



Cancer Undergraduate  
Research Experience

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## **2022 Scholars (7)**

### **Claudia Iribagiza, The University of Oklahoma**

Mentor: Yong Chen, PhD

Project: "Range Verification from a Proton Machine using Acoustic Signals"

### **Hamilton Young, The University of Oklahoma**

Mentor: Stefan Wilhelm, PhD

Project: "Cost-efficient Microfluidic Manufacturing of Organic Nanoparticles"

### **Jean-Marie Hodges, Southeastern Oklahoma State University**

Mentor: George Huang, PhD

Project: "Fusobacterium Nucleatum Promotes Colorectal Carcinoma Cell Migration"

### **Jhonathan Guerrero, Southern Nazarene University**

Mentor: CV Rao, PhD

Project: "Biomarker Evaluation of Naproxen Treated Rat Bladder Cancer Tissues"

### **Kathleen McDaniel, Kansas State University**

Mentor: Lacy McNally, PhD

Project: "Synergistic Effect of Omeprazole and Paclitaxel to Enhance Anti-Cancer Effect in Ovarian Carcinoma"

### **Lok-bong Yuen, The University of Texas**

Mentor: Thanh Bui, PhD

Project: "Examining Potential Associations Between Demographic Characteristics and Rates of HPV Vaccination Referral"

### **Maria Bustamante, The University of Oklahoma**

Mentor: Bethany Hannafon, PhD

Project: "Racial and Ethnic Differences and Disparities in the Incidence of IN-SITU and Invasive Breast Cancer Among Women in Oklahoma"

## **2021 Scholars (6)**

### **Alisha Asif, Oklahoma City University**

Mentor: Resham Bhattacharya, PhD

Project: "Role of KRCC1 in X-Irradiation Induced Damage"



Cancer Undergraduate  
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**Jo-Dane Bell, University of New Mexico**

Mentor: Elizabeth Hile, PhD

Project: "Do Changes in Patient-Reported Cognition Explain Change in Cognitive Performance During Taxane Chemotherapy for Women's Cancers?"

**Alexis Bills, The University of Oklahoma**

Mentor: Jie Wu, PhD

Project: "Discovering the Next Generation of RET Inhibitors for Gatekeeper and Solvent-Front Mutants"

**Wambui Gachunga, The University of Oklahoma**

Mentor: Stefan Wilhelm, PhD

Project: "Engineering a Nanomedicine to Repolarize Tumor-Associated Macrophages for Cancer Immunotherapy"

**Callie Pettigrew, The University of Oklahoma**

Mentor: Bethany Hannafon, PhD

Project: "Exosome Signaling Transfers Chemoresistance in Endometrial Cancer: Implications for the HIPPO Pathway"

**Brooke Redwine, Princeton University**

Mentor: Stefan Wilhelm, PhD

Project: "Designing and Characterizing Nanoparticles for Studying Interactions with Tumor-Associated Endothelial Cells"

**2020 Scholars (0; COVID-19)**

**2019 Scholars (11)**

**Robert Cascella, The University of Oklahoma**

Mentor: James Battiste, MD, PhD

Project: "Concomitant Mycoplasma Infection in Glioblastoma"

**George Chamoun, University of North Texas**

Mentor: Priyabrata Mukherjee, PHD

Project: "Inside Out: A Novel Theory in Understanding Metastasis"



Cancer Undergraduate  
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**Bailey Gardner, The University of Oklahoma**

Mentor: Resham Bhattacharya, PhD

Project: "Role of USP10 in Pancreatic Cancer"

**Eli Isenberg, The University of Oklahoma**

Mentor: Darla Kendzor, PhD

Project: "Tobacco Use in Mental Health among Homeless Adults in Oklahoma City"

**Amber Karim, The University of Oklahoma**

Mentor: Stefan Wilhelm, PhD

Project: "Controlling Interactions between Tumor Cells and Nanoparticles through Rational Nanoparticle Surface Engineering"

**Kira Morikawa, The University of Oklahoma**

Mentor: Lauren Zenewicz, PhD

Project: "Modulation of Epithelial Mesenchymal Transition by the Cytokine Interleukin 22"

**Shreya Nuguri, The University of Oklahoma**

Mentor: Rajagopal Ramesh, PhD

Project: "Combinatorial Therapy Targeting AXL and HUR in Non-small Cell Lung Cancer"

**Valerie Quach, University of Mississippi**

Mentor: Hariprasad Gali, PhD

Project: "Synthesis and In Vitro Evaluation of KSP\*-CY5 for Fluorescent Imaging of HER2 Expression"

**Neal Rangu, The University of Oklahoma**

Mentor: Michael Businelle, PhD

Project: "History of Concussion in Homeless Adults is Related to Mental and Physical Health Problems"

**Rachel Terry, Oklahoma State University**

Mentor: Joe Zhao, PhD

Project: "Characterizing the Expression of PZR Isoforms in Glioblastoma Multiforme Cells"



Cancer Undergraduate  
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**Pham Vo, Iowa State University**

Mentor: Jie Wu, PhD

Project: "Identification of KIF5B-RET Mutants Resistant to the RET Protein Tyrosine Kinase Inhibitor LOXO-292"

**2018 Scholars (8)**

**McKenna Box, Oklahoma Christian University**

Mentor: Jie Wu, PhD

Project: "Selective Rescue of SHP2 Mutant-Induced Erythroid Differentiation Blockade by an Allosteric Shp2 Inhibitor"

**Quynh Chi Dang, Southern Methodist University**

Mentor: Asish Ghosh, PhD

Project: "Heat Shock Protein 90 Regulates B Cell Receptor and Fibroblast Growth Factor Receptor Signaling Axes in B-Cell Chronic Lymphocytic Leukemia"

**Joseph Eid, The University of Oklahoma**

Mentor: Joe Zhao, PhD

Project: "T396s Variation in Sh2b3 Linked With Red Blood Cell Count"

**Kristy Johnson, Oklahoma State University**

Mentor: James Battiste, MD, PhD

Project: "Migration Velocity of Glioblastoma Tumor Cells and the Effects of Radiation on Speed and Viability"

**Avanish Madharavam, University of North Carolina**

Mentor: Hiroshi Yamada

Project: "Shugoshin 1 Chromosomal Instability Mice Model Enables Brain Inflammation and Amyloid-Beta Deposit"

**Linh Nguyen, Dickinson College**

Mentor: Rajagopal Ramesh, PhD

Project: "HuR as a Potential Target for Melanoma Therapy"



Cancer Undergraduate  
Research Experience

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**Elizabeth Olah, Northern Ohio University**

Mentor: Asish Ghosh

Project: "c-ABL Activates JAK2 Non-Canonical Signaling Pathway in B-Cell Chronic Lymphocytic Leukemia"

**2017 Scholars (8)**

**Adewunmi Adebajo, Cameron University**

Mentor: Joe Zhao, PhD

Project: "Comparative Analysis of the SHB3/LNK Gene in Mammals: A Key to Understanding Myeloproliferative Neoplasms"

**Asim Ali, The University of Oklahoma**

Mentor: James Battiste, MD, PhD

Project: "Targeting Glioblastoma Cells with (Z)-3,5,4' Trimethoxystilbene Adversely Affects Viability and Migration"

**Madison Granger, Oklahoma Baptist University**

Mentor: Danny Dhanasekaran, PhD

Project: "Identification of Novel Oncogenic Long Noncoding RNAs in Ovarian Cancer"

**Spencer Hall, The University of Oklahoma**

Mentor: Jie Wu, PhD

Project: "Construction of CCDC6-RET Mammalian Cell Expression Vectors"

**Whitney Hall, Oklahoma Christian University**

Mentor: Asish Ghosh, PhD

Project: "Extracellular Vesicles Target T-Cell Function in B-Cell Chronic Lymphocytic Leukemia"

**Ali Khan, The University of Oklahoma**

Mentor: Rajagopal Ramesh

Project: "Exosomes as a Theranostic for Lung Cancer"

**Tammy Phillips, Oklahoma City University**

Mentor: Priyabrata Mukherjee, PhD

Project: "Gold Nanoparticles Regulate Lipid Droplet Formation in Ovarian Cancer Cells"



Cancer Undergraduate  
Research Experience

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**Summer Simeroth, The University of Oklahoma**

Mentor: Resham Bhattacharya, PhD

Project: "Cisplatin Induces Chemoresistant "Stem-Like" Phenotype in Ovarian Cancer Cells"

**2016 Scholars (10)**

**Jan Bian, Oklahoma Christian University**

Mentor: Sukyung Woo, PhD

Project: "Paclitaxel Treatment Increases Tumor-derived Exosome Production"

**Garrett Boren, Oklahoma State University**

Mentor: Danny Dhanasekaran, PhD

Project: "Long Noncoding RNA HEIH Acts as a Novel Biomarker for Ovarian Cancer"

**Landon Hester, Oklahoma Christian University**

Mentor: Joe Zhao, PhD

Project: "Clinical Implications of TRIM65 Amplification and Mutation"

**Ryan Jones, Oklahoma Christian University**

Mentor: Priyabrata Mukherjee, PhD

Project: "Roads Not Taken: Gold Nanoparticles Illuminate Cancer's Secrets by Unraveling New Molecular Targets"

**Dusenge Kamali, Oklahoma Christian University**

Mentor: Resham Bhattacharya, PhD

Project: "First Line Chemotherapy Induces Stemness and Multidrug Resistance in Major Types of Cancer"

**Nadezda Mamedova, The University of Oklahoma**

Mentor: Jie Wu, PhD

Project: "Construction of Baculoviral Vectors for RET Kinase Domain Mutants"

**Julie Nguyen, The University of Oklahoma**

Mentor: Doris Benbrook, PhD

Project: "Role of BCL-2 in the Mechanism of SHETA2 Cytotoxicity in Ovarian Cancer Cell Lines"



Cancer Undergraduate  
Research Experience

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**Kaitlyn Norton, Grinnell College**

Mentor: Jennifer Vidrine, PhD

Project: "Food Insecurity, Risk Behaviors and Health Intervention in Oklahoma"

**Benjamin Zhao, California Institute of Technology**

Mentor: Asish Ghosh, PhD

Project: "Microna-21 Targets Anti-Angiogenic Thrombospondin-1 in B-Cell Chronic Lymphocytic Leukemia"

**Alex Zhu, Duke University**

Mentor: James Battiste, MD, PhD

Project: "Viability of Human Glioblastoma Cells during Migration after Radiation"

**2015 Scholars (10)**

**Garrett Boren, Oklahoma State University**

Mentor: Joe Zhao, PhD

Project: "Genomic Sequence Variation: Indicate Possible Regulatory Differences in Mast Cell Protease Expression"

**Jaili Dong, Case Western Reserve University**

Mentor: Danny Dhanasekaran, PhD

Project: "Oncogenic LNCRNA UCA1 in Ovarian Cancer: Regulation of Glucose Transporter, GLUT1"

**Miranda Garlett, Southern Nazarene University**

Mentor: Priyabrata Mukherjee, PhD

Project: "SMNDC1 as a Potential Therapeutic Drug Treatment for the Treatment of Epithelial Ovarian Cancer"

**CJ Hornback, Southern Nazarene University**

Mentor: Danny Dhanasekaran, PhD

Project: "Long Noncoding RNAs Play a Key Role in the Regulation of HSA-LET-7A in Ovarian Cancer"

**Samantha Horton, Oklahoma Baptist University**

Mentor: Resham Bhattacharya, PhD

Project: "TGF-BETA, A Potential Clinical Target in Uterine Carcinosarcoma"



Cancer Undergraduate  
Research Experience

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**Nadezda Mamedova, The University of Oklahoma**

Mentor: Sukyung Woo, PhD

Project: "Evaluation of Apelin and Its Receptor APJ in Promoting Angiogenic Effects in Vitro"

**Meghna Singh, University of Missouri - Kansas City**

Mentor: Natarajan Aravindan, PhD

Project: "Guanylate Cyclase Signaling and the Development of High-Risk Metastatic Neuroblastoma"

**Ryan Tierney, College of the Holy Cross**

Mentor: Frank Hays, PhD

Project: "The P66SHC Adaptor Protein Inhibits the Caspase Cascade"

**Zitong Wang, Cornell University**

Mentor: Priyabrata Mukherjee, PhD

Project: "UBAP2 is a New Target for Pancreatic Cancer Research"

**Rachel Wolansky, The University of Oklahoma**

Mentor: Natarajan Aravindan, PhD

Project: "Role of HDACs in the Evolution of High-Risk Neuroblastoma"

**2014 Scholars (8)**

**Kristen Damphousse, The University of Oklahoma**

Mentor: Laura Beebe, PhD

Project: "Tobacco Use and Oral Cancer in US Males: an Ecological Study"

**Claire Hagensick, The University of Oklahoma**

Mentor: Takemi Tanaka, PhD

Project: "The Pharmacological Safety of ESTA: A Potential Approach to Prevent Breast Cancer Metastasis"

**Skyler Hying, University of Wisconsin**

Mentor: Natarajan Aravindan, PhD





Cancer Undergraduate  
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Project: "RD3 Loss Driven Mirnas Alterations Seitches Favorable to High-Risk Aggressive Neuroblastoma"

**Austin McGinnis, Southern Methodist University**

Mentor: Danny Dhanasekaran, PhD

Project: "Identification of HPV Insertion Sites Using Genome Walking"

**Vy Pham, The University of Oklahoma**

Mentor: Lawrence Rothblum, PhD

Project: "Inhibition of RDNA Transcription by Peptide that Targets POL I-RRN3 Interface Promotes Cell Death"

**Mark Street, Oklahoma City University**

Mentor: Resham Bhattacharya, PhD

Project: "Cisplatin Induces Acquired Resistance to Paclitaxel in Ovarian Cancer"

**Cole Townsend, The University of Oklahoma**

Mentor: Anupama Munshi, PhD

Project: "MIR-200C Restores Chemo- and Radiosensitivity in Triple-Negative Breast Cancer"

**Anna Zhao, Vanderbilt University**

Mentor: Joe Zhao, PhD

Project: "Glutamine Deprivation Induces Senescence and Activates P38 Map Kinase in Fibrosarcoma HT-1080 Cells"

**2013 Scholars (8)**

**Jonathan Bates, Oklahoma Christian University**

Mentor: Rajagopal Ramesh, PhD

Project: "IL-24 Inhibits Cancer Metastasis by Regulating the CXCR4/SDF-1 Axis"

**Brandon Burkett, Oklahoma City University**

Mentor: Xin Zhang, PhD

Project: "Tetraspanin CD151 Plays a Crucial Role in Laminin-Binding Integrin Mediated Cell-Matrix Adhesion"

**Corinne Dinges, The University of Oklahoma**

Mentor: Natarajan Aravindan, PhD

Project: "No Bioavailability after Hyperthermia Ameliorate Radiatoin Induced Stemness of Breast Cancer Cells"



Cancer Undergraduate  
Research Experience

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**Maximilian Lyon, University of Central Oklahoma**

Mentor: Joe Zhao, PhD

Project: "Identification of HPV Insertion Sites Using Genome Walking"

**Tom Pham, The University of Oklahoma**

Mentor: Jennifer Holter, MD

Project: "FLT and FDG Imaging of Patients with Leukemia Undergoing Allogeneic Transplantation"

**Vy Pham, The University of Oklahoma**

Mentor: Lawrence Rothblum, PhD

Project: "Acetylation of the PAF49/PAF53 Heterodimer, SIRT7, and RDNA Transcription"

**Richard Pody, The University of Oklahoma**

Mentor: Rheel Towner, PhD

Project: "Assessing ELTD1 Antibody as a Glioma Treatment in Mice"

**Christa Riggs, Ouachita Baptist University**

Mentor: Danny Dhanasekaran, PhD

Project: "LPA Stimulates SER/THR-Phosphorylation of Argonaute-2 in Hypoxia-Stressed Ovarian Cancer Cells"

**2012 Scholars (12)**

**Lacy Brame, The University of Oklahoma**

Mentor: HK Lin, PhD

Project: "The Effect of 5 $\alpha$ -androstane-3 $\beta$ ,17 $\beta$ -diol (3 $\alpha$ -diol) on Androgen Metabolism in Prostate Cancer"

**Tiffany Cheng, The University of Oklahoma**

Mentor: Ralf Janknecht, PhD

Project: "Role of JMJD2B in Pancreatic Cancer"

**Matthew Crow, University of Science and Arts of Oklahoma**

Mentor: Danny Dhanasekaran, PhD

Project: "Effects of LPA on miRNA Profile in Ovarian Cancer"

**Macey Lawson, Southern Nazarene University**

Mentor: Danny Dhanasekaran, PhD

Project: "Defining LPA-Responsive Signaling Pathway(s) in Ovarian Cancer Cells"



Cancer Undergraduate  
Research Experience

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**Ryan Major, Oklahoma Christian University**

Mentor: Natarajan Aravindan, PhD

Project: "MMP9 Reinforces Radiation-Induced Delayed Invasion and Metastasis of Neuroblastoma by means of Positive Feedback with NF- $\kappa$ B via both ERK 1/2 and IKK Activation"

**Aniruddha Parkih, Vanderbilt University**

Mentor: Rajagopal Ramesh, PhD

Project: "Combination Therapy Targeted to HuR and Epidermal Growth Factor Receptor (EGFR) in Lung Cancer"

**Richard Pody, The University of Oklahoma**

Mentor: Rheal Towner, PhD

Project: "In Vivo Molecular MRI of VEGF-R2 in Mouse GL261 Gliomas: Therapeutic Assessment"

**Jeremiah Reasoner, Oklahoma Christian University**

Mentor: Lurdes Queimado, MD, PhD

Project: "Head and Neck Cancer"

**Christa Riggs, Ouachita Baptist University**

Mentor: David Crawford, PhD

Project: "Identifying Proteins that bind to UBE2Q2 and Exosome Component 7"

**Mary Siems, Southern Nazarene University**

Mentor: William Sonntag, PhD

Project: "Cancer and Aging"

**Stuardo Trigueros, The University of Oklahoma**

Mentor: Anupama Munshi, PhD

Project: "HuR: An mRNA-Binding Protein as a Target for Breast Cancer Therapy"

**Neilee Wood, Oklahoma City University**

Mentor: Xin Zhang, PhD

Project: "Tetraspanin CD82 and Its Role as a Metastasis Suppressor"

**2011 Scholars (6)**



Cancer Undergraduate  
Research Experience

Stephenson  
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**Lacy Brame, The University of Oklahoma**

Mentor: HK Lin, PhD

Project: "Prostate Cancer Progression"

**Kathleen Evans, The University of Oklahoma**

Mentor: Danny Dhanasekaran, PhD

Project: "Transcription Factors that are Overexpressed in Ovarian and Pancreatic Cancer"

**Sara Gower, Oklahoma Christian University**

Mentor: Anupama Munshi, PhD

Project: "Breast Cancer Overview"

**Ryan Johnston, University of Central Oklahoma**

Mentor: Natarajan Aravindan, PhD

Project: "EF24, A Novel Monoketone Prevents Dissemination of Radiotherapy Associated Oncogenes in Distant Organs: A Preliminary Insight Using Neuroblastoma Model"

**Tanya Watts, University of Notre Dame**

Mentor: Danny Dhanasekaran, PhD

Project: "Effect of Lysophosphatidic Acid on the Phosphorylation of Transcription Factor STAT3 in HEY Cells"

**Jacob Wayland, Oklahoma Christian University**

Mentor: Natarajan Aravindan, PhD

Project: "Anti-Carcinogenic and Radio-Sensitizing Effects of Novel Monoketone EF24: A Preliminary Insight"

**2010 Scholars (4)**

**Lacy Brame, The University of Oklahoma**

Mentor: HK Lin, PhD

**Kathleen Evans, The University of Oklahoma**

Mentor: Danny Dhanasekaran, PhD



Cancer Undergraduate  
Research Experience

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**Connie Liu, The University of Oklahoma**

Mentor: Natarajan Aravindan, PhD

**Tonya Watts, University of Notre Dame**

Mentor: Danny Dhanasekaran, PhD