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Winthrop P. Rockefeller  
Cancer Institute

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**NCI Fund Semiannual Legislative Report**

December 1, 2022 - May 31, 2023

# TABLE OF CONTENTS

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Executive Summary .....	1
Background.....	1
NCI Designation Overview.....	2
Impact of Cancer Centers on Cancer Care.....	3
Value of NCI Designation.....	3
Process to Attain NCI Designation.....	4
Expected Timeline .....	5
State Funds to Support NCI Designation .....	6
Progress Toward Achieving NCI Designation Dec. 1, 2022 – May 31, 2022.....	7
Large-Scale Recruitment of Cancer Researchers.....	7
Strategic Recruitment of Oncology Clinical Faculty and Staff .....	7
External Advisory Board .....	8
Increased Research Funding.....	8
Cancer Research Grant Activity.....	8
Philanthropic Fundraising.....	9
Radiation Oncology Center and Program Expansion .....	9
Clinical Trials.....	10
UAMS Baptist Health Cancer Network.....	10
Community Outreach and Engagement.....	10
Cancer Research Training and Education .....	11
New Developments in Oncology .....	11
Pilot Funding.....	12
Shared Resources .....	13
APPENDIX A – Expense Breakdown .....	15
APPENDIX B – Curricular Vitae of Cancer Research Recruits .....	20
APPENDIX C – Curricular Vitae of Oncology Clinical Faculty .....	74
APPENDIX D – 2023 External Advisory Board Bios.....	130
APPENDIX E – Act 181.....	137

## Executive Summary

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In 2019, the Arkansas General Assembly passed Senate Bill 151, creating the University of Arkansas for Medical Sciences (UAMS) National Cancer Institute Designation Trust Fund. A semiannual report of the use of funds from the trust fund is required pursuant to Act 181 of 2019. To date, this report provides information regarding the balance of the fund, administrative costs paid for from the fund, and total revenue received by the fund. A detailed description of the steps taken and the progress made toward achieving status as a National Cancer Institute-designated cancer center are covered in this report as well, including faculty recruitment efforts, research funding and grant activity, philanthropic fundraising, infrastructure and cancer care network expansion, clinical trials, and community outreach programs. This period's report also includes information regarding the Cancer Research Training and Education program, pilot funding opportunities, and shared resources.

## Background

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According to the American Cancer Society, more than 18,600 Arkansans will be diagnosed with cancer in 2023, and an estimated 6,340 people will die of the disease.<sup>1</sup> Arkansas has a high rate of cancer diagnoses in four types of cancers: lung and bronchus (2,950), breast (2,510), prostate (2,500), and colon and rectal (1,630). Although cancer mortality rates in Arkansas have decreased between 2010 and 2021, the state currently ranks 6<sup>th</sup> highest in the nation with regards to cancer-related deaths.<sup>2</sup> Cancer is the second-leading cause of death in Arkansas and could become the leading cause of death within the next decade, surpassing cardiovascular disease, based on the diagnosis trends in the state.

Earning NCI designation for our cancer center will allow UAMS to provide cancer patients throughout the state of Arkansas with specialty cancer care close to home as well as providing access to cutting-edge clinical trials while expanding our work on cancer prevention, early detection, and cancer research.

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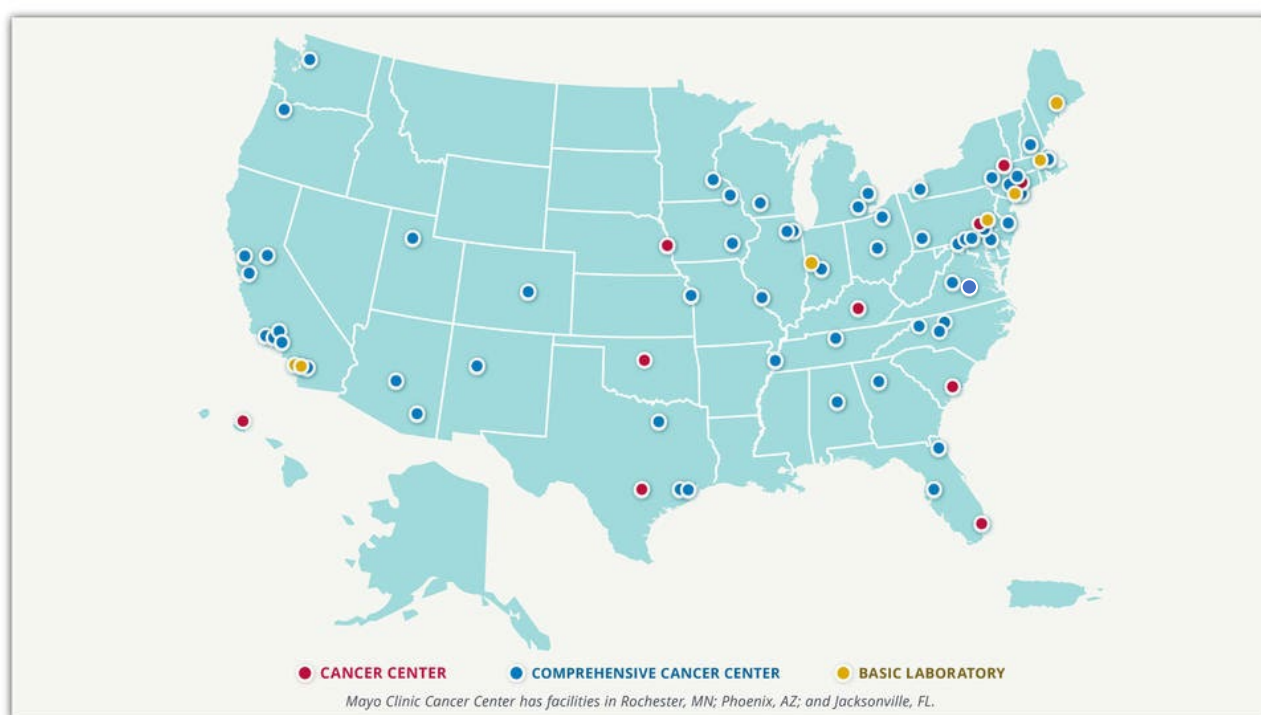
<sup>1</sup> American Cancer Society. *Cancer Facts & Figures 2023*. American Cancer Society, 2023, [www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2023/2023-cancer-facts-and-figures.pdf](https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2023/2023-cancer-facts-and-figures.pdf).

<sup>2</sup> Centers for Disease Control and Prevention. *Cancer Mortality by State*. CDC/National Center for Health Statistics, 28 Feb 2022, [https://www.cdc.gov/nchs/pressroom/sosmap/cancer\\_mortality/cancer.htm](https://www.cdc.gov/nchs/pressroom/sosmap/cancer_mortality/cancer.htm).

## NCI Designation Overview

The National Cancer Institute (NCI) recognizes designated cancer centers for their exceptional leadership in clinical, laboratory, and translational research. NCI-designated cancer centers represent the top 2% of cancer centers in the United States.

In 1971, President Richard Nixon signed the National Cancer Act of 1971 authorizing the National Cancer Program to provide additional funding to establish 15 new cancer centers. These new cancer centers were charged with conducting clinical research, training, and demonstration of advanced diagnostic and treatment methods for cancer. Today, the NCI supports a network of 71 NCI-designated cancer centers in 36 states and the District of Columbia, including 54 Comprehensive Cancer Centers, 10 Cancer Centers, and seven Basic Laboratory Cancer Centers (**Figure 1**). Sixty NCI-designated cancer centers are affiliated with university medical centers.



**Figure 1. NCI Designated Cancer Centers.** There are currently 71 NCI-designated cancer centers across 36 states and the District of Columbia.

NCI-designated cancer centers are recognized for their scientific leadership in laboratory and clinical research, in addition to serving their communities and the broader public by integrating training and education for biomedical researchers and health care professionals. NCI-designated cancer centers dedicate significant resources toward developing research programs, faculty, and facilities that will lead to better and innovative approaches to cancer prevention, diagnosis, and treatment. NCI supports the research infrastructure for cancer centers to advance scientific goals and foster cancer programs that draw together investigators from different disciplines.

## Impact of Cancer Centers on Cancer Care

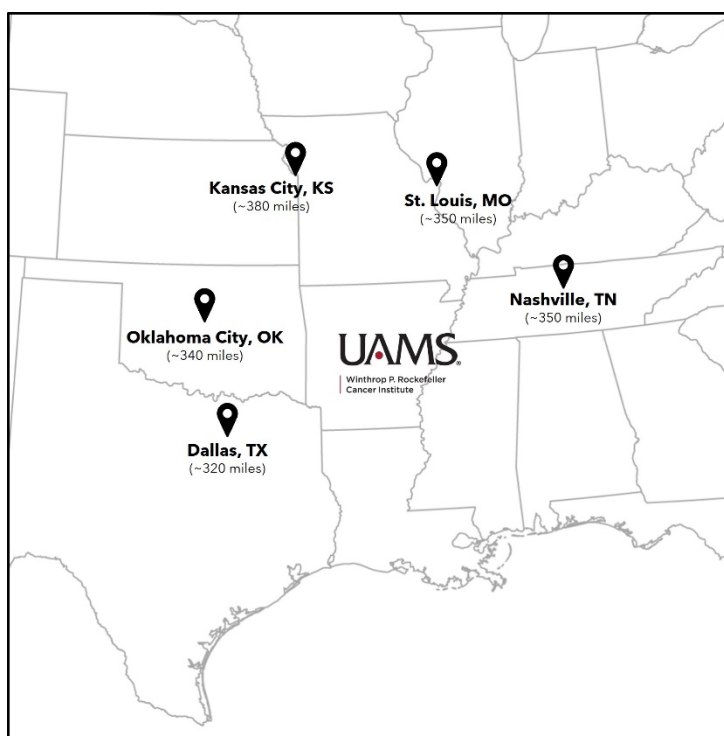
When the U.S. Senate approved to increase the number of comprehensive cancer centers in 1975, their goal was to geographically distribute these centers in order to provide an estimated 80% of the U.S. population with access to cancer care within a reasonable driving distance. Cancer centers serve their local communities with programs and services tailored to their unique needs and populations. As a result, these centers disseminate evidence-based findings to their own communities, and these programs and services can be translated to benefit similar populations around the country.

There are no NCI-designated centers in Arkansas, Louisiana, or Mississippi. The nearest NCI-designated centers providing adult cancer care are located in Dallas, Oklahoma City, Kansas City, St. Louis, and Nashville. These centers are all ~300+ miles (5+ hours drive) away from Central Arkansas and are not a feasible cancer care solution for most Arkansans (**Figure 2**).

Markey Cancer Center in Lexington, Kentucky; Stephenson Cancer Center in Oklahoma City, Oklahoma; and Sylvester Comprehensive Cancer Center in Miami, Florida; earned NCI designation for the first time in 2013, 2018, and 2019, respectively. Additionally, the University of Kansas Cancer Center in Kansas City, Kansas, and the Massey Cancer Center in Richmond, Virginia, were elevated to “Comprehensive” status in 2022 and 2023, respectively.

The NCI Cancer Centers Program continues to value the geographic distribution of its cancer centers and patient access to research-driven, cutting-edge care.

The NCI recognizes that there is a great need and opportunity for Arkansas to have an NCI-designated cancer center, and it stands ready to support the Winthrop P. Rockefeller Cancer Institute on its journey toward designation.



**Figure 2. Closest NCI-Designated Centers to Arkansas.**

## Value of NCI Designation

NCI designation is an enormous asset for any state and benefits include the following:

1. Direct monetary support from NCI will support cancer research that benefits Arkansans. While many cancer centers conduct research, the Winthrop P. Rockefeller Cancer Institute is the only academic institution in the Arkansas focused on improving cancer outcomes. In fact, NCI requires its designated cancer centers to define their research portfolio based on what will make a difference in cancer prevention, awareness, treatment, survival, and quality of life in the population they serve.

2. Indirect monetary gains include a projected \$70 million economic impact on the state of Arkansas annually. Further growth following NCI designation is expected to increase that impact value. (Source: Arkansas Center for Health Improvement, 2018)
3. Becoming a member of the NCI Cancer Centers Program will give Arkansas a seat at the table to drive national strategic planning for cancer research toward opportunities that will benefit all Arkansans.
4. Arkansans will have access to clinical trials and new cancer treatments that are only available to NCI-designated cancer centers.
  - a. Access to grant funding opportunities that are only available to NCI-designated cancer centers
  - b. Access to cutting-edge clinical trials and investigational drugs that are only available to NCI-designated cancer centers
5. Cancer researchers at the Winthrop P. Rockefeller Cancer Institute will have access to cancer research grants that are only available to NCI-designated cancer centers. This provides the opportunity to increase the amount of cancer research designed to benefit Arkansans by ~60%.

The opportunity to partner with an NCI-designated cancer center will attract biotechnology and pharmaceutical companies to Arkansas. It is estimated that designation could lead to the establishment of a biotechnology park in Arkansas along with offices and headquarters for many pharmaceutical companies.

## Process to Attain NCI Designation

NCI designation is attained through strategic recruitment of cancer researchers and establishment of a sophisticated cancer research infrastructure prescribed by the NCI in its P30 Cancer Center Support Grant (CCSG) (<https://grants.nih.gov/grants/guide/pa-files/PAR-21-321.html>).

Our estimated cost to attain NCI designation is \$250 million. This cost is in line with recent successful NCI designation efforts. Oklahoma's Stephenson Cancer Center became the 70th NCI-designated cancer center on May 2, 2018, stating it took 12 years and \$400 million to become designated. Twenty-nine percent of the \$400 million came from the state, predominantly through a statewide tobacco tax, according to Stephenson Cancer Center Director, Robert Mannel, MD.<sup>3</sup> The Sylvester Comprehensive Cancer Center in Miami, Florida, reported that it spent \$250 million over five years to become the country's 71st NCI-designated cancer center on July 29, 2019. Sylvester's director, Stephen Nimer, MD, said that the state of Florida contributed a little over \$16 million per year during that time to support their efforts to achieve NCI designation.<sup>4</sup>

Cancer centers seeking NCI designation undergo review by an External Advisory Board (EAB) to ensure that NCI's standards for a designated center are being met. These EAB meetings are critical to keep a cancer center on track for designation and result in a formal report about the cancer center being filed with NCI. Once an EAB has determined that a cancer center is ready to apply for NCI Designation, the cancer center must meet with NCI and get their approval to apply.

Once NCI approves a center to apply for NCI designation, the center submits its CCSG to NCI according to the timeline set by NCI. Preparation of a CCSG generally takes two years and is often begun well before NCI approves a center to apply for designation. Following submission of the grant, the cancer center will host a site visit from NCI and leaders from other cancer centers to review the cancer center.

<sup>3</sup> *The Cancer Letter*. 2 May 2018, Vol. 44, No. 18, [https://cancerletter.com/conversation-with-the-cancer-letter/20180504\\_3/](https://cancerletter.com/conversation-with-the-cancer-letter/20180504_3/)

<sup>4</sup> *The Cancer Letter*. 29 July 2019, Vol. 45, No. 31, [https://cancerletter.com/the-cancer-letter/20190729\\_1/](https://cancerletter.com/the-cancer-letter/20190729_1/)

Both the written grant and site visit comprise the scores that determine if a cancer center becomes NCI-designated. After NCI designation is attained, it must be renewed every five years with the submission of another CCSG and site visit. This ensures that the standards set forth by NCI for a designated cancer center continue to be upheld.

## Expected Timeline

The Winthrop P. Rockefeller Cancer Institute is targeting submission of its CCSG application as soon as possible (**Figure 3**). Several critical factors influence this timeline: 1) how quickly strategic cancer research recruitments can be made, 2) achieving approximately 250 patient accruals on clinical trial (NCI requirement), 3) establishing a statewide community outreach and engagement effort including cancer research relevant to the state of Arkansas, and 4) ultimately a timeline set by NCI for submitting the CCSG application.

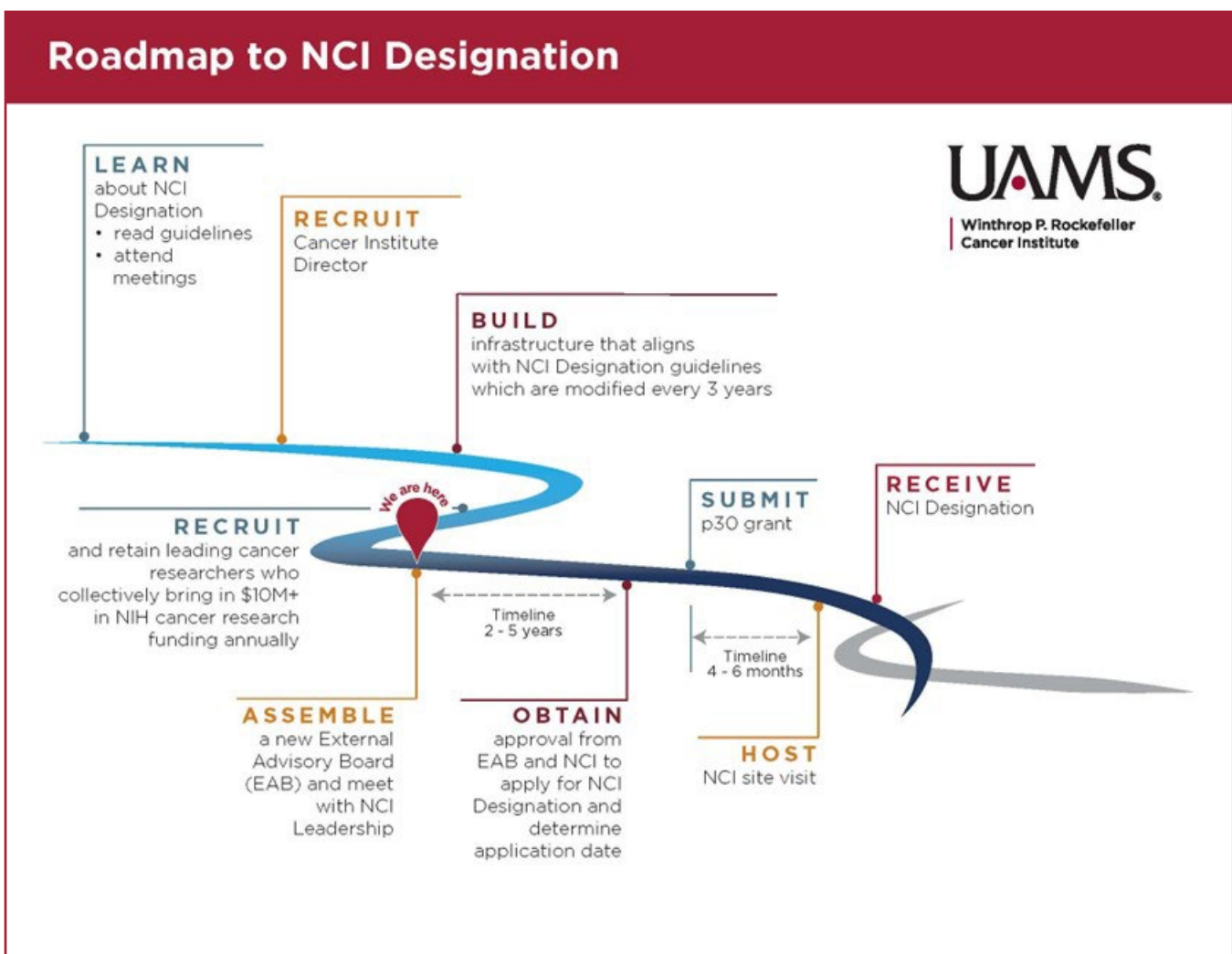


Figure 3. Roadmap to NCI Designation.

## State Funds to Support NCI Designation

The Winthrop P. Rockefeller Cancer Institute continues to diligently use the state funds provided by Senate Bill 151 to support NCI designation efforts. **Table 1** shows our actual expense to date and forecasts current confirmed commitments in future years. **Table 2** provides an accounting of the trust fund for the current reporting period of December 1, 2022 – May 31, 2023. Details on the expense breakdown can be found in **Appendix A**.

**Table 1. State Funds – NCI Designation.**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
Division	FY20 (Actual Expense)	FY21 (Actual Expense)	FY22	FY23	FY24	FY25	FY26	FY27	FY28	Total
Actual Expense	1,929,339	4,822,056	15,821,985							22,573,379
Encumbered Expense (current confirmed commitments)				40,698,989	42,203,807	31,696,806	28,201,693	23,792,327	12,728,940	179,322,562
Total Actual Expense Plus Encumbered Expenses										201,895,941
Total Revenue Received to Trust Fund to Date										78,632,763

**Table 2. Trust Fund Reporting Period: December 1, 2022 to May 31, 2023.**

Beginning Balance (December 1, 2022)	\$51,848,937.26
Total Transfers In	\$0.00
Special Revenue: Cigarette Paper Tax	\$830,664.48
**Processing Charges by DF&A on Special Revenue	(\$25,750.59)
Net Revenue Received	\$52,653,851.15

### Expense:

**Workers Comp Charged direct by DF&A	(\$12,023.62)
Expense Draws Posted for Period (6/01/2022 – 11/30/2022)	(\$16,348,012.41)
Ending Balance (November 30, 2022)	\$36,293,815.12
Expense Draws for November Not Yet Posted to AASIS	(\$1,233,662.46)
Adjustment for funds drawn for Protocol but not fully expenses in this period	\$2,201,218.90
Adjusted Ending Balance	\$37,261,371.56

\*\*Department of Finance and Administration adjustments



## Progress Toward Achieving NCI Designation Dec. 1, 2022 - May 31, 2022

### Large-Scale Recruitment of Cancer Researchers

The Winthrop P. Rockefeller Cancer Institute continues to see recruitment activities from the global ads that were placed in high-impact journals during previous reporting periods. Because we have worked with departments across campus on recruitment for a couple of years now, departments will now approach us with cancer-relevant faculty candidates that would benefit our research portfolio. During the current reporting period, one successful recruit was referred from a partner department (**Table 3**). This recruit will also assume a leadership position within the College of Pharmacy. This recruit's CV is provided in **Appendix B**. To date, our large-scale effort has yielded 22 diverse candidates across 11 academic departments and four colleges.

**Table 3. Cancer Research Recruitments December 1, 2022 – May 31, 2023.**

Candidate	Current/Previous Institution	Recruited Rank	Recruitment Status	Recruitment Home Department	Research Interest	Peer-Reviewed Cancer Research Funding at Time of Legislative Reporting	CI investment*
<b>Amit Tiwari, MS, PhD</b>	University of Toledo	Professor, Associate Dean of Research and Graduate Studies in the College of Pharmacy	Started May 22, 2023	Pharmaceutical Sciences	Drug resistance, tumorigenesis, and drug disposition	\$1,422,759 (DoD)	\$1,100,000 total for start-up resources over 5 years

\*Cancer Institute investment represents the total commitment made by the Cancer Institute to support the cancer research candidate and generally represents a three-to-five-year period. This support is to pay for operating expenses including lab equipment, personnel salary and fringe, supplies, services, and other relative cancer research costs.

### Strategic Recruitment of Oncology Clinical Faculty and Staff

In the last six months, we have hired five additional physicians to join our impressive clinical team in 2023 (**Table 4**). Monique Spillman, MD, PhD, will serve as Chief of the Division of Gynecologic Oncology and Associate Medical Director for the Cancer Service Line. Matthew Solverson, MD, will serve our head and neck cancer patients in Northwest Arkansas. Ankur Varma, MD, is a hematologist joining our transplant team. In addition, surgical oncologists S. Thomas Kang, MD, and Nicholas Tingquist, MD, will be joining our colorectal and thoracic teams, respectively. Their CVs are presented in **Appendix C**. We continue to utilize medical search firms and our own advertisements to recruit top medical oncologists from around the country.

**Table 4. Clinical Oncology Recruitments December 1, 2022 – May 31, 2023.**

Incoming	Anticipated Start Date	Clinic	Subspecialty	Previous Organization
<b>S. Thomas Kang, MD</b>	August 2023	Surgical Oncology	Colorectal Surgery	University of Alabama Birmingham
<b>Monique Spillman, MD, PhD</b>	April 2023	Gynecologic Oncology	Gynecologic Oncology	Texas Oncology
<b>Matthew Solverson, MD</b>	July 2023	Otolaryngology	Head & Neck Cancer	UAMS
<b>Nicholas Tingquist, MD</b>	August 2023	Thoracic Oncology	Thoracic Oncology	Vanderbilt University Medical Center
<b>Ankur Varma, MD</b>	August 2023	Hematology/Transplant	Hematology/Transplant	Rush University

## External Advisory Board

Our second EAB meeting was held on March 31, 2023, in the Betsy Blass conference room on the 10<sup>th</sup> floor of the Winthrop P. Rockefeller Cancer Institute. Six members of the EAB were in attendance, including EAB Chair Dr. Kunle Odunsi (Director, University of Chicago Medicine Comprehensive Cancer Center), Dr. John Farley (Dignity Health Cancer Institute), Dr. Andrew K. Godwin (Deputy Director, University of Kansas Comprehensive Cancer Center), Dr. Samir N. Khleif (Georgetown University), Dr. Timothy Richard Rebbeck (Dana-Farber Cancer Institute), and Dr. Sora Park Tanjasiri (Chao Family Comprehensive Cancer Center). EAB member bios are located in **Appendix D**.

Dr. Michael Birrer (Director, Winthrop P. Rockefeller Cancer Institute), the six Shared Resources Directors (Dr. Steve Post, Dr. Donald Johann, Jr., Dr. Alan Tackett, Dr. Stephanie Byrum, Dr. Marjan Boerma, and Dr. Jun Ying), Dr. Gwendolyn Bryant-Smith (Associate Director of Diversity, Equity, and Inclusion), Nicolas Pruss (Research Systems Analyst), Matthew Kovak (Director, Clinical Trials Office) and the four Program Leaders (Dr. Steve Post, Dr. Mayumi Nakagawa, Dr. Marjan Boerma, and Dr. Hong-yu Li) provided detailed presentations to the EAB from their respective areas and programs. The Winthrop P. Rockefeller Cancer Institute expects to receive feedback from the EAB this summer. Our next EAB meeting is tentatively scheduled for winter 2023-2024.

## Increased Research Funding

Our recruitment of active researchers has continued to bring in additional cancer research funding. Our 22 signed recruits have brought in \$17 million of active external peer-reviewed funding (total); this number does not include any of the recruits' planned grant submissions once arriving on campus. Investments thus far through FY22 in new recruits amounted to a 139% return on investment. In addition, our current researchers continue to submit multiple grants to cancer-related funding sources such as NCI, American Cancer Society (ACS), and Department of Defense (DOD). Our researchers were awarded \$12.3 million in new peer-reviewed, cancer-related funding (total) during the current reporting period of December 1, 2022 – May 31, 2023. As of May 31, 2023, our cancer researchers held \$21.1 million in peer-reviewed, cancer-related annual project direct cost grant funding.

## Cancer Research Grant Activity

A total of 10 external peer-reviewed grants were awarded during the latest reporting period, resulting in more than \$12 million in grant funding for cancer-related research (**Table 5**) from five different external funding agencies (**Table 6**).

**Table 5. Cancer Research Grant Activity.**

External Peer-Reviewed New Grants Awarded (#)	Awarded External Peer-Reviewed New Grant Funding (Project Period Total Costs)
10	\$12,312,236

**Table 6. Detailed List of Cancer Research Grant Activity.**

Grant Number	Title	Funding Agency	PI	Total Amount Awarded
2P01CA138338-11	UMN subaward - lung cancer P01	NIH/Nat. Cancer Institute	Boysen, Gunnar	\$120,366
HHSF2232016111C	Scientific and methodological advancement in liquid biopsies to further the development	U.S. Food and Drug Administration	Johann, Donald	\$839,975

	of lung cancer-based precision medicine (Bio 3)-NCE			
5UM1CA121947-16	AMC Statistical Ctr - Continuation Year 2022-2023	NIH/Nat. Cancer Institute	Lee, Jeanette	\$20,103
FP00056999	Affordable Care Act on racial disparity in endocrine therapy use among females with early-stage hormone receptor positive Breast Cancer	American Cancer Society	Li, Chenghui	\$222,000
1R01CA277682-01	Drug Development of Skp2 PROTACs in Cancer	NIH/Nat. Cancer Institute	Li, Hong-yu	\$3,720,946
2P20GM125503-06	COBRE Phase II	NIH/Nat. Inst. of General Medical Sciences	O'Brien, Charles	\$1,500,000
HT94252310083	Development of OPROTACs-based Novel EIF4G1 Degrad	US Department of Defense	Qin, Zhiqiang	\$152,000
FP00056925	Ryanodine Receptors as Therapeutic Targets to Prevent Doxorubicin-Induced Lymphatic Dysfunction	NIH/Nat. Cancer Institute	Stolarz, Amanda	\$2,179,661
1R37CA266135-01A1	Identifying Markers of Abnormal Neurocognitive Trajectories during Chemotherapy Treatment of Childhood Acute Lymphoblastic Leukemia	NIH/Nat. Cancer Institute	Van Der Plas, Ellen	\$2,376,265
FP00056372	Targeting the KRAS-USP7-RAD18 Axis to Overcome Radiation Resistance in Pancreatic Cancer	American Cancer Society	Wolfe, Adam	\$1,180,920
<b>Total</b>				<b>\$12,312,236</b>

## Philanthropic Fundraising

The Winthrop P. Rockefeller Cancer Institute's ability to host in-person fundraising events has been the key to success during this funding period, and our Gala for Life raised funds similar to those before the COVID pandemic. On May 6, 2023, the Winthrop P. Rockefeller Cancer Institute hosted its third "Be a Part of the Cure Walk," further gaining momentum and surpassing our goals in all areas, including community engagement, education, awareness, and fundraising. The walk raised \$365,000, and more than 1,500 people participated. Our advisory board is re-engaging since COVID, and their support and financial commitment has been vital to completing projects for the Winthrop P. Rockefeller Cancer Institute. The Envoys is expanding its number of members and ramping up for additional "Doctor Is In" events hosted by businesses, board of advisors, etc., with the purpose of educating the community as well as awareness of treatments, research, and clinical trials. These events set us apart from others in the community. We continue to collaborate with the Vice Chancellor of Institutional Advancement, John Erck, and to date, have gifts and pledges totaling \$22.6 million of our \$30 million goal.

## Radiation Oncology Center and Program Expansion

On September 19, 2022, building construction was completed on the 52,249 square foot Radiation Oncology and Proton Center on the UAMS campus in Little Rock. One month later, the proton cyclotron and gantry arrived from Belgium, and installation began on October 17, 2022. Three state-of-the-art linear photon accelerators arrived in May 2023, and will offer additional treatment options for patients receiving photon therapy. The Proton Center is a partnership between UAMS, Arkansas Children's Hospital, Baptist Health, and Proton International. As part of the Winthrop P. Rockefeller Cancer Institute, the center will be the only proton center in Arkansas and will allow our residents to receive this cutting-edge treatment without having to leave the state. The first patients to receive photon therapy at the new center are scheduled to receive treatment in July 2023. The Proton Center is expected to begin treating patients in October 2023, providing an alternative treatment to

traditional radiation therapy using a precisely focused high-energy beam that targets tumors without affecting the surrounding tissue and organs.

The new center requires staff with expertise in the field of proton therapy, including a medical physicist and proton radiation therapist. In January 2023, Wen Chien Hsi, PhD, joined the Department of Radiation Oncology as an associate professor of physics specializing in proton beam radiation therapy. Prior to his arrival, Dr. Hsi was assistant professor at the University of Florida Health Proton Therapy Institute in Jacksonville, Florida. In addition, Megan Mary Meckling will serve as the Assistant Director for Patient Care at the new center. She previously worked as a proton radiation therapist at the University of Kansas Medical Center's Proton Center. In addition to two full-time engineers, the Radiation Oncology Center has also added critical support staff, including radiation therapists, nurses, and IT staff. New clinical faculty include Ciani Ellison, MD (joined July 2023); Mausam Patel, MD (joined November 2022); and Santanu Smanta, MD (joined July 2022). Proton International is coordinating training both on campus and at other proton centers around the country to ensure that staff have all the necessary skills to provide excellent care to our patients.

### **Clinical Trials**

To provide the best cancer treatment options for Arkansans, the Winthrop P. Rockefeller Cancer Institute continues to expand its clinical trials program. A staff of 70 research nurses, research coordinators, and regulatory and financial specialists currently support 265 clinical research studies in brain, breast, cutaneous, gastrointestinal, genitourinary, gynecological, head and neck, lung, radiation oncology, phase I, and hematological cancers. Clinical trials staff have enrolled 86 participants in therapeutic trials and over 550 total participants during this reporting period. Enrollment is up over 15% since the previous reporting period. We also expanded our staff presence and clinical trial access to Northwest Arkansas and the Central Arkansas Veterans Healthcare System, with the first trials opening in April 2023. We plan to expand our portfolio across the network and continue to see an increase in therapeutic clinical trial enrollment.

### **UAMS Baptist Health Cancer Network**

In 2020, the University of Arkansas System Board of Trustees approved a joint venture between UAMS and Baptist Health to expand comprehensive cancer care, allowing the two medical centers to deliver state-of-the-art treatments with the most innovative technology available in Arkansas. The collaboration simplifies treatment and allows oncologists to personalize therapy options, including clinical trials. In May 2023, UAMS and Baptist Health commemorated the opening of a new cancer clinic and 32-bay infusion center on the campus of Baptist Health Medical Center in Little Rock. The infusion center, set to open in September 2023, will include a blend of patient treatment areas to accommodate specific needs (open pods versus isolation/private) and eventually an embedded urgent care clinic specifically designed for cancer patients.

### **Community Outreach and Engagement**

The Winthrop P. Rockefeller Cancer Institute Community Outreach and Engagement (COE) office continued its efforts in advancing coordinated care for cancer patients and families and improving access to care by ensuring community partners know "Who We Are & What We Do," visiting nearly 1,200 FQHCs, health care facilities, community-based organization, faith-based organization, top employers, and other businesses across the state collectively. Our seven-person navigator team located in Fort Smith, Batesville, Jonesboro, Little Rock, Pine Bluff, Magnolia, and Texarkana, helped nearly 2,000 individuals and/or families seeking cancer screenings and navigated over 320 individuals and/or families to wellness and financial resources.

To support physicians and other clinicians, the COE office launched its first semiannual education symposium focused on breast, cervical, and colorectal cancer. The Union County Education Symposium was held on February 28, 2023, in El Dorado, AR. Dr. Sri Obulareddy presented on breast cancer; Dr. Heather Williams presented on cervical cancer; and Dr. Karen Crowell presented on colorectal cancer. Each presenter spoke about causes/risks, screening recommendations, and treatment options. Each also shared incidence and mortality rate data for the U.S., Arkansas, and Union County. Invited guests included physicians and clinicians in Union County, and a total of 22 people attended.

Education and awareness activities continued through a collaboration between Heather Williams, MD, assistant professor of Obstetrics and Gynecology in the UAMS College of Medicine; the Cancer Research Training and Education Core (CRTEC); and the Winthrop P. Rockefeller Cancer Institute Diversity, Equity, and Inclusion (DEI) team to develop a curriculum on the human papillomavirus (HPV) for high school students. The HPV curriculum was presented to high school administrators in El Dorado, Junction City, and Strong. All three districts approved the curriculum, and in May 2023, the curriculum was taught to 28 students in Strong. El Dorado and Junction City school districts plan to include the curriculum during the 2023-2024 school year.

### **Cancer Research Training and Education Core**

A critical component needed for gaining designation as an NCI cancer center is a means for our scientists to directly interact with the greater national and international cancer research community. Such interactions can introduce our scientists to cutting-edge ideas and raise the profile of our scientists nationally and internationally. CRTEC uses travel grants and two seminar series, Forum Seminar Series and Cancer Institute Grand Rounds, to foster direct interaction with scientific leaders and to raise awareness of our investigators and the advanced research they are doing in Arkansas. The CRTEC arranges travel, speaker honoraria, and speaker itineraries for both Forum and Grand Rounds. This is a large undertaking that we have successfully executed for the past two years.

Travel grants allow Winthrop P. Rockefeller Cancer Institute members, their fellows, and students to present their research at national and international meetings. This gives exposure of our scientists to the international scientific community and provides a path for exchange of ideas with other leading scientists. These discussions, often around a poster, foster collaborations, and refinement of scientific concepts. Since December 2020, the CRTEC core has awarded 31 travel grants, with 26 being awarded between December 1, 2022, and May 31, 2023.

The Forum Seminar Series targets internationally recognized basic and translational scientists who are doing transformative cancer research with the goal of promoting interactions and collaborations among scientists. To facilitate this goal, the series returned to an in-person only event in February 2023. The Forum Seminar series is held weekly, and a total of 15 speakers (two of which were virtual) gave presentations from December 2022 to May 2023. Members interested in the speaker's work have the opportunity to attend a dinner with the host and speaker the evening before their scheduled presentation. The following day, the speaker meets with small groups of investigators to discuss ongoing cancer research, allowing our scientists to showcase their cancer research and to potentially establish long-term relationships with the speakers. Similarly, Grand Rounds attracts internationally known clinical scientists who are applying the latest treatments and conducting clinical trials. From December 2022 to May 2023, this CME accredited series featured interactions between our clinical teams with six leaders in cancer treatment.

### **New Developments in Oncology**

On May 5, 2023, the Winthrop P. Rockefeller Cancer Institute hosted the first annual New Developments in Oncology, a CME event designed to highlight new developments in cancer treatment and to provide educational

opportunities to our clinical staff. A total of 158 people attended the all-day event, including 44 physicians, 68 nurses, and two physician assistants. Thirty-eight additional people (Winthrop P. Rockefeller Cancer Institute administrators and medical staff from Highlands Oncology Group in Northwest Arkansas, South Arkansas Hematology & Oncology Clinic in Pine Bluff, Fowler Family Center for Cancer Care in Jonesboro, and Baptist Health) attended as well. Seven oncologists from the Winthrop P. Rockefeller Cancer Institute gave oral presentations highlighting new developments in cellular therapies, immuno-oncology cancer drugs, and genetic instability as a therapeutic target as well as new therapeutic developments in breast, lung, gastrointestinal, and genitourinary cancers.

### Pilot Funding

To achieve NCI designation, cancer centers are expected to have a robust research portfolio with funding and publications in thematic areas aligned with catchment area needs. To grow the our research portfolio in pursuit of NCI designation, the Winthrop P. Rockefeller Cancer Institute offers pilot opportunities for members who conduct research across the translational spectrum. These pilot opportunities are meant to fund new avenues of cancer research that will accelerate the collection of data for NCI grant submissions and cancer-relevant publications. Pilot funding opportunities include the following:

**Team Science Award** – First established in 2020, the Team Science mechanism supports new cancer-focused research between our members. Funding supports multi-PI teams pursuing collaborative, transdisciplinary research, with the ultimate goal being submission of program project level NCI grants. These program project level grants involve teams of researchers combining their expertise with maximal impact to address pressing needs in cancer care and are a critical step in the journey toward NCI designation. Projects are funded for one year with budgets up to \$100,000. During FY23, five investigative teams received Team Science Awards totaling \$500,000 in pilot funding (**Table 7**). While this mechanism has only been active since 2020, the Winthrop P. Rockefeller Cancer Institute maintains a summary of productivity metrics related to total number of awards and related publications, grants, and extramural funding (**Table 8**).

**Table 7. Team Science Awards – FY23.**

Project Title	Principal Investigators	Total Budget Amount
Towards Advanced Lung Cancer Screening	Donald Johann, MD, Professor of Biomedical Informatics Fred Prior, PhD, Professor of Biomedical Informatics	\$100,000
Tuning Immune Recognition of Metastatic Melanoma to Increase Efficacy of Immunotherapy	Brian Koss, PhD, Assistant Professor of Biochemistry & Molecular Biology Alan Tackett, PhD, Distinguished Professor of Biochemistry & Molecular Biology	\$100,000
Using Deep Learning Algorithms to predict rectal cancer outcomes based on MRI restaging of rectal cancer following neoadjuvant Chemoradiation Therapy	Jonathan Laryea, MD, Professor of Surgery Fred Prior, PhD, Professor of Biomedical Informatics	\$100,000
Design and synthesis of small molecule direct modulators of the pore-forming pro-apoptotic protein BAK	Tudor Moldoveanu, PhD, Associate Professor of Biochemistry & Molecular Biology Hong-yu Li, PhD, Professor of Pharmaceutical Sciences	\$100,000
Synergistic effects of SR-A blockade and radiation therapy	Steven Post, PhD, Professor of Pathology Marjan Boerma, PhD, Professor of Pharmaceutical Sciences	\$100,000

**Table 8. Team Science Awards Productivity Metrics – Summary.**

Number of Pilots Awarded	Number of Publications	Grants Obtained	Total Extramural Grant Funding
19	4	1	\$2,958,086



**Seeds of Science Award** – Since 2009, the Winthrop P. Rockefeller Cancer Institute has invested in outstanding cancer researchers through the Seeds of Science award mechanism. While this program is overseen by the Winthrop P. Rockefeller Cancer Institute, it relies on two community partnerships to fund: 1) The Envoys, a group of community and business leaders that advocate on behalf of our cancer center, and 2) The Hot Springs Village Walk for Cancer Research, an annual event hosted by the residents of Hot Springs Village that raises funds to support cancer research at multiple institutions. The Seeds of Science program funds promising new research from skilled researchers focused on solving relevant cancer care problems, with the goal of allowing these researchers to gather data needed to submit for NCI grant awards and disseminate their findings with others in the field. Projects are funded for one year with budgets up to \$50,000. During FY23, seven cancer investigators received Seeds of Science Awards totaling \$350,000 in pilot funding (**Table 9**). Since the program's start in 2009, the Winthrop P. Rockefeller Cancer Institute has maintained a summary of productivity metrics related to total number of awards and related publications, grants, and extramural funding (**Table 10**).

**Table 9. Seeds of Science Award – FY23.**

Project Title	Principal Investigator	Total Budget Amount
Inhibition of the TGF- $\beta$ Pathway by 1D11 Antibody in Ovarian Cancer	Michael Birrer, MD, PhD, Professor Biochemistry & Molecular Biology	\$50,000
Define the effect of FGF18-mediated interaction between ovarian cancer cells and the host immune system	Michael Birrer, MD, PhD, Professor of Biochemistry & Molecular Biology	\$50,000
Identification of new natural compounds against diffuse intrinsic pontine glioma (DIPG)	Lu Dai, PhD, Assistant Professor of Pathology	\$50,000
Characterization of the Senescent Secretome of the Bone Metastatic Tumor Niche	Jesus Delgado-Calle, PhD, Assistant Professor of Physiology & Cell Biology	\$50,000
Unraveling the electrophysiological mechanisms involved in gliomas	Abdallah Hayar, PhD, Associate Professor of Neurobiology & Developmental Sciences	\$50,000
Anti-tumor efficacy of oncolytic virus-mediated delivery of alloantigen in pancreatic cancer	Bolni "Marius" Nagalo, PhD, Assistant Professor of Pathology	\$50,000
CCN1+ myeloid cells and serum CCN1 as biomarkers of a functional immune microenvironment in myeloma	Shmuel Yaccoby, PhD, Professor of Internal Medicine	\$50,000

**Table 10. Seeds of Science Award Productivity Metrics – Summary.**

Number of Pilots Awarded	Number of Publications	Grants Obtained	Total Extramural Grant Funding
31	34	16	\$7,505,450

## Shared Resources

Shared resources play an important role in advancing our research mission. The Winthrop P. Rockefeller Cancer Institute provides access to state-of-the-art equipment, technologies, services, and scientific consultation that enhance scientific interaction and productivity among members as well as other researchers at UAMS. The Winthrop P. Rockefeller Cancer Institute supports six shared resources: Bioinformatics, Biostatistics, Genomics, Proteomics, Radiation Biology, and Translational Pathology. We continue to grow, develop, and enhance

available shared resources in our effort to obtain NCI designation. Shared resources accomplishments during the current reporting period include the following:

**Audit of Shared Resources Data and External Advisory Board Report** – In order to help Winthrop P. Rockefeller Cancer Institute Administration and Shared Resources Directors report key data related to the usage and productivity of the Shared Resources, our staff conducted an audit of the past 5 years of data relating to membership usage, grant-funded research support, supported publications, internal funding, and external funding. Shared Resources then reported their findings, progress, and procedures to the EAB for review and critique. The feedback generated by this review was used to make several changes that will help further our cancer center’s path toward NCI designation.

**Expansion of Services and Equipment** – The Bioinformatics Shared Resource has developed and published a new R package for the analysis of proteomics data. The Proteomics Shared Resource purchased and installed a new UPS system. In addition, two pieces of equipment, a Waters LC system and a Newomics DuoESI ion source, are in the process of being purchased. An iLab license was purchased for the Radiation Biology Shared Resource, which will be used to access services starting in mid-July. This will facilitate the integration of Radiation Biology metrics in the Hub. The Translational Pathology Shared Resource purchased and installed the OpenSpecimen management software. Shared Resource Directors continue to present at Research Program meetings to increase awareness of services offered by their respective laboratories.

**Extramural Funding Applications** – The Genomics Shared Resource has submitted an S10 Shared Instrument Grant for \$750,000 towards the purchase of an Illumina NovaSeq X Plus NGS System. This system will support higher throughput and reduced cost for several members. If funded, the Winthrop P. Rockefeller Cancer Institute will provide institutional support for the balance of the cost. The Proteomics Shared Resource has submitted an administrative supplement for the purchase of a Tecan EVO liquid handling robot. The supplement is pending review. The Radiation Biology Shared Resource has submitted a High-End Instrumentation grant for a new cryogen-free MRI to replace an aging piece of equipment.

**Shared Resources Annual Survey** – Shared Resources conducted a survey of members to gather data on membership demographics, usage, knowledge of offered programs and services, and member satisfaction with services and technology provided including timeliness, quality, cost-effectiveness, and accessibility. Additionally, members were surveyed on their predicted future use of the Shared Resources to ascertain the best ways to support the future needs of members and their research. The annual survey is a strategic tool used to perform comparative analytics to help identify growth and areas in need of improvement as a part of the Shared Resource annual review process.



# APPENDIX A

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## Expense Breakdown

Expense Breakdown - Senate Bill 151 - Trust Fund For NCI Designation

		Semiannual Report July 1, 2023				Notes
Program Account Description	Fund Center Account	Salary	Fringe	M&O	Total Expense	
Imig, John	CC004122	17,549.86	2,007.33	23,024.30	42,581.49	Recruitment package support
Owsley, Kelsey	CC004123	13,800.00	3,154.86	0.00	16,954.86	Recruitment package support
Van Der Plas, Ellen	CC004124	39,879.28	13,115.24	1,680.46	54,674.98	Support of head & neck clinical trial
Griffin, Robert	CC004127	4,141.00	928.75	5,026.66	10,096.41	Support of head & neck clinical trial
Atiq, Omar, MD (COM Internal Medicine-Medical Oncology)	CC100244	26,712.01	6,655.24	256,680.04	290,047.29	Support of head & neck clinical trial
Breast Cancer Vaccine (COM - Pathology - Immune Monitoring)	3012858	0.00	0.00	0.00	0.00	Support for breast cancer vaccine
Cancer Service Line Support	CC100246	9,082.40	2,081.54	5,061.00	16,224.94	Clinical research effort for Jibrán Ahmed, MD
Cancer Institute Administration	CC100248	14,916.07	5,148.32	255,546.64	275,611.03	Staff salaries, equipment, supplies, etc.
Cancer Institute Basic Research	CC100249	24,934.38	5,014.23	160,536.02	190,484.63	For WPRCI Research Retreat
Cancer Clinical Trials Research Administration (CCTRA)	CC100250	319,785.55	86,585.24	38,974.66	445,345.45	Cancer Clinical Trials
Lewis, Gary, MD (COM - Radiation Oncology)	CC100252	37,999.98	6,498.33	0.00	44,498.31	Recruitment package support
Leung, Ricky, PhD (COM Pharmacology Toxicology)	CC100253	25,515.01	5,879.61	57,631.47	89,026.09	Recruitment package support
Birrer, Michael, MD, (Cancer Institute)	CC100332	15,000.00	26.80	18,166.01	33,192.81	Recruitment package support
Manzano, Mark, PhD (COM Microbiology & Immunology)	CC100335	12,250.02	3,148.53	1,194.29	16,592.84	Recruitment package support
Zhan, Frank MD, PhD (COM Internal Medicine - Medical Oncology)	CC100336	57,274.30	14,449.99	0.00	71,724.29	Recruitment package support
Cancer Institute Bioinformatics Core Support	CC100353	0.00	0.00	107,674.64	107,674.64	Supplement to Core for expense in excess of operating revenue
Belido, Teresita, PhD (COM Physiology and Biophysics)	CC100360	42,666.34	9,735.16	22,365.97	74,767.47	Recruitment package support
Cancer Institute Cancer Therapeutics	CC100365	0.00	0.00	155.78	155.78	Cancer Institute Program Support
Cancer Institute Health Disparities - Ronda Henry-Tillman, MD	CC100366	27,813.84	6,549.28	628.79	34,991.91	Retention package support
Core Voucher Program	CC100372	0.00	0.00	45,937.90	45,937.90	Cancer core use vouchers for CI members
Cancer Pilot Program	CC100373	0.00	0.00	300,000.00	300,000.00	Support for 4 cancer pilot projects at \$100K each, credit represents balance not yet spent
Amick, Benjamin III, PhD (CPH Epidemiology)	CC100391	49,637.65	9,023.05	0.00	58,660.70	Recruitment package support
Cornett, Larry (AR INBRE grant support)	CC100415	683.34	200.33	25,000.00	25,883.67	Program support

Program Account Description	Fund Center Account	Salary	Fringe	M&O	Total Expense	Notes
Ryan, Katie, PhD (COM Biochemistry)	CC100416	25,886.27	7,442.71	2,755.43	36,084.41	Recruitment package support
Jones, Dina (CPH HBHE Center for Tobacco Study)	CC100418	16,796.24	3,257.24	3,807.40	23,860.88	Recruitment package support
Cancer Institute Community Outreach	CC100422	406,621.16	92,644.73	57,332.95	556,598.84	Support for Associate Director for Community Outreach and Engagement
Cancer Institute CCSG Administration	CC100423	17,797.76	5,027.31	0.00	22,825.07	Recruit ads
Wolfe, Adam	CC100428	2,916.48	5,410.73	37,784.04	46,111.25	Recruitment package support
Delgado-Calle, Jesus, MD, (COM Physiology & Biophysics)	CC100457	9,015.27	1,878.43	29,715.22	40,608.92	Recruitment package support
DFA Charges - Workers Comp	CC100461	0.00	0.00	0.00	0.00	Charges administered by DFA
Radiation Core	CC100471	5,149.98	943.42	15,231.03	21,324.43	Purchase of x-ray cabinet
Tricot, Guido, MD (COM Myeloma Center)	CC100478	-7,737.70	-604.35	0.00	-8,342.05	Recruitment package support
Recruitment Costs	CC100488	0.00	0.00	134,953.51	134,953.51	Advertising costs, travel, interview meals, etc.
Dr. Karbassi Breast Vaccine Support	CC100509	34,243.75	9,835.77	48,240.94	92,320.46	Support of clinical trial for a breast cancer vaccine
Roy Choudhury, Samrat, PhD (COM Pediatrics)	CC100771	10,133.48	1,039.52	430.50	11,603.50	Recruitment package support
Yeh, Ed (COM Internal Medicine)	CC100779	0.00	0.00	44,925.32	44,925.32	Recruitment package support
Nagalo, Marius (COM Pathology)	CC100783	34,719.51	7,525.77	17,972.91	60,218.19	Recruitment package support
Miah, Syem (COM Biochemistry)	CC100924	18,521.76	5,926.81	2,056.48	26,505.05	Recruitment package support
Seeds of Science Pilot Program	CC100790	0.00	0.00	50,000.00	50,000.00	Support 4 Pilot Projects at \$50K each
Park, Mark (COPH Epidemiology)	CC100794	47,387.53	11,910.71	20,255.00	79,553.24	Recruitment package support
Enemark, Eric (COM-Biochemistry)	CC100826	27,461.70	9,058.36	0.00	36,520.06	Recruitment package support
Chang, Ming (COM Pharmacology and Toxicology)	CC100827	0.00	0.00	10,231.68	10,231.68	Recruitment package support
Brochausen, Mathias (DBMI)	CC100840	43,885.03	10,827.42	1,504.99	56,217.44	Recruitment package support
Tackett, Alan (COM Biochemistry)	CC100988	67,191.63	17,769.38	35,630.02	120,591.03	Research support
Leung, Justin (COM Radiation Oncology)	CC100989	0.00	0.00	13,347.65	13,347.65	Recruitment package support
Qin, Z (COM Pathology)	CC100991	4,087.15	1,030.30	55,497.95	60,615.40	Recruitment package support
Byrd, Alicia (COM Biochemistry)	CC100992	0.00	0.00	7,168.72	7,168.72	Recruitment package support

Program Account Description	Fund Center Account	Salary	Fringe	M&O	Total Expense	Notes
Xia, Fen (COM Radiation Oncology)	CC100993	30,709.84	7,499.94	21,032.12	59,241.90	Recruitment package support
Proteomics Core (COM Biochemistry)	CC100994	6,768.77	1,922.69	0.00	8,691.46	Proteomics Core support
Lu, Williams (COM Pathology)	CC101002	22,196.36	2,814.65	61,367.26	86,378.27	Recruitment package support
Hsu, Ping-Ching (COPH EOH)	CC101004	6,588.35	1,989.77	0.00	8,578.12	Recruitment package support
Structural Biology	CC101007	0.00	0.00	676,633.20	676,633.20	Structural Biology Core support
WPRCI Diversity	CC101028	63,185.61	13,617.82	1,406.52	78,209.95	Support for Associate Director for Diversity, Equity, and Inclusion
Johann, Don (DBMI)	CC101114	137,503.63	36,449.31	98,010.96	271,963.90	Research support
Rahman, Mohammad (COM Biochemistry)	CC101130	68,231.66	14,740.93	35,131.44	118,104.03	Recruitment package support
Racine-Miousse, Isabella (COM Biochemistry)	CC101152	2,750.00	680.22	6,275.78	9,706.00	Recruitment package support
Bai, Mei	CC101156	8,193.67	1,156.19	8,550.00	17,899.86	Recruitment package support
RRAP Pilots	CC102675	0.00	0.00	99,434.00	99,434.00	Rural Research Awards Program
Travel Grant Program	CC102679	0.00	0.00	10,699.25	10,699.25	Support for cancer related research travel
CTRM Scholars (TRI)	CC102684	55,930.03	12,156.54	0.00	68,086.57	Translational Research support
Koss, Brian (COM Biochemistry)	CC102685	19,743.07	5,984.04	42,923.42	68,650.53	Recruitment package support
Tobacco Cessation	CC102719	43,855.49	7,691.26	76.85	51,623.60	Tobacco cessation program support
Hallgren, Emily	CC102779	45,000.00	11,391.76	3,307.04	59,698.80	Recruitment package support
Clawson, Emily	CC102782	31,357.92	7,647.43	1,870.57	40,875.92	Recruitment package support
Bioinformatics Core	CC102803	5,375.00	1,719.89	0.00	7,094.89	Supplement to Core for expense in excess of operating revenue
Van Rhee, Fritz	CC102810	40,537.90	11,111.60	1,131.61	52,781.11	Translational Research support
Schootman, Mario	CC102817	119,999.99	26,689.70	0.00	146,689.69	Recruitment package support
Rodriguez, Analiz	CC102823	61,994.54	8,026.36	0.00	70,020.90	Research support
Cancer Prevention and Population Sciences	CC102830	21,947.20	4,193.57	0.00	26,140.77	Program support
Genomics Core Secondary	CC102833	103,571.12	31,150.19	0.00	134,721.31	Additional support to the Core for expense not included in the recharge rate sheet.
Jaemsen, Joonas	CC102851	33,092.76	8,031.80	320,342.90	361,467.46	Recruitment package support

Program Account Description	Fund Center Account	Salary	Fringe	M&O	Total Expense	Notes
Moldoveanu, Tudor	CC102852	47,250.00	15,586.71	226,604.59	289,441.30	Recruitment package support
Biostatistics	CC102853	102,657.24	23,627.11	10,547.16	136,831.51	Support to Biostatistics Core
Bauer, Michael	CC102861	4,208.34	1,613.12	0.00	5,821.46	Recruitment package support
DelNero, Peter	CC103030	49,000.02	11,046.15	7,524.47	67,570.64	Recruitment package support
Kim, KyoungHyun	CC103331	49,000.02	15,484.94	60,735.92	125,220.88	Recruitment package support
Cancer Prevention and Control	CC103351	84,889.04	13,469.01	1,220.56	99,578.61	Program support
Cancer Grand Rounds	CC103373	0.00	0.00	6,118.60	6,118.60	Support to cancer education
Allen, Antino	CC103374	0.00	0.00	112,111.28	112,111.28	Recruitment package support
Cancer Forum	CC103376	0.00	0.00	28,926.61	28,926.61	Support to cancer education
Cancer Biology	CC103477	0.00	0.00	262.66	262.66	Program support
Varian Equipment	FD507   CC100248	0.00	0.00	8,190,000.00	8,190,000.00	Radiation Oncology Expansion Project
Cancer Gifts	CC001766	0.00	0.00	-19.34	-19.34	Will be corrected to correct fund associated with this account
WPRCI Administration	CC103375	6,246.67	1,990.61	16.12	8,253.40	Will be corrected to correct fund associated with this account
<b>Total Expense</b>		<b>2,775,502.27</b>	<b>670,609.40</b>	<b>11,946,367.92</b>	<b>15,392,479.59</b>	

## APPENDIX B

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Curricula Vitae of Cancer Research Recruits

## AMIT K. TIWARI, B.S.P.S., M.S., Ph.D.

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Frederic and Mary Wolfe Center, Health Science Campus, University of Toledo, HEB-282F, 3000 Arlington Ave., MS 1015; Toledo, OH 43614

**Tel:** (419) 383-1913; **Fax:** (419) 383-1909 ; **Email:** [amit.tiwari@utoledo.edu](mailto:amit.tiwari@utoledo.edu)

**Lab:** (419) 383-1503/1930/1984; **Lab:** [Cancer & Systems Therapeutics](#)

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### EDUCATION AND TRAINING

2011- 2013 Postdoctoral Research Associate, Icahn School of Medicine at Mount Sinai, NY  
2008- 2011 Ph.D. in Pharmaceutical Sciences (Pharmacology), St. John's University, NY  
2006- 2008 M.S. in Pharmaceutical Sciences (Pharmacology), St. John's University, NY  
2001- 2005 B. Pharm. in Pharmaceutical Sciences, RamEesh Institute, India

### PRESENT APPOINTMENTS

2022- Professor of Pharmacology & Exp. Therapeutics  
*Head, Cancer & Systems Therapeutics (CAST) program*  
*College of Pharmacy & Pharmaceutical Sciences, Univ. of Toledo, OH*  
2022- Professor of Cell and Cancer Biology (Joint Position)  
*College of Medicine & Life Sciences (COLMS), Univ. of Toledo, OH*  
2021- Director of International Engagement, *University of Toledo, OH*

#### **Current Affiliated Positions**

2022- **Editor-In-Chief**, Cancer Reports, Wiley Press  
2021- Adjunct Professor  
*Center of Medical and Bio-Allied Health Sci Research, Ajman University, UAE*  
2020- Board of Directors, *Shivajirao Kadam Group of Institutions, India*  
2017- Visiting Faculty of Pharmacology & Toxicology, *College of Veterinary Medicine, Nursing and Allied Health, Tuskegee University, Tuskegee, AL*  
2015- Member of Graduate Faculty, University of Toledo, OH

### POSITIONS HELD

2021-2022 Associate Professor of Cell and Cancer Biology, *College of Medicine, Univ. of Toledo*  
2019-2022 Associate Professor of Pharmacology & Exp. Therapeutics; *Head, Cancer & Systems Therapeutics (CAST) program, College of Pharmacy & Pharmaceutical Sciences, Univ. of Toledo, OH (Tenured)*  
2017- 2021 Adjunct Faculty of Biology, *Bowling Green State Univ., Bowling Green, OH*  
2015- 2019 Assistant Professor of Pharmacology & Exp. Therapeutics (**Tenure-track**)  
*Head, Cancer & Systems Therapeutics (CAST) program, College of Pharmacy & Pharmaceutical Sciences, Univ. of Toledo, OH*  
2015- 2016 Adjunct Faculty, *Department of Biology, Tuskegee Univ., Tuskegee, AL*  
2015: Visiting Faculty, *RGPV University, Bhopal, India*  
2013- 2015 Assistant Professor of Pharmacology & Toxicology (Tenure-track), *Dept. of Biomedical Sci, Col. of Veterinary Med, Nursing and Allied Health, Tuskegee Univ., Tuskegee, AL*  
2012- 2014 NYAS Alliance Fellow, *New York Academy of Sciences Alliance, NY*



2011- 2013 Postdoctoral Research Associate, Icahn School of Med. At Mount Sinai, NY 2010- 2011  
 University Fellow, *College of Pharmacy, St. John's University, Queens, NY* 2010:  
 Research Fellow (Summer), Chen's lab, *St. John's University, Queens, NY* 2008- 2010  
 Teaching Fellow, *College of Pharmacy, St. John's University, Queens, NY* 2007- 2008  
 Teaching Assistant, *College of Pharmacy, St. John's Univ., Queens, NY* 2005- 2006  
 Nutrition Medical Officer, Nestle Ltd., New Delhi, India.

## AWARDS AND HONORS

2022 Fellow in the Mid-American Conference (MAC) Academic Leadership Development Program (ADLP), *Univ. of Toledo*  
 2022 President's Award for Excellence in Creative and Scholarly Activity, *Univ. of Toledo*  
 2022 University's Outstanding Research and Scholarship Award, *University of Toledo, Ohio*  
 2022 Outstanding Faculty Award recognized in all areas of Research, Teaching, Service and Outreach, Department of Pharmacology & Experimental Therap., *Univ. of Toledo, Ohio*  
 2022 Distinguished Young Alumni Award, *St. John's University, NY*  
 2021 University's Outstanding Advisor Award, *University of Toledo, Ohio*  
 2021 Distinguished Scientist Award, *International Assoc. of Pharmacy Professionals*  
 2020 Distinguished Speaker Award, AAPS AU Chapter, *Auburn University, AL*  
 2019 Editorial Travel Award, MDPI Press GICBC Conference, *London*  
 2018 Invited Judge, Travel award, American Biomedical Research Conference for Minority Students (ABRCMS) conference, *Indiana*  
 2017 Distinguished Researcher Award, RIPER University, *Anantapur, India*  
 2017 Fellow, UT-Scholars Institute Program (SIP), *Ohio*  
 2017 Invited Judge with Travel Award, ABRCMS conference, Phoenix, *Arizona*  
 2017-2020 *Nominated in 2017, 18, 19 and 20, Univ. Toledo's Outstanding Advisor Award, honoring faculty and staff for exemplifying excellence in academic advising.*  
 2017 Global Research Engagement Award, JNTUA/RIPER/Govt. of *Andhra P, India*  
 2017 Young Investigator Award, Synergy Cancer Pharmacology Conference, *NY*  
 2017 'Chandrabose et al. 2017' appeared on the cover of '*Bioorg Med Chem Lett*'  
 2016 Learner Engagement Award, College of Pharmacy, *University of Toledo, Ohio*  
 2016 Outstanding Scientist - Excellence in Innovation Research Award, MP, *India*  
 2016-2018 Faculty Marshall, Coll. of Pharmacy & Pharmac. Sci. *University of Toledo, Ohio*  
 2015 Fellow, ASM-LINK, Undergraduate Faculty Research Initiative (UFRI) Fellows Award, by *American Society of Microbiol & National Science Foundation.*  
 2015 Invited Judge, Travel award, ABRCMS conference, *Seattle, Washington*  
 2014 Health Disparity Res Summer Institute, Travel & 2<sup>nd</sup> Best Poster Award, *AL*  
 2014 Invited Judge, Travel award, ABRCMS conference, *San Antonio, TX*  
 2014 Travel Award, GMaP conference, Johns Hopkins, *Bethesda, MD Health*  
 2014 Health Disparities Research Training Program (HDRTP) Scholars, *NIH-U54 grant (University of Alabama, Birmingham-Tuskegee Cancer Partnership)*  
 2013 Top citation Award from FEBS journal 2011-2013  
 2012 New York Academy of Science (NYAS) Alliance Fellow, *NY*  
 2011 Outstanding performance in Research Award - *St. John's University, NY*  
 2010 University Fellowship, *St. John's University, NY*  
 2010 Excellence Award for Research, Cancer Lab's, *St. John's University, NY*  
 2009 Top citation award, Elsevier – Tiwari et al. 2009, *Biochemical Pharmacology*  
 2007- 2010 Graduate Scholarship, M.S./PhD, *St. John's University, NY*



## RESEARCH

Cancer & Systems Therapeutics (CAST) research group focuses primarily on improving drug design, discovery, development and delivery using tumor- directed pharmacokinetic/ pharmacodynamic (PK/PD) investigations, as well as exploring novel approaches to molecular determinants of drug resistance, tumorigenesis, and drug disposition. The CAST is a multidisciplinary research group that also focuses on innovative drug delivery systems, natural products drug discovery, and chemical toxicity. Most recently, CAST has been engaged in drug discovery efforts i.e., developing novel cell death inducers that modulate necroptosis, methuosis, and autophagy.

**Research Support:** Over \$8.5 million+ extramural funding acquired; >\$11 million under review/pending.

### Active Funding

1. **National Cancer Institute, NIH –R01 [R01CA258682]** (08/22 to 07/27) Title: *Targeting eIF4A1 in drug-resistant breast cancer stem-like cells*  
Role - **Co-I** (PI: Dayanidhi); Amount: \$2,043,899; Percentage Effort: 5%
2. **National Cancer Institute, NIH-R21 [1R21CA256462-01A1]** (01/22 - 01/24) Title: *Targeting eIF4A along with immunotherapy to overcome chemoresistance*; Role: **Co-I** (PI: Dayanidhi); Amount: \$424,875; Perc Effort: 3%; Scored 4<sup>th</sup>%
3. **Scleroderma Foundation** (04/22 - 03/24) Title: *The development of TRPM8 targeted therapy against Raynaud's phenomenon Disease States*; Role: **Co-I** (PI: Ding); Amount: \$200,000; Perc Effort: 5%; (Awarded begins 03/22; 33% direct funds to Tiwari Lab)
4. **Ohio State Dept of Higher Education (ODHE)** (09/21 - 09/23)  
Title: *Health Effects of Dermal Contact to Cyanotoxins in At-Risk Preexisting Disease States*; Role - **Co-I**; (PI: Kennedy); Amount: \$265,934; Perc Effort: 1%
5. **Department of Defense, BCRP Level 2 [W81XWH2110053]** (01/21 - 12/23) Title: *Development of Novel Inducers of Nonapoptotic Cell Death to Target TNBC*; Role: **PI**; Amount: \$1,422,759; Perc Effort: 20%
6. **TSWREIS - Telangana Social Welfare Residential Educational Institutions Society Educational Funds** (08/19 to Open)  
Title: *Indo-US STEM Outreach Program for Underserved Students*  
Role - **PI** (Program Director); Amount: \$12,000/yr; Perc Effort: 1%
7. **UT-AYRP undergraduate research award** (01/22 to 06/22)  
Title: *Developing thienopyrimidines analogs against chemo-resistant tumors.*  
Role - **Mentor** (PI: Dusseau, N); Amount: \$3,000/yr; Perc Effort: 0%

8. **T32-G-RISE NIH-NIGMS** (02/22 to 01/25)  
**Title:** *Training in Translational and Molecular Cell Dynamics (TMCD).*  
**Role – Consultant** (PI: Osman); Amount: \$2,650,000; Perc Effort: 0%
  
9. **Research Awards and Fellowships URFO Program** (04/22 to 03/23)  
**Title:** *A High Throughput Biomimetic Microfluidic Platform for Recapitulating Breast Cancer Metastasis*  
**Role – Co-I** (PI: Tang); Amount: \$12,750; Perc Effort: 2%
  
10. **IRIA – Interdisciplinary Research Initiative Award** (04/22 to 12/23)  
**Title:** *Role of formins in therapy resistance in glioblastoma patient cell lines*  
**Role – Co-PI** (PI: Eissenman); Amount: \$20,000; Perc Effort: 5%
  
11. **Research Innovation Award – UT-ORSP** (04/22 to 12/23)  
**Title:** *ABC transporters as targets for drugs of abuse*  
**Role – PI**; Amount: \$40,000; Perc Effort: 3%
  
12. **Undergraduate Summer Research and Creative Activity Program** (03/22 to 08/22) **Title:** *Development of novel topoisomerase II alpha inhibitors against colorectal cancer* **Role - Mentor**  
 (PI: Dusseau, N); Amount: \$3,000/yr; Perc Effort: 0%

#### **Awarded; Declined by PI**

**Award/Funding:** NIH - R15 (Impact score –20; Awarded\*) (6/18) **Title:** *Necroptosis induction to target anthracycline resistance in TNBC*  
**Role - PI**      **Award:** Total cost \$474,000\*  
 \* PI turned down due to minor overlap with another funding.

**Award/Funding:** NIH - U54 grant – pilot project (Awarded\*) (10/14) **Title:** *Targeting mitochondria in triple negative breast cancer*  
**Role – PI**      **Award:** Direct cost \$230,000\*  
 \*Accepted for funding but the PI has to decline due to job change from Tuskegee to Univ of Toledo; grant was non-transferrable.

#### **Pending; Under Review**

**Award/Funding:** Dominican Republic MESCyT Award (09/22 - 08/25) **Title:** *Anticancer activities of Fevillea cordifolia and its active constituents*  
**Role:** PI; (MPI – Terrero); Amount: \$290,000; Effort: 7%  
**Outcome:** Awarded (*The funds from MESCyT pending to be transferred to UT*)

**National Cancer Institute, NIH – R01** (03/23 to 02/28) **Title:** *Development of novel non-apoptotic cell death inducers for colon cancer therapy* **Role - PI**;  
 Amount: \$1,935,380; **Outcome:** *Scored 21 percentile (first submission)*; **Outcome:** Resubmit– Pending

**National Cancer Institute, NIH – R21** (03/23 to 02/25)

Title: *Targeting mTOR-TFEB axis in colorectal cancer therapy*  
Role – **PI**; Amount: \$425,000; Outcome: *Scored 34 percentile (first submission)*;  
Outcome: Resubmit – Pending

**National Cancer Institute, NIH – R01** (09/22 to 08/27) Title:  
*Targeting resistance through combination approaches in breast cancer*  
Role - **Co-I**; (PI: Dayanidhi); Amount: \$2,277,608; Perc Effort: 5%; Outcome: Pending

**Sponsored Research Agreement, BeyondSpring Pharma** (08/22 to 07/23)  
*Investigation of the molecular effects of plinabulin on glioblastoma patient-derived cells.* Role - **Co-I**; (PI: Eissenman); Amount: \$580,000; Perc Effort: 15%;  
Outcome: Pending

**National Cancer Institute, NIH – R01** (11/22 to 10/27) Title:  
*Mechanisms of inherited chronic intrahepatic cholestasis caused by MRP9 deficiency* Role - **Co-I**  
(PI: Chunyue) Amount: \$1.95 million; subcontract \$200K to UT;  
Outcome: Pending

**NIH-R15-AREA Award** (01/23 to 12/25)  
Title: *High-throughput high-resolution microscopy for mechanism based phenotypic drug discovery applications*  
Role - **Co-I**; (PI: Ray); Amount: \$451,498; Effort: 10%; Outcome: Pending

**Dominican Republic – MESCyT International award** (09/22 to 08/24) Title:  
*Development of Novel Anticancer Formulations of Securotide*  
Role - **PI**; (MPI – Terrero); Amount: \$400,000; Effort: 5%; Outcome: Pending

**NIH – R21** (02/23 to 01/25)  
Title: *Serotonin 1B antagonism as a non-stimulant approach to the treatment of ADHD*;  
Role - **Co-I**; (PI: Hall); Amount: \$482,463; Effort: 10%; Outcome: unscored; resubmit

**NIH – R15-AREA Award** (01/23 to 12/25)  
Title: *Protein Kinase C-delta Therapy for the Protection of Sepsis Induced Neuroinflammation*.  
Role - **Co-I**; (PI:Tang); Amount: \$395,000; Effort: 8%; Outcome: scored, resubmit

**Ohio Cancer Research (OCR) – pilot project** (09/22 to 08/24) Title:  
*Targeting chemotherapy-induced inflammation to prevent TNBC metastasis*; Role - **Co-I**;  
(PI:Tang); Amount: \$60,000; Perc Effort: 5%;  
Outcome: Pending

**Ohio Cancer Research (OCR) – pilot project** (09/22 to 08/24) Title:  
*Mechanism-based high-throughput anticancer screening using digital holography* Role - **Co-I**; (PI: Ray); Amount: \$60,000; Effort: 10%;

Outcome: Pending

**Department of Defense – BCRP FL1**

(04/23 to 03/26)

Title: *Targeting chemotherapy-induced inflammation to prevent breast cancer metastasis*; Role - **PI**; (MPI: Tang); Amount: \$1,100,000; Effort: 10%; Outcome: scored, resubmit

**Department of Defense – BCRP FL2**

(02/23 to 12/26) Title: *Co-*

*targeting of IFN4A1 and telomeres in metastatic TNBC*

Role - **MPI**; (Initiating PI: Raman)

Amount: \$765,688 (Tiwari) Total 2.3 million \$ Grant; Outcome: scored, resubmit

**Department of Defense – BCRP FL2**

(02/23 to 01/26) Title: *A*

*novel breast cancer therapy by secreted protein ligands from CD36<sup>+</sup> fibroblasts*; Role - **Co-I**; (MPI: Furuta and Parvin); Amount: UT portion - \$772,500 (Tiwari portion is \$301,000); scored, resubmit

**Completed**

**Susan G. Komen CCR Award [CCR18548498]**

(08/18 to 08/22) Title:

*Necroptosis induction to target triple negative breast cancer*

Role: **PI**; Amount: \$450,000; Perc Effort: 10% (NCE, 8-21 – 8-22)

**National Science Foundation – MRI Grant [Award#1919337]**

(08/19 to 07/22)

Title: *MRI: Acquisition of a Transmission Electron Microscope for Research and Training.*; Role: **Co-PI**; (PI: Gunning); Amount: \$780,000 (70% NSF - 545,650.00; 30% various sources including UT and ODHE); Perc Effort: 5%

**Systems Oncology, LLC** -licensed our technology on methuophagy (05/18 to 06/20) Title: *Novel anticancer technologies*

Role: **PI**; Amount: \$40,000; Effort: 1%

**Systems Oncology, LLC** -sponsored research agreement

(08/18 to 10/19) Title:

*Development of Patentable, Methuophagy Inducing Compounds for Cancer Therapy* Role: **PI**; (MPI: Erhardt); Amount: \$60,500; Effort: 2%

**Dearce-Koch Memorial Endowment Fund Award**

(06/18 to 05/19) Title:

*Methuophagy induction to target apoptosis resistance*

Role: **PI**; Amount: \$25,000; Effort: 10%

**The Paso Del Norte Health Foundation**

(03/18 to 08/19) Title: *In*

*vivo Characterization of Nicotine Loaded Solid Lipid Nanoparticle Hydrogels*; Role: **Co-I**; (PI: Boddu); Amount: \$11,000; Effort: 1%

**STAR OUR-UT Undergraduate research award**

(05/18 to 08/18) Title:

*Developing thienopyrimidines analogs against chemo-resistant tumors.*

Role - **Mentor** (PI:Mell, K); Amount: \$1,375/yr; Perc Effort: 0%

**Union International Cancer Control** (12/17 to 02/18) Title: *Use of CRISPR technology for mammalian genome engineering and generation of eukaryotic cell lines for studying apoptosis in cancer cells*  
Role: **Mentor**; (PI: Seth); Amount: \$3500; Effort: 2%

**Woods Hole Pilot Grant** (11/17 to 03/19)  
Title: *Alkenones toxicity and applications*  
Role: **PI**; (Co-PI: Baki); Amount: \$25,000; Effort: 5%

**California Grape Commission** (08/14 to 07/15) Title: *Effects of Whole Grape Powder on NF-kB driven inflammatory signaling*  
Role: **Co-PI**; (PI:Samuel); Amount: \$30,000; Effort: 10%

**U54: Morehouse School of Medicine/Tuskegee University/ Univ. Of Alabama at Birmingham Comprehensive Cancer Center; Partnership– pre-pilot projects** Title: *The role of TTP-Lin28-let-7-axis in the regulation of colorectal cancer treatment*; Role: **PI**; (MPI/Co-Lead PI: Esther); Amount: \$15,000; Effort: 15%

**UAB MHRC- Health Disparities Research Training Program Grant** (02/14 to 02/15) Title: *Role of ABCC family of transporters and their signaling pathway in the regulation of chemotherapy responses in pancreatic cancers*;  
Role: **PI**; Amount: \$5,000; Effort: 2%

**Ray-Biotech –Pilot-Biomarker grants** (03/10 to 02/13) Title: *Identify biomarkers of resistance or response to anti-EGFR therapy of cancers* Role: **Co-PI**; (PI: Chen); Amount: \$20,000; Effort: 20%

#### [Active Fund Raising/Donation to Tiwari Cancer Research Lab](#)

12/17: University of Toledo Foundation created Tiwari's - Cancer Cure Funds to support Dr. Tiwari's Cancer Research at UT through donor support  
12/17-18: Cancer Cure Funds received **\$2000/year**, in donation 12/19: Cancer Cure Funds received **\$3000**, in donation  
12/20: Cancer Cure Funds received **\$3000**, in donation  
12/21: Anatrace Inc., Toledo OH donated **\$24000**, towards equipment's 12/21: Cancer Cure Funds received **\$3000**, in donation  
03/22: Cancer Cure Funds received **\$3000**, in donation

## **PROFESSIONAL SERVICE**

### **1. National and International Service**

#### **a) Grant Panel/ Funding Agency Reviewer**

2022-	<b>Ad Hoc Chair</b> and Reviewer, Department of Defense (DOD), BCRP Mechanism
2022-	Graduate Women in Science (GWIS)
2022-	Austrian Academy of Sciences - Doctoral fellowship program
2022-	International Union for Cancer Control (UICC)
2022	University of Sharjah, UAE, Competitive Res Grant
2022	National Science Foundation, NSF-GRFP
2021	Joint (NSFC-ISF) Research Grant from National Science Foundation of China and Israel Science Foundation
2021	Jack Brockhoff Foundation, Australia
2021	US - Department of Defense (DOD), USA
2021	Geneva UHFMR Foundation Grants, Switzerland
2021	University of Sharjah, UAE, Competitive Res Grant
2020	Graduate Women in Science (GWIS)
2020	University of Sharjah, UAE, Competitive Res Grant
2019	National Science Center, Poland
2019	INBRE-DRPP, Nebraska
2019	Environmental Protection Agency (EPA), Chemical Safety
2018	National Institute of Health, NIH, XNDA study section
2018	Environmental Protection Agency (EPA), Chemical Safety
2017-2021	International Union for Cancer Control (UICC)
2017-2019	NABP AACP District IV grant proposals
2017	INBRE-DRPP, Nebraska
2016	Medical Research Council, UK-ASM Newton Fund
2015	Macquarie University Research Fellowships, Australia
2014-2016	National Science Foundation, NSF-GRFP

#### **b) Editor/Associate Editor**

2022- Present	<b>Editor-in-Chief –Cancer Reports, Wiley Press</b>
2022- Present	<b>Guest Editor –Pharmaceutics, MDPI Press,</b> <a href="https://www.mdpi.com/journal/pharmaceutics/special_issues/function_nanoparticle">(<a href="https://www.mdpi.com/journal/pharmaceutics/special_issues/function_nanoparticle">https://www.mdpi.com/journal/pharmaceutics/special_issues/function_nanoparticle</a>)</a>
2022- Present	<b>Guest Editor –Frontiers in Toxicology</b> <a href="https://www.frontiersin.org/research-topics/35194/single-cell-in-vitro-toxicology#overview">(<a href="https://www.frontiersin.org/research-topics/35194/single-cell-in-vitro-toxicology#overview">https://www.frontiersin.org/research-topics/35194/single-cell-in-vitro-toxicology#overview</a>)</a>
2022- Present	<b>Guest Editor –Oncology Reports, in progress</b>
2021- Present	<b>Guest Editor –Cancers, MDPI Press</b>
2021- Present	<b>Associate Editor: Frontiers In vitro Toxicology</b>
2020- Present	<b>Section Editor, Oncology – Current Pharmaceutical Design, Bentham</b>
2020	<b>Editor – Special Issues – Frontiers in Oncology – Women Cancer</b> <a href="https://www.frontiersin.org/research-topics/8433/the-role-of-breast-cancer-stem-cells-in-clinical-outcomes">(<a href="https://www.frontiersin.org/research-topics/8433/the-role-of-breast-cancer-stem-cells-in-clinical-outcomes">https://www.frontiersin.org/research-topics/8433/the-role-of-breast-cancer-stem-cells-in-clinical-outcomes</a>)</a>

2018- 2020	<b>Editor – Special Issues – <i>Frontiers in Oncology</i></b> ( <a href="https://www.frontiersin.org/research-topics/7704/mechanisms-of-cell-death-toxicity-and-survival">https://www.frontiersin.org/research-topics/7704/mechanisms-of-cell-death-toxicity-and-survival</a> )
2015- Present	<b>Associate Editor: <i>Frontiers in Pharmacology</i></b>
2015- Present	<b>Associate Editor: <i>Frontiers in Oncology</i></b>
2012- 2014	<b>Associate Editor-in-Chief - <i>J of Analytical and Pharm Research</i></b>

**c) Editorial Board**

Drug Resistance Updates (IF~23) Journal of Clinical Medicine	Drug Metabol Lett (Bentham Sciences)
Oncology Reports	Heliyon (Elsevier, Cell Press) Biomedical &
Pharmacology Journal	Current Clinical Pharmacology International
Journal of Hospital Pharm and Clin Res (IJPCR)	Achieves of Pharmacy Practice Int. J. of Pharmac
J. of Investigational Biochemistry	Annals of Clinical Case Reports
Chemotherapy	SM Pharmacology & Therapeutics Modern
J. Analytical Oncology	Austin Pharmacology & Pharmaceutics
Pharmacy and Pharmacology Int. Journal	Int. J. of Toxicol and Pharmacol Res.
Chem & Toxicology	Achieves of Pharmacy Practice Journal of Med
Ther. Drug Carrier Systems	Annals of Clinical Case Reports Critical Rev.
Austin Pharmacology & Pharmaceutics	SM Pharmacology & Therapeutics
Frontiers in Cancer Metabolism	Recent Patents on Anticancer Drug Discovery

**d) Manuscript Reviewer (for >190 journals – only selected ones are listed here).**

*Molecular Cancer, Oncogene, Biochemical Pharmacology, Cancer Research, Drug Discovery Today, J. of Clinical Medicine, European J of Cancer, Molecular Metabolism, Pharmacological Reviews, European J of Medicinal Chemistry, Frontiers in Pharmacology, Acta Pharmacologica Sinica B, Pharmaceutics, European J of Pharmacology, Journal of Med Chem & Toxicology, Annals of Clinical Case Reports, PLOs One, Molecular Pharmaceutics, Springer Plus, Heliyon, Frontiers in Oncology, Marine Drugs, Molecular Membrane Biology, ACS Omega, Critical Rev. Ther, Drug Carrier Systems, BMC Cancer, BMC Complementary and Alternative Med, Molecules, Cellular Biochemistry, International J. of Mol. Sciences, Cancer Reports, Expert Opinion on Therapeutic Patents, Drug Discoveries & Therapeutics (DDT), J. Of Cellular and Molecular Medicine, Leukemia Research, Molecular Therapeutics, Phytomedicine, Natural Products, Drug Delivery and Translational Research, Molecules, Redox Biology, Oncotargets, Scientific Reports, J. of Med Chem & Toxicology, J of Experimental Therapeutics (JPET), Int. J. of Pharmacy and Clin Res (IJPCR), Annals of Clinical Case Reports, Achieves of Pharmacy Practice, Current Clinical Pharmacology, Drug Metabolism Lett, International Journal of Hospital Pharm, Biomedical & Pharmacology Journal, Oncology Reports, Cellular Physiology and Biochemistry, J of Cellular and Molecular Medicine, Current Pharmaceutical Design, Cancer Letters, Annals of Clinical Case Reports, Pharmacy and Pharmacology Int. Journal, Achieves of Pharmacy Practice, J. Analytical Oncology, Modern Chemotherapy, J. of Investigational Biochemistry, Int. J. of Toxicol and Pharmacol Res., Austin Pharmacology & Pharmaceutics, SM Pharmacology & Therapeutics, Drug Metabolism Letters, Achieves of Pharmacy Practice, J. Experimental Pharmacology, J. Cancer Therapy (JCT) – Review Editor, RSC Advances, Bioorganic Medicinal Chemistry Letters, J of Controlled Release, Bioorganic Medicinal Chemistry, Cancers, Clinical Cancer Research*



**e) Scientific Service in National and International Conferences/Societies:**

2021- 2022	University of Toledo Delegate for AACP, 2021-2022
2021- Present	Member, AACP Biological Sciences Mentorship Program Committee 2020: Alternate University of Toledo Delegate for AACP, 2020-2021
2019:	<b>Session Chair</b> , Invited speaker - 4 <sup>th</sup> Global Insight Conference on Breast Cancer, Innovinc International, London, UK, July 17 <sup>th</sup> to 20 <sup>th</sup> .
2019- Present	<b>Chair and Ambassador</b> , SURF-TSWREIS, Indo-US Partnership to promote education and research to minorities and underserved population.
2018- 2019	Member, AACP, Volwiler Awards Committee
2018:	<b>Session Chair</b> , Invited speaker - International conference on 'Emerging Trends in Drug Discovery' Poona College of Pharmacy, India. Nov 2 <sup>nd</sup>
2018:	<b>Plenary speaker</b> - International conference on 'Emerging Trends in Drug Discovery' Poona College of Pharmacy, Pune, India. November 2 <sup>nd</sup> , 2018
2018:	<b>Keynote speaker</b> - Global Integration of Opportunities in Healthcare Management, IPS Academy, Indore, India. October 31 <sup>st</sup> , 2018
2018:	<b>Chair</b> , Session 1- Biomedical and Pharmaceutical Research, International Conference on Emerging Research in Biosciences, New Delhi, India. October 28 <sup>th</sup> – 30 <sup>th</sup> , 2018
2018:	<b>Keynote speaker</b> , College of Clinical Pharmacy Research Conference, University of Toledo, OH. April 8 <sup>th</sup> , 2018
2017- Present	<b>Ambassador</b> , Research and Global Development Comm., RIPER, India 2017-
2018	<b>Member</b> , AACP, AJPE Lyman Awards Committee
2017:	Judge and Reviewer, Oral Abstracts, ABRCMS Conference, Indiana 2017:
	<b>Session Chair</b> - 'Cell Cycle and Apoptosis Mediated Cell Death', Synergy Cancer Pharmacology Conference, Queens, NY Dec 13 <sup>th</sup> -16 <sup>th</sup> 2017 2017:
	<b>Fellow</b> , Scholarship Institute Program, University of Toledo
2017:	<b>Judge</b> , Graduate Research Forum, University of Toledo
2017:	<b>Organizer</b> , Scientific committee, 1 <sup>st</sup> Cancer Pharmacology Research, Synergy Conference, Queens, NY Dec 13 <sup>th</sup> -16 <sup>th</sup> 2017
2017:	<b>Chair</b> , Scientific Delivery – Modern Discovery Approach against Drug Resistance, Indo-US Conference on Drug Resistance – New Threats and Global Challenge, RIPER, Anantapur, India – October 27 <sup>th</sup> -28 <sup>th</sup> 2017
2017- Present	Senior advisor, Research and Global development, RIPER, AP, India 2017-
Present	<b>Ambassador</b> , Relationship Manager from UT for RIPER, AP, India 2016-
Present	<b>Judge</b> and Reviewer, MGRS Conference, Toledo, OH
2015- 2016	Member, AACP Biol Sec: Chalmers, Dawson, Volwiler Awards Committee 2015-
2017	Member, AACP Health Disparity and Cultural Competency Committee 2015-
2017	<b>Judge</b> , Graduate Research Council, University of Toledo
2015- 2017	Research and Innovations Committee, RGVP, Bhopal, India
2015:	<b>Judge</b> and Reviewer, (Oral/Poster), ABRCMS, Seattle, Washington 2014:
	<b>Judge</b> and Reviewer, Oral & Poster session, ABRCMS, San Antonio, TX
2014- 2015	<b>Chair</b> and co-Leader - RCMI Translational Research Network (RTRN) Genes, Environment and Toxicology cluster (2014-2015)
2013:	<b>Judge</b> – Oral session, Phi Zeta Research Day, 14 <sup>th</sup> Biomedical Research Symposium, Tuskegee University, Tuskegee, Sept. 20, 2013



2013: **Judge** and Reviewer - (Oral/Poster), Annual Biomedical Research Conference for Minority Students (ABRCMS), Nashville, Tennessee

2013: **Judge** – NanoBio Summit, Center for Nanobiotechnology Research, Alabama State University, Oct. 17-18, 2013, Montgomery, AL

2011- 2012 "Work in Progress" committee and "Pharmacology and Systems Biology Retreat" Organizing Committee in the Dept. of Pharmacology and Systems biology, Mount Sinai School of Medicine, NY (Nov. 2011 – Aug. 2012)

2012- 2013 NYAS Fellow - teach elementary students in Afterschool STEM Program 2010-2017 External Advisor, Institute of Transgene Life Sciences, India

**f) Consulting positions:**

2020- Present College of Pharmacy, Ajman University, UAE

2019- Present Poona College of Pharmacy, Bhartiya Vidyapeeth Pune, India

2018- 2019 HCZY LifeSci Tech, Inc., a Shenzhen corporation, Shenzhen, China 2018-2021

2021 Laudis Biotech, Inc., Brooklyn, New York

2018- 2020 Systems Oncology Inc., Arizona

2017- 2018 C.W. Attorneys, Pharmaceutical Cases

**g) International Outreach, Scientific and Academic Engagements:**

2022- Present Member, Committee on Professional Ethics (COPE)

2021- Present **Ambassador**, Ajman University, UAE-US Partnership *to promote education and research.*

2020- Present **Ambassador**, PUCMM - Pontificia Universidad Católica Madre y Maestra University, Dominican Republic-US Partnership *to promote education, research and academic exchange.*

2019- Present **Chair and Ambassador**, SURF-TSWREIS, Indo-US Partnership *to promote education and research to minorities and underserved population.*

2019- Present **Ambassador**, Bhartiya Vidyapeeth Pune, Indo-US Partnership to promote education and research.

2017- Present **Ambassador**, Research and Global Develop. Committee, RIPER, India

2015- 2017 **Co-Chair**, Indo-US Research Development Committee, RGPV, India

**f) Memberships in Professional Societies:**

2019- 2020 American Society of Pharmacol and Experim. Therapeutics (ASPET) 2017- Present

The Rho Chi Society

2016- Present The Sigma Phi Sigma Society

2015- Present American Association of College of Pharmacy (AACP) 2015- Present

American Association of University Professors (AAUP) 2012- 2013

American Association of Pharmaceutical Sciences (AAPS)

2011- 2014 American Association for the Advancement of Science (AAAS) 2011- 2018

New York Academy of Sciences (NYAS)

2009- Present American Cancer Society (ACS)

2008-Present American Association for Cancer Research (AACR)

## **2. INTRAMURAL SERVICE**

### **UNIVERSITY OF TOLEDO, SERVICE (UNIVERSITY/SCHOOL/DEPARTMENT)**

#### **a) University of Toledo, Committees Served/Serving**

2022- Present	University's Outstanding Advisor Award Committee
2021- 2022	Dean Search Committee for College of Pharmacy & Pharm Sci., UT 2020: Research Misconduct Committee at UT
2020- Present	Member, Research Infrastructure and Admin at UT
2018- 2019	Dean Search Committee for College of Pharmacy & Pharm Sci., UT 2018-
2021	Faculty Senate Constitution and Rules Committee, UT
2018- 2021	Faculty Senate Election Committee
2018- 2021	Faculty Senate, elected member for 3-year term 2018- 2020 CPPS Strategic Steering Committee
2017- Present	<b>Organizer</b> , PET Mixers, CPPS, <i>University of Toledo, OH</i> 2017- Present Institutional Animal Care and Use (IACUC) Committee, UT 2015- 2018 LGBTQ Committee, UT
2015- 2016	Faculty Senate Constitution and Rules Committee, UT

#### **b) College of Pharmacy & Pharm Sci, Univ of Toledo, Committees Served**

2022- Present	Faculty and Staff Professional Development Committee, CPPS 2022- Present	Fundraising and College Development Committee, CPPS 2022- Present	PHCL Department Personnel Committee
2020- 2022	Admissions Committee, CPPS		
2020- Present	Relationship Manager, Ajman University, UAE 2019- 2022	College Personnel Committee, CPPS	
2018- Present	<b>Chair</b> , SURF Committee – TSWREIS-Indo-US Summer Research 2018- 2020	CPPS Strategic Steering Committee	
2018- 2020	Scholarship and Research Committee		
2018- 2020	Honors Thesis Advisors, Member		
2018- Present	Graduate Admissions Committee, CPPS 2018- 2019	Information Technology Committee 2017- Present	Relationship Manager for RIPER, India
2017- 2020	Human and Health Disparity Committee, CPPS 2015- 2018	Assessment Committee, CPPS	
2015- Present	BSPS Internship/Honors Thesis Committee (20) 2016- 2020	MSBS Internship Thesis Committee (4)	
2015- Present	Department Liaison for communications		
2015- Present	MS Thesis Committee (5 as a PI; 6 as a graduate advisor) 2015- Present		
	Ph.D. Thesis Committee (12 as a PI; 14 as a graduate advisor)		

### **PAST SERVICES (UNIVERSITY/SCHOOL/DEPARTMENT)**

#### **a) Tuskegee University, AL, Committees Served**

2014- 2015	Class of 2016 Faculty Advisor – College of Veterinary Medicine, TU
2014- 2015	Cultural Organizing Committee – 14th Biomedical Symposium, TU
2014- 2015	Health and Safety Committee
2014- 2015	Phi-Zeta Research Committee
2014- 2015	Graduate Admissions Committee

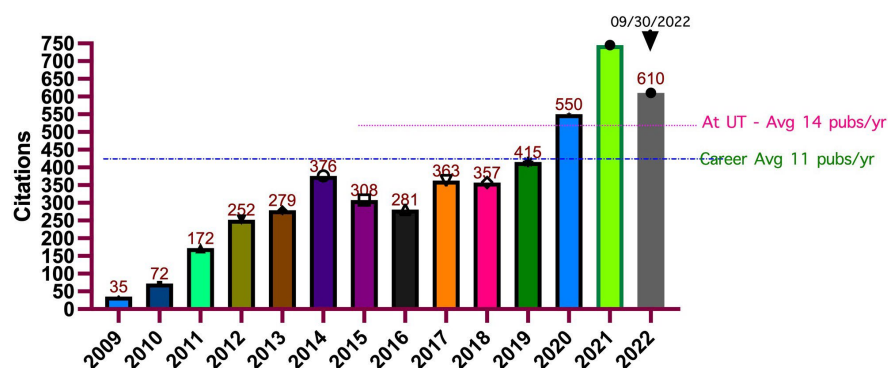
2014- 2015	<b>Co-Chair</b> –RTRN, Genes, Environment and Toxicology cluster
2014- 2015	Haitian-Tuskegee Training Research Committee: Served as a Major Professor - Toxicology to Samuel Raphael for 8 weeks.
2013- 2015	CVNAH, TU Research Committee – AVMA/COE
2013- 2015	Tuskegee Biomedical Symposium Committee
2013- 2015	Integrated Biosciences (IBS) Ph.D. Advisory Committee
2013- 2015	Interdisciplinary Pathobiology Ph.D. Advisory Committee:

## PUBLICATIONS/PATENTS/SCHOLARLY ACTIVITIES

**Sum of times cited: > 5,000**

h-index: **34.0**

i-10 index: **74.0**



<https://scholar.google.com/citations?user=3vfvjz0AAAAJ&hl=en>

## Summary of Publications/Scholarly Activity

### Special Issues Editor/Edited:

2022	Babu RJ and <b>Tiwari AK</b> . Special Issue “ <i>Functionalized Nanoparticles in Cancer Therapeutics</i> ”, for section “Nanomedicine and Nanotechnology”, in <b>Pharmaceutics</b> , 2022.
2021	Raman D, Tiriveedhi V, Shanker A and <b>Tiwari AK</b> . Special Issue “Resistance to Apoptosis-Based Cancer Therapy—Induction of Non-apoptotic Cell Death to Overcome Chemoresistance” will be published in a Special Issue in <b>Cancers</b> , in press, 2021-2022.
2021	<b>Tiwari AK</b> . “Transformative Approaches to Improve Chemotherapy for Difficult to Treat Solid Tumor”. Special Issue, Oncology Section, <i>Current Pharmaceutical Design</i> , 2021, Vol. 27, No. 46
2020	Raman D, <b>Tiwari AK</b> , Tiriveedhi V, and Rhoades JA. ‘The Role of Breast Cancer Stem Cells in Clinical Outcomes’. will be published in a Special Issue in <b>Frontiers in Oncology</b> , Women’s cancer in 2019-2020
2019	<b>Tiwari AK</b> , and Ashby CR. ‘Mechanisms of Cell Death, Toxicity and Survival’. published in a Special Issue in <b>Frontiers in Pharmacology</b> , Cancer Molecular Targets and Therapeutics, in 2018-2019.

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**Papers in Submission/Revision/Under Submission**

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- 2022 Thakur CK, Chandrabose K, Abou-Dahech M, MOHD A. M. Altabakha MAM, Asbhy, CR, Shahwan MJ, Tiwari AK, Moorthy NSH. Microwave-Assisted Functionalization of Multi-walled Carbon Nanotubes. *To be submitted*
- 2022 Nyinawabera A, Gupta S, Dayanidhi D, Chandrabose K, Dayinidhi R, Ashby CR, **Tiwari AK**– “Necroptosis Induction by Novel thieno-pyrimidin-4-yl-hydrazinylidene compounds inhibit triple negative breast cancer proliferation and metastasis” (Under prep, *To be submitted to Cell Death and Disease – Nature Press*, 2021)
- 2022 Wang Z, **Tiwari AK**, and Gallo JM. Evaluation of Abcc2 and Abcc3 transporters in the oral bioavailability of methotrexate. (*To submit to Drug Metab and Dispos*)
- 2022 Terrero D, Ashby CR, Raman D, and **Tiwari AK**. Redundant functions of ABC drug transporters. Review (*To be submitted, Drug Resistance Updates*)
- 2022 Khare VM, Ashby CR, Nyinawabera A, **Tiwari AK**– “Could RAGE lead to necroptotic cell death?” (Opinion, *To be submitted*)
- 2022 Kumar R, Staffeld J, McIntosh KD, Amawi H, **Tiwari AK**– “Tyrosine kinase inhibitors targeting HER-2 overexpressing breast cancer: a review” (*To be submitted to Frontiers in Biosciences*)
- 2022 Badejo A, Soni S, Salhotra A, Manne P, **Tiwari AK**, Malhotra A – “Pancreatic Adenocarcinoma Biomarkers Development: Progress and Challenges” (*Under submission to BMC Cancers*)
- 2022 Chojnacki BJ, Tran HT, Alnafisah RW, Alyami MA, Sarver JG, Messer WS, Sari Y, **Tiwari AK**- “Two-hundred years of Parkinson’s disease: past, present and future treatments” (*To be submitted*)
- 2022 Nyinawabera A, Khare VM, Raman D, Ashby CR, **Tiwari AK** “Necroptosis modulators in cancer therapy” (*To be submitted to Frontiers Oncology Special Issue – Cell Death and Toxicity*)
- 2022 **Tiwari AK**, and Gallo JM. Evaluation of Abcc2 and Abcc3 transporters in the oral bioavailability of methotrexate. (*To be submitted to Drug Metab and Dispos*)

## INVITED TALKS (Selected)

- 2022 **Tiwari AK** – “Targeting Multidrug Resistance in Cancer through Unconventional Cell Death Induction”. Southern Methodist University, Department of Biological Sciences Seminar Series, October 21st 2022; *Invited talk*
- 2022 **Tiwari AK** – “Novel Non-Conventional Cell Death Induction to Overcome Multidrug Resistance”. University of Johannesburg, Laser Research Centre, Johannesburg, South Africa, October 4th 2022; Virtual Talk
- 2022 **Tiwari AK** – “New paradigm in Small Molecule Drug Discovery”. MESYCT Conference, Special Session Talk, XVII International Congress of Scientific Research (XVII CIC) Santo Domingo, June 9<sup>th</sup>, 2022; *Invited Keynote Lecture; Chair of Session*
- 2022 **Tiwari AK** – “Unconventional cell death induction to combat drug-resistant cancers”. Baylor Biology Seminar Series, Baylor University, TX, April 22, 2022
- 2022 **Tiwari AK** – “New insights and technologies to combat drug-resistance”. Penn State Colloquium 2022 Series - Graduate Program in Nutritional Sciences, Penn State University, PA, April 11<sup>th</sup>, 2022
- 2021 **Tiwari AK** – “Multidrug resistance in cancer”. Indian Pharmaceutical Association Annual Convention 2021 (IPAC 2021), Virtual, “Reimaging Pharmacy in 21st Century: Transformational changes ahead”, India, July 16 & 17, 2021, *Invited Keynote Lecture*
- 2021 **Tiwari AK** – “Research Opportunities and Possibilities”. Recruitment Event, Lorain County Community College, OH, April 7<sup>th</sup> 2021.
- 2021 **Tiwari AK** – “Drug discovery, development and drug delivery: With a special focus on drug resistance”. Center of Medical and Bio-allied Health Sciences Research, Ajman University, Ajman, UAE, March 21, 2021
- 2021 **Tiwari AK** – “Why Pharmacy?” Recruitment Event, Columbus State Community College, OH, March 5<sup>th</sup> 2021.
- 2021 **Tiwari AK** – “Pharmaceutical Research Opportunities” Rockets Scholar Day, University of Toledo, OH, February 6<sup>th</sup> 2021.
- 2021 Kahaleh B, **Tiwari AK**, Alostrok N– “Targeting TRPM8, a Cold Sensing Cation Channel Protein, as a Potential Treatment for Raynaud’s Phenomenon” Department of Medicine, University of Toledo, OH, January 11<sup>th</sup> 2021.
- 2020 **Tiwari AK** – “Novel strategies against multidrug-resistant cancer” International Conference on Emerging Research in Biosciences, New Delhi, India. Institute of Pharmaceutical Research, GLA University, Mathura, India, June 18, 2020. *International Webinar Series*
- 2020 **Tiwari AK** – “Unconventional cell death induction to target drug-resistant cancers”. AAPS student chapter's, Auburn University, Alabama. Feb 25, 2020. *Distinguished Guest Speaker*

- 2019 **Tiwari AK** – “Innovative approaches to target drug resistance cancer” Department of Biology Seminar Series, Southern Methodist University, December, 2019, Dallas, TX *Invited Lecture*
- 2019 **Tiwari AK** – “Caspase-independent cell death induction to target triple negative form of breast cancer” 4<sup>th</sup> International Cancer Research & Drug Development Conference, October 21<sup>st</sup> – 24<sup>th</sup>, 2019, Baltimore, *Special Invited Lecture*
- 2019 **Tiwari AK** – “A novel non-apoptotic approach to target TNBC” 4<sup>th</sup> Global Insight Conference on Breast Cancer, Innovinc International, July 17<sup>th</sup> – 20<sup>th</sup>, 2019, London, UK *Special Invited Lecture*
- 2019 **Tiwari AK** – “Novel technologies against drug resistant cancers”. Pontificia Universidad Catolica Madre y Maestra, Santiago Campus, Dominican Republic. June 3<sup>rd</sup> 2019 *Keynote Lecture*
- 2019 **Tiwari AK** – “Advancement in Cancer Chemotherapy in 21<sup>st</sup> Century”. XV Congreso Internacional De Investigación Científica, Santo Domingo, Dominican Republic, June 4<sup>th</sup> – 8<sup>th</sup>, 2019 *Special Panel Lecture*
- 2019 **Tiwari AK** – “Role of mitochondrial dynamics in TNBC resistance”. Pontificia Universidad Catolica Madre y Maestra, Santo Domingo Campus, Dominican Republic. March 26<sup>th</sup>, 2019 *Special Invited Lecture*
- 2019 **Tiwari AK** – “Novel strategies to fight triple negative breast cancer” Board of Director’s meeting. Komen North-West Ohio Affiliate, Toledo, Ohio. January 16<sup>th</sup>, 2019 *Special Invited Lecture*
- 2018 **Tiwari AK** – “Innovative strategies to overcome apoptosis resistance” All India Institute of Medical Sciences (AIIMS), New Delhi, India. November 5<sup>th</sup>, 2018 *Special Invited Lecture*
- 2018 **Tiwari AK** – “A new cell death mechanism - methuophagy” International conference on ‘Emerging Trends in Drug Discovery’ Poona College of Pharmacy, Pune, India. November 2<sup>nd</sup>, 2018 *Plenary speaker*
- 2018 **Tiwari AK** – “Novel technologies to overcome drug resistance” Integration of Opportunities in Healthcare Management, IPS Academy, Indore, India. October 31<sup>st</sup>, 2018 *Keynote speaker*
- 2018 **Tiwari AK** – “Multidrug resistance a major impediment to cancer chemotherapy” International Conference on Emerging Research in Biosciences, New Delhi, India. October 28<sup>th</sup>–30<sup>th</sup>, 2018, *Special Invited Lecture*
- 2018 **Tiwari AK** – “Induction of cancer cell cannibalism and its advantages” Laboratory of Cell Biology Seminar Series, National Cancer Institute, NIH, October 16<sup>th</sup>, 2018
- 2018 **Tiwari AK** – “Novel technologies to overcome drug resistance in cancer” **Guest lecture series**, All India Institute of Medical Sciences (AIIMS), New Delhi, India. June 25<sup>th</sup>, 2018
- 2018 **Tiwari AK** – “Novel technologies to target multidrug resistant cancers” Special Session Talk, XIV International Congress of Scientific Research (XIV CIC), Santo Domingo, Dominican Republic. June 6-8<sup>th</sup>, 2018



- 2018 **Tiwari AK** – “Targeting apoptotic resistance – Induction of a unique cell death mechanisms in cancer” Seminar Series, College of Pharmacy, Manchester University, IN. April 25<sup>th</sup>, 2018
- 2018 **Tiwari AK** – “Novel technologies inducing unique cell death mechanism in cancer” Bio-engineering Seminar Series, Dept. of Bioengineering, University of Toledo, OH. April 12<sup>th</sup>, 2018
- 2018 **Tiwari AK** – “Have you explored the researcher in you?” 5<sup>th</sup> Annual Student College of Clinical Pharmacy Research Conference, University of Toledo, OH. April 8<sup>th</sup>, 2018  
*Keynote speaker*
- 2017 **Tiwari AK** – “Unconventional caspase-independent mechanisms to target drug resistance” Synergy Cancer Pharmacology Conference, Queens, NY Dec 13<sup>th</sup>-16<sup>th</sup> 2017 *Awarded – Young Investigation Award; Chaired a Session ‘Cell cycle and apoptosis mediated cell death’*
- 2017 **Tiwari AK** – “Methuophagy induction targets apoptosis resistance” Toledo Cancer Symposium, Toledo Ohio, December 1<sup>st</sup>, 2017
- 2017 **Tiwari AK** – “Overcoming multidrug resistance” and “Methuophagy induction, a new approach against drug resistance” Indo-US Conference on Drug Resistance – New Threats and Global Challenge, RIPER, Anantpur, India – October 27<sup>th</sup> -28<sup>th</sup> 2017  
*Awarded – Distinguished Researcher Award; Sessions Chair*
- 2017 **Tiwari AK** – “Tools to provide in class formative feedback on learning (Standard 19.1)- - Google Docs”, Advancement Conference, University of Toledo, Ohio, May 11, 2017
- 2017 **Tiwari AK** – “The use of Non-invasive pharmacokinetic analysis using Hybrid Optoacoustic Ultrasound Technology” St. Michael’s Hospital Toronto, Canada, January 9<sup>th</sup>, 2017
- 2016 **Tiwari AK** – “Advances in triple negative breast cancer therapy” 1st Annual Breast Cancer Summit at St. Rita’s Medical Lima, Ohio, September 29, 2016,
- 2016 **Tiwari AK** – “Drug Resistance: Can we get rid of ‘em” Graduate Students Seminar Series, Rajiv Gandhi Prodyogik Vishwavidyalaya, M.P. India – Feb 16<sup>th</sup>, 2016
- 2016 **Tiwari AK** – “Avenues and Challenges to Current Chemotherapy Development” International Conference on Emerging Frontiers in Drug Discovery and Development. Rajiv Gandhi Prodyogik Vishwavidyalaya, M.P. India – Feb 19<sup>th</sup>, 2016 (Eminent Guest Speaker)
- 2015 **Tiwari AK** – “Pharmaceutical Sciences as a Career Option for STEM majors” for the 2015 Research Experience for Undergraduate (REU), The Center for Nanobiotechnology Research, Alabama State University, AL– July 6<sup>th</sup>, 2015.
- 2015 **Tiwari AK** – Implications of efflux transporters in animal chemotherapeutics. Animal Science and College of Veterinary Medicine, Tuskegee University, Tuskegee, AL, July 7<sup>th</sup>, 2015.

- 2015 **Tiwari AK** – Challenges and future directions of targeted anticancer drug discovery. Ohio State University, Department of Surgery and Medicine, Columbus, OH – July 14th, 2015.
- 2015 **Tiwari AK** – Targeted anticancer drug discovery and development. Anatrace Pharmaceuticals, Toledo, OH – July 24th, 2015.
- 2014 **Tiwari AK** – Anticancer drug development: Integrating Pharmacokinetic/ Pharmacodynamic approaches with systems biology. Fairleigh Dickinson University, Florham Park, NJ – October 9th, 2014.
- 2014 **Tiwari AK** – Polymorphic alterations in efflux transporters affect anticancer disposition. GMaP Maryland Conference invited by John's Hopkins University, Bethesda, MD – June 18-19th, 2014.
- 2014 **Tiwari AK** – Implications of efflux transporters in anticancer therapy and resistance. Alabama State University, Montgomery, Al - Feb, 27th, 2014.
- 2013 **Tiwari AK** - Complimentary roles of efflux transporters in anticancer disposition. Mitchell Cancer Institute, University of South Alabama, Mobile, Al July, 23<sup>rd</sup>, 2013.
- 2012 **Tiwari AK** - Redundant functions of ABC transporters in topotecan disposition. Dept of Pharmacology and Systems Therapeutics. Mount Sinai School of Medicine, NY, Dec. 4<sup>th</sup> 2012.
- 2012 **Tiwari AK** - Overlapping functions of efflux transporters in drug disposition. Tuskegee University, AL, Nov. 30<sup>th</sup>, 2012.
- 2011 **Tiwari AK** - Nilotinib (Tasigna®) reverses ABCB1- and ABCG2-mediated drug resistance by inhibiting their efflux function. Albert Einstein College of Medicine, Bronx, NY. March 16, 2011
- 2010 **Tiwari AK** - PDE5 inhibitors as modulators of MDR. 7<sup>th</sup> National ABC transporters meeting, NCI, NIH, Bethesda, MD 20892, September 14-15, 2010
- 2008 **Tiwari AK** - Differential Effects of the EGFR Tyrosine Kinase Inhibitor AG1478 on the Function of ABCB1 and ABCG2. 5<sup>th</sup> Northern American ABC transporters meeting, NCI, NIH, Bethesda, MD 20892; September 24-26<sup>th</sup>, 2008
- 2007 **Tiwari AK** - Up-regulation of MRP4 and down-regulation of influx transporters in human leukemic cells with acquired resistance to 6-mercaptopurine. 4<sup>th</sup> Northern American ABC transporters meeting, NCI, NIH, Bethesda, MD 20892; October 3<sup>rd</sup>- 5<sup>th</sup>, 2007
- 2006 **Tiwari AK** - "Bifidogenic effect and power of immunity," Nestle Nutrition Symposium, Bareilly, U.P, India; 4th July 2006

#### **ABSTRACTS AND POSTER PRESENTATIONS (Selected)**

- 2022 Ray A and **Tiwari AK**– “Drug development and screening of novel anti-cancer therapeutics using holographic microscopy”. MESYCT Conference, Special

Session Talk, ***XVII International Congress of Scientific Research (XVII CIC)***  
Santo Domingo, June 6<sup>th</sup>- 12<sup>th</sup>, 2022

- 2022 Tang Y, Sigdel I, Ofori-Kwafo A, Heizelman R, Vogel P, **Tiwari AK**– “A novel biomimetic microfluidic platform for the study of breast cancer metastasis”. MESYCT Conference, ***XVII International Congress of Scientific Research (XVII CIC)*** Santo Domingo, June 6<sup>th</sup>- 12<sup>th</sup>, 2022
- 2022 Terrero D, Tang Y, Trivedi P, Raman D, **Tiwari AK**– “Targeting mitochondrial dynamics for the management of multidrug resistant cancer”. MESYCT Conference, ***XVII International Congress of Scientific Research (XVII CIC)*** Santo Domingo, June 6<sup>th</sup>- 12<sup>th</sup>, 2022
- 2022 Neupane R, Malla S, Abou-Dahech MS, Balaji S, Kumari S, Tang Y, Chandrabose K, Trivedi P, **Tiwari AK**– “Novel dimethoxyquinazoline-4-amine analogs designed to inhibit colorectal cancer proliferation”. MESYCT Conference, ***XVII International Congress of Scientific Research (XVII CIC)*** Santo Domingo, June 6<sup>th</sup>- 12<sup>th</sup>, 2022
- 2022 Malla S, Kumari S, Terrero D, Raman D, Ray A, Trivedi P, **Tiwari AK**– “Development of novel unconventional cell death inducers against triple negative breast cancer”. MESYCT Conference, ***XVII International Congress of Scientific Research (XVII CIC)*** Santo Domingo, June 6<sup>th</sup>- 12<sup>th</sup>, 2022
- 2022 Malla S, Kumari S, Terrero D, Raman D and **Tiwari AK**. Development of mitochondrial fission inhibitors in inducing non-apoptotic cell death in triple-negative breast cancer, Abstract 5659. Non-apoptotic cell death autophagy session. **Annual Meeting, American Association for Cancer Research**; 2022 April 08-13. New Orleans, LA
- 2022 Neupane R, Malla S, Abou-Dahech M, Balaji S, Kumari S, Tang Y, Karthikeyan C and **Tiwari AK**. Design and development of novel anticancer dimethoxyquinazoline-4-amine analog, DW-8, against colorectal cancer. **Annual Meeting, American Association for Cancer Research**; 2022 April 08-13. New Orleans, LA
- 2022 Kabir M, Kharel A, Malla S, Kreais Z, Nath P, Wolfe J, Hassan M, Kaur D, **Tiwari AK**, Ray A, Detection of apoptotic and necrotic cell death using holographic microscopy, **Photonics West 2022**, San Francisco, USA, (Jan 25)
- 2022 Khoubafarin S, Kharel A, Malla S, Nath P, Kaur D, **Tiwari AK**, Ray A, Monitoring the efficacy of chemotherapeutic drugs using dark field imaging, **Photonics West 2022**, San Francisco, USA. (Jan 23)
- 2021 Terrero D, Malla S, Raman D, **Tiwari AK**. Collateral sensitivity to overcome drug resistance. In: ***XVI International Congress of Scientific Research (XVI CIC)***; 2021 June 9-11. Santo Domingo, Dominican Republic.
- 2021 **Tiwari AK**, Terrero D, Pasternak M, Trivedi P. Targeting endolysosomal trafficking to overcome cancer drug resistance. In: ***XVI International Congress of Scientific Research (XVI CIC)***; 2021, June 9-11. Dominican Republic.

- 2021 Malla S, Ramapuram H, Al-Oudat BA, **Tiwari AK**. Novel Chyrsin-De-allyl PAC-1 hybrid analogue as a potential anticancer agent against TNBC. Abstract. In: **Graduate Research Forum**; 2021 March 25-26. Toledo, OH
- 2021 Len J, Malla S, Hussein N, Lee D, Ramapuram T, Agrawal A, McIntosh K **Tiwari AK**. DML6, a dialkylamino-functionalized chalcone analog inhibits ovarian cancer cells via oxidative stress, intrinsic apoptosis induction and mitotic catastrophe. Abstract. In: Proceedings of the 8th **Annual Student Research Symposium of the Student College of Clinical Pharmacy**; 2021 April 5. Toledo (OH): SCCP; 2021.
- 2021 Pasternak M, Hussein N, Kumari S, **Tiwari AK**. Design, synthesis, and development of novel 4-pyridyl, non-apoptotic cell death inducers against colorectal cancer. Abstract. In: **12<sup>th</sup> Annual MGRS Midwest Graduate Research Symposium**; 2021 April 10. Toledo (OH): MGRS; 2021.
- 2020 Malla S, Bastihalli TD, Dayanidhi DL, Vogel P, Kumari S, **Tiwari AK**. Necroptosis inducing thienopyridine analogs overcomes chemoresistance in TNBC. Abstract. In: Proceedings 111th **Annual Meeting, American Association for Cancer Research**; 2020 June 22-24. Philadelphia (PA): AACR; 2020. 4119
- 2020 Bastihalli TD, Saraiya S, Hanley RA, Malla S, **Tiwari AK**. Novel thienopyrimidine analog TPH104 induces immunogenic cell death in TNBC cells. Abstract. In: Proceedings 111th **Annual Meeting, American Association for Cancer Research**; 2020 June 22-24. Philadelphia (PA): AACR; 2020. 2406
- 2020 Hussein N, Pasternak M, Kumari S, Awthe Z, Gunning W, Trippier PC, **Tiwari AK**. Endolysosomal trafficking defects leads to caspase independent cell death in colon cancer. Abstract. In: Proceedings of the 111th **Annual Meeting of the American Association for Cancer Research**; 2020 June 22-24. Philadelphia (PA): AACR; 2020.
- 2019 Pasternak M, Hussein N, Trivedi P, Erhardt P, **Tiwari AK**. Structure-Activity Relationship (SAR) Studies and Synthesis of Compounds Inducing Non-Apoptotic, Caspase-Independent Cell Death in Cancer Cells. **Poster, American Chemical Society Central Regional Meeting**, June 6, 2019, Hotel Midland, MI
- 2019 McIntosh K, Terrero D, and **Tiwari AK**. "Safety toxicity evaluation with alkenones from Isochrysis species in female SAS Sprague Rats" at Student College of Clinical Pharmacy (SCCP), 2019, Toledo, OH, USA (**First Prize - ORAL presentation award**).
- 2019 Pasternak M, Hussein N, Chandrabose K, Erhardt PW, **Tiwari AK**. Development of Non-Apoptotic, Caspase-Independent Cell Death Inducers Against Cancer Cells, **Poster, Midwest Graduate Research Symposium**, April 6, 2019, University of Toledo, OH
- 2019 Hussein N, Amawi H, Nyinawabera A, Malla S, Trivedi P, **Tiwari AK**. Abstract. Discovery and molecular mechanism of novel thienopyrimidine derivative against prostate cancer. Abstract. In: Proceedings of the **10th annual MGRS (Midwest Graduate Research Symposium)**, The University of Toledo. Toledo, Ohio. April 6th, 2019. Oral Presentation

- 2019 Pasternak M, Hussein N, Chandrabose K, Erhardt PW, **Tiwari AK**. Development of Non-Apoptotic, Caspase-Independent Cell Death Inducers Against Cancer Cells, **Poster, American Association of Cancer Research (AACR)**, April 2, 2019, Georgia World Congress Center Atlanta, GA
- 2019 Muskiewicz D, Resendiz Gutierrez F, Frommann N, Hama M, Patel B, **Tiwari AK**, Hall FS. Influences of experimental conditions and strain on the escalation of ethanol consumption in male and female mice. **Seventh Annual Neuroscience Symposium** at April 4, 2019, Kent State University, Kent, Ohio.
- 2019 Hussein N, Nyinawabera A, Amawi H, **Tiwari AK**. Cariprazine is a potent chemo-adjuvant against multidrug resistant colon and lung cancer. **Poster, American Association of Cancer Research (AACR)**, April 2, 2019, Georgia World Congress Center Atlanta, GA
- 2019 Pasternak M, Hussein N, Tukaramrao DB, Erhardt PW, **Tiwari AK**. Development of small molecules that induce a novel caspase-independent cell death. Poster, Graduate Research Forum, March 20, 2019, University of Toledo, OH
- 2018 Nyinawabera A and Tiwari AK. Targeting anthracycline resistant triple negative breast cancer. Oral presentation, LEAF Pharmaceuticals, September, 2018, Boston, USA.
- 2018 Pasternak M, Hussein N, Erhardt, P, **Tiwari AK**. Unique caspase-independent cell death inducers in colorectal cancer cells. **Poster, Glass City Chemistry Conference, June 14-16, 2018**, University of Toledo, Ohio
- 2018 Nyinawabera A, Gupta S, Chandrabose K and Tiwari AK. Targeting dysregulated mitochondrial fission pathways in Triple Negative Breast cancer therapy. Poster, 18<sup>th</sup> World Congress of Basic and Clinical Pharmacology 2018 (WCP2018) July 1-6 2018. Kyoto, Japan. **(First Prize - ORAL presentation award). Young Scientist Award from American Society for Pharmacology and Experimental Therapeutics (ASPET).**
- 2018 Nyinawabera A, Gupta S, Chandrabose K and **Tiwari AK**. Necroptosis induction in triple negative breast cancer therapy. Poster, **American Association for Cancer Research Annual meeting April 14-18, 2018**, McCormick Place North/South Chicago, IL, USA
- 2018 Hussein N, Amawi H, Christmann R, **Tiwari AK**. The dopamine D3 receptor antagonists modulate ABCG2-mediated MDR. **Presentation, 5th Annual Student College of Clinical Pharmacy Research Conference**, University of Toledo, OH. April 8th, 2018
- 2018 **Tiwari AK**, Amawi H, Chandrabose K, Erhardt P and Trivedi P. Discovery of an unconventional form of cell death in colorectal cancer. Poster, **American Association for Cancer Research Annual meeting April 14-18, 2018**, McCormick Place North/South Chicago, IL, USA
- 2018 Nyinawabera **A**, Gupta **S**, Vij **A**, Chandrabose **K** and Tiwari **AK**. Development of novel non-apoptotic cell death inducers to target triple negative breast cancer. Oral

presentation, Midwest Graduate Research Symposium (MGRS) 2018, Toledo, OH, USA. (**First Prize - ORAL presentation award**).

- 2017 Amawi H, **Hussein N**, Fetcenko A, Alnafisah R, Karthikeyan C, Manivannan E, Trivedi P, **Tiwari AK**. Novel sylibin analogues target ovarian cancer EMT/Wnt/beta-catenin resistance pathways. **Poster, American Association for Cancer Research Annual meeting April 1-5 2017**, Walter E. Washington Convention Center, Washington, D.C., USA.
- 2017 Hussein N, Amawi H, Ashby CR Jr, Karthikeyan C, Mittal R, Christmann R, Trivedi P, **Tiwari AK**. The dopamine (DA) D3 receptor antagonists (PG01037, NGB2904, SB-277011A, and U99194) significantly attenuate ABCG2-mediated multidrug resistance. **Poster, American Association for Cancer Research Annual meeting April 1-5 2017**, Walter E. Washington Convention Center, Washington, D.C., USA.
- 2017 Koduru SV, Nyinawabera A, Ravnicek DJ, **Tiwari AK**. Interrogation of small RNA-seq data for small noncoding RNA in human colon cancer. **Poster, American Association for Cancer Research Annual meeting April 1-5 2017**, Walter E. Washington Convention Center, Washington, D.C., USA.
- 2017 Koduru SV, **Tiwari AK**, Leberfinger A, Hazard HW, Kawasawa YI, Mahajan M, Ravnicek DJ. Differentially expressed small noncoding RNAs in triple-negative breast cancer. **Poster, American Association for Cancer Research Annual meeting April 1-5 2017**, Walter E. Washington Convention Center, Washington, D.C., USA.
- 2017 Hussein N, Amawi H, Karthikeyan C, Manivannan E, Ashby CR Jr, **Tiwari AK**. The dopamine (DA) D3 receptor antagonists (PG01037, NGB2904, SB277011A, & U99194) significantly attenuate ABCG2- mediated multidrug resistance. Poster presentation, **American Association for Cancer Research Annual meeting 2017**, April 1-5 Walter E. Washington Convention Center, Washington, D.C., USA. Abstract: 1191
- 2017 Khan S, Christman R, Tiwari P, Verma R, Basu A, Waikar D, Konar AD and **Tiwari AK**; Proteolysis resistant self-assembled  $\omega$ -amino acid dipeptide based non-cytotoxic hydrogels as curcumin delivery vehicle. **8th Annual Midwest Graduate Research Symposium (MGRS), 2017**, March 25, Toledo, OH, USA
- 2017 Amawi H, Hussein N, Alnafisah R, Karthikeyan C, Manivannan E, Trivedi P, **Tiwari AK**. Inhibiting Metastatic Colorectal Cancer Proliferation by Targeting the Apoptotic/epithelial-mesenchymal (EMT) Pathways with Novel Silybin Derivatives. Oral Presentation, **8th Annual Midwest Graduate Research Symposium (MGRS), 2017**, March 25, Toledo, OH, USA. (**First Prize - ORAL presentation award**).
- 2017 Gupta S, Nyinawabera A, **Tiwari AK**. Novel Chemo-Neo-Adjuvants in Triple Negative Breast Cancer. Poster Presentation at Midwest Graduate Research Symposium; 2017 March 25; Toledo, OH, USA.
- 2017 Alnafisah R, Amawi H, Hussein N, Karthikeyan C, Trivedi P, **Tiwari AK**. Targeting metastatic prostate cancer by novel thienopyrimidines derivatives. Oral

- Presentation, **8th Annual Midwest Graduate Research Symposium (MGRS)**, 2017, March 25, Toledo, OH, USA.
- 2017 Chvatal A, Al-zhrani R, AmbrusR, Szabó-Révész P, **Tiwari AK**, and Boddu SHS. Cytotoxicity and aerodynamical testing of spray dried meloxicam forms for inhalation. **6th FIP Pharmaceutical Sciences World Congress 2017**, Stockholm, Sweden, 21-24 May 2017.
- 2017 Karthikeyan C, **Tiwari AK**, Meijer L, Trivedi P. "N-(1H-pyrazol-3-yl)quinazolin-4-amines as a Novel Class of Casein Kinase 1  $\delta/\epsilon$  Inhibitors: Synthesis, Biological Evaluation and Molecular Modeling Studies." 2nd National Conference of Institute of Pharmacy, "Emerging Trends in Drug Discovery, Development and Molecular Targets for Cancer Research", NCIP-2017, organized by Institute of Pharmacy, Nirma University, Ahmedabad, India 24-25 January 2017
- 2016 Karthikeyan C, **Tiwari AK**, Trivedi P. "Synthesis of isatin linked chalcones and cytotoxic activity against prostate and colon cancer cells *in vitro*." 2<sup>nd</sup> International Conference on Structural and Functional Genomics, SASTRA University, Thanjavur, India 19-20 August, 2016.
- 2016 Gumireddy A, Chauhan HV, Chauhan DK, Christman JN, Amawi H, and **Tiwari AK**. "Formulation of Soluble Binary and Novel Ternary Amorphous Complexes for Anticancer Activity." Poster presented at **AAPS annual meeting, exposition and conference, Colorado** on November 13-17, 2016
- 2016 Amawi H, Hussein N, Fetcenko A, Karthikeyan C, Manivannan E, Chauhan H, Mittal R, Trivedi P, and **Tiwari AK**. "Design and pharmacological development of novel silybin analogues as potent and selective antiproliferative agents." Poster presented at **AAPS annual meeting, exposition and conference, Colorado** on November 13-17, 2016
- 2016 Hussein N, Amawi H, Charles Jr A, Karthikeyan C, Mittal R, Trivedi P, and **Tiwari AK**. "Differential Effects of Dopamine D3 Antagonists in Modulating ABCG2 Mediated MDR". **Celebrating 30 Years of Research on Multidrug Resistance and ABC Transporters symposium, National Cancer Institute, NIH, Bethesda, MD, September 21-23, 2016.**
- 2016 McIntosh K, Amawi H, Mittal R, Hussein N, and **Tiwari AK**. "Redundant functions of ABC transporters in anticancer disposition." **Celebrating 30 Years of Research on Multidrug Resistance and ABC Transporters symposium, National Cancer Institute, NIH, Bethesda, MD, September 21-23, 2016.**
- 2016 Hussein N, Amawi H, Charles Jr A, Karthikeyan C, Mittal R, Trivedi P and **Tiwari AK**. "Dopamine D3 antagonists reverse ABCG2 mediated MDR and enhance anticancer toxicity". **ECAT (Emerging health Care and Advancement in Toxicology) International Conference**, Toledo, OH September 8-10, 2016. (*Best poster (1<sup>st</sup> Prize) presentation award*).
- 2016 Amawi H, Chen J, Balch C, McIntosh K, Karthikeyan C, Trivedi P and **Tiwari AK**. Targeting chemo-resistant colon cancer by inhibiting embryonic resistance pathways. Experimental and Molecular Therapeutics, **AACR Annual Meeting 2016 in New Orleans, Louisiana April 16-April 20.**



- 2016 Amawi H and **Tiwari AK**. Colon cancer chemoprevention by inhibiting embryonic signaling pathways. **7th Annual Midwest Graduate Research Symposium, The University of Toledo, Ohio: Saturday, April 9th, 2016; Oral**
- 2016 Amawi H and **Tiwari AK**. Colon cancer chemoprevention by plant derived synthetic analogues. **Elevator Talk, Pharmaceutical Sciences Graduate Student Council (PSGSC) Symposium; The University of Toledo, Ohio: April 1, 2016; Oral Talk (2<sup>nd</sup> Prize – Oral talk)**
- 2015 Nusbaum AC, McIntosh K, Malla R, Kirwen EM, Nyinawabera A, Karthikeyan C, Faridi J, Trivedi P, and **Tiwari AK**. 2-(phenyl)-3H-benzo[d]imidazole-5-carboxylic acids: Development of novel therapeutic agents against breast cancer. **Ohio Valley Chapter of the Society of Toxicology (OVSOT); Annual Meeting: Nov 13, 2015; Poster presentation**
- 2015 Kirwen EM, Nusbaum AC, Amawi H, McIntosh K, Malla R, Chen J, Nyinawabera A, Karthikeyan C, Faridi J, Trivedi P, and **Tiwari AK**. (2E,5E) -5-(3-hydroxy-4-methoxybenzylidene) -2-(phenylimino) thiazolidin-4-one: Development of Novel Therapeutic Agents against Breast Cancer. **Ohio Valley Chapter of the Society of Toxicology (OVSOT); Annual Meeting: Nov 13, 2015; Poster presentation**
- 2015 Pondugula SR, Abbott KL, Flannery PC, **Tiwari AK**. Zosuquidar, an MDR1 inhibitor, activates human PXR to induce CYP3A4 and MDR1 gene expression. **International Society for Study of Xenobiotics Meeting**, Orlando, Florida, USA (October 18-22, 2015). Published in **Drug Metabolism Reviews**. Vol. 48. 2-4 Park Square, Milton Park, Abingdon Or14 4rn, Oxon, England: Taylor & Francis Ltd, 2016.
- 2015 Chaudhury CS, Abbott KL, Flannery PC, **Tiwari AK**, Pondugula SR. Gefitinib, a clinically-used tyrosine kinase inhibitor, inhibits the transcriptional activity of pregnane X receptor in human hepatocytes. **Auburn University Research Initiative In Cancer Meeting**, Opelika, AL (August 28-29, 2015).
- 2015 Chen J, Amawi H, McIntosh K, Karthikeyan C, Trivedi P, Pondugula PR and **Tiwari AK**. Pymido[1", 2":1,5]pyrazolo[3,4-b]quinolines reverses ABCG2-mediated multi-drug resistance in cancer. **Ohio Valley Chapter of the Society of Toxicology (OVSOT); Annual Meeting: Nov 13, 2015; Poster presentation**
- 2015 Suswam EA, Putcha BDK, **Tiwari AK**, Jadhav T, Walker KD, Harkins L, Amer S, Eltoum IE, Bae S, Manne U. Molecular and cellular localization profiles of tristetraproline in colorectal cancer: Implications for tumor progression in diverse patient populations. [abstract]. In: **Proceedings of the 106th Annual Meeting of the American Association for Cancer Research**; 2015 Apr 18-22; Philadelphia, PA. Philadelphia (PA): AACR; **Cancer Res** 2015;75(15 Suppl): 4953. doi:10.1158/1538-7445.AM2015-4953
- 2014 Narayanan NK, Kunimasa K, Tian D, Horton L, Dolgaev I, Heguy A, Miller G, **Tiwari AK**, Narayanan BA. Gnetin C, a novel resveratrol dimer, targets pancreatic cancer metabolism. **AACR Special Conference on Pancreatic Cancer: Innovations in Research and Treatment**; May 18-21, 2014; New Orleans, LA , article in **Cancer**

**Research** 75(13 SUPPLEMENT):B57-B57 · July 2015; doi: 10.1158/1538-7445.PANCA2014-B57

- 2014 Lee C, Chandrabose K, Mittal R, Pondugula S, Trivedi P and **Tiwari AK#**. Development of novel therapeutic agents against colorectal cancer. **Annual Biomed Res. Conference for Minority Students**, Nov 12-15<sup>th</sup>, San Antonio, TX
- 2014 Buckley T, Saddler M, Herring S, Chandrabose K, Lee C, Pondugula S, Trivedi P and **Tiwari AK#**. Chemosensitizing Difficult to Treat Tumors by Reversing ABCG2-Mediated Multidrug Resistance. **Annual Biomedical Research Conference for Minority Students**, Nov 12-15<sup>th</sup> 2014, San Antonio, TX
- 2014 Buckley T, Wirtu G, Mittal R, Chowdhary R, Vig K, Chen ZS and **Tiwari AK#**. "Enhancing delivery of tyrosine kinase inhibitors in drug resistant tumors" George Washington Carver Conference, October 31<sup>st</sup>, 2014, Tuskegee Univ, AL
- 2014 Jones V, Chandrabose K, Lee C, Saddler M, Robinson T, Trivedi P and **Tiwari AK#**. Novel 3-((2-chloroquinolin-3-yl)methylene)indolin-2-one derivatives produces potent anticancer effects against ovarian cancer in vitro. **Phi-Zeta Research conference, 15<sup>th</sup> Biomedical Symposium**, Sept 17-18<sup>th</sup> 2014, Tuskegee Univ, AL
- 2014 Hassan H, **Tiwari AK**, Min B, Reddy, G, Hinton A and Abdela W. Use of extracts of *Citrus sinensis* as antimicrobial agents for foodborne zoonotic pathogens and spoilage bacteria. **15<sup>th</sup> Biomedical Symposium**, Sept 17-18<sup>th</sup> 2014, Tuskegee University, AL (Oral talk)
- 2014 Lee C, Chandrabose K, Mittal R, Pondugula S, Trivedi P and **Tiwari AK#**. Development of novel therapeutic agents against colorectal cancer. **Phi-Zeta Research conference, 15<sup>th</sup> Biomedical Symposium**, Sept 17-18<sup>th</sup> 2014, Tuskegee University, AL (**2<sup>rd</sup> Prize – Oral talk**)
- 2014 Saddler M, Herring S, Chandrabose K, Lee C, Pondugula S, Trivedi P and **Tiwari AK#**. Targeted approach to overcome ABCG2-mediated drug resistance in cancer. **Phi-Zeta Research conference, 15<sup>th</sup> Biomedical Symposium**, Sept 17-18<sup>th</sup> 2014, Tuskegee University, AL (**3<sup>rd</sup> Prize – Oral talk**)
- 2014 Gruber NM, **Tiwari AK**, Sanglard LP, Samuel T, Bedi D, Wirtu G. Acetyl Co-A Carboxylase (ACC) inhibitor sensitizes an anticancer agent in canine and human mammary neoplasia cells. 15th Annual Merit-NIH Veterinary Scholars Symposium "One Health" 0731–08/3, 2014, Cornell University CVM, Ithaca, NY
- 2014 Jones V, Chandrabose K, Lee C, Saddler M, Robinson T, Trivedi P and **Tiwari AK#**. Novel 3-((2-chloroquinolin-3-yl)methylene)indolin-2-one derivatives produces potent anticancer effects against ovarian cancer in vitro. 15th Annual Merit-NIH Veterinary Scholars Symposium "One Health" July 31 - August 3, 2014, Cornell University CVM, Ithaca, NY
- 2014 Moore J, Chandrabose K, Herring S, Lee C, Buckley T, Pondugula S, Mittal R, Trivedi P and **Tiwari AK#**. Targeting ABCG2-transporters to overcome drug resistance in cancer. IBS-REU summer research program. July 30<sup>th</sup>, 2014, Tuskegee University, AL.

- 2014 Herring S, Saddler M, Chandrabose K, Lee C, Pondugula S, Trivedi P and **Tiwari AK#**. Targeted approach to overcome ABCG2-mediated drug resistance in cancer. MSE-RISE summer research program, Jul 28 2014, Tuskegee Univ, AL
- 2014 **Tiwari AK**, Moore J, Herring S, Lee C, Chandrabose K, Pondugula S, and Trivedi P. Novel chemo-adjuvants to overcome multidrug resistance in cancer. Health Disparity Research and Training Program, Summer Institute, July 22-23, 2014, held at University of Alabama at Birmingham, AL (**2<sup>nd</sup> Best Poster Award**)
- 2013 Buckley T, Wirtu G, Mittal R, Chowdhary R, Vig K, Chen ZS and **Tiwari AK#**. "Enhancing delivery of tyrosine kinase inhibitors in drug resistant tumors" International Nano-Bio Summit, Oct 17th-18th, 2013, Alabama State Univ, AL
- 2013 Buckley T, Brockett E, Chen ZS and **Tiwari AK#**. "Defining the roles of efflux transporters in tyrosine kinase inhibitors drug disposition" ABRCMS meeting November 13<sup>th</sup> 2013, Nashville, Tennessee
- 2013 **Tiwari AK#**, Buckley T, Patel A, Chen ZS and Gallo JM. "Complimentary functions of efflux transporters in anticancer elimination" **10<sup>th</sup> Northern American ABC transporters meeting**, NCI, NIH, Bethesda, MD 20892; September 18<sup>th</sup>, 2013
- 2013 **Tiwari AK#**, Buckley T, Potts H, Piazza TJ and Gallo JM. "Polymorphic alterations in efflux transporters affect anticancer disposition" **14<sup>th</sup> Biomedical Symposium**, Sept. 16-18, 2013, Tuskegee University, Tuskegee, AL
- 2013 Sodani K, **Tiwari AK**, Dai CL, Abuznait AH, Xiao ZJ, Patel A, Kaddoumi A, Ashby CR, Chen ZS. "Sildenafil potentiates the anticancer activity of paclitaxel in ABCB1-mediated multidrug resistance xenograft mode" **104<sup>th</sup> American Association for Cancer Research (AACR)** 2013, Washington DC
- 2013 Patel A, **Tiwari AK**, Chufan EE, Sodani K, Anreddy N, Singh S, Ambudkar SV, Stephani R and Chen ZS. PD17384, human VEGFR inhibitor, reverses ABCB1 mediated drug resistance in cancer cells. 2013, Gordon Research Conference: Multi-Drug Efflux Systems, Ventura, CA,
- 2012 Chitranshi N, **Tiwari AK**, and Tripathi PK. Investigating the function of single nucleotide polymorphism (SNPs) in CTSB gene (cathepsin B): a computational approach. Proceedings of the 7th conference of the Hellenic Society for Computational Biology & Bioinformatics - **HSCBB12 FORTH**, Heraklion, Crete, Greece, Oct. 4-6, 2012 (*Oral presentation*)
- 2012 Sodani K, **Tiwari AK**, and Chen ZS. Nilotinib potentiates anticancer sensitivity in murine multidrug resistance xenograft models. **9<sup>th</sup> North American ABC workshop**. NCI, NIH, Bethesda, MD; September 27-28, 2012. (*Oral presentation*)
- 2012 Sodani K, **Tiwari AK**, Dai CL, Patel A, Chen ZS. GW583340 and GW2974, Human EGFR and HER-2 inhibitors, reverse ABCB1- and ABCG2-mediated drug resistance. **103<sup>rd</sup> American Association for Cancer Res.** 2012, Chicago IL
- 2012 Chen ZS, Sun YL, Chen JJ, **Tiwari AK**, Fu LW, and Dai CL. Screening for compounds that reverse MRP7-mediated multidrug. FEBS-ABC2012 - **4<sup>th</sup> FEBS Special Meeting on ABC Proteins**, March 3-9, 2012, Innsbruck, Austria

- 2011 Chen JJ, Zhang DM, Bhatnagar J, **Tiwari AK**, Chen WM, Ambudkar SV, Chen SD, Ye CW and Chen ZS. B2B1, one of 23-hydroxybetulinic acid analogs, can modulate ABC transporters mediated MDR. **8<sup>th</sup> North American ABC workshop. NCI, NIH, Bethesda, MD; Sept. 28-29, 2011, (Oral presentation)**
- 2011 Patel A, **Tiwari AK**, Sodani K, Singh S, Vispute S, Chen ZS. PD173074, a selective FGFR1 and FGFR3 inhibitor, reverses ABCB1-mediated multidrug resistance. **8<sup>th</sup> North American ABC workshop. NCI, NIH, Bethesda, MD 20892; Sept. 28-29, 2011, NCI-Frederick, Maryland. (Oral presentation)**
- 2011 Chen ZS, **Tiwari AK**, Shi Z, Shukla S, Singh S, Chen JJ, Patel A, Ambudkar SV. PDE5 inhibitors reverse ABCB1- and ABCG2-mediated chemotherapeutic drug resistance in cancer. **Gordon Research Conference-Multi-Drug Efflux Systems, June 12-17, 2011, Les Diablerets, Switzerland. (Oral presentation)**
- 2011 **Tiwari AK**, Shi Z, Shukla S, Singh S, Chen JJ, Patel A, Ambudkar SV, Chen ZS. A new function of Sildenafil (Viagra <sup>TM</sup>) as a multidrug resistance modulator. **2011 NJPhast Scholarship awards, Hanover Marriot, NJ, USA May 19, 2011**
- 2011 **Tiwari AK**, Shi Z, Shukla S, Singh S, Talele TT, Ambudkar SV, Chen ZS. Reversal of ABCB1- and ABCG2-mediated drug resistance by sildenafil. **Cancer Research: April 15, 2011; Volume 71, Issue 8, Supplement 1. 102<sup>nd</sup> American Assoc for Can Res (AACR), Orlando, FL, USA April 1-5, 2011**
- 2010 **Tiwari AK**, Sodani K, Wang S, Kuang YH, Chen X, Chen K, Ashby CR, Chen ZS. BCR-Abl tyrosine kinase inhibitor Nilotinib (Tasigna®) reverses ABCB1/Pgp- and ABCG2/BCRP-mediated multidrug resistance. **101<sup>st</sup> American Assoc for Can Res (AACR), Washington, DC, USA April 17-22, 2010**
- 2010 Dai CL, Liang YJ, Wang YS, **Tiwari AK**, Yan YY, Wang F, Chen ZS, Tong XZ, Fu LW, Sunitinib reverses ABCG2/BCRP-mediated multidrug resistance by inhibiting its efflux activity **101<sup>st</sup> American Association for Cancer Research (AACR), Washington, DC, USA April 17-22, 2010**
- 2010 Sodani K, Kuang YH, Shen T, Vispute S. **Tiwari AK**, Lei Y. Lee JW, Chen X, Fu LW and Chen ZS. Tyrosine kinase inhibitors are potent reversal agents for MRP7 (ABCC10)-mediated multidrug resistance. **101<sup>st</sup> American Assoc for Can Res (AACR), Washington, DC, USA April 17-22, 2010**
- 2009 Sodani K, **Tiwari AK**, Kuang YH, Shen T, D'Ambra TM, Lei Y, Lee J, Chen X, Ashby CR, Chen ZS. Lapatinib, erlotinib, imatinib and nilotinib are potent reversal agents for MRP7 (ABCC10)-mediated multidrug resistance. **6<sup>th</sup> North American ABC workshop. NCI, NIH, Bethesda, MD 20892; Sept. 24-25, 2009**
- 2009 **Tiwari AK**, Sodani K, Wang S, Kuang YH, Chen X, Chen K, Ashby CR, Chen ZS. Nilotinib (AMN107, Tasigna) reverses multidrug resistance by inhibiting the activity of the ABCB1/Pgp and ABCG2/BCRP/MXR transporters. **6<sup>th</sup> North American ABC workshop. NCI, NIH, Bethesda, MD; Sept. 24-25, 2009**
- 2009 Dai CL, Wang YS, **Tiwari AK**, Wu CP, Su XD, Wang SR, Liu DG, Ashby CR, Huang Y, Robey RW, Liang YJ, Chen LM, Shi CJ, Ambudkar SV, Chen ZS, Fu LW. Lapatinib could reverse ABCB1 and ABCG2 mediated-multidrug resistance *in Vitro*,

- ex-vivo and *in Vivo* but increase exposure of chemotherapeutic agent. **100<sup>th</sup> American Assoc for Can Res (AACR), Denver, Colorado, USA April 18-22, 2009**
- 2009 Chen ZS, **Tiwari AK**, Shi Z, Dai CL, Shukla S, Wu CP, Wang SR, Abraham I, Sodani K, Ashby CR, Kuang YH, Robey RW, Fu LW, Bates SE, Ambudkar SV. Tyrosine kinase inhibitors as modulators of multidrug resistance in cancer. **Multidrug Resistance & ABC Transporters Conference. Baltimore, Maryland USA, November 5<sup>th</sup>, 2009**
- 2008 Dai CL, **Tiwari AK**, Wu C, Su XD, Liu DG, Huang Y, Liang YJ, Chen LM, Shi CJ, Ashby CR, Chen ZS, Ambudkar SV, Zhang JY, Robey RW, Bates SE, Fu LW. Reversal of Multidrug Resistance ABCB1 and ABCG2 by Lapatinib. **5<sup>th</sup> Northern American ABC transporters meeting, NCI, NIH, Bethesda, MD 20892; September 24-26, 2008**
- 2008 **Tiwari AK**, Shi Z, Parmar S, Shukla S, Robey RW, Kim IW, Bates SE, Si QS, Goldblatt CS, Abraham I, Shao N, Chen YM, Zhang A, Fu LW, Ambudkar SV, Chen ZS. Differential Effects of the EGFR Tyrosine Kinase Inhibitor AG1478 on the Function of ABCB1 and ABCG2. **99<sup>th</sup> American Association for Cancer Research (AACR), San Diego, CA, USA April 12-16, 2008**
- 2008 Shi Z, Peng XX, Kim IW, Shukla S, **Tiwari AK**, Si QS, Robey RW, Bates SE, Wang S, Chim C, Shen T, Ashby CR, Fu LW, Ambudkar SV, Chen ZS. Reversal of ABCB1- and ABCG2-mediated MDR by erlotinib (tarceva, OSI-774). **99<sup>th</sup> American Assoc for Can Res (AACR), San Diego, CA, USA April 12~16, 2008**
- 2007 Shi Z, Peng XX, Kim IW, Shukla S, Si QS, Robey RW, Bates SE, Shen T, **Tiwari AK**, Ashby CR, Jr., Fu LW, Ambudkar SV and Chen ZS. Erlotinib (Tarceva, OSI- 774) Antagonizes ABCB1 and ABCG2-mediated Drug Resistance. The **4<sup>th</sup> North American ABC workshop, NCI, NIH, Bethesda, MD, October 4-5, 2007**
- 2007 Shen T, **Tiwari AK**, Shi Z, Abraham I, Peng XX, Kim IW, Jain S, Ashby CR, Fu LW, Youssef D, Sayed KL, Ambudkar SV, Chen ZS. Development of Sipholane Triterpenes as Modulators of Multidrug Resistance in Cancer. **4<sup>th</sup> Northern American ABC transporters meeting, NCI, NIH, Bethesda, MD; Oct 3-5, 2007**
- 2007 **Tiwari AK**, Peng XX, Shi Z, Damaraju VL, Huang XC, Kruh GD and Chen ZS. "Characterization of human T cell line with acquired drug resistance to 6-Mercaptopurine"; **College of Pharmacy and Allied Health Sciences, St. John's University, Jamaica, NY 11439 October 23, 2007**
- 2007 Shi Z, Jain S, Kim IW, Peng XX, **Tiwari AK**, Abraham I, Youssef DT, Fu LW, El Sayed K, Ambudkar SV and Chen ZS "Development of Sipholane Triterpenes as modulators of multidrug resistance in cancer"; **College of Pharmacy and Allied Health Sciences, St. John's University, Jamaica, NY October 23, 2007**

## **TEACHING AND ADVISING**

### **UNIVERSITY OF TOLEDO**

<b>2022- Present</b>	<b>Professor of Pharmacology and Experimental Therapeutics</b>
<b>2019- 2022</b>	<b>Associate Professor of Pharmacology and Experimental Therapeutics</b>
<b>2015- 2019</b>	<b>Assistant Professor of Pharmacology and Experimental Therapeutics</b>
2021- Present	PHM6200 Integrated Pharmaceutical and Clinical Sciences 5 (IPCS 5), Oncology (1 credit hr., 35%)
2020- Present	PHM6000:001 IPCS 4, Gastrointestinal Pharmacology; (1 credit hr., 35%)
2020- 2020	PHM6010:001 Cardiology II (1 credit hr., 35%)
2018- Present	PHCL 5100: Experimental Therapeutics I; (1 credit hr., 7%)
2018- Present	PHCL 7100: Experimental Therapeutics I; (1 credit hr., 7%)
2017- 2021	PHCL 3730: Pharmacol II: Endocrine & CNS Pharmacol; (3 credit hr., 30%)
2017- 2021	PHCL 5720: Pharmacol II: Endocrine & CNS Pharmacol; (3 credit hr., 40%)
2017- Present	PHCL 5990: Problems in Pharmacology; (1-3 credit hr., 100%)
2016- Present	PHCL 5990: Problems in Pharmacology; (1-3 credit hr., 100%)
2016- Present	PHCL 6300: Res Exp in Experimental Therap; MS; (1-3 credit hr., 100%)
Present	PHCL 4960: Honors Thesis in Pharmacology; (6 credit hr., 100%)
2016- Present	PHCL 6920: M.S. Thesis Research in Pharmacology; (3 credit hr., 100%)
2016- Present	PHCL 6390: Problems in Experimental Therapeutics; (1-6 credit hr., 100%)
2016- 2022	PHPR 5770: Advanced Drug Delivery Systems-I; (3 credit hr., 15%, ad-hoc)
2016- Present	PHPR 5500: From Experimental to Applied Therapeutics; (4 credit hr., 10%)
2016- Present	PHCL 8390: Problems in Experimental Therapeutics; (1-6 credit hr., 15%)
Present	PHCL 6900: M.S. Thesis Research in Exp Pharmacology; (3 credit hr., 100%)
2016- 2022	PHPR 5780: Advanced Drug Delivery Systems-II; (3 credit hr., 12%, ad-hoc)
2016- 2019	PHCL 4700: Pharmacol III: CNS & Cardiovas. Pharmacol; (3 credit hr., 40%)
2016- Present	PHPR 7500: From Experimental to Applied Therapeutics; (4 credit hr., 10%)
2016- Present	PHCL 6600: Seminar in Pharmacology; (1 credit hr., 7%)
2015- Present	PHCL 4780: Internship Pharmacol/Toxicology; (6 credit hr., 100%)
2015- Present	PHCL 4910: Problems in Pharmacology; (1-3 credit hr., 100%)
2015- Present	PHCL 2900: Pharmacology Research Introduction; (6 credit hr., 100%)
Present	PHCL 8300: Res Exp. in Experimental Therap; PhD; (3-6 credit hr., 100%)
2015- Present	PHCL 8960: Dissertation Res in Experimental Therap; (6 credit hr., 100%)

### **TUSKEGEE UNIVERSITY**

<b>2017- Present</b>	<b>Visiting Professor of Pharmacology and Toxicology, College of Veterinary Medicine</b>
<b>2013- 2015</b>	<b>Assistant Prof (Tenure Track) of Pharmacology &amp; Toxicology, College of Veterinary Medicine</b>
2020-Present*	VMED816. Pharmacology; PK/PD; Oncology; GI Pharmacology; Students: 54 (*2020 Course Coordinator, College of Vet. Medicine, Tuskegee University)
2017-Present#	PHSI.0543.01.14SP: Pharmacology; Antimicrobial/Antiparasitics Students: 76 (17); 78 (18); 68 (19); 57 (20) (#2017- Present - Visiting Faculty, College of Veterinary Medicine, Tuskegee University)

2014	NURS 0314; Nursing Pharmacology: Pharmacology basics, ANS, CNS, GI; Oncopharmacology, Respiratory, Cardiovascular, Pharmacogenetics; Students: 25
2014	PHSI.0543.01.14SP: Pharmacology; Antimicrobial agents, Anticancer therapeutics, Neuropharmacology; Students: 75
2014	PHSI.0546.01.14SP: Toxicology; Toxicokinetics, Metal toxicity, Mycotoxins, Zootoxins, Herbicides; Students: 74
2013- 2014	PHSI.0442.01.13FA: Pharmacology; Pharmacometrics, Pharmacogenetics, PK/PD, Cardiovascular, GI, Endocrinology, Corticoids, Respiratory drugs; Students: 76 (13); 75 (14)

## **ST. JOHN'S UNIVERSITY**

2008- 2010	<b>Teaching Fellow, College of Pharmacy</b> <ul style="list-style-type: none"> <li>• Taught molecular biology laboratory courses including Pharmacology, Biochemistry, Oncology, Cardiovascular, Immunology, Endocrinology and Compounding laboratory courses to graduate pharmacy students (2<sup>nd</sup> – 5<sup>th</sup> year) from (2008 – 2010; including summer sessions)</li> <li>• Managed class/lab of 85 students/term, while supervising a team of 4 assistants</li> </ul>
2007- 2008	<b>Teaching Assistant, College of Pharmacy</b> <ul style="list-style-type: none"> <li>• Assist TF to run undergraduate pharmacy labs in dispensing, formulation</li> <li>• Pharmaceutical compounding; Parenteral preparations; Pharmacogenetics</li> </ul>

## **POSTDOCTORAL, GRADUATE/UNDERGRADUATE AND SCHOLARS SUPERVISED**

### **A. POSTDOCTORAL/VISITING SCHOLAR RESEARCH SCHOLARS**

2021-Present	Shikha Kumari, PhD, Res Assistant Professor, University of Toledo 2018-2020 Diwakar Tukaramrao, PhD, Res Assistant Prof, University of Toledo <i>Now, CORE Director., Penn State University, PA</i>
2018-2019	Rohit Seth, PhD, Visiting Scientist, University of Toledo <i>Now, Professor, Guru Ghasidas Univ., India</i>
2017-2018	Karthikeyan Chandrabose, PhD, Visiting Scholar, University of Toledo <i>Now, Assistant Professor, Amarkantak Univ., India</i>
2015-2017	Curt Balch, PhD, Postdoctoral Research Associate, University of Toledo <i>Now, Head, Bioscience Advising Corp., MI</i>

<b>B. MAJOR OR CO-MAJOR PROFESSOR – Graduate Students</b>	2022- Present Mohammed Albaaj, PhD student, University of Toledo
	2022- Present Kelsee Kaysu Zajac, MD student, University of Toledo
2020- 2021	Briana Maktabi, PhD student, University of Toledo
2021- Present	Rinda Bachu, MS, PhD student, UT (dropped off due to family reasons); <i>Now Volunteering as a Research Associate</i>
2020- Present	Swapnaa Balaji, PhD student, University of Toledo
2020- Present	Mariam Abou-Dahech, PhD student, University of Toledo
	2019- Present Rabin Neupane, PhD student, University of Toledo
2018- Present	Saloni Malla, PhD student, University of Toledo



2018- 2022 Dr. Mariah Pasternak, Pharm D/PhD student, University of Toledo  
*Now, Community Pharmacist Leader, PA*

2019- Present Dr. David Terrero (already an MD), PhD student, University of Toledo 2019-  
Present Donghyun Lee, Pharm D Student, University of Toledo

2018- 2022 Jenna M. Len, Pharm D Student, University of Toledo 2018- 2020  
Gabrielle Emerson, MS student, University of Toledo 2017- 2021 Dr. Noor  
Hussein, Doctoral student, University of Toledo  
*Now, Postdoctoral Fellow at Stanford University, CA*

2017- 2018 Andrew W. Peters, Pharm D Student, University of Toledo 2017- 2018 Ryann  
M Christman, MS student, University of Toledo

2016- 2019 Dr. Angelique Nyinawabera, Doctoral student, University of Toledo  
*Now, Lead Scientist, LEAF pharmaceuticals, Boston*

2016- 2017 Samar Khan, M.S.B.S MD, student, University of Toledo  
*Now, MD student at University of Toledo, OH*

2016- 2017 Smiti Gupta, M.S.B.S student, University of Toledo 2016- 2017 Rawan  
Alnafisah, M.S.B.S student, University of Toledo  
*Now, MD student at University of Toledo, OH*

2016- 2019 Dr. Kyle McIntosh, Doctoral student, University of Toledo  
*Now, Coordinator and Staff, Environmental Protection Agency (EPA)*

2016- 2017 Noor Hussein, M.S. student, University of Toledo

2016- 2017 Joshua Staffeld, Pharm D. student, University of Toledo 2015- 2017 Dr.  
Haneen Amawi, Doctoral student, University of Toledo  
*Now, Tenured Associate Prof and Assoc. Dean, Yarmuk Univ., Jordan*

2013- 2014 Veronica Jones, DVM, Tuskegee University 2013- 2014 Maria Sadler, DVM,  
Tuskegee University

2013- 2014 Arabela V Guedes, DVM, Tuskegee University  
*Now, PhD student in Brazil*

2013- 2014 Tia Robinson, DVM, Tuskegee University

2013- 2014 Leticia-Perera Sanglard, DVM, Tuskegee University  
*Now, PhD student at University of Iowa*

2013- 2014 Rupak Chaudhary, PhD, Tuskegee University 2013- 2014 Veronica  
Jones, DVM, Tuskegee University

2013- 2014 Anusha Angjala, PhD student, Tuskegee University 2013- 2015 Crystal Lee,  
PhD student, Tuskegee University

### **C. RESEARCH TRAINEES IN COLLABORATION, UTOLEDO AND BEYOND**

2020- 2021 Fairuz Shah Faizee, MS student, Bio-Engineering, UT 2021- Present  
Awurama Ofori-kwafo, PhD student, Bio-Engineering, UT

2017- 2018 N Esmati, PhD student, Chemistry, University of Toledo, OH 2016- 2018 Ritu  
Malla, PhD student, University of Pacific,

2013- 2014 Neil Grubber, DVM, Tuskegee University

2013- 2014 Samuel Raphael, BS, Haiti Intern, Tuskegee University, AL 2011- 2013 Arala  
Cohen, BS, Mount Sinai School of Medicine, NY 2011- 2013 Jyoti Sharma, PhD, Mount Sinai  
School of Medicine, NY 2009- 2011 Christine Chim, Pharm D student, St. John's University, NY

2009- 2011 Peirong Ding, MD resident, St. John's University, NY

2009- 2011 Atish Patel, PhD student, St. John's University, NY 2009- 2011 Saurabh  
Vispute, MS student, St. John's University, NY

2009- 2011	Christine Chim, Pharm D student, St. John's University, NY
2009- 2011	Chung-Shien Lee, Exchange Student, St. John's University, NY
2009- 2010	Shirley Lu, MD, St. John's University, NY
2009- 2010	Shirley Lu, MD, St. John's University, NY
2008- 2011	Kamlesh Sodani, PhD, St. John's University, NY
2007- 2009	Si-Rong Wang, MS student, St. John's University, NY
2007- 2008	Jefferson Lee, Exchange Student, St. John's University, NY

#### **D. UNDERGRADUATE / PROFESSIONAL STUDENTS**

2022- Present	Sara Kerber, PTOX student, University of Toledo	2022- Present	Isaac Kaba, PTOX student, University of Toledo
2020- Present	Noah A Dusseau, PTOX student, University of Toledo	2020- Present	Evelynn M Voss, PTOX student, University of Toledo
2020- 2021	Zachary York, PTOX student, University of Toledo	2018- 2020	Zaynah Awethe, PTOX student, University of Toledo
2018- 2020	Marwah Hassan, PTOX student, University of Toledo	2018- 2019	Marya El Nassar, PTOX student, University of Toledo
2018- 2019	Abdulrahman Ba Gunaid, PTOX student, University of Toledo	2018- 2020	Mariam Abou-Dahech, Cosmetics Major, University of Toledo
2017- 2018	Mell Kristopher, PTOX student, University of Toledo	2017- 2018	Megan Post, PTOX student, University of Toledo
2017- 2018	Sachinethani Senevirathne, PTOX student, University of Toledo	2017- 2018	Austin Offerle, PTOX student, University of Toledo
2016- 2017	Aubry Fetcenko, PTOX student, University of Toledo	2016- 2017	Jenna Christman, PTOX student, University of Toledo
2016- 2017	Ryann Christman, PTOX student, University of Toledo	2016- 2018	Anthony Dodge, PTOX student, University of Toledo
2016- 2018	Nathaniel Kopp, PTOX student, University of Toledo	2016- 2017	Bryn Langende, PTOX student, University of Toledo
2015- 2018	Xuexuan Xu, PTOX student, University of Toledo	2015- 2018	Rohit Kumar, PTOX student, University of Toledo
2015- 2017	Sarah Vietmeir, PTOX student, University of Toledo	2015- 2017	Mahmood Meqdad, PTOX student, University of Toledo
2015- 2017	Joel Chen, PTOX student, University of Toledo	2015- 2017	Bryn Langenderfer, PTOX student, University of Toledo
2015- 2016	Amy Nusbaum, PTOX student, University of Toledo	2015- 2016	Erin Kirwen, PTOX student, University of Toledo
2015- 2016	Kelly Mei, PTOX student, University of Toledo	2015- 2016	Brittany Pirl, P1 PTOX student, University of Toledo
2015- 2016	Federicco Resendiz Guterrez, PTOX student, University of Toledo	2013- 2015	Ashley Canion, Food Science student, Tuskegee University
2013- 2015	Ashley Canion, Food Science student, Tuskegee University	2013- 2015	Ebony Brockett, Chemistry student, Tuskegee University
2013- 2015	Terissa Buckley, Food Science student, Tuskegee University	2013- 2014	Joshua Moore, RICE funded student, Tuskegee University
2013- 2014	Veronica Alston, Food Science student, Tuskegee University	2013- 2015	Terrisa Buckley, Unergraduate student, Tuskegee University

#### **D. HIGH SCHOOL / PRE-PROFESSIONAL STUDENTS**

2022- Present Srestha Chattopadhyay, Toledo  
2021- 2022 Anjali Mahatpure, New Jersey (Now, Pre-med at Univ of Michigan, MI) 2021-  
2022 Grace Lee, Maumee Valley High School, OH (High-school student) 2019:  
Aishani Agrawal, Pennsylvania (Now, Pre-med, Univ of Michigan, MI) 2019  
Hariteja Ramapuram, Alabama (Now, Pre-med, Auburn Univ, AL)

#### **F. SERVICE ON THESIS COMMITTEE/ROTATION (selected students of 44)** 2022- Present

Md Alamgir Kabir, PhD student, Physics and Natural Sciences, UT 2021-  
Present Awurama Ofori-kwafo, PhD student, Bio-Engineering, UT  
2020- Present Huyen Tran, Doctoral student, Pharmacology, Univ. of Toledo 2018- Present  
*Chair*, Rachel Golonka, Doctoral student, Pharmacol & Physiol, UT 2018-  
Present Jackson Huang, Doctoral student, Cancer Biology, Univ. of Toledo  
2017- 2020 Sangita Sridharan, PhD (Now Post-doc) Cancer Biology, Univ. of Toledo 2017-  
2020 Cory Howard, PhD, Cancer Biology, Univ. of Toledo  
2017- 2019 Fawaz Alasamari, PhD, Doctoral student, University of Toledo 2017- 2018  
N Esmati, Doctoral student, Chemistry, University of Toledo 2017- 2018 Daniyah  
A Almarghalani, Doctoral student, University of Toledo 2016- 2019 Arpan De, Doctoral student,  
Biology, Bowling Green University  
2016- 2018 Amit Dahal, MS student, Pharmacy Practice, University of Toledo 2016- 2018  
Astha Chadha, MS student, University of Toledo  
2015- 2017 Alaa Hammad, PhD, Doctoral student, University of Toledo 2015- 2017 Ali  
Zarban, Doctoral student, University of Toledo  
2015- 2017 Md Zubayer H Saad, MS student, University of Toledo 2015- 2017 Alaa  
Hammad, PhD, Doctoral student, University of Toledo 2015- 2017 Qasim Alhadidi, PhD,  
Doctoral student, University of Toledo 2015- 2017 Fahad Alsheri, PhD, Doctoral student, University of  
Toledo 2015- 2016 BSMP student (Brazilian International student)  
2014- 2015 Neil Grubber, DVM, Tuskegee University 2014- 2015 Arabela Viana, DVM,  
Tuskegee University 2014- 2015 Leticia Sanglard, DVM, Tuskegee University

#### **DISSERTATION EXAMINER FOR FOREIGN UNIVERSITIES**

2020: Prerna Chauhan, PhD thesis, All India Institute of Medical Sci, India 2020:  
Mausumi Besan, Banaras Hindu University, India  
2019: Angela Patricia, PhD thesis, Macquarie University, Australia  
2019: Devendra Singh, PhD thesis, All India Institute of Medical Sci, India 2016:  
Mojdeh Abbasi, MS thesis, Macquarie University, Australia  
2018: Urooj Nazim, PhD thesis, University of Karachi, Pakistan

#### **PROMOTION AND TENURE REVIEWER**

2020: Macquarie University, Australia  
2020: Cell Biology, National Cancer Institute, NIH, Bethesda, MD  
2017: Pacific University, School of Pharmacy, Hillsboro, OR

## FACULTY MENTORING AND ADVISING

2020- Present: Yuan Tang, PhD, Tenure-Track Assistant Prof., University of Toledo, OH 2019-  
Present: Vishal Singh, PhD, Tenure-Track Assistant Prof., Penn State University, PA  
2019- Present: Nitin Chitranshi, PhD, Research Faculty, Macquarie University, Australia 2019-  
2020: Sunil Sirohi, PhD, Tenure Track Faculty, AACP Biological Section *Peer  
Mentee.*  
2018- 2021 Mohini Khare, U Penn; Now at Eurofins Lancaster Laboratories, PA 2018-  
Present: Anil Tiwari, PhD, Postdoctoral Fellow, Pittsburg University; Presently,  
Scientist, Dr. Schroff Eye Hospital, Delhi, India

## Learners' success: Awards/Honors/Grants to learners/mentees (selected)

2022 Rabin Neupane, PhD Student, awarded, prestigious and highly competitive 'AAPS-  
*Outstanding Poster Award*', by American Association of Pharmaceutical Sciences.  
*He will be presenting his groundbreaking research "Development of novel  
macropinocytosis inducers " and giving a rapid-fire talk "Macropinocytosis route for  
drug delivery: An unexplored avenue with prospects and challenges" in AAPS  
PhramSci 360 Conference between October 16- 20th in Boston. This included  
\$1000 award.*

2022 Saloni Malla, PhD Student, awarded, prestigious and highly competitive 'AACR-  
*Doreen J. Putrah Cancer Research Foundation Scholar-in-Training Award*', by  
American Association of Cancer Research. *She will be presenting her  
groundbreaking research "Development of mitochondrial fission inhibitors in inducing  
non-apoptotic cell death in triple-negative breast cancer," at AACR In New Orleansf  
from April 8<sup>th</sup> -13<sup>th</sup>. This included \$1000 award.*

2022 Deen Sari, Pre-pharmacy and pre-med intern, awarded **\$3000 UT-SRCAP  
(Undergraduate Summer Research and Creative Activity Program) award**, for  
*'Development of novel topoisomerase II alpha inhibitors against colorectal cancer.'*  
*Award by University of Toledo, Office of Undergraduate Research (03-22 to 08/22)*

2022 Noah Dusseau, BSPS Student, awarded **\$3000 UT-AYRP award**, for *'Developing  
thienopyrimidines analogs against chemo-resistant tumors.'* Award by University of  
Toledo, Office of Undergraduate Research (01-22 to 06/22)

2021 Saloni Malla, PhD Student, awarded, '*Health Science Campus Retirees Scholarship*',  
*Award by University of Toledo, 2021. This included \$1000 award.*

2020 Saloni Malla, PhD Student, awarded, '*Dean Katherine Easley Wemmer Scholarship of  
Excellence, Awarded by American Association of University Women (AAUW) for the  
academic year of 2020-2021*

2020 Noor Hussein, PhD Student, awarded, '*AACR-Get Your Rear in Gear Philadelphia  
Scholar in Training Award*' supported by the Colon Cancer Coalition, the American  
Association for Cancer Research. This included **\$1500 award.**

2020 Mariam Abou Dahech, PhD student, awarded University Fellowship 2020 - 2024

2019 Mariah Pasternak, PhD student, awarded the **\$1000 Eberly Center for Women  
Millennium Scholarship** in Math & Science 2019 – 2020.

- 2019 PhD student 'Kyle McIntosh' won **1<sup>st</sup> prize** for his oral talk "Safety toxicity evaluation with alkenones from Isochrysis species in female SAS Sprague Rats" at Student College of Clinical Pharmacy (SCCP), 2019, Toledo, OH, USA
- 2019 Mariah Pasternak, PhD student, inducted, Rho Chi Pharmacy Honor Society
- 2019 Two BSPS interns from my lab were selected to medical schools Rohit Kumar (Ohio State University)' Kristopher Mell (Michigan University).
- 2018 Kristopher Mell, BSPS scholar received a **\$1375 STAR OUR-UT Undergraduate fellowship**, 2017-18 to work in Dr. Tiwari lab; (05-18 to 08/18); Role: Mentor
- 2018 Angelique Nyinawabera, PhD student, won **\$3000 'Young Investigator Award'** from *American Society of Pharmacology and Experimental Therapeutics (ASPET)* to present her ground-breaking work at World Conference in Kyoto, Japan, 2018.
- 2018 Angelique Nyinawabera, PhD Student, won **1<sup>st</sup> prize**, oral talk "Development of novel non-apoptotic cell death inducers to target triple negative breast cancer", *Annual Midwest Graduate Research Symposium (MGRS), 2017, Toledo, OH*
- 2017-Present Four learners were on patent applications – Haneen Amawi, Angelique Nyinawabera, Noor Hussein and Cory Howard
- 2017 Mariah Pasternak, PhD student, awarded University Fellowship 2017 – 2021
- 2017 Haneen Amawi, PhD student, won **1<sup>st</sup> prize**, oral talk "Inhibiting Metastatic Colorectal Cancer Proliferation by Targeting the Apoptotic/epithelial-mesenchymal (EMT) Pathways with Novel Silybin Derivatives" at *Annual Midwest Graduate Research Symposium (MGRS), 03-2017, Toledo, OH*
- 2017 Noor Hussein a graduate student interviewed by Cancer Today Magazine. *They recognized contribution in the area of drug resistance, particularly related to the role of Dopamine 3 antagonists and repurposing them in drug resistant cancer.*
- 2017 Dr. Rohit Seth, Visiting Professor, India received an award of **\$3500 from Union Cancer Control Foundation Grant** for the project to be mentored under Dr. Tiwari
- 2016 Haneen Amawi, PhD student in Tiwari lab won **2<sup>nd</sup> prize** for "Colon cancer chemoprevention by plant derived synthetic analogues." at Elevator Talk, Pharmaceutical Sciences *Graduate Student Council (PSGSC) Symposium*; The University of Toledo, Ohio
- 2016 Noor Hussein, MS student in Tiwari lab won **1<sup>st</sup> prize** for her Poster Presentation "Dopamine D3 antagonists reverse ABCG2 mediated MDR and enhance anticancer toxicity". at *ECAT (Emerging health Care and Advancement in Toxicology) International Conference, Toledo, OH September 8-10, 2016.*
- 2013-21 Several learners received Posters/ applauds/recognition awards at various national conferences i.e., MGRS, NIH, ECAT, SOT and AACR conferences
- 2015 Vandressa Arantes, International student (Summer 2015) research was featured on July month's BSMP (Brazilian Student Mobility Program) online newsletter.
- 2015 Terrisha Buckley, undergraduate student, Tuskegee University won first prize in Poster presentation at Joint Alliance Symposium, Alabama, Jul 2015,

## NEWS AND MEDIA

- 2022 Dr. Tiwari was on the spotlight in UT news for being awarded for 'President Award for Creativity and Scholarly Activity' from the University of Toledo, OH.
- 2022 Dr. Tiwari was on the spotlight in UT CPPS and UT news for being awarded for 'Outstanding Research and Scholarship Award' from the University of Toledo, OH.
- 2022 Dr. Tiwari was on the spotlight in the St. John's University, NY website and also in UT CPPS news for winning the Distinguished Young Alumni Award for 2022.
- 2021 Dr. Tiwari was on the spotlight in the UT CPPS news and in a separate UT news for winning the 'Outstanding Advisor Award' for 2021.
- 2021 Dr. Tiwari research was highlighted by Susan G. Komen through a personal interview and publishing this through their blog 'Could Swelling and Bursting Tumors be a New Form of Breast Cancer Treatment?'
- <https://blog.komen.org/blog/could-swelling-and-bursting-tumors-be-a-new-form-of-breast-cancer-treatment/>
- 2021 Dr. Tiwari was featured on several news outlets their 1.43 million funding from the U.S. Department of Defense for development of targeted molecules aimed at triple negative breast cancer.
- [https://news.utoledo.edu/index.php/01\\_25\\_2021/utoledo-drug-discovery-researcher-awarded-1-4-million-department-of-defense-funding-focused-on-difficult-to-treat-breast-cancer](https://news.utoledo.edu/index.php/01_25_2021/utoledo-drug-discovery-researcher-awarded-1-4-million-department-of-defense-funding-focused-on-difficult-to-treat-breast-cancer)
  - <https://www.wtol.com/article/news/health/utoledo-researchers-receive-14-million-to-study-breast-cancer-treatment/512-24ab63eb-d31f-408d-b6bc-2c21fe10be8b>
  - [https://www.facebook.com/permalink.php?id=146389338742139&story\\_fbid=3540069149374124](https://www.facebook.com/permalink.php?id=146389338742139&story_fbid=3540069149374124)
  - <https://www.toledoblade.com/local/education/2021/01/26/university-toledo-awarded-federal-grant-chemotherapy-treatment/stories/20210125095>
  - <https://www.13abc.com/2021/01/25/ut-research-on-treatment-of-triple-negative-breast-cancer-receives-14-million-funding-award/>
  - [https://news.utoledo.edu/index.php/01\\_26\\_2021/1-4-million-in-funding-for-cancer-research-at-ut](https://news.utoledo.edu/index.php/01_26_2021/1-4-million-in-funding-for-cancer-research-at-ut)
  - [https://www.eurekalert.org/pub\\_releases/2021-01/uot-uad012221.php](https://www.eurekalert.org/pub_releases/2021-01/uot-uad012221.php)
- 2019 Dr. Tiwari appeared on the academic minutes produced by national public radio (npr). It was also broadcasted to over 200 radio stations throughout the country.
- <https://player.fm/series/the-academic-minute-2459839/amit-k-tiwari-university-of-toledo-multi-drug-resistance>
  - <https://podcasts.apple.com/us/podcast/amit-k-tiwari-university-of-toledo-multi-drug-resistance/id1060078714?i=1000451417372>
  - <https://academicminute.org/2019/09/amit-k-tiwari-university-of-toledo-multi-drug-resistance/>
  - <http://www.insidehighered.com/audio/2019/09/27/multi-drug-resistance>
  - <https://www.npr.org/podcasts/564572329/the-academic-minute/partials?start=placeholder>
- 2019 NorthWest Ohio Komen affiliate highlighted Dr. Tiwari's work in the 'Promise event' that was covered live by 13abc news channel. Also, Dr. Tiwari appeared on the cover of Promise newsletter for the year 2019.
- [http://nwohio.info-komen.org/site/DocServer/WEB\\_The\\_Promise\\_Winter\\_2019.pdf?docID=18237](http://nwohio.info-komen.org/site/DocServer/WEB_The_Promise_Winter_2019.pdf?docID=18237)
- 2018 Dr. Tiwari research on discovery of necroptosis inducers against triple negative breast cancer, funded by Susan G. Komen was highlighted by several news agencies.
- <https://www.13abc.com/content/news/University-of-Toledo-professor-is-working-on-cutting-edge-cancer-research--494649871.html>
  - <https://www.toledoblade.com/local/education/2018/09/25/susan-komen-donates-ut-half-million-breast-cancer-research/stories/20180924231?abnpageversion=evoked>

- [http://utnews.utoledo.edu/index.php/09\\_26\\_2018/breakthrough-research-at-ut-shows-promise-in-treating-drug-resistant-form-of-deadly-breast-cancer](http://utnews.utoledo.edu/index.php/09_26_2018/breakthrough-research-at-ut-shows-promise-in-treating-drug-resistant-form-of-deadly-breast-cancer)
  - <https://komeennwohio.org/research-investment-for-research-of-triple-negative-breast-cancer/>
  - <https://tech2.org/india/ut-researchers-awarded-nearly-half-a-million-for-breast-cancer-research/>
  - <https://centredailytimes.org/research/komen-awards-grant-ut-researchers-studying-drug-resistant-breast-cancer-88440684>
  - <http://www.wtol.com/story/39170839/komen-awards-grant-to-ut-researchers-studying-drug-resistant-breast-cancer>
  - <http://www.utoledo.edu/research/rsp/news.html>
  - <https://wordpress.utoledo.edu/pharmacy/category/uncategorized/>
  - <http://www.smartbrief.com/branded/0CFA9D5B-9285-47DF-A018-5ED9E96C0C0B/C84D9053-AD49-40E9-9201-4E10EBB602F6>
- 2017 Dr. Tiwari's research featured in 'Cancer Today Magazine'. The article was entitled with 'Tackling drug resistance'. Volume 7, Issue 2.
- 2016 Vandressa Arantes (Summer 2015 intern from Brazil) was featured on July month's BSMP online newsletter. In addition, UT CPPS covered this story as well.
- 2016 Dr. Tiwari's appeared in the widely-circulated newsletter from RGPV institute:
- Published thought of the month - Tiwari AK. "CANB – Continuous and nonstop betterment," *RGPV newsletter, MP, India Vol 1, Issue 3, March (2016)*
  - Published pictures of Chairs of section and Guests of honors for inaugurating international seminar on "Emerging Frontiers in Drug Discovery and Development," *RGPV newsletter, MP, India Vol 1, Issue 3, March (2016)*
- 2016 UT College of Pharmacy "Research Excellence Award for Dr. Tiwari" – August 2016
- <http://wordpress.utoledo.edu/pharmacy/2016/04/22/research-excellence-award-for-dr-tiwari/>
- 2016 'Learner Engagement Award' 2016
- <https://www.facebook.com/utoledopharmacy/photos/a.630288553685546/991714177542980/?type=1&theater>
- 2015 Dr. Tiwari was honored to be a Visiting Scientist and Professor to Rajiv Gandhi Prodyogik Vishwavidyalaya, then, 28th largest University in the world. *The Vice Chancellor, Governor of State, Principal Secretary of the State, Education Minister* and former home minister of the state all backed up this association with UT. Our work was widely covered by several leading Indian news agencies like: *The Times of India; Dainik Jagaran; Sandhya Prakash; Dainik Bhaskar People's Samachar; Naiduniya*

## APPENDIX C

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Curricula Vitae of Oncology Clinical Faculty



## S. Thomas Kang

Current address:

818-987-4314

14201 Retreat Lane

stkang@uabmc.edu

Birmingham, AL 35242

### Education

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University of Alabama Birmingham Medical Center

- Colon and rectal surgery fellowship, anticipated duration Aug 2022 – Jul 2023

TriHealth Good Samaritan Hospital, Cincinnati, OH

2017 – 2022

- General Surgery Residency

Creighton University School of Medicine, Omaha, NE

2013 – 2017

- Doctor of Medicine

Whitworth University, Spokane, WA

2008 – 2012

- Magna Cum Laude, cumulative GPA 3.8
- Bachelor of Science in Chemistry with emphasis on Biochemistry
- Spanish and Psychology Minors

### Research

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Collaborative Institutional Training Initiative (CITI)-certified for  
Biomedical Responsible Conduct of Research, Health Information Privacy and Security,  
Conflicts of Interest, and Biomedical Research, Creighton University, Omaha, NE and TriHealth  
Good Samaritan Hospital, Cincinnati, OH 2014 – 2022

The Role of Social Vulnerability in Outcomes Following Colorectal Surgery Under Enhanced  
Recovery Programs 2022

University of Alabama, Birmingham, AL under the direction of Dan Chu, M.D.

- Accepted for podium presentation at ASCRS 2023

Increased Use of PET After Colorectal Surgery is Associated with Improved Outcomes 2022  
University of Alabama, Birmingham, AL under the direction of Dan Chu, M.D.

- Accepted for ePoster presentation at ASCRS 2023

Relationship Between the Social Vulnerability Index (SVI) and Bowel Preparation for Colorectal Surgery 2022

University of Alabama, Birmingham, AL under the direction of Dan Chu, M.D.

- Accepted for ePoster presentation at ASCRS 2023

Laparoscopic Resection of Obstructing Tumor at Duodenal-jejunal Junction 2021  
TriHealth Good Samaritan Hospital, Cincinnati, OH under the direction of Kevin Tymitz, M.D.

- Video abstract of laparoscopic resection and intracorporeal anastomosis of an obstructing mass at the duodenal-jejunal junction

Robotic-assisted Colorectal Surgery: Does BMI Affect Conversion Rates 2019 – 2020  
and Postoperative Complications?, TriHealth Good Samaritan Hospital, Cincinnati, OH under the direction of Hamza Guend, M.D.

- Retrospective study on relationship between patient body-mass index (BMI) and robotic-assisted surgery conversion rate

Metastasectomy for Stage IVa Colon Cancer – Does the Type of Treating 2018 – 2019  
Institution Make a Difference?, TriHealth Good Samaritan Hospital, Cincinnati, OH under the direction of David Lee, M.D.

- Retrospective study to discern if patients with metastatic colon cancer have improved outcomes at specialized centers

Post-operative Pneumonia Prevention: A Systematic Approach, 2017 – 2019  
TriHealth Good Samaritan Hospital, Cincinnati, OH under the direction of Katherine Meister, M.D.

- Identification of and development of protocols to address underlying factors that contribute to post-operative pneumonia

Survey of laparoscopic and DaVinci robotic training programs at 2016 – 2017  
obstetrics and gynecology residencies throughout the United States,  
Creighton University Medical Center, Omaha, NE under the direction of Katie Sekpe, M.D.

- Contact obstetrics and gynecology residencies in the U.S. to gather data regarding laparoscopic and robotic training protocols for their residents.

Retrospective study on resolution of comorbid conditions 2016 – 2017  
post-bariatric surgery at Creighton University Medical Center, Omaha, NE  
under the direction of Kalyana Nandipati, M.B.B.S.

- Study the impact of bariatric surgery on morbidly obese patients with co-morbidities such as hypertension and diabetes.

Meta-analysis on the clinical advantage of early-transjugular 2015 – 2016  
intrahepatic portosystemic shunt (TIPS) at  
Creighton University Medical Center with collaborations from University of Minnesota,  
University of Nebraska Medical Center, Mayo Clinic College of Medicine,  
Washington University School of Medicine, and Northwestern University Feinberg School of  
Medicine, Omaha, NE under the direction of Michael F. Sorrell, M.D., John Lake, M.D., &  
Shadi Hamdeh, M.D.

- Study the advantage of early-TIPS placement in variceal bleed prophylaxis over standard medical treatment.

- Case report on PANDAS at Immanuel Medical Center, Omaha, NE 2016  
under the direction of Tony Pesavento, M.D.
- Wrote a case report on a rare case of pediatric autoimmune neuropsychiatric disorders associated with Streptococcal infections (PANDAS).
- Meta-analysis research at Creighton University Medical Center, Omaha, NE 2015  
under the direction of Shadi Hamdeh, M.D.
- Compared the efficacy between urea breath test and stool antigen test in confirming H. pylori eradication.
- Meta-analysis research at Creighton University Medical Center 2015  
with collaboration from University of Nebraska Medical Center, Omaha, NE under the direction of Shadi Hamdeh, M.D.
- Compared the prophylactic efficacy between norfloxacin and trimethoprim-sulfamethoxazole against spontaneous bacterial peritonitis.
- Case report on CNS vasculitis, Creighton University Medical Center, Omaha, NE 2015  
under the direction of Dixitha Anugula, M.D.
- Wrote a case report on a patient who presented with central nervous system vasculitis.
- Retrospective research at Creighton University Medical Center, Omaha, NE 2014 – 2015  
under the direction of Michael Del Core, M.D.
- Studied how race influences health disparities with respect to coronary heart disease.

## Presentations and Publications

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- Kang, S.T.,** Kennedy, G.D. (Book chapter, in progress). “Reappraisal of the 5 centimetre rule of distal excision for carcinoma of the rectum: a study of distal intramural spread and of patients’ survival” in *50 Studies Every Colorectal Surgeon Should Know*.
- Greenwell, K.L., **Kang, S.T.,** Meister, K., Tymitz, K. (2022, March). Laparoscopic Resection of Obstructing Tumor at Duodenal-jejunal Junction. Video abstract and presentation at SAGES Annual Meeting, Denver, CO.
- Kang, S.T.,** Moran, R., Hussain, L., Guend, H., Dunki-Jacobs, E.M., & Lee, D.Y. (2021, April). Metastasectomy for Stage IVa Colon Cancer – Does the Type of Treating Institution Make a Difference? Published in *The American Surgeon*.
- Kang, S.T.** When It’s Time (2021, January). Podium presentation at Surgical Grand Rounds, TriHealth Good Samaritan Hospital, Cincinnati, OH.
- Kang, S.T.,** Moran, R., Hussain, L., Guend, H., Dunki-Jacobs, E.M., & Lee, D.Y. (2020, May). Metastasectomy for Stage IVa Colon Cancer – Does the Type of Treating Institution Make a Difference? Podium presentation at Resident Annual Research Day, Cincinnati, OH.

- Kang, S.T.,** Hussain, L., Werth, D., & Meister, K. (2019, July). Post-operative Pneumonia Prevention: A Systematic Approach. Podium presentation at ACS Quality and Safety Conference, Washington, D.C.
- Kang, S.T.,** Hussain, L., Werth, D., & Meister, K. (2019, May). Post-operative Pneumonia Prevention: A Systematic Approach. Podium and poster presentations at Resident Quality, Safety, and Service Excellence Day, Cincinnati, OH.
- Kang, S.T.,** Moran, R., Hussain, L., Guend, H., Dunki-Jacobs, E.M., & Lee, D.Y. (2019, March). Disparities in Treatment of Stage IVa Colon Cancer with Liver Metastasis – Is It Time to Consider Regionalization of Care? Podium presentation at the Annual Cancer Symposium of Society of Surgical Oncology, San Diego, CA.
- Bhatia, P., Cheung, S., **Kang, S.T.,** Gantz, S., Pallati, P., Forse, A., & Nandipati, K. (2016, September). Resolution of comorbid conditions are significantly higher with malabsorptive procedures. Poster presented at SAGES 2017, Houston, TX.
- Hamdeh, S., Altayar, O., **Kang, S.T.,** Al-shebani, Y., Mouchli, M., Ahmad, D., Elwir, S., Murad, M.H., Lake, J., & Sorrell, M. (2017, Apr). Early-TIPS versus Conventional Treatment in Secondary Prophylaxis of Esophago-gastric Variceal Bleeding: A systematic review and meta-analysis. Presented at the Northwestern Feinberg School of Medicine, Chicago, IL.
- Kabach, A., Hamdeh, S., **Kang, S.T.,** Ahmad, D., & Mukherjee, S. (2016, May). Su1488 Norfloxacin versus Trimethoprim-sulfamethoxazole in Prevention of Spontaneous Bacterial Peritonitis: A meta-analysis. Poster presented at the Digestive Disease Week 2016, San Diego, CA.
- Kabach, A., Hamdeh, S., **Kang, S.T.,** Ahmad, D., Mukherjee, S. (2016, April). Su1488 Norfloxacin versus Trimethoprim-Sulfamethoxazole in Prevention of Spontaneous Bacterial Peritonitis: A Metaanalysis. Published in *Gastroenterology*, Vol 150, Issue 4.
- Kang, S.T.** (2016, April). Tetralogy of Fallot. Case study of a neonate with Tetralogy of Fallot published in *What I Saw in Peds: Pediatric Newsletter*. Creighton University School of Medicine, Omaha, NE.
- Kang, S.T.,** Hamdeh, S., Salih, M., & Reddymasu, S. (2016, March). Urea Breath Test (UBT) versus Stool Antigen Test in Post-Treatment Eradication of H. Pylori Infection: A meta-analysis. Poster presented at the Midwest Student Biomedical Research Forum, Omaha, NE.
- Gies, K., **Kang, S.T.,** Anugula, D., Buddam, A., Mirza, M., & Jagadesh, S. (2015, September). Stroke in Young Female – RCVS. Poster presented at the Nebraska/South Dakota American College of Physicians Annual Scientific Meeting, Omaha, NE.

**Kang, S.T., & Del Core, M. (2015, March).** Influence of Race on Presentation and Outcomes in Patients with Coronary Heart Disease. Poster presented at the Midwest Student Biomedical Research Forum, Omaha, NE.

## Leadership Experience

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Chief resident, Department of General Surgery, 2021 – 2022  
TriHealth Good Samaritan Hospital, Cincinnati, OH

- Administrative and clinical duties as a chief surgical resident

House Staff Association Senator, 2019 – Present  
TriHealth Good Samaritan Hospital, Cincinnati, OH

- Attend meetings and discuss matters within Graduate Medical Education

TriHealth Lifting Caregivers (TLC) member, 2017 – Present  
TriHealth Good Samaritan Hospital, Cincinnati, OH

- Available for peer support within TriHealth

Surgery Club Officer, Surgical Skills Lab Coordinator, 2016 – 2017  
Creighton University School of Medicine, Omaha, NE

- Arrange various skill labs for Surgery Club members.

Executive Board Member, Project CURA 2015 – 2017  
(Creighton Medical United in Relief Assistance), Creighton University School of Medicine, Omaha, NE

- Provide support, guidance, and leadership to those medical students planning their humanitarian trips abroad to underserved regions in various countries including India, Guatemala, and Romania.
- Applied for and was awarded a partial funding of \$5,835.00 from the Creighton Global Initiative 2016.

Student Chair of Admissions, Creighton University School of Medicine 2013 – 2017  
Admissions Committee, Omaha, NE

- Organize and oversee the student life aspect of medical school interviewees such as tours and hosting.

Medical support, Project Homeless Connect, Omaha, NE 2013 – 2017

- Provide annual physical examinations and connections to various resources to the less fortunate in and around the community.

Clinic care team, Magis Acute Care Clinic, Omaha, NE 2013 – 2017

- Become a part of a team composed of an attending, medical students, pharmacy students, and social workers to help assess, diagnose, and treat patients who are homeless and/or uninsured.

Co-leader of research committee, Project CURA, 2014 – 2015  
Creighton University School of Medicine, Omaha, NE

- Set the groundwork for Creighton medical students going abroad through CURA to be actively involved in those communities by the way of gathering data.

Volunteer liaison, NOAH Clinic, Omaha, NE 2014 – 2015

- Provided connections between medical students and North Omaha Area Health, a clinic that provides access to health care and education at low or no cost to the patients.

Volunteer, Surgery on Sunday, Omaha, NE 2013 – 2014

- Provided free hernia assessments and assisted in hernia repair surgeries for low-income individuals under the supervision of Charles Filipi, M.D.

### Community Service

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Mentor, Youth Emergency Services, Omaha, NE 2014 – 2017

- Mentor and spend time with an at-risk or transition-living youth.

Volunteer, Open Door Mission, Omaha, NE 2013 – 2017

- Help with food preparation and service, dishwashing, and donation sorting.

Volunteer, Habitat for Humanity, Omaha, NE 2013 – 2017

- Clean and side a house for a low-income family.

Volunteer, Partners-Against-Cancer, Omaha, NE 2014 – 2015

- Provided support and companionship to a patient who has been diagnosed with cancer.

Coordinator and volunteer, Make-a-Wish Run, Omaha, NE 2013 – 2014

- Raised money for children in Nebraska to be able to have their wishes come true.
- As a part of the coordinating team, raised \$4,785.

Leader and volunteer, Body Basics, Omaha, NE 2013 – 2014

- Taught the basics of the human body at local elementary schools.

Volunteer, DoJustice, Omaha, NE 2013 – 2014

- Volunteered to educate, diagnose, and treat sexually transmitted diseases at the Douglas County Corrections.

Trip leader, Project CURA, India 2014

- Planned the trip and led a group of medical students on a 4.5-week humanitarian work through India during the summer of 2014.

Volunteer, Siena-Francis House, Omaha, NE 2013

- Helped with food preparation and service.

- Co-advisor, YMCA Youth & Government, Spokane, WA 2011 – 2012
- Taught high school students from Spokane to write bills, the usage of parliamentary procedures, and the importance of civic duties.
  - Chaperoned the delegation to Olympia, WA for a week so that they could demonstrate their knowledge.
- Coordinator and volunteer, Mentors and Students Together, Spokane, WA 2010 – 2012
- Organized mentor-mentee matches, scheduled interviews and field trips.
  - Formed a good line of communication with Mountainside Middle School staff in order to identify students for the program.
  - Performed background checks to adhere to regulations set forth by Spokane County.
- Volunteer, Sacred Heart Children's Hospital, Spokane, WA 2010 – 2012
- Tended to pediatric oncology patients and their families by spending time with them and accommodating to their needs.
- Counselor, YMCA camps, La Cañada Flintridge, CA 2008 – 2011
- Participated as a counselor in various YMCA camps every summer.
  - Guided and worked with children from elementary school to high school age groups.
- Medical service trip volunteer, Guatemala 2010
- As a part of a team of doctors and volunteers, helped to educate and provide free-of-charge healthcare to underserved Guatemalans.
- Medical service trip volunteer, Haiti 2010
- With a team of other volunteers, established the first standing free clinic in a region of Jacmel, Haiti.
  - Provided medical service, training, and supplies to Haitians.
- Volunteer, Winter Youth Olympic qualifiers, Spokane, WA 2009
- Judged slalom skiers competing for the Winter Youth Olympics.
- Volunteer, Cup of Cool Water, Spokane, WA 2009
- Participated in aiding the homeless in Downtown Spokane.
  - Provided help in the shelter and in the streets by cleaning and passing out sack lunches.

## Honors and Scholarships

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- Resident Research Award 2018 – 2020
- Awarded for research productivity
- Resident of the Year 2019
- Awarded to a resident in good standing

Creighton University School of Medicine Dean's Magis Scholarship 2015 – 2017

- Awarded to students for community service involvement.

Medical Dean's Scholarship 2013 – 2017

- Awarded to students from socio-educationally and/or –economically disadvantaged backgrounds who demonstrate a commitment to diversity through extracurricular and leadership roles.

Clerkship Honors 2015 – 2016

- Inpatient Internal Medicine, Surgery, Pediatrics, and Psychiatry

Phi Rho Sigma Scholarship 2013

- Awarded to a Phi Rho Sigma member who demonstrates a willingness to spend time in service of others.

The Whitworth University Laureate Society 2008 – 2012

- Awarded to those with GPA of 3.75 or higher each semester.

The Werner Rosenquist Scholarship 2008 – 2012

- Awarded to one incoming freshman for the entirety of his college career at Whitworth.

Whitworth University Chemistry Department Scholarship 2011

- Awarded to an upper-classman chemistry major who has achieved a high GPA.

### **Memberships and Certifications**

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American Board of Surgery 2022 – Present

- Board-certified in General Surgery

Member, American Society of Colon and Rectal Surgeons 2021 – Present

### **Hobbies and Interests**

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Traveling, exercising

Music, movies, reading, and theatre



## **MONIQUE ANN SPILLMAN, MD, PhD, FACOG**

### **CURRENT POSITION (07/2014 - present)**

Texas Oncology, P.A.

Practice Partner

Gynecologic Oncology

Baylor Charles A. Sammons Cancer Center 3410 Worth Street, Suite 400

Dallas, TX 75246

Clinical (214) 370-1300

Clinical FAX (214) 370-1313

**Preferred Contact Information**

**Cell Phone: (720)253-3834**

**Email: maspillman@gmail.com**

Clinical Associate Professor (Clinical Professor effective September 2022)

Texas A&M College of Medicine and Health Sciences Center

Clinical Associate Professor

Texas Tech University Health Sciences Center, School of Medicine, Permian Basin

### **PREVIOUS POSITION (07/2006 – 05/2014)**

**University of Colorado Anschutz Medical Campus**

**Associate Professor, Department of Obstetrics and Gynecology**

Primary Appointment: Section of Gynecologic Oncology

Joint Appointment: Section of Reproductive Sciences

Secondary Appointment: Division of Endocrinology, Department of Medicine

12631 East 17th Ave, MS B198-4

Aurora, CO 80045

Clinical Office 303-724-2066

Clinical FAX 303-724-2053

### **EDUCATION**

May 1989 University of Texas at Austin, Austin, TX

B.A, Biochemistry, High Honors

June 4, 1999 University of Texas Southwestern Medical School, Dallas

M.D.

May 7, 1999 University of Texas Southwestern Graduate School, Dallas

Ph.D., Genetics and Development

## **POSTDOCTORAL EDUCATION**

June 20, 1999- June 20, 2003

Brigham and Women's Hospital/Massachusetts General Hospital Integrated  
Residency Program, Boston, MA  
Obstetrics and Gynecology Resident

July 1, 2003- June 30, 2006

Duke University Medical Center, Durham, NC Fellow, Gynecologic Oncology

July 1, 2006 – June 30, 2011

Women's Reproductive Health Research Scholar University of Colorado School  
of Medicine, Aurora CO Dr. Kathryn Horwitz lab  
Role of estrogen in ovarian cancer growth and metastasis

## **BOARD CERTIFICATION and LICENSURE**

American Board of Obstetrics and Gynecology

Original certification 2008.

Maintenance of Certification: 2010-2021, in progress 2022.

Passed secure recertification examination 2015

American Board of Obstetrics and Gynecology, Special Certification in Gynecologic Oncology

Original Certification 2009

Maintenance of Certification: 2010-2021, in progress 2022.

2/2009 – 8/30/2024

Texas Medical License

5/2006 – 4/30/2015

Colorado's Physician's License (Expired)

6/2003 – 6/26/2014

North Carolina Medical License (Expired)

6/1999 – 6/2003

Massachusetts Training License (Expired)

## **CHRONOLOGICAL EMPLOYMENT HISTORY**

Assistant Professor

University of Colorado School of Medicine  
Department of Obstetrics and Gynecology  
Section of Gynecologic Oncology  
Joint Appointment Section of Reproductive Sciences  
July 2006 - June 2012

Assistant Professor

Secondary Appointment

University of Colorado School of Medicine  
Department of Medicine  
Division of Endocrinology  
October 2008- May 2014

Associate Professor	University of Colorado School of Medicine Departments of Obstetrics and Gynecology and Medicine July 2012-May 2014
Attending Physician	Texas Oncology Baylor Sammons Cancer Center July 2014-present
Clinical Associate Professor	Texas A&M College of Medicine and Health Sciences Center March 2015 - present
Clinical Associate Professor	Texas Tech University Sciences Center, School of Medicine, Permian Basin Campus April 2015-present
Clinical Professor (pending)	Texas A&M College of Medicine (effective 09/01/22)

#### **HONORS, SPECIAL RECOGNITIONS AND AWARDS**

1985	National Merit Scholar, UT Austin
1989	Phi Beta Kappa, UT Austin
1989-1992	NIH Medical Scientist Training Program Fellowship University of Texas Southwestern
1999	Outstanding OB/GYN Medical Student Award Dallas-Fort Worth Obstetrics and Gynecology Society
1999	Alpha Omega Alpha University of Texas Southwestern Medical School
2004	Leadership College Scholar North Carolina Medical Society
2006	Fellows' Research Prize Duke University Medical Center
2007	Faculty Special Teaching Award University of Colorado Department Obstetrics and Gynecology
2010	Women's Health Research Day Award University of Colorado Anschutz Medical Campus

2011	Selected Participant in National Cancer Institute Cancer Research Imaging Camp
2011	AAMC Early Career Women Faculty Development Seminar Delegate from University of Colorado
2011	University of Colorado Women in Medicine and Science Professional Leadership Award
2013	Robert C. Cefalo/ACOG Leadership Institute
2013	Nominee, Golden Stethoscope Award for Best Role Model Preceptor, University of Colorado
2016, 2017	Selected for inclusion on the <i>Super Doctors</i> ® list, Gynecologic Oncology
2021	Department of OB/GYN Excellence in Teaching Award, BUMC
2022	Society of Gynecologic Oncology Humanitarian and Volunteerism Award (national)

## PROFESSIONAL ORGANIZATIONS/SCHOLARLY SOCIETIES

### Society of Gynecologic Oncology

2005-2015	Government Relations Committee
2006-2009	Candidate Member
<b>2008-2010</b>	<b><i>Vice-Chair, Government Relations Committee</i></b>
2009-present	Full Member
2009-2010	Practice Survey Committee
<b>2010-2011</b>	<b><i>National Co-Chair, Research Summit</i></b>
<b>2010-2012</b>	<b><i>Chair, Government Relations Committee</i></b>
2011	Strategic Planning Committee
2011	Nominations Committee
2012	Practice Summit Committee Member
2013-2014	45 <sup>th</sup> Annual Meeting Program Committee
2014	Practice Survey Committee
2015-2019	Legislative and Regulatory Task Force
<b>2018-2021</b>	<b><i>Inaugural Chair, Ethics Committee</i></b>
2018-2019	50 <sup>th</sup> Annual Program Committee Member
2022	Awards Committee

American Congress/College of Obstetricians and Gynecologists

1999-2008	Junior Fellow
2000-2006	AMA-CEJA Liaison to Committee on Ethics
2006-2013	AMA Young Physicians Section Delegate
2006-2013	AMA Delegation, Alternate Delegate
2007-2014	Member, Committee on Ethics
2009-present	Fellow (FACOG)
<b>2010-2012</b>	<b><i>Vice-Chair, Committee on Ethics</i></b>
<b>2012-May 2014</b>	<b><i>Chair, Committee on Ethics</i></b>
2012-May 2014	Liaison, American Academy of Pediatrics Committee on Bioethics
2012-May 2014	Liaison, American Society Reproductive Medicine Ethics
Committee 2013-2014	AMA Delegation, Delegate
2015	Wrote ACOG Congressional testimony on VA Care for Women
<b>2016- 2019</b>	<b>Chair, Ethics Documents Review Committee</b>
2021-present	AMA Delegation, Delegate

American Medical Association

1990-present	Member
1993-1995	Council on Scientific Affairs Student Representative
2000-2006	Council on Ethical and Judicial Affairs Resident/Fellow Member
<b>2014-2021</b>	<b><i>Council on Ethical and Judicial Affairs Member</i></b> <b><i>(National AMA Presidential Appointment)</i></b>
<b>2019-2020</b>	<b><i>Vice-Chair, Council on Ethical and Judicial Affairs</i></b>
<b>2020-06/21</b>	<b><i>Chair, Council on Ethical and Judicial Affairs</i></b>

Gynecologic Oncology Group (GOG), now known as NRG

2006-2014	Clinical Trials Investigator
2013-2014	Member, Committee on Experimental Medicine

National Comprehensive Cancer Network

2013-2014	Member, Ovarian Cancer Panel
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Texas Medical Association

1996	Special Committee on Physician Workforce Planning
1998	Special Committee on Genetics
1999-2006	Member <i>in absentia</i>
2014-present	Member
2014-present	<i>Ex officio</i> participant with the Texas Delegation to the AMA

Dallas County Medical Society

2014-present	Member
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American Association for Physician Leadership (formerly American College of Physician Executives)

2013-2020, 2022	Member
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American Association for Cancer Research

2001-2007	Associate Member
2007-2014	Full Member

International Gynecologic Cancer Society

2008-present	Member
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**PROFESSIONAL SERVICE ACTIVITIES**

**Reviewer and Referee**

2005-present	Reviewer, <i>Gynecologic Oncology</i> (completed >40 reviews)
2008	Abstract Reviewer, Society of Gynecologic Oncologists Annual Meeting
2009	Reviewer, <i>International Journal of Gynecologic Oncology</i>
2009	Reviewer, <i>Cancer Control, Journal of the Moffitt Cancer Center</i>
2010	Reviewer, <i>Nature Communications</i>
2010-2014	Reviewer, <i>British Journal of Cancer</i>
2010	Reviewer, <i>Expert Opinion in Oncology Drugs</i>
2010-present	Reviewer, <i>American Journal of Obstetrics and Gynecology</i>
2012	Reviewer, <i>Acta Obstetrica et Gynecologica Scandinavica</i>
2013-present	Reviewer, <i>Cochrane Reviews</i>

**Texas A&M College of Medicine, Baylor University Medical Center Campus**

2019-present	Representative, Promotions and Tenure Committee
2022-present	OB/GYN Clerkship Director

**Baylor University Medical Center**

2015-2017	Chair, Research Committee, OB/GYN
2015-2017	Women's Health Council
2021-present	Ethics Committee
2021-present	OB/GYN Peer Review Committee

**University of Colorado Anschutz Medical Center**

Department of Obstetrics and Gynecology

2006-2014	Reproductive Sciences Research Advisory Committee
2007-2014	Chair, Gynecologic Tissue and Fluid Bank Steering Committee Prioritization of protocols and distribution of banked gynecologic tissues collected under the GTFB protocol.
2008-2014	Program of Excellence in Cancers of the Ovary in Colorado (PECOC), Research Director

2010-2014	OB/GYN Faculty Senate representative
2010-2011	Departmental Research Planning Committee
2010-2011	Co-Chair, Reproductive Sciences Seminar Series
2011-2014	Fellowship Research Director, Gynecologic Oncology Fellowship
2011-2013	Member, Selection Committee for Reproductive Sciences Section Director
2013-2014	Assistant Fellowship Director, Gynecologic Oncology Fellowship

#### University of Colorado School of Medicine

2009-2014	Comprehensive Cancer Center Biobanking Steering Committee Coordination of all tissue banks on the campus, including bioinformatics platforms.
2010-2014	Faculty Senator, Department of Obstetrics and Gynecology
2011	Grant Review Committee, Breast Cancer SPORE

#### National Committee Service

##### **American Board of Obstetrics and Gynecology, Division of Gynecologic Oncology**

2012-2017	Invited Submission for Question Design for Written Exam, Gynecologic Oncology
2018	Invited Participant, Summit on Professionalism, Washington, DC
2019- present	Certifying Examiner for ABOG
2019-present	Invited Submission for Question Design for Written Specialty Certification Exam.

##### **Society of Gynecologic Oncologists**

2008-2010	Vice-Chair Government Relations Committee
2009-2010	Practice Survey Committee Designed 5-year comprehensive survey of gynecologic oncologists to detail national trends in compensation, RVUs, malpractice patterns, patient and payor mix, and gender differences.
2010-2011	<i>National Co-Chair, Research Summit</i>

	Produced SGO "Pathways to Progress" white paper on Gynecologic Malignancies as a roadmap for the next 10 years.
2010-2011	Strategic Planning Committee Developed vision statement, mission statement, and strategic plan goals for the next 5 years for Society of Gynecologic Oncology
2010-2012	<b><i>Chair, Government Relations Committee</i></b> 1.Coordinated national advocacy agenda for gynecologic cancer research and treatment and educated Congressional staffers on ovarian cancer research. 2.Interfaced with officials in Congress and National Cancer Institute to successfully increase ovarian cancer research funding. 3.Spearheaded national health care reform agenda for gynecologic oncologists with national Surgical Coalition. 4.Provided training and motivation to committee members for involvement in advocacy activities.
2011	Nominating Committee Revised the process by which Executive Council leaders are identified and put forward for elected leadership positions. Identified and vetted candidates for the 2012 elections.
2013-2014	Member, Program Committee 2014 Annual Meeting
2014	Member, Practice Survey Committee
<b><i>2018-03/21</i></b>	<b><i>Inaugural Chair, Ethics Committee</i></b> <b><i>Lead committee that developed Code of Professional Ethics, Modernized Conflict of Interests and Commitment policies, developed Grievance Procedures</i></b>
2018-19	50 <sup>th</sup> Annual Program Committee Member
2019	Plenary V Session Chair, Operations Matter: Improving Efficiency
2020	COVID-19 Task Force Member
2022	Honors and Awards Committee



**American College/Congress of Obstetricians and Gynecologists**

2006-2013	<i>AMA Young Physicians Section Delegate</i> One of two young practicing physicians designated by ACOG to represent the views of obstetricians and gynecologists in the AMA Young Physicians Section. Participated in national healthcare policy formation.
2006-2014	<i>ACOG Delegation to the American Medical Association House of Delegates</i>
2007-2009	Member, Committee on Ethics
2010-2012	<b><i>Vice-Chair, Committee on Ethics</i></b>
2012-2014	<b><i>Chair, Committee on Ethics</i></b> Discussant, contributor, and editor of ethics manuscripts for the College. Topics have included: Surgery and Patient Choice, The Limits of Conscientious Refusal in Reproductive Medicine, Medical Tourism, Relationships with Industry, Maternal-Fetal Intervention and Fetal Care Centers
2016-2019	Chair, Ethics Documents Committee
2021-present	<i>ACOG Delegation to the American Medical Association House of Delegates</i>

**International Consensus Conference on Orangutan Health**

2012	Gynecology Panel, consulting expert
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**TEACHING RECORD****Continuing Medical Education**

2011	Colorado Obstetrical and Gynecological Society/ACOG Lecture “Genetic Testing in Gynecology: Medicine and Marketing”
2011	Colorado Obstetrical and Gynecological Society/ACOG “Robotic Surgery: the technique is not worth the time and investment,” a Pro – Con Debate with Dr. Kevin Davis
2011-2012	<b>National Co-Chair</b> Gynecologic Oncology Group Winter Symposium, January 2012 “Capitalizing on Biology to Develop Novel Prevention and Treatment Approaches to Gynecologic Cancer”

2014	Sunrise Seminar Program Chair: The ACA Movement: How Implementation of the Affordable Care Act Affects Gynecologic Oncology. 45 <sup>th</sup> Annual Society of Gynecologic Oncology Meeting, Tampa, FL
2014	Session Moderator: Approaches to Improve Quality and Palliative Care in Gynecologic Cancers. 45 <sup>th</sup> Annual Society of Gynecologic Oncology Meeting, Tampa, FL
2015	ACOG District XI and TAOG Meeting Endowed lecture “Cervical Cancer: From Prevention to Treatment,” October 2015
2015	“Update in Gynecologic Cancers,” Baylor University Medical Center Internal Medicine Grand Rounds
2015	“Physician Professional Discipline and Ethical Violations,” Baylor University Medical Center, Department of OB/GYN Ethics Grand Rounds
2019	Plenary V Session Chair, Operations Matter: Improving Efficiency SGO 50 <sup>th</sup> Annual Meeting, Hawaii
2022	Grand Rounds, Department of Surgery, Baylor, Dallas, TX “Medicine and Marketing: Ethical Conflict?” Ethics credit CME
<b>Medical Students</b>	
2009-2011	“Ovarian and Endometrial Cancers” IDPT 7030 MS III OB/GYN Core Clerkship Lecture
2009	“Cervical, Vaginal, Vulvar Cancers” IDPT 7030 MS III OB/GYN Core Clerkship Lecture
2009-2011	“Ovarian and Endometrial Cancers” IDPT 7030 MS III OB/GYN Core Clerkship Lecture
2009-2013	IDPT 7655 Thesis Years Foundations of Doctoring course clinical proctor
<b>Graduate Students</b>	
2007	“Ovarian Cancer: A Steroid Regulated Disease?” Hormone Related Malignancies & Division of Endocrinology, Metabolism & Diabetes Research Seminar
2007	“Ovarian Cancer: A Steroid Regulated Disease?” Program in Reproductive Sciences Seminar
2009	CANB 7600: “The role of HPV in Cervix Cancer” Lecture, Exam question design and grading

2009	“Estrogen Replacement Therapy Induces a Unique Gene Expression Pattern in Ovarian Cancer” Hormone Related Malignancies Seminar
2010	CANB 7600: “The role of HPV in Cervix Cancer” Lecture, Design of Exam questions and grading
2011	CANB 7600: “A Tale of Two Cancers: It was the best of times it was the worst of times” Ovarian and Cervical Cancer Biology Lecture, Design of Exam Questions
2014	CANB 7600: "Cervical Cancer Success Story,” Lecture, Design of Exam Questions.

### **Housestaff**

2006	“Radical Radiation Oncology for Residents”
2007	CREOG Review Seminar Director Conceived, initiated, planned, and directed the inaugural 4-week CREOG review course for the residents. Collated written study materials. Lectured on gynecologic oncology, genetics and ethics.
2008	CREOG Review Seminar Director Gynecologic Oncology Minisymposium
2009	“What’s in Your Genes? Genetic Testing in Gynecologic Oncology” Department of OB/Gyn Grand Rounds, August 17,2009.
2009	“Seminal Trials in Cervical Cancer” Hematology Oncology Fellows Lecture Series, April 2009
2010	CREOG Review Seminar: Gynecologic Oncology, Genetics, Ethics Organized the 3rd year of this review course, lectured on gynecologic oncology, genetics, ethics.
2011	CREOG Review Seminar: General Gyn Potpourri
2012	“Working Below the Waist: Gynecologic Pathology,” Resident didactic
2013	“Gynecologic Oncology: Working Below the Waist,” Rad Onc Resident Didactic
2013	“Ovarian Cancer Basics," OB./GYN Resident Didactic
2014	“Chemotherapy in Gynecologic Oncology,” Radiation Oncology resident didactic

2015	“Gyn Potpourri,” CREOG Review Seminar, Baylor University Medical Center OB/GYN residents, January 2015.
2015	“To Pap or Not to Pap, that is the question.” Baylor University Medical Center Internal Medicine Residents, January 2015.
2016	CREOG Review: Gyn Potpourri
2016,2017	Ethics for OB/GYN Residents (Texas Tech)
2016	Pediatric and Adolescent Gyn Cancers (Texas Tech)
2016	Genetics for OB/GYN (Texas tech)
2016	“Cervical Cancer Management” Baylor Medical Oncology Fellows
2017,2018	Basics of Medical Liability (Texas Tech)
2018	Ovarian Cancer: Silent No More. Baylor Medical Resident Lecture Series
2022	OB/GYN and Urology Review for General Surgery Residents

#### **MENTEES:**

##### **Undergraduates**

Summer 2012	Ms. Lacey Gibson Summer University of Colorado Cancer Center Research Fellowship Masters of Global Health, Harvard, 2017
2020-present	Ms. Marin Guthrie UT Austin, premedical honors student
2021-present	Mr. Grant Ebel UT Austin Dean’s Scholars premedical honors student

##### **Medical Students**

2009-2012	IDPT 7655 Thesis Years Foundations of Doctoring course MSTP student Ms. Jamie Fornetti
2010	Advisor for Women’s Health Track Senior Project, Ms. Rebecca Dole
2011	Advisor for Ryan Roth and Sara Parke MSI Summer Project in Ovarian Cancer Awareness

2012	IDPT 7655 Thesis Years Foundations of Doctoring course Dr. Pippa Cosper Currently, Radiation Oncologist, Assistant Professor, University of Wisconsin
2013	IDPT 7655 Thesis Years Foundations of Doctoring course Ms. Hannah Scarborough, MSTP student
January – May 2014	Research Rotation mentor Dr. Brandon Sawyer, now gynecologic oncologist Baylor Dallas
2017-2018	Mentor for TAMU MS IV students in OB/GYN: Dr. Jessica Kim, Matched to University of Texas Houston, OB/GYN Dr. Brittany Carter, Matched Baylor College of Medicine, Surgery Dr. Suneet Flora, Matched St. John’s Hospital, Detroit Michigan, OB/GYN
2022-2023	Hope Allen, MSIV, TAMCOM

### **Graduate Students**

Winter, 2007	Lab Rotation mentor to Dr. Jessica Wahlig Saben, Program in Reproductive Sciences.
Summer, 2012	Lab mentor to Dr. Hannah Scarborough, Program in Reproductive Sciences
Fall, 2013	Lab Rotation mentor to Dr. Michael Oliphant, Program in Reproductive Sciences

### **Residents**

2009-2010	Mentor for Dr. Christine Conageski, resulting in SGO poster presentation, Anti-Proliferative Activity of c-SRC Kinase Inhibitor Saracatinib Correlates with IGF1R and EGFR Expression in Ovarian Cancer Cell Lines. Faculty at the University of Colorado
2009-2012	Mentor for Dr. Caitlin Stashwick, resulting in opening of clinical trial protocol, “A prevalence study of adrenal suppression after adjuvant corticosteroid administration during gynecologic cancer chemotherapy.” (PRMC 09-168) Completed Gynecologic Oncology fellowship at the University of Pennsylvania, now in private practice Pennsylvania
2010-2011	Mentor for Dr. Erin Medlin for case report of concurrent Gastrointestinal Stromal Tumors (GIST) and Ovarian Tumors Completed gynecologic oncology fellowship University of Wisconsin Current faculty University of Louisville, KY

2010-2011	Mentor for Dr. Caitlin Stashwick resulting in manuscript, "Diagnosis and Management of Endocrine-Active and Non-Epithelial Ovarian Tumors."
2013-14	Mentor to Dr. Sumer Allensworth, resulting in SGO poster presentation, "Do the skills of a gynecologic oncologist cross species?" Completed gynecologic oncology fellowship, Mayo Clinic Current practice in Madison, Wisconsin
2013-14	Mentor to Dr. Nicki Stornelli, multifaceted project looking at erythropoietin usage before and after FDA warning and risk mitigation program. Private OB/GYN practice in Billings Montana
2022-23	Co-Mentor to Dr. Virginia Fontenot Research Project mentor to Dr. Kaitlin Wagner

#### **Gynecologic Oncology Fellows (Clinical and Research Mentorship)**

2010-2013	Dr. Julia Embry, now at Kaiser Permanente, Denver CO Dr. Irina Dmitrova, now in private practice, Seattle, WA
2011-2014	Dr. Charles Anderson, now in private practice, Oregon
2012-2014	Dr. Georgina Cheng, faculty position at University of Indiana
2012-2014	Dr. Michael Guy, private practice, Ohio
2013-2014	Dr. Bradley Corr, University of Colorado Facult

### **RESEARCH/SCHOLARSHIP RECORD**

#### **REFERREED JOURNALS**

1. Ali AA, JL Finlay, WL Gerald, P Nisen, NS Rosenfield, MP LaQuaglia, **M Spillman**, B O'Malley, and R Fraser. (1994) Congenital mesoblastic nephroma with metastasis to the brain: a case report. *American Journal of Pediatric Hematology-Oncology*, 16: 361-4.
2. Osborne-Lawrence S, PL Welcsh, **M Spillman**, SC Chandrasekharappa, TD Gallardo, M Lovett, and AM Bowcock. (1995). Direct selection of expressed sequences within a 1Mb region flanking BRCA1 on human chromosome 17q21. *Genomics*, 25: 248-255.
3. Abel KJ, LC Brody LC, JM Valdes, MR Erdos, DR McKinley, LH, Castilla, SD Merajver, FJ Couch, LS Friedman, EA Ostermeyer, ED Lynch, M-C King, PL Welcsh PL, S Osborne-Lawrence, **M Spillman**, AM Bowcock, FS Collins, and BL Weber. (1996). Characterization of *EZH1*, a human homolog of Drosophila *Enhancer of zeste* near BRCA1. *Genomics*, 37: 161-171.
4. **Spillman MA**, and AM Bowcock. (1996). BRCA1 and BRCA2 mRNA levels are coordinately elevated in human breast cancer cells in response to estrogen. *Oncogene*, 13:1639-1645.
5. Wu LC, ZW Wang, JT Tsan, **MA Spillman**, A Phung, XL Xu, M-C Yang, L-Y Hwang, AM Bowcock, and R Baer. (1996) Identification of a RING protein that interacts *in vivo* with the BRCA1 gene product. *Nature Genetics*, 14: 430-440.

6. Thai TH, FH Du, JT Tsan, Y Jin, A Phung, **MA Spillman**, HF Massa, CY Muller, R Ashfaq, JM Mathis, DS Miller, BJ Trask, R Baer, and AM Bowcock. (1998) Mutations in the BRCA1-associated ring domain (BARD1) gene in primary breast, ovarian and uterine cancers. *Human Molecular Genetics*, 7:195-202.
7. Tomlinson GE, TT-L Chen, VA Stastny, AK Virmani, **MA Spillman**, V Tonk, JL Blum, NR Schneider, II Wistuba, JW Shay, JD Minna, and AF Gazdar. (1998) Characterization of a breast cancer cell line derived from a germ-line BRCA1 mutation carrier. *Cancer Research*, 58:3237-3242.
8. Morin K, H Rakatansky, FA Riddick Jr., LJ Morse, JM O'Bannon 3rd, MS Goldrich, P Ray, M Weiss, RM Sade, **MA Spillman**. (2002). Conflicts of interests in clinical trials. *JAMA*, 287(1): 78-84.
9. Taub S, K Morin, **MA Spillman**, RM Sade, FA Riddick; Council on Ethical and Judicial Affairs of the American Medical Association.(2004) Managing familial risk in genetic testing. *Genet. Test.* 8 (3): 356-9.
10. Taub S, K Morin, RM Sade, **MA Spillman**; Council on Ethical and Judicial Affairs of the American Medical Association. (2004) Safeguards in the use of DNA databanks in genomic research. *Genet. Med.* 6(6): 526-9.
11. **Spillman MA**, and A Berchuck (2005). "Stretching the surface epithelium," *Journal of Society of Gynecologic Investigation*, 11(8):501-2.
12. **Spillman MA**, JM Schildkraut, S Halabi, P Moorman, B Calingaert, RC Bentley, JR Marks, S Murphy, A Berchuck.(2005). Transforming growth factor  $\beta$  receptor I polyalanine repeat polymorphism does not increase ovarian cancer risk. *Gynecologic Oncology*, 97:543-549.
13. Murphy SK, Z Huang, Y Wen, **MA Spillman**, RS Whitaker, LR Simel, TD Nichols, JR Marks and A Berchuck. (2006) Frequent *IGF2/H19* domain epigenetic alterations and elevated *IGF2* expression in epithelial ovarian cancer. *Molecular Cancer Research*, 4(4): 283-292.
14. Soper JT, **MA Spillman**, JH Sampson, JP Kirkpatrick, JK Wolf, DL Clarke-Pearson. (2007) High-risk Gestational Trophoblastic Neoplasia with brain metastases: individualized multidisciplinary therapy in the management of four patients. *Gynecologic Oncology*, 104: 691– 694.
15. **Spillman MA** and R Sade. (2007). Clinical Trials of Xenotransplantation: Waiver of the Right to Withdraw from a Clinical Trial Should Be Required. *J Law Med Ethics*, Summer;35(2):265-72.
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80. Brown AJ, N duPont, R Alvarez, **M Spillman**, L Landrum, C Lefkowitz. MAID ready for primetime? A survey of SGO members regarding medical aid in dying (MAID). *Gynecol Oncol Rep*. 2021 Jul 5;37:100829. PMID: 34277920

(\*) indicates American Society of Reproductive Medicine or American College of Obstetricians and Gynecologists Ethics Committee papers. By convention, the author citation is the ASRM or ACOG; however, I am an acknowledged committee member and author and the publications are searchable under my name M Spillman in pubmed.

#### NON-REFEREED INVITED EDITORIALS

**Spillman MA**. "SGO Washington Update: The Price of a Profession." *Gynecologic Oncology*, 119(1):3-4, 2010. PMID:20708785

**Spillman, MA**. "Until Debt Do Us Part," *Gynecologic Oncology*, 2011. 123(3):455. PMID:22020038

**Spillman MA**. "Mad Men (of Medicine)," AM News Ethical Commentary, 2013.

**Spillman MA**. "I, Robotic Surgeon." Virtual Mentor Ethical Commentary, 1;16(10):813-7, 2014. PMID:25310049

#### BOOK CHAPTERS

**Spillman MA**, Berchuck A. Diagnosis and management of hereditary cancer. *Glass' Office Gynecology*, 6<sup>th</sup> edition, (Curtis M, Overholt S, Hopkins MP eds.) Lippincott, Williams and Wilkins, Philadelphia, 2006.

Clarke-Pearson DL, **Spillman MA**, Lutman, CV, Lee PS. Preoperative Evaluation and Postoperative Management. *Clinical Gynecology*, 1<sup>st</sup> edition, (Bieber E, Sanfilippo J, and Horowitz I, eds.), Elsevier, Churchill Livingstone Title, 2006.

Lee PS, **Spillman MA**, Lutman CV, and Clarke-Pearson DL. Preoperative Evaluation. *Berek and Novak's Gynecology*, 14th edition (Berek, J, ed.) Lippincott, Williams, and Wilkins, 2006.

**Spillman MA**, Berchuck A. Diagnosis and management of hereditary cancer. *Glass' Office Gynecology*, 7<sup>th</sup> edition, (Curtis M, Overholt S, Hopkins MP eds.) Lippincott, Williams and Wilkins, Philadelphia, 2014.

## OTHER DOCUMENTS

**Spillman MA**, Behbakht K, Kelly M, Davidson S. A Phase II Study of Fulvestrant (Faslodex®) as a Maintenance Chemopreventative Agent in Advanced Serous Epithelial Ovarian Cancer after Complete Response to Frontline Surgery and Chemotherapy, AACR/ASCO Methods in Clinical Cancer Research Workshop, Vail, CO, August, 2009.

**Spillman MA**, and Karlan B for the SGO Research Summit Committee. “Pathways to Progress: The next decade of research in women’s cancer.” 2011

## ABSTRACTS

Welsh PL, Osborne-Lawrence SL, **Spillman MA**, Lovett M, and Bowcock AM. Characterization of direct selected cDNAs from BRCA1 region of 17q21. *American Journal of Human Genetics*, 55 Supplement: A274, 1994. American Society of Human Genetics, poster presentation.

**Spillman MA**, and Bowcock AM. Estrogen stimulation of the BT-483 cell line results in increased levels of BRCA1 and ETV4 mRNAs. *American Journal of Human Genetics*, 57 Supplement:A5, 1995. American Society of Human Genetics, oral plenary presentation.

Bowcock AM, and **Spillman MA**. BRCA1 and BRCA2 mRNAs are coordinately elevated in breast cancer cells by estrogen. *American Journal of Human Genetics*, 59 Suppl: A35, 1996. American Society of Human Genetics, oral presentation

**Spillman MA**, Du F, Zhao C, and Bowcock AM. The use of mRNA differential display to isolate genes altered in breast cancer progression. *American Journal of Human Genetics*, 59 Supplement: A52, 1996. American Society of Human Genetics, oral presentation

**Spillman MA**, Mok SC and Bowcock AM. Estrogen upregulates ETV4 mRNA transcript levels. Poster Number, Proceedings of the American Association for Cancer Research, 2002, 43:117. Annual Meeting San Francisco, 2002, poster presentation, abstract #585.

**Spillman MA**, Kim J-H, Bowcock AM, Mok SC. Nuclear oncogene ETV4 is overexpressed in ovarian cancer. *Gynecologic Oncology*, 84(3): 510. Poster, 33rd Annual Society of Gynecologic Oncologists Meeting, Miami, 2002.

Murphy SK, **Spillman MA**, Whitaker RS, Marks JM, and Berchuck A. Epigenetic alterations and deregulated IGF2 expression in ovarian cancer. AACR Meeting Abstracts 2004:963. American Association of Cancer Research, 95<sup>th</sup> Annual meeting, poster, 2004.

**Spillman MA**, Schildkraut JM, Calingaert B, Wenham RM, Marks JR, Spurdle AB, Chenevix-Trench G, and Berchuck A. Relationship between polymorphisms in the progesterone and type I TGF- $\beta$  receptors and ovarian cancer risk. Program 10<sup>th</sup> Biennial Meeting of the International Gynecologic Cancer Society, Edinburgh, Scotland, October 3-7, 2004. Abstract #25, plenary oral presentation.

**Spillman MA**, Lacy J, Whitaker RS, Grace L, Teaberry V, Murphy SK, and Berchuck A.

Regulation of metastasis suppressor gene MKK4 in ovarian cancer. *Gynecologic Oncology* Supplement 101: S170, 2006. 37<sup>th</sup> Annual Meeting of the Society of Gynecologic Oncologists, poster presentation, 2006

**Spillman MA**, Sartorius CA, Harrell JC, Manning NG, Jacobsen BM, Horwitz KB. Estrogen alters tumor growth and metastatic pattern in a human ovarian cancer xenograft model. AACR Meeting Abstracts, 2008: 4572. AACR Annual Meeting, poster presentation, 2008.

**Spillman M**, Sartorius C, Harrell JC, Manning N, Jacobsen B, Horwitz K. Estrogen alters tumor growth and metastatic pattern in a human ovarian cancer xenograft model. Abstract 205, Poster, Program of the 11<sup>th</sup> International Gynecologic Cancer Society Meeting, Bangkok, Thailand, October 25-28, 2008.

**Spillman MA**, Sartorius CA, Harrell JC, Manning N, Jacobsen BM, Horwitz KB. Estrogen Replacement Therapy Promotes Extraperitoneal Lymph Node Metastases in a Mouse Xenograft Ovarian Cancer Model. *Gynecologic Oncology*, 112(2): S184. Poster, 40<sup>th</sup> Annual Meeting of the Society of Gynecologic Oncologists, San Antonio, 2009.

Syed N, Conner A, Helfrich B, Korch C, Behbakht K, **Spillman MA**. DNA Genotype Authentication of Ovarian Cancer Cell Lines: Provenance versus Proof. *Gynecologic Oncology*, 112(2): S184. Poster, 40<sup>th</sup> Annual Meeting of the Society of Gynecologic Oncologists, San Antonio, 2009.

**Spillman M**, Conner A, Conageski C, Helfrich B, Behbakht K. Anti-Proliferative Activity of c-SRC Kinase Inhibitor Saracatinib Correlates with IGF1R and EGFR Expression in Ovarian Cancer Cell Lines. *Gynecologic Oncology* 116:S158. Poster, 41<sup>st</sup> Annual Meeting of the Society of Gynecologic Oncologists, San Francisco, 2010.

**Spillman MA**, Manning NG, Dye W, Harvell DME, Jacobsen BM, Horwitz KB. Estrogen Replacement Therapy Induces a Unique Gene Expression Pattern in Ovarian Cancer. Meeting Abstract Book, Keystone Symposium Nuclear Receptors: Signaling, Gene Regulation, and Cancer, Keystone, CO, March 21-26, 2010. Poster 334, page 121.

**Spillman MA**, Manning NG, Dye W, Sartorius CA, Post MD, Harvell DME, Jacobsen BM, Horwitz KB. Tissue specific pathways for estrogen regulation of ovarian cancer growth and metastasis. Rocky Mountain Reproductive Sciences Symposium, April 17, 2010, Ft. Collins, CO. Poster 29, page 33.

Stashwick C, **Spillman M**, Behbakht K, Davidson S, and Kelly MG. Non-debulkability score (NDS) predicts residual disease and surgical morbidity in ovarian cancer. Rocky Mountain Reproductive Sciences Symposium, April 17, 2010, Ft. Collins, CO. Oral presentation, Abstract 7, page 11.

**Spillman M**, Jacobsen B, Bradford A, Murphy S, Jackson T, Helfrich B, Lessey B, and Korch C. The Women's Cancer Cell Genotype Atlas (WCCGA): DNA authentication of endometrial cancer, ovarian cancer, and breast cancer cell lines. International Gynecologic Cancer Society, Prague, 2010. Abstract 1559, poster.

**Spillman MA**, Manning NG, Dye W, Jacobsen B, and Horwitz KB. Estrogen replacement therapy induces a unique gene expression pattern in ovarian cancer that differs from breast cancer, International Gynecologic Cancer Society, Prague, 2010. Abstract 374, oral presentation.

**Spillman MA**, Manning NG, Dye W, and Horwitz KB. Ovarian cancer lymph node metastases express unique cellular structure and adhesion genes. Abstract 119, poster presentation. Society of Gynecologic Oncologists 42nd Annual Meeting, Orlando, 2011.

Enriquez VA, **Spillman MA**, Seabrook JL, Winger QA, and Bouma GJ. LIN28 and MicroRNAs in Ovarian Cancer. Society for the Study of Reproduction, 2011 Poster

Anderson C, Bemis L, Medlin E, Manning N, Dye W, Hicks D, and **Spillman MA**. Differential Estrogen Regulation of Ovarian Cancer MicroRNAs Integrates BRCA1 and Progesterone Receptor Pathways, poster presentation, SGO 43rd Annual Meeting, Austin 2012.

Enriquez VA , da Silveria JC , **Spillman MA**, Winger QA , and Bouma GJ. Ovarian cancer cell-secreted exosomes induce molecular and phenotypic changes in cells. CVMBS, 2012, poster

Hicks D, Scarborough H, Bemis L, **Spillman MA**. MicroRNA 146a Is a Potential Urinary Biomarker of Ovarian Cancer, International Gynecologic Cancer Society, Vancouver, 2012, poster.

Powell MA, Sill MW, Goodfellow PJ, Leslie KK, Jeske YW, Lankes HA, Mannel RS, **Spillman MA**, Lee PS, Hoffman JS, McMeekin DS, Pollock PM, for the Gynecologic Oncology Group. A Phase II Trial of Brivanib in Recurrent or Persistent Endometrial Cancer: A Gynecologic Oncology Group Study, International Gynecologic Cancer Society, Vancouver, 2012, plenary presentation.

Anderson C, Hicks D, Scarborough H, Vanderlinden L, Tabakoff B, and **Spillman MA**. Neuropathic Pain Inhibitor Kindolor Augments Efficacy of Gemcitabine and Paclitaxel in Ovarian Cancer Cell Lines Allowing Reduced Chemotherapy Concentration. Society of Gynecologic Oncology, Los Angeles, 2013, poster.

Enriquez VA, da Silveria JC, **Spillman MA**, Bruemmer J, Winger QA, and Bouma GJ. Cell-secreted exosomes in ovarian cancer. CSU Ventures meeting, April, 2013.

Allensworth S, Boon DJ, **Spillman MA**. “Do the skills of a gynecologic oncologist cross species?” Society of Gynecologic Oncology, Tampa, 2014, poster.

Guy M, Corr B, Davidson S, Guntupalli S, Sheeder J, **Spillman MA**, Behbakht K. “Comparative surgical outcomes in endometrial cancer patients staged with robotics or laparotomy 65 years and older,” Society of Gynecologic Oncology, Tampa, 2014, poster.

Anderson CA, Davidson S, Fontenot A, Medlin E, Sheeder J, **Spillman MA**, Behbakht, K, Guntupalli S. “Hemostatic gelatin-thrombin matrix is associated with pelvic abscesses in patients

undergoing surgery for gynecologic cancer.” Western Association of Gynecologic Oncologists, 2014.

Guy MS, Kumar L, Behbakht K, **Spillman MA**. " Progestin treatment decreases CD133+ cancer stem cell populations in endometrial cancer. Western Association of Gynecologic Oncologists, 2014.

Richmond AM, Blake EA, Smith EE, **Spillman MA**, Post MD. "Fascin expression is associated with epithelial-mesenchymal transition and advanced disease in uterine carcinosarcoma. Accepted for poster presentation, Western Association of Gynecologic Oncologists, 2015.

Doo DW, Sheeder J, Quinn ME, **Spillman MA**, Post MD. "Expression of CD44 is positively correlated with estrogen receptor status in epithelial ovarian cancer." Western Association of Gynecologic Oncologists, accepted for poster presentation, 2015.

Corr B, Finlay-Schultz J, Rosen RB, Qamar L, Post MD, Behbakht K, **Spillman MA**, Sartorius CA. "Cytokeratin 5 positive cells represent a therapy resistant subpopulation in epithelial ovarian cancer." Accepted for poster presentation Western Association of Gynecologic Oncologists, 2015.

Salhia B. **M Spillman**, AJ Goel. (2018) Identification of epigenetic non-invasive biomarkers for the early detection of ovarian cancer. Baylor Scott and White Research Institute-Translational Genomics (TGEN) Retreat, oral presentation and poster. (Winner Best Poster)

Brown AJ. N duPont, R Alvarez, **M Spillman**, L Landrum, C Lefkowitz. (2021) MAID ready for primetime?: A survey of SGO membership regarding medical aid in dying (MAID), SGO Virtual Meeting.

Dinerman A, Thompson R, Ogola G, Preskitt JT, **Spillman M**, Landry C. (2022) Sentinel lymph node biopsy for early vulvar squamous cell carcinoma. Society of Surgical Oncology Annual Meeting, poster.

## **PRESENTATIONS: *INVITED LECTURES***

### **LOCAL**

- |      |   |
|------|---|
| 2006 | “Human Papilloma Virus: Statistics and Science”<br>Colorado Obstetrics and Gynecology Society, Garden of the Gods, CO                 |
| 2007 | “Career Options after an MD/PhD”<br>22 <sup>nd</sup> annual National MD/PhD Meeting, Keystone, CO.                                    |
| 2008 | “Ethics of Genetic Testing in Gynecologic Oncology” Society of<br>Gynecologic Nurse Oncologists, Denver, CO                           |
| 2009 | “Ovarian Cancer: Accessories Matter”<br>Ovarian Cancer Research Fund Super Luncheon,<br>Governor’s Mansion, Denver CO, September 2009 |



- 2011 “Moving on up: ovarian cancer metastasis outside of the abdominal cavity,” Hormone Related Malignancies Retreat, March 25, 2011
- 2011 "What's new in ovarian cancer research," Cheryl Shackelford Foundation Survivor's Lunch, Denver, CO June 3, 2011.
- 2011 "PECOC: Program of Excellence in Cancers of the Ovary of Colorado" Teal Soiree Featured Speaker, Shackelford Foundation, September, 2011.
- 2014 "Ovarian cancer genes: From wandering to wondering," Cvetko Center Ovarian Cancer Survivor's Program, Dallas TX September 2014
- 2016 “Ovarian Cancer: What’s in your genes?” OVARCOME Program, February, 2016, Sammons Cancer Center
- 2018 “Me Three,” Conference of the Professions, Dallas Tx, May, 2018.
- 2019 “What’s in Your Genes?: from genetic testing to genomics to targeted drugs in gynecologic oncology.” Society of Gynecologic Nurse Oncologists Annual Meeting, Fort Worth, Texas.
- 2022 “Medicine and Marketing: Ethical Conflict?” Department of Surgery Grand Rounds, Baylor University Medical Center

## **REGIONAL**

- 2012 "Clinical Implications of BRCA Mutations," Colorado Ovarian Cancer Summit, Denver CO
- 2009 “Ovarian Cancer: A Steroid Hormone Responsive Disease?” University of Texas Southwestern Department of OB/Gyn Grand Rounds
- 2011 “Genetic Testing in Gynecology: Medicine and Marketing” Colorado Obstetrics and Gynecology Society, Aspen, CO
- 2011 “Robotic Surgery: the technique is not worth the time and investment,” a Pro – Con Debate Colorado Obstetrics and Gynecology Society, Aspen, CO
- 2011 “Tissue Specific Pathways for Estrogen Regulation of Ovarian Cancer Growth and Metastasis”
- 2012 "Clinical Implications of BRCA Mutations," Colorado Ovarian Cancer Summit, Denver CO
- 2015 Texas Oncology Annual Shareholders Meeting, Dallas, TX

	"Medicine and Marketing: Ethical Conflict?"
2022	Grand Rounds, Department of Surgery, Baylor, Dallas TX "Medicine and Marketing: Ethical Conflict?"
<b>NATIONAL</b>	
2004	"Residents and Fellows: Needs, Knowledge and Attitudes" North Carolina Leadership College Select Presentation, North Carolina Medical Society Annual Meeting
2004	"Bump Down There: A primer of vulvar dermatology" Grand Rounds, Cape Fear Valley Medical Center, North Carolina
2004	"Pelvic Masquerade: Genitourinary tuberculosis" Grand Rounds, Cape Fear Valley Medical Center, North Carolina
2005	"Clinical trials of xenotransplantation: is a waiver of the right to withdraw required?" Pitts Lectureship in Medical Ethics: Reflections on Emerging Technologies at the Centennial of Organ Transplantation Medical University of South Carolina
2005	"Pelvic Masquerade: Genitourinary tuberculosis" Grand Rounds, WakeMed Medical Center, North Carolina
2006	"A Stem-ulating Topic: Science, Policy and Ethics of Stem Cells" Duke Department of Obstetrics and Gynecology Grand Rounds
2006	"Ovarian and Cervical Cancer: The Quiet Ones," Friends of Nursing Living Well Conference
2008	"Research in Prevention and Early Detection Optimizes Gynecologic Cancer Care," Society of Gynecologic Oncologists Capitol Hill Briefing, Washington, DC
2008	Plenary Session Discussant, "Cancer Stem Cell Gene Signature Identified from Ovarian Tumor Side Populations," Society of Gynecologic Oncologists, 39 <sup>th</sup> Annual Meeting
2009	"What's in Your Genes? Genetic Testing in Gynecologic Oncology," Grand Rounds, Portsmouth Naval Hospital, Portsmouth, VA
2010	"Health Care Reform: Policies that Affect Gynecologic Cancer Care," plenary session, Society of Gynecologic Oncologists 41 <sup>st</sup> Annual Meeting, San Francisco, CA

- 2011                    “Innovative Payment Strategies in Health Care Reform,” plenary session, Society of Gynecologic Oncologists, 42<sup>nd</sup> Annual Meeting, Orlando, FL.
- 2012                    "Medicine and Marketing: Ethical Implications," invited speaker for the Society of Memorial Sloan Kettering Gynecologic Oncologists
- 2012                    "Practice Implications of Health Care Reform," plenary session, Society of Gynecologic Oncology, 43rd Annual Meeting, Austin, TX.
- 2012                    "Cost Considerations in Cancer Care: Slippery Slope of Bedside Rationing," Society of Gynecologic Oncology, 43rd Annual Meeting.
- 2012                    "Will PARP Inhibitors be the Treatment of Choice for All Serous Cancers?" Society of Gynecologic Oncology, 43rd Annual Meeting.
- 2012                    "Practice Implications of the Pathways to Progress Report," SGO Winter Meeting, Lake Tahoe, CA.
- 2013                    "Authentication of Ovarian and Endometrial Cancer Cell Lines," Society of Gynecologic Oncology Winter Meeting, Beaver Creek, CO.
- 2014                    "Your ACA Movement: How the Affordable Care Act Affects Gynecologic Oncology." Society of Gynecologic Oncology Annual Meeting, Tampa FL.
- 2019                    “Professional Ethics Code of Conduct,” Society of Gynecologic Oncology 50<sup>th</sup> Annual Meeting, Honolulu Hawaii.
- 2020                    “Ethical Considerations and Critical Communications in COVID-19”, Society of Gynecologic Oncology Webinar, April, 2020.

## **INTERNATIONAL**

- 2014                    “Moving Up and Away from the Ovary: Role of Estrogen in Ovarian Growth and Metastasis,” la División de Obstetricia y Ginecología de la Pontificia Universidad Católica de Chile, April 2014
- 2014                    “Estrogen Increases Ovarian Cancer Metastasis in a Mouse Model,” VII Encuentro Internacional de Obstetricia y Ginecología, Vina del Mar, Chile, April 2014

## GRANT SUPPORT

### Past Funding

2003	Principal Investigator Ovarian Cancer Research Fund Program of Excellence Award “The Role of MAP2K4 in Suppressing Metastasis of Serous Ovarian Cancers”	100% effort (\$75,000)
2006-2011	Fellow Women’s Reproductive Health Research Scholars NIH-HD01271-04 (PI Ronald Gibbs; M.C. Neville, Program Director)	38% effort
2007	Principal Investigator Department of Obstetrics and Gynecology, UCHSC Academic Enrichment Fund “Mouse Models of Human Ovarian Cancer Distant Metastases”	10% effort (\$10,000)
2007-2008	Principal Investigator Gynecologic Cancer Foundation Susan G. Komen Breast Cancer Foundation Career Development Award “Steroid Hormone Regulation of Extraperitoneal Ovarian Cancer Metastases in Mouse Models”	37% effort (\$100,000)
2007-2008	Sub-Investigator Adelson Foundation Ovarian Cancer Research Consortium	10% effort (\$45,000)
2008-2009	Sub-Investigator Avon Foundation “Banking Normal Tissues from High-Risk Breast and Ovarian Cancer Patients”	10% effort (\$50,000)
2008-2009	Principal Investigator Department of Obstetrics and Gynecology, University of Colorado Academic Enrichment Fund “Banking Normal and Diseased Gynecologic Tissues Removed at Surgery”	10% effort (\$20,000)
2009-2013	Principal Investigator Ovarian Cancer Research Fund/Liz Tilberis Scholars “Modulation of Estrogen Response in a Mouse Xenograft Model of Steroid Hormone Sensitive Ovarian Cancer.”	37% effort (\$150,000/yr/3yrs)
2011-2012	Principal Investigator American Cancer Society Independent Research Grant “Targeting Ovarian Cancer Biomarkers as Small Animal PET-CT and MRI Imaging Agents.”	\$30,000

2011-2012	Co-Principal Investigator HERA Foundation Sean Patrick Translational Research Award "Novel Methods for the Detection of microRNAs in Accessible Fluids of Ovarian Cancer Patients."	\$50,000
2011-2014	Principal Investigator Department of Obstetrics and Gynecology Start Up Funds	\$711,000
2016	Collaborator with Dr. Bodour Sahlia and Dr. Ajay Goel Baylor Research Institute/TGEN Funds Identification of epigenetic non-invasive biomarkers for cancer.	\$413,770 the early detection of ovarian
2017	Baylor Co-PI with TGEN PI Dr. Will Hendricks Defining and exploiting novel therapeutic vulnerabilities in SWI/SNF-mutant ovarian cancers	\$257,175

#### **COMMUNITY SERVICE: TELEVISION INTERVIEWS**

2009	Channel 7 Denver, Live Expert Interview CA125 as Ovarian Cancer Screening Test
2009	Channel 4 Denver, Taped Expert Interview Rare Cervical Cancers2
2009	Channel 7 Denver, Taped Expert Interview Fertility Sparing Surgery in Ovarian Cancer
2010	Channel 7Denver, Taped Expert Interview Ovarian Cancer Symptoms
2012	Channel 4 Denver, Taped Expert Interview New Tests for Early Ovarian Cancer Detection
2012	Channel 9 Denver, Taped Expert Interview Saving Sally Orangutan surgery
2012	Denver Post Online VideoBlog Saving Sally
2013	Channel 7 Denver, Live Expert Interview: BRCA Testing and Risk Reducing Surgery
2020	Channel 4 Abilene, Live Expert Interview Why are Cancer Rates Falling?
2020	Dallas, Taped Expert Interview Differences between home DNA testing and cancer specific DNA testing.

#### **COMMUNITY ACTIVITIES**

Gynecologic Surgical Consultant to the Denver Zoo (ended May, 2014) Colorado Ovarian Cancer Alliance Board of Directors (ended March, 2014) Citizen Potawatomi Nation Member

## **Matthew Thomas Solverson**

9816 Emmet St.

Omaha, NE 68134

Preferred Phone: 414-232-5024

Email: [matthew.solverson@unmc.edu](mailto:matthew.solverson@unmc.edu)

### **Surgical Residency**

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University of Nebraska Medical Center

Dept. of Otolaryngology – Head and Neck Surgery

Start Date: 07/01/2017

Expected completion date: 06/30/2022

### **Medical Education**

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Medical College of Wisconsin, United States

Doctor of Medicine

08/2013 - 05/2017

### **Undergraduate Education**

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University of Wisconsin-Madison, Madison, WI

Bachelor of Science

Majors: Neurobiology and Psychology

08/2008 - 05/2013

### **Membership and Honorary/Professional Societies**

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Phi Beta Kappa Honor Society, UW-Madison Chapter

Alpha Omega Alpha Society, University of Nebraska Chapter

American Academy of Otolaryngology-Head and Neck Surgery #143772

### **Certification/Licensure**

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Basic Life Support, American Heart Association

Nebraska TEP 8039

CITI ID 4016794

### **Volunteer Experience**

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**MCW Buddies**, Milwaukee, WI, United States

Date: 01/2015 - 04/2015, medical student volunteer with pediatric dialysis patients

**Repairers of the Breach-Homeless Clinic**, Milwaukee, WI, United States

Date: 09/2014 - 06/2015, medical student volunteer

**Saturday Clinic for the Uninsured**, Milwaukee, WI, United States

08/2014 - 05/2015, medical student volunteer

**Milwaukee Lakefront Marathon Medical Tent**, Milwaukee, WI, United States

10/2013 - 10/2014, medical student volunteer

**American Family Children's Hospital**, Madison, WI, United States

Date: 01/2012 - 07/2012, undergraduate student volunteer

## **Work Experience**

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**Harlow Primate Laboratory**, Madison, WI, United States

Date: 05/2011 - 08/2013, student research assistant

**Wisconsin Sleep Laboratory**, Madison, WI, United States

Date: 05/2010 – 04/2011, student research assistant

**Ozaukee County Highway Patrol**, Cedarburg, WI, United States

05/2009 – 08/2009

## **Presentations**

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UNMC ENT Morbidity and Mortality/Quality Improvement

- 02/14/2017 – Esophageal variceal bleed after total thyroidectomy – mortality
- 10/10/2018 – Distal tip necrosis of nasal bilobed flap
- 11/14/2018 – Hematoma after alar concentric advancement flap
- 01/09/2019 – Retained tube in middle ear space
- 02/04/2019 – Delayed neck exploration in case of necrotizing fasciitis
- 03/13/2019 –
  - Acquired choanal stenosis
  - Wound infections after dog bite injury to head and neck
- 04/10/2019 – Chyle leak after supraomohyoid neck dissection
- 08/14/2019 – Severe post-op epistaxis after FESS
- 11/13/2019 – Complicated hospital course after total laryngopharyngectomy – mortality
- 11/11/2020 – Acute MI after paramedian and melolabial flaps – mortality
- 12/08/2020 – Acute respiratory failure during pediatric tracheostomy

UNMC ENT Grand Rounds

- 05/30/2018 – Laryngectomy: a historical perspective
- 02/27/2019 – Deep neck space infections
- 06/13/2020 – Free flap reconstruction in head and neck surgery
- 10/28/2020 – Mental health in head and neck cancer patients

American College of Surgeons – Student Symposium, 2016 Oct.

- Solverson M, Neideen T. Extended review of beta blockers in geriatric trauma patients: Pre-injury beta blockers are associated with decreased mortality. Poster presentation. 2016 Oct. Washington, DC.

Fall Voice Conference – 2019 Oct.

- Solverson M, Klute L, Bingcang C, Dowdall J. Diffuse spontaneous laryngeal hemorrhage with Trastuzumab. Poster Presentation. 2019 Oct. Plano, TX.

## **Publications**

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- Solverson M. Authorship - Perspective of an ENT resident. Graduate Medical Education Research Journal. 2020 Sep 29; 2(1). doi: 10.32873/unmc.dc.gmerj.2.1.006.
- Klute L, Solverson M, Bingcang CM, Dowdall JR. Diffuse spontaneous laryngeal hemorrhage with Trastuzumab. Case Reports in Otolaryngology. 2020 Aug 24; 2020. Article ID 8818905, <https://doi.org/10.1155/2020/8818905>
- Faria J, Solverson M, Faria M, Benoit M, McCormick M. Potential cytochrome p450 drug-drug interactions among pediatric patients undergoing tonsillectomy. Otolaryngol Head Neck Surg. 2019 Jan;160(1):145-149. doi: 10.1177/0194599818793850.

## **Ongoing Research**

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Date: 05/2020 – current

Location: Dept. Otolaryngology - Head and Neck Surgery, University of Nebraska Medical Center, Omaha, NE

Role: Resident researcher

Supervisors: Elizabeth Bradford Bell, MD, Zafar Sayed, MD

Title: Predictors of Salvage Laryngectomy

Goals: Retrospective review of patients with laryngeal cancer to evaluate for patient and treatment factors associated with eventual salvage laryngectomy.

Role: Assist with project design and implementation, data collection.

Status: Data analysis, collecting further data

Date: 03/2020 – current

Location: Dept. Otolaryngology - Head and Neck Surgery, University of Nebraska Medical Center, Omaha, NE

Role: Resident researcher

Supervisors: Kristy Carlson, PhD; Jayme Dowdall, MD; Christie Barnes, MD

Critique of nasopharyngeal swab educational videos

Goals: Have otolaryngologists review and critique a multitude of educational videos teaching nasopharyngeal swab technique.

Role: Development of scoring system for rating the educational videos. Distribution of videos to otolaryngologists for review. Writing and revision of manuscript.

Status: in preparation for submission to journal

Date: 05/2019 – current



Location: Dept. Otolaryngology - Head and Neck Surgery, University of Nebraska Medical Center, Omaha, NE

Role: Resident researcher

Supervisors: Jayme Dowdall, MD; Christie Barnes, MD

Title: Tracheostomy Quality Improvement

Goals:

- 1.) Improve care providers' knowledge and comfort with tracheostomy related care.
- 2.) Evaluate the utility of an e-learning module in the quality improvement process.

Role: Development of quiz and survey to assess learner's comfort and knowledge of tracheostomy care pre- and post-module.

Status: The module, quiz, and survey are currently implemented into the curriculum of residents who undergo clinical rotation in the ICU. Data is currently being collected.

## **Courses**

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AOCMF Management of Facial Trauma

- Sep 8-9, 2018

UNMC Anatomy of the Head and Neck

- Aug 16-18, 2017
- Aug 15-17, 2018
- Aug 14-16, 2019
- Aug 1-9-21, 2020
- Aug 18-20, 2021

UNMC Basic Temporal Bone

- Mar 22-23, 2018

UNMC Skull Base and Advanced Otology

- Mar 28-29, 2019
- June 24-25, 2021

UNMC Basic Sinus

- May 16-17, 2019

UNMC Skull Base and Advanced Sinus

- May 11-12, 2018

UNMC Airway

- Feb 22, 2019

UNMC Facial Trauma

- Jul 28, 2018

- Jul 18, 2020

UNMC Ultrasound of the Head and Neck

- Nov 2, 2018
- Nov 6, 2020

### **Awards**

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Werner Progressive Care Unit Physician of the Quarter, 12/2019 – 02/2020

InterCOM Resident of the Month, November 2020

UNMC Oto-HNS Resident of the Year, 2020-2021

### **Hobbies & Interests**

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Ice hockey, soccer, deer hunting, turkey hunting, personal fitness, fishing, cooking, Wisconsin sports

**Nicholas D. Tingquist**  
5 Claiborne St • Nashville, TN 37210  
501.590.2608 • ntingquist@gmail.com

#### Education

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2020- Pres	Vanderbilt University Medical Center, Nashville, TN Department of Thoracic Surgery, Cardiothoracic Surgery Fellowship
2015- 2020	University of Arkansas for Medical Sciences, Little Rock, AR Department of Surgery, General Surgery Residency
2011- 2015	University of Arkansas for Medical Sciences, Little Rock, AR Medical Degree
2007- 2011	University of Arkansas, Fayetteville, AR B.S. in Biochemistry, Summa Cum Laude

#### Board Certifications

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2020- Pres	American Board of Surgery
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#### Credentialing/Licensure

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2022- Pres	Donor Heart Procurement, Tennessee Donor Services
2021- Pres	Donor Lung Procurement, Tennessee Donor Services
2020- Pres	Tennessee State Medical License

#### Honors and Awards

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2020	Chris Hackler Award for Excellence in Medical Ethics
2020	University of Arkansas for Medical Sciences Resident of the Year
2020	Robert M. Bransford, MD Outstanding Chief Resident Award
2019 – 2020	General Surgery Chief Resident, University of Arkansas
2016	Iron Intern Award, University of Arkansas
2015	Dr. Forrest Ellis Promise in Surgery Scholarship <ul style="list-style-type: none"><li>• medical school senior with a promising career in surgery</li></ul>
2007 – 2012	Governor's Distinguished Scholar <ul style="list-style-type: none"><li>• Competitive academic scholarship, awarded by state</li></ul>
2007 – 2011	University of Arkansas Honors College Fellowship <ul style="list-style-type: none"><li>• Competitive academic scholarship, awarded by university</li></ul>

## Podium Presentations

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- |          |  |
|----------|--|
| Mar 2022 | "Robotic Subxiphoid Thymectomy"<br>Nicholas Tingquist, M.D. and Eric Grogan, M.D.<br>Presented at General Thoracic Surgical Club Meeting, 2022.  |
| Oct 2019 | "Smoking Cessation Counseling In A Thoracic Surgery Clinic Is Effective."<br>Matthew Steliga, M.D. and Jason Muesse, M.D., Faculty.<br>Oral Presentation at International Association for the Study of Lung Cancer North American Meeting, 2019. |

## Publications

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- |           |  |
|-----------|--|
| Sept 2021 | "Commentary: Anterior Superior Sulcus Tumor Resection: Easing Complexity"<br>Nesbitt, J. and Tingquist, N. <i>JCTVS Techniques</i> . Accepted for Publication.   |
| Sept 2021 | Klutts, G., Tingquist, n., Pagteilan, J., Sexton, K., Muesse, J., Marino, k., Steliga, M. "A Pathway for Esophageal Obstruction is Associated with Decreased Cost and Length-Of-Stay" <i>Foregut</i> . Accepted for Publication. |

## Book Chapters

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- |          |  |
|----------|--|
| Oct 2022 | In Publication – Upchurch, Sonnenday, and Dimick. "Non-Small Cell Lung Cancer". In Lippincot, Williams, and Wilkins (2022) <i>Clinical Scenarios in Surgery: Decision Making and Operative Technique</i> . |
| May 2022 | In Publication - Servais and Smit. "Robotic Diaphragm Plication". In Elsevier (2022) <i>Robotic Thoracic Surgery</i> .   |
| Mar 2017 | Bland et al. "Diagnosis and Management of Pleural Metastases and Malignant Effusion in Breast Cancer". In Elsevier (2017) <i>The Breast</i> .  |

## Poster Presentations

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| Oct 2018 | "Bronchopleural Fistula in an Unstable Trauma Patient Managed with Endobronchial Valve Therapy." Matthew Steliga, MD, Faculty. Poster presentation at Multidisciplinary Cardiovascular and Thoracic Critical Care Conference, 2018.                  |
| Jan 2018 | "Admission for Advanced Esophageal Cancer: A Dedicated Team Approach Benefits Patients and Reduces Costs."<br>Matthew Steliga, M.D. and Kevin Sexton, M.D., Faculty. Poster presentation at Society of Thoracic Surgeons, 2018.                      |
| Apr 2017 | Tingquist N, Kimbrough MK, Thrush C, Mizell J. Money Matters: A Medical Student Curriculum for Personal and Business Financial Management. (oral presentation). 2017 AAMC SGEA/GSA/SOSR Regional Conference, April 19-22, 2017, Charlottesville, VA. |

Mar 2017

“Forequarter Amputation in a Septuagenarian.” Matthew Steliga, M.D. and Corey Montgomery, M.D., Faculty. Poster presentation at General Thoracic Surgical Club, 2017.

#### Professional Memberships

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2020 – Pres	Southern Thoracic Surgical Association
2020 – Pres	Society of Thoracic Surgeons
2020 – Pres	General Thoracic Surgical Club
2020 – Pres	Alpha Omega Alpha
2015 – Pres	American College of Surgeons
2011 – Pres	American Medical Association

**Curriculum vitae: Ankur Varma, MD, MPH****Mailing Address:**

801 S. Financial Pl, Apt 2817  
Chicago, IL 60605

**Email:** Ankur\_varma@rush.edu

**Phone number:** 713-240-  
0586

**Current Position**

Assistant Professor (7/15/2019- Present)

Department of Internal Medicine, Division of Hematology, Oncology and Cell Therapy,  
Section of Bone Marrow Transplantation and Cellular Therapy  
Rush University

**Education**

MD Anderson Cancer Center

Stem cell transplant and Cellular Therapy Fellowship

07/1/2018-06/23/2019

Baylor College of Medicine, Houston

Hematology Oncology Fellowship

07/2015-6/30/2018

University of Texas Health Science Center, Houston

Internal Medicine Residency

06/24/2012-06/30/2015

University of Texas School of Public Health, Houston

MPH (Masters in Public Health), Epidemiology

08/30/2010-05/09/2014

GPA= 4.0

West Bengal University of Health Sciences, Kolkata, India

R.G. Kar Medical College and Hospital

MBBS (Bachelor of Medicine & Bachelor of Surgery)

09/01/2003-03/09/2009

GPA = 3.81

### **Awards**

1. Award of excellence “Outstanding Oncology Fellow”, Baylor College of Medicine Lester and Sue Smith Breast Center. 06/2018
2. Baylor Cell and Gene Therapy Best Oral Presentation 06/2017
3. 3rdPlace Winner: 2014 TX ACP Residents Day Research Poster Competition
4. 110% Medicine Resident Award, 04/2014, Department of Internal Medicine, University of Texas Health Science Center
5. Outstanding New Student Master’s Tuition Scholarship for the fall semester, 2010, University of Texas School of Public Health

### **Board Certifications**

1. American Board of Internal Medicine: Internal Medicine
2. American Board of Internal Medicine: Hematology
3. American Board of Internal Medicine: Medical Oncology

### **Membership**

1. American Society of Transplantation And Cellular Therapy
2. American College of Physicians
3. Alliance for Clinical Trials in Oncology

### **Editorial Board**

World Journal of Transplantation

### **Journal Reviewer**

1. Blood Advances.
2. Biology of Blood and Bone Marrow Transplantation Journal.
3. European Journal of Haematology.
4. The Cureus Journal of Medical Science
5. Therapeutic Advances in Infectious Disease
6. OncoTargets and Therapy

### **Interview panel/Interviewer**

1. Rush Medical School Admission
2. Rush Hematology Oncology Fellowship program

### **Oral Presentation/Grand Rounds**

1. Optimal donor selection for myeloid and lymphoid malignancies using the CIBMTR database as a part of personalized medicine. 2/20/20. CIBMTR 2020 Annual Meeting
2. CAR- T therapy in Multiple Myeloma, 1/22/2020, Grand Rounds, Rush University Medical Center
3. CAR- T therapy in Lymphoma Multiple Myeloma, 3/19/2021, Grand Rounds, Rush University Medical Center
4. CAR- T therapy in Hematologic Malignancies, 4/9/2021, Hematology Oncology Fellows, Rush University Medical Center
5. Improved Outcomes in Hematological Malignancies Through CAR T-Cell therapy, 3/18/22. Grand Rounds, Stroger hospital of cook county.

### **Publications**

- 1 Strati P, Varma A, Adkins S, Nastoupil LJ, Westin J, Hagemeister FB *et al.* Hematopoietic recovery and immune reconstitution after axicabtagene ciloleucel in patients with large B-cell lymphoma. *Haematologica* 2020; : haematol.2020.254045.
- 2 Shah M V., Saliba RM, Verma A, Ciurea SO, Oran B, Olson A *et al.* Allogeneic stem cell transplant for patients with myeloproliferative neoplasms in blast phase: improving



- outcomes in the recent era. *Br J Haematol* 2021; : bjh.17423.
- 3 Yassa G, Varma A, Baptista J, Myers R, Reimer A, Forrest GN *et al.* Human Herpesvirus-6 Infection and Calcineurin Inhibitor Pain Syndrome Interaction after Umbilical Cord Blood Transplant. *Transplant Cell Ther* 2021. doi:10.1016/j.jtct.2021.02.019.
  - 4 Varma A, Kosuri S, Ustun C, Ibrahim U, Moreira J, Bishop MR *et al.* COVID-19 infection in hematopoietic cell transplantation: age, time from transplant and steroids matter. *Leukemia* 2020; **34**: 2809–2812.
  - 5 Rhee Y, Santos CAQ, Lurain N, Marinovic DA, Prockop SE, Varma A *et al.* Difficult Balance Between Multidrug-Resistant Cytomegalovirus Infection and Graft-Versus-Host Disease in an Allogeneic Hematopoietic Stem Cell Transplant Recipient. *Infect Dis Clin Pract* 2020; **28**: 257–260.
  - 6 Varma A, Kosuri S, Ustun C, Ibrahim U, Moreira J, Bishop MR *et al.* COVID-19 infection in hematopoietic cell transplantation: age, time from transplant and steroids matter. *Leukemia* 2020. doi:10.1038/s41375-020-01019-x.
  - 7 Varma A, Loya J, Junaid Hussain M, Don Yun H, Gobbi EK, Reimer A *et al.* Calcineurin-inhibitor induced pain syndrome after stem cell transplant. *Leuk Lymphoma* 2020; : 1–4.
  - 8 Ciurea SO, Kongtim P, Varma A, Rondon G, Chen J, Srour S *et al.* Is there an optimal conditioning for older patients with AML receiving allogeneic hematopoietic cell transplantation? *Blood* 2020; **135**: 449–452.
  - 9 Varma A, Abraham SC, Mehta RS, Saini NY, Honhar M, Rashid M *et al.* Idiopathic refractory ascites after allogeneic stem cell transplantation: a previously unrecognized entity. *Blood Adv* 2020; **4**: 1296–1306.
  - 10 Varma A, Rondon G, Srour SA, Chen J, Ledesma C, Champlin RE *et al.* Endothelial Activation and Stress Index (EASIX) at Admission Predicts Fluid Overload in Recipients of Allogeneic Stem Cell Transplantation. *Biol Blood Marrow Transplant* 2020. doi:10.1016/j.bbmt.2020.01.028.
  - 11 Saini N, Ma J, Milton DR, Patel R, Varma A, Bashir Q *et al.* Impact of Autologous Transplantation in Patients with Multiple Myeloma with t(11;14): A Propensity-Score Matched Analysis. *Clin Cancer Res* 2019; **25**: 6781–6787.
  - 12 Nathan S, Hussain MJ, Baptista J, Yun HD, Varma A, Vardouniotis A *et al.* DLBCL after Allogeneic HCT in a Patient with Transformed DLBCL: Does it matter Whether Relapse

- or PTLID? *Clin Lymphoma Myeloma Leuk* 2019. doi:10.1016/j.clml.2019.12.002.
- 13 Saini NY, Patel RD, Varma A, Bashir Q, Delgado R, Rondon G *et al.* Outcomes of autologous stem cell transplantation in Waldenström's macroglobulinemia. *Ann Hematol* 2019; **98**: 2233–2235.
  - 14 Kongtim P, Hasan O, Perez JMR, Varma A, Wang SA, Patel KP *et al.* Novel Disease Risk Model for Patients with Acute Myeloid Leukemia Receiving Allogeneic Hematopoietic Cell Transplantation. *Biol Blood Marrow Transplant* 2020; **26**: 197–203.
  - 15 Yun HD, Nathan S, Larson M, Hussain MJ, Katz DA, Varma A *et al.* Erythroid differentiation of myeloblast induced by gilteritinib in relapsed FLT3-ITD-positive acute myeloid leukemia. *Blood Adv* 2019; **3**: 3709–3712.
  - 16 Yun HD, Varma A, Hussain MJ, Nathan S, Brunstein C. Clinical Relevance of Immunobiology in Umbilical Cord Blood Transplantation. *J Clin Med* 2019; **8**: 1968.
  - 17 Varma A, Sui D, Milton DR, Tang G, Saini N, Hasan O *et al.* Outcome of Multiple Myeloma With Chromosome 1q Gain and 1p Deletion After Autologous Hematopoietic Stem Cell Transplantation: propensity-score matched analysis. *Biol Blood Marrow Transplant* 2019. doi:10.1016/j.bbmt.2019.12.726.
  - 18 Subbiah IM, Lei X, Weinberg JS, Sulman EP, Chavez-MacGregor M, Tripathy D *et al.* Validation and Development of a Modified Breast Graded Prognostic Assessment As a Tool for Survival in Patients With Breast Cancer and Brain Metastases. *J Clin Oncol* 2015; **33**: 2239–45.
  - 19 Murthy RK, Varma A, Mishra P, Hess KR, Young E, Murray JL *et al.* Effect of adjuvant/neoadjuvant trastuzumab on clinical outcomes in patients with HER2-positive metastatic breast cancer. *Cancer* 2014; **120**: 1932–8.
  - 20 Afrough A, Saliba RM, Hamdi A, El Fakih R, Varma A, Dinh YT *et al.* Outcome of Patients with Immunoglobulin Light-Chain Amyloidosis with Lung, Liver, Gastrointestinal, Neurologic, and Soft Tissue Involvement after Autologous Hematopoietic Stem Cell Transplantation. *Biol Blood Marrow Transplant* 2015; **21**: 1413–7.
  - 21 Varma A, Saliba RM, Torres HA, Afrough A, Hosing C, Khouri IF *et al.* Outcomes in hepatitis C virus seropositive lymphoma and myeloma patients after autologous stem cell transplantation. *Bone Marrow Transplant* 2016; **51**: 999–1001.

- 22 Afrough A, Saliba RM, Hamdi A, Honhar M, Varma A, Cornelison AM *et al.* Impact of Induction Therapy on the Outcome of Immunoglobulin Light Chain Amyloidosis after Autologous Hematopoietic Stem Cell Transplantation. *Biol Blood Marrow Transplant* 2018; **24**: 2197–2203.
- 23 Varma A, Biritxinaga L, Saliba RM, Stich M, Jauch SF, Afrough A *et al.* Impact of Hepatitis B Core Antibody Seropositivity on the Outcome of Autologous Hematopoietic Stem Cell Transplantation for Multiple Myeloma. *Biol Blood Marrow Transplant* 2017; **23**: 581–587.
- 24 Saini NY, Patel RD, Varma A, Bashir Q, Delgado R, Rondon G *et al.* Long-term durable efficacy of autologous stem cell transplantation in POEMS syndrome. *Am J Hematol* 2019; **94**: E72–E74.
- 25 Saini NY, Patel R, Varma A, Bashir Q, Delgado R, Rondon G *et al.* Melphalan-based autologous transplant in octogenarian multiple myeloma patients. *Am J Hematol* 2019; **94**: E2–E5.

### Posters and abstracts

1. Tollkuci E, Gizem Yassa G.,.....**Varma A.**, et al Letemovir Prophylaxis Outcomes in Allogeneic Hematopoietic Cell Transplant Recipients. Transplantation and Cellular Therapy Meeting 2021
2. Behrens E., Timmermann A.,.... **Varma A.**, et al Outcomes of COVID-19 Infection in Patients with Hematologic Malignancies. American Society of Hematology Annual Meeting 2020
3. Kongtim P, Hasan O, Perez J.M.R, **Varma A.**, et al Development and validation of a novel disease risk model for patients with AML receiving allogeneic hematopoietic cell transplantation. American Society of Clinical Oncology Annual Meeting 2019
4. Strati P, Adkins S, Nastoupil LJ.,..., **Varma A**, et al. . Clinical Implications of Cytopenias Beyond Day 30 after Axi-cel Therapy in Patients with Relapsed/Refractory Large B-cell Lymphoma. iCML, 2019.

5. Strati P, Adkins S,.....**Varma, A.**, et al. Hematopoietic recovery and immune reconstitution after axi-cel CAR T-cell therapy in patients with relapsed/refractory large B-cell lymphoma. American Society of Clinical Oncology Annual Meeting 2019
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21. Murthy R K. **Varma,A.**, Mishra, P., Hess K R., Young E., Murray J L., Koenig K H., Moulder S L., Melhem- Bertrandt,A., Giordano S H., Booser D., Valero V., Hortobagyi G N., Esteva F J. Effect of adjuvant/neoadjuvant trastuzumab on clinical outcomes in patients with HER2-positive metastatic breast cancer. American Society of Clinical Oncology Annual Meeting, Chicago, IL, 2012.
22. Lu,H., **Varma,A.**, Popat,U., Champlin,R., Gagel,R. Risk factors for low bone mass in patients with hematological disorders/malignancies during early allogeneic stem cell transplant, The Bone Disease Program of Texas,8<sup>th</sup> Annual Scientific Retreat, Houston, TX, 2011.

## **Clinical Trials**

### **Principal Investigator**

1. A Phase 1/2 Study to Evaluate the Safety and Efficacy of JSP191 in Combination with a Reduced Intensity Conditioning Regimen of Low Dose Radiation and Fludarabine in Patients with Myelodysplastic Syndrome (MDS) or Acute Myeloid Leukemia (AML) Undergoing Allogeneic Hematopoietic Cell Transplantation (HCT)
2. Evaluation of Cancer Patients for Evidence of SARSCoV-2 IgG Seroconversion.
3. Assessment of Chimerism and Relapse Post Bone Marrow/Hematopoietic Cell Transplant (HCT) Using AlloHeme Test (ACROBAT)

### **Co-investigator**

1. Rush COVID-19 Control Biorepository
2. AB-101-01: Phase 1/2 Clinical Trial to Evaluate the Safety and Anti-Tumor Activity of AB-101 Monotherapy and AB-101 plus Rituximab in Patients with Relapsed/Refractory Non-Hodgkin's Lymphoma of B-Cell Origin
3. BMT CTN 1506: A Multi-center, Randomized, Double-blind, Placebo-controlled Phase III Trial of FLT3 Inhibitor Gilteritinib Administered as Maintenance Therapy Following Allogeneic Transplant for Patients with FLT3/ITD AML
4. An Open-label, Single Arm, Phase 2 Study to Evaluate Efficacy and Safety of Avapritinib, a Selective KIT Inhibitor in Patients with Advanced Systemic Mastocytosis
5. Phase I Safety Study of Descartes-11 in Patients with Relapsed/Refractory Multiple Myeloma
6. Phase I/II Study of HCG and EGF Supplementation (Pregnyl) to Support Tolerance and Repair as Adjunct Therapy in High Risk/Refractory Acute GVHD
7. A Phase 3 Study of Itacitinib or Placebo in Combination with Corticosteroids as Initial Treatment for Chronic GVHD
8. Managed Access Program to Provide Access to CTL019 For Acute Lymphoblastic Leukemia or Large B-cell Lymphoma Patients

**Previous Work Experience**

1. Graduate Research Assistant, Department of Breast Medical Oncology, University of Texas MD Anderson Cancer Center, Houston 08/2011-05/2012
2. Graduate Research Assistant, Department of General Internal Medicine, University of Texas MD Anderson Cancer Center, Houston 01/2011-07/2011
3. Medical Officer, Mithapur Pediatric Healthcare Center, Patna, India 04/2009-07/2010

**Volunteer Experience**

1. Houston Habitat for Humanity helping to build homes in Houston, TX. 11/2014.
2. Volunteered as a phlebotomist for Harris County West Nile Cohort Patient Meeting, UT School of Public health, Houston, Texas. 10/2010.
3. Volunteered in the Polyclinic of the Indian Red Cross Society, Bihar branch, India helping patients understand their medications and addressing their concerns. 02/2008.
4. Regular volunteer in the Pulse Polio immunization program, India from 2006-2009.

**Teaching Experience**

1. Teaching medical students and fellows
2. Health education in the community especially to new mothers regarding care of the newborn at Mithapur Pediatric Healthcare Center

**Interests**

Reading fiction novels, traveling, cooking

## APPENDIX D

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2023 Winthrop P. Rockefeller Cancer Institute External Advisory Board Bios



**Adekunle “Kunle” Odunsi, MD, PhD (Chair)**

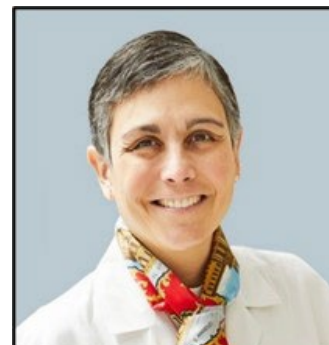
*Director, University of Chicago Medicine Comprehensive Cancer Center  
Dean for Oncology, Biological Sciences Division  
The Abbvie Foundation Distinguished Service Professor  
Department of Obstetrics and Gynecology  
University of Chicago  
Chicago, IL*



Adekunle "Kunle" Odunsi, MD, PhD, FRCOG, FACOG, is an expert in immunotherapy and vaccine therapy for cancer. Dr. Odunsi pioneered the development of antigen-specific vaccine therapy and “next generation” adoptive T-cell immunotherapies to prolong remission rates in women with ovarian cancer. Dr. Odunsi received his medical degree from the University of Ife and his doctoral degree from the Imperial Cancer Research Fund Laboratories, MRC Weatherall Institute of Molecular Medicine, John Radcliffe Hospital, in Oxford, United Kingdom. He completed his residencies in obstetrics and gynecology at the Rosie Maternity and Addenbrooke’s Hospitals, University of Cambridge, and Yale University School of Medicine. His fellowship in gynecologic oncology was at Roswell Park Comprehensive Cancer Center, in Buffalo, New York, where he joined the faculty in 2001 and remains. Dr. Odunsi’s research interests focus on understanding the mechanisms of immune recognition and tolerance in human ovarian cancer, and the translation of the findings to clinical immunotherapy trials.

**Marcela G. del Carmen, MD, MPH**

*Professor of Obstetrics, Gynecology and Reproductive Biology  
Executive Vice President at Mass General Brigham  
President of the Massachusetts General Physicians Organization  
Division of Gynecologic Oncology  
Massachusetts General Hospital  
Boston, MA*



Marcela G. del Carmen, MD, MPH, is a graduate of the Johns Hopkins School of Medicine. She completed her OB/GYN residency at Johns Hopkins Hospital and her fellowship in gynecologic oncology at Massachusetts General Hospital, and she has an MPH from the Harvard School of Public Health. Dr. del Carmen was on the faculty at Johns Hopkins before returning to join the faculty at Massachusetts General Hospital. She is a professor of obstetrics, gynecology, and reproductive biology at Harvard Medical School. Dr. del Carmen's research interests include the surgical treatment of gynecologic malignancies, specifically ovarian cancer; the management of rare gynecologic tumors; and improving access to health care services for underserved populations.

**Edward Chu, MD, MMS**

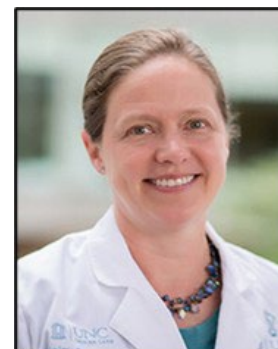
*Director, Albert Einstein Cancer Center  
 Vice President for Cancer Medicine, Montefiore Medicine  
 Professor, Department of Medicine (Oncology)  
 Professor, Department of Molecular Pharmacology  
 Carol and Roger Einiger Endowed Professor of Cancer Medicine  
 Albert Einstein College of Medicine  
 Bronx, New York*



Edward Chu, MD, MMS, received his undergraduate, graduate, and medical degrees from the Brown University Program in Liberal Medical Education and continued at Brown to complete his internal medicine residency. Dr. Chu currently serves as the Deputy Director of the University of Pittsburgh Medical Center's (UPMC) Hillman Cancer Center (HCC), Co-leader of the HCC Cancer Therapeutics Program, Director of the HCC Phase I Program, Associate Director of the University of Pittsburgh Drug Discovery Institute, and Chief of the Division of Hematology-Oncology. In addition to his leadership positions, Dr. Chu is a National Institutes of Health-funded basic, translational, and clinical investigator. As well as clinical oncologist with a long history of developing and leading phase I and phase II clinical trials, particularly for colorectal cancer and other gastroenterology cancers. With his expertise in cancer pharmacology and drug development, he has been active in designing and developing novel agents and treatment approaches.

**E. Claire Dees, MD, ScM**

*Professor of Medicine, Division of Oncology  
 Breast Oncology and Developmental Therapeutics  
 Director, Early Phase Clinical Trials Group  
 Co-Lead, Clinical Research Program  
 UNC Lineberger Comprehensive Cancer Center  
 Chapel Hill, NC*



E. Claire Dees, MD, ScM, is an experienced medical oncologist and clinical trialist. She is a Professor of Medicine at the University of North Carolina School of Medicine, and a member of The UNC Lineberger Comprehensive Cancer Center and the UNC Breast Center. She founded the Developmental Therapeutics (Phase I trials) Working Group at UNC-LCCC, and she now directs the early phase clinical trials program and the breast cancer clinical trials group. Dr. Dees co-leads the LCCC Clinical Research Program. Her research focuses on early phase clinical trials of novel therapeutics, especially those focused on breast cancer. She has been the principal investigator for over 100 trials including 10 currently open early phase trials.

**Chad A. Ellis, PhD**

*Deputy Director, Research Administration  
Hillman Cancer Center  
University of Pittsburgh Medical Center  
Pittsburgh, PA*



Chad Ellis, PhD, earned his bachelor's degree in microbiology and cell science from the University of Florida and his doctorate in pharmacology from the University of Illinois School of Medicine. He joined the NCI as a postdoctoral fellow in 1999 where he focused on the regulation, activation, and signaling pathways of the *Ras* proteins and identified and oversaw a patent application for the novel protein, *Rig*. Dr. Ellis served as Deputy Director of Research Affairs at the Yale Comprehensive Cancer Center, where he led strategic planning activities for the center, oversaw cancer research activities, managed key infrastructure and administrative tasks, and handled faculty retention and recruitment. In 2014, he was appointed Associate Director of Administration at UNC Lineberger Comprehensive Cancer Center. Dr. Ellis also spent several years as a research scientist and consultant to private companies, including Rexahn Corporation, FBA, Inc., and Cellectricon Inc.

**John Farley, MD, COL (ret), FACOG, FACS**

*Division of Gynecologic Oncology  
Center for Women's Health  
Dignity Health Cancer Institute  
Phoenix, AZ*



John Farley, MD, COL (ret), is a board-certified gynecologic oncologist at Dignity Health – Cancer Institute and the Division of Gynecologic Oncology at the Center for Women's Health at Dignity Health St. Joseph's Hospital and Medical Center. He is dual board-certified in obstetrics and gynecology. Dr. Farley's expertise includes clinical trial design, new drug development, and treatment of complex gynecologic malignancies. He is a member of NRG Oncology, American Association of Cancer Research, Society of Gynecologic Oncologists, American Society of Clinical Oncology, and is a Fellow of the American Congress of Obstetricians and Gynecologists. In 2020, he received the Uniformed Services University of the Health Sciences Distinguished Alumni Award and the Society of Gynecologic Oncology Ambassador Award. Dr. Farley is a highly decorated Colonel in the U.S. Army and was awarded the Bronze Star Medal in 2005 and Meritorious Service Medal in 2006. He received his undergraduate degree from the United States Military Academy. He then received his medical degree from Uniformed Services University of the Health Sciences. He later completed his residency in Obstetrics and Gynecology and fellowship in Gynecologic Oncology at Walter Reed Army Medical Center.

**Andrew K. Godwin, Ph.D.**

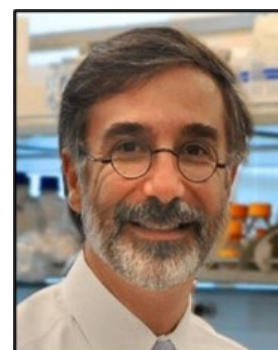
*Chancellors Distinguished Chair in Biomedical Sciences Endowed Professor  
 Professor, Department of Pathology & Laboratory Medicine  
 Division Director, Genomic Diagnostics, Department of Pathology & Laboratory Medicine.  
 Director, Molecular Oncology  
 Deputy Director, University of Kansas NCI-Designated Cancer Center  
 Founding Director, Kansas Institute for Precision Medicine COBRE  
 Professor, Department of Cancer Biology (secondary)  
 Professor, Department of Internal Medicine (secondary)  
 Professor, Department of Microbiology, Molecular Genetics and Immunology (secondary)  
 Biorepository Coordinator for the HICTR Translational Technologies Resource Center  
 Director, Biospecimen Shared Resource  
 Director, Biospecimen Repository Core Facility  
 KBA Eminent Scholar  
 Kansas University Medical Center  
 University of Kansas  
 Kansas City, KS*



Andrew K. Godwin, PhD, is the Chancellors Distinguished Chair in Biomedical Sciences Endowed Professor and Division Director of Genomic Diagnostics in the Department of Pathology at KUMC. He serves as a professor of Pathology and Laboratory Medicine and is the founding director of the Clinical Molecular Oncology Laboratory, a CLIA-certified, CAP-accredited molecular diagnostics laboratory for the KU Health System. Dr. Godwin also serves as the founding director of the KU Cancer Centers' Biospecimen Shared Resource and the KU Medical Center's Biospecimen Repository Core Facility, as well as the founding scientific director for the Biomarker Discovery Laboratory (BDL) which supports integral and integrated biomarker studies for clinical trials. He is a leader in the field of translational research and precision medicine, and his laboratories at KUMC continue to focus on various aspects of both basic and translational research, with an emphasis on the early detection of cancer, predictive and prognostic biomarkers, liquid biopsies based on extracellular vesicles, molecular therapeutics, companion diagnostics, clinical trials, and biosample ascertainment. He is currently a member of the Early Therapeutics and Rare Cancers Committee and vice chair of the Breast Translational Medicine Subcommittee of the Southwest Oncology Group (SWOG), Dr. Godwin remains active in ovarian cancer advocacy.

**Samir N. Khleif, MD**

*Professor of Oncology  
Georgetown University  
Washington D.C.*



Samir N. Khleif, MD, is an immunologist and immune therapist. His research program "Translational Tumor Immunology" focuses on understanding mechanisms through which the immune system and cancer cells interact and how to overcome tumor tolerance in developing therapeutic approaches. Specifically, his research interests include developing novel immune therapeutics, cancer vaccines and delineating the mechanisms of resistance to immunotherapy. From 2006-2009, Dr. Khleif was asked by the U.S. government to develop and direct the King Hussein Cancer Centre in Amman. Dr. Khleif served as Director of Georgia Cancer Center at Augusta University. As Director of the Georgia Cancer Center, Dr. Khleif oversaw the development of a large integrated program of basic scientists and clinicians merging the Cancer Center's strengths in immunology, inflammation, tolerance, basic science, and immune therapy. Dr. Khleif was an intramural NIH scientist for 20 years. While at NCI, he served as a leader of the Cancer Vaccine Section, leading a nationally active Immune Therapy Program. His laboratory has conducted some of the earliest clinical trials in antigen vaccines and was the first to conduct vaccines against mutant oncogenes. He has published several studies on the mechanisms of tumor-induced suppression in animal models and has overcome such inhibition by developing strategies that have been translated into clinical trials.

**Timothy Richard Rebbeck, PhD**

*Vincent. L. Gregory, Jr. Professor of Cancer Prevention  
Director, Zhu Family Center for Global Cancer Prevention  
Director, Center for Cancer Equity and Engagement  
Harvard T.H. Chan School of Public Health  
Dana-Farber Cancer Institute  
Harvard Medical School  
Boston, MA*



Timothy Rebbeck, PhD, is the Vincent L. Gregory, Jr. Professor of Cancer Prevention at the Harvard TH Chan School of Public Health and Professor of Medical Oncology at the Dana-Farber Cancer Institute. Dr. Rebbeck's research focuses on the etiology and prevention of cancer with an emphasis on cancers with a genetic etiology and those that are associated with disparities in incidence or mortality by race. He has directed multiple large molecular epidemiologic studies and international consortia that have been used to identify and characterize genes involved in cancer etiology, understand the relationship of allelic variation with biochemical or physiological traits, and explore interactions of inherited and somatic genomic variation with epidemiological risk factors. He has also led studies of BRCA1 or BRCA2 mutations to understand breast, ovarian, and prostate cancer risk and precision prevention interventions that may reduce that risk. In addition to his research activities, Dr. Rebbeck leads several initiatives on the Harvard Campus. He serves as Associate Director for Equity and Engagement in the Dana-Farber / Harvard Cancer Center and Co-Director for the Collective Impact Program of Harvard Catalyst.

**Sora Park Tanjasiri, DrPH, MPH**

Professor, Department of Epidemiology & Biostatistics  
 Equity Advisor, Program in Public Health  
 Associate Director, Cancer Health Equity & Community Engagement  
 Chao Family Comprehensive Cancer Center  
 University of California, Irvine  
 Orange, CA



Sora Park Tanjasiri, DrPH, MPH, is a Professor in the department of Epidemiology at the University of California, Irvine Department and The Associate Director of Cancer Health Disparities and Community Engagement at the Chao Family Comprehensive Cancer Center. Her research focuses on community health promotion to reduce cancer health disparities among diverse populations, particularly Asian Americans and Pacific Islanders. She has served as PI or Co-PI on over two dozen extramurally funded cancer-related studies, including multiple Principal Investigator of the Bristol-Myers Squibb Foundation-funded Optimizing Access to Cancer Care for Asian Americans, and the NCI-funded U54 Community Network Program Center WINCART: Weaving an Islander Network for Cancer Awareness, Research and Training. Her research has been published in such peer-reviewed journals as *American Journal of Public Health*, *Journal of the American Medical Association*, *Health Education & Behavior*, and *Health Promotion Practice*. Dr. Tanjasiri also serves as an advisor to numerous non-profit organizations, including the Orange County Asian Pacific Islander Community Alliance, St. Joseph Health System Community Partnership Fund, and the Orange County Women's Health Project.

## APPENDIX E

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Act 181

State of Arkansas

As Engrossed: S2/4/19

92nd General Assembly

## A Bill

Regular Session, 2019

SENATE BILL 151

By: Senators Irvin, Bledsoe, B. Davis, J. English

By: Representatives M. Gray, Barker, Bentley, Brown, Capp, Cavanaugh, Crawford, Dalby, C. Fite,  
Lundstrum, J. Mayberry, Petty, Rushing, Speaks, Vaught, Gazaway

### For An Act To Be Entitled

AN ACT CONCERNING THE PURSUIT OF A NATIONAL CANCER  
INSTITUTE-DESIGNATED CANCER CENTER AT THE WINTHROP P.  
ROCKEFELLER CANCER INSTITUTE AT THE UNIVERSITY OF  
ARKANSAS FOR MEDICAL SCIENCES; TO CREATE THE  
UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES NATIONAL  
CANCER INSTITUTE DESIGNATION *TRUST FUND*; AND FOR  
OTHER PURPOSES. 17

### Subtitle

CONCERNING THE PURSUIT OF A NATIONAL  
CANCER INSTITUTE-DESIGNATED CANCER CENTER  
AT THE WINTHROP P. ROCKEFELLER CANCER  
INSTITUTE AT THE UNIVERSITY OF ARKANSAS  
FOR MEDICAL SCIENCES. 25

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS: 28

SECTION 1. DO NOT CODIFY. Legislative findings.

The General Assembly finds that:

(1) In 2018, approximately sixteen thousand (16,000) Arkansans  
were diagnosed with cancer in 2018, which means that forty-four (44)  
Arkansans were diagnosed with cancer per day;

(2) Of those sixteen thousand (16,000) Arkansans diagnosed with  
cancer, six thousand nine hundred ten (6,910) will die of the disease;

(3) The four (4) types of cancer with significantly high annual



1 diagnosis rates in Arkansas are:

2 (A) Lung and bronchus cancer, with two thousand seven  
3 hundred twenty (2,720) diagnoses;

4 (B) Breast cancer, with two thousand one hundred sixty  
5 (2,160) diagnoses;

6 (C) Prostate cancer, with one thousand two hundred sixty  
7 (1,260) diagnoses; and

8 (D) Colon and rectal cancer, with one thousand three  
9 hundred seventy diagnoses (1,370);

10 (4) Over the past twenty-eight (28) years, nationwide cancer-  
11 related deaths have decreased by five percent (5%), but in Arkansas the rate  
12 of cancer-related deaths has increased by nine percent (9%);

13 (5) Only Kentucky, Mississippi, and Oklahoma had higher cancer-  
14 related death rates in the past twenty-eight (28) years than Arkansas;

15 (6) Cancer is the second-leading cause of death in Arkansas and  
16 may become the leading cause of death within the next decade, surpassing the  
17 current leading cause, cardiovascular disease, based on the diagnosis trends  
18 in the state;

19 (7) There are currently seventy (70) National Cancer Institute-  
20 Designated Cancer Centers, located in thirty-six (36) states and the District  
21 of Columbia, including National Cancer Institute-Designated Cancer Centers in  
22 Texas, Missouri, Oklahoma, and Tennessee;

23 (8) There are no National Cancer Institute-Designated Cancer  
24 Centers in Arkansas, Mississippi, or Louisiana;

25 (9) In 2018, the State of Oklahoma received the seventieth  
26 National Cancer Institute-Designated Cancer Center;

27 (10) Having a National Cancer Institute-Designated Cancer Center  
28 in Arkansas will improve and expand access to clinical trials, cancer  
29 treatment, cancer prevention, cancer screening, and education in Arkansas;

30 (11) A National Cancer Institute-Designated Cancer Center in  
31 Arkansas would act as a hub of groundbreaking treatments and care for the  
32 communities around the state;

33 (12) Arkansas cancer patients often times are required to leave  
34 the state to receive treatment at a National Cancer Institute-Designated  
35 Cancer Center;

36 (13) National Cancer Institute-Designated Cancer Centers have

1 expanded treatment options due to research grant funds and experimental  
2 trials, and hundreds of research studies are underway at these centers,  
3 ranging from basic laboratory research to clinical assessments of new  
4 treatments not currently available in Arkansas;

5 (14) Having a National Cancer Institute-Designated Cancer Center  
6 in the state would save the lives of thousands of Arkansans through expanded  
7 treatment opportunities, including opportunities to participate in  
8 experimental cancer treatments;

9 (15) Being a National Cancer Institute-Designated Cancer Center  
10 would allow the Winthrop P. Rockefeller Cancer Institute at the University of  
11 Arkansas for Medical Sciences to be awarded more research funds, which will  
12 provide additional experimental cancer treatments in the state;

13 (16) A National Cancer Institute-Designated Cancer Center will  
14 provide support for cancer treatment providers, clinics, and hospitals in  
15 Arkansas;

16 (17) In addition to the human suffering caused by cancer, there  
17 are economic costs that result from the disease, including medical costs and  
18 the impact on the productivity of the cancer patient and his or her family;

19 (18) The Winthrop P. Rockefeller Cancer Institute at the  
20 University of Arkansas for Medical Sciences is pursuing designation as a  
21 National Cancer Institute-Designated Cancer Center for the benefit of the  
22 more than three million (3,000,000) citizens of Arkansas;

23 (19) The National Cancer Institute recommends that a cancer  
24 center have at least twenty million dollars (\$20,000,000) in National Cancer  
25 Institute-funded research;

26 (20) The Winthrop P. Rockefeller Cancer Institute at the  
27 University of Arkansas for Medical Sciences currently has approximately ten  
28 million dollars (\$10,000,000) in National Cancer Institute-funded research;

29 (21) The Winthrop P. Rockefeller Cancer Institute at the  
30 University of Arkansas for Medical Sciences can apply for only a limited  
31 number of National Cancer Institute grant funds because over sixty percent  
32 (60%) of the National Cancer Institute's grant applications require that the  
33 cancer center be a National Cancer Institute-Designated Cancer Center in  
34 order to apply for the grant funds;

35 (22) In order to achieve status as a National Cancer Institute-  
36 Designated Cancer Center, the Winthrop P. Rockefeller Cancer Institute at the

1 University of Arkansas for Medical Sciences will need to recruit:

2 (A) A renowned expert in cancer research to serve as the  
3 Director of the Winthrop P. Rockefeller Cancer Institute at the University of  
4 Arkansas for Medical Sciences; and

5 (B) Nationally recognized National Cancer Institute-funded  
6 medical professionals;

7 (23) To be successful in gaining status as a National Cancer  
8 Institute-Designated Cancer Center, ongoing, dedicated financial support from  
9 the State of Arkansas is critical;

10 (24) The Winthrop P. Rockefeller Cancer Institute at the  
11 University of Arkansas for Medical Sciences will need a stream of funding  
12 between ten million dollars (\$10,000,000) and twenty million dollars  
13 (\$20,000,000) per year to establish and maintain a National Cancer Institute-  
14 Designated Cancer Center;

15 (25) Like other states that have been successful in securing  
16 status as a National Cancer Institute-Designated Cancer Center for their  
17 cancer centers, it is incumbent that the State of Arkansas invest in this  
18 initiative;

19 (26) It is a strategic goal of the Winthrop P. Rockefeller  
20 Cancer Institute at the University of Arkansas for Medical Sciences to  
21 becomes a National Cancer Institute-Designated Cancer Center;

22 (27) State government funds will assist the Winthrop P.  
23 Rockefeller Cancer Institute at the University of Arkansas for Medical  
24 Sciences secure vital investments from other public and private sources;

25 (28) The Winthrop P. Rockefeller Cancer Institute at the  
26 University of Arkansas for Medical Sciences is committed to raising at least  
27 thirty million dollars (\$30,000,000) in private funds to support the pursuit  
28 of achieving status as a National Cancer Institute-Designated Cancer Center;

29 (29) The private resources pursued by the Winthrop P.  
30 Rockefeller Cancer Institute at the University of Arkansas for Medical  
31 Sciences are a part of a cohesive and focused plan that will forever change  
32 the state;

33 (30) It is estimated that having a National Cancer Institute-  
34 Designated Cancer Center will bring in an additional seventy million dollars  
35 (\$70,000,000) annually to Arkansas's economy and will create one thousand  
36 five hundred eighty-four (1,584) new jobs over five (5) years;

1           (31) The state should establish a fund solely for the purpose of  
2 pursuing and maintaining status as a National Cancer Institute-Designated  
3 Cancer Center for the Winthrop P. Rockefeller Cancer Institute at the  
4 University of Arkansas for Medical Sciences;

5           (32) If upon June 30, 2027, the Winthrop P. Rockefeller Cancer  
6 Institute at the University of Arkansas for Medical Sciences has not achieved  
7 status as a National Cancer Institute-Designated Cancer Center, then the fund  
8 created in this act should sunset; and

9           (33) Future General Assemblies will have the authority and  
10 responsibility to evaluate the progress of the Winthrop P. Rockefeller Cancer  
11 Institute at the University of Arkansas for Medical Sciences toward achieving  
12 status as a National Cancer Institute-Designed Cancer Center and adjust this  
13 act accordingly. 14

15         SECTION 2. Arkansas Code Title 19, Chapter 5, *Subchapter 11*, is  
16 amended to add an additional section to read as follows:

17         19-5-1149. University of Arkansas for Medical Sciences National Cancer  
18 Institute Designation Trust Fund – Report.

19         (a) There is created on the books of the Treasurer of State, the  
20 Auditor of State, and the Chief Fiscal Officer of the State a trust fund to  
21 be known as the “University of Arkansas for Medical Sciences National Cancer  
22 Institute Designation Trust Fund”.

23         (b) The fund shall consist of:

24           (1) Moneys obtained from private grants or other sources that  
25 are designated to be credited to the fund; and

26           (2) Any other funds authorized or provided by law.

27         (c) The fund shall be used by the Winthrop P. Rockefeller Cancer  
28 Institute at the University of Arkansas for Medical Sciences solely to  
29 achieve and maintain status as a National Cancer Institute-Designated Cancer  
30 Center.

31         (d) The Treasurer of State shall invest the moneys available in the  
32 fund.

33         (e)(1) The investment of funds under this section is exempt from § 19-  
34 3-518(a)(2)(B)(i)(b) and (c).

35           (2) Moneys in the fund may be invested in any instrument:

36           (A) Listed in § 19-3-518(b)(1)(B); and

1 (B) Approved by the guidelines established by the State  
2 Treasury investment policy approved by the State Board of Finance.

3 (f) Moneys remaining in the fund at the end of each fiscal year shall  
4 carry forward and be made available for the purposes stated in this section  
5 in the next fiscal year.

6 (g)(1) The Winthrop P. Rockefeller Cancer Institute at the University  
7 of Arkansas for Medical Sciences shall submit a semiannual report containing  
8 the following information to the Governor; the Legislative Council or, if the  
9 General Assembly is in session, the Joint Budget Committee; the Senate  
10 Committee on Public Health, Welfare and Labor; and the House Committee on  
11 Public Health, Welfare, and Labor:

12 (A) The balance of the fund as of the reporting date;

13 (B) A list of the administrative costs paid for from the  
14 fund, including without limitation salaries, pensions, and packages;

15 (C) The total revenue received by the fund during the  
16 reporting period; and

17 (D) A detailed description of the steps taken and the  
18 progress made toward achieving status as a National Cancer Institute-  
19 Designated Cancer Center during the reporting period.

20 (2) The semiannual report required under this subsection shall  
21 be submitted by January 1 and July 1 of each year. 22

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24 /s/Irvin

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27 **APPROVED: 2/19/19**  
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