Department of/Office of Pharmacology & Toxicology

Annual Report

2015

Jeffrey Travers, MD, PhD
Professor and Chair

For the period including
January 1, 2015 — December 31, 2015
Statement from the Chair/Associate Dean

[Highlights of the year limited to 500 words]

2015 was a year of transition for the Department of Pharmacology & Toxicology. In February, new chair Dr. Jeffrey Travers started. Many accomplishments of the faculty, staff and students of the Department took place, some of which are detailed below.

Faculty. Drs. Thomas Lockwood and James Lucot retired from the Department and have returned as Emeritus faculty. Both are involved in teaching and research/writing and continue their contributions. New Assistant Professors Drs. Ravi Sahu and Yong-jie Xu were recruited as Assistant Professors. Both brought NIH funding with them (Dr. Sahu a K22 grant, Dr. Xu, an R01 grant). Dr. Peter Lauf (Emeritus Professor) was honored as he was appointed as Chair for the Distinguished Physiological Committee for a three-year term. Drs. Yanfang Chen and Khalid Elased were both promoted to Professor. Dr. Mauricio Di Fulvio received the Boonshoft Academy of Medicine Excellence in Medical Education and Research Award (junior faculty). Dr. Di Fulvio was selected by his peers. The Faculty participated in a retreat in the Fall which was centered around work standards. An incentive award policy was developed to compensate faculty who are high performers in the educational, service and mentoring missions of the Department. Departmental tee shirts with the motto, Pharmacology & Toxicology: Advancing Research from Molecule to Man were unveiled.

Research. Dr. Travers was successful in transferring his NIH and VA Merit grants. Additionally, he renewed long-running NIH R01 and VA Merit awards. The laser company Cutera donated a resurfacing laser to the Department to allow Dr. Travers to continue his research studies. Research Assistant Professor Dr. Ji Bihl received an Innovative Basic Research Award (American Diabetes Association). Dr. Richard Simman (part-time faculty) received an Award from Nephews Pharmaceutical Company to study burn dressings. Dr. Javier Leezman received a grant from the Dayton Children’s Hospital. The Department was able to add new space in the Biological Sciences II Building which was renovated for Drs. Xu and Travers’ laboratories. A Pharmacology Translational Unit was established in the Wright State Physicians Building near campus and Faye Hager RN was recruited to direct this clinical and translational trials unit. A melanoma vaccine trial (MAVIS) was initiated and the PTU is in the process of obtaining further pharmaceutical company-sponsored trials.

Education. Under the direction of Terry Oroszi, the Pharmacology & Toxicology Master’s Program continued to recruit and train high numbers of students. In addition, an MD-MS program was initiated and two BSOM medical students enrolled. Ms. Oroszi oversaw expansion of the CBRN program, and with a small loan from the BSOM, has established the CBRN as an on-line and nation-wide course.

Service/Other. The Department initiated a new newsletter whose goal is to highlight the various programs and to keep both the local community and our alumni apprised of the Department. The inaugural issue was in the Fall, and featured former interim chair Dr. Norma Adragna in the “Spotlight Section”. Ms. Terry Oroszi co-edited (along with Dr. Larry James) a book, “Weapons of Mass Psychological Destruction and Those Who Use Them”.

Summary. The Department has emerged from 2015 poised to take advantage of the strong educational enterprise and is developing a strong research portfolio, to include translational human studies. Our plan for 2016 is to continue to strengthen the missions of Education, Research & Service.
# Programs/Divisions

<table>
<thead>
<tr>
<th>Name of Division or Program</th>
<th>Director</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Biophysics</td>
<td>Norma Adragna, Ph.D.</td>
<td>2003-present</td>
</tr>
<tr>
<td>Proteome Analysis Laboratory</td>
<td>David Cool, Ph.D.</td>
<td>2004-present</td>
</tr>
<tr>
<td>Master’s Program</td>
<td>Terry Oroszi, M.S.</td>
<td>2008-present</td>
</tr>
<tr>
<td>Nanotoxicology Research</td>
<td>Saber Hussain, Ph.D.</td>
<td>2010-present</td>
</tr>
<tr>
<td>CBRN Certificate Program</td>
<td>Terry Oroszi, M.S.</td>
<td>2013-present</td>
</tr>
<tr>
<td>Training Program (BIOST)</td>
<td>Khalid Elased, PharmD, Ph.D.</td>
<td>2013-present</td>
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<tr>
<td>Therapeutics Curriculum</td>
<td>Mary Jo Trout, PharmD</td>
<td>2013-present</td>
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<tr>
<td>Training Program</td>
<td>Courtney Sulentic, Ph.D.</td>
<td>2013-present</td>
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<tr>
<td>Preclinical Pharmacology Core</td>
<td>Yanfang Chen, M.D., Ph.D.</td>
<td>2015-present</td>
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<tr>
<td>Pharmacology Translational Unit (PTU)</td>
<td>Jeffrey Travers, M.D., PhD.</td>
<td>2015-present</td>
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</tbody>
</table>

# Fully Affiliated Faculty

<table>
<thead>
<tr>
<th>Name and Academic Position</th>
<th>Clinical Interests</th>
<th>Research Interests</th>
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</thead>
<tbody>
<tr>
<td>Norma Adragna, Ph.D., Professor</td>
<td></td>
<td>Cardiovascular, ion transport, cell signaling, cellular physiology, membrane transport, cancer biology</td>
</tr>
<tr>
<td>Francisco Javier Alvarez-Leefmans, M.D., Ph.D., Professor</td>
<td></td>
<td>Neuroscience, molecular physiology &amp; pharmacology, clinical neurology</td>
</tr>
<tr>
<td>Ji Bihl, M.D., Ph.D., Research Assistant Professor</td>
<td></td>
<td>Cerebrovascular diseases and diabetes, specifically in developing novel predictive</td>
</tr>
</tbody>
</table>
**Name and Academic Position** | **Clinical Interests** | **Research Interests**
--- | --- | ---
Yanfang Chen, M.D., Ph.D., Professor |  | and therapeutic avenues for hemorrhagic stroke and vascular complications of diabetes.
David Cool, Ph.D., Professor | OBGYN- proteomic and inflammatory changes involved in pre-term labor, pre-eclampsia, infertility, vulvodynia | Translational Research- neurodegeneration and neuroinflammation from organophosphate exposure, neuroendocrine and endocrine diseases related to processing and secretion of prohormones
Mauricio Di Fulvio, Ph.D., Assistant Professor |  | Diabetes
Khalid Elased, PharmD, Ph.D., Professor |  | Diabetes, cardiovascular
Saber Hussain, Ph.D., Professor |  | Nanoparticles
Terry Oroszi, M.S., Research Instructor, Graduate Program Director, CBRN Defense Program Director, Co-chair EMDP Advisory Board |  | Translational medicine Group decision making and meeting behaviors
Ravi Sahu, Ph.D., Assistant Professor |  | Cancer Pharmacology
Richard Simman, M.D., Professor | Wound care, plastic surgery | Wound care treatment
Courtney Sulentic, Ph.D., Associate Professor |  | Immunology
Mary Jo Trout, Pharm.D., Assistant Professor |  | Medical training, therapeutics curriculum
Jeffrey Travers, M.D., Ph.D., Chair & Professor | Translational medicine | Skin Inflammation/cancer, Lipid Pharmacology

## Teaching

**Baccalaureate** [any course for a bachelor’s degree]

**Dr. Courtney Sulentic**
- Undergraduate Research Trainees
  - Aubrey Morris, Lab Assistant
  - Gabriel Crabb, BioSTAR Trainee

**Courses**
- M&I 4260 Microbiology and Immunology, Lecturer (17 hrs)
Graduate students, including thesis supervision [master's, doctor's post-doctoral]

**Dr. Norma Adragna**

**Students**

**Thesis Director:**
- Jasser Alzhrani, MS student, 2013-2015, graduated April 2015
- Kranthi K. Chougoni, MS student, 2014-2015
- Praveen Alla, MS student, 2014-present
- Silpika Kovvali, MS student, 2014-2015
- Vamsi Anil Krishnai Chandu, MS student, 2015-present
- Josh Stricker, MS student, 2015
- Nedu C. Ihezurike, MS student, 2015-present
- Sami Alsabri, MS student, summer-fall 2015

**Thesis Co-Director:**
- Chandra Maharjan, MS Student, 2014-present
- Ravina Ashteputre, MS Student, 2014-2015
- Lamai Abdulrahman Alsulaiman, MS student, 2015-2016

**Thesis Committee Member:**
- Langni Liu, MS committee member, 2014-2015
- Arathi Sesha Lakshmi Paluri, BMS student, 2012-present

**Courses**
- PTX 9220 – Effective Scientific Writing: Part 1 & 2, Co-Director, Director respectively

**Dr. F. Javier Alvarez-Leefmans**

- Jeannine Crum, Year 7 BMS PhD student
- Pankay Patyal, MS thesis
- Jacob Adam Vincent, 4th year MD/PhD student, Thesis committee
- Adam Deardorff, BMS PhD thesis advisory, expected graduation 2015
- Pavani Beesetty, BMS PhD program, thesis advisory committee
- Sarah Saad Alsharif, M&I master’s program, thesis advisory, graduated April 2015

**Courses**
- Effective Scientific Writing: Part 1, Course Director
- BMS 8750 Neuroscience & Physiology, (2) lectures
- Effective Scientific Writing: Part 2, Instructor

**Dr. Ji Bihl**

**Courses**
- PTX 8000 Spring Cell Culture, course director
- PTX 8000 Summer Cell Culture, course director
- PTX8000 Fall Cell Culture, course director
- PTX 8000 Spring Journal club, course director
- PTX 7102 Summer Journal club, course director
- PTX 7110 Fall Journal club, course director

**Dr. Yanfang Chen**

- Langni Liu, P&T MS student
- Nomula Mounica, MS student
- Deekshith Vanamala, P&T MS student
- Apri Arnold Daubenspeck, PhD committee member
- Abdelfatah Abou Issa, P&T MS student
- Jinju Wang, BMS PhD student (formally P&T student)
- Xiang Xiao, BMS PhD student (formally P&T student)
- Yue Wang, MD visiting scholar
Dr. David Cool
M.S. Thesis Advisor
Shamili Samohi, MS Advisor, graduated 2015
Ashvin Iyer, MS Advisor, graduated 2015
Mahesh Kodali, MS Advisor, graduated 2015

M.S. Committee Member
Kaulini Burra, P&T committee member, graduated 2015
Pankaj Patyal, P&T committee member, graduated 2015
Abdelmateh Abou Issa, P&T committee member, expected graduation 2016
Walid Mari, P&T committee member, expected graduation 2016
Siham Abdal, P&T committee member, expected graduation 2016

Ph.D. Co-Advisor
Anthony Politio, BMS PhD Co-Advisor, graduated 2015
Prakash Arumagam, BMS PhD Co-Advisor, expected graduation 2016
Ravina Ashtaputre, P&T advisor, expected graduation 2016

Ph.D. Committee Member
Ryan Yoakum, BMS PhD committee member, graduated 2016
David Ellis, BMS PhD committee member, graduated 2015
Jinju Wang, BMS PhD committee member, expected graduation 2016
Brian Stogsdill, BMS PhD committee member, expected graduation 2017
Mahmoud Alghamri, BMS PhD committee member, expected graduation 2016
April Daubenspeck, BMS PhD committee member, expected graduation 2018
Yirong Zhou, BMS PhD committee member, expected graduation 2018

Ming Zhou, MD, OB/GYN Miami Valley Resident Research Fellow
Jason Retzke, MD, OB/GYN Miami Valley Resident Research Fellow
Kari Rudinsky, MD, Fellow
Ziad Hadar, MD, Fellow
Amol Molshe, MD Fellow

Courses
PTX 7020 Spring 2015 Laboratory Management, course director
PTX 7020 Fall 2015 Laboratory Management (online course), course director
PTX 7500 Research Techniques, course director
BMS 805 Intercellular Communication

Dr. Mauricio Di Fulvio
Andrew Snyder, BMS PhD thesis committee
Kavia Annu, MS thesis committee
Kaulini Burra, MS thesis committee

Courses
PTX 7001 DNA Damage & Repair, co-director
PTX 7300 – Control of Cell Cycle, co-director
PTX 7300 – Endocrine Disruption, co-director
PTX 7110 – Journal Club

Dr. Khalid Elased
Laale Alawi, MS Advisor, graduated 2015
Sana Emberesh, MS Advisor, graduated 2015
Brenda Owuor, MS Advisor, graduated 2015
Xiang Xiao, BMS PhD thesis advisory

Courses
PTX 7300 Cellular Molecular Toxicology, Cardiovascular lectures
PTX 7300 Cellular Molecular Toxicology, Obesity & Diabetes lectures
PTX 9220 Scientific Writing 1, co-director
PTX 9220 Scientific Writing 2, co-director
Dr. Saber Hussain
David Ellis, BMS PhD thesis advisory, graduated 2015
Anthony Polito, BMS PhD thesis advisory, graduated 2015
Rose Cooper, P&T MS thesis advisory, graduated 2015

Courses
PTX 8130: NanoMedicine, course director

Terry Oroszi
Leadership advising, P&T MS students:
Eman Alabdrabalnabi
Yusra Andijani
Aiman Khan
Tahani Momenah
Sachchida Subedi
Fahdah Almutairi
Srinivasula Chinnapareddy
Paulet Egbai
Matthew Greene
Nedu Ihezurike
Bala Karri
Sara Kassem
Meenasri Kumbaji
Rebecca Law
Sarah Law
Rajitha Mohtarapu
Ebru Sen
Shriya Sharma
Suhasini Shella
Najib Tabal
Muralikrishna Timmisetty
Amanda Tosun
Marwa Younes
Cheng Zhang

Courses
PTX 9120 Scientific Writing 1 (online), spring 2015
PTX 8000 Advanced Science Writing, summer 2015
PTX 8200 Communications in Science, summer 2015
PTX 9120 Effective Science Writing Part 1 (online), summer 2015
PTX 9120 Effective Science Writing Part 2 (online), summer 2015
PTX 8000 Human Studies Research, summer 2015
PTX 8120 Case Studies for Chemical, Biological, Radiological Defense, summer 2015
PTX 8000 Human Studies Research, fall 2015
PTX 8120 Case Studies for Chemical Biological Radiological Defense, fall 2015
PTX 8210 Applications to Medical Biological Defense, Principles of Toxicology, fall 2015
PTX 9000 Introduction to Research, fall 2015
PTX 9200 Pharmacology Clinical Research (1 & 3 credit), 2015
PTX 9220 Effective Scientific Writing: Part 2 (online)

Dr. Ravi Sahu
Jeremiah Saylae, P&T master’s student
Bishal Marasini, P&T master’s student

Rotations
Kushboo Patel, P&T master’s student
Suhasini Shobana, P&T master’s student
Ebru Sen, P&T master’s student
Dr. Richard Simman
Adelbifatah Issa, MS Advisor, graduated 2015
Walid Mari, MS Advisor, expected graduation 2016

Course
PTX 8080: Wound Healing

Dr. Courtney Sulentic
Graduate Research Trainees:
Andrew Snyder, Biomedical Sciences (BMS) Ph.D.
David Ellis, BMS Ph.D., (co-advisor with Dr. Hussain Saber, WPAFB), defended December 2015
Rebecca Law, Pharm/Tox M.S., non-thesis research project
Nicole Panstingel, Pharm/Tox M.S.
Siham Abdulla, Pharm/Tox M.S.
Maher Alwetheyanni, Microbiology/Immunology M.S.
Zahra Jassim Alfaheeda, Microbiology/Immunology M.S.
Naga Lakshmi Kaulini Burra, Pharm/Tox M.S., defended September 2015
Bassam Kashgari, Microbiology/Immunology M.S., defended August 2015

Graduate Advisory Committees:
Amanda Hanes (BMS representative), BMS, Ph.D.
Sumeet Poudel, BMS, Ph.D.
Kevin Novak, (BMS representative), BMS Ph.D.
Tu Thienn Danh, BMS Ph.D.
Sumeet Poudel, BMS Ph.D.
Anthony Polito, BMS Ph.D. (BMS representative), defended 2015
Todd Lewis, BMS Ph.D. (BMS representative)
Joanna Barthelemy, BMS Ph.D., defended 2015
Shannon Romer, BMS Ph.D., defended 2015
Adam Deardorff, BMS Ph.D. (BMS representative), defended 2015
Dima Sbenaty, Microbiology/Immunology M.S., defended 2015
Kelley Williams, Microbiology/Immunology M.S., defended 2015
Bradley Gregg, Microbiology/Immunology M.S.
Rose Cooper, Pharm/Tox M.S., defended 2015

Courses
ES 7120 Environmental Biology: Genes, Organisms and Ecosystems, Lecturer (1.5 hr)
M&I 7260 Microbiology and Immunology, Lecturer (17 hr)
M&I 7260 Microbiology and Immunology Seminar Course, co-director (28 hr)
PTX 7300 Cellular Pharmacology & Toxicology, Director, Lecturer (16 hr), Faculty Facilitator (38 hr)
BMS 8050 Intercellular Communication, Lecturer (4.5 hr)

Dr. Jeffrey Travers
Nicole Panstingel, MS thesis committee, expected graduation 2016
Sami Alsabri, MS student, expected graduation 2016
Walid Mari, MS thesis committee, expected graduation 2016
Katherine Fahy, MS thesis committee, expected graduation 2017
Xiang Xiao, BMS PhD thesis committee, expected graduation 2016
Prakash Arumugan, BMS PhD thesis committee, expected graduation 2016
Langni Liu, BMS PhD thesis committee, expected graduation 2018
Behzad Sharitak, PhD thesis committee, Indiana University-Purdue University, expected graduation 2016
Olufolakemi Olayia Awe, PhD thesis committee, Indiana University-Purdue University, expected graduation 2016
Jesus Ocana, PhD thesis committee, Indiana University-Purdue University, expected graduation 2016
Jonathan Weyerbacher, M.D., research fellow, Indiana University-Purdue University, 2014-2016
Ann Collier, Dissertation committee, Indiana University-Purdue University, Dept of Pharmacology, 2013-present
Olufolakemi Olayia Awe, Dissertation committee, Indiana University-Purdue University, Dept of Medical Biology, 2011-15
Jasser Ali, MS thesis committee, 2015
James Readler, BMS PhD Dissertation Committee, 2015-
Undergraduate medical education [medical school]

**Dr. Norma Adragna**
We'am Hussain, medical student, 2014-present

**Dr. F. Javier Alvarez-Leefmans**
Lecture on back pain with Dr. M. Rich, 1 lecture

**Dr. David Cool**
SMD 535 Hypersensitivity Lecture 2nd yr SOM, online lecture 3 TBL
SMD 521 CATO Hormone Synthesis 1st yr SOM, 2 hours
SMD 561 Reproduction Teratogens in Preg., 2nd yr SOM, 1 hour

**Dr. Khalid Elased**
SMD 535 Pathobiology & Therapeutics for 2nd year SOM
SMD 553 Digestive course for 2nd year medical students/WrightQ
SMD 580 Staying Alive course for 2nd year medical students/WrightQ

**Dr. Courtney Sulentic**
Principles of Disease, Lecturer (7.5 hr); Engaged Learning Modules - Faculty Facilitator (4.5 hr)
Pathobiology and Therapeutics, Engaged Learning Modules - Faculty Facilitator (5 hr)
Wright Q Facilitator (18 hr)

**Dr. Jeffrey Travers**
Larrilyn Yelton, MD/MS student, research/clinical mentor
Casey Walk, MD/MS student, research/clinical mentor
John Sullenbarger, MD student, clinical mentor

Graduate medical education [residents, fellows]

**Dr. David Cool**
Miami Valley Hospital- Translational Research Training:
OB/GYN Miami Valley Hospital Resident Research Fellowship Program, 2008-2015

Ming Zhou, M.D., Proteomic Research Project. OB/GYN Miami Valley Hospital Resident Research Fellowship Program 2009-2012.

Jason Retzke, M.D., Proteomic Research Project- Jason took the PTX700 Research Techniques course taught by me. Finished PCRs in the summer of 2015.

Ziad Hadar, M.D., Effect of tocolytics on surfactant production and secretion from NCI-HC441 lung cells. Manuscript Accepted 12/2015.

OB/GYN Residents: I began working with Dr. Jerry Yaklic and Dr. Steve Lindheim in OB/GYN and the OB/GYN Residents to develop translational research projects; Polycystic ovary syndrome, Interstitial Cystitis, Vulvodynia, and Endometriosis.

**Dr. Richard Simman**
Ed Glack, MD
Dr. Gabbard, MD

**Dr. Jeffrey Travers**
Nathan Weir, MD/PhD, resident, WSP Dermatology
Danielle Petite, MD, resident, WSP Dermatology
Scarlett Boulous, MD, resident, WSP Dermatology
Keren Weltman, MD, resident, WSP Dermatology
Continuing medical education [grand rounds, seminars]

**Dr. Jeffrey Travers**
Monthly grand rounds, Department of Dermatology

**Other**

**Dr. F. Javier Alvarez-Leefmans**
Judge, poster competition, 7th Annual Medical Student Research Symposium, BSOM

**Dr. Mauricio Di Fulvio**
Reviewer Editor Frontiers in Endocrinology

**Dr. Courtney Sulentic**
Mentor Match program mentor, SOT: Alicia Taylor, PhD, Post-doc at University of California, Berkeley

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. Norma Adragna**

**Dr. Ji Bihl**
AHA Scientist Development Grant (16SDG26420078), PI, 1/1/2016-12/31/2019. ROLE OF ACE2 OVER-EXPRESSING ENDOTHELIAL PROGENITOR CELLS IN CEREBRAL HEMORRHAGE
The major goal of this project is to determine the preventive and therapeutic role of ACE2 over-expressing endothelial progenitor cells (ACE2-EPCs) in hemorrhagic stroke animal model and determine the underlying mechanisms.

**Dr. Yanfang Chen**
NIH RO1 (HL098637); "Balance of Angiotensin II/Angiotensin (1-7): A Target in Ischemic Stroke", 2010-2015, PI, $1,442,822


**Dr. David Cool**
NIH Arlian (PI), Cool (Consultant), 2011-2016, Scabies: Biology, Culture, Host Specificity and Antigens

**Dr. Khalid Elased**
Department of Education P116M100027, 2010-2015, Translational Biomedical Training for Under-represented Minorities, PI, $238,048

American Society of Nephrology, Carl W. Gottschalk Research Scholar Grant.2015-2017, $200,000 "Molecular Imaging of RAS for the Discovery of Novel Biomarkers in Chronic Kidney Disease" Role: Co-Principal Investigator (Grobe, PI)

Total amount of Fund
Dr. Saber Hussain
226136 Research Incentive Fund ($5000) from WSU - to support Ms. Rose Cooper
Procured several in-house grants at my current employment - (US$1M)
Biomolecular Interaction of engineered nanomaterials, Saber Hussain (PI), 2013-2017,
In-house Grant (AFRL/RHDJ), Saber Hussain (PI),

Dr. Ravi Sahu
NIH/NIEHS 7K22ES023850-02, (P.I. Sahu), $487,551,07/2014-06/2017
9 Calendar months effort (6 academic + 3 summer)
Environmental Pro-oxidative Stressors and immunosuppression
The main objectives of this project are to investigate effects of UVB-PAF-R agonists against the immune
enhancing effects of anti-CTLA-4/anti-PD-1 therapy in murine melanoma models, and to determine the impact of
therapeutic doses of UVB (phototherapy) on oxidized PAF-R agonists generation in human subjects.

European Organization for Research and Treatment of Cancer (EORTC) (P.I. Sahu) 08/2015
This is an Early Career Oncologist/Scientist (ECOS) Grant on the development of markers in Cancer Diagnostic.
EORTC partners with the National Cancer Institute (NCI) and American Society of Clinical Oncology (ASCO) in
the selection of the ECOS grant applications. Total 25 grants were awarded to candidates from US/Canada (5) and Europe (20).

Dr. Richard Simman
Effect of Oasis Ultra Tri-Layer Matrix on Stage III and IV trunk pressure wounds treated with Negative Pressure
Wound Therapy (NPWT). Smith & Nephew, Medical Director, Wound Care Program and Surgical Services at
Kindred Hospital Wound Care Program Director, The Oaks of West Kettering, Aug 2014-present, $56,000

Dr. Courtney Sulentic
5R25GM090122, National Institute of general Medical Sciences (08/01/2011-06/30/2016) Biomedical Scholars
Program (BioSTAR), Initiative for Maximizing Student Development (IMSD), Program Director

Dr. Jeffrey Travers
MAVIS Melanoma Vaccine in State IIb, IIC and III Melanoma Patients Polynoma LLC (Travers), 10/01/15 to
9/30/19. The goal of this multicenter double-blinded placebo-controlled Phase III study is to test a polyvalent
melanoma vaccine in high-risk melanoma patients. Our Pharmacology Translational Unit at Wright State
University is one of the sites.

NIH/NHLB R01 HL062996 (Travers), 07/01/1999 - 9/30/2020, 25% effort, $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.

NIH/NIEHS R01 ES020866 (Spandau/Travers-co-PI’s), 09/01/2012 - 5/31/2017, 15% effort, $225,000 direct
costs/year, Mechanisms of photocarcinogenesis in geriatric skin.

The objectives of this project are to define the lasting effects of dermal rejuvenation by dermabrasion or
fractionated laser resurfacing techniques to increase dermal IGF-1 levels and correct the abnormal acute UVB
response in geriatric subjects. IGF-1R signaling pathways that result in keratinocyte senescence will be defined
by creating skin equivalents with keratinocytes expressing dominant-negative and overexpressing P38 MAPK and
p53 proteins. These skin equivalents will be tested in vitro and in vivo for UVB-mediated pro-carcinogenic
responses. This grant will remain at Indiana University and I will subcontract to perform clinical studies.

Basic Science VA Merit Award, 510BX000853, (Travers), 10/01/2010 - 09/30/2019, 20% effort, $146,000 direct
costs/year, Oxidized lipids and UV immunosuppression.

The objective of this study is to define photodynamic therapy-mediated systemic immunosuppression using
murine and human model systems.

Clinical VA Merit Award 1101CX000809 (Travers), 7/01/2014 – 3/31/2017, 20% effort, $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.
R01 AG048946-01A1 (Travers/Spandau-co-PIs), 09/01/2014 – 08/30/2019, 20% effort, 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.

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

Papers in refereed journals

Dr. Norma Adragna

Dr. Ji Bihl


Dr. Yanfang Chen


Dr. David Cool


Dr. Mauricio Di Fulvio


Dr. Khalid Elased


Dr. Saber Hussain


**Terry Oroszi**


Dr. Richard Simman

**Dr. Ravi Sahu**


**Dr. Richard Simman**


Natallia Maroz, M.D.; Samer Mohandes, MD; Halle Field, MD; Zlata Kabakov, MD; Richard Simman, Calciphylaxis In Patients With Preserved Kidney Function., JACCWS , (2015) 6,24-8


Abdelfatah Abou Issa MD;Karen Brow,n RN; David Cool, PhD ; Richard Simman MD (September 26-28, 2015). Effect of Porcine Intestinal Sub-Mucosa Matrix on the Healing Rate of Stage IV trunk Pressure Wounds. SAWC, Wound Healing Society Meeting, Caesars Palace, Las Vegas, Nevada.

Abdelfatah Abou Issa MD;Walid Mari ,MD ; Richard Simman, MD (August 12-15, 2015). Clinical UsageOutcome of Porcine Intestinal Sub-Mucosa, a Case Series. Amputation Prevention Symposium2015, Hilton Chicago, IL.


Abdelfatah Abou Issa MD;Karen Brow,n RN; David Cool, PhD ; Richard Simman MD (August 12-15, 2015).Effect of Porcine Intestinal Sub-Mucosa Matrix on the Healing Rate of Stage IV trunk Pressure Wounds. Amputation Prevention Symposium, 2015, Hilton Chicago, IL.
Effect of Oasis Ultra Tri-Layer Matrix on Stage III and IV trunk pressure wounds treated with Negative Pressure Wound Therapy (NPWT), Smith & Nephew, Medical Director, Wound Care Program and Surgical Services at Kindred Hospital Wound Care Program Director, The Oaks of West Kettering, Aug 2014-present, $56,000

Dr. Courtney Sulentic


Dr. Jeffrey Travers


Sahu RP, Ferracini M, Travers JB. Systemic chemotherapy is modulated by Platelet-activating factor receptor agonists. Mediator of Inflamm. 2015:820543, 2015. PMID: 25922565. PMC4398925

Sahu RP, Derr-Yellin E, Travers JB, Ocana J, Konger R. Epidermal PPARg deficiency in mice acts through TNF-alpha to augment the acute UV photoresponse and to suppress contact hypersensitivity. Submitted for publication 2015

Books, chapters, reviews
Dr. Norma Adragna

Dr. Ji Bihi

Terry Oroszi


Published abstracts

**Dr. Norma Adragna**


Silver nanoparticles alter ion transport and hemoglobin spectrum in human red blood cells Praveen Kumar Alla, Peter K Lauf, Ioana Pavel Sizemore, Arathi Paluri, Marjorie Markopoulos, and Norma C. Adragna. 9th Annual Cleveland State Interdisciplinary Research Conference (CSIRC), Abstract Book, 2015.

Silver nanoparticles alter ion transport and hemoglobin spectrum in human red blood cells Praveen Kumar Alla, Peter K Lauf, Ioana Pavel Sizemore, Arathi Paluri, Marjorie Markopoulos, and Norma C. Adragna. 33rd Mtg, Ohio valley society of Toxicology Abstract Book, 2015.

**Dr. F. Javier Alvarez-Leefmans**
Alvarez-Leefmans, F.J. and Mao S. Higher than Equilibrium Intracellular Cl- Concentration in Dorsal Root Ganglion Neurons of NKCC1 Knockout Mice April 2015 The FASEB Journal vol. 29 no. 1 Supplement 845.22

**Dr. Ji Bihl**

**Dr. David Cool**


**Dr. Khalid Elased**

Sponsor(s): Asia Pacific Congress of Hypertension and The Indonesian Society Of Hypertension.
Dr. Saber Hussain
Total published abstracts: 10 (not listed on report)

Terry Oroszi
Oroszi, T., (2015). Disruptive technology; Don’t get caught with your pants down. Technical Symposium Cincinnati-Dayton Chapter of INFORMS.


Dr. Courtney Sulentic


Kashgari, B. F., Snyder, A., Sulentic, C. E. W.: Determining the role of the AhR in Ig expression and class switch recombination. Toxicological Sciences, the Toxicologist, 144:1141, 2015.


Dr. Jeffrey Travers


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

**Dr. Norma Adragna**


K-Cl Cotransporter 3 (KCC3) and the Control of K and Cell Volume Homeostasis in Double-Alanine Mutant HEK 293 Cells, Norma C. Adragna, Nagendra Ravilla, Kristopher Kahle and Peter K. Lauf, Cell Signaling Group Meeting, Wright State University, Dayton, OH, May 20, 2015.

The Na/K Pump ATPase - Bcl-2 Protein Connection. Peter K Lauf and Norma C. Adragna. 50th Annual Lake Cumberland Biological Transport Group, Lake Cumberland, Jamestown, KY, June 21-24, 2015

Studies on Tuberous Sclerosis Complex Cellular Models Norma. C. Adragna, Jasser Alzhrani, Kristopher Kahle and Peter Lauf, 50th Annual Lake Cumberland Biological Transport Group, Lake Cumberland, Jamestown, KY, June 21-24, 2015


Regulated phosphorylation of the K-Cl cotransporter 3 at dual C-terminal threonines is a potent switch of intracellular potassium content and cell volume homeostasis, Norma C. Adragna, Nagendra Babu Ravilla, Peter K. Lauf, Gulnaz Begum, Arjun R. Khanna, Dandan Sun, and Kristopher T. Kahle, Department of Pharmacology and Toxicology, Boonshoft School of Medicine, Wright State U, Dayton, OH, December 4, 2015.

**Dr. F. Javier Alvarez-Leefmans**

Invited as Seminar Speaker at University of Pittsburgh School of Medicine. This seminar was co-sponsored by the Neurology Department, and the Renal-Electrolyte Division, under the series “Neurology-Renal Grand Rounds Lectures. Visiting Professor Series.” Seminar title: “Cation-chloride cotransporters in choroid plexus epithelial cells: their function in cerebrospinal fluid K+ regulation and secretion”. November 11, 2015.

**Dr. Ji Bihl**


Bihl J. “Endothelial progenitor cells in vascular disease,” Marshall Institute for Interdisciplinary Research, Marshall University, September 15, Huntington, WV

**Dr. Mauricio Di Fulvio**


**Dr. Khalid Elased**

Invited Speaker to the 3rd International Symposium of the Renin Angiotensin System (RAS): Understanding systemic, Intracellular and Tissue RAS. School of Medicine, Universidade Federal de Sao Paulo, Brazil.

Poster presentations at the American Heart Association Annual Meeting.

Poster presentations at the American Diabetes Association Annual Meeting.

Poster presentations at the American Nephrology Association Annual Meeting.

**Dr. Saber Hussain**

Organized- and Speaker: Continuing Education Course, Society of Toxicology: Is Synthetic Biology is future of toxicology. 4 hours, 03/2015

**Terry Oroszi**

Oroszi, T., (2015). Americans’ Participation in Islamic Extremism. 8 Hour workshop, Advanced Technical Intelligence Center (ATIC), Beavercreek, OH.

Oroszi, T., (2015). A new model for collaborative decision making. VA Simulations Center, VAMC Dayton, OH.


**Dr. Richard Simman**


Training to become a wound specialist. First Middle East wound care and Diabetic Limb Salvage Conference. May 3-5, 2015. Le Meridian Hotel, Amman, Jordan.


Close It Or Let It Heal. First Middle East Wound Care and Diabetic Limb Salvage Conference. May 3-5, 2015. Le Meridian Hotel, Amman, Jordan.


“Atypical Ulcers, Diagnosis and Management”. The Amputation Prevention Symposium. August 14, 2015 Hilton Chicago, Chicago, IL.


Co-Conference Director: First Middle East Wound Care and Diabetic Limb Salvage -May 3-5, 2015 Conference. Le Meridian Hotel, Amman, Jordan.

**Dr. Courtney Sulentic**

Participant in Panel Discussions

Work/Life Balance Panel, BioSTAR and STREAMS summer program

Workshop Chair, Organizer and Speaker

What are the Strengths and Weaknesses of Mice as a Model for Humans in Studies of Immunological Effects of Drugs and Chemicals? Society of Toxicology, San Diego, CA, 2015

Sulentic, C. E. W.: Differences in human and mouse transcriptional regulatory regions within the immunoglobulin heavy chain (IGH) and implications in autoimmune diseases

**Student Oral Presentations (trainee presenter from Sulentic lab)**

*Snyder, A., Sulentic, C. E. W.: Determining the function of the immunoglobulin heavy chain 3' regulatory region using CRISPR-mediated genetic editing. Biomedical Sciences Ph.D. Program Research Retreat, Wright State University, Dayton, OH, 2014.


*Kashgari, B., Sulentic, C. E. W.: Determining the role of the aryl hydrocarbon receptor in immunoglobulin expression and class switch recombination. Celebration of Research, Scholarship, and Creative Activities, Wright State University, Dayton, OH, 2015.

*Snyder, A., Sulentic, C. E. W.: Utilizing the CRISPR-Cas9 genetic editing system to study immunoglobulin heavy chain regulation. Celebration of Research, Scholarship, and Creative Activities, Wright State University, Dayton, OH, 2015.


**Student Poster Presentations**


*Kashgari, B. F., Snyder, A., Sulentic, C. E. W.: Determining the role of the AhR in Ig expression and class switch recombination. Toxicological Sciences, the Toxicologist, 144:1141, 2015.


*Abdulla, S., Snyder, A., Sulentic, C. E. W.: Effect of CRISPR-mediated genetic edits of the hs1.2 enhancer on ε IGH expression in U266 cells. Ohio Valley Society of Toxicology, Northern Kentucky University, KY, 2015.


* Snyder, A., Panstingel, N., Abdullah, S., Sulentic, C. E. W.: Reducing the number of hs1.2 invariant sequence repeats in the 3'immunoglobulin heavy chain regulatory region alters Ig expression. Ohio Valley Society of Toxicology, Northern Kentucky University, KY, 2015.


Dr. Jeffrey Travers

Henry Ford Hospital Department of Dermatology, Detroit, MI, "Dermal influences on photocarcinogenesis and how cosmetic therapies can be protective", “Clinical-basic science kodachromes-a day in the clinic with me!”. April, 2015.

Ohio State University Department of Pathology, Columbus, OH, “The Platelet-activating factor system as the effector for environmental and iatrogenic stressors”. July, 2015.


Christian Doppler Laboratory on Biotechnology of Skin Aging, University of Vienna, Vienna Austria. “Platelet-activating Factor System and the Wages of Sin”, November, 2015.

University of California, Davis Department of Dermatology. “Dermal senescence and photocarcinogenesis: a new paradigm for non-melanoma skin cancer” December, 2015.

Consultantships [sponsor activity]

Dr. F. Javier Alvarez-Leefmans

Work with Dr. Amol Soin (Chairman, The Ohio Pain Clinic, and Medical Director of the Kettering Innovation Center) on an IP application. The aim is to develop a translational collaboration with Dr. A. Soin, preparing patents and raising funds from private organizations. The aims of this project are: 1) evaluation of pharmacological targets of non-opioid analgesics and/or anti-inflammatory substances. 2) Development of new/improved analgesics/anti-inflammatories/antipruritic drugs, for spinal and peripheral use/administration/delivery, having central and peripheral actions.

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

Dr. Norma Adragna

Editorial Board: Cellular Physiology & Biochemistry, Karger. Switzerland.

Regular reviewer for > 20 scientific journal in my area of expertise.

Dr. F. Javier Alvarez-Leefmans


Ad hoc reviewer for the following journals: the British Journal of Pharmacology, Journal of

Dr. Ji Bihl

Reviewer for journals: Cellular and Molecular Neurobiology (8), Toxicology Science (2), Stem Cell International (1), Life Science (1), Medical Science Monitor (1)

Dr. Yanfang Chen

Guest Editor, Stem Cell International
Editorial board: American Journal of Cardiovascular Disease
Editorial board: CNS: Neurosciences and Therapeutics
Editorial board: World Journal of Hypertension

Dr. David Cool
2015 NIH CounterAct Study Section Member Molecular, Cellular & Developmental Neurosciences Integrated Review Group. U01 Study Section Reviewer (03/12/2015).
2014- Present- Editorial Board Interdisciplinary Toxicology
2012- Present- Editorial Board Journal of Environmental Immunological Toxicology
Peer Reviewer for 2 manuscripts to: J. Med. Res. Archives
Peer Reviewer for 1 manuscript to: Life Sciences

Dr. Mauricio Di Fulvio
Grant reviewer for the American Heart Association (AHA) (1) and reviewed 5 papers (American Journal of Physiology, PLoS One, Diabetes, Diabetology and Metabolic Syndrome)
Work was part of the Front page cover in the December issue of the Journal of Endocrinology

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
Toxicological Sciences (ASSOCIATE EDITOR)
2009-2012: Nanotoxicology (Editorial Member)
2015-todate: Journal: NANOIMPACT, Editorial position

Professional Memberships and Affiliations
Italian Society of Nanotoxicology
Society of Toxicology
Association of Government Toxicologists

Reviewer For Journals
2007-present Reviewer, Toxicological Sciences
2005-present Reviewer, Toxicology Letters
2007-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
2008-present Reviewer, Langmuir
2008-present Reviewer, Nature Nanotechnology
2006-present Reviewer, Carbon
2008-present Reviewer, Journal of the American Chemical Society
2008-present  Reviewer, Advanced Materials, Small
2010-present  Reviewer, PNAS

**Honors and Awards**
2015- 711 Human Performance Wing- international team award

**Dr. Ravi Sahu**
Editor for Journal of Natural Products and Biomedical Research (JNPBR), Journal of Heavy Metal and Chelation Therapy, Annals of Clinical Pathology and Insight Medical Publishing Journal.
Review Editor: Frontiers in Non-coding RNA
Associate Editor: International Journal of Forensic Science & Pathology
Editorial Board Member and/or adhoc Reviewer for over 40 scientific journals.
Travel Award: 2nd International Conference on “The New Era of Antibody Research and Therapy”

**Dr. Courtney Sulentic**
Distinguished Service Award, Ohio Valley Society of Toxicology
Manuscript highlighted in Toxicological Sciences, Salisbury and Sulentic, “The AhR and NF-κB/Rel Proteins Mediate the Inhibitory Effect of 2,3,7,8-Tetrachlorodibenzo-p-dioxin on the 3’Immunoglobulin Heavy chain Regulatory Region”
Faculty Promotion External Reviewer for Dr. Venkatesh Hegde, University of South Carolina

**Grant Review Panels**
National Institute of Environmental Health Sciences (NIEHS), Special Emphasis Panel ZES1LWJ-K (R1) for R13/U13 Conference Grants
National Sciences and Engineering Research Council of Canada
University of Cincinnati, Center for Environmental Genetics Pilot Project Grant Review

**Dr. Jeffrey Travers**
Journal Reviewer:
American Journal of Pathology
American Journal of Clinical Dermatology
Archives of Dermatological Research
Archives of Biochemistry & Biophysics
Archives of Dermatology
BMC Pulmonary Medicine
BMC Research Notes
British Journal of Dermatology
Journal Reviewer (continued):
Cancer Microenvironment
Cell Proliferation
Cellular Microbiology
Clinical, Cosmetic and Investigational Dermatology
Colloids and Surfaces B: Biointerfaces
Drug Design, Development and Therapy
European Journal of Cancer
Experimental Dermatology
Free Radical Biology and Experimental Medicine
Human Immunology
Immunology
Inflammation Research
International Journal of Immunopharmacology
IUBMB Life
Journal of American Academy of Dermatology
Journal of Biological Chemistry
Journal of Clinical Investigation
Journal of Dermatological Science
Journal of Experimental Medicine
Journal of Immunology
Journal of Inflammation Research
Journal of Investigative Dermatology
Journal of Leukocyte Biology
Journal of Lipid Research
Journal of Pediatrics
Laboratory Investigations
Life Sciences
Marine Drugs
Nature
Oncotarget
Pediatric Health, Medicine and Therapeutics
PLOS-one
Photochemistry and Photobiology
Prostaglandins, Leukotrienes and Essential Fatty Acids
Scientific Reports
Thrombosis Research.
Translational Research
World Journal of Pediatrics
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)
Summary of Service Activities

Student advising

Dr. Adragna
Neelima Sharma, BMS student, graduated, June 2014, working on publications
Jasser Alzhrani, MS student, 2013-2015, graduated April 2015
Kranthi K. Chougoni, MS student, 2014-2015
Praveen Alla, MS student, 2014-present
Silpika Kovvali, MS student, 2014-2015
Vamsi Anil Krishnai Chandu, MS student 2015-present
Josh Stricker, MS student 2014-present
Nedu Ihezurika, MS student 2015-present
Lamai Abdurahman Alsulaiman, MS student, 2015-2016
Praveen Alla, MS student, 2014-present
Silpika Kovvali, MS student, 2014-2015
Vamsi Anil Krishnai Chandu, MS student 2015-present
Josh Stricker, MS student 2014-present
Nedu Ihezurika, MS student 2015-present
Lamai Abdurahman Alsulaiman, MS student, 2015-2016
Sami Alsabri, MS, 2015
Chandra Maharjan, MS Student, 2014-present
Ravina Ashtaputre, MS Student, 2014-2015
Tariq Alqahtani, MS student, graduated 2015
Langni Liu, MS committee member, 2014-2015.
Arathi Sesha Lakshmi Paluri, BMS student, 2012-present.
Britney Caskey, MS student, Spring 2015

Dr. F. Javier Alvarez-Leefmans
Besides investing considerable time in advising the students in my lab, I advised on a regular basis all students in which I served as Member of their Thesis Committee (in prior section).

Dr. Ji Bihl
Abdelfatah S. Abou Issa, master student, thesis committee, 2013-2015
Ravina M. Ashtaputre, MS Student, thesis committee, 2014-2016
Sayali Dharmadhikari, MS Student, thesis committee, 2014-2016

Dr. Yanfang Chen
Langni Liu, P&T MS student
Nomula Mounica, MS student
Deekshith Vanamala, P&T MS student
Apri Arnold Daubenspeck, PhD committee member
Abdelfatah Abou Issa, P&T MS student
Jinju Wang, BMS PhD student (formally P&T student)
Xiang Xiao, BMS PhD student (formally P&T student)
Yue Wang, MD visiting scholar

Dr. David Cool
Shamili Sammohi, P&T M.S. Advisor, Grad- 2015
Ashvin Iyer, P&T M.S., Advisor, Grad- 2015
Mahesh C. Kodali, P&T M.S. Advisor, Grad- 2015
Kaulini Burra, P&T M.S. Committee Member, Grad- 2015
Pankaj Patyal, P&T M.S. Committee Member, Grad- 2015
Abdelfateh Abou Issa, P&T M.S. Committee Member, Proj- 2016
Walid Mari, P&T M.S. Committee Member, Proj- 2016
Ravina Ashtaputre, P&T M.S. Advisor, Proj- 2016
Siham Abdul, P&T M.S. Committee Member, Proj- 2016
Ryan Yoakum BMS Ph.D. Committee Member (BMB), Grad- 2016
David Ellis, BMS Ph.D. Committee Member (P&T), Grad- 2015
Prakash Arumagam, BMS Ph.D. Co-Advisor (NCBP), Proj- 2016
Jinju Wang, BMS Ph.D. Co-Advisor (P&T), Proj- 2016
Anthony Polito, BMS Ph.D. Co-Advisor (P&T), Grad- 2015
Brian Stodgill, BMS Ph.D. Committee Member (Bio), Proj- 2017
Mahmoud Alghamri, BMS Ph.D. Committee Member (Bio), Proj- 2016
April Daubenspeck, BMS Ph.D. Committee Member (NCBP), Proj- 2018
Yirong Zhou, BMS Ph.D. Committee Member (P&T), Proj- 2018

Dr. Mauricio Di Fulvio
Andrew Snyder, BMS PhD, thesis committee member/co-advisor
Kavia Annu, PharmD. MS PTX WSU
Kaulini Burra, PharmD. MS PTX WSU

Dr. Khalid Elased
Laale Alawi, MS Advisor, graduated 2015
Sana Emberesh, MS Advisor, graduated 2015
Brenda Owuor, MS Advisor, graduated 2015
Xiang Xiao, BMS PhD thesis advisory

Dr. Saber Hussain
David Ellis, BMS PhD thesis supervision
Anthony Polito, BMS PhD thesis supervision
Rose Cooper, MS thesis

Terry Oroszi
Leadership advising, P&T MS students:
Eman Alabdrabalnabi
Yusra Andijani
Aiman Khan
Tahani Momenah
Sachchida Subedi
Fahdah Almutairi
Srinivasula Chinnapareddy
Paulet Egbai
Matthew Greene
Nedu Ihezurike
Bala Karri
Sara Kassem
Meenasri Kumbaji
Rebecca Law
Sarah Law
Rajitha Motharapu
Ebru Sen
Shriya Sharma
Suhasini Shella
Najib Tabal
Muralikrishna Timmisetty
Amanda Tosun
Marwa Younes
Cheng Zhang

Dr. Ravi Sahu
Jeremiah Saylae, P&T master's student
Bishal Marasini, P&T master's student
Kushboo Patel, P&T master's student
Suhasini Shobana, P&T master's student
Ebru Sen, P&T master's student

Dr. Richard Simman
Adbelfatah Issa, MS Advisor, graduated 2015
Walid Mari, MS Advisor, expected graduation 2016
Nick Hess, Graduate Medical Resident
Nick Gould, Graduate Medical Resident
Dr. Courtney Sulentic

Graduate Research Trainees:
Andrew Snyder, Biomedical Sciences (BMS) Ph.D.
David Ellis, BMS Ph.D., (co-advisor with Dr. Hussain Saber, WPAFB), defended December 2015
Rebecca Law, Pharm/Tox M.S., non-thesis research project
Nicole Panstingel, Pharm/Tox M.S.
Siham Abdulla, Pharm/Tox M.S.
Maher Alwethaynani, Microbiology/Immunology M.S.
Zahra Jassim Alfhaeeds, Microbiology/Immunology M.S.
Naga Lakshmi Kaulini Burra, Pharm/Tox M.S., defended September 2015
Bassam Kashgari, Microbiology/Immunology M.S., defended August 2015

Graduate Advisory Committees:
Amanda Hanes (BMS representative), BMS, Ph.D.
Sumeet Poudel, BMS, Ph.D.
Kevin Novak, (BMS representative), BMS Ph.D.
Tu Thien Danh, BMS Ph.D.
Sumeet Poudel, BMS Ph.D.
Anthony Polito, BMS Ph.D. (BMS representative), defended 2015
Todd Lewis, BMS Ph.D. (BMS representative)
Joanna Barthelemy, BMS Ph.D., defended 2015
Shannon Romer, BMS Ph.D., defended 2015
Adam Deardorff, BMS Ph.D. (BMS representative), defended 2015
Dina Sbenaty, Microbiology/Immunology M.S., defended 2015
Kelley Williams, Microbiology/Immunology M.S., defended 2015
Bradley Gregg, Microbiology/Immunology M.S.
Rose Cooper, Pharm/Tox M.S., defended 2015

Dr. Jeffrey Travers

Nicole Panstingel, MS thesis committee, expected graduation 2016
Sami Alsabri, MS student, expected graduation 2016
Walid Mari, MS thesis committee, expected graduation 2016
Katherine Fahy, MS thesis committee, expected graduation 2017
Xiang Xiao, BMS PhD thesis committee, expected graduation 2016
Prakash Arumugan, BMS PhD thesis committee, expected graduation 2016
Langni Liu, BMS PhD thesis committee, expected graduation 2018
Behzad Sharitak, PhD thesis committee, Indiana University-Purdue University, expected graduation 2016
Olufolakemi Olaiya Awe, PhD thesis committee, Indiana University-Purdue University, expected graduation 2016
Jesus Ocana, PhD thesis committee, Indiana University-Purdue University, expected graduation 2016
Jonathan Weyerbacher, M.D., research fellow, Indiana University-Purdue University, 2014-2016
Ann Collier, Dissertation committee, Indiana University-Purdue University, Dept of Pharmacology, 2013-present
Olufolakemi Olaiya Awe, Dissertation committee, Indiana University-Purdue University, Dept of Medical Biology, 2011-15
Jasser Ali, MS thesis committee, 2015
James Readler, BMS PhD Dissertation Committee, 2015-

Committee membership/officer [indicate if committee chair]

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

Dr. Norma Adragna
Chair, Ad hoc space committee, 2014-2015
Interviewing of most chair candidates for department of BSOM, 2013-Jan 2015
Morris Symposium, organizing committee member, 2014-2015

Dr. F Javier Alvarez-Leefmans
Member of the Pharmacology & Toxicology Faculty Affairs and Development Committee

Reelected Faculty Senator representing the Boonshoft School of Medicine Constituency for 2015-2017 Academic years. Term expires at the end of Spring Semester 2017.
Member of the Research Committee for the Office of Research Affairs at the Boonshoft School of Medicine. Elected 2015-2017.

Member Pharm & Tox MS Pharmacology & Toxicology Review Committee.

**Dr. David Cool**
- Pediatric Dept Chair Search Committee, 2015
- Faculty Promotion and Advancement Committee (FPAC), 2014-2016
- Translational Research Grant Reviewer- ad hoc, 2014- present
- Judge- Medical Student Research Symposium 2014- present

**Pharmacology & Toxicology**
- Workload Equity & Merit Committee, 2015- present
- Comprehensive MS Program Review Committee, 2015- present
- MS Program Policies Committee, 2014- present
- Faculty Affairs and Development Committee, 5/2013-2015
- Acting Chair when Dr. Adragna is traveling, 4/19/13-02/2015
- Director- Proteome Analysis Laboratory, 2004- 2015
- Faculty Affairs Development Committee, 2005- present

**BioMedical Sciences Program (BMS)**
- Admissions Committee, 2015- present
- Integrative Toxicology Track, 2015- present
- Nominating Committee, 2013-2015

**Dr. Mauricio Di Fulvio**
- Students Admission's Committee, Pharmacology & Toxicology, BSOM
- Scholarship Committee, Pharmacology & Toxicology, BSOM
- Nomination Committee, BMS Program

**Dr. Khalid Elased**
- Member, Executive Leadership Team for Dayton Heart Ball, American Heart Association Campaign

**Dr. Ravi Sahu**
- Pharmacology & Toxicology Scholarship Committee
- Pharmacology & Toxicology Admissions Committee

**Dr. Courtney Sulentic**
- Research Committee, elected member, BSOM, 2014-2016
- Faculty Curriculum Committee, BSOM, 2013-2016
  - Curriculum Development, Foundations of Clinical Medicine Subcommittee
- LCME re-accreditation subcommittee 4, Educational resources and infrastructure and Curricular content, 2015-2016
- Executive Committee, elected member, BSOM, 2014-2015
- Pathobiology and Therapeutics Steering Committee, BSOM
- Principles of Disease Steering Committee, BSOM
- Director of Seminar Series for the Department of Pharm/Tox
- Faculty Affairs and Development Committee (FADC), Pharm/Tox

Member of the Neuroimmunology Research group

**Dr. Jeffrey Travers**
- WSU Executive Committee, 2015-present
- Dean’s Research Chairs Committee, 2015-present
- LCME Curriculum Committee, 2015-present
- Academy of Medicine Board of Directors, 2015-present
Dr. Norma Adragna
Pharmacology and Toxicology Faculty Affairs and Development Committee 2015-present, Chair
Pharmacology and Toxicology Scholarships committee, 2015-present
Women in Sciences Giving Circle Faculty Awards Committee, 2015-present

Dr. F. Javier Alvarez-Leefmans
Alternate Member. Laboratory Animal Care and Use Committee (LACUC)
Member of the IACUC appointed by the Department of Veterans Affairs. Term 01/15/15 through 12/31/17.
Member Course Design Team for developing an Undergraduate Neuroscience Major Program. This entailed active participation in 1hr weekly meetings with the other members of the team.
Member of the Biomedical Sciences PhD Program Admissions Committee. Elected for two years of service (2014-2016).

Dr. Yanfang Chen
Master’s Program Scholarship Committee
Master’s Program Admissions Committee

Dr. David Cool
Faculty Senate Pre-requisite Check Committee, 2015

Dr. Ravi Sahu
Institutional Animal Care and Use Committee (IACUC)
Institutional Biosafety Committee (IBC)

Dr. Courtney Sulentic
BioSTAR and STREAMS Career Panel Discussion, Panelist
Women’s Peer Mentoring Group, supported by the NSF-funded LEADER Program at WSU
BMS Admissions Committee, 2013-2015
Radiation Safety Committee, 2005-present; Chair, 2013-present

Dr. Jeffrey Travers
Academic Policies Committee, 2015-present

Wright State Physicians

Dr. Jeffrey Travers
Dermatology clinical practice, WSU Department of Dermatology

Hospital or affiliated institution [name]

Dr. F. Javier Alvarez-Leefmans
Jumpstarted a collaboration with the Neurology Department at Dayton Children’s Hospital, with Dr. Robert Lober and at WSU Neuroscience Engineering Collaboration (NEC) with N. H. Kashou PhD, Director Image Analysis Lab, Functional Near-Infrared Spectroscopy Lab. Wright State University. Aim: MRI and microscopy image analyses of NKCC1 KO mice. Hypothesis: NKCC1 controls the cell water volume of choroid plexus epithelial cells and determines secretion of CSF. Significance: NKCC1 is target of compounds that can be used in the control of CSF secretion in idiopathic intracranial hypertension and hydrocephalus.
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. Jeffrey Travers
Indiana University Hospital, Indianapolis, IN 1995-2015
Wishard Memorial Hospital, Indianapolis, IN 1995-2015
Roudebush VA Hospital, Indianapolis, IN 1995-2015
Dayton VA Medical Center, Dayton, Ohio 2015-

Medical Licensure:
Indiana, 1995-
Ohio, 2015-

Board Certification:
Dermatology, 1995-, Recertification, 2015

University/Hospital Activities:
Indiana University Medical Center
  Medical Scientist (M.D./Ph.D.) Program Committee 1997-2015
  -Executive Committee 2001-2015
  IU School of Medicine Scientific Advisory Council 2009-2015

State

National
Dr. Norma Adragna
Chair Emeritus, Lake Cumberland Biological Transport Group, 2014-2015

Dr. Yanfang Chen
Study Section, NASA Research Committee
Abstract grader for Annual Scientific Conference of American Heart Association
Oversea Reviewer, Division of Materia Medica and Pharmacology, National Natural Science Foundation of China (NSFC)

Dr. Mauricio Di Fulvio
Basic cell genetics and epigenetics (GE) 3 Peer Review Study Group, American Heart Association (AHA)

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. Represented WSU at the USP Convention in 2015 at Washington, DC.

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)

**Dr. Ravi Sahu**

Manuscript reviews and editorial services of various national and international scientific journals.

**Dr. Courtney Sulentic**

Undergraduate Program Strategy Group, SOT

Mentor Match program organizer, facilitator and mentor, SOT

  Alicia Taylor, PhD, Post-doc at University of California, Berkeley

**Dr. Jeffrey Travers**

Professional Societies:

- American Society for Clinical Investigation (ASCI), 2007-present
- IU School of Medicine ASCI representative, 2011-15
- American Society for Biochemistry and Molecular Biology, 2003-present
- Alpha Omega Alpha Medical Honor Society, 1990-present
- American Academy of Dermatology, 1996-present
  - Member, AAD Council on Science and Research, 2011-2015
- Indiana Academy of Dermatology, 1996-2015
- Sigma Xi, 1990-present
- Society for Investigative Dermatology, 1995-present
- American Dermatological Association, 2011-present

**Other**

**Dr. Norma Adragna**

Pharmacology and Toxicology Interim Chair, January 1st-January 31st, 2015

Member of 10 Scientific Societies.

Reviewer of > 20 Scientific Journals.

Development of new field of research with the aim to attract external funding.

Preparing to develop new courses in my field of expertise, old and newly acquired, with the purpose to increase the student pool, increase revenue and contribute to innovation.

**Dr. Courtney Sulentic**

Invited Expert, Colgate-Palmolive Luncheon, SOT Annual Meeting

Poster Session Chair, SOT Annual Meeting

Ad-hoc reviewer for several journals
Dr. Jeffrey Travers
Mentor of NIH K22 Award: Environmental Pro-oxidative Stressors and Immunosuppression, Sahu, Ravi (2014-17).

National Institutes of Health Review Panels
NIH/NIAMS Loan Repayment Grant Review, 4/2016
Arthritis Connective Tissue, and Skin (ACTS) permanent member 2013-2017
NIAMS SEP (chair) 11-2015

Veteran’s Administration Review Panels
VA Oncology E Review Panel (chair) 12-2014, 6-2015, 12-2015

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

Honors and awards [Faculty or staff]
Dr. Jeffrey Travers
American Society for Clinical Investigation, 2007-
American Dermatology Association, 2011-
External Advisor, Christian Doppler Laboratory on Biotechnology of Skin Aging, Vienna Austria, 2013-

Hosted events [CME, etc.]
Other information

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

Dr. F. Javier Alvarez-Leefmans
Co-organized a seminar with the department of Biological Sciences for the visit of Dr. Ernest Wright, Department of Physiology, David Geffen School of Medicine UCLA.

Dr. Ji Bihl
Submitted grants:
(1) ADA Innovative Basic Science, PI, 2016-2019, “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.

(2) NIH R21, PI, 2016-2018, “MICROVESICLES AS A NOVEL TRANSMITTER FOR UVB-INDUCED BIOACTIVE PROUCTS”, 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.

(3) NIH RO1, Co-PI, 2015-2020, “BALANCE OF ANGIOTENSIN II/ANGIOTENSIN (1-7): A TARGET IN ISCHEMIC STROKE”, The major goals of this project are to investigate the role of Angiotensin II/Angiotensin (1-7) balance in ischemic stroke and examine the underlying mechanisms related to microvesicles.

Submitted papers:


Served as the committee of the National Post-doctoral Association (NPA) for the Workshops & Poster session. I reviewed all the submitted proposals and abstracts. I attended the monthly tele-conference for helping organizing the 2016 Annual NPA meeting.

Served as the president of WSU Post-doctoral Association (PDA) which is a society for post-docs, late year Ph.D. students, research staff, and early stage faculty. I recruited new members and updated the PDA list by contacting Department chairs and Human resources. I sent out the job, grant, and conference information/opportunities and organized events for WSU post-docs.

Dr. David Cool
Professional Societies:
Am. Soc. for Pharmacology & Therapeutics (ASPET), 2014- present
Association of Biomolecular Research Facilities (ABRF), 2012- present
American Society for Mass Spectrometry (ASMS), 2007-present
Collaborative Research- Ongoing in 2015:
Dr. Ji Chen-Bihl P&T Dept. Microvesicles and stroke, 2014- present
Dr. John Bini & Dr. Steve Burdette, MVH. Dept. Surgery, Aerosolized Antibiotics in the Treatment of Ventilator Associated Pneumonia, 2014-present
Dr. Richard Simman, P&T Dept, Comparison of wound healing using OASIS and vacuum, 2014-present
Dr. Steve Lindheim, OB/GYN Female Reproductive Health Research, 2014 - present
Dr. Jerry Yaklic, OB/GYN Interstitial Cystitis, Endometriosis and Vulvodynia- Resident Research Projects, 2013-present
Dr. Gary Ventolini, OB/GYN Texas. Identifying Biomarkers of Vulvodynia.
Dr Lucy Wrenshall- (NCBP) Identification of multimers of IL2.
Dr. Matthew Peterson (Lifespan) Exercise and diet.
Dr James Olson- (Emerg. Med) Biomarkers of Stroke damage.
Dr Miryoung Lee- (Lifespan) Analysis of biomarkers of dieting
Dr Marge Morgan/Dr Larry Arlian- (Biology) House Dust Mite Proteins
Dr Greg Boivin- (LAR) Glycosylation of tendon proteins in diabetes
Dr Yanfang Chen- (P&T) Identification of proteins in microvesicles
Dr Courtney Sulentic- (P&T) Identification of proteins associated with Ikb.

Dr. Mauricio Di Fulvio
Education: I attended the Foundation for Advanced Education in the Sciences (FAES) TRAC56 RNA-Seq workshop. This week long workshop was held at WSU and was sponsored by NIH.

Student advising: I have been advising, teaching, guiding and directly performing experiments for and with students from different laboratories of the Department of Pharmacology and Toxicology and other departments as well. These experiments are related to molecular techniques such as PCR, RT-PCR, cloning, sub-cloning, nucleic acid purification, sequencing, cell culture for transfection of plasmids, immunohistochemistry, plasma hormone determination, and dynamic tests of glucose homeostasis in mice (glucose, insulin, alanine and pyruvate tolerance tests). I have also been directly teaching them the use of bioinformatic tools for restriction enzyme digestion analysis, DNA primer design, nucleotide alignments and searching in molecular databases (NCBI, GenBank, etc).

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

Reviewer of the abstracts for the American Heart Association, High Blood Pressure Council Annual Meeting at Washington DC, September, 2015.

Dr. Saber Hussain
Defines, leads, and manages multiple branch Nanotoxicology and Nanobioeffects technical activities, programs and personnel in an independent manner.

Supervise and manage 15-member team—DoD pioneers in nanotoxicology (noted through publications) and research

Plan to consider for 2 MS students from Pharm/Tox. Currently one MS Student (Ms Nicole Panstinge) is working in my lab as lab rotation. Collaborative project is under discussion in collaboration with Dr Jeffrey Travers-

Long term plan to assist Pharm/tox to establish area of expertise as center of excellence in nanobio/nanomedicine that provide great opportunities for students and young faculty.

Establish collaboration between AFRL and WSU through different programs

Dr. Richard Simman

Director of Back to Basic Wound Care Course. The Amputation Prevention Symposium, Chicago, Hilton

Co-Conference Director: First Middle East Wound Care and Diabetic Limb Salvage, Amman, Jordan.

Dr. Courtney Sulentic
I continue to be a very active mentor to my students and consistently strive to facilitate career development opportunities as well as exposure to peers and professionals by facilitating attendance to local and national scientific meetings as evidenced by the number of student presentations highlighted above. In addition to devoting much time to mentoring and teaching, I have also focused the activities in my lab on finalizing experiments and writing and submitting manuscripts for publication. To that end we published three manuscripts in 2015. We have completed experiments for three more papers and are actively preparing these manuscripts for submission. Additionally, through collaboration with Dr. Koles (Pathology, BSOM) and Dr. Saxe (BSOM and Digestive Care), we have analyzed samples collected from Celiac patients for a clinical study directly related to my research goals and have completed the statistical analysis and are in the process of preparing a manuscript based on this work. In addition to the above efforts, my involvement in professional societies, university committees, academic teaching and student mentoring has remained steady.

My goals for 2016 are to focus more of my effort to my research program though I am finding this difficult due to increased involvement in BSOM teaching. I submitted several small and large grants in 2015 and utilized the writing expertise of Lillian Pubols (supported by BSOM). Unfortunately, these grants were not funded; submission of a revised R21 collaborative grant with Dr. Travers received a fundable score. I plan to revise my R01 grant for resubmission this summer. I also continue to direct the NIH BioSTAR grant but unfortunately this grant is independent of my own research efforts and is focused on providing research opportunities for Wright State undergraduate students. Besides submitting manuscripts and revised grants, I will continue my efforts to expand my grant opportunities including collaborative grant opportunities. To this end I have initiated collaborations with experts outside of WSU who are willing to contribute technical and genetic expertise. I am also working on identifying common research goals and potential collaborative activities with other faculty within the Pharm/Tox department; and I will maintain my long-standing collaboration with Saber Hussain from Wright Patterson Airforce Base (we have recently published two papers together) and my clinical collaborations with Paul Koles (BSOM) and Jon Saxe (BSOM and Digestive Care). Additionally, I am looking to collaborate with other physicians at BSOM and have attended the Linking Clinicians and Basic Scientists meetings initiated through BSOM Office of Research to make more connections with clinicians.
Dr. Jeffrey Travers

PENDING:

Samsung Inc. (Travers PI for subcontract; Young Kim is PI at Purdue)
Mesoscopic Bioimager for Optical Diagnosis, 03/01/2016 – 12/31/2016, 10% effort, $40,000 total costs
The objective of these studies sponsored by Samsung are to build and test a mesoscopic bioimager on human skin. My role is to conduct the clinical studies.

R21 AR070010-01A1 (Travers-Sulentic co-PIs), 4/01/2016 – 08/30/2018, 10% effort, $125-150,000 direct costs/year, Photodynamic Therapy-Induced Immune Modulation: Mechanisms and Influence on Therapeutic Efficacy. The objective of this study is to test the immune effects of PDT in human subjects. This application received an 8% score (below 12% payline) and thus should be funded.

Journal Reviewer:
American Journal of Pathology
American Journal of Clinical Dermatology
Archives of Dermatological Research
Archives of Biochemistry & Biophysics
Archives of Dermatology
BMC Pulmonary Medicine
BMC Research Notes
British Journal of Dermatology
Journal Reviewer (continued):

Cancer Microenvironment
Cell Proliferation
Cellular Microbiology
Clinical, Cosmetic and Investigational Dermatology
Colloids and Surfaces B: Biointerfaces
Drug Design, Development and Therapy
European Journal of Cancer
Experimental Dermatology
Free Radical Biology and Experimental Medicine
Human Immunology
Immunology
Inflammation Research
International Journal of Immunopharmacology
IUBMB Life
Journal of American Academy of Dermatology
Journal of Biological Chemistry
Journal of Clinical Investigation
Journal of Dermatological Science
Journal of Experimental Medicine
Journal of Immunology
Journal of Inflammation Research
Journal of Investigative Dermatology
Journal of Leukocyte Biology
Journal of Lipid Research
Journal of Pediatrics
Laboratory Investigations
Life Sciences
Marine Drugs
Nature
Oncotarget
Pediatric Health, Medicine and Therapeutics
PLOS-one
Photochemistry and Photobiology
Prostaglandins, Leukotrienes and Essential Fatty Acids
Scientific Reports
Thrombosis Research.
Translational Research
World Journal of Pediatrics

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-)