we will develop a model for predicting the response to inputs by combining two tools created by OSU faculty, Spakowicz and Ma.

07/02/2019-06/30/2020 — 2K12CA133250-06A1 (PI: Byrd, Awardee: Presley)

NCI

OSU K12 Training Grant For Clinical Faculty Investigators

Goal: The goal of this proposal is to mentor and effectively train faculty-level investigators in basic science and/or clinically oriented approaches to translational research.

Role: Co-Investigator

01/01/2019-12/31/2020 · \$149,500 — Pelotonia New Investigator Award (PI: Spakowicz)

Pelotonia Non-profit Research Foundation

The Effect of the Microbiome on Immune Checkpoint Inhibitor Response and Corticosteroid Use in Melanoma

Goal: This award will study the how the microbiome interacts with the immune system in the context of immunotherapy for melanoma with specific focus on toxicity and corticosteroid use. All microbiome processing, data generation, analysis and integration will be performed in my lab.

01/01/2019-12/31/2020 · \$186,428 — Pelotonia Clinical Trial Award (PIs: Spakowicz, Carbone, Clinton)

Pelotonia Non-profit Research Foundation

Pilot study to define compliance and impact of a novel black raspberry food product on the microbiome and immune functions in a high-risk cohort for lung cancer.

Goal: This award seeks to modify the microbiome with the eventual goal of tailoring gut flora to match desired outcomes in terms of response to treatment or to promote health. All microbiome processing, data generation, analysis, and integration will be performed in my lab.

01/01/2019-12/31/2020 · \$50,000 — OSU Hematology Department Research Funds (PI: Choe, Spakowicz)

Longitudinal analysis of the impact of Vitamin A on stool microbiota post-hematopoietic stem cell transplantation (HSCT).

Goal: This award seeks to modify the microbiome by decreasing gut tight junction leakiness, thereby reducing bloodstream infections and graft versus host disease.

Role: Co-PI

2018 (2, as PI = 0)

\$300,000

07/01/2018-06/30/2020 · \$100,000 — Davis Bremmer Award (PI: Presley)

OSU Center for Clinical & Translational Science (CCTS)

The Aging Immune System, Treatment Response, and Functional Decline among Older Adults with Lung Cancer

Goal: This award will study how the microbiome interacts with the aging immune system in the context of lung cancer therapy. All microbiome processing, data generation, analysis, and integration will be performed in my lab.

Role: Co-I

07/01/2018-06/30/2020 · \$200,000 — Pelotonia New Investigator Award (PI: Presley)

Pelotonia Non-profit Research Foundation

The Aging Immune System, Treatment Response, and Functional Decline among Older Adults with Lung Cancer

Goal: This award will study how the microbiome interacts with the aging immune system in the context of lung cancer therapy. All microbiome processing, data generation, analysis, and integration will be performed in my lab.

Role: Co-I

Inventions

T2026-085 — Systems and methods for predicting treatment-related toxicity in patients with metastatic melanoma.

Released September 30, 2026.

Publications

(See the complete list)

Accompanying public software and analysis code are noted below the relevant publications. Links point to the latest verified release, which may postdate the publication; unversioned repositories are identified separately.

2026 (14)

1. Chambers LM, **Spakowicz D**, Chalif J, O'Connor R, Kistenfeger Q, Mehra Y, Mohssen M, Abdeen C, Haight P, Nagel C, Neff R, Cohn D, Copeland LJ, Backes F, Cosgrove C, Hays J, Dravillas C, McLaughlin E, O'Malley D. PRO-PLATINUM: A randomized, double-blind, placebo controlled study to investigate the efficacy of a probiotic intervention on the gut and vaginal microbiome of ovarian cancer patients undergoing treatment with platinum chemotherapy. *Gynecol Oncol*. 2026 Aug;211:74-78. doi: 10.1016/j.ygyno.2026.06.016. PMID: 42364424.
2. Zhou Q, Lu Y, Wang L, Zhou W, Oba H, Zhou Y, Shen M, Qu X, De Souza C, Rayner A, Chen Y, Cheng TY, Ling Z, Li L, Liu C, Voigt AY, Xiong R, Oh J, **Spakowicz D**, Dravillas C, Tian AW, Nicolls MR, Huynh AT, Chen X, Hu J, He M, He F, Snyder MP, Yang J, Zhou X. Power and sample-size estimation in human microbiome research. *Med*. 2026 Jul 10;7(7):101174. doi: 10.1016/j.medj.2026.101174. PMID: 42302785.
3. Li M, **Spakowicz DJ**, Zhao S, Kwon H, Chian K, Khorasanchi A, Guo Y, Wei L, Meng L, Yang Y, Alahmadi A, Memmott RM, Kaufman J, He K, Shields PG, Mace TA, Phelps MA, Coss CC, Li Z, Kendra KL, Carbone DP, Otterson GA, Presley CJ, Owen DH. Association between obesity, sex, medical comorbidities, and survival in cancer patients treated with immune checkpoint inhibitors. *J Cancer*. 2026;17(6):1117-1124. doi: 10.7150/jca.130032. PMID: 42327585; PMCID: PMC13280536.
4. Bukovac J, Husain M, Sapper T, O'Dell A, Bittoni M, Gastier H, Chebbi A, Hockenhull V, Dohar Z, Moon J, Tabung F, Verschraegen C, Wu R, Kendra K, Yang Y, Volek J, **Spakowicz D**. How the Ketogenic Diet Shapes the Microbiome to Influence Cancer Immunotherapy Outcomes: An Exploration of Clinical Trials and Their Results. *Nutr Cancer*. 2026;78(6):367-396. doi: 10.1080/01635581.2026.2658807. PMID: 42077003; PMCID: PMC13247657.

Accompanying public software/code release: keto-rev v1.0.

5. Chalif J, Moruzzi C, Velasquez J, O'Connor R, Fulton J, Mehra Y, Cohn DE, Copeland LJ, Cosgrove CM, Nagel CI, O'Malley DM, Monovich L, **Spakowicz DJ**, Chambers LM. Implementing non-invasive biospecimen collection in gynecologic oncology: Insights from a prospective gut microbiome feasibility study. *Gynecol Oncol*. 2026 May;208:63-68. doi: 10.1016/j.ygyno.2026.03.008. PMID: 41905324.
6. Liu CC, Grencewicz D, Chakravarthy K, Li L, Liepold R, Wolf M, Marcho LM, Sangwan N, Tzeng A, Hoyd R, Jhavar SR, Grobmyer SR, Al-Hilli Z, Sciallis AP, **Spakowicz D**, Ni Y, Eng C. Breast tumor microbiome regulates anti-tumor immunity and T cell-associated metabolites. *Sci Rep*. 2026 Apr 16;16(1):17587. doi: 10.1038/s41598-026-48719-5. PMID: 41991647; PMCID: PMC13243561.

Accompanying public software/code release: staph-brca v1.0.

7. Sekar N, Zhao S, Rudich A, Johns N, Hwang JD, Su PL, Hu J, **Spakowicz D**, Wei L, Yang Y, Cheng TD, Coss C, Phelps M, Parang B, Gheeya J, Roof L, Alahmadi A, Memmott R, Kaufman J, Presley C, He K, Burns T, Shields P, Rolfo C, Carbone D, Owen D, Li M. CLO26-084: Prognostic Value of Sarcopenia in Patients With Metastatic NSCLC Receiving First-Line Immune Checkpoint Inhibitors. *J Natl Compr Canc Netw*. 2026 Mar 31;24(3.5):CLO26-084. doi: 10.6004/jnccn.2025.7467. PMID: 42061416.
8. Hwang JD, Su PL, Zhao S, Hu J, **Spakowicz D**, Wei L, Baiu I, D'Souza D, Merritt R, Kneuert P, Parang B, Gheeya J, Roof L, Alahmadi A, Memmott R, Kaufman J, Presley C, He K, Burns T, Shields P, Rolfo C, Carbone D, Owen D, Li M. CLO26-114: Association Between Neoadjuvant Chemoimmunotherapy-Induced Anemia and Survival in Patients With Resectable Non-Small Cell Lung Cancer. *J Natl Compr Canc Netw*. 2026 Mar 31;24(3.5):CLO26-114. doi: 10.6004/jnccn.2025.7321. PMID: 42061423.
9. Petouhoff A, Hicks R, Husain M, Hoyd R, Xu M, Dravillas C, Patel SH, Johns A, Grogan M, Li M, Lopez G, Miah A, Liu Y, Muniak M, Schmidt M, Das A, Lathrop H, Das P, Secor A, Haddad T, Tinoco G, Carbone D, Kendra K, Otterson GA, Presley CJ, Mace T, **Spakowicz D**, Owen DH. Impact of proton pump inhibitors on immunotherapy is modulated by prior chemotherapy and linked to gut microbiome-immune cell signatures. *Cancer Immunol Immunother*. 2026 Mar 9;75(4):98. doi: 10.1007/s00262-026-04346-7. PMID: 41801404; PMCID: PMC12972483.
Accompanying public software/code release: ppiio v1.0.0.
10. Han C, **Spakowicz D**, Von Ah D, Noonan A, Pyter L. Gut Microbiota and Nutritional Profiles of Colon Cancer Patients Undergoing Chemotherapy: A Longitudinal Pilot Study. *Nutrients*. 2026 Jan 29;18(3):438. doi: 10.3390/nu18030438. PMID: 41683263; PMCID: PMC12899050.
11. Chow Z, Liu J, He D, Wang C, Gan T, Mansour A, Shaker N, Dravillas C, Hoyd R, Durbin E, Napier D, Gao T, Schaberg K, Huang L, Ulrich N, Siegel E, Edge S, Cook L, Salhia B, Churchman M, Kolesar J, **Spakowicz D**, Evers BM, Bocklage T. Colon cancer in Appalachian Kentucky: Unique genetic, microbiome and obesity findings in a cohort comparison. *HGG Adv*. 2026 Jan 15;7(1):100527. doi: 10.1016/j.xhgg.2025.100527. Epub 2025 Oct 9. PMID: 41063459; PMCID: PMC12554973.
12. Obermayer A, Davis J, Talada DP, Teng M, Eschrich S, Yin V, **Spakowicz D**, Chatterjee D, Rounbehler RJ, Churchman ML, Tarhini AA, Wang X, Gupta S, Markowitz J, Goecks J, Li R, Rodrigues Pessoa R, Manley BJ, Tan AC, Grass GD, Chen DT, Shaw TI. ShinyEvents: harmonizing longitudinal data for real-world survival estimation. *NPJ Precis Oncol*. 2026 Jan 13. doi: 10.1038/s41698-025-01212-0. Epub ahead of print. PMID: 41526666.
13. Marcho LM, Chakravarthy KB, Jhavar SR, **Spakowicz DJ**. Tumor-infiltrating microbes and therapy response: a new frontier in triple-negative breast cancer precision oncology. *J Immunother Cancer*. 2026 Jan 7;14(1):e013314. doi: 10.1136/jitc-2025-013314. PMID: 41500775; PMCID: PMC12781984.
14. Jhavar SR, **Spakowicz D**. Tumor bacterial burden dictates immunotherapy fate in head and neck cancer. *Nat Cancer*. 2026 Jan 2. doi: 10.1038/s43018-025-01074-2. Epub ahead of print. PMID: 41482525.

2025 (15)

1. Zarich S, Cole RM, Fairchild K, **Spakowicz D**, Sparagna G, Madison A, Ni A, Belury MA. Effects of Walnuts on Postprandial Cognitive Function in Adults With Subjective Cognitive Impairment: Protocol for a Randomized Crossover Trial. *JMIR Res Protoc*. 2025 Dec 19;14:e82032. doi: 10.2196/82032. PMID: 41418290; PMCID: PMC12759297.
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Book Chapters

1. Grencewicz DJ, Jahanbakhshi S, Fulton J, Wheeler C, Chalif J, Chambers L, **Spakowicz D**. The Role of the Microbiome in Modulating Human Health. In: *Soil Health: Food as Medicine*. CRC Press/Taylor & Francis Group; 2025. ISBN: 978-1-00-346974-2

Published Abstracts and Presentations

Conference abstracts, posters, and oral presentations. Journal articles are listed under Publications.

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2. Jahanbakhshi S, et al. (coauthor: **Spakowicz D**). Dietary modulation of gut Lachnospiraceae reveals conserved microbial metabolic programs linked to host immune regulation. ASM; 2026. Poster. Presenter: Shiva Jahanbakhshi.
3. Jahanbakhshi S, et al. (coauthor: **Spakowicz D**). Comparative genomics of gut commensal Lachnospiraceae and their associations with cancer treatment response with immune checkpoint inhibitors. Case Comprehensive Cancer Center; 2026. Poster. Presenter: Shiva Jahanbakhshi.
4. Jahanbakhshi S, et al. (coauthor: **Spakowicz D**). Comparative genomics of gut commensal Lachnospiraceae and their associations with cancer treatment response with immune checkpoint inhibitors. AACR Annual Meeting; 2026. Poster. Presenter: Shiva Jahanbakhshi.

2025 (13)

1. Dravillas C, et al. (coauthor: **Spakowicz D**). Modeling Longitudinal Microbiome Data with Application to a Melanoma Clinical Trial Evaluating Immune Checkpoint Inhibitor Treatment Response (NCT05102773). ASA; 2025. Oral presentation. Presenter: Caroline Dravillas.
2. Loncar A, et al. (coauthor: **Spakowicz D**). Tumor colonization with *Candida albicans* increases tumor growth and decreases treatment response by influencing tumor hypoxia and immune activity. Pelotonia Scholars Symposium; 2025. Oral presentation. Presenter: Alexander Loncar. Best Undergraduate Presentation Award: Alexander Loncar.
3. **Spakowicz D**. Using dietary interventions to improve cancer treatment outcomes via modification of the microbiome. HMIDT; 2025. Oral presentation.
4. Jahanbakhshi S, et al. (coauthor: **Spakowicz D**). Gut microbiome modulation by a black raspberry nectar for improving anti-PD1 therapy effectiveness in pre-clinical cancer models. CFAES; 2025. Poster. Presenter: Shiva Jahanbakhshi.
5. Jahanbakhshi S, et al. (coauthor: **Spakowicz D**). Gut microbiome modulation by a black raspberry nectar for improving anti-PD1 therapy effectiveness in pre-clinical cancer models. 21st Annual Russell Klein Nutrition Research Symposium; 2025. Poster. Presenter: Shiva Jahanbakhshi.
6. Grencewicz D, et al. (coauthor: **Spakowicz D**). Tumor colonization with *Candida albicans* increases tumor growth and decreases treatment response. Case Comprehensive Cancer Center Microbiome Workshop; 2025. Oral presentation. Presenter: Dennis Grencewicz. Best Trainee Presentation Award: Dennis Grencewicz.
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9. Mehra Y, LaPlante E, Flora L, Dravillas C, Kim J, Aduwo J, Korley N, Diaz A, Miller E, Pitter K, Williams N, Hoyd R, Mo X, **Spakowicz D**, Chambers L, Arthur EK, Quick AM. Impact of pelvic radiation on vaginal microbiome and pelvic health: Findings from the GEORGIA Trial (NCT04713618). AACR Annual Meeting; Chicago, IL; 2025 Apr 25–30. Cancer Res. 2025;85(8_Suppl_1):Abstract nr 4693.
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1. Jahanbakhshi S, et al. (coauthor: **Spakowicz D**). Gut microbiome modulation by a black raspberry nectar for improving anti-PD1 therapy effectiveness in pre-clinical cancer models. Pelotonia Institute for Immuno-Oncology (PIIO); 2024. Poster. Presenter: Shiva Jahanbakhshi.
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2. Li M, Zhao S, Chian K, Chakravarthy K, Kwon H, Gauntner T, Jones N, Secor A, Das P, Surya N, Zehr B, **Spakowicz D**, Wei L, He K, Alahmadi A, Memmott R, Kaufman J, Shields PG, Li Z, Carbone DP, Presley CJ, Otterson GA, Owen DH. P1.21-15 Prognostic value of change in platelet volume for patients with metastatic non-small cell lung cancer treated with pembrolizumab. J Thorac Oncol. 2023 Nov;18(11 Suppl):S240–S241.
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11. Coleman S, Wheeler C, Hoyd R, Denko L, Lin C, Fadlullah M, Hu-Lieskovan S, Chung C, Tarhini A, **Spakowicz D**, Tan AC. Systematic analysis of the predictive gene expression signatures of immunotherapies across multiple cancer types using IOSig. AACR Annual Meeting; 2023 Apr. *Cancer Res.* 2023;83(7_Supplement):6574.
12. Wheeler CE, Coleman S, Hoyd R, Osman A, Denko L, Tan AC, **Spakowicz D**, Tarhini A. Intra-tumor microbes identified by RNAseq associated with response to immune checkpoint blockade in metastatic melanoma. AACR Annual Meeting; 2023 Apr 1. *Cancer Res.* 2023;83(7_Supplement):5904.
13. Pallerla A, Conrad B, Bibi A, Williams N, Wheeler C, Hoyd R, Suman S, Amann J, Liu Y, Bittoni M, Zhang S, Grogan M, Anand A, Afrah N, Presley C, Tabung FK, Li L, Vodovotz Y, Zhu J, Carbone DP, Clinton SK, **Spakowicz D**. A causal modeling platform for testing lifestyle interventions on the microbiome and response to immunotherapy. AACR Annual Meeting; 2023 Apr. *Cancer Res.* 2023;83(7_Supplement):4435.

2022 (1)

1. **Spakowicz D**, Hoyd R, Wheeler CE, Williams N, Bibi A, Husain M, Rajamouli S, Suman S, Amann J, Grogan M, Vibhakar P, Owen DH, Carbone DP, Rosko A, Burd CE, Presley CJ. Older adult specific microbes correlate with treatment response and markers of T-cell senescence in NSCLC. AACR Special Conference: Aging and Cancer; 2022 Nov. *Cancer Res.* 2023;83(2_Suppl_1).

2021 (7)

1. Karivedu V, Hoyd R, Wheeler C, Jhawar S, Bhateja P, Bonomi M, **Spakowicz D**. Preliminary insights into the impact of tumor microbiome in head and neck squamous cell carcinoma. SITC Annual Meeting; 2021 Nov. *J Immunother Cancer.* 2021;9(Suppl 2):A878. doi: 10.1136/jitc-2021-SITC2021.837.
2. Bittoni M, Bibi A, Williams N, Mendelson M, Grainger E, Vodovotz Y, Riedl K, Clinton S, Carbone D, **Spakowicz D**. Report on a phytochemical-rich dietary intervention trial to prevent lung cancer: implementation in a high-risk lung screening clinic. *J Thorac Oncol.* 2021 Mar;16(3 Suppl):S470–S471. Abstract P40.03.

3. Byun W, Ross H, Kozono D, Urbanic J, Robb R, Talabere T, Oezkan F, **Spakowicz D**, Stinchcombe T, Carbone D. TCR sequencing to identify responders in patients with stage III NSCLC treated with atezolizumab with chemoradiation (AFT-16). *J Thorac Oncol*. 2021 Mar. Abstract P79.01. doi: 10.1016/j.jtho.2021.01.1180.
4. Malalur PG, Mo X, Hoyd R, Hays JL, Carbone DP, **Spakowicz D**. Investigating intra-tumor microbes, blood microbes, and CEA for development of non-invasive biomarkers in colorectal cancer. ASCO Annual Meeting; 2021 Jun 4–8. Poster.
5. Jin N, Mo X, Hoyd R, Yilmaz AS, Liu Y, Jagjit Singh M, Muniak M, Hampel H, **Spakowicz D**. Microbiome signature, global methylation and immune landscape in early onset colorectal cancer. ASCO Annual Meeting; 2021.
6. Tinoco G, Husain M, Hoyd R, Jagjit Singh M, Liu Y, Mo X, Chen JL, Liebner DA, **Spakowicz D**. The sarcoma microbiome as a diagnostic and therapeutic target. ASCO Annual Meeting; 2021. *J Clin Oncol*. 2021;39(15_suppl):11541. doi: 10.1200/JCO.2021.39.15_suppl.11541.
7. Arthur E, Quick A, Arnett A, Mo X, **Spakowicz D**. The vaginal microbiome as a biomarker of pelvic health and patient-reported outcomes in women receiving pelvic radiation. ONS/NCI/NINR Symptom Science Advances in Oncology Nursing Colloquium; 2021. Poster.

2020 (8)

1. Malalur PG, Mo X, Hoyd R, Carbone DP, **Spakowicz D**. Intra-tumoral microbes and overall survival in colorectal cancer patients. ASCO Annual Meeting; 2020 May 29–Jun 2. Poster.
2. Zhao S, Li M, **Spakowicz D**, Patel SH, Johns A, Grogan M, Miah A, Husain M, He K, Bertino EM. Neutrophil-lymphocyte score: a novel prognostic scoring system that utilized the dynamic change of neutrophil, lymphocyte, and albumin and its comparison to other indices. ASCO Annual Meeting; 2020. *J Clin Oncol*. 2020;38(15_suppl):3048.
3. **Spakowicz D**, Hoyd R, Liu Y, Sahasrabudhe J, Singh MJ, Arefi I, Denney A, Carbone D, Mo X. Abstract B30: Intratumoral microbes correlate with tumor-infiltrating lymphocytes in lung cancer RNAseq. AACR; 2020 Apr. *Cancer Res*. 2020;80(8_Supplement):B30.
4. Riesenberg BP, Li M, **Spakowicz D**, Hoyd R, Beane J, Yang Y, Oezkan F, He K, Patel SH, Johns A. Platelets impact the responsiveness of immune checkpoint blockade therapy in solid tumors. ASCO Annual Meeting; 2020. *J Clin Oncol*. 2020;38(15_suppl):e15023.
5. Patel SH, Li M, Zhao S, **Spakowicz D**, Wei L, Burkart JT, Husain M, He K, Bertino EM, Shields PG, Carbone DP. Changes in lymphocyte/monocyte ratio as a prognostic marker to predict overall survival in patients with advanced cancer treated with immune checkpoint inhibitors. ASCO Annual Meeting; 2020. *J Clin Oncol*. 2020;38(15_suppl):3047.
6. Li M, Zhao S, **Spakowicz D**, Burkart JT, Patel SH, Husain M, He K, Bertino EM, Shields PG, Wei L. Neutrophil to lymphocyte ratio, PD-L1 expression, and survival in patients with advanced non-small cell lung cancer receiving first-line immune checkpoint inhibitor therapy. ASCO Annual Meeting; 2020. *J Clin Oncol*. 2020;38(15_suppl):46.
7. Li M, **Spakowicz D**, Zhao S, Patel SH, Johns A, Grogan M, Miah A, Husain M, He K, Bertino EM. Inhaled corticosteroid use and risk of pneumonitis in patients treated with immune checkpoint inhibitors. ASCO Annual Meeting; 2020. *J Clin Oncol*. 2020;38(15_suppl):3140.
8. **Spakowicz D**, Husain M, Tinoco G, Patel SH, Burkart JT, Verschraegen CF, Kendra KL, Hoffman S, Philippon J, Quiroga DM, Otterson GA, Owen DH. Intra-tumoral microbes correlate with tumor-infiltrating lymphocytes in lung cancer biopsies. AACR Special Conference: The Microbiome, Viruses, and Cancer; Orlando, FL; 2020 Feb 23. Poster.

2019 (6)

1. Serrano J, Hoyd R, **Spakowicz D**, Kyriazis GA. Saccharin supplementation induces glucose intolerance conditional on sweet chemoreceptor sensing. 2019. E21–E22.
2. Johns A, Grogan M, Hoyd R, Bridges JFP, Wei L, Patel S, Li M, Husain M, Kendra KL, Otterson GA, Burkart JT, Rosko AE, Andersen BL, Carbone DP, Owen DH, **Spakowicz D**, Presley CJ. Is immunotherapy toxicity associated with improved overall survival among older adults with advanced cancer? ASCO Annual Meeting; Chicago, IL; 2019 Jun. J Clin Oncol. 2019;37(15_suppl):6580.
3. Johns A, Wei L, Grogan M, **Spakowicz D**, Patel S, Li M, Husain M, Kendra K, Otterson G, Burkart J, Rosko A, Andersen B, Carbone D, Owen D, Presley CJ. Risk factors for immunotherapy toxicity among older adults. AGS Annual Scientific Meeting; Portland, OR; 2019 May.
4. **Spakowicz D**, Li M, Hoyd R, Burkart JT, Patel SH, Husain M, He K, Presley CJ, Bertino EM, Shields PG, Carbone DP, Shah HA, Tinoco G, Folefac E, Bhateja P, Verschraegen CF, Otterson GA, Li L, Kendra KL, Owen DH. Re-evaluating the neutrophil-to-lymphocyte ratio: machine learning-based variable selection for predicting survival at twelve months in late-stage cancer patients receiving immunotherapy. ASCO Annual Meeting; Chicago, IL; 2019 Jun. J Clin Oncol. 2019;37(15_suppl):e18201.
5. **Spakowicz D**, Burkart J, Patel S, Husain M, He K, Presley C, Bertino E, Shields P, Carbone DP, Verschraegen C, Otterson G, Kendra K, Li M, Owen D. Change in neutrophil to lymphocyte ratio during treatment with immune checkpoint inhibitors predicts survival in patients with advanced cancer. ASCO-SITC Clinical Immuno-Oncology Symposium; San Francisco, CA; 2019 Feb.
6. **Spakowicz D**, Husain M, Tinoco G, Patel SH, Burkart JT, Verschraegen CF, Kendra KL, Hoffman S, Philippon J, Quiroga DM, Otterson GA, Owen DH. Effect of concomitant medications on overall survival in patients with cancer undergoing immunotherapy. ASCO-SITC Clinical Immuno-Oncology Symposium; San Francisco, CA; 2019 Feb.

Invited Talks

4/13/2026 — Case Comprehensive Cancer Center Microbiome Symposium

“Low abundance microbes in obesity-associated cancers”

Cleveland, OH

12/3/2025 — Nationwide Children’s Hospital Oral-GI Microbiology Research Affinity Group (OGM-RAG) Special Seminar

“Translating the Cancer Microbiome: From Predictive Models to Therapeutic Interventions”

Columbus, OH

10/15/2025 — The Ohio State University

Radiation Oncology 8250: Biology of the Tumor Microenvironment

“The Impact of the Microbiome on the Tumor Microenvironment”

Columbus, OH

07/03/2025 — OSU Division of Internal Medicine Grand Round Presentation

“Current clinical implications of the microbiome and future prospects”

Columbus, OH

04/25/2025 — OSU Pelotonia Institute for Immuno-Oncology Research in Progress Meeting

“The tumor microbiome affects the microenvironment as a function of the microbe and cancer type”

Columbus, OH

03/28/2025 — The 21st Annual Meeting of the MidSouth Computational Biology and Bioinformatics Society

“Spatial effects of the breast tumor microbiome”

Salt Lake City, UT

03/01/2025 — OSU Lung SPORE PPG Research Retreat

“Radiotherapy outcomes modification via the microbiome” (w. Nic Denko)

Columbus, OH

03/01/2025 — OSU Lung SPORE PPG Research Retreat

“Age-dependent microbiome-immune effects on irAE development and outcome” (w. Carolyn Presley)

Columbus, OH

02/20/2025 — Translational Research Cancer Centers Consortium

“The tumor microbiome affects the microenvironment as a function of the microbe and cancer type”

Seven Springs, PA

05/09/2024 — Abbott Nutrition

“Using nutrition to alter cancer treatment outcomes via the microbiome”

Columbus, OH

05/07/2024 — Oncology Research Information Exchange Network Microbiome Research Interest Group Meeting

“Update on the tumor microbiome presentations at AACR24”

Remote - Online

05/06/2024 — Center of Microbiome Science Annual Retreat

“Modification of the microbiome to improve cancer treatment outcomes”

Columbus, OH

04/25/2024 — Diet, Nutrition, and Cancer: Collaborating Toward a Cancer-Free World

“Intersections of Diet, Cancer, and the Immune System”

Controlled Environment Agriculture Research Complex, Columbus, OH

04/17/2024 — National Clinical Trials Network: Phase 1 Working Group

“The Role of the Microbiome in Cancer Treatment outcomes: use for correlative science in Phase I clinical trials”

Columbus, OH

03/09/2024 — Society for Immunotherapy of Cancer: Spring Scientific; Metabolism at the Hub of Cancer and Immunity

“Dietary modification of Lachnospiraceae abundance promotes response to immune checkpoint blockade”

Miami, FL

03/04/2024 — University of New Mexico Comprehensive Cancer Center Cancer Control and Population Science Research Program Meeting

“Exploring the tumor microbiome with ORIEN sequencing data”

Online

11/17/2023 — Next Generation Lung Cancer Symposium

“The Role of the Microbiome in Lung Cancer”

Columbus, OH

11/03/2023 — Rust Belt Microbiome Conference

“Trials using the older adult microbiome as a biomarker of treatment outcomes and a therapeutic target”

Pittsburgh, PA

10/17/2023 — The Ohio State University Comprehensive Cancer Center Annual Scientific Meeting

“Exploring the tumor microbiome with ORIEN sequencing data”

Columbus, OH

09/13/2023 — Pelotonia Institute for Immuno-Oncology

Dietary modification of the microbiome to improve cancer treatment outcomes

Columbus, OH

06/29/2023 — Pelotonia Institute for Immuno-Oncology

“Increasing response to immunotherapy through diet-based alterations of the microbiome: a mouse validation study”

Columbus, OH

05/15/2023 — The Ohio State University Comprehensive Cancer Center

“The exORIEN Consortium: Progress and Future Directions”

Columbus, OH

04/25/2023 — Shared Insights Seminar Series: Biospecimen Shared Resource, Super-User

“Shared Insights: Microbiome collection and processing through the Biospecimen Shared Resource”
Columbus, OH

03/30/2023 — Donors Seminar, Pelotonia Foundation
“Using the microbiome to alter cancer treatment outcomes”
Columbus, OH

03/14/2023 — Pelotonia Institute For Immuno-Oncology Research In Progress Seminar
“Exploring the tumor microbiome”
Columbus, OH

03/02/2023 — The Oncology Research Information Exchange Network Scientific Retreat
“The tumor microbiome associates with features of the tumor microenvironment, treatment outcomes, and histologies; a national collaboration of the exORIEN Consortium”
Salt Lake City, UT

03/01/2023 — The Oncology Research Information Exchange Network Scientific Retreat, Artificial Intelligence/Machine Learning Session
“The {exotic} tool for detecting low abundance microbes in high-throughput sequencing data: processing, decontamination, and validation”
Salt Lake City, UT

02/28/2023 — Oncology Data Science Symposium
The tumor microbiome associates with features of the tumor microenvironment, treatment outcomes, and histologies; a national collaboration of the exORIEN Consortium”
Huntsman Cancer Institute, Salt Lake City, UT

02/16/2023 — Science In Action Data Science Series
“Metatranscriptomics for the assessment of paired host and microbe activities in tumors and clinical trial swabs: data generation and processing resources through the OSU Applied Microbiology Services Lab and the Ohio Supercomputing Center”
The Ohio State University, Columbus, OH

02/14/2023 — Case Comprehensive Cancer Center Microbiome Workshop
Keynote Speaker
“Exogenous sequences in unmapped transcriptome data”
Cleveland, OH

02/06/2023 — Oncogeriatrics Program Investigators Meeting
“Incorporating microbiome science into clinical trials involving older adults”
The Ohio State University, Columbus, OH

12/09/2022 — The Oncology Research Exchange Network Scientific Committee
“Comparison of the Oral and Tumor Microbiomes Between Appalachian and non-Appalachian patients”
Online

11/17/2022 — American Association for Cancer Research Aging and Cancer Conference
Older adult-specific microbes correlate with treatment response and markers of T-cell senescence in NSCLC”
San Diego, CA

10/14/2022 — The Ohio State University Comprehensive Cancer Center Annual Meeting
“The older adult microbiome as a biomarker of treatment outcomes and a therapeutic target”
Columbus, OH

04/14/2022 — Ohio SuperComputing StateWide User’s Group Annual Meeting
“Exogenous sequences in unmapped tumor transcriptome data”
Columbus, OH

09/08/2021 — Lung Cancer Foundation of America /Bristol Myers Squibb /International Lung Cancer Foundation Young Investigator Research Grant Update
“Modifiable biomarkers of immunotherapy treatment response lung cancer”

08/31/2021 — The Scientist Symposium: Cancer and Aging
Online

08/15/2021 — Cultivating a Cure

“Modifying the gut microbiome with dietary interventions”

Columbus, OH

06/22/2021 — International Society of Geriatric Oncology

“Immunotherapy toxicity and steroids use in older cancer patients”

Online

06/10/2021 — QIAGEN Human Microbiome Days series

Online

05/06/2021 — Symposium on World Cancer Research 2022

“The microbiome and response to immunotherapy in older adults”

Online

10/13/2020 — Biological big data: the of the microbiome in cancer treatment

Big Data Analytics Association, Columbus, OH

09/18/2020 — The role of the gut and tumor microbiomes in cancer treatment

PIIO, Columbus, OH

05/02/2020 — Melanoma Research Foundation

Columbus, Ohio

“Understanding Melanoma: From Prevention to Treatment”

04/01/2020 — Innovator of the Year

The Ohio State University, Columbus, Ohio

09/01/2019 — Big Ten Cancer Research Consortium Correlative Science Clinical Trial

Chicago, Illinois

“Practical considerations for incorporating microbiome collection into clinical trials”

04/17/2017 — Department of Biomedical Informatics Seminar

Cleveland Clinic Foundation Cleveland, Ohio

“From Microbiomes to Molecules: Natural Product Discovery through Community Sequencing”

02/27/2017 — Division of Medical Oncology Seminar

The Ohio State University Columbus, Ohio

“From Microbiomes to Molecules: Natural Product Discovery through Community Sequencing”

02/13/2017 — Asthma From Pathway Biology to Precision Therapeutics Conference

Keystone, Colorado

“Using microbial composition within sputum transcriptome data to stratify patients by asthma severity”

01/05/2017 — Department of Biostatistics and Data Science Seminar

City of Hope, Duarte, California

“From Microbiomes to Molecules: Natural Product Discovery through Community Sequencing”

Educational Activities

2022 — Lecturer, Biochemical Mechanisms of Carcinogenesis (BCG8270), The Ohio State University, Columbus, OH

2022 — Lecturer, Biology of the Tumor Microenvironment (NSGY8250) , The Ohio State University, Columbus, OH

2019 — Lecturer, Clinical Informatics (CBB470), The Ohio State University, Columbus, OH

2013-2014 — Instructor, Molecular Biophysics and Biochemistry 230: Rainforest Expedition and Laboratory, Yale University, New Haven, CT

Mentorship

Postdocs

Mohamed Mohssen — 2026–Present

Hiroshi Nishiwaki — 2025–Present. Current Position: Visiting Fellow.

Yogita Mehra — 2023–Present

Medical Students/Residents/Fellows

Reed O’Conner — 2025–Present. Honors: Gynecology Oncology Fellow.

Julia Chalif — 2025–Present. Honors: Gynecology Oncology Fellow.

Ahmad Hussein — 2022–2025. Honors: Medical Student; Current Position: Resident, Internal Medicine, OSU.

Dennis Grencewicz — 2022–2026. Honors: Samuel J. Roessler Memorial Scholarship Medical Student – Research Scholar, Carolyn Kuckein AOA Fellow; President Landacre Honor Society; Current Position: Case Comprehensive Cancer Center Harrington Physician Scientist Training Program.

Bailey Conrad — 2022–2023. Honors: Medical Student.

Graduate Students

Tanisha Mukherjee — 2025–Present. Current Position: Microbiology Masters.

Lynn Marcho — 2025–Present. Current Position: BSGP PhD.

Julia Zalewski — 2025–2026. Current Position: Biostats Masters.

Elham Mirtaheri — 2025–Present. Current Position: OSUN PhD.

Anna Petouhoff — 2025–Present. Current Position: BSGP PhD.

Karthik Chakravarthy — 2024–2025. Honors: MD/PhD Student.

Shiva Jahanbakhshi — 2023–Present. Honors: Graduate Research Assistant (Food Science and Technology).

Caroline Dravillas — 2020–Present. Honors: Masters Student, Public Health (OSU); Current Position: Data Analyst.

Rebecca Hoyd — 2018–Present. Honors: Data Analyst, Graduate Research Assistant; Current Position: PhD Candidate in Biostatistics (OSU).

Full time staff

Lane Nevers — 2025–Present. Honors: Pelotonia Research Scholar.

Alexander Loncar — 2025–2026. Honors: Pelotonia Research Scholar; Current Position: Medical Student (Univ of Cincinnati).

YunZhou Liu — 2019–2023. Honors: Pelotonia Research Scholar; Current Position: Graduate School (Johns Hopkins).

Nyelia Williams — 2019–2023. Honors: Research Assistant; Current Position: Lab Manager, OSU.

Mitch Muniak — 2019–2021. Honors: Research Assistant; Current Position: Medical Student (Ohio University).

Malven Singh — 2019–2024. Honors: Undergraduate Researcher; Current Position: Research Tech, Tessera Therapeutics, Boston, MA.

Amna Bibi — 2019–2024. Honors: Research Assistant.

Undergraduate Students

Ian Sander — 2024–Present. Honors: Barry Goldwater Scholar; Current Position: Ohio-5 Fellow.

Bemnet Worku — 2025–Present. Honors: Undergraduate Researcher Apprenticeship Fellow.

Raymond Nahhas — 2025–Present

Caitlin O'Malley — 2025–Present

Jacqueline Hudak — 2024–2025

Jonah Bukovac — 2025–Present. Honors: Undergraduate Researcher Apprenticeship Fellow.

Aspen Carson — 2025–Present. Honors: Undergraduate Researcher Apprenticeship Fellow.

Ridha Pandey — 2023–2025. Honors: Undergraduate Researcher Apprenticeship Fellow.

Idara Ntukidem — 2023–2024

Matthew Drozda — 2023–2024

Justin Simmons — 2023–2023. Honors: CREATES Fellow.

Naa Dromo Korley — 2023–2023. Honors: ASPIRE Undergraduate Fellow; Current Position: Medical Student (Univ. Of Cincinnati).

Carol Mensah-Bonsu — 2023–2023. Honors: CREATES Fellow.

Alexander Loncar — 2022–Present. Honors: Pelotonia Research Scholar.

Lane Nevers — 2022–Present. Honors: URAP, Undergraduate Fellow, Pelotonia Research Scholar.

Louis Denko — 2022–2024. Honors: Undergraduate Researcher.

Owen Snyder — 2021–2024. Honors: Undergraduate Researcher; Current Position: Medical Student (Univ. Of Cincinnati).

Mari Lynn — 2021–2023. Honors: CREATES Undergraduate Fellow.

Yangyang Liu — 2021–2022. Honors: Pelotonia Undergraduate Research Fellow.

Alvin Anand — 2021–2021. Honors: Undergraduate Researcher.

Aadi Pallerla — 2020–2022. Honors: Pelotonia Undergraduate Research Fellow; Current Position: Medical Student (Univ. Of Cincinnati).

Isaac Arefi — 2019–2022. Honors: Undergraduate Researcher.

Andy Denny — 2019–2021. Honors: Undergraduate Researcher.

Mark Isom — 2019–2020. Honors: Undergraduate Researcher.

Janhavi Sahasrabudhe — 2019–2020. Honors: Undergraduate Researcher.

Linda Antwi — 2019–2020. Honors: Undergraduate Researcher.

J.T. Bassett — 2019–2019. Honors: Undergraduate Researcher; Current Position: Olive Consulting.

High School Students

Jennifer Carmona Cordova — 2025–Present. Position in Lab: CREATES Fellow; Current Position: High School Student.

Justin A. Suppogu — 2025–Present. Current Position: High School Student.

Camille Croom — 2025–2025. Current Position: High School Student.

Jaleea Gamble — 2023–2023. Position in Lab: ASPIRE Fellow; Current Position: High School Student.

Najma Afrah — 2022–2022. Position in Lab: CREATES High School Fellow; Current Position: High School Student.

Thesis Committee

Claire Cornellier — 2025–Present. Department: Graduate Research Associate.

Yinjie Li — 2023–Present. Department: Thesis Committee.

Noah Lepola — 2023–Present. Department: Thesis Committee.

Sushma Nepal — 2023–Present. Department: Thesis Committee.

Dharti Shantaram — 2022–Present. Department: Thesis Committee.

Shiqi Zhang — 2021–2024. Department: Thesis Committee; Current Position: Postdoc, MD Anderson.

Connor Geraghty — 2017–2019. Department: Thesis Committee; Current Position: Postdoc, Harvard.

Faculty Mentoring

Claire Han — College of Nursing — Mentor on Oncology Nursing Fund Early Investigator Award

Gabriel Tinoco, MD — Division of Medical Oncology — Mentor on K08 application

Laura Chambers, DO — Division of Gynecologic Oncology — Mentor on K12 application, DoD Career Development Award

Professional Memberships and Activities

2026–Present — Scientific Advisory Board Member, Lung Cancer Research Foundation (LCRF)

2026 - 2028 — Editor, Genome Biology

2026-05-01 – 2028-04-30 — Editorial Board Member, AACR Cancer Research Communications

2023 – Present — Infectious Disease Institute Applied Microbiology Services Lab Strategic Advisory Committee

2023 - Present — Leader, Oncology Research Information Exchange Network Microbiome Research Interest Group

2023 - 2026 — Chair, OSU Culturomics Interest Group

2021 - Present — Center of Microbiome Science

College of Medicine Representative to the Executive Advisory Committee

2021 - Present — Cancer in Aging Research Group

2021 – Present — Leader, Oncology Research Information Exchange Network (ORIEN) Tumor Microbiome Inter-Member Project

2021 – Present — ORIEN Immuno-oncology Research Interest Group

2020 – Present — Alliance Care of the Older Adult Committee

2019 – Present — OSU Onco-geriatrics Research Group

2019 – Present — Big10 Cancer Research Consortium Correlative Science Working Group

2019 – Present — American Association for Cancer Research

2019 – Present — International Society for Study of Lung Cancer

2019 – Present — Pelotonia Institute for Immuno-Oncology

2018 – Present — Translational Data Analytics Institute

2018 – 2025 — Society for Immunotherapy of Cancer

2016 – 2020 — International Society for Computational Biology

2015 – 2020 — American Society for Microbiology

2012 – 2015 — Mycological Society of America

2006 – 2013 — Biophysical Society

2025 — Guest Editor, Genome Biology, “Microbiome and cancer” collection

2021 — Assistant Editor, Journal of Clinical Investigation (JCI)

Ad hoc reviewer

(12) BMC Cancer 2019-2025

(4) Cell, Host & Microbe 2024, 2025

(4) Nature Cancer 2024-2025

(4) Cancer Research Communications 2023-2025

(2) Cancer Epidemiology, Biomarkers & Prevention 2025

(2) Gut Microbes 2024

(2) Journal of Pharmacology and Experimental Therapeutics 2023

(2) Metabolites 2022

(2) Microbial Biotechnology 2021

(2) International Journal of Radiation Oncology Biology Physics 2021

(2) Journal of Fungi 2018

(1) eBioMedicine 2025

(1) Lancet Oncology 2025

(1) Cancer Cell 2025

(1) Nutrition and Cancer 2024

(1) Oncotarget 2024

(1) Cell Reports 2024

(1) Cancer Medicine 2023

(1) Clinical Lung Cancer 2023

(1) Proceedings of the National Academy of Sciences 2023

(1) Annals of Translational Medicine 2022

(1) Molecular Physiology 2022

(1) Heliyon 2022
(1) Current probiotics 2022
(1) Journal of Geriatric Oncology 2022
(1) Journal of Gastrointestinal Cancer 2021
(1) Current Biotechnology 2020
(1) International Journal of Molecular Sciences 2020
(1) Cancer drug resistance 2020
(1) Genes 2019
(1) High-Throughput 2017

Service

2026-11-20 (scheduled) — OSUCCC Intramural Research Program Clinical Translational Science Reviewer (Fall 2026)
2026-11-02 (scheduled) — OSUCCC Intramural Research Program Basic Science Reviewer (Fall 2026)
2026-09-23 (scheduled) — Center for Cancer Prevention and Survivorship Works in Progress R21 Grant Reviewer
2026 — OSU Aging Research Initiative Pilot Program Reviewer
2026 — CTSI R Grant Mock Study Section Reviewer
2026-04-29 — OSUCCC Intramural Research Program Basic Science Reviewer
2026 — American Cancer Society CTPS Application Reviewer
2025-12-16 — CTSI R Grant Mock Study Section Reviewer
2025 — Infectious Diseases Institute Seed Grant Reviewer
2025-04-07; 2025-10-31 — OSUCCC Intramural Research Program Clinical/Translational Science Reviewer
2025 — Graduate Faculty Representative: Mathematics defense
2025 — FAMRI Grant Reviewer
2024, 2025 — Pelotonia Graduate Fellowship Reviewer
2024 — European Science Foundation External Grant Reviewer
2022 — Division of Medical Oncology Division-Chief Search Committee Member
2027-01-01 – 2029-12-31 — American Cancer Society term member on the Postdoctoral Fellowship-Clinical & Population Sciences (PF-CPS) Peer Review Committee in the Career Growth and Research Excellence Program
2026-04-13 — Case Comprehensive Cancer Center Microbiome Symposium Poster Judge
2026-04-01 — Center of Microbiome Science Travel Award Reviewer
2025-03-03 — National Cancer Institute Translational Immuno-Oncology Study Section ad hoc reviewer
2025-02-26 — Small Animal Imaging Shared Resource User Committee
2024-02-14 – 2025-12-31 — Department of Microbial Infection and Immunity Search Committee (2 positions)
2024-10-29 — Moderator, Oncology Research Information Exchange Network Scientific Summit, Microbiome session
2024-10-28 — Moderator, Oncology Data Science Research Symposium session
2024-05-17 — Graduate Faculty Representative: Statistics defense
2024-04-11 — Pelotonia Basic Science Study Section
2024-01-01 – Present — ORIEN Clinical Quality Assurance Working Group
2024-01-01 – Present — IDI GEMS Strategic Advisory Committee
2024-01 – 2024-08 — OSU Microbial Infection and Immunity Faculty Search Committee
2023-12-08 — OSU Medical Student Research Day Judge
2023-10-25 — Pelotonia Translational Science Study Section

2023-10-16 — Pelotonia Basic Science Study Section
2023-06-27 — T32 Predoctoral Mentored Research Training Program Study Section
2023-05-11 — Foods For Health Innovator Awards Study Section
2023-05-03 — Center for Clinical and Translational Science Launch to Success Mock Study Section Reviewer
2023-04-05 — Pelotonia Basic Science Study Section
2023-02-24 — OSU Medical Student Research Scholarship Reviewer
2023-02-16 — National Cancer Institute Translational Immuno-Oncology Study Section
2023-02-06 — OSU Center of Microbiome Science Proposal Cohort Reviewer
2022-11-30 — OSU Infection Disease Institute Interdisciplinary Research Seed Grant Reviewer
2022-04-28 — OSU Foods For Health Seed Grant Review Panel
2022-03-14 — Pelotonia Basic Science Study Section
2022-03-07 — OSU Medical Student Research Scholarship Reviewer
2021-09-23 — OSUCCC RISSR User Committee Meeting
2021-04-28 – Present — Pelotonia Institute for Immuno-Oncology (PIIO) Center for Cancer Immuno-Microbiomics (CCIM)
2021-05 – 2023-01 — Data Safety Monitoring Committee (Beating Lung Cancer in Ohio)
2021-03-03 - 2024 — Pelotonia Institute for Immuno-Oncology Center for Cancer Immuno-Microbiomics Planning Committee
2021-04-22 — International Association for the Study of Lung Cancer (IASLC 2021) World Conference on Lung Cancer Abstract Grader
2021-05-21 — Clinical Translational Science Shared Resource (CTSSR) Oversight Committee
2021-04-21 — Pelotonia Postdoctoral Fellowship Study Section
2021-03-18 — OSU-CCC Trainee Research Day Poster Judge
2021-02-18 — National Cancer Institute (NCI) Clinician Science Training Grant (KL2) Study Section
2020-04-08 — Pelotonia Basic Science Study section
2019-10-24 — Pelotonia Basic Science Study section
2019-04-02 — OSU-CCC Trainee Research Day Poster Judge

Other Creative Products

Public Software Releases

Latest verified GitHub release per project, checked September 28, 2026. Dates are shown in US Eastern time. Study code includes published papers, preprints, submitted manuscripts, and conference work.

Reusable tools and packages

mec-tx v1 — released 2026-04-30. Encoding and comparison of oncology treatment timelines, patient clustering, and survival analysis.

tmesig v1 — released 2026-03-04. Tumor microenvironment expression signatures, including hypoxia and mitochondrial scores.

mt.surv v1.1.1 — released 2025-05-20. Multi-threshold survival analysis of count and expression data.

exotic v2.0 — released 2024-04-01. Processing and contaminant filtering of exogenous sequences in tumors and immune cells.

microsig v1.0 — released 2023-09-29. Microbial signature scoring, including signatures from BugSigDB.

mhealth-iit v0.1.0 — released 2023-03-12. R Shiny application supporting consent and Fitbit data collection in clinical trials.

Manuscript and study analysis code

OCRescore v1.0.0 — released 2026-09-26. Analysis code accompanying the mitochondrial oxygen consumption and lung tumor hypoxia preprint.

bewell-mice v1.0.0 — released 2026-09-25. Analysis code for the submitted BE WELL mouse-model manuscript.

bewell v1.0.0 — released 2026-09-24. Analysis code for the submitted BE WELL black raspberry nectar clinical trial manuscript.

ppiio v1.0.0 — released 2026-09-18. Proton pump inhibitors, immunotherapy, and microbiome-immune cell analyses.

mitox v1.0 — released 2026-08-20. Melanoma clinical trial manuscript analyses and the original power calculations (NCT05102773).

adjing v1 — released 2026-08-07. Pretreatment T-cell transcriptional signatures and melanoma immunotherapy outcomes.

staph-brca v1.0 — released 2025-12-19. Breast tumor microbiome, anti-tumor immunity, and T-cell-associated metabolites.

keto-rev v1.0 — released 2025-09-30. Code and analyses supporting the ketogenic diet and cancer immunotherapy review.

exorien-exogio v1.0 — released 2025-08-26. Early-onset colorectal cancer epigenetics, intratumoral microbiome, and immunity.

exorien-recrad v1.0 — released 2024-05-20. Tumor microbiome, hypoxia, and radiation response in colorectal cancer.

fitness v1.0 — released 2024-05-15. Longitudinal geriatric assessment and functional disability in lung cancer.

atbac v2.0 — released 2024-04-01. Obesity-associated microbiomes and visceral adipose tissue inflammation.

exorien-melio v0.1 — released 2023-05-26. Tumor microbiome and immunotherapy outcomes in metastatic melanoma.

exohnsc v1 — released 2022-12-19. Tumor microbiome and hypoxia across head and neck cancer subsites.

exotic-manuscript 1.0 — released 2022-08-10. Analyses accompanying the exotic methods manuscript.

co-mo-io v1.0.0 — released 2022-06-24. Medical comorbidities and immune checkpoint inhibitor outcomes.

mageio v1.0.1 — released 2021-02-05. Aging microbiome and response to immunotherapy.

aacrmv20 v.10 — released 2020-12-17. Analysis code for the AACR microbiome conference presentation.

diacomp20 v0.1 — released 2020-07-09. Analyses of diabetic complications in preclinical models.

decoasthma v1.0 — released 2020-03-09. Integration of microbial and host RNA-seq signals in asthma.

co-med-io v1.0.1 — released 2019-11-06. Concomitant medications and immune checkpoint inhibitor outcomes.

Additional public software

MEGA — Intratumoral microbiome analysis; public version tag 0.0.5.

mhealthCI — Bayesian structural time series for estimating intervention effects in mobile health data. The prior CV records v0.1 dated 2021-05-23; the repository currently lists no GitHub releases.

Historical release records

These entries are retained from the prior CV; their original repositories are no longer publicly accessible at the recorded addresses as of September 28, 2026.

respondersig v0.1 — 2021-12-10. Microbiome responder/non-responder signatures and meta-analysis (formerly spakowiczlab/respondersig).

LDA-link v1.0 — 2020-04-13. Integration of microbial and host RNA-seq signals in asthma (formerly Gersteinlab/lda-link).

I attest that this information is accurate.

Signature:

Date: 2026-09-10