Boonshoft School of Medicine
WRIGHT STATE UNIVERSITY

Department of/Office of Pharmacology & Toxicology

Annual Report:

July 1, 2019 – June 30, 2020

Jeffrey Travers, MD, PhD
Professor and Chair, Pharmacology & Toxicology
Staff Physician, Dayton VA Medical Center

1 Statement from the Chair/Associate Dean

The Department of Pharmacology & Toxicology continues to move forward in positive fashion on the educational, investigative and service fronts. 2019-2020 was a very good year for the Department due to the winning combination of a hard-working diverse faculty, improving infrastructure, and the cohesion found in our group.

Under the expert leadership of Dr. Terry Oroszi and assisted by Ms. Catherine Winslow, and new coordinator Ms. Corinne Thaxton, the MS program overall has achieved modest growth, and since 2018 the Program has had in place an on-line curriculum. With the current COVID 19 pandemic, having the on-line program in place allowed the Department to quickly adapt to the changing educational landscape. In addition, the MD-MS program has been re-vamped to fit with the changes in the medical school curriculum. Finally, we have approval to initiate our clinical MS program designed by Dr. Oroszi and a group of external consultants who she directed that takes advantage of the clinical training in the Pharmacology Translational Unit. This new program will provide training for those with interest in human clinical trials.

As a way to equally distribute the teaching load in the department, we have established minimal faculty teaching standards of 3 classes per year. To take advantage of the very high faculty to student ratio, the Department has developed a plan that each student is assigned a faculty mentor and they are to meet twice a year. In addition to that support, students have program meetings with the director and assistant director of the program. We have also begun a monthly MS student research forum where students provide a brief update of their research. Finally, we continue to produce a departmental newsletter three times a year that highlights faculty, staff, and student accomplishments.

Dr. Jinju Wang was hired as a Research Assistant Professor.

At present, almost all full-time faculty are either funded by (either PI or have % effort) or are submitting extramural grant proposals. The most recent being Drs. Bihl and Kemp receiving NIH R01 grants. Dr. Travers renewed one of his chronic NIH R01s will now be funded until 2024 (from 1999-2024). His group also was notified that one of his VA Merit grants was awarded senior status and thus will be funded for 8 years (until 2028).

We continue to invest and expand our departmental cores: Proteomics, Pharmacology Translational Unit, and the Preclinical Pharmacology core.

Regarding the Pharmacology Translational Unit (PTU), we currently have more than ten active pharmaceutical industry sponsored trials ranging from atopic dermatitis to a melanoma vaccine. The PTU also has open IRB protocols for ~10 different translational studies funded by the NIH or VA. To help support that unit, we have a director, an MA coordinator, an RN coordinator, and a regulatory specialist. We hired Dr. Craig Rohan, a dermatologist as a part-time (20% effort) faculty to assist in the PTU as well in the educational and research missions. The Department has also awarded a small pilot grant to Dr. Ulas Sunar in Engineering to assist his studies characterizing mesoscopic imaging of human skin.

Another initiative has been to develop stronger long-term relationships with the Wright Patterson Air Force Base to enhance the educational, research and service missions of the Department. With the assistance of Dr. Oroszi, the Department has developed an arrangement whereby long-term adjunct faculty Dr. Saber Hussain and some of his research group will be occupying departmental laboratory space.

Lastly, our Department will continue to collaboratively work with each other and other faculty at Wright State University. Though the pandemic did slow our progress, we look at this as a temporary issue and the Department will continue to thrive and effectively pursue our three missions of Education, Research and Service.

2 Programs/Divisions

Name of Division or Program	Director	Dates
[Provide a description here of programs/divisions within the department including directors and participating faculty]		
Proteome Analysis Laboratory	David Cool, PhD	2004-present
Master's Program	Terry Oroszi, EdD	2008-present
Nanotoxicology Research	Saber Hussain, PhD	2010-present
CBRN Certificate Program	Terry Oroszi, EdD	2013-present
Preclinical Pharmacology Core	Yanfang Chen, MD, PhD Ji Bihl, MD, PhD	2015-present 2019-present
Pharmacology Translation Unit (PTU)	Jeffrey Travers, MD, PhD	2015-present

3 Fully Affiliated Faculty (may be the same as #2 above for some depts)

Name and Academic Position	Clinical Interests	Research Interests
[list fully affiliated faculty, including statement of clinical and research interests]		
F. Javier Alvarez-Leefmans, MD, PhD, Professor		Neuroscience, molecular physiology & pharmacology, clinical neurology
Ji Bihl, MD, PhD, Assistant Professor		Cerebrovascular diseases and diabetes, specifically in developing novel predictive and therapeutic avenues for hemorrhagic stroke and vascular complications of diabetes
Yanfang Chen, MD, PhD, Professor		Cardiovascular disease, cerebrovascular complications
David Cool, PhD, Professor, Director, Proteome Laboratory		Cellular mechanisms involved in neurodegeneration and neuroinflammation in

Name and Academic Position	Clinical Interests	Research Interests
		response to diseases and chemical toxicity Proteomic and genomic changes in response to endocrine diseases. Developing protocols and facilities for proteome, lipid and carbohydrate analysis
Mauricio Di Fulvio, PhD, Associate Professor		Diabetes
Khalid Elased, PhD, PharmD, Professor		Diabetes, cardiovascular
Saber Hussain, PhD, Professor		Nanoparticles
Mike Kemp, PhD, Assistant Professor		How human cells maintain the integrity of their genomic DNA, particularly in response to environmental genotoxins such as ultraviolet (UV) light
Terry Oroszi, EdD, Assistant Professor Director, MS Graduate Program Director, CBRN Defense Certificate Program Co-chair EMDP Advisory Board		Healthcare and Homeland Security (Terrorism /CBRN/Crisis Decision making)
Craig Rohan, MD, Assistant Professor, Pharm Tox, Associate Clinical Professor, Dermatology		Clinical Trials, Wright State Translational Unit
Ravi Sahu, PhD, Assistant Professor		Cancer pharmacology
Courtney Sulentic, PhD, Associate Professor		Immunology
Jeffrey Travers, MD, PhD, Professor and Chair Professor of Dermatology Staff Physician, Dayton VA Medical Center	Translational medicine	Skin inflammation/cancer, lipid pharmacology
Yong-jie Xu, MD, PhD, Associate Professor		Genome integrity, signaling mechanism of replicator checkpoint

4 Teaching

Baccalaureate [any course for a bachelor's degree]

Dr. Mike Kemp

Rebekah Hutcherson, Honors Undergraduate Research, 2018-2019, graduated May 2019

Dr. Ravi Sahu

Andrew Forino, B.S., Anatomy, spring 2020

Dr. Courtney Sulentic

M&I 4260/BMS 8020/PTX 8260 Microbiology and Immunology, Lecturer (9.5 hrs), fall 2019

Dr. Jeffrey Travers

Lecture in BMB2000 careers in biomedical research

Ramzi Elased, undergrad/Harvard, May, 2019-present

Dr. Yong-jie Xu

Brittany Hawley (Jan. 2019- Feb 2020): ASK program at COSM, WSU

Graduate students, including thesis supervision [master's, doctor's post-doctoral]

Dr. F. Javier Alvarez-Leefmans

PTX 7022, Effective Scientific Writing, Part 1, Director
PTX 7002, Effective Scientific Writing, Part 2, Co-Director

Mentor, Leader Admin students:
Abeer Najjar
Kimberly Thomas
Ram Vallabaneni

Dr. Ji Bihl

PTX 8000, Cell Culture Training, Spring
PTX 8000, Cell Culture Training, Summer
PTX 8000, Cell Culture Training, Fall
PTX 8014, Integrative Pharmacology and Toxicology, Summer
PTH 816, Overview of Animal Research, Fall

Postdoctoral Fellow:
Jinju Wang, PhD, 2016-present (Post-doc Fellowship Award, AHA, 2 yr grant, 10 papers)

Thesis Director:
Manasi Halurkar, MS, 2017-present, graduated summer 2019
Venkata Sai Usha Sri Polaki, MS, 2018-present
Sri Meghana Yerrapragada, MS, 2019-present

Thesis Advisory Committees:
Pariksha Thapa, MS, 2019 graduated

Visiting Scholar:
Yuchen Li, PhD, 2019-2019

Mentor, Leader/Admin Students:
Bissan Hassan, 2018-2019, graduated

Lab Rotations:
Shweta Bhadri, MS, 2019
Modhi Alshammari, MS, 2019
Arwa Alrasheed, MS, 2019
Venkata Arikatla, MS, 2019

Dr. Yanfang Chen

PTX 8000, Cell Culture Training, Spring
PTX 8000, Cell Culture Training, Summer
PTX 8014, Integrative Pharmacology and Toxicology, Summer
PTX 7021, Effective Scientific Writing 1, fall 2019
PTX 7022, Effective Scientific Writing 2, spring 2020

Thesis Director:
Kartheek Pothana, MS, 2018-2020

Thesis Advisory Committee:
Manasi Halurkar, MS, 2018, graduated 2019
Venkata Sai Usha Sri Polaki, MS, 2018-2020, proj graduation summer 2020
Langni Liu, BMS PhD, 2014-present, proj defense summer 2020

Visiting Scholar:
Hua Liu, MD, PhD, 2018-2019
Zhirong Ye, MD/MS, 2019-2020

Mentor, Leader/Admin Students:
Sri Donepudi, MS 2018-2019, graduated
Prashanth Reddy Penthala, MS 2019-2020

Dr. David Cool

PTX 7020, Laboratory Management, Classroom, Director
PTX 7020, Laboratory Management, Online MS students, Director
PTX 7020, Laboratory Management, MD/MS, Director
PTX 7500, Research Techniques, Director
BMS 805, Intercellular Communication, 4 hours

Thesis Director:
Hima Priya Yenuga, MS, 2018-2020
Arwa Hosawi, MS, 2019-2021

Thesis Advisory Committees:
Brian Stodgill, BMS/PhD, proj. graduation 2019
Jenny Jurcsisin, BMS/PhD, proj. graduated 2019
Raji Santhanakrishnan, BMS/PhD, graduated 2019
Prithy Martis, BMS/PhD, proj. graduation 2020
Soham Parikh, BMS/PhD, proj. graduation 2020
Ben Schmitt, BMS/PhD, proj graduation 2020
Jananie Rockwood, BMS/PhD, proj gradution 2022
Adaku Ume, MD/PhD, proj graduation 2022
Phillip Walker, MD/PhD, proj graduation 2021
Xiu Huan Yap, BMS/PhD, proj graduation 2022
Hannah Shows, BMS/PhD, proj graduation 2022

Dr. Mauricio Di Fulvio

PTX 7001, Cellular Pharmacology & Toxicology, Co-Director
PTX 7110, Journal Club, Director

Thesis Director:
Yakshkumar Rathod, MS, 2018-present
Rana Abdeliawad, MS, 2019-present
Modhi Alshammari, MS, 2019-present

Mentor, Leader/Admin Students:
Ambika Shoemaker, 2018-2020, graduated

Committee Member:
Charles Luu, BMS/PhD, 2019-present
Abdulla Alshudukhi, BMS/PhD, 2019-present
Tahir Amin Sulehria, BMS/PhD, 2019-present

Dr. Khalid Elased

PTX 7001, Cellular Pharmacology & Toxicology, Co-Director
PTX 9021, Effective Scientific Writing 1, Co-Director
PTX 9022, Effective Scientific Writing 2, Co-Director

Thesis Director:
Unmesha Thanekar MS, proj graduated 2019

Thesis Committee:
Leonid M Yermakov, MD/PhD, 2018-present
Christiana Draper, MD/PhD, 2018-present
Adaku Ume, MD/PhD, 2018-present
Yakshkumar Diliphbhai Rathod, MS, proj 2018-2020

Mentor/lab, Leader/Admin:
Abeer Najjar, MS, graduated 2020
Harshal Sawant, MS, proj graduation summer 2020

Dr. Saber Hussain

Advisor Leadership Students (due to being at WPAFB):
Madeline DeBrosse, MS, proj. graduation 2019

Dr. Mike Kemp

PTX 7012, Intro to Research
PTX 8007, Career Planning in Pharmacology & Toxicology, Fall 2019, Developed this course
PTX 8020, Pharmacology & Toxicology of DNA Damaging Agents, spring 2020

Thesis Director:
Kavya Shaj, PharmD, MS, 2017-2019, graduated August 2020
Abdulrahman Alkawar, MS, 2018-2020, graduated May 2020
Mariyyak Madkhali, MS, 2019-2020, graduated May 2020
Amber Castellanos, MS, 2019-2020, graduated May 2020
Vivek Gousetti, MS, 2019-present, proj graduation spring 2021
Nandeen Anabtawi, MS, 2019-present, proj graduation spring 2021
Meghana Ginugu, MS, 2019-present, proj graduation spring 2021

Doctoral Thesis Supervison
William Cvammen, BMS/PhD, 2020

Postdoctoral Training
Alex Carpenter, PhD, January 2020-present

Dr. Terry Oroszi

Summer 2019
PTX 7022, Effective Scientific Writing Part 1, 3 credit hours
PTX 7022, Effective Scientific Writing Part 2, 3 credit hours

PTX 8004, Medical Chem, Rad, and Nuc Defense, 3 credit hours
PTX 8005, Medical Biological Defense, 3 credit hours
PTX 8006, Case Studies for CBRN Defense, 3 credit hours
PTX 8000, Leadership: Theory and Application, 3 credit hours

Fall 2019
PTX 7022, Effective Scientific Writing Part 1, 3 credit hours
PTX 8004, Medical Chem, Rad, and Nuc Defense, 3 credit hours
PTX 8005, Medical Biological Defense, 3 credit hours
PTX 8006, Case Studies for CBRN Defense, 3 credit hours
PTX 8000, Leadership: Theory and Application, 3 credit hours
PTX 7012, Introduction to Research, 1 credit hour
PTX 7000, Biostatistics, 3 credit hours
PTX 7005, Clinical Investigation Capstone, 1 credit hours

Spring 2020
PTX 7000, Healthcare and Homeland Security Journal Club, 1 credit hour
PTX 7021, Effective Scientific Writing Part 1 (MD/MS), 3 credit hours
PTX 7022, Effective Scientific Writing Part 2 (MD/MS), 3 credit hours
PTX 8000, Leadership: Theory and Application, 3 credit hours
PTX 8140, Human Studies Research, 3 credit hours

Summer 2020
PTX 7000, Healthcare and Homeland Security Journal Club, 1 credit hour
PTX 7022, Effective Scientific Writing Part 2 (MD/MS), 3 credit hours
PTX 8140, Human Studies Research, 3 credit hours

Co-Advisor MD/MS Students:
Andrew La'Pelusa, 2016-present
Jude Khatib, 2017-present, graduated 2020
Jaree Naqvi, 2017-present, graduated 2020
Benita Wu, 2017-present, graduated 2020
Michael Williams, 2017-present, proj graduation fall 2020
Roy Chen, 2018-present
Sabina Bashir, 2018-present
Ryan Gabbard, 2018-present
Cameron McGlone, 2018-present
Rob Hoopes, 2018-present
Steven Repas, 2019-present
Zafer Sattouf, 2019-present
Sharlo Bayless, 2019-present
Jacob Dickman, 2019-present
Benjamin Schmeusser, 2019-present,
Janet Lubov, 2020-present
Manansi Kulkarni, 2020-present
Danielle Corbin, 2020-present

Doctoral Advising/Co-advisor:
Michele Miller, PhD, 2017-present

Dr. Craig Rohan

Rotation of MD/MS students at Wright State Physicians, WPAFB, and Dayton VA

Dr. Ravi Sahu

PTX 7021, Effective Scientific Writing 1, fall 2019
PTX 9220, Effective Scientific Writing 2, Director, spring 2020
PTX 7011, Thesis Development Workshop, spring 2020

PTX 8014, Integrative Pharmacology & Toxicology, summer 2019
PTH 8407, Overview of Animal Research for MD students BSOM, summer 2019

Thesis Director:
Sayali Kadam, MS, proj. graduation 2019, summer switched to L/A
Shreepa Chauhan, MS, 2018-2020, graduated 2020

Thesis committee:
Oladay Oyebanji, MS, graduated 2020
Hima Priya Yenuga, MS, graduated 2020

Felicia Gooden, PhD student, 2018-present

Mentor Leader/Admin Students:
Abdullah Althaiban, MS, 2018-2019
Haji Muhammad Salleh Syaza Ayuni, MS, graduated 2019
Harshini Mallipeddi, MS, graduated 2019

Other:
Anita Thyagarajan, PhD, Research Scientist, 2015-present

Dr. Courtney Sulentic

PTX 7300, Cellular Pharmacology & Toxicology, Directory
M&I 7260/BMS 8020/PTX 8260 Microbiology and Immunology Seminar Course, co-director (24.5 hr); Fall 2019
BMS 8050, Intercellular Communication, lecturer, spring 2020 4.5 hours

Graduate Research Trainees:
Miliben Bhakata, M&I MS, 2018-present
Clayton Buckner, M&I MS; transitioned to BMS PhD program, 2019-present
Sydney White, P/T MS, 2019-present
Valerie Benedict, Anatomy M.S.
Salina Daniels, Biology M.S., graduated non-thesis January 2020
Eric Reed, BMS Ph.D. program; co-advisor Tyler Nelson, Ph.D. Wright Patterson AFB
Soham Parikh, BMS Ph.D. program; co-advisor Sharmila Mukhopadhyay, Ph.D., Dept. of Mechanical Engineering, WSU

Graduate Advisory Committees, BMS PhD:
Hannah Shows
Rujuta Gadgil (BMS representative)
Amjed Aljagthmi (BMS representative)
Astha Shakya (BMS representative)
Tahir Sulehria
Angela Campo (BMS representative)

Mentor Leader/Admin Students:
Harshal Sawant, MS, 2018-present
Vishwanath Gampala, MS, 2018-present
Philip Ndoki, 2018-2019, graduated

Dr. Jeffrey Travers

PTX 7021, Effective Scientific Writing, Part 1
PTX 7022, Effective Scientific Writing, Part 2
PTX 8000 B02 Independent Study Journal Club (Director)
BSOM Medical School
-Pathobiology and Therapeutics Module for 2nd year Medical Students.
Co-led Problem-Based Learning Modules for “Immunologic Disorders and Immunopharmacology”, and “Environmental Pathology and Toxicology”

"Dermatology infectious rashes".

Thesis Director:
Avinash Mahajan, MS, 2018-present
Simon Oyebanji, MS, 2018-graduated 5-2020
Pariksha Thapa, MS, 2018-graduated 5-2019

Thesis Advisory Committees:
Aparna Poluparthi, MS, proj. graduation 2018
Walid Mari, MS, 2016-2018, graduated 2018
Shreepa Chauhan, MS, 2018-present, graduated 2020
Mariyyah Madkhali, MS, 2018-present, graduated 2020
Hima Priya Yenuga, MS, 2018-present, graduated 2020

Co-Advisor MD/MS Students:
Andrew La'Pelusa, 2016-present
Jude Khatib, 2017-present, graduated 2020
Jaree Naqvi, 2017-present, graduated 2020
Benita Wu, 2017-present, graduated 2020
Michael Williams, 2017-present, proj graduation Dec 2020
Roy Chen, 2018-present
Sabina Bashir, 2018-present
Ryan Gabbard, 2018-present
Cameron McGlone, 2018-present
Rob Hoopes, 2018-present
Steven Repas, 2019-present
Zafer Sattouf, 2019-present
Sharlo Bayless, 2019-present
Jacob Dickman, 2019-present
Benjamin Schmeusser, 2019-present
Janet Lubov, 2020-present
Manansi Kulkarni, 2020-present
Danielle Corbin, 2020-present

PhD Program Students:
Langni Liu, 2016-present, proj graduation 2020

Dr. Yong-jie Xu

PTX 7002, Thesis Development course
BMS 9940, Introduction to Research
PTX 7021, Effective Scientific Writing

Thesis Director:
Alaa Mahdi, MS, 2018-present

Thesis committee members:
Ishita Haider (PhD student in Dr. Quan Zhong's lab):
Amanda Myers (PhD student in Dr. Weiwen Long's lab)
Rujuta G. Yashodhan (PhD student in Dr. Michael Leffak's lab)

Rotation Graduate Students:
Sankhadip Bhadra (Dec 2019-Mar, 2020) PhD student from the BMS program, 1st lab rotation.
Nadeen Anabatawi (Sept. 2019): MS student in the Dept of Pharm Tox.
Arwa Alrasheed (Oct. 2019): MS student in the Dept of Pharm Tox.

Postdoctorals:
Nafees Ahamad, PhD
Saman Khan, PhD

Undergraduate medical education [medical school]

Dr. Javier Alvarez-Leefmans

Wright Q Year 1, Staying Alive

Dr. Ji Bihl

PTH 816, Overview of Animal Research, Fall

Dr. David Cool

Wright Q Year 2 Group 10 Beginning to an End, balance control and repair
Wright Q Year 2 Group 11 Beginning to end, Balance control and Repair, fall 2018

Dr. Khalid Elased

Wright Q Legacy Curriculum, facilitator
- Hypertension
- Myocardial Infraction and Angina
- Atrial fibrillation & Aortic stenosis
- Urinary Tract Infection
- Asthma
- Acute Renal Failure
- Congestive Heart Failure
- Shock

Dr. Courtney Sulentic

Wright Q Legacy Curriculum, facilitator, Beginning to End, Balance, Control Repair, Fall winter 2019-2020
Wright Q Legacy Curriculum, facilitator, Staying Alive, Fall Winter 2019-2020

Research Mentor for BSOM M2 Students:
Rachel Rhee, 2019
Shaigan Bhatti, 2019

Dr. Jeffrey Travers

Pathobiology and Therapeutics Module for 2nd year Medical Students.
Co-led Problem-Based Learning Modules for "Dermatology infectious rashes", 2019

Graduate medical education [residents, fellows]

Dr. Craig Rohan

Dermatology, Pediatrics and Internal Medicine residents routinely rotate in the clinic. Presents regular lectures to multiple academic departments.

Dr. Jeffrey Travers

Department of Dermatology, Resident student lectures (4)

Continuing medical education [grand rounds, seminars]

Dr. Ji Bihl

Extracellular Vesicles: New Insights for Diagnosis and Therapeutic Applications for Vascular Diseases. Central Research Forum, Wright State University, Dayton, OH, October, 2019.

Dr. Craig Rohan

In the past year, since coming on faculty at Wright State, I have given invited lectures at the Air Force Global Health Conference and gave a grand rounds lecture to the Department of Emergency Medicine. I am a regular participant at Wright State's Department of Dermatology Grand Rounds.

Dr. Jeffrey Travers

Dermatology Grand Rounds, Wright State Physicians, monthly

Other

Dr. Courtney Sulentic

Naazy Eman, Mentor for Women Walking West
Alicia Taylor, PhD, Mentor Match Program, Early Career Toxicologist

Dr. Jeffrey Travers

Medical Education Resources, Inc. I am a regular lecturer for this non-profit company that is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide AMA PRA Category 1 Credit(s)™. MER is widely-recognized as one of the leading providers of high-quality continuing medical education symposia and educational materials for physicians.

5 Scholarly Activity

Funded grants [List PI(s), grant title, funding source, amount of award, and dates of award. Please list each grant only once. Identify student & resident authors, i.e., *=student author **=resident/fellow]

Dr. Ji Bihl

NIH R01 (NHLBI, 2R01HL062996), PI- Travers, Co-investigator (10%), $15,000,000,01/2020-11/2023
Effects of prolonged, trophoblast-specific Hif-1alpha on placental function and preeclamptic symptoms
Platelet Activating Factor and Epidermal Cytotoxicity.
The major goal of this project is to investigate the combinatorial impact of short-term ethanol exposure and thermal burn injury on platelet-activating factor and microvesicle particles in keratinocytes leading to multi-organ dysfunction.

VA (IBX000853D), PI- Travers, Collaborator, $3,200,000, 01/2020-11/2023

Platelet Activating Factor and Epidermal Cytotoxicity.
The major goal of this project is to investigate the impact of UVB exposure on platelet-activating factor and microvesicle particles in keratinocytes leading to immunosuppression.

NIH R01 (NINDS), 1R01NS102720, PI 05/01/2018-12/31/2023, Exosmes From MIR-Primed Endothelial Progenitor Cells for Treating Ischemic Stroke, **Yanfang Chen, Co-PI,** $1,875,000

ADA Innovative Basic Science Grant (1-17-IBS-187, $345,000, **PI**, **Yanfang Chen Co-PI**,01/01/2017-12/31/2019, THERAPEUTIC ROLE OF miR-126 OVER-EXPRESSING EPC-MVs for ISCHEMIC STROKE IN DIABETES
The major goal of this project is to determine the therapeutic role of miR-126-EPC-MVs in ischemic stroke in diabetes by protecting ECs/EPCs/neurons/astrocytes against ischemic and inflammatory injury and promoting angiogenic/neurogenic repair; and determine the predictive role of the levels of cEPC-MVs and their carried miR-126 for ischemic stroke outcomes in diabetic patients.

NIH R21 (5 R21 AR071110, $407,332, **PI**, **Yanfang Chen Co-PI**, 08/10/2017-07/31/2019, MICROVESICLES AS A NOVEL TRANSMITTER FOR UVB-INDUCED BIOACTIVE PRODUCTS
The major goals of this project are to determine the involvement of PAF-PAFR signaling pathway in mediating UVB-induced MVP release and the effects of antioxidant on UVB-induced MVP release, and determine the bioactive agents in UVB-MVP.

AHA Scientist Development Grant (16SDG26420078), “Role of ACE2 over-expressing endothelial progenitor cells in cerebral hemorrhage”, 2016.1-2019.12, PI, Bihl, **Yanfang Chen Co-PI**, $320,000

AHA Postdoctoral Fellowship Award, 18POST33990433, Supervisor, 07/01/2018-12/31/2020, The Regulatory Effect of Exercise on Circulation EPC-Exs and Its Implication in Ischemic Stroke, $110,000.

Dr. Mauricio Di Fulvio

American Diabetes Association (Innovative Basic Science Award # 1-17-IBS-258). Di Fulvio, M (PI) Chloride-regulated insulin secretion. Budget: $350,000 (1/1/17-12/31-19)

National Institute of Diabetes, Digestive and Kidney Disease (NIDDK). R21 DK113446-01, Di Fulvio, M (PI). Role of Slc12a5 in insulin secretion and glucose homeostasis. Budget: $ 550,000.

Dr. Saber Hussain

Air Force Office of Scientific Research (AFOSR), Hussain, PI

Biomolecular Interaction of Nanomaterials (6.1), 2019-2021, $1,000,000
Radiogenetics, human performance augmentation, 2016-2019, $75,000
Seedling Funding ($100K)

Selected AFOSR Star Team Award, top 1%

Consortium Funding for postdoc $150, NRC $300,000

DAGSI Funding for graduate Student, $50,000

Dr. Mike Kemp

NIH GM130583, PI, DNA Damage Kinase Signaling in Non-replicating Human Cells and Tissues, awarded 2/1/19.

NIH ES030113 (Co-investigator; sub-contract) – “Circadian clock disruption: A risk factor for environmental mutagenesis”; awarded 1/18/20

Dr Craig Rohan

I am a co-investigator or sub-investigator for 13 clinical pharmaceutical/ VA or NIH trials.

Dr. Ravi Sahu

Elsa U. Pardee Foundation Grant , (P.I. Sahu), 03/2018 - 02-2019, 1 summer month Impact of platelet-activating factor in targeted therapy responses in melanoma patients.

No cost extention, NIH/NIEHS, 7K22ES023850-02, (P.I. Sahu), 07/2014 - 06/2017, 2 summer months (no cost extension), Environmental Pro-oxidative Stressors and immunosuppression.

Dr. Jeffrey Travers

Pharmaceutical-sponsored studies:

103A-301 10/01/2015 to 9/30/2021
Polynoma, LLC
A Multicenter, Double-blind, Placebo-controlled, Adaptive Phase 3 Trial of POL-103A Polyvalent Melanoma Vaccine in Post-resection Melanoma Patients (Stage IIb, IIc and III) with a High Risk of Recurrence.
Our Pharmacology Translational Unit is one of the participating sites.

Corrona Psoriasis Registry 07/01/2016 to 06/30/2021
National Psoriasis Foundation
The Corrona Psoriasis Registry is a prospective, non-interventional, research study for patients with psoriasis under the care of a dermatologist. Target enrollment is approximately 10,000 patients with no defined upper limit on enrollment. Approximately 200 clinical dermatology clinics in North America will be recruited to participate. Our Pharmacology Translational Unit is one of the participating sites.

I1F-MC-RHCD12/1/2016 06/30/2021

Eli Lilly and Company
Multicenter, Double-Blind, Randomized, Placebo-Controlled Study to Evaluate Safety, Tolerability, and Efficacy of Ixekizumab in Patients from 6 to Less than 18 Years of Age with Moderate-to-Severe Plaque Psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

LP0162-1326 3/15/2017 to 3/1/2019
Leo Pharmaceuticals
A Phase 3 trial to provide evidence of the efficacy and safety of tralokinumab monotherapy in the treatment of subjects with moderate-to-severe AD inadequately controlled with topical therapies. Such subjects would be candidates for systemic therapy. Our Pharmacology Translational Unit is one of the participating sites.

I4V-MC-JAIW 2/20/2018 to 2/28/2021
Eli Lilly and Company
A Phase 3, multicenter, randomized, double-blind, placebo-controlled, parallel-group, outpatient, 113-week study designed to evaluate the efficacy and safety of baricitinib 1-mg and 2-mg in patients with moderate to severe atopic dermatitis. Our Pharmacology Translational Unit is one of the participating sites.

I4V-MC-JAIX 4/20/2018 to 2/28/2022
Eli Lilly and Company
A Phase 3, Multicenter, Randomized, Double-Blind, Open-Label, Parallel-Group, Outpatient, Extension study designed to evaluate the efficacy and safety of baricitinib 1-mg and 2-mg in patients with moderate to severe atopic dermatitis. Our Pharmacology Translational Unit is one of the participating sites.

IM011046-BMS-986165 09/01/2018 to 12/01/2019
Bristol-Myers Squibb Company
A Multi-Center, Randomized, Double-Blind, Placebo- and Active Comparator-Controlled Phase 3 Study to Evaluate the Efficacy and Safety of BMS-986165 in Subjects with Moderate to Severe Psoriasis.
Our Pharmacology Translational Unit is one of the participating sites.

I6T-MC-AMAJ 06/11/2018 to 07/01/2020
Eli Lilly and Company
A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study Comparing the Efficacy and Safety of Mirikizumab to Secukinumab and Placebo in Patients with Moderate-to-Severe Plaque Psoriasis.
Our Pharmacology Translational Unit is one of the participating sites.

I6T-MC-AMAH 08/01/2019 to 12/012021
Eli Lilly and Company
A Multicenter, Randomized, Double-Blind, Extension Study Comparing the Efficacy and Safety of Mirikizumab to Secukinumab in Patients with Moderate-to-Severe Plaque Psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

ASN002AD-201 06/01/2018 to 06/01/2019
Asana BioSciences, LLC
A Randomized, Double-Blind, Placebo-Controlled, Phase 2b Study to Evaluate the Efficacy, Safety, Tolerability, and Pharmacokinetics of ASN002 in Subjects with Moderate to Severe Atopic Dermatitis. Our Pharmacology Translational Unit is one of the participating sites.

ASN002AD-201-EXT 01/01/2019 to 12/01/2022
Asana BioSciences, LLC
An Open-Label Extension Study to Evaluate the Efficacy, Safety, Tolerability, and Pharmacokinetics of ASN002 in Subjects with Moderate to Severe Atopic Dermatitis. Our Pharmacology Translational Unit is one of the participating sites.

I1F-MC-RHCR 11/01/2018 to 01/01/2020
Eli Lilly and Company. A 24 week Multicenter, Randomized, Double-Blind, Parallel-Group Study Comparing the Efficacy and Safety of Ixekizumab to Guselkumab in Patients with Moderate-to-Severe Plaque Psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

CC-10004-PPSO-003 11/01/2018 to 11/01/2020
Celgene Corporation
A Phase 3 Placebo Controlled Study in Pediatric Subjects from 6 to 17 Years with Moderate to Severe Plaque Psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

CC-10004-PSOR-022 12/01/2018 to 12/01/2020
Celgene Corporation
A Phase 3, Multicenter, Randomized, Placebo-Controlled, Double-Blind Study of the Efficacy and Safety of Apremilast (CC-10004) in Subjects with Mild-to-Moderate Plaque Psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

CAIN457A2324 8/01/2018 to 8/01/2020
Novartis
A randomized, double-blind, multicenter study assessing short (16 weeks) and long-term efficacy (up to 1 year), safety, and tolerability of sub-cutaneous secukinumab in subjects of body weight 90 kg or higher with moderate to severe chronic plaque-type psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

LP0162-1337 9/01/2018 to 9/01/2019
LEO Pharmaceuticals
An open-label, single-arm, multi-centre, long-term extension trial to evaluate the safety and efficacy of tralokinumab in subjects with atopic dermatitis who participated in previous tralokinumab clinical trials. Our Pharmacology Translational Unit is one of the participating sites.

ALX-101-ATOP-204 03/01/2019 to 03/01/2020
Asana BioSciences, LLC
A Phase2, Randomized, Double-Blind, Vehicle-Controlled, Parallel-Group Study to Evaluate the Safety and Efficacy of ALX-101 Topical Gel Administered Twice Daily in Adults and Adolescents with Moderate Atopic Dermatitis. Our Pharmacology Translational Unit is one of the participating sites.

I6T-MC-AMBK 04/01/2019 to 03/01/2020
Eli Lilly and Company
An Open-Label Evaluation of Mirikizumab Following Subcutaneous Administration Using Prefilled Syringe or Autoinjector in Patients with Moderate-to-Severe Plaque Psoriasis. Our Pharmacology Translational Unit is one of the participating sites.

WSP-07-BARI 06/01/2019 to 06/01/2020
Eli Lilly and Company
An Investigator-Initiated Study to Evaluate the Efficacy of Baricitinib in Treatment of Delayed- type Hypersensitivity versus Irritant Skin Reactions in Healthy Adult Male Subjects. Our Pharmacology Translational Unit is the only site for this Investigator-initiated study.

Celgene 05/1/2018 to 09/1/2020
Korman, Neil PI (Travers co-Investigator)

An Investigator Initiated Study of Monocyte Biomarkers in Moderate to Severe Plaque Psoriasis Subjects Treated with Apremilast This is an investigator-initiated study in collaboration with Case Western to test the ability of oral apremilast to modify monocyte biomarkers associated with thrombosis in psoriatic subjects. Our Pharmacology Translational Unit at Wright State University is one of the sites for this study, with the other one being Case Western Reserve Department of Dermatology.

Extramural support:

(ACTIVE)

R01 HL062996 (Travers) 07/01/1999 to 6/30/2024 25% effort
NIH/NHLB $250,000 direct costs/year
Platelet-activating factor and Epidermal Cytotoxicity
The objectives of this study are to define the role of oxidized glycerophosphocholines in UVB-mediated early responses in human and murine skin, as well as to characterize novel oxidized lipids produced in response to UVB.

Basic Science VA Merit Award (Travers) 10/01/2010 to 03/31/2028 20% VA effort
510BX000853 $146,000 direct costs/year
Oxidized lipids and UV immunosuppression

The objective of this study is to define the role of microvesicle particles in UVB-mediated systemic immunosuppression using murine and human model systems. This grant received a 6% and **thus will be renewed until 2024. This grant accepted for Senior Clinical Research Award status and thus will be renewed until 2028.**

Clinical VA Merit Award (Travers) 7/01/2014 to 6/30/2024 20% VA Effort
1101CX000809 $150,000 direct costs/year
IGF-1 and the initiation of non-melanoma skin cancer
The objectives of this grant are to test the pro-carcinogenic effects of chronic UVB on localized areas of skin on young versus geriatric subjects, and test whether localized IGF-1 is protective. In addition, the ability of topical IGF-1 inhibitor to augment procarcinogenic effects of UVB on human skin xenografted onto immunodeficient mice will be defined. **These studies were renewed with 0.7% score for another 4 years.**

R01 AG048946-01 (Travers/Spandau-co-PIs) 09/01/2014 to 04/30/2020* 20% effort
**No cost extension*
Wounding Therapy and Photocarcinogenesis $205,000 direct costs/year

The objective of these studies is to test the ability of wounding therapies including fractionated laser resurfacing to inhibit abnormal dermal senescence in human geriatric subjects and includes a clinical study to define if laser resurfacing can protect against skin cancer in geriatric subjects at our VA dermatology clinic. This grant has been moved to Wright State University and a subcontract established for Dr. Spandau.

R21 AR071110-01A1 (Bihl) 07/01/2017 to 06/30/2019 10% effort
Microvesicles as a novel transmitter for UVB-induced bioactive products
$125-150,000 direct costs/year
The objective of this study is to measure microvesicles in skin from various types and treatments. My role as co-investigator is to conduct human translational studies.

R21 AR070010-01 (Travers-Sulentic-co-PIs) 07/01/2016 to 03/31/2020* 10% effort
*No cost extension $125-150,000 direct costs/year
Photodynamic Therapy-Induced Immune Modulation: Mechanisms and Influence on Therapeutic Efficacy
The object of this study is to test the immune effects of PDT in human subjects.

Dr. Yong-jie XU

RO1-GM110132, NIH/NIGMS, (2/1/2015 - 1/31/2021), Title: Signaling Mechanism of the DNA Replication Checkpoint. Total Cost (DC + IDC): $1,350,500

Publications [List each publication only once; do not list manuscripts in press. List only publications from the year covered by this report.]

Dr. Ji Bihl

Li Y, Liu Y, Wu P, Tian Y, Liu B, Wang J, Bihl J (Co-corresponding author), Shi H. "Inhibition of ferroptosis alleviates early brain injury after subarachnoid hemorrhage in vitro and in vivo via reduction of lipid peroxidation," Cellular and Molecular Neurobiology. 2020 April.

Zhang H, Pan Q, Xie Z, **Chen Y,** Wang J, Bihl J, Zhong W, Chen Y, Zhao B, Ma X, "Implication of MicroRNA503 in Brain Endothelial Cell Function and Ischemic Stroke," Transl Stroke Res. 2020 Apr 14.

Wang J, Chen S, Bihl J (2020). "Exosome-Mediated Transfer of ACE2 (Angiotensin-Converting Enzyme 2) from Endothelial Progenitor Cells Promotes Survival and Function of Endothelial Cell," Oxid Med Cell Longev. 2020 Jan 20.

Li Y, Wu P, Bihl J (Co-corresponding author), Shi H (2020). "Underlying mechanisms and potential therapeutic molecular targets in blood-brain barrier disruption after subarachnoid hemorrhage," Curr Neuropharmacol. 2020 Jan 6.

Li Y, Wu P, Dai J, Zhang T, Bihl J, Wang C, Liu Y, Shi H (2019). "Inhibition of mTOR Alleviates Early Brain Injury After Subarachnoid Hemorrhage Via Relieving Excessive Mitochondrial Fission," Cell Mol Neurobiol. 2019 Nov 15.

Pan Q, Ma C, Wang Y, Wang J, Zheng J, Du D, Liao X, **Chen Y**, Chen Y, Bihl J, Chen C, Yang Y, Ma X (2019). "Microvesicles-mediated communication between endothelial cells modulates endothelial survival, and angiogenic function via transferring of miR-125a-5p," J Cell Biochem. 2019;120(3):3160-3172.

Dr. Yanfang Chen

Li G, Liu H, Ma C, Chen Y, Wang J, Yang Y. Exosomes are the novel players involved in the beneficial effects of exercise on type 2 diabetes. J Cell Physiol. 2019 Feb 12. doi: 10.1002/jcp.28319.

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Liu S, Chen J, Shi J, Zhou W, Wang L, Fang W, Zhong Y, Chen X, Chen Y, Sabri A, Liu S. M1-like macrophage-derived exosomes suppress angiogenesis and exacerbate cardiac dysfunction in a myocardial infarction microenvironment. Basic Res Cardiol. 2020 Feb 28;115(2):22. doi: 10.1007/s00395-020-0781-7.

Dr. David Cool

Grunwald, Jr., W.C., Cool, D.R. Proteomic and Genomic Endocrine Responses in Oxytocin Knockout Mice. Med Res Archives 7: 11 1-16 (2020).

Dr.Maurio Di Fulvio

Impaired glucose tolerance, glucagon and insulin responses in mice lacking the loop diuretic-sensitive *Nkcc2a* transporter. Lisa Kelly, Mohammed M. Almutairi, Shams Kursan, Romario Pacheco-Andrade, Eduardo Dias-Junior, Hayo Castrop, Mauricio Di Fulvio (2019) *Am J Physiol Cell Physiol. 317(4):C843-C856.*

Chloride transporters and channels in β-cell physiology: revisiting a 40-year-old model. Mauricio Di Fulvio and Lydia Aguilar-Bryan. *Biochem Soc Trans. 47(6):1843-1855.* Invited Review.

Heterogeneous expression of *CFTR* in normal human pancreatic β-cells; a potential role in insulin secretion regulation. Mauricio Di Fulvio, Marika Bogdani, Myrian Velasco, Timothy S. McMillen, Cecilia Ridaura, Lisa Kelly, Mohammed M. Almutairi, Shams Kursan, Abu A. Sajib, Marcia Hiriart, Lydia Aguilar-Bryan. *J Clin Endocrinol Metab*. under review

Dr. Khalid Elased

Effect of hyperglycemia and rosiglitazone on renal and urinary neprilysin in db/db diabetic mice. Alawi LF, Emberesh SE, Owuor BA, Chodavarapu H, Fadnavis R, El-Amouri SS, **Elased** KM. Physiol Rep. **2020** Feb;8(3):e14364. doi: 10.14814/phy2.14364. PMID: 32026607

Dr. Saber Hussain

MC Brothers, M DeBrosse, CC Grigsby, RR Naik, **SM Hussain**, Jason Heikenfeld, and Steve S. Kim. Achievements and Challenges for Real-Time Sensing of Analytes in Sweat within Wearable Platforms, Acc. Chem. Res., 2019, 52 (2), 297–306, 2019.

Saracino E1, Maiolo L, Polese D, Semprini M, Borrachero-Conejo AI, Gasparetto J1, Murtagh S1, Sola M, Tomasi L, Valle F, Pazzini L, Formaggio F, Chiappalone M, Hussain S, Caprini M, Muccini M, Ambrosio L, Fortunato G, Zamboni R, Convertino A, Benfenati V. A Glial-Silicon Nanowire Electrode Junction Enabling Differentiation and Noninvasive Recording of Slow Oscillations from Primary Astrocytes. Adv Biosyst. 2020 Apr;4(4): e1900264. doi: 10.1002/adbi.201900264.

H Lujan, E Romer, R Salisbury, S Hussain, C Sayes - Determining the biological mechanisms of action for environmental exposures: Applying CRISPR/Cas9 to toxicological assessments Toxicological Sciences, 2020, 1-14. doi: 10.1093/toxsci/kfaa028

Tilly TB, Nelson MT, Chakravarthy KB, Shira EA, Debrose MC, Grabinski CM, Salisbury RL, Mattie DR, Hussain SM. In Vitro Aerosol Exposure to Nanomaterials: From Laboratory to Environmental Field Toxicity Testing. Chemical Research in Toxicology. 2020; http://dx.doi.org/10.1021/acs.chemrestox.9b00237

Tilly TB, Ward RX, Luthra JK, Robinson S, Eiguren-Fernandez A, Lewis GS, Salisbury RL, Lednicky JA, Sabo-Attwood TL, Hussain SM, Wu CY. Condensational particle growth device for reliable cell exposure at the air-liquid interface to nanoparticles. Aerosol Science and Technology. 2019:1-20.

Miller TE, Henkels KM, Huddleston M, Salisbury R, Hussain SM, Sasaki AT, Cho KJ. Depletion of phosphatidylinositol 4-phosphate at the Golgi translocates K-Ras to mitochondria. Journal of cell science. 2019; 132(16):jcs231886.

Dr. Mike Kemp

Choi J-H, Han S, and **Kemp MG**. (2020). Detection of the small oligonucleotide products of nucleotide excision repair in UVB-irradiated human skin. DNA Repair. 86: 102766.

Travers JB, **Kemp MG**, Weir NM, Cates E, Alkawar AM, Majahan AS, Spandau DF. (2020). Wounding with a microneedling device corrects the inappropriate ultraviolet B radiation response in geriatric skin. Arch Dermatol Res. 312(1): 1-4.

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Hutcherson RJ and **Kemp MG**. (2019). ATR kinase inhibition sensitizes quiescent human cells to the lethal effects

of cisplatin but increases mutagenesis. Mutation Research. 816-818: 111678.

Dr. Terry Oroszi

Oroszi, T. Competency-Based Education, *Creative Education, 2020*

Oroszi, T. Power in the Workplace, Finding an Alternative to the Iron Fist, *Open Journal of Leadership*, Vol. 9, No. 2, PP. 97-112, 2020

Oroszi, T. Disruption Innovation and Theory, Journal of *Service Science and Management*, Vol. 13, No. 4, PP. 449 – 458. 2020

Oroszi, T. Group Interaction, and Behavior in Meetings: A New Assessment Tool to Monitor Group Behavior, *Creative Education*, Vol. 11, No. 4, PP. 596-604. 2020

Oroszi, T. Egos at the Table, a Study of Meeting Behaviors, *Psychology.* Vol.11 No. 4, PP. 636-645. 2020

Oroszi, T. Organizational Meeting Style is Not Conducive to Group Decision Making, *Advances in Applied Psychology*, Vol. 10 No. 4, PP. 115-127. 2020

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Kassem, S., Oroszi, T. Possible Therapeutic use of Bumetanide in the Treatment of Autism Spectrum Disorder. *Journal of Biosciences and Medicines*, Vol.7 No.12, PP. 58-67. 2019

Ismail, H., Oroszi, T. Addiction Treatment and Crimes. *Research and Reviews on Healthcare*, J4(3), PP 349 – 356. http://dx.doi.org/10.32474/RRHOAJ.2019.04.000186, 2019

Dr. Craig Rohan

I had a small role in a photodamage trial with Dr Travers prior to formally joining the P+T Dept—that work was formally published this year: Travers JB, Poon C, Bihl T, Borchers C, Rohrbach DJ, Borchers S, Trevino J, Rubin , Donnelly H, Kellawan K, Carpenter, L, Bahl S, Rohan C, Muennich E, Guenthner S, Hahn H, Rkein A, Darst M, Mousdicas N, Cates E, Sunar U. Quantifying skin photodamage with spatial frequency domain imaging: Statistical results. Biomed Optics Express. 2019 10(9): 4676-4683. PMID: 31565518.

Dr. Ravi Sahu

Sahu RP. Deciphering Mechanisms of UVR-Induced Tumoral Immune Checkpoint Regulation against Melanoma. Cancer Research. 2019; 79(11):2805-2807.

Konger RL, Derr-Yellin E, Ermatov N, Ren L, **Sahu RP**. The PPARγ agonist rosiglitazone suppresses syngeneic mouse SCC tumor growth through an immune-mediated mechanism. Molecules. 2019; 24(11). Pii: E2192.

Travers JB, Weyerbacher J, Ocana JA, Brochers CE, Rapp CM, **Sahu RP**. Acute ethanol exposure augments low dose UVB-mediated systemic immunosuppression via enhanced production of Platelet-activating factor receptor agonists. Journal of Investigative Dermatology 2019; 139(7): 1619-1622.

Jacob S, Chaithra V, Sumanth M, Prabhu SK, Chen CH, Travers JB, Abhilasha K, Thyagarajan A, Kemparaju K, **Sahu RP**, Rajaiah R, Marathe GK. p38 MAP-kinase inhibitor protects against platelet-activating factor-induced death in mice. Free Radical Biology and Medicine. 2019; 143:275-287.

Dr. Courtney Sulentic

Snyder, A. D., Ochs, S. D., Johnson, E. B., **Sulentic, C. E. W.** Aryl hydrocarbon receptor-induced activation of the human IGH hs1.2 enhancer: Mutational analysis of putative regulatory binding motifs. *Molecular Immunology*, 2020; 120:164-178

Dr. Jeffrey Travers

Hoopes R, Veerkamp PM, **Travers JB**. Exuberant reaction of facial keloid to topical imiquimod. Jacobs Journal of Expt Derm. 3(1) 025, 2019.

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Yu H, Dilbaz S, Coßmann J, Hoang AC, Diedrich V, Herwig A, Harauma A, Hoshi Y, Moriguchi T, Landgraf K, Körner A, Lucas C, Brodesser S, Balogh L, Thuróczy J, Karemore G, Kuefner MS, Park EA, Rapp C, **Travers JB**, Röszer T. Breast milk alkylglycerols sustain beige adipocytes through adipose tissue macrophages. J. Clin. Invest. 130:2485-2499, 2019. PMID: 31081799.

Travers JB, Poon C, Bihl T, Borchers C, Rohrbach DJ, Borchers S, Trevino J, Rubin M, Donnelly H, Kellawan K, Carpenter, L, Bahl S, Rohan C, Muennich E, Guenthner S, Hahn H, Rkein A, Darst M, Mousdicas N, Cates E, Sunar U. Quantifying skin photodamage with spatial frequency domain imaging: Statistical results. Biomed. Optics Express. 10(9): 4676-4683, 2019. PMID: 31565518.

Abhilasha KV, Sumanth MS, Chaithra VH, Jacob SP, Thyagarajan A, **Sahu RP**, Rajaiah R, Prabhu KS, Kemparaju K, **Travers JB**, Chen CH, Marathe GK. p38 MAP-kinase inhibitor protects against platelet-activating factor-induced death in mice. Free Radic Biol Med. 143:275-287, 2019. PMID: 31442556.

Travers JB, **Kemp MG,** Weir NM, Cates E, Alkawar AM, Mahajan AS, Spandau DF. Wounding with a microneedling device corrects the inappropriate ultraviolet B radiation response in geriatric skin. Arch Derm Res 312:1-4, 2020. PMID: 31659432.

Chen R, Wargo JJ, Williams A, Cates E, Spandau DF, Knisely C, **Travers JB**. Single ablative fractional resurfacing laser treatment for forearm actinic keratoses: six month follow-up data from an intrapatient comparison between treated and untreated sites. Lasers Surg Med 52(1): 84-87, 2020. PMID: 31736123.

Wu BY, Khatib JZ, Krishnamurthy S, **Travers JB**. Mystery burns and nocturnal seizure safety. Cutis. 105(1): 32-35, 2020. PMID: 32074144. (*Featured on the Cover of the Journal*).

Liu L, Fahy KE, Awoyemi AA, Thapa P, Kelly LE, Chen J, **Bihl JC**, **Cool DR, Chen Y**, Rapp CM, Johnson RM, and **Travers JB**. Thermal burn injury generates bioactive microvesicles: evidence for a novel transport mechanism for the lipid mediator Platelet-activating factor that involves subcellular particles and the PAF receptor. J. Immunol. (*in press 2020*). PMID: 32434939

Books, chapters, reviews

Dr. Ji Bihl

(1). Li Y, Wu P, Bihl J (Co-corresponding author), Shi H (2020). “Underlying mechanisms and potential therapeutic molecular targets in blood-brain barrier disruption after subarachnoid hemorrhage,” Curr Neuropharmacol. 2020 Jan 6.

Dr. Mike Kemp

Kemp MG. (2019). Damage removal and gap filling in nucleotide excision repair. The Enzymes: DNA Repair, 45: 59-97.

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Dr. Terry Oroszi

Miller, M., Oroszi, T., Romaine, W., Williams, K., (2019), Ignorance is the parent of fear: utilizing social media in response, *CBRNe World*, Falcon Communications UK, Winchester, United Kingdom, August 2019, p. 19-22.

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Oroszi, T. *Contextual Factors Influencing CBRN Leadership Decision-Making.* In Chemical Warfare Agents: Biomedical and Psychological Effects, Medical Countermeasures, and Emergency Response, 2019

Oroszi, T. L., & Ellis, D. H. The American Terrorist: Everything You Need to Know to be a Subject Matter Expert. Greylander Press, LLC. (Print, Audiobook, and E-book), 2019

Dr. Ravi Sahu

Alshehri MSA@, Thyagarajan A@, Miller KLR, Sherwin C, **Travers JB**, **Sahu RP**. Myeloid-derived suppressor cells and pancreatic cancer: Implications in novel therapeutic approaches. Cancers 2019;11(11). pii: E1627. (@ equal co-authors).

Thyagarajan A, Tsai KY, **Sahu RP**. MicroRNA heterogeneity in melanoma progression. Seminars in Cancer Biology. 2019. pii: S1044-579X(19)30009-4.

Dr. Yongjie Xu

Xu YJ, Khan S, Didier AC, Wozniak M, Liu YF, Singh S, and Nakamura TM (2019) A tel2 mutation that destabilizes the Tel2-Tti1-Tti2 complex eliminates Rad3ATR kinase signaling in the DNA replication checkpoint and leads to telomere shortening in fission yeast. *Mol. Cell. Biol.* 39(20) e00175-https://mcb.asm.org/content/early/2019/07/22/MCB.00175-19

Published abstracts

Dr. Ji Bihl

Halurkar M, Bihl J (2020) "Effect of EPC-EXs on high glucose and H/R-induced injury of neurons and astrocytes," FENS 2020, Glasgow, UK

Wang J, Chen S, Bihl J (2020) "Moderate exercise has beneficial effects on mouse ischemic stroke by enhancing the functions of circulating endothelial progenitor cell-derived exosomes via activation of the miR-126/BDNF/PI3k pathway," ISEV 2020, Philadelphia, PA

Wang J, Pan Q, Zhao B, Ma X, Bihl J (2019) "Overexpression of ACE2 boosts the therapeutic effects of endothelial progenitor cells derived exosomes on hemorrhagic stroke," High Blood Pressure Scientific Meeting 2019, New Orleans, LA

Wang J, Chen S, Bihl J (2020) "Exercise Improves Endothelial Function Associated with Alleviated Inflammation and Oxidative Stress of Perivascular Adipose Tissue in Type 2 Diabetic Mice," ADA Scientific Session 2020, Chicago, IL

Wang J, Chen S, Liu H, Yang Y, Bihl J (2019) "Exercise enhanced the function of endothelial progenitor cell-derived exosomes on protecting neurons against hypoxia/reoxygenation insult," International Stroke Conference, Honolulu, HI

Dr. David Cool

Steven R. Lindheim, Does anti-mullerian hormone (amh) predict biochemical hyperandrogenism, oligo-anovulation, metabolic dysfunction, and metabolic syndrome?: results from a longitudinal study. **2019 Fertility and Sterility Dialog** 111(4):e37 DOI: 10.1016/j.fertnstert.2019.02.092

T.A. Sensing, C.E. Hardman, **D.R. Cool**, J.R. Lynde, J.S. Bruun, R. Armstrong, A.S. Shoen, and J.K. Bini. A pilot study of cytokine profiles in patients who develop ventilator-associated pneumonia. Soc. Crit. Care 2019.

Dr. Mauricio Di Fulvio

CFTR is functionally expressed in a subpopulation of endocrine cells of the mammalian islet of Langerhans and modulates insulin secretion. Di Fulvio M, Bogdani M, Kelly L, Velasco M, Hiriart M and Aguilar-Bryan L. European

Cystic Fibrosis Society Basic Science Conference. Dubrovnik, Croatia • March 27-30, 2019

Expression of *Kcc2a-S25*, a new splice variant of the neuronal K^+Cl^- cotransporter-2 in endocrine tissues and testicle germ cells. Rathod Y, Kursan S, Dias-Junior E, Kelly L and Di Fulvio M. Ohio Physiological Society. 34th Annual Meeting, September 20-21, 2019, WSU, Dayton, Ohio.

Dr. Khalid Elased

Anhar Hosawi, Sanjeev Dhakal, Unmesha Thanekar, Laale Alawi, Harshal Sawant, Nadja Grobe, **Khalid M Elased**. Abstract P2036: Effects of Angiotensin II Type 1 A Receptor (AT1aR) on Renal and Urinary Biomarkers of Acute Kidney Injury in Two Kidney One Clip (2K1C) Model of Renovascular Hypertension.
Conference: **Hypertension Meeting of the American Heart Association**
Location: New Orleans, LA, September 5-8, 2019.
Originally published4 Sep 2019 https://doi.org/10.1161/hyp.74.suppl_1.P2036 . Hypertension. 2019;74:AP2036.

Unmesha Thanekar, Rupinder K Gill, Sanjeev Dhakal, Anhar Hosawi, **Khalid M Elased**.
Abstract P2044: Renoprotective Effects of Canagliflozin in Db/db Diabetic Mice.
Conference: **Hypertension Meeting of the American Heart Association**
Location: New Orleans, LA, September 5-8, 2019
Originally published4 Sep 2019https://doi.org/10.1161/hyp.74.suppl_1.P2044. Hypertension. 2019;74:AP2044.

Thanekar U, **Elased KM**. Effect of canagliflozin on renal and urinary biomarkers for diabetic kidney disease in db/db diabetic mice. 34th Meeting of the Ohio Physiological Society held in Wright State University, Dayton, OH, September 20-21, 2019.

Hosawi A, Dhakal S, Alawi L, Sawant H, Thanekar U, Grobe N, **Elased KM**. Effects of Angiotensin II Type 1 A Receptor (AT1aR) on renal and urinary biomarkers of acute kidney injury in Two-kidney One Clip model of Renovascular Hypertension. 34th Meeting of the Ohio Physiological Society held in wright State University, Dayton, OH, September 20-21, 2019

Dr. Saber Hussain

Total of 2- Society of Toxicology 2020

Dr. Mike Kemp

Journal of Investigative Dermatology (May 2019)
Environmental and Molecular Mutagenesis (Sept 2019)

Dr. Terry Oroszi

Oroszi, Terry (2019), The American Terrorist. National Homeland Security, Phoenix AZ

Dr. Ravi Sahu

Shreepa Chauhan, Anita Thyagarajan, **Ravi P. Sahu**. The role of the Platelet activating factor-receptor in miR-149-mediated effects on lung cancer growth and treatment efficacy. The poster was presented in an annual Ohio Physiological Society (OPS) 2019 meeting.

Abdullah Altaiban, Anita Thyagarajan, **Ravi P. Sahu.** KRAS Pathway based Targeted Therapy Responses in Pancreatic Cancer. The poster was presented in an annual Ohio Physiological Society (OPS) 2019 meeting.

Bushra Faisal Al-Harbi, Felicia Chee-Tuan Gooden, Anita Thyagarajan, **Ravi P. Sahu**. Advancements in VEGF-based targeted therapy approaches for lung cancer. The poster was presented in an annual Ohio Physiological Society (OPS) 2019 meeting.

Shreepa Chauhan, Anita Thyagarajan, **Ravi P. Sahu**. Platelet activating factor-receptor in lung cancer growth and treatment efficacy. The poster was presented in an annual Ohio Valley Chapter of the Society of Toxicology (OVSOT) 2019 meeting.

Abdullah Altaiban, Anita Thyagarajan, **Ravi P. Sahu.** KRAS Pathway based Targeted Therapy Responses in Pancreatic Cancer. The poster was presented in an annual Ohio Valley Chapter of the Society of Toxicology (OVSOT) 2019 meeting.

Raisa Siddiqui, **Ravi P. Sahu**. PDPN and Cancer. The poster was presented in an annual Ohio Valley Chapter of the Society of Toxicology (OVSOT) 2019 meeting.
Anita Thyagarajan, Sayali M. Kadam, Langui Liu, Lisa Kelley, Christine M. Rapp, Yanfang Chen, **Ravi P. Sahu**. Platelet-activating factor-receptor dependent pathway mediates gemcitabine chemotherapy-induced microvesicle particles release in pancreatic cancer cells. The poster was presented in an annual Experimental Biology 2019 meeting.

These posters were also presented at the annual meetings of Boonshoft School of Medicine (BSOM) Cancer Research Forum and College of Science and Mathematics (CoSM) Festival of Research.

Dr. Courtney Sulentic

*Allex-Buckner, C., Snyder, A., **Sulentic, C.E.W.**: Mapping of a highly repetitive enhancer region within the IGH gene using long-read-single molecule nanopore. *Toxicological Sciences, the Toxicologist*, **174**:2001, 2019. 2001 (virtual meeting due to COVID19)

Bhakta, M., Buckner, C., Burra, K., **Sulentic, C.E.W.: Differential effects of the AhR on immunoglobulin expression in a human B-cell line. *Toxicological Sciences, the Toxicologist*, **174**:2509, 2018. (virtual meeting due to COVID19)

*Valerie B. (platform and poster), **Sulentic, C. E. W.**: Evaluation of physiologically relevant aryl hydrocarbon receptor ligands on Ig heavy chain expression in a human B-cell line model. *Autumn Immunology Conference (AIC),* **48**:129, 2019.

*Bhakta, M. (platform and poster), Allex-Buckner, C., Burra, K., **Sulentic, C. E. W.**: Differential effects of the AhR on immunoglobulin expression in a human B-cell line. *Autumn Immunology Conference (AIC),* **48**:130, 2019.

*Allex-Buckner, C. (platform and poster), Snyder, A., **Sulentic, C. E. W.**: Mapping of a highly repetitive enhancer region within the IGH gene using long-read-single molecule nanopore sequencing. *Autumn Immunology Conference (AIC),* **48**:132, 2019.

Dr. Travers

Travers JB, **Kemp MG**, Spandau DF. Protection of geriatric skin from abnormal pro-carcinogenic UVB responses by dermal wounding strategies which upregulate dermal IGF-1 levels. J. Invest. Dermatol. 139(5) S131, 2019.

Liu L, Rapp C, **Bihl J, Travers J** (2019) “UVB induced-release of bioactive microvesicle particles in keratinocytes carry platelet-activating factor,” ISEV 2019 Meeting, Kyoto, Japan

A98 Thapa P, Liu L, Rapp CR, **Travers JB**. Synergistic effects of UVB and Platelet-activating factor on microvesicle particle production. J. Invest. Dermatol. 139(5) S130, 2019.
Liu L, Thapa P, Rapp CR, **Travers JB**. Evidence that UVB-generated microvesicle particles are involved in acute skin inflammation. J. Invest. Dermatol. 139(5) S131, 2019.

Significant presentations [e.g., to academic societies, medical schools and national professional societies.]

Dr. Ji Bihl

Role of exosomes and exosomal miRNAs in brain repair after stroke. Department of Biomedical Science, Marshall University, Huntington, VW. March 2020.

Extracellular vesicles in stroke pathogenesis and therapy. Department of Biology, Wright State University, Dayton, OH. November 2019.

Extracellular Vesicles: New Insights for Diagnosis and Therapeutic Applications for Vascular Diseases. Wright State University (Central Research Forum), Dayton, OH, October 2019.

The Research Proceedings and Translational Potentials of Extracellular Vesicles. Wuhan Sports University, Wuhan, China. July 2019.

Dr. Mauricio Di Fulvio

Borrowing neuronal genes to better understand insulin secretion. Seminar. Dept of Neuroscience Cell Biology and Physiology. Boonshoft School of Medicine, Wright State University.

The metabolic and hormonal consequences of lacking Nkcc2a. 53rd Annual Lake Cumberland Biological Transport Group Meeting, Jamestown, KY

Chloride transporters in β-cell physiology. Membrane Transport Proteins. Gordon Research Conference. Grand Summit Hotel at Sunday River in Newry, ME

Chloride transporters and channels in β-cell physiology and insulin secretion. ITTS Inaugural Conference 2018. Channels and co-transporters in Neuronal and Pancreatic β-cell physiology and disease. Vienna, Austria.

Chloride physiology in β-cells and insulin secretion. Boonshoft School of Medicine Central Research Forum. Wright State University

Dr. Khalid Elased

Presentations of two posters at the Annual Meeting of the American Heart Association in New Orleans.

Dr. Saber Hussain

Organized- and Speaker: Served in program committee of Society of Toxicology (10000 members) to review abstracts and workshop proposals (2017-2020)

Dr. Mike Kemp

Florida International University Biomolecular Sciences Institute, Miami, FL, April 2019.

University of Cincinnati College of Medicine Department of Molecular Genetics, Biochemistry, and Microbiology Seminar, Cincinnati, OH (Oct 2019)

50th Annual Meeting of the Environmental Mutagenesis and Genomic Society, Washington D.C. (Sept 2019)

DNA Repair Symposium at the 18th Congress of the European Society for Photobiology/17th International Congress on Photobiology, Barcelona, Spain (Aug 2019)

Dr. Terry Oroszi

Oroszi, T. National Preparedness Summit, Dallas Texas. (Terrorism), March 2020
Oroszi, T. National Security Agency (NSA) provided terrorism training to CI/S personnel. Nov 2019
Oroszi, T. FBI/ InfraGard Quantico invited speaker. Nov 2019
Oroszi, T. InfraGard/ASIS Security Conference | Global Security Exchange Speaker, Chicago, IL, Sept 2019
Oroszi, T. Brief the House Intelligence and Armed Services Staff, Washington DC (Terrorism), July 2019
Oroszi, T. National Homeland Security Conference Speaker, Phoenix, AZ (Terrorism in the US), June 2019
Oroszi, T. FBI Information Sharing Initiative Guest Speaker, May 2020
Oroszi, T. Department of Agriculture. Columbus OH. Agroterrorism, March 2020
Oroszi, T. Institute of Management Accountants. Cincinnati OH. Power Platform, Feb 2020
Oroszi, T. Highlights for Children, Columbus, OH. Understanding the Path Toward Radicalization. Nov 2019
Oroszi, T. Intelligence Analysis Career Training (IACT), Program - 4/5/6 Power Platform Workshop, June 2019
Oroszi, T. Intelligence Analysis Career Training (IACT), Program - The American Terrorist Workshop, June 2019

Dr. Ravi Sahu

Ravi P. Sahu. Exploring mechanisms of immune checkpoint regulation in environmental stressor-induced progression of melanoma. The World Congress on Cancer Research & Therapy 2019 at Rome, Italy. (E- talk)

Ravi P. Sahu. Intervention of lipid mediator-based pathway for skin cancer. 24th International Conference on Cancer Research and Pharmacology Conference themed **"**Breaching Frontiers in Cancer Research and Pharmacology" 2019 at Singapore. (E-Talk).

Dr. Courtney Sulentic

*Parikh, S. (platform), **Sulentic, C. E. W.**, Mukhopadhyay, S. M.: Influence of surface modification of carbon nanotube-coated scaffolds on keratinocyte cell growth. Ohio Valley Society of Toxicology, Procter & Gamble, Mason, OH, 2019.

*Bhakta, M., Allex-Buckner, C., Burra, K., **Sulentic, C. E. W.**: Differential effects of the AhR on immunoglobulin expression in a human B-cell line. Ohio Valley Society of Toxicology, Procter & Gamble, Mason, OH, 2019.

*Valerie B., **Sulentic, C. E. W.**: Evaluation of physiologically relevant aryl hydrocarbon receptor ligands on Ig heavy chain expression in a human B-cell line model. Ohio Valley Society of Toxicology, Procter & Gamble, Mason, OH, 2019.

*Allex-Buckner, C., Panstingel, N., **Sulentic, C. E. W.**: Feel the burn: Effects of sunscreen nanoparticles on cytokine and chemokine production in human skin. Ohio Valley Society of Toxicology, Procter & Gamble, Mason, OH, 2019.

*Valerie B., **Sulentic, C. E. W.**: Evaluation of physiologically relevant aryl hydrocarbon receptor ligands on Ig heavy chain expression in a human B-cell line model. Central Research Forum, Boonshoft School of Medicine, Wright State University, Dayton, OH, 2019.

*Parikh, S., **Sulentic, C. E. W.**, Mukhopadhyay, S. M.: Potential application of hierarchical multi-walled carbon nanotube-coated carbon supports as wound healing scaffolds. Central Research Forum, Boonshoft School of Medicine, Wright State University, Dayton, OH, 2019.

Dr. Jeffrey Travers

VA Clinical Grand Rounds, Dayton VAMC, Dayton OH

European Society of Photobiology-International Congress on Photobiology Congress, Barcelona, Spain. Invited plenary speaker "Platelet-activating factor and UVB responses" August, 2019.

Ohio Health Partners, Inc Dermatology Grand Rounds Speaker, Columbus, OH, 2019

"Mechanisms of non-melanoma skin cancer and wounding strategies to prevent photocarcinogenesis". September, 2019.

American Society for Photobiology (joint Ammerican Society for Photobiology-European Society for Photobiology Session invited plenary speaker. Chicago, IL. "The role of microvesicles in UVB signaling" June, 2020.

Consultantships [sponsor activity]

Dr. David Cool

VA Travers (PI) Funded Consultant 2020-2024
Oxidized Lipids and UV Immunosuppression

NIH-R21 Bihl (PI) Funded Cool (Consultant) 2018-2020
Microvesicles as a novel transmitter for UV-induced bioactive products.

Collaborations & Consultants

Dr. Karen Parker, Stanford University- OT & AVP in Autism	2009-present
Dr. Vye Greanya (WSRI) VNS versus OPs and Opiates	2019- present
Dr. Ray Bahado-Singh, Beaumont Health Research Center, MI. Proteomics	2016- present
Dr. Steven Lindheim OB/GYN Neu(5)GC in Infertility, endometriosis, vulvodynia	2015- present
Dr. John Bini MVH, Dept.Surgery, Proteins in Ventilator Associated Pneumonia	2014- present
Dr. Oleg Paliy- BMB- HPLC Analysis of Small Bacterial Metabolic Molecules	2018- present
Dr. Richard Simman, P&T Dept, Comparison of wound healing using OASIS.	2014-present
Dr Lucille Wrenshall, NCBP Dept, Role of IL2 in cardiovascular system	2012-present
Dr. Steven Lindheim OB/GYN Polycystic Ovary Syndrome	2014- present
http://clinicaltrials.gov/ct2/show/study/NCT01487486	
Dr Miryoung Lee- (Texas A&M) Analysis of biomarkers of dieting	2013- present
Dr. James Olson- Emergency Medicine & NCBP (RET), Biomarkers of Stroke. Patent Filed, Ongoing Research Project	2003-present
Dr. Jiri Sonek & Dr. David McKenna, MVH- OB/GYN, BioMarkers for Preterm Delivery Ongoing Research Project.	2008-present

Dr. Jeffrey Travers

Proctor & Gamble. Skin eruptions from Tide Pods 2017-

Eli Lilly, Inc. Member of NCRF Advisory Board regarding Baracitinib use in Skin Diseases 2018-

Other recognition [e.g. editorships, reviewer awards]

Dr. Ji Bihl

Awards
2019 President's Awards for Excellence: Early Career Achievement Award, Wright State University, OH

Editorial Board
Oxidative Medicine and Cellular Longevity

Professional Memberships
- American Society for Exosomes and Microvesicles (ASEMV)
- International Society for Extracellular Vesicles (ISEV)
- American Diabetes Association (ADA)
- American Heart Association (AHA)

Dr. Yanfang Chen

Professional Memberships
International Society for Extracellular Vesicles (ISEV)
American Diabetes Association (ADA)
American Heart Association (AHA)

Reviewer for Scientific Conference
American Heart Association (AHA)

Reviewer for journals
Cellular and Molecular Neurobiology,Cellular Physiology and Biochemistry, Experimental Cell Research

Dr. David Cool

2014- Present- Editorial Board, Interdisciplinary Toxicology

2012- Present- Editorial Board, Journal of Environmental Immunological Toxicology

2020- NIH CounterAct Study Section Member Molecular, Cellular & Developmental Neurosciences Integrated Review Group. U01 & U54 Study Section Reviewer (03/04-06/20).

Dr. Mauricio Di Fulvio

Ad-hoc reviewer NIH-NIDDK, Diabetes, Endocrinology, and Metabolic Diseases B Sub-Committee (DDK-B). Washington DC.

Ad-hoc reviewer NIH-DPPS, Molecular and Cellular Endocrinology Study Section -MCE. Washington, DC.

Review Editor, Frontiers in Endocrinology
Review Editor, Frontiers in Neurosciences
Reviewer Scientific Reports
Reviewer American Journal of Physiology

Dr. Khalid Elased
Member of the Editorial Board of the Journal of Diabetes Research
Member of the Editorial Board of World Journal of Hypertension (WJH).
Member of the Editorial Board of World Journal of Cardiology (WJC).
Member of the Editorial Board of SAJ Pharmacy & Pharmacology

Dr. Saber Hussain

Editorial Positions
Journal: NANOIMPACT, 2015-present
Frontiers of Toxicology (Associate Editor), 2019-present
Nanotoxicology (Editorial Member), 2009-present
Nanoimpact, 2015-2020

Professional Memberships and Affiliations
Society of Toxicology

Reviewer For Journals
Reviewer, Toxicological Sciences, 2007-present
Reviewer, Toxicology Letters, 2005-present
Reviewer, Toxicology In Vitro, 2007-present
Reviewer, Journal of Toxicology and Environmental Health, 2007-present
Reviewer, International Journal of Nanomedicine, 2007-present
Reviewer, International Journal of Toxicology, 2007-present
Reviewer, Food Chemical Toxicology, 2007-present
Reviewer, International Journal of Nanomedicine, 2007-present
Reviewer, Langmuir, 2008-present
Reviewer, Nature Nanotechnology, 2008-present

Reviewer, Carbon, 2008-present
Reviewer, Journal of the American Chemical Society, 2008-present
Reviewer, Advanced Materials, Small, 2008-present
Reviewer, PNAS, 2010-present

Dr. Mike Kemp

2019 Newly Independent Investigators Engagement Program, Environmental Mutagenesis and Genomics Society

Dr. Ravi Sahu

Regular Adhoc reviewer of various scientific journals:
Antioxidants, Autophagy, BBA Molecular and Cell Biology of Lipids, Biomedical Research International, Biomarkers in Cancers, Cancer Research, Cancer, Cancers, Cancer letters, Clinical Cancer Research, Carcinogenesis, Cancer Management and Research, Cancer Informatics, Food & Function, International J of Molecular Sciences, European Journal of Inflammation, Journal of Investigative Dermatology, Journal of Lipid Mediators, Mediators of Inflammation, Mini-Reviews in Medicinal Chemistry, Molecular Cancer Research, Oncotarget, Oncogenesis, Oncotarget and Therapy, Oxidative Medicine and Cellular Longevity, Plos One, Photochemistry and Photobiology, Scientific Reports, Translational Oncogenomics.
Research, Oncotarget, Oncogenesis, Oncotarget and Therapy, Oxidative Medicine and Cellular Longevity, Photochemistry and Photobiology, Scientific Reports.

Dr. Courtney Sulentic

Student Awards, Miliben Bhakta, Ohio Valley Society of Toxicology meeting, Procter & Gamble. Best M.S. Poster Presentation, Selected for “Tox on the Clock” presentation

Dr. Jeffrey Travers

External Advisor, Christian Doppler Laboratory on Biotechnology of Skin Aging, Vienna Austria, 2013-present
External Advisor, University of Wisconsin NIAMS P30, Skin Disease Research Core Grant, Madison, WI., 2016-19
External Advisor, University of Pittsburgh NCI SPORE grant, Pittsburgh, PA 2019-
Brage Golding Distinguished Professor for Research, 2020-2023

Journal Reviewer (2019-2020):
Archives of Dermatology
British Journal of Dermatology
European Journal of Pharmacology
Free Radical Biology and Experimental Medicine
Inflammation Research
International Journal of Immunopharmacology
IUBMB Life
Journal of Biological Chemistry
Journal of Immunology
Journal of Investigative Dermatology
Molecules
Molecular Carcinogenesis
Nutrients
Toxicology and Applied Pharmacology
Translational Research

Editorial Board:
Inflammation & Allergy – Drug Targets
Clinics in Oncology (Melanoma/Skin Cancer section)

International Union of Basic and Clinical Pharmacology Committee on Receptor Nomenclature, PAF-R (Member 2012-present)

Grant Reviewer:

National Institutes of Health Review Panels (**53 separate panels served**)
NIAMS T32 Review 10-2019
NIAMS RISK grant reviewer 6-2019
NAIMS SBIR grant reviewer 3-2020, 6-2020

Veteran's Administration Review Panels (**16 panels served**)
VA Oncology D/E Review Panel, 11-2019, 5-2020

External Advisor, NCI SPORE grant, University of Pittsburgh (2019-present)

Dr. Yongje Xu

Ad hoc reviewer for the following journals: Current Genetics and Genes

6 Summary of Service Activities

Student advising

Dr. F. Javier Alvarez-Leefmans

Mentor, Leader Admin students:
Abeer Najjar
Kimberly Thomas
Ram Vallabaneni

Dr. Ji Bihl

Post-doctoral Fellow:
Jinju Wang, Ph.D., 2016-present.

Thesis Director:
Venkata Sai Usha Sri Polaki, MS, 2018-present
Sri Meghana Yerrapragada, MS, 2019-present

Thesis Advisory Committee:
Praveen Kumar Alla, Ph.D, 2016-20212.
Langni Liu, Ph.D, 2015-2020
Kartheek Pothana, MS, 2018-20204.
Oladayo Ayobami Oyebanji, MS, 2018-20205.
Andrew Forino, MS, 2018-2020

Visiting Scholar
Yuchen Li, Ph.D, 2018-2019

High School Students:
Eileen Yang, 2019

Lab Rotations:

Shweta Bhadri, MS, 2019
Modhi Alshammari, MS, 2019
Arwa Alrasheed, MS, 2019
Venkata Arikatla, MS, 2019

Dr. Yanfang Chen

Kartheek Pothana, MS, thesis director, 2018-2020
Manasi Halurkar, MS, thesis advisory committee, 2018, expected graduation summer 2019
Langni Liu, BMS PhD, thesis advisory committee, 2014-present, proj defense summer 2020
Sri Donepudi, MS, mentor L/A, 2018-2019, graduated
Prashanth Reddy Penthala, MS Leadership Program, 2019-2020,
Manansi Halurkar, MS, 2017-2019
Venkata Sai Usha Sri Polaki, MS 2018-2020
Hua Liu, MD, Ph.D, 2018-2019
Zhirong Ye, M.D./M.S, 2019-2020

Dr. David Cool

Hima Priya Yenuga, MS, 2018-2020
Arwa Hosawi, MS, 2019-2021
Brian Stodgill, BMS/PhD, proj. graduation 2019
Jenny Jurcsisin, BMS/PhD, proj. graduated 2019
Raji Santhanakrishnan, BMS/PhD, graduated 2019
Prithy Martis, BMS/PhD, proj. graduation 2020
Soham Parikh, BMS/PhD, proj. graduation 2020
Ben Schmitt, BMS/PhD, proj graduation 2020
Jananie Rockwood, BMS/PhD, proj gradution 2022
Adaku Ume, MD/PhD, proj graduation 2022
Phillip Walker, MD/PhD, proj graduation 2021
Xiu Huan Yap, BMS/PhD, proj graduation 2022
Hannah Shows, BMS/PhD, proj graduation 2022

Dr. Mauricio Di Fulvio

Rana Abdeljawad, PharmD. MSc. Advisor
Modhi Alshammari, PharmD. MSc. Advisor
Yaksh Rathod, PharmD. MSc. Advisor
Charles Luu, BSc. MSc. Committee member
Abdullah Alshudukhi, MSc, BMS-PhD. Committee member
Tahir Amin Sulehria MD, BMS-PhD. BMS representative, Committee member
Ambika Shoemaker, MS, mentor L/A, 2018-present

Dr. Khalid Elased

Unmesha Thanekar MS, thesis director, graduated 2019
Leonid M Yermakov, MD/PhD, 2018-present
Christiana Draper, MD/PhD, 2018-present
Adaku Ume, MD/PhD, 2018-present
Yakshkumar Diliphbhai Rathod, MS, proj 2018-2020
Abeer Najjar, MS, graduated 2020
Harshal Sawant, MS, proj graduation summer 2020

Dr. Saber Hussain

Madeline DeBrosse, MS, mentor L/A, proj. graduation 2019

Dr. Mike Kemp

Kavya Shaj, PharmD (Pharm/Tox M.S.; graduated Aug 2020)
Abdulrahman Alkawar (Pharm/Tox M.S.; expected May 2020)
Mariyyah Madkhali (Pharm/Tox M.S.; expected May 2020)
Amber Castellanos (Pharm/Tox M.S.; expected May 2020)
Vivek Gogusetti (Pharm/Tox M.S.; expected Spring 2021)
Nadeen Anabtawi (Pharm/Tox M.S.; expected Spring 2021)
Maghana Ginugu (Pharm/Tox M.S.; expected Spring 2021)
William Cvammen (Biomedical Ph.D.; May 2020 - present)
Alex Carpenter, Ph.D. (Jan 2020 – present)
Rebekah Hutcherson, Honors Undergraduate Research, 2018-present

Dr. Terry Oroszi

Andrew La'Pelusa, Co-advisor MD/MS, 2016-present
Jude Khatib, Co-advisor MD/MS, 2017-present, graduated 2020
Jaree Naqvi, Co-advisor MD/MS, 2017-present, graduated 2020
Benita Wu, Co-advisor MD/MS, 2017-present, graduated 2020
Michael Williams, Co-advisor MD/MS, 2017-present, proj graduation fall 2020
Roy Chen, Co-advisor MD/MS, 2018-present
Sabina Bashir, Co-advisor MD/MS, 2018-present
Ryan Gabbard, Co-advisor MD/MS, 2018-present
Cameron McGlone, Co-advisor MD/MS, 2018-present
Rob Hoopes, Co-advisor MD/MS, 2018-present
Steven Repas, Co-advisor MD/MS, 2019-present
Zafer Sattouf, Co-advisor MD/MS, 2019-present
Sharlo Bayless, Co-advisor MD/MS, 2019-present
Jacob Dickman, Co-advisor MD/MS, 2019-present
Benjamin Schmeusser, Co-advisor MD/MS, 2019-present
Janet Lubov, Co-advisor MD/MS, 2020-present
Manansi Kulkarni, Co-advisor MD/MS, 2020-present
Danielle Corbin, Co-advisor MD/MS, 2020-present
Michele Miller, PhD, 2017-present

Dr. Craig Rohan

Multiple BSOM medical students have rotated on base, at Wright State Physicians Dermatology and at the Dayton VA Medical Center

Dermatology, Pediatrics and Internal Medicine residents routinely rotate in my clinic. I give regular lectures to multiple academic departments.

Student advising: I was able to help one of my prior WSU Internal Medicine residents to match to a second residency in Dermatology at Brown University.

Dr. Ravi Sahu

Sayali Kadam, MS, thesis director, proj. graduation 2019, summer switched to L/A
Shreepa Chauhan, MS, 2018-2020, graduated 2020
Felicia Gooden, PhD student, 2018-present
Abdullah Althaiban, MS, mentor L/A,2018-present
Haji Muhammad Salleh Syaza Ayuni, MS, graduated 2019
Harshini Mallipeddi, MS, graduated 2019
Oladay Oyebanji, MS, graduated 2020
Hima Priya Yenuga, MS, graduated 2020

Other:
Anita Thyagarajan, PhD, Research Scientist, 2015-present

Dr. Courtney Sulentic

Miliben Bhakata, M&I MS, 2018-present
Clayton Buckner, M&I MS; transitioned to BMS PhD program, 2019-present
Sydney White, P/T MS, 2019-present
Valerie Benedict, Anatomy M.S.
Salina Daniels, Biology M.S., graduated non-thesis January 2020
Eric Reed, BMS Ph.D. program; co-advisor Tyler Nelson, Ph.D. Wright Patterson AFB
Soham Parikh, BMS Ph.D. program; co-advisor Sharmila Mukhopadhyay, Ph.D., Dept. of Mech of Eng, WSU
Hannah Shows
Rujuta Gadgil (BMS representative)
Amjed Aljagthmi (BMS representative)
Astha Shakya (BMS representative)
Tahir Sulehria
Angela Campo (BMS representative)
Harshal Sawant, MS, 2018-present
Vishwanath Gampala, MS, 2018-present
Philip Ndoki, 2018-2019, graduated

Dr. Jeffrey Travers

Avinash Mahajan, MS, 2018-present, proj graduation 2020
Simon Oyebanji, MS, 2018-graduated 5-2020
Pariksha Thapa, MS, 2018-graduated 5-2019

Thesis Advisory Committees:
Shreepa Chauhan, MS, 2018-present, committee, graduated 2020
Mariyyah Madkhali, MS, 2018-present, committee, graduated 2020
Hima Priya Yenuga, MS, 2018-present, committee, graduated 2020

Co-Advisor MD/MS Students:
Andrew La'Pelusa, MD/MS advisor, 2016-present
Jude Khatib, 2017-present, MD/MS advisor, graduated 2020
Jaree Naqvi, 2017-present, MD/MS advisor, graduated 2020
Benita Wu, 2017-present, MD/MS advisor, graduated 2020
Michael Williams, 2017-present, MD/MS advisor, proj graduation Dec 2020
Roy Chen, 2018-present, MD/MS advisor
Sabina Bashir, 2018-present, MD/MS advisor
Ryan Gabbard, 2018-present, MD/MS advisor
Cameron McGlone, 2018-present, MD/MS advisor
Rob Hoopes, 2018-present, MD/MS advisor
Steven Repas, 2019-present, MD/MS advisor
Zafer Sattouf, 2019-present, MD/MS advisor
Sharlo Bayless, 2019-present, MD/MS advisor
Jacob Dickman, 2019-present, MD/MS advisor
Benjamin Schmeusser, 2019-present, MD/MS advisor
Janet Lubov, 2020-present, MD/MS advisor
Manansi Kulkarni, 2020-present, MD/MS advisor
Danielle Corbin, 2020-present, MD/MS advisor
Langni Liu, 2016-present, advisor, proj graduation 2020

Dr. Yong-jie Xu

Alaa Mahdi, MS, 2018-present
Ishita Haider, committee (PhD student in Dr. Quan Zhong's lab):
Amanda Myers, committee, (PhD student in Dr. Weiwen Long's lab)
Rujuta G. Yashodhan, committee (PhD student in Dr. Michael Leffak's lab)
Sankhadip Bhadra (Dec 2019-Mar, 2020) PhD student from the BMS program, 1st lab rotation.
Nadeen Anabatawi (Sept. 2019): MS student in the Dept of Pharm Tox, rotation
Arwa Alrasheed (Oct. 2019): MS student in the Dept of Pharm Tox, rotation

Committee membership/officer [indicate if committee chair]

Wright State University Boonshoft School of Medicine [or college name]

Dr. F. Javier Alvarez-Leefmans

Pharm/Tox Faculty Affairs & Development Committee

Dr. Ji Bihl

Boonshoft School of Medicine Medical Student Scholarly Grant Review committee
Pharm/Tox Master's Program Admission Committee

Dr. Mauricio Di Fulvio

BMS Admissions Committee

Dr. Khalid Elased

Faculty Curriculum Committee
WrightQ Writing Group
BSOM Faculty Promotions and Advancement Committee
Pharm/Tox Faculty Affairs & Development Committee

Dr. Mike Kemp

Biomedical Sciences Ph.D. Program Nominating Committee

Dr. Terry Oroszi

BSOM Continuing Medical Education Committee (CME)
Pharm/Tox Master's Program Admission Committee

Dr. Craig Rohan

Wright State University Boonshoft School of Medicine: Department of Dermatology Clinical Competency Committee Member

Dr. Ravi Sahu

P&T Scholarship committee, 2015-present.
Pharm/Tox Admissions Committee, 2015-present

Dr. Courtney Sulentic

Student Promotions Committee, elected member, BSOM, 2017-2021
Faculty Affairs and Development Committee (FADC), Pharm/Tox
5-Year Chair Review Committee for Dr. Kadakia, 2020

Dr. Jeffrey Travers

WSU Executive Committee, 2015-present
Dean's Research Chairs Committee, 2015-present
LCME Curriculum Committee, 2015-2018
Academy of Medicine Board of Directors, 2015-present
Bylaws Committee, 2017-present
Scholarship in Medicine, 2017-present
Basic Science Track Committee (Chair), 2018-present
BSOM Dean Search Committee, 2020-

Wright State University

Dr. Ji Bihl

Institutional Animal Care and Use Committee (IACUC)
Biomedical Sciences Program (BMS) Admissions Committee

Dr. David Cool

Biomedical Sciences Program (BMS) Curriculum Committee, 2019-2021
Pharm/Tox Faculty Affairs and Development Committee, Chair 1998- present, Chair 2019-present
Parking Appeals Subcommittee, 2017- present
Building and Grounds Committee, 2017-2019

Dr. Khalid Elased

Laboratory Animal Care & Use Committee.
BMS PhD Program Curriculum Committee.

Dr. Terry Oroszi

WSU Faculty Senator
Faculty Senate Ad Hoc International Graduate Student Success Committee
WSU International Program Oversight Committee (IPOC/IEAC)
Various PTX Department Committees

Dr. Ravi Sahu

Institutional Animal Care & Use Committee (IACUC)
Institutional Biosafety Committee (IBC)

Dr. Courtney Sulentic

Women's Peer Mentoring Group, initially supported by the NSF-funded LEADER Program at WSU
Radiation Safety Committee, 2005-present; Chair, 2013-2020 (committee dissolve)
Women in Science Giving Circle member, 2016-present
Academic Policies committee, BMS PhD Program, elected member, 2019-2021

Dr. Jeffrey Travers

Academic Policies Committee, 2015-present

Wright State Physicians

Dr. Jeffrey Travers

Laboratory Quality Assessment and Assurance Committee, 2016-present

Professor of Dermatology, Pharmacology & Toxicology (adjunct), 2015-

Hospital or affiliated institution [name]

Dr. David Cool

Miami Valley Hospital OB/GYN

OB/GYN Translational Reproductive Health Research Grant Committee, 2014- present
Judge- MVH Resident Research Day- OB/GYN, 2005-present

Dr. Khalid Elased

Registered and licensed as a pharmacist in the state of Ohio.

Dr. Craig Rohan

Wright Patterson Medical Center: Cancer Care Committee/ Tumor Board Member

Dr. Jeffrey Travers

Dayton VA Medical Center, Dayton, Ohio, 2015-present
Medical Licensure: Ohio, 2015-present
Board Certification: Dermatology. 1995-present
Ohio Academy of Dermatology

National

Dr. Ji Blhl

Reviewer for Scientific Conference
International Stroke Conference (ISC)

Reviewer for journals
Cellular and Molecular Neurobiology (6), Experimental Cell Research (1), International Journal of Molecular Medicine (1), Circulation – Heart failure (1), Clinical and Experimental Gastroenterology (1), Neuropsychiatric Disease and Treatment (2), Biological Chemistry (1), International Journal of Developmental Neuroscience (1), Microvascular Research (2), The International Journal of Electrical Engineering & Education (3), Molecular Medicine Reports (1) Cell and Tissue Research (1)

Dr. Yanfang Chen

Reviewer for Scientific Conference, American Heart Association (AHA)
Reviewer for Grants, National Institutes of Health (NIH)

Dr. Mauricio Di Fulvio

Advisory Committees. Study sections of 1) Molecular and Cellular Endocrinology, and 2) Membrane Transporters and Receptors. National Agency for the Promotion of Science and Technology, Buenos Aires, Argentina.

Dr. Khalid Elased

AHA High Blood Pressure Council Conference Review Committee

Appointed delegate of WSU Boonshoft School of Medicine to the United States Pharmacopeia (USP) Convention. Will represent WSU at the upcoming USP Convention on May 2, 2020 at Washington, DC.

Scientific Society

American Diabetic Association (ADA)
Fellow of the American Heart Association (AHA)
European Association for the Study of Diabetes (EASD)

American Society for Pharmacology and Experimental Therapeutics (ASPET)
Member of the American College of Clinical Pharmacy (ACCP)
Member of the American Physiological Society (ASP)
Member of the American Society of Nephrology (ASN)

Delegate of the WSU Boonshoft School of medicine to the United States Pharmacopeia.

Referee of scientific journals:
Member of the Editorial Board:
Journal of Diabetes Research
Journal of Nephrology Research
World Journal of Hypertension (WJH)
World Journal of Cardiology (WJC)
SAJ Pharmacy & Pharmacology

Reviewer of the following Journals:
Advances in Critical Care
American Journal of Physiology: Heart and Circulatory Physiology
American Journal of Physiology: Renal Physiology
BMC Nephrology
Brazilian Journal of Medical and Biological Research
Cellular & Molecular Biology Letters; Circulation
Circulation Research; Clinical and Experimental Hypertension
Clinical and Experimental Pharmacology & Physiology; Endocrine
Experimental Diabetes Research; Experimental Physiology
Hypertension Research; International Journal of Biological Macromolecules
International Journal of Hypertension; International Journal of Nephrology and Renovascular Disease
Journal of Diabetes Research
Journal of Proteome Research; Journal of the American Society of Hypertension
Kidney and Blood Pressure Research
Life Sciences
Metabolism- Clinical and Experimental
Microbial Pathogenesis
Molecular Psychiatry
Nephron Physiology
PLoS One
Regulatory Peptides

Research Peer Review:
National American Heart Association (AHA) Cardiac Biology Study Group.

Abstract Reviewers for The AHA Hypertension Annual Meetings (20018 & 2019) at Chicago & New Orleans.

NIH/NIDDK: Special Emphasis Panel/Scientific Review Group **2019/08 ZHL1 CSR-C (S1)**
"Maximizing the Scientific Value of the NHLBI Biorepository: Scientific Opportunities for Exploratory Research (R21)

Dr. Saber Hussain

Advisor National Research Council, Postdoctoral Mentor

Dr. Mike Kemp

Chair, Honors and Awards Committee, Environmental Mutagenesis and Genomics Society

Dr. Terry Oroszi

President, InfraGard, Dayton Alliance Chapter/FBI
Director, Simman Wound Board
The Dayton Think Tank, Chairperson of the Board
Institute for Operations Research and Management (INFORMS)

Midwest Academy of Management (MAM)

National
InfraGard Alliance/FBI
NYPD SHIELD
DoD Homeland Defense Information Analysis Center Subject Matter Expert (SME)
Joint Chief CWMD (Countering Weapons of Mass Destruction) Education Consortium, DC
Washington DC NBC Industry Group (NBCIG)
American Council on Education (ACE)

Dr. Ravi Sahu

International Examiner to evaluate a Ph.D. Thesis.
Malathi. R (Thesis Advisor: Dr. J. Karthikeyan, Department of Biochemistry (PG & Research) Kongunadu Arts and Science College, Coimbatore, Tamil Nadu, India.

Dr. Courtney Sulentic

Elected to the Society of Toxicology Council, Councilor, 2018-2021
- Council Liaison
- Faculty United for Toxicology Undergraduate Recruitment and Education (FUTURE)
- Committee on Diversity Initiatives

Appointed Subcommittees
- Issue Statement Review
- Social Networking
- Strategic Plan Priority Implementation Task Force
  - Podcast
  - C1 Outreach to Educators
  - B3 Outreach and Communication
- Non-SOT Annual Meeting and Regional Chapter Funding

Elected to Presidential Chain for Women in Toxicology Special Interest Group, Society of Toxicology
Vice President, 2019-2020
President-elect, 2020-2021

Mentor Match program, mentor, Society of Toxicology

Other service:
Poster judge for Ohio Valley Society of Toxicology Annual meeting
Ad-hoc reviewer for several journals

Other

Dr. Ji Bihl

Preclinical Pharmacology Core Director

Submitted grants
NIH R01 (NICHD), PI- Brown, Co-investigator (5%), 08/01/2020-07/31/2025 (scored 14%)
Effects of prolonged, trophoblast-specific Hif-1alpha on placental function and preeclamptic symptoms
The major goal of this project is to understand how prolonged trophoblast Hif-1α in preeclampsia leads to detrimental changes in placental function, fetal growth, and maternal pathophysiology. In addition, the role of gestational hypertension in fetal growth restriction will be determined.

Career Development Award (CDA), American Heart Association (AHA), PI- Wang, Mentor, 04/01/2020-3/30/2023
The role of EPC exosomal communication in the beneficial effects of exercise on ischemic stroke
The major goals of this project are to investigate the role of exercise in the function of EPC-EXs in ischemic stroke

with hypertension.

NIH R01 (NIH), PI- Williams, Co-investigator (10%), 01/01/2020-12/31/2024
Zinc deficiency-induced pathophysiological renal mechanisms involved in hypertension
The major goal of this project is to determine the role of Zin deficiency in hypertension.

Submitted papers
Wang J, Chen S, Zhang W, Chen Y, Bihl J#, "Enrichment of miR-126 boosts the therapeutic effects of endothelial progenitor cells derived exosomes on diabetic ischemic stroke," submitted to CNS neuroscience & therapeutics. Revision.

Yuchen Li, Jinju Wang, Shuzhen Chen, Pei Wu, Manasi Suchit Halurkar, Huaizhang Shi, Ji Bihl, " MiR-137 Boosts the Neuroprotective Effect of Endothelial Progenitor Cell Derived-Exosomes in Oxyhemoglobin Treated SH-SY5Y Cells Partially via COX2/PEG2 Pathway," submitted to Stem Cell Research & Therapy.
Ji Bihl. "Extracellular Vesicles: Involvement of neurological manifestations during Coronavirus Disease 2019 (COVID-19)," submitted to Journal of Extracellular Vesicles.

Dr. Yanfang Chen

Preclinical Pharmacology Core Co-Director

Dr. David Cool

Director of the Proteome Analysis Laboratory, 2004-present, unpaid position

Dr. Saber Hussain

Established a new in vitro laboratory at the base to develop 1. Multi-Organ System Model Development for Elucidating Mechanism of Operational Stressors using 3D *in Vitro* to more accurately represent human organs and allow for rapid toxicity screening and 2) Application of Gene Editing Technology to identify molecular pathways in response to operational stressors.

Working on to bring collaboration & opportunities to bring resources and mutual benefits between AFRL & Pharm/Tox- would benefit by having their students involved in real-world research activities and internships within the Air Force Activity. Potential to have one or two postdoc to work at WSU under this collaboration.

Long term plan to assist Pharm/tox to establish area of expertise as center of excellence in Nanotoechnology/nanomedicin and its application to dermatology- there are so many nanobased products, i.e., Sunscreen, antimicrobials, dressings, slow liberation volatile compounds (such as perfumes and insect repellents), radiation, directed energy provide opportunities for looking into their mechanism of dermal toxicity while developing nanotechnology based tools for diagnostic tools for real time visualization of tumors and infections and malignant diseases, antimicrobials, skin fillers, cutaneous paralyzing agents, gene silencers, cutaneous vaccines, induced skin treatments (for example, optical, magnetic, thermal, and radiofrequency).

Dr. Mike Kemp

Recipient of 2019 Environmental Mutagenesis Society Newly Independent Investigators Engagement Program.

Dayton VAMC Subcommittee on Research Safety

Manuscript Reviewer: Frontiers in Molecular Biosciences; Open Biology; Toxics; Cancers (2); Molecules; Genetics and Molecular Biology; Gene; Photodermatology, Photoimmunology, and Photomedicine; Journal of Integrative Medicine; Cell Proliferation; FEBS Letters; Aging; J Invest Derm; J Cell Mol Med; Mol Gen and Genomic Med; Nuc Acids Res

Dr. Terry Oroszi

Leadership
Program Director Pharmacology & Toxicology Graduate Programs (2008 – Present)
Program Director Pharmacology & Toxicology CBRN Defense Program (2012 - Present)
Course Director of 60 courses in five years.

Development of education aids
To meet the needs of the online students, as well as to offer refreshers, I have made the Power Platform into a video, and ESW1 and 2 course information videos available on YouTube, and had guests lecturers in my CBRN courses recorded so that their webinar could be used every semester, without requiring them to repeat it. In 2019 we started videotaping all of our seminars (with permission) to create a library that can be used for courses and learning aids. They are on YouTube as well.

Curriculum design (course development and/or redesign)
Redesign:
PTX-7012 (1 Credit Hr.) Introduction to Research. *Redesigned to make it a standalone class with assignments to verify objectives are met.*

PTX 7000 (3 Credit hour) Biostatistics

Developed the following courses:
PTX-7000 (1 Credit Hr.) * Healthcare and Homeland Security Journal Club. In 2020 I *submitted a more detailed 4-credit course with a similar name, not yet approved. The course integrates FEMA, HERT, and CERT training.*

PTX-7021 (3 Credit Hrs.) * Effective Scientific Writing: Part 1. When I created the nonthesis track I included this class as an independent study course, (students choose a faculty member to do the paper with), there was too much inconsistency in goals/outcomes/requirements, so I amended it to be a classroom class, and for online students, I amended it again. I still teach the online classes, and the material for the classroom is based on my original class.

PTX-7022 (3 Credit Hrs.) * Effective Scientific Writing: Part 2. When I created the nonthesis track I included this class as an independent study course, (students choose a faculty member to do the paper with), there was too much inconsistency in goals/outcomes/requirements, so I amended it to be a classroom class, and for online students, I amended it again. I still teach the online classes, and the material for the classroom is based on my original class.

PTX-8000 (3 Credit Hrs.) * Leadership: Theory and Application. This is an elective class. I love teaching this class.

PTX-8140 (3 Credit Hrs.) * Human Studies Research. For anyone doing clinical work. It covers IRB petitions and CITI training.

PTX-8006 (3 Credit Hrs.) * Case Studies for CBRN Defense

PTX-8000 (3 Credit Hrs.) * MD/MS Capstone, for Clinical Investigation students only.

PTX-8010 (3 Credit Hrs.) * Clinical Research: Roles and Responsibilities. I created this class to be part of the new Clinical Trials Coordination track.

Development of innovative teaching programs
Redesign:
PTX Research Track. This was the only track until 2009. The average number of students was 5.

Develop:
NEW PTX Clinical Investigation MD/MS Concentration, 2019
PTX Clinical Trials Coordination Concentration, 2020
PTX Clinical Research Certificate (in the approval process), 2020
PTX Undergraduate CBRN Defense Certificate (in the approval process), 2020

The partnering of healthcare and homeland security was something I wanted to incorporate in the medical school and furthering/expanding the education of our medical students, so in 2015 I created a degree that would allow a medical student to get an MS degree, the Clinical Investigation concentration, and

encouraged the participants to do the CBRN courses, and a healthcare and homeland security journal club. In 2019 I put together another degree for MD/MS students and health care professionals, call the Clinical Trials Coordination concentration.

Service to my department went beyond creating new courses and concentrations. I chaired every ad hoc committee in my department, and most standing committees, like policy, admissions, discipline, and curriculum committees. In many cases, I am the chair of a committee of one. When we switched from quarters to semesters, I single-handedly transferred all the courses, submitted needed paperwork, and updated the faculty as needed.

Service to my WSU and BSOM: Serving the military and government agency communities with this program opened up other opportunities, such as a bioacademic workshop, partnering with the FBI, at WSU, or working to create an emergency management disaster preparedness MS degree involving every college on campus. This experience also led me to focus my doctorate (dissertation) on decision-making for crisis leadership and completed both an internship and a post-doctoral fellowship at the VA in medical simulations. Some WSU and BSOM committees in which I participated include:

Service to my community: Upon completion of my degree I met with the Dayton Mayor and proposed The Dayton Think Tank, with a focus on crisis, threat, disaster, and emergency management. Together we came up with our first nearly fifty members, top crisis leaders in our region, in which I was/am The Dayton Think Tank chair.

Service to my community and country: My service to the community extended to doing several talks and workshops related to leadership and homeland security, In 2017 I was invited to be part of InfraGard, an FBI public partnership, and spoke at their national meeting where I met the FBI director for the first time. A year later I was nominated to be part of the FBI Citizen's Academy, a program for community leaders with a curriculum similar to Quantico, but geared to non-law enforcement personnel. I was also invited to a sit-down conference meeting with the FBI director to discuss CBRN, terrorism, and crisis topics. In 2019 I headed back to Quantico for a week-long leadership training program and spoke with both HQ and Quantico personnel on my area of research. When I left Quantico, I headed straight to the National Security Agency to provide training to their security and intelligence personnel. In 2020 I became president of the WPAFB/Dayton chapter of Infragard.

My passion for service is not over, I have been pushing for a Healthcare and Homeland Security Center at WSU for the last few years. Until recently, when I would use those two words together, I received confused looks, people did not see the relationship. It took COVID19 for many to see that health care professionals need to know about homeland security. My research niche, healthcare and homeland security, is unlike any other faculty member in the medical school, and my research, publications, and service reflect this unique but highly valuable contribution. In the field of homeland security, I am an internationally recognized subject matter expert in decision-making for crisis leadership, Chemical, Biological, Radiological, and Nuclear Defense, and American terrorism. My research is part of NSA's training curriculum, Facebook's workplace violence program, and I have been asked to return to Quantico, FBI HQ, and NSA to reach a global audience, versus the security/intelligence audience I typically have. In June 2019, I was asked to Congress to brief members of the House Intelligence and Armed Forces committees.

Dr. Courtney Sulentic

Submitted:
R01 ES031925-01 NIEHS
"Role of the AhR and genetic differences in human antibody production"
Impact score: 42; Percentile: 21 (Reviewers 1 and 2 gave fundable scores)

Dr. Jeffrey Travers

American Society for Clinical Investigation, 2007-present

External Advisor, Christian Doppler Laboratory on Biotechnology of Skin Aging, Vienna Austria
2013-present

External Advisor, University of Wisconsin NIAMS P30, 2016-present

Member, Advisory Board, Christian Doppler Laboratory on Biotechnology of Skin Aging, Department of Biotechnology, BOKU-University of Natural Resources and Life Sciences, Vienna, Austria, 2014-present.

External Advisor, NIH/NIAMS-sponsored Skin Disease Research Core (P30) grant, University of Wisconsin Department of Dermatology, 2016-present

Dr. Yongie Xu

Proposed a new Pharmacology & Toxicology course: Research Methods in the Analysis of Genome Integrity.

7 Patient Care Summary

[If applicable. Include number of ambulatory visits, hospitalizations, surgeries, new techniques or programs developed; new collaborations.]

Dr. Craig Rohan

Dermatology Clinics at WPS
Dermatology Clinics at Dayton VAMC

Dr. Jeffrey Travers

Dermatology Clinics at WSP (2 per week)
Dermatology Clinics at Dayton VAMC (1 per week)

8 Honors and awards [Faculty or staff]

Dr. Jeffrey Travers
Brage Golding Distinguished Professor for Research 2020-2023