Office of Research Affairs

Annual Report:

July 1, 2021 – June 30, 2022

Paul J. Hershberger, PhD, Associate Dean for Research Affairs
Autumn James, BS, Research Affairs Coordinator
Statement from the Associate Dean

Following are several highlights from the 2021-22 academic year for the Office of Research Affairs:

• The Research Committee awarded five seed grants.
  o Recipients in the Collaborative Translational Research Grant category were:
    ▪ Drs. Weiwen Long (Biochemistry and Molecular Biology) and Robert Lober (Pediatrics): “Defining the roles of SRC-3 and SOX2 in diffuse intrinsic pontine glioma (DIPG).”
    ▪ Drs. Ravi Sahu (Pharmacology and Toxicology) and Kelly Miller (Internal Medicine): “Translational relevance of the PAF system in combination chemotherapy-mediated micro-vesicle particles release.”
  o Recipients in the Junior Faculty Award to Support Diversity in Research category were:
    ▪ Dr. Kwang-Jin Cho: “Define phosphatidylinositol 4-kinase IIIB as a novel and tractable target for blocking oncogenic K-Ras signaling.”
    ▪ Dr. Timothy Crawford: “African American older adults living with HIV: Exploring intersectional stigma and HIV.”

• The Associate Dean of Research Affairs, Dr. Madhavi Kadakia, was promoted to Vice Provost for Research and Innovation. Dr. Paul Hershberger was subsequently appointed to serve as Interim Associate Dean for Research Affairs.

• As part of the BSOM Strategic Planning process, a subcommittee for Research identified the following priorities:
  o Promote research among clinical and basic science faculty.
  o Emphasize faculty recruitment and retention.
  o Create infrastructure for centralized support of research activities.
  o Increase financial management and reporting.

• The First Annual BSOM Research Symposium was held on April 6, 2022, an event combining the former Central Research Forum and the Medical Student Research Symposium. Three medical students and five faculty presented their research in a plenary session and 57 students and faculty posters were included in the Poster Session.

• Goals for the 2022-23 academic year include:
  o Employ staff for the Office of Research Affairs with an emphasis on increasing research activity and funding.
  o Conduct another Seed Grant application and award process.
  o Improve internal and external communications about BSOM research.
  o Collaborate with the Department of Medical Education in expanding research opportunities for medical students.
## Grant Funding Overview

<table>
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<tr>
<th>Department</th>
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<th>F&amp;A</th>
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<td>School of Medicine (BSOM) Totals</td>
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### Funded Grants by Department

#### Biochemistry/Molecular Biology-SOM (BYM55)

Long, Dr. Weiwen, PhD, Morel, Marion F., PhD. Role of RBXL16 in Lung Adenocarcinomas with Activating KRAS Mutations, American Lung Association/Non-Profit, $100,000, July 1, 2021 – June 30, 2022

Kadakia, Madhavi, PhD. Enhancing STEM Education Through the iGEM Competition, UES, Inc./Industry, $105,000, August 20, 2021 – September 30, 2022.

Ren, Hongmei PhD Post Doc, Voss, Andrew Alvin PhD, Rich, Mark Monroe, MD, PhD. Lipin1 Improves Dystrophic Pathology and Muscle Function, Department of the Army/Federal, $525,000, August 15, 2021 – August 14, 2023.

Kadakia, Madhavi, PhD. Enhancing STEM Education Through the iGEM Competition, UES, Inc./Industry, $67,266, August 20, 2021 – September 30, 2022.


Kadakia, Madhavi, PhD. Enhancing STEM Education Through the iGEM Competition, UES, Inc./Industry, $2,884, August 20, 2021 – September 30, 2022.

**Business Office-SOM (BOM55)**


Rex, Kimberly Ann, MHA. ODHE Subsidy for Primary Care, Ohio Department of Higher Education/State, $242,676, July 1, 2021 – June 30, 2022.

**Family Medicine (FPR55)**


Hershberger, Paul John, PhD. Health Inequities MES Project, Ohio State University/Educational Institutions, $606,891, July 1, 2021 – June 30, 2022.

Conway, Kate MD, Flowers, Stacy Renae PsyD, Turkson, Nicole Yamoah MD PhD. Refugee Healthcare, Catholic Social Services of the Miami Valley/Non-Profit, $72,200, January 1, 2022 – June 30, 2023.

**Medical Education – BSOM (ASM55)**


**Medicine (MED55)**


**NueroSci Cell Bio Physiology-SOM (ANM55)**


Kozak, Dr. Juliusz Ashot, PhD. Sodium Influx Assay for Measurement of TRPM7 Channel Activity in Intact Cells, National Institute of Allergy and Infectious Diseases/NIH/DHHS/Federal/NIH, $187,500, June 1, 2021 – May 31, 2023.

Rich, Mark Monroe, MD, PhD Voss, Andrew Alvin, PhD. Novel Approaches to Therapy of Muscle Ion Channelopathies, National Institute of Arthritis & Musculoskeletal & Skin Diseases/NIH/DHHS/Federal/NIH, $521,840, April 1, 2021 – March 31, 2023.


Orthopedic Surgery (OSM55)


Rapp, Ms. Christine M. Dayton Veterans Affairs Medical Center IPA Agreement – Rapp. Veterans Affairs Medical Center/Federal, $8,788, October 1, 2021 – November 30, 2021.


Williams, Amy R. Veterans Affairs Medical Center IPA Agreement – Williams. Veterans Affairs Medical Center/Federal, $10,501, October 1, 2021 – November 30, 2021.
Knisely, Christina. Veterans Affairs Medical Center IPA Agreement – Knisely. Veterans Affairs Medical Center/Federal, $14,593, October 1, 2021 – November 30, 2021.

Cates, Elizabeth E., BS. Dayton Veterans Affairs Medical Center IPA Agreement. Veterans Affairs Medical Center/Federal, $9,892, October 1, 2021 – November 30, 2021.


Thyagarajan, Anita. Dayton VA Medical Center IPA Agreement - Anita Thyagarajan. Veterans Affairs Medical Center/Federal, $10,877, October 1, 2021 – November 30, 2021.


Travers, Jeffrey Bryant MD PhD, Rohan, Craig A, Sherwin, Catherine Mary Turner, PhD Cool, David, PhD. UVB Radiation-generated Microvesicle Particles as Effectors for Photosensitivity. National Institute of Environmental Health Sciences/NIH/DHHS/Federal/NIH, $375,000, February 1, 2022 – January 31, 2023.

Hong, Jessica Seyoun. VA IPA - Jessica Hong. Veterans Affairs Medical Center/Federal, $5,776, January 1, 2022 – March 31, 2022.

Hong, Jessica Seyoun. VA IPA - Jessica Hong. Veterans Affairs Medical Center/Federal, $6,932, January 1, 2022 – March 31, 2022.

Khan, Saman. VA IPA – Khan. Veterans Affairs Medical Center/Federal, $6,421, January 1, 2022 – March 31, 2022.

Khan, Saman. VA IPA – Khan. Veterans Affairs Medical Center/Federal, $1,561, January 1, 2022 – March 31, 2022.


Carpenter, Alex. VA IPA - Alex Carpenter. Veterans Affairs Medical Center/Federal, $13,825, January 1, 2022 – March 31, 2022.

Carpenter, Alex. VA IPA - Alex Carpenter. Veterans Affairs Medical Center/Federal, $3,363, January 1, 2022 – March 31, 2022.

Cates, Elizabeth E., BS. Dayton Veterans Affairs Medical Center IPA Agreement. Veterans Affairs Medical Center/Federal, $20,385, December 1, 2021 – March 31, 2022.

Thyagarajan, Anita. Dayton VA Medical Center IPA Agreement - Anita Thyagarajan. Veterans Affairs Medical Center/Federal, $10,877, December 1, 2021 – March 31, 2022.

Knisely, Christina. Veterans Affairs Medical Center IPA Agreement – Knisely. Veterans Affairs Medical Center/Federal, $14,593, December 1, 2021 – March 31, 2022.

Rapp, Ms. Christine M. Dayton Veterans Affairs Medical Center IPA Agreement – Rapp. Veterans Affairs Medical Center/Federal, $8,788, December 1, 2021 – March 31, 2022.

Rapp, Ms. Christine M. Dayton Veterans Affairs Medical Center IPA Agreement – Rapp. Veterans Affairs Medical Center/Federal, $8,788, December 1, 2021 – March 31, 2022.


Thyagarajan, Anita. Dayton VA Medical Center IPA Agreement - Anita Thyagarajan. Veterans Affairs Medical Center/Federal, $10,877, December 1, 2021 – March 31, 2022.

Rapp, Ms. Christine M. Dayton Veterans Affairs Medical Center IPA Agreement – Rapp. Veterans Affairs Medical Center/Federal, $8,788, December 1, 2021 – March 31, 2022.

Rapp, Ms. Christine M. Dayton Veterans Affairs Medical Center IPA Agreement – Rapp. Veterans Affairs Medical Center/Federal, $26,364, December 1, 2021 – March 31, 2022.

Hong, Jessica Seyoun. VA IPA - Jessica Hong. Veterans Affairs Medical Center/Federal, $13,864, April 1, 2022 – September 30, 2022.


Cates, Elizabeth E., BS. Dayton Veterans Affairs Medical Center IPA Agreement. Veterans Affairs Medical Center/Federal, $10,678, April 1, 2022 – September 30, 2022.

Knisely, Christina. Veterans Affairs Medical Center IPA Agreement – Knisely. Veterans Affairs Medical Center/Federal, $14,593, December 1, 2021 – March 31, 2022.

Carpenter, Alex. VA IPA - Alex Carpenter. Veterans Affairs Medical Center/Federal, $34,376, April 1, 2022 – March 31, 2023.


Thyagarajan, Anita. Dayton VA Medical Center IPA Agreement - Anita Thyagarajan. Veterans Affairs Medical Center/Federal, $32,630, April 1, 2022 – March 31, 2023.


**Population and Public Health Sciences (CMH55)**


Kinzeler, Dr. Nicole, PhD. Crawford, Dr. Timothy Nathaniel, PhD, MPH. SARDI Evaluation of the Ohio Disaster Relief Project. Montgomery County ADAMH Services Board/Other government, $279,218, September 30, 2021 – September 29, 2022.

Kinzeler, Dr. Nicole, PhD Ford, Jo Ann, MRC Crawford, Dr. Timothy Nathaniel, PhD, MPH, GPRA Evaluation, Training, Data Collection and Reporting For Ohio’s State Opioid Response Grant 2.0. Ohio Department of Mental Health and Addiction Services/State, $1,022,049, September 30, 2021 – September 29, 2022.


Kinzeler, Dr. Nicole, PhD Huber, Jon-Michael McGlone, Connie. Evaluation of the Zero Suicide Project for Montgomery County. Montgomery County ADAMH Services Board/Other government, $80,000, August 31, 2021 – August 30, 2022.


Silverstein, Sydney Meredith. Linkage to Hope Project. Public Health Dayton and Montgomery County/Other government, $37,500, October 1, 2023 – September 30, 2024.


**Psychiatry (PYC55)**

Gainer, Danielle Michelle. Rural General Psychiatry. Ohio Department of Mental Health and Addiction Services/State, $10,000, July 1, 2021 – June 30, 2022.


Merrill, Brian. Adult Psychiatry. Ohio Department of Mental Health and Addiction Services/State, $15,000, July 1, 2021 – June 30, 2022.


Research Affairs (RAM55)


Dudley, Emily Suzanne, DVM. Demonstration and Practice of Core Competencies within the Sinclair Vet Tech Cohort. Sinclair Community College/Educational institutions, $3,500, July 1, 2023 – June 30, 2024.

Surgery (SUR55)


Publications are included in the annual reports from specific departments.
Hosted events

Boonshoft School of Medicine First Annual Research Symposium.
April 6, 2022 | 4:30 – 7:00 p.m.

- 57 posters were presented by students and faculty.
- Featured Faculty Research Talks
  - **Timothy Crawford, Ph.D., M.P.H.**
    - Exploring the Impact of Discrimination and HIV-related Stigma on Engagement in HIV Care: Findings from a Pilot Study among Older African Americans Living with HIV
  - **Jason Miner, M.D.**
    - Defining Mild Traumatic Brain Injury: Making the Leap from Research Definition to Clinical Practice
  - **Sydney Silverstein, Ph.D. & Danielle Gainer, M.D.**
    - Rethinking Trauma-Informed Care: How Qualitative Research Can Inform Clinical Practice
  - **Kwang-Jin Cho, Ph.D.**
    - K-Ras Plasma Membrane Interactions: A Tractable Therapeutic Target
- Featured Student Research Talks
  - **Christopher Dupont, B.A., MS3**
    - Understanding Muscle Weakness in Hyperkalemic Periodic Paralysis
  - **Scout Bowman-Gibson, B.S., MS2/G1**
    - Isolation and Application of Extracellular Vesicles
  - **Tonia Rhone, M.S., MS3**
    - Patient-Centered Focus Groups as a Catalyst for Anti-Racism Research and Quality Improvement in an Urban Academic OB/GYN Clinic