



# **Department of/Office of Pharmacology & Toxicology**

## **Annual Report:**

**July 1, 2021 – June 30, 2022**

Jeffrey B. Travers, MD, PhD  
Professor and Chair

# 1

## Statement from the Chair/Associate Dean

The Department has experienced a very good year as measured by success in our education, service and research missions. The faculty are unified with an enthusiastic *esprit de corps*. The level of collaboration amongst faculty is very high. A regular (3x year) newsletter and weekly “Down on the Pharm” notices to the faculty have greatly improved communication. We have undergone an alumni survey, then an external review of our educational programs followed by a faculty retreat to plan our future. The external review found that the departmental programs were successful as measured by metrics such as quality, satisfaction, and % graduation and job placement. A recent external EAB Masters Portfolio Analysis based upon labor market demand and competitive landscape variables completed for WSU Main campus in July 2022 also found that our MS programs have significant growth potential. The plan is to continue and expand our successful educational programs and to hire educational faculty to complement our research-based faculty and vibrant group of specialized adjuncts.

I will further briefly outline the Departmental accomplishments below. Please see entire document to appreciate the breadth and scope of faculty endeavors.

### **Educational Mission.**

Academic scholarly/creative activity and teaching are essential components to the success of the departmental mission. The department thrived during and after the pandemic thanks to the department’s ability to allow professors to teach courses in two or three semesters rather than one. Online classes allowed us to educate more students and contribute to our ability to meet the needs of increasing numbers of students. Allowing students to enroll in the Spring instead of only the Fall has added to our numbers, yet has resulted in the need to offer several courses at multiple times. This helped us maintain our student population, and this past year we had record numbers of MS students.

Another program that we spent a few years developing saw its first incoming class in 2020. This new Clinical Trials Coordination concentration leverages the Pharmacology and Translational Medicine Unit (PTU) for educational purposes. Given the shortages of clinically trained positions in the pharmaceutical industry, this new concentration fills an important need. The Clinical Trials Coordination Concentration is designed to give students a solid understanding of the current paradigm in clinical trials (randomized controlled trials, phase I, II and III trials, phase IV trials, adaptive trials, placebo-controlled trials) and how pharmaceutical companies are implementing meaningful changes to their clinical trial practices. The program centers around 45 contact hours at the Pharmacology Translational Unit (PTU), a separate year-long intensive course on aspects of regulatory procedures/medical writing and an investigative writing project on an area of interest to the student.

Today we are able to offer incoming students the following options:

#### Degrees:

- 2-year Research Track
- 2-year, 1-year, and a fully online non-thesis option
- Clinical Investigation Concentration (MD/MS) Program
- Clinical Trials Coordination Concentration MS degree
- Pipeline- HealthCare and Homeland Security MS degree

#### Graduate Level Certificates:

- Clinical Trials Coordination Certificate
- CBRN Defense Certificate
- Graduate General Toxicology Certificate (In partnership with the Navy Medical Research Lab, Dayton OH)
- Pipeline-Undergrad CBRN Defense program

#### Other:

Offering practical courses like Lean Six Sigma (With optional Green and Black Belt Certifications) and Improved relations with WPAFB/AFRL

Dr. Terry Oroszi has become Vice Chair, with her emphasis on educational programs. She has simply thrived in this role. We celebrated our 20th anniversary of our MS program this past Fall, to include a celebration that was widely attended. The festivities included one of our alumni serving as the Earl H. Morris Endowed Lecturer, as well as a fund-raising initiative that created a BSOM 20th Anniversary Student Scholarship Fund. Over two hundred members of the MS Class were in attendance and were joined by many WSU dignitaries.

**Research Mission.**

Research efforts are moving along well. Yongjie Xu has obtained an NIH R35 grant, and Kemp and Travers have received NIH and VA grants. The movement of part of the laboratory space of long-term faculty colleague Dr. Saber Hussain from the WPAFB into the Departmental research space has further enhanced our research infrastructure. More translational studies, both NIH/VA-funded and pharma-supported clinical trials, are in place in the PTU. Faculty in the Department have also been publishing many manuscripts, to include in high impact journals (e.g., two in the Journal of Clinical Investigation). Many continue to develop new collaborations through funding as well as publications.

**Service Mission.**

Departmental faculty members have also been very active in the service category. These efforts include service locally, as well as at the national level. Multiple faculty colleagues are involved in extramural grant panels. The addition of new faculty member Craig A. Rohan MD enhances the clinical services as well as adds to the educational and research missions. We also continue to assist the Department of Dermatology and funded an external expert to review their clinical operations.

The past year has been a good one and we have plans in place to make the next years even better!

## 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
Clinical Trials Coordination Certificate Program	Terry Oroszi, EdD	2020-present
Preclinical Pharmacology Core	Yanfeng Chen, MD, PhD	2015-present
Pharmacology Translational Unit (PTU)	Jeffrey Travers, MD, PhD	2015-present

# 3 Fully Affiliated Faculty

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
Yanfang Chen, MD, PhD, Professor		Cardiovascular disease, cerebrovascular complications
David Cool, PhD, Professor, Director of Proteome Laboratory		Cellular mechanisms involve in neurodegeneration and neuroinflammation in 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, PharmD, PhD, 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 Associate Medical Director PTU Staff Physician, Dayton VA Medical Center	Translational Medicine	Clinical Trials, Wright State Pharmacology Translational Unit
Ravi Sahu, PhD, Assistant Professor		Cancer pharmacology
Courtney Sulentic, PhD, Associate Professor		Immunology

<b>Name and Academic Position</b>	<b>Clinical Interests</b>	<b>Research Interests</b>
Jeffrey Travers, MD, PhD, Professor and Chair Professor of Dermatology Staff Physician, Dayton VA Medical Center	Translational Medicine	Skin inflammation/cancer, lipid pharmacology Clinical Trials, Wright State Pharmacology Translational Unit
Yong-jie Xu, MD, PhD, Associate Professor		Genome integrity, signaling mechanism of replicator checkpoint

## 4 Teaching

### **Baccalaureate** [any course for a bachelor's degree]

#### **Courtney Sulentic**

M&I 4260 4260 Microbiology and Immunology, Lecturer, Fall 2021.

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

#### **F. Javier Alvarez-Leefmans**

PTX 7021 Effective Scientific Writing I, Director, Fall 2021  
Spring semester – Sick leave

#### **Leader Admin MS Advisor**

Sindhuja Shiva  
Vishal Avadhanula  
Vyshnavi Aaireni  
Samba Takkellapati  
Dinesh Vara  
Divya Yekkala

#### **Yanfang Chen**

PTX 8000 Cell Culture Training, Summer 2021  
PTX 8000 Cell Culture Training, Fall 2021  
PTX 7021 Effective Scientific Writing I, Fall 2021  
PTX 7022 Effective Scientific Writing I, Spring 2022  
PTX 8070 Cell Culture Training, Spring 2022

#### **Leader Admin Advisor**

Hamad Albaqami  
Harish Kothapalli  
Padma Jyesta  
Vijaya Lakshmi Vaishnava Sri  
Rayma Goli  
Seshagiri Naripireddy

#### **David Cool**

PTX 7010 Research Techniques, Director, Fall 2021  
PTX 7020 Laboratory Management, Two sections, Director Spring 2022  
PTX 7020 Laboratory Management (Online), MD/MS students, Director, Summer 2021

BMS 805 Intercellular Communication-neuropeptide transmitters and receptors, Spring 2021

PhD Advisory Committee

Jananie Rockwood, BMS Rep, Projected graduation 2022  
Adaku Ume, MD/PhD BMS co-advisor, Projected graduation 2022  
Phillip Walker, MD/PhD BMS committee, Projected graduation 2021  
Xiu Huan Yap, BMS committee, Graduated 2021  
Hannah Shows, BMS committee, Graduated 2021  
Kristen Rehl, BMS rep, Projected graduation 2023  
Christina Davidson, BMS committee, Projected graduation 2023  
Mia Burnett, BMS committee, Projected graduation 2024  
Bryan Mayville, BMS committee, Projected graduation 2023

Thesis Advisory Committee

Shikshita Singh, PTX, Projected graduation 2023

Leader Admin MS Advisor

Venkat Yendapalli  
Mounika Vejendla  
Harshitha Tummura, Graduated summer 2022  
Rachana Gade, Graduated spring 2022  
Madhuri Karasani, Graduated spring 2022  
Amolya Nampally, Graduated spring 2022  
Anikitha Uppalapati

**Mauricio Di Fulvio**

PTX 7300 Cellular Pharmacology & Toxicology, 8 sessions, Co-director, Spring 2022  
PTX 7110 Journal Club, Director, Fall 2021

Thesis Advisory Committee

Yaksh Rathod, PhD BMS advisor, 2021-2026  
Charles Luu, Committee member  
Abdullah Alshudukhi, PhD BMS committee member  
Tahir Amin Sulehria, PhD BMS committee member  
Rana Abdeljawad, MS student advisor, Graduated summer 2021

Leader Admin MS Advisor

Abdul Basit  
Sirisha Musirigari  
Apruv Rana, Graduated summer 2022  
Atul Sheoran, Graduated summer 2022  
Shriya Bandapalli  
Sahithi Bethelli

**Khalid Elased**

PTX 7001 Cellular Pharmacology & Toxicology, Co-director, Spring 2022  
PTX 7021 Effective Scientific Writing 1, Fall 2021  
PTX 7022 Effective Scientific Writing 2, Spring 2022

Thesis Advisory Committee

Rana Abdeljawad, MS student committee member, Graduated summer 2021  
Sydney White, MS student committee, Graduated summer 2022  
Adaku Ume, MD/PhD student, committee  
Yakshkumar Rathod, PhD committee member

Leader Admin MS Advisor

Meeti Champaneria  
Zaid Sirhan, graduated spring 2022

Eswar Valmiki, graduated summer 2022  
Anisha Cherukuri  
Jaypalsinh Gohil  
Prashanthi Bommineni, graduated spring 2022  
Vimarsh Joshi  
Adil Mohammed

### **Saber Hussain**

#### Advisory Committee

Capt. Bryan Mayville, PhD student, 2020-2023  
Soham Parikh, PhD student committee, 2021-current  
Mia Burnett, PhD student, co-advisor, 2022-current  
(10) Summer Intern students from WPAFB

### **Mike Kemp**

PTX 8007 Career Planning in Pharmacology & Toxicology, Fall 2022  
PTX 8020 Pharmacology & Toxicology of DNA Damaging Agents, Spring 2022  
PTX 8007 Career Planning in Pharmacology & Toxicology, Spring 2022  
PTX 7012 Intro to Research 5 weeks rotation, Fall 2022  
PTX 7002 Journal Club, Summer 2021

#### Thesis Advisory Committee

Hrishikesh Kadam, MS student, 2021-present  
Naga Kavuri, MS student, 2021-present  
Prashanti Gaikwad, MS student, 2021-present  
William Cvammen, BMS PhD student, 2020-present  
Alex Carpenter, PhD, postdoctoral training, 2020-present  
Saman Khan, PhD, postdoctoral training. Feb 2021-present  
Sri Meghana Yerrapragada, BMS PhD student, summer 2022-present

#### Leader Admin MS Advisor

Balaram Gudapati  
Yeseswi Guduri

### **Terry Oroszi**

PTX 7021 Effective Scientific Writing I, online, Fall 2021  
PTX 7022 Effective Scientific Writing II, online Spring 2022  
PTX 8140 Human Studies Research, Fall 2021  
PTX 8140 Human Studies Research, Spring 2022  
PTX 7006 Leadership, Theory and Application, Spring 2022  
PTX 7012 Introduction to Research, Fall 2021  
PTX 7002 Journal Club/Special Topics, Summer 2021  
PTX 7005 Clinical Investigation Capstone, Spring 2022

#### Leader Admin MS Advisor

Rachana Balusa  
Jessica Hong  
Vijayala Jogi  
Venkatesh Kilari  
Suvechha Bhandari, graduated spring 2022  
Kesha Patel  
Sucheta Sachdeva, graduated spring 2022  
Gagandeep Shergill, graduated spring 2022  
Brooke Burtis, graduated spring 2022  
Christina Stroh, graduated spring 2022  
Mark Robinson  
Rajiv Ramdat, graduated spring 2022

Sowon Chung, graduated summer 2021  
Alycia Ketter, graduated spring 2022  
Reethi Yadlapalli, graduated summer 2022  
Dhatrika Uggumudi, graduated spring 2022  
Meghana Anagani  
Vinitha Sakhamuri

PhD Advising

Michele Miller, co-advisor, graduated 2022.

**Craig Rohan**

PTX 7021 Effective Scientific Writing I, MD/MS students, summer 2021  
PTX 7022 Effective Scientific Writing II, MD/MS students, summer 2021  
PTX 7021 Effective Scientific Writing I, MD/MS students, summer 2022  
PTX 7022 Effective Scientific Writing II, MD/MS students, summer 2022

MD/MS Co-Advisor

Steven Repas, graduated spring 2022  
Sharlo Bayless, graduated spring 2022  
Ben Schmeusser, graduated spring 2022  
Jacob Dickman, graduated spring 2022  
Zafer Sattouf, graduated spring 2022  
Danielle Corbin  
Janet Lubov  
Maansi Kulkarni  
Megan Cleary  
Alex Vollmar  
Ericson Torralba  
Timothy Frommeyer  
Michael Gilbert  
Garrett Fisher  
Afryea Henderson  
Mark Ortenzio  
Winston Owens  
Andrea Shugar

**Ravi Sahu**

PTX 7021 Effective Scientific Writing I, Fall 2021  
PTX 7022 Effective Scientific Writing II, Course Director, 2022  
PTX 7011 Thesis Development Workshop, Co-director, 2022

Thesis Mentor/Advisory Committee

Chad Brewer, committee, graduated spring 2022  
Mashaal Alyahya, committee, graduated summer 2022  
Sydney White, MS student, graduated summer 2022  
Krishna Awasthi  
S. Chitra, committee

Leader Admin MS Advisor

Sreevalli Chirumamilla  
Vaibhav Gajjar  
Rachana Pathipaka  
Lakshmi Devaropalli  
Sai Priya Devarkonda

**Courtney Sulentic**

PTX 8260 Microbiology and Immunology, Co-director, fall 2021  
PTX 7300 Cellular Pharmacology & Toxicology, Spring 2022



BMS 8050 Intercellular Communication, Lecturer, Spring 2022

Thesis Advisory Committee

Sydney White, MS student, mentor, graduated summer 2022  
Mia Williams Burnett, ED PhD student, mentor, current  
Mili ben Bhakata, BMS PhD student, mentor, 2021-current  
Eric Reed, BMS PhD student, current  
Clayton Buckner, BMS PhD student, mentor, current  
Modhi Alshammari, MS student, graduated spring 2022  
Xiu Huan Yap, BMS PhD student, graduated summer 2021  
Hannah Shows, BMS PhD student, graduated fall 2021  
Rujuta Gadgil, BMS PhD student, representative  
Makda Gebrezgi, MS M&I, committee  
Lauren Krause, MS M&I, committee, graduated spring 2022  
Alaa Qishta, MS M&I, committee, graduated spring 2022  
Rujuta Gadgill BMS PhD, representative  
Yakshkumar Rathod, BMS PhD, representative  
Anthony Young, BMS PhD, representative

Leader Admin MS Advisor

Vineel Jampani  
Bhavitha Madala  
Chandana Madala  
Shiva Nanavath

**Jeffrey Travers**

PTX 8000 Journal Club MD/MS, Summer 2021  
PTX 7021 Effective Scientific Writing, MD/MS, Summer 2021  
PTX 7021 Effective Scientific Writing, Fall 2021  
PTX 7022 Effective Scientific Writing, Spring 2022  
PTX 8005 Advanced Topics in Pharmacokinetics, Course Director, Summer 2021

Primary Advisory/Committee member

Chad Brewer, MS student, advisor, graduation spring 2022  
Cvammen William, BMS PhD student, committee, 2020-  
Pranali Manrekar  
Shikshita Singh  
Rushabh Lohade

MD/MS Co-Advisor

Steven Repas, graduated spring 2022  
Sharlo Bayless, graduated spring 2022  
Ben Schmeusser, graduated spring 2022  
Jacob Dickman, graduated spring 2022  
Zafer Sattouf, graduated spring 2022  
Danielle Corbin  
Janet Lubov  
Maansi Kulkarni  
Megan Cleary  
Alex Vollmar  
Ericson Torralba  
Timothy Frommeyer  
Michael Gilbert  
Garrett Fisher  
Afryea Henderson  
Mark Ortenzio  
Winston Owens  
Andrea Shugar

### **Yongjie Xu**

PTX 7011 Thesis Development Workshop  
PTX 7021 Effective Scientific Writing  
PTX 7022 Effective Scientific Writing  
PTX 7002 Genome Stability and Human Disease Journal Club  
BMS 9940 Introduction to Research

#### **Primary Advisory/Committee member**

Mashaël Alyahaya, MS student, advisor, graduated spring 2022  
Sankhadip Bhadra, BMS PhD student, 2020-  
Nafees Ahamad, postdoctoral

#### **Leader Admin MS students**

Abdul Basit  
Rakshith Katta  
Haripriya Panguluri  
Leighanna Palmer

#### **Primary advisory/committee member:**

William Cvammen (PhD student in Dr. Kemp's lab)  
Akshay Hira (PhD student in Dr. Kadakia's lab)  
Rujuta G. Yashodhan (PhD student in Dr. Leffak's lab)  
Amanda Myers (PhD student in Dr. Long's lab)  
Hirishikesh Kadam (MS student in Dr. Kemp's lab)

## **Undergraduate medical education** [medical school]

### **David Cool**

WrightQ, Beginning to End, Balance Control and Repair

### **Khalid Elased**

WrightQ, Staying Alive Module

### **Craig Rohan**

Dermatology lectures to MS2 class

### **Courtney Sulentic**

WrightQ, Staying Alive Module  
WrightQ, Beginning to End, Balance Control and Repair

#### **Research Trainees**

Raghiv Talreja, 4<sup>th</sup> year medical student  
Shaina Ailawadi, 4<sup>th</sup> year medical student

### **Jeffrey Travers**

No formal lecture, but teach medical students during dermatology elective and every one of three 4h clinics/week.

## **Graduate medical education** [residents, fellows]

### **Craig Rohan**

Clinical rotations for dermatology, pediatrics, internal medicine and family practice, 2-4 days/week

### **Jeffrey Travers**

Lecture to residents, Hillbilly Kodachromes, Immunology I, II, 2021  
Lecture to residents, Immunology III, IV, Kodachromes, 2022

## **Continuing medical education** [grand rounds, seminars]

### **Craig Rohan**

Seminars at Dayton Children's Medical Center, Wright Patterson Medical Center and monthly lectures to dermatology residents.

### **Jeffrey Travers**

American Society for Photobiology Webinar

"Platelet-activating factor as a critical mediator for photobiology"

September, 2021.

Invited Speaker, Annual Meeting of the Alcohol and Immunology Research Interest Group (AIRIG) Alcohol & Tissue Injury/Organ Function Friday Loyola University Chicago Health Sciences Campus, Maywood, IL

"The Platelet-activating Factor system and microvesicle particles as effectors for intoxicated thermal burn injury pathology: Implications for environmental stressor-induced immunosuppression"

November, 2021.

University of Miami Department of Dermatology Grand Rounds

"Platelet-activating factor and microvesicle particles as critical effectors for UVB radiation"

Lecture to residents:

"An afternoon in clinic with ME!"

Miami Dermatology Society Annual Meeting

"New Insights into The Pathogenesis of Skin Cancer: Clinical Implications"

April, 2022.

Medical Education Resources, Inc., CME-approved lectures for primary care providers.

Charleston, SC- November 2021

"Bacterial Infections"

"Acne"

"Leg Ulcers"

"Cutaneous Signs of Systemic Disease"

"Interesting Cases"

Scottsdale, AZ- February, 2022

"Bacterial Infections"

"Acne"

"Leg Ulcers"

"Cutaneous Signs of Systemic Disease"

"Interesting Cases"

## **Other**

### **Craig Rohan**

Guest on the Curbsiders-Internal Medicine podcast on atopic dermatitis.

### **Courtney Sulentic**

Mentor Match Program mentor, SOT: Alicia Taylor, PhD, Early Career Toxicologist

Mentor for Women Walking West: Naazy Eman

# 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]

## Yanfang Chen

**Yanfang Chen** (Co-PI), Ji Bihl, (PI), "Exosomes from MIR-Primed Endothelial Progenitor Cells for Treating Ischemic Stroke." NIH Ro1 (NHLBI, 2R01HL062996), \$1,875,000, 01/2020-11/2023.

**PIs, Jeffrey B Travers and Yanfang Chen, Co-PI David Cool, Craig Rohan.** "UVB radiation-generated microvesicle particles as effectors for photosensitivity." NIH R01 (NIHES031087, 04/01/2021 – 01/31/2026), \$337,500, Co-PI

## Saber Hussain

**Hussain, Saber.** "Biosignatures discoveries of stress-Ocular Model (6.1)". \$1M, 2019-2022.

**Hussain, Saber.** "Biophotonic based cellular commutation & signaling (6.1)". \$0.75 M, 2020-2023.

**Hussain, Saber.** "Effects of Inhaled Contaminants & Stress on Lung Surfactant Function (6.2)". \$1M, 2020-2023.

**Hussain, Saber.** "Expanded multi-organ in vitro model in collaboration w/ Wright State Univ to support advanced medical S&T to sustain Airmen health & performance in stressful environment. Resulted academic partnership via CRADA w/WSU 2020-2023, \$1.5M equipment placed in Pharm/Tox in AFRL collaborative laboratory, train students, Synergy and partnership, enhanced medical S&T, access to talented work force.

## Mike Kemp

**Kemp, M** (PI). "DNA damage kinase signaling in non-replicating human cells and tissues"; NIH GM130583 ~\$296,000 total costs/year, 2/1/19-1/31/24.

**Kemp, M** (PI). "Circadian Clock Modulating Drugs in Cancer Prevention and Treatment" Ohio Cancer Research #5020, \$30,000 total costs/year, 7/1/20-6/30/22.

**Kemp, M** (PI). "Mapping DNA Repair and Error-Prone DNA Synthesis in Geriatric Skin"; VA Clinical Merit 1101CX002241, ~\$220,000 total costs/year, 4/1/21-3/31/25.

**Kemp, M** (Co-I, sub contract). "Circadian clock disruption: A risk factor for environmental mutagenesis"; NIH ES030113, \$45,696 total costs/year, 11/01/20-10/31/24.

## Craig Rohan

Principal investigator for multi-center trial involving Tapinarof.

Sub investigator on new and continuing trials involving psoriasis, prurigo Nodularis, hidradenitis suppurative and bullous pemphigoid.

### **Ravi Sahu**

**Sahu, Ravi**, (PI) “Defining the novel mechanistic insights of the platelet-activating factor-receptor axis in the therapeutic potential of pancreatic cancer.”. Elsa U. Pardee Foundation Grant, \$105,771, 08/2020-09/2021.

**Sahu, Ravi (Co-PI with Miller, Co-I Travers, Jeffrey, Collaborators Cool, David, Chen, Yanfeng)**. “Translational relevance of the PAF system in combination chemotherapy mediated microvesicle particles release.” BSoM Seed Grant RIF 223301, \$14,500, 07/2021-06/2022.

### **Courtney Sulentic**

UES Subcontract at WPAFB, PI, in collaboration with Dr. Sean Harshman. “Utilization of Advanced Analytical Techniques and Methods for the Identification of Protein-protein Interactions of the Aryl Hydrocarbon Receptor Complex in Human Cells.”

### **Jeffrey Travers**

#### **Extramural awards (NIH, VA)**

**Travers, JB**. R01 HL062996 (Travers). “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.” NIH/NHLB, \$250,000 direct costs/year, 25% effort, 07/01/1999 to 6/30/2024. **Co-I: Cool and Sahu**

**Pls, Jeffrey B Travers and Yanfang Chen, Co-PI David Cool, Craig Rohan)**. “UVB radiation-generated microvesicle particles as effectors for photosensitivity.” NIH R01 (NIHES031087, 04/01/2021 – 01/31/2025), \$337,500, Co-PI, 04/2021-3/2026.

**Travers, JB** (Basic Science VA Merit Award 510BX000853). “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. \$165,000 direct costs/year, 20% VA effort, 10/01/2010 to 03/31/2028.

**Travers, JB** (Clinical VA Merit Award 1101CX000809). “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. \$150,000 direct costs/year, 20% VA effort, 7/01/2014 to 9/30/2023.

Travers, JB R01 ES030113 (Gaddameedhi). NIH/ES subcontract to WSU-Michael Kemp PI for subcontract. 10/06/2020-10/31/2022.

#### **Pharma-sponsored studies**

**Travers, JB** (Polynoma, LLC 103A-301). 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. 10/01/2015 to 9/30/2021

**Travers, JB** (Corrona Psoriasis Registry, 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. 07/01/2016 to 06/30/2021.

**Travers, JB** (Eli Lilly and Company, I1F-MC-RHCD). 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. 12/1/2016 to 02/03/2021.

**Travers, JB** (Eli Lilly and Company, 14V-MC-JAIW). 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. 2/20/2018 to 2/28/2021.

**Travers, JB** (Eli Lilly and Company 14V-MC-JAIX). 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. 4/20/2018 to 2/28/2022.

**Travers, JB** (Bristol-Myers Squibb Company, IM011046-BMS-986165). 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.  
09/01/2018 to 12/01/2019; extension until 2022.

**Travers, JB** (Eli Lilly and Company, I6T-MC-AMAH). 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. 08/01/2019 to 12/01/2021.

**Travers, JB** (Asana BioSciences, LLC, ASN002AD-201-EXT). 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. 01/01/2019 to 12/01/2022.

**Travers, JB** (Celgene Corporation, CC-10004-PPSO-003). 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. 11/01/2018 to 11/01/2021.

**Travers, JB** (Celgene Corporation, CC-10004-PSOR-022). 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. 12/01/2018 to 12/01/2021.

**Travers, JB** (Eli Lilly and Company, I6T-MC-AMBK). 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. 04/01/2019 to 03/01/2022.

**Travers, JB** (Eli Lilly and Company, WSP-07-BARI). 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. 06/01/2019 to 06/01/2022.

**Travers, JB**, Co-I; Korman, Neil, PI (Celgene). 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. 05/1/2018 to 09/1/2021.

### **Yongjie Xu**

**Xu, Yongjie** (PI). RO1-GM110132. "Signaling Mechanism of the DNA Replication Checkpoint. 2/1/2015 - 1/31/2022 with one-year extension in 2021.

**Xu, Yongjie** (PI). R35-GM144307. "DNA Replication Checkpoint in Fission Yeast." 2/1/2022-1/31/2027.

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

### Yanfang Chen

Wang J, Pothana K, Chen S, Sawant H, **Travers JB**, Bihl J, **Chen Y**. Ultraviolet B Irradiation Alters the Level and miR Contents of Exosomes Released by Keratinocytes in Diabetic Condition. *Photochem Photobiol.* 2021 Dec 21. doi: 10.1111/php.13583. Epub ahead of print. PMID: 34931322.

### Mauricio Di Fulvio

Rathod YD, **Di Fulvio M**. The feeding microstructure of male and female mice. *PLoS One.* 2021 Feb 4;16(2):e0246569. doi: 10.1371/journal.pone.0246569. eCollection 2021. PMID: 33539467

### Khalid Elased

Loretelli, C., Rocchio, F., D'Addio, F., Ben Nasr, M., Castillo-Leon, E., Dellepiane, S., Vergani, A., Abdelsalam, A., Assi, E., Maestroni, A., Usuelli, V., Bassi, R., Pastore, I., Yang, J., El Essawy, B., Elased, K.M. Fadini, G.P., Ippolito, E., Seelam, A.J., Pezzolesi, M., ... Fiorina, P. (2021). The IL-8-CXCR1/2 axis contributes to diabetic kidney disease. *Metabolism: Clinical and Experimental*, 121, 154804. <https://doi.org/10.1016/j.metabol.2021.154804>.

### Saber Hussain

M DeBrosse, Y Yuan, M Brothers, A Karajic, J van Duren, S Kim, S Hussain & J Heikenfield. A dual approach of an oil-membrane composite and boron-doped diamond electrode to mitigate biofluid interferences. *Sensors*, 2021 (23), 8063.

MT Nelson, JM Slocik, EJ Romer, CI Mankus, RT Agans, RR Naik & S Hussain. Examining cellular responses to reconstituted antibody protein liquids. *Scientific Reports* 2021, 11(1), 109.

Natan R Barros, Han-Jun Kim, Marcus J Goudie, KangJu Lee, Praveen Bandaru, Ethan A Banton, Einollah Sarikhani, Wujin Sun, Shiming Zhang Hyun-Jong Cho, Martin C Hartel, Serge Ostrovidow, Samad Ahadian, Saber M Hussain, Nureddin Ashammakhi, Mehmet R Dokmeci, Rondinelli D Herculano, Junmin Lee, Ali Khademhosseini. Biofabrication of endothelial cell, dermal fibroblast, and multilayered keratinocyte layers for skin tissue engineering. *Biofabrication.* 2021; 13(3), 035030.

### Mike Kemp

Carpenter MA, Ginugu M, Khan S, and **Kemp MG**. DNA containing cyclobutane pyrimidine dimers is released from UVB-irradiated keratinocytes in a caspase-dependent manner. Working on revision to review at *J Invest Dermatology*.

Kim SH, Kim GH, **Kemp MG\***, and Choi J-H\*. (2022). TREX1 degrades the 3' end of the small DNA oligonucleotide products of nucleotide excision repair in human cells. *Nucleic Acids Research.* (in press) (\***co-corresponding author**)

Cvammen W and **Kemp MG**. (2022). The flavonoid nobiletin exhibits differential effects on cell viability in keratinocytes exposed to UVA versus UVB radiation. *Photochemistry & Photobiology.* (in press)

Khan S, Cvammen W, Anabtawi N, Choi J-H, and **Kemp MG**. (2022). XPA is susceptible to proteolytic cleavage by cathepsin L during lysis of quiescent cells. *DNA Repair.* 109: 103260.

Anabtawi N, Cvammen W, and **Kemp MG**. (2021). Pharmacological inhibition of cryptochrome and REV-ERB promotes DNA repair and cell cycle arrest in cisplatin-treated human cells. *Scientific Reports.* 11(1): 17997.

Sarkar S, Porter KI, Dakup PP, Gajula RP, Koritala BSC, Hylton R, **Kemp MG**, Wakamatsu K, and Gaddameedhi S. (2021). Circadian clock protein BMAL1 regulates melanogenesis through MITF in melanoma cells. *Pigment Cell Melanoma Res.* 34(5): 955-965

### **Terry Oroszi**

Shergill, G.S., Bhandari, S., & Oroszi, T.L. (2022). Recent developments in search of effective herbal medicine for the treatment of leukemia. *Online Journal of Complementary & Alternative Medicine*. Vol.7 No. 2.

Oroszi, Terry (2022). Ready, Set, Go. *Parents with Preparedness Magazine*.

Sachdeva, S., Green, T.D., & Oroszi, T.L. (2021). The health and productivity effects of remote work on clinical research associates. *Clinical Researcher*, 703, 6.

Miller, M., Romine, W., & Oroszi, T. (2021). Public discussion of anthrax on twitter: Using machine learning to identify relevant topics and events. *J.M.I.R. Public Health and Surveillance*, 7(6), e27976.

### **Craig Rohan**

Sattouf Z, Repas SJ, Travers JB, **Rohan CA**. Vitamin D and Vitamin D Analogs as Adjuncts to Field Therapy Treatments for Actinic Keratoses: Current Research and Future Approaches. *Journal of Skin Cancer* Jun 19;2021:9920558. PMID 9920558.

Bayless S, Travers JT, Sahu RP, **Rohan CA**. Enhanced Outcomes of Photodynamic Therapy with Aminolevulinic Acid Through Inhibition of Immunosuppression, *Review Oncology Letters*, 2021 Sep; 22(3): 664. PMID: 34386086.

### **Ravi Sahu**

Borchers C, Thyagarajan A, Rapp CM, **Travers JB, Sahu RP**. "Evaluation of the SARS-CoV-2 spike S protein response on PI3K agonist mediated IL-8 release. *Medical Sciences*, 2021; 9(2):30.

### **Courtney Sulentic**

Kaplan, BLF, Baglolle CJ, Sulentic, C.E. W. Editorial: Role of the aryl hydrocarbon receptor in immune modulation. *Frontiers in Toxicology*, 2022; 4:941665. Doi:10.3389/ftox.2022.941664.

### **Jeffrey Travers**

Mahajan AS, Arikatla VS, Thyagarajan A, Zhelay T, **Sahu RP, Kemp MG**, Spandau DF, **Travers JB**. Creatine and Nicotinamide Prevent Oxidant-Induced Senescence in Human Fibroblasts. *Nutrients*. 2021 Nov 16;13(11):4102. doi: 10.3390/nu13114102. PMID: 34836359; PMCID: PMC8622652.

Spandau DF, Chen R, Wargo JJ, **Rohan CA**, Southern D, Zhang A, Loesch M, Weyerbacher J, Tholpady SS, Lewis DA, Kuhar M, Tsai KY, Castellanos AJ, **Kemp MG**, Markey M, Cates E, Williams AR, Knisely C, Bashir S, Gabbard R, Hoopes R, **Travers JB**. Randomized controlled trial of fractionated laser resurfacing on aged skin as prophylaxis against actinic neoplasia. *J Clin Invest*. 2021 Oct 1;131(19):e150972. doi: 10.1172/JCI150972. PMID: 34428179; PMCID: PMC8483749

McGlone CL, Christian L, Schmeusser B, Liu L, Chalfant CE, Stephensen DJ, Sherwin CM, Rapp CM, Sattouf Z, **Rohan CA**, Morris C, **Chen Y, Travers JB**. Evidence for Systemic Reactive Oxygen Species in UVB-mediated Microvesicle Formation. *Photochem Photobiol*. 2022 Jan;98(1):242-247. doi: 10.1111/php.13494. Epub 2021 Aug 7. PMID: 34324712; PMCID: PMC8799769.

Bhadri S, Thapa P, **Chen Y**, Rapp CM, **Travers JB**. Evidence for microvesicle particles in UVB-mediated IL-8 generation in keratinocytes. *J Clin Investig Dermatol*. 2021 Dec;9(2):10.13188/2373-1044.1000076. doi: 10.13188/2373-1044.1000076. Epub 2021 Dec 30. PMID: 34950767; PMCID: PMC8693786.

Slingluff CL, Lewis KD, Andtbacka R, Hyngstrom J, Milhem M, Markovic SN, Bowles T, Hamid O, Hernandez-Aya L, Claveau J, Jang S, Philips P, Holtan SG, Shaheen MF, Curti B, Schmidt W, Butler MO, Paramo J, Lutzky J, Padmanabhan A, Thomas S, Milton D, Pecora A, Sato T, Hsueh E, Badarinath S, Keech J, Kalmadi S, Kumar P, Weber R, Levine E, Berger A, Bar A, Beck JT, **Travers JB**, Mihalciou C, Gastman B, Beitsch P, Rapisuwon S, Glaspy J, McCarron EC, Gupta V, Behl D, Blumenstein B, Peterkin JJ. Multicenter, double-blind, placebo-controlled trial of seviprotimut-L polyvalent melanoma vaccine in patients with post-resection melanoma at high



risk of recurrence. *J Immunother Cancer*. 2021 Oct;9(10):e003272. doi: 10.1136/jitc-2021-003272. PMID: 34599031; PMCID: PMC8488725.

Thapa P, Bhadri S, Borchers C, Liu L, **Chen Y**, Rapp CM, **Travers JB**. Low UVB Fluences Augment Microvesicle Particle Generation in Keratinocytes. *Photochem Photobiol*. 2022 Jan;98(1):248-253. doi: 10.1111/php.13495. Epub 2021 Aug 7. PMID: 34324709; PMCID: PMC8799755.

Awoyemi AA, Borchers C, Liu L, **Chen Y**, Rapp CM, Brewer CA, Elased R, **Travers JB**. Acute ethanol exposure stimulates microvesicle particle generation in keratinocytes. *Toxicol Lett*. 2022 Feb 1;355:100-105. doi: 10.1016/j.toxlet.2021.11.008. Epub 2021 Nov 18. PMID: 34801640; PMCID: PMC8702459.

Kulkarni M, Rohan CA, Morris D, **Travers JB**. Resolution of dupilumab-associated alopecia areata with dosage modification. *JAAD Case Rep*. 2022 Feb 17;22:85-88. doi: 10.1016/j.jdcr.2022.01.034. PMID: 35340733; PMCID: PMC8942794.

Dickman J, Howell M, Hoopes R, Wang Y, Dickerson TJ, Bottomley M, Shamma HN, Rapp CM, Turner MJ, **Rohan CA** and **Travers JB**. Insights into Lichen Planus Pigmentosus Inversus using Minimally Invasive Dermal Patch and Whole Transcriptome Analysis. *J Clin Investigat Dermatol*. 2022;10(1): 9

Frommeyer TC, Gilbert MM, Brittain GV, Wu T, Nguyen TQ, **Rohan CR** and Jeffrey B. **Travers JB**. UVB-Induced Microvesicle Particle Release and Its Effects on the Cutaneous Microenvironment. *Frontiers in Immunology*, 06 May 2022

Mahajan AS, Arikatla VS, Thyagarajan A, Zhelay T, Sahu RP, **Kemp MG**, Spandau DF, and **Travers JB**. (2021). Creatine and nicotinamide prevent oxidant-induced senescence in human fibroblasts. *Nutrients*. 13(11): 4102.

Spandau DF, Chen R, Wargo JJ, Rohan CA, Southern D, Zhang A, Loesch M, Weyerbacker J, Tholpady SS, Lewis DA, Kuhar M, Tsai WY, Castellanos AJ, **Kemp MG**, Markey M, Cates E, Williams AR, Knisely C, Bashir S, Gabbard, R, Hoopes R, and **Travers JB**. (2021). Randomized controlled trial of fractionated laser resurfacing on aged skin as prophylaxis against actinic neoplasia. *J Clin Invest*. 131(19): e150972.

### **Yongjie Xu**

Alyahya MY, Khan S, Bhadra S, Samuel RE, and **Xu YJ** (2022) Replication stress induced by the ribonucleotide reductase inhibitor guanazole, triapine, and gemcitabine in fission yeast. *FEMS Yeast Res*. V22, issue 1 <https://academic.oup.com/femsyr/article/22/1/foac014/6545798>.

Zhang L, Geng, XR, Wang FF, Tang JS, Ichida Y, Arishya S, Jin S, Chen MY, Tang ML, Pozo FM, Wang WX, Wang J, Wozniak M, Guo XX, Miyagi M, Jin FL, **Xu YJ**, Yao XS, and Zhang YW (2022). 53BP1 regulates heterochromatin through liquid phase separation. *Nature Commun*. 13:360 <https://doi.org/10.1038/s41467-022-28019-y>

## **Books, chapters, reviews**

### **Craig Rohan**

Bayless S, **Travers JB**, **Sahu RP**, **Rohan CA**. Inhibition of photodynamic therapy induced-immunosuppression with aminolevulinic acid leads to enhanced outcomes of tumors and precancerous lesions. *Oncology Letters*, 2021; 22(3):664.

### **Courtney Sulentic**

Anderson, S.E., Sulentic, C.E.W., Kaplan, B.L.F.: Chapter 14: Immunotoxicology in Industrial Hygiene and Occupational Exposures. In: *Patty's Industrial Hygiene and Toxicology* (eds. Paustenbach, Farland, Klaunig, Levy and Greim) 7<sup>th</sup> edition, Wiley.

### Textbook contribution

Inquisitive question writer for Chapter 8 of Janeway's Immunobiology, 10<sup>th</sup> edition, Murphy, K., Weaver, C., Berg, L. (2022).

### Terry Oroszi

Oroszi, T. & Ellis, D. (2020), *The Mindset of a Terrorist*. In Norton, R. & Mauroni, A (eds), *Agroterrorism: National Defense Assessment, Strategies, and Capabilities*. United States Air Force Center for Strategic Deterrence Studies Maxwell Air Force Base, Alabama. (pp. 29-42) (ISBN|978-0-9914849-5-9).

### Jeffrey Travers

#### Reviews:

Frommeyer TC, Rohan CA, Spandau DF, Kemp MG, Wanner MA, Tanzi E, Travers JB. Wounding Therapies for Prevention of Photocarcinogenesis. *Front Oncol*. 2022 Jan 7;11:813132. doi: 10.3389/fonc.2021.813132. PMID: 35071017; PMCID: PMC8776632.

Khair S, Brenner LA, Koval M, Samuelson D, Cucinello-Regland JA, Anton P, Piano MR, Simon L, Crotty K, Sharieh F, Travers JB, Singh V, Cannon A, Kim A, McCullough RL, Wyatt TA, McMahan RH, Choudhry MA, Kovacs EJ. New insights into the mechanism of alcohol-mediated organ damage via its impact on immunity, metabolism, and repair pathways: A Summary of the 2021 Alcohol and Immunology Research Interest Group (AIRIG) meeting. *Alcohol*. 2022 Jun 1: S0741-8329(22)00050-7. doi: 10.1016/j.alcohol.2022.05.004. Epub ahead of print. PMID: 35659577.

Frommeyer TC, Gilbert MM, Brittain GV, Wu T, Nguyen TQ, Rohan CA, Travers JB. UVB-Induced Microvesicle Particle Release and Its Effects on the Cutaneous Microenvironment. *Front Immunol*. 2022 May 6;13:880850. doi: 10.3389/fimmu.2022.880850. PMID: 35603177; PMCID: PMC9120817.

### **Published abstracts**

#### F. Javier Alvarez-Leefmans

The Ins and Outs of Apical NKCC1 in Choroid Plexus Epithelial Cells. Submitted to *Europhysiology* 2022. Copenhagen, Denmark. To be presented by invitation as a speaker in the American Physiological Society Symposium "NKCC1 in the choroid plexus: which way to go?" in September 2022.

#### David Cool

Williams Burnett, M. L., Benedict, V., Cool, D.R., Sulentic, C.E.W., Evaluation of Physiologically Relevant Aryl Hydrocarbon Receptor Ligands on Antibody Expression in a Human B Cell Line Model, Wright State University, Dayton, OH., Ohio Valley Society of Toxicology Virtual Meeting, July 28, 2021.

Williams Burnett, M. L., Benedict, V., Cool, D.R., Sulentic, C.E.W., Evaluation of Physiologically Relevant Aryl Hydrocarbon Receptor Ligands on Antibody Expression in a Human B Cell Line Model, Wright State University, Dayton, OH., Society of Toxicology Virtual Meeting, poster Number 2430, May 22, 2020.

#### Ravi Sahu

Zaid Sirhan, Anita Thyagarajan, Ravi P Sahu. Exploring the therapeutic efficacy of tucatinib versus tucatinib combination approaches in HER-2 breast cancer patients. Annual Ohio Valley Society of Toxicology 2021 meeting, July 28, 2021.

Anita Thyagarajan, R. Michael Johnson, Jeffrey B Travers, Ravi P Sahu. Topical application of gemcitabine chemotherapy generates microvesicle particles in a Platelet-activating factor-receptor and acid sphingomyelinase-dependent manner. SID meeting 2022.

Pathipaka Rachana, Anita Thyagarajan, Ravi P Sahu. Melatonin as a drug repurposing in the treatment of melanoma. Annual Ohio Valley Society of Toxicology 2021 meeting, November 5, 2021.

Chirumamilla Sreevalli, Anita Thyagarajan, **Ravi P Sahu**. Exploring the effectiveness of aspirin as drug repurposing against pancreatic cancer. Annual Ohio Valley Society of Toxicology 2021 meeting, November 5, 2021.

Vaibhav Gajjar, Anita Thyagarajan, **Ravi P Sahu**. Exploiting the efficacy of metformin at a drug reposing for non-small cell lung cancer treatment. Annual Ohio Valley Society of Toxicology 2021 meeting, November 5, 2021.

### **Courtney Sulentic**

**Sulentic, C.E.W.:** Communicating Science in an age of misinformation and mistrust. Toxicological Sciences, the Toxicologist, **186**:1201, 2022.

**Sulentic, C.E.W.,** Allex-Buckner, C., Snyder, A.,: Functional characterization of the immunoglobulin polymorphic hs1.2 enhancer using CRISPR/Cas9 editing. Toxicological Sciences, the Toxicologist, **186**:4135, 2022.

\*Bhakta, M., Burra, K., Allex-Buckner, White, S., Burnett, M.W., **Sulentic, C.E.W.:** AhR activation differentially alters the expression profile of IGH isotypes. Toxicological Sciences, the Toxicologist, **186**:4140, 2022.

\*Allex-Buckner, C., Snyder, A., **Sulentic, C.E.W.:** Genome-wide characterization and off-target detection of a CRISPR/Cas9-edited B lymphocyte cell line. Toxicological Sciences, the Toxicologist, **186**:3716, 2022.

### **Jeffrey Travers**

Chad Brewer, Azeezat A. Awoyemi, Christina Borchers, Christine M Rapp, Anita Thyagarajan, **Ravi P Sahu, Jeffrey B Travers**. Combining ethanol + thermal burn injury results in elevated microvesicle particle production via dramatic production of the lipid mediator Platelet-activating factor. Annual Ohio Valley Society of Toxicology 2021 meeting. 11/5/2021.

Chad Brewer, Azeezat A. Awoyemi, Christina Borchers, Christine M. Rapp, Anita Thyagarajan, **Ravi P Sahu, Jeffrey B Travers**. Heightened levels of microvesicle particles resulting from a combination of ethanol and thermal burn injury. Alcohol & Immunology Research Interest Group (AIRIG) meeting at Loyola University, Chicago, IL 2021.

Chad Brewer, Azeezat A Awoyemi, Christina Borchers, Christine M Rapp, Anita Thyagarajan, **Ravi P Sahu, Jeffrey B Travers**. Heightened levels of microvesicle particles resulting from combination of ethanol and thermal burn injury. Alcohol (Fayetteville, N.Y.). 96:99-100. November 2021. DOI: 10.1016/j.alcohol.2921.09.009, IL, 2021.

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

### **F. Javier Alvarez-Leefmans**

Invited Speaker, 55th Annual Lake Cumberland Biological Transport Group Meeting (June 21-23, 2021). "The ins and outs of apical NKCC1"

Invited speaker, Europhysiology 2022, Copenhagen, Denmark, to be held September 16-18, 2022. "NKCC1 in the choroid plexus: which way to go?". This international meeting is organized by The Physiological Society (UK), The Scandinavian Physiological Society, The German Physiological Society, and the Federation of European Physiological Societies.

### **Terry Oroszi**

InfraGard Congress, August 2021.

Emergency Management virtual speaker series, invited speaker, October 2021.

CBRNe Convergence invited speaker, November 2021.

FBI HQ & Quantico InfraGard meeting, November 2021.

My Career Path, American Embassy in Baghdad for faculty and administrators from 18 universities in Iraq and Kurdistan, January 2022.

LA FBI/INMA meeting, February 2022.

Stand Up Task Force with FBI HQ O.P.S. Academics FBI Partnership, February 2022.

Milwaukee, WI FBI/INMA meeting, May 2022.

National Homeland Security Association Speaker, June 2022.

### **Ravi Sahu**

Oral Presentations (via video conferencing) as an Invited speaker:

Chemopreventive mechanisms of metformin as a drug repurposing against non-small cell lung cancer (via video conferencing). Academia International Webinar on Cancer Research and Therapeutics, 2022.

Anticancer efficacy of dietary medicinal compounds (via video conferencing). 10<sup>th</sup> International Conference on Traditional & Alternative Medicine, 2022.

Deciphering the functional significance of lipid mediator Platelet-activating factor in the therapeutic efficacy of anti-cancer agents (via video conferencing). International Seminar on Recent Biochemical Approaches in Therapeutics- VIII (RBAT-VIII), 2022.

Oxidized lipids in the efficacy of cancer therapies (via video conferencing). 3<sup>rd</sup> International Webinar on Cancer Research and Therapy, 2022.

Exploiting the translational relevance of oxidized lipid mediator in the efficacy of cancer therapies (via video conferencing). Scholars International Webinar on Cancer Research and Therapeutics, National Institute of Biologia, Slovenia, 2021.

Phytochemicals as a promising traditional and complementary approach for breast cancer (via video conferencing). 13<sup>th</sup> World Congress on Traditional and Complementary Medicine at London, UK, 2021.

### **Courtney Sulentic**

\*Ailawadi, S. and \*Talreja, R. (platform, co-presenters) Titanium dioxide and zinc oxide nanoparticles in sunscreens: impact on cytokine expression in human skin post-UVB exposure. BSOM Medical Student Research Seminar, 2022

Regulation of Antibody Production: Getting Environmental cues from the AhR? AhR Symposium 2022: Toxicity to Therapeutics, Penn State University, State College, PA 2022

Communicating Science in an age of misinformation and mistrust, Society of Toxicology Annual Meeting 2022  
Organizer and co-Chair

Transforming Our World through Empowerment of Environmental Justice Communities, Virtual American Association for the Advancement of Science Annual Meeting 2022  
Organizer and co-Chair

### **Student presentations:**

\*Bhakta, M. (platform), Allex-Buckner, C., White, S., Burnett, M. W., and **Sulentic, C. E. W.** Potential Physiological role of AhR in Antibody Production. Ohio Valley Society of Toxicology, Virtual Meeting, 2021.

\*Allex-Buckner, C. (platform), Bhakta, M., and **Sulentic, C. E. W.** Genome Wide Characterization of a CRISPR/Cas9-Edited B Lymphocyte Cell Line. Ohio Valley Society of Toxicology, Virtual Meeting, 2021.

\*White, S. (platform), Freiwan, A., Snyder, A., **Sulentic, C. E. W.** AhR-mediated transcriptional regulation of the human immunoglobulin hs1.2 enhancer. Ohio Valley Society of Toxicology, Virtual Meeting, 2021.

\*Burnett, M. W. (platform), Lujan, H., Mayville, B., Benedict, V., and **Sulentic, C. E. W.** Analysis of Metabolic Profiles to Detect Changes in the Immune Function of B cells. Ohio Valley Society of Toxicology, Virtual Meeting, 2021.

Ailawadi, S., \*Talreja, R. (platform), Panstingel, N., Alex-Buckner, C., **Sulentic, C. E. W.** Titanium dioxide and zinc oxide nanoparticles in sunscreens: impact on cytokine

**Jeffrey Travers**

Under Continuing Medical Education section.

**Consultantships** [sponsor activity]

**David Cool**

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

**Terry Oroszi**

Gerson Lehrman Group (GLG) Council member, as needed

N.S.F. Grant \$125/hr.at 80 hours of consulting on deception in clearance interviews.

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

**F. Javier Alvarez-Leefmans**

Associate Editor, Frontiers in Membrane Physiology and Biophysics. Frontiers Journals. Science Park PSE-D, CH-1015 Lausanne, Switzerland.

Ad hoc reviewer for the following journals during the period reported: Frontiers in Physiology, and The American Journal of Physiology-Cell Physiology.

Ad hoc grant reviewer for Wings for Life Spinal Cord Research Foundation. Salzburg, Austria. 05/16/2022 to 05/22/2022.

**David Cool**

NIH CounterAct Study Section Member Molecular, Cellular & Developmental Neurosciences Integrated Review Group. R21 Study Section Reviewer 10/28-29/2021.

Editorial Board, Interdisciplinary Toxicology, 2014-Present

**Mauricio Di Fulvio**

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

Ad-hoc reviewer NIH-NIDDK, Special Emphasis Panel/Scientific Review Group, 2021/05, ZDK1 GRB-B (M2) 1.

**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.

### **Saber Hussain**

Editorial Positions:

Journal of Nanotoxicology, 2014-present

Toxicological Sciences, Associate Editor, 2010-2013

Neurotoxicology, Editorial Editor, 2009-2012.

### **Mike Kemp**

Co-editor for special issue of Frontiers in Cell and Developmental Biology entitled: "Mechanistic Studies of Genome Integrity, Environmental Health, and Cancer Etiology.:

Reviewer, NIH Cancer Prevention Study Section (February-March 2022).

Reviewer, United Kingdom Medical Research Council Predoctoral Clinical Research Fellowship (October 2021).

### **Terry Oroszi**

InfraGard Leadership Regional Award, 2021.

Chief Editor, InfraGard Journal, 2022.

### **Craig Rohan**

Dayton's Best Doctors: Dayton Magazine, 2022

### **Ravi Sahu**

Serves as an editorial board member, associate editor and reviewer for several scientific journals.

### **Courtney Sulentic**

Lead Topic Editor for Frontiers in Toxicology, Immunotoxicology Special Topic: Role of the Aryl Hydrocarbon Receptor in Immune Modulation, 2021-2022, current views ~ 4800

Nominated by the Society of Toxicology for election ballot for the International Union of Toxicology (IUTOX) Executive Committee.

### **Jeffrey Travers**

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

Reviewer for multiple journals in areas of my expertise, ~2/month

Reviewer, VA Oncology D/E grant review panel (co-chair), 11-2021, 5-2022

Reviewer, NIAMS SBIR grant review panel 3-2022

### **Yongjie Xu**

Ad hoc reviewer for the following journals: Genes, Cancer Letters, and Frontiers in Cell and Developmental Biology.

# 6

## Summary of Service Activities

### Student advising

#### **F. Javier Alvarez-Leefmans**

##### Leader Admin MS Advisor

Sindhuja Shiva  
Vishal Avadhanula  
Vyshnavi Aaireni  
Samba Takkellapati  
Dinesh Vara  
Divya Yekkala

#### **Yanfang Chen**

##### Leader Admin Advisor

Hamad Albaqami  
Harish Kothapalli  
Padma Jyesta  
Vijaya Lakshmi Vaishnava Sri  
Rayma Goli  
Seshagiri Naripireddy

#### **David Cool**

##### PhD Advisory Committee

Jananie Rockwood, BMS Rep, Projected graduation 2022  
Adaku Ume, MD/PhD BMS co-advisor, Projected graduation 2022  
Phillip Walker, MD/PhD BMS committee, Projected graduation 2021  
Xiu Huan Yap, BMS committee, Graduated 2021  
Hannah Shows, BMS committee, Graduated 2021  
Kristen Rehl, BMS rep, Projected graduation 2023  
Christina Davidson, BMS committee, Projected graduation 2023  
Mia Burnett, BMS committee, Projected graduation 2024  
Bryan Mayville, BMS committee, Projected graduation 2023

##### Thesis Advisory Committee

Shikshita Singh, PTX, Projected graduation 2023

##### Leader Admin MS Advisor

Venkat Yendapalli  
Mounika Vejudla  
Harshitha Tummura, Graduated summer 2022  
Rachana Gade, Graduated spring 2022  
Madhuri Karasani, Graduated spring 2022  
Amoolya Nampally, Graduated spring 2022  
Anikitha Uppalapati

### **Mauricio Di Fulvio**

#### Thesis Advisory Committee

Yaksh Rathod, PhD BMS advisor, 2021-2026  
Charles Luu, Committee member  
Abdullah Alshudukhi, PhD BMS committee member  
Tahir Amin Sulehria, PhD BMS committee member  
Rana Abdeljawad, MS student advisor, Graduated summer 2021

#### Leader Admin MS Advisor

Abdul Basit  
Sirisha Musirigari  
Apruv Rana, Graduated summer 2022  
Atul Sheoran, Graduated summer 2022  
Shriya Bandapalli  
Sahithi Bethelli

### **Khalid Elased**

#### Thesis Advisory Committee

Rana Abdeljawad, MS student committee member, Graduated summer 2021  
Sydney White, MS student committee, Graduated summer 2022  
Adaku Ume, MD/PhD student, committee  
Yakshkumar Rathod, PhD committee member

#### Leader Admin MS Advisor

Meeti Champaneria  
Zaid Sirhan, graduated spring 2022  
Eswar Valmiki, graduated summer 2022  
Anisha Cherukuri  
Jaypalsinh Gohil  
Prashanthi Bommineni, graduated spring 2022  
Vimarsh Joshi  
Adil Mohammed

### **Saber Hussain**

#### Advisory Committee

Capt. Bryan Mayville, PhD student, 2020-2023  
Soham Parikh, PhD student committee, 2021-current  
Mia Burnett, PhD student, co-advisor, 2022-current  
(10) Summer Intern students from WPAFB

### **Mike Kemp**

#### Thesis Advisory Committee

Hrishikesh Kadam, MS student, 2021-present  
Naga Kavuri, MS student, 2021-present  
Prashanti Gaikwad, MS student, 2021-present  
William Cvammen, BMS PhD student, 2020-present  
Alex Carpenter, PhD, postdoctoral training, 2020-present  
Saman Khan, PhD, postdoctoral training. Feb 2021-present  
Sri Meghana Yerrapragada, BMS PhD student, summer 2022-present

#### Leader Admin MS Advisor

Balaram Gudapati  
Yeseswi Guduri



### **Terry Oroszi**

#### Leader Admin MS Advisor

Rachana Balusa  
Jessica Hong  
Vijayala Jogi  
Venkatesh Kilari  
Suvechha Bhandari, graduated spring 2022  
Keshu Patel  
Sucheta Sachdeva, graduated spring 2022  
Gagandeep Shergill, graduated spring 2022  
Brooke Burtis, graduated spring 2022  
Christina Stroh, graduated spring 2022  
Mark Robinson  
Rajiv Ramdat, graduated spring 2022  
Sowon Chung, graduated summer 2021  
Alycia Ketter, graduated spring 2022  
Reethi Yadlapalli, graduated summer 2022  
Dhatrika Uggumudi, graduated spring 2022  
Meghana Anagani  
Vinitha Sakhamuri

#### PhD Advising

Michele Miller, co-advisor, graduated 2022.

### **Craig Rohan**

#### MD/MS Co-Advisor

Steven Repas, graduated spring 2022  
Sharlo Bayless, graduated spring 2022  
Ben Schmeusser, graduated spring 2022  
Jacob Dickman, graduated spring 2022  
Zafer Sattouf, graduated spring 2022  
Danielle Corbin  
Janet Lubov  
Maansi Kulkarni  
Megan Cleary  
Alex Vollmar  
Ericson Torralba  
Timothy Frommeyer  
Michael Gilbert  
Garrett Fisher  
Afryea Henderson  
Mark Ortenzio  
Winston Owens  
Andrea Shugar

### **Ravi Sahu**

#### Thesis Mentor/Advisory Committee

Chad Brewer, committee, graduated spring 2022  
Mashaal Alyahya, committee, graduated summer 2022  
Sydney White, MS student, graduated summer 2022  
Krishna Awasthi  
S. Chitra, committee

#### Leader Admin MS Advisor

Sreevalli Chirumamilla  
Vaibhav Gajjar  
Rachana Pathipaka  
Lakshmi Devaropalli  
Sai Priya Devarkonda

## **Courtney Sulentic**

### Thesis Advisory Committee

Sydney White, MS student, mentor, graduated summer 2022  
Mia Williams Burnett, ED PhD student, mentor, current  
Mili ben Bhakata, BMS PhD student, mentor, 2021-current  
Eric Reed, BMS PhD student, current  
Clayton Buckner, BMS PhD student, mentor, current  
Modhi Alshammari, MS student, graduated spring 2022  
Xiu Huan Yap, BMS PhD student, graduated summer 2021  
Hannah Shows, BMS PhD student, graduated fall 2021  
Rujuta Gadgil, BMS PhD student, representative  
Makda Gebrezgi, MS M&I, committee  
Lauren Krause, MS M&I, committee, graduated spring 2022  
Alaa Qishta, MS M&I, committee, graduated spring 2022  
Rujuta Gadgill BMS PhD, representative  
Yakshkumar Rathod, BMS PhD, representative  
Anthony Young, BMS PhD, representative

### Leader Admin MS Advisor

Vineel Jampani  
Bhavitha Madala  
Chandana Madala  
Shiva Nanavath

## **Jeffrey Travers**

### Primary Advisory/Committee member

Chad Brewer, MS student, advisor, graduation spring 2022  
Cvammen William, BMS PhD student, committee, 2020-  
Pranali Manrekar  
Shikshita Singh  
Rushabh Lohade

### MD/MS Co-Advisor

Steven Repas, graduated spring 2022  
Sharlo Bayless, graduated spring 2022  
Ben Schmeusser, graduated spring 2022  
Jacob Dickman, graduated spring 2022  
Zafer Sattouf, graduated spring 2022  
Danielle Corbin  
Janet Lubov  
Maansi Kulkarni  
Megan Cleary  
Alex Vollmar  
Ericson Torralba  
Timothy Frommeyer  
Michael Gilbert  
Garrett Fisher  
Afyrea Henderson  
Mark Ortenzio  
Winston Owens  
Andrea Shugar

## **Yongjie Xu**

### Primary Advisory/Committee member

Mashaal Alyahaya, MS student, advisor, graduated spring 2022  
Sankhadip Bhadra, BMS PhD student, 2020-  
Nafees Ahamad, postdoctoral

Leader Admin MS students

Abdul Basit  
Rakshith Katta  
Haripriya Panguluri  
Leighanna Palmer

Primary advisory/committee member:

William Cvammen (PhD student in Dr. Kemp's lab)  
Akshay Hira (PhD student in Dr. Kadakia's lab)  
Rujuta G. Yashodhan (PhD student in Dr. Leffak's lab)  
Amanda Myers (PhD student in Dr. Long's lab)  
Hirishikesh Kadam (MS student in Dr. Kemp's lab)

**Committee membership/officer** [indicate if committee chair]

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

**F. Javier Alvarez-Leefmans**

Pharmacology and Toxicology Faculty Affairs and Development Committee

**David Cool**

Pharmacology and Toxicology Faculty Affairs and Development Committee, Chair

**Khalid Elased**

BSOM Research Committee  
Pharmacology and Toxicology Faculty Affairs and Development Committee

**Mike Kemp**

Pharmacology and Toxicology Education Committee, 2021-present.

**Terry Oroszi**

BSOM Continuing Medical Education Committee (CME) and Toxicology Education Committee  
Pharmacology and Toxicology Education Committee, 2021-present.\* Chair  
Pharmacology and Toxicology Admissions Committee, 2021-present.\* Chair  
BSOM Nominations Committee

**Craig Rohan**

Dermatology Clinical Competence Committee

**Courtney Sulentic**

Faculty Promotion and Advancement Committee, elected member, BSOM, 2020-2022  
BSOM Strategic Plan, Research Subcommittee  
Faculty Affairs and Development Committee (FADC), Pharm/Tox  
Education Committee, Pharm/Tox

Service:

BSOM Medical Student Research Symposium Poster/Presentation Judge  
DAGMEC Resident Research Forum Poster Judge

**Jeffrey Travers**

WSU Executive Committee, 2015-present  
Dean's Research Chairs Committee, 2015-present  
Scholarship in Medicine

Basic Science Track Committee, Chair 2018-present  
LAR Advisor, 2022-

**Yongjie Yu**

Member of the Educational Committee in the Department of Pharmacology & Toxicology

**Wright State University**

**F. Javier Alvarez-Leefmans**

Member of the Neuroscience Advisory Board  
Member of the WSU Faculty Senate Building and Grounds Committee

**David Cool**

BMS PhD Curriculum Committee

**Khalid Elased**

Laboratory Animal Care & Use Committee

**Mike Kemp**

BMS PhD Admissions Committee, 2021-2022

**Terry Oroszi**

WSU Faculty Senator, 2020-present  
Committee Chair, International Education Advisory Committee (I.E.A.C.)

**Ravi Sahu**

Institutional IACUC and IBC Committees  
Departmental Admission and Scholarship Committee

**Courtney Sulentic**

Nominating Committee, BMS Ph.D. Program, elected member, 2021-2023  
Women's Peer Mentoring Group, initially supported by the NSF-funded LEADER Program at WSU  
Women in Science Giving Circle member, 2016-present

**Yongjie Xu**

BMS PhD Student Admission Committee, 2021-2022

**Wright State Physicians**

**State**

**Khalid Elased**

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

**Courtney Sulentic**

Organized the 2021 Ohio Valley Society of Toxicology (OVSOT) annual meeting to be held at WSU, but was shifted to a virtual format because of COVID.

## **National**

### **Mauricio Di Fulvio**

Advisory Committees – Study sections of Molecular & Cellular Endocrinology & Membrane Transporters & Receptors  
National Agency for the Promotion of Science and Technology, Argentina

### **Khalid Elased**

American Heart Association High Blood Pressure Council Conference Review Committee.  
Member on the American Heart Association KCVD Committee of the Council on the Kidney in Cardiovascular Disease.  
Delegate of WSU Boonshoft School of Medicine to the United States Pharmacopeia (USP) Convention.

### **Mike Kemp**

Honors and Awards Committee, Environmental Mutagenesis and Genomics Society, 2017-present,  
Chair 2019-present.  
Excellence in Science Award Committee, FASEB, 2020-present

### **Terry Oroszi**

InfraGard National Members Alliance Officer  
NYPD SHIELD

### **Courtney Sulentic**

#### **Society of Toxicology:**

Presidential Chair for Women in Toxicology Special Interest Group, Society of Toxicology  
Vice President, 2021-2022  
Past President, 2022-2023

Mentor Match program, mentor, Society of Toxicology

Service at the 2022 SOT Annual Meeting in San Diego, CA:

Presided over the Women in Toxicology Special Interest Group Annual Reception

Invited Expert, Colgate-Palmolive Luncheon

Host for Poster Tours in Immunotoxicity, Postdoctoral Assembly

The Graduate School Breakout session, Undergraduate Program, Committee on Diversity Initiatives, Panelist

Ad-hoc reviewer for several journals

### **Jeffrey Travers**

#### **NIH Grant Review Panels**

NAIMS SBIR grant reviewer March 2022

#### **VA Grant Review Panels**

VA Oncology D/E Review Panel, November 2021, May 2022, Co-chair

### **Hospital or affiliated institution [name]**

**Mike Kemp**

Dayton VAMC Subcommittee on Research Safety, 2020-present

**Other**

**Yanfang Chen**

Departmental Core for Preclinical Pharmacology, Director

**Khalid Elased**

Member of Scientific Societies

American Diabetes Association (ADA)

Fellow of the American Heart Association (AHA)

Member of the American Society of Nephrology (ASN)

**Mike Kemp**

Manuscript Reviewer (25 manuscripts): International Journal of Molecular Sciences (x6); The Lancet Oncology; Photodermatology, Photoimmunology, & Photomedicine (x2); Biology; Frontiers in Genetics; Journal of Biochemical and Molecular Toxicology; Proteins; Cancers, Communications Biology; Mutation Research; Journal of Pharmaceutical Research International; Therapeutics; Journal of European Dermatology Venerology; Frontiers in Oncology; Genes; Biomedicine and Pharmacotherapy; Journal of Insect Physiology; Environmental and Molecular Mutagenesis; Drug Design, Development, and Therapy

**Ravi Sahu**

Community Service:

Faculty Judge for State Science Day, The Ohio Academy of Science

Faculty Judge for Buckeye Science & Engineering Fair

**Courtney Sulentic**

*COVID Conway Communications Reboot* Newsletter, reviewer and contributor

Sulentic, C.E.W. What is natural immunity and why do I need the vaccine or a booster? In K. Conway (Ed.)

*COVID Conway Communications Reboot #4*. Internal BSOM report (January 2022).

# 7

## Patient Care Summary

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

**Craig Rohan**

Dermatology clinics at Wright State Physicians (two half-days/week) and Dayton VA Medical Center (one half-day/week).

**Jeffrey Travers**

Dermatology clinics at Wright State Physicians and Dayton VAMC.

# 8

## Honors and awards [Faculty or staff]

### Jeffrey Travers

Brage Golding Distinguished Professor for Research.

# 9

## Hosted events [CME, etc.]

# 10

## Other information

[Other information that represents your department's contribution to the academic mission of the Boonshoft School of Medicine.]

### F. Javier Alvarez-Leefmans

In collaboration with Dr Eric Delpire (Vanderbilt SOM) and Dr Edna Kaneshiro (U. Cincinnati), I am editing and writing the 5th edition of Cell Physiology Sourcebook: Essentials of Membrane Biophysics, scheduled to be published by Elsevier Academic Press, in December 2022.

Manuscript in preparation: Cation chloride cotransporters in choroid plexus epithelial cell function: unanswered questions and controversial issues.

Preparing resubmission of paper by Patyal P., Cha, D. and Alvarez-Leefmans F.J. Expression of Na<sup>+</sup>, K<sup>+</sup>, 2Cl<sup>-</sup> Cotransporter 1 and Aquaporins 4 and 7 in mouse choroid plexus and brain ependyma. Paper resubmission has been delayed as a consequence of my health issues.

### Yanfang Chen

Director, Pharmacology & Toxicology Departmental Core for Preclinical Pharmacology

### David Cool

Proteome Analysis Laboratory, Director, 2004-present

### Collaborations & Consultants

Dr. Karen Parker, Stanford University- OT & AVP in Autism, 2009-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. 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.

### **Mauricio Di Fulvio**

Review Editor Frontiers in Endocrinology  
Review Editor Frontiers in Neurosciences  
Reviewer Scientific Reports, Nature Communications  
Reviewer PLoS one  
Reviewer Lancet  
Reviewer American Journal of Physiology  
Reviewer European Journal of Physiology

### **Khalid Elased**

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

#### **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  
Journal of the Renin-Angiotensin-Aldosterone System  
Kidney and Blood Pressure Research  
Life Sciences  
Metabolism- Clinical and Experimental  
Microbial Pathogenesis  
Molecular Psychiatry  
Nephron Physiology  
Nutrition Research  
PLoS One  
Physiological Reports  
Regulatory Peptides  
The Journal of Pathology.

#### **Research Peer Review:**

Abstract Reviewers for The AHA Hypertension Annual Meetings (2020) New Orleans.

National Research Development and Innovation Office (Hungary): Special Emphasis Panel/Scientific Review Group Physiology, Pathophysiology, Pharmacology and Endocrinology Study Section. Budapest, Hungary.

### **Saber Hussain**

Participated and advised in DURIP proposal for equipment through AFOSR  
Participated in DHP-DoD proposals JPC-6 and JPC-5.

### **Terry Oroszi**



PharmTox department external review, 2021-2022.  
BSOM Faculty Senator – minute preparation.  
Diversity, Equity, and Inclusion Faculty Training through BSOM, October 2021.  
Invent2prevent Targeted Violence & Terrorism D.H.S. funded program for students  
(Co-PI Oroszi and Co-PI Sethi) 2K budget per team.  
Reworked PharmTox curriculum into distinct categories: Toxicology, Pharmacology, Career,  
Pre-clinical Clinical, Leadership, and H.C.H.S. Part of an effort to change the curriculum to  
a personalized degree program.  
Initiate a new Healthcare and Homeland Security degree, 2022.  
Hosted retired Director of NIH Assessment and Policy at a PharmTox seminar to raise awareness of  
I.P. theft and new federal grant requirements.

### **Craig Rohan**

Submitted a grant proposal in psoriasis genetics with Dr. Courtney Sulentic.

Submitted IRB investigator-initiated trial investigating the effects of imipramine on prurigenic and pain response in photodynamic therapy for actinic keratoses.

### **Ravi Sahu**

Faculty Judge and moderator for Scholarship in Medicine (SCH) presentation day.  
Faculty Judge for DAGMEC Virginia C. Woods Resident Research Forum.  
Hosted rotations for incoming thesis students.  
Advised several students in career planning.

### **Courtney Sulentic**

Finalizing experiments for manuscripts and grants, writing and submitting manuscripts for publication, and grant writing.

Submitted a small foundation grant in collaborations with Drs. Travers and Rohan.

Previously submitted R01 grant, scored 21% and added new cutting-edge experiments to address comments and now must be submitted as a new grant.

Focusing my efforts on getting papers published and published an editorial based on an Immunotoxicology Special Topic for Frontiers in Toxicology for which I developed and was the Lead Topic Editor.

I rotated off the Council for the Society of Toxicology in May of 2021. In May 2022, I transitioned from President to Past President for the Women in Toxicology special interest group in the Society of Toxicology which has over 7000 national and international members.

My goals for 2022-2023 are to continue focusing effort on my research program, most specifically on publishing papers and resubmitting my R01 grant. I have communicated with my Program Officer to ensure that my grant goes to the proper study section. I am hopeful that my revised R01 grant will be funded but I will continue my efforts to expand my grant opportunities including collaborative grant opportunities. To this end I have initiated collaborations with experts inside and outside of WSU who are willing to contribute statistical, technical, genetic and bioinformatic expertise. I recently established a proteomics collaboration with Dr. Sean Harshman directly related to my current research efforts. I am looking forward to strengthening translational collaborations already initiated with Drs. Travers, Rohan, Walusimbi, and Polenakovic and identifying common research goals and potential collaborative activities with other faculty within the Pharm/Tox department and at WSU. I am currently working closely with Dr. Mike Raymer who is co-mentoring my Ph.D. student (Clayton Alex-Buckner) and providing bioinformatic expertise. I will maintain my long-standing collaboration with Dr. Saber Hussain and other scientists, including Drs. Cam Mauzy, Wanda Lyon, and Tyler Nelson at Wright Patterson Air force Base.

**Jeffrey Travers**

LAR advisor, 2022.