#### Jui-Hung Jimmy Yen, Ph.D. Associate Professor of Microbiology and Immunology Indiana University School of Medicine 2101 E. Coliseum Blvd., MEC208 Fort Wayne, IN 46805 TEL: 260-257-6844

#### **Education**

**Ph.D., Immunology, 2007** Rutgers University, NJ

# M.S., Immunology, 2003

Rutgers University, NJ

# B.S., Microbiology, 1998

Soochow University, Taiwan

# **Professional Employments**

Associate Professor with Tenure 2020 - present

#### Research Director - Indiana University School of Medicine - Fort Wayne

Indiana University Fort Wayne Representative - Council of Associate Deans for Research, IUPUI Statewide Course Co-Director - Host Defense, Indiana University School of Medicine

- Department of Microbiology and Immunology, Indiana University School of Medicine, IN
- Study neuroinflammation in the disease of ischemic stroke, multiple sclerosis, and Alzheimer's disease
- Investigate the protective effect of IFNβ in ischemic stroke
- Investigate the role of IRG1 in immunometabolism in the context of neuroinflammation
- Investigate the impact of minor stroke on cerebral amyloid angiopathy and Alzheimer's disease
- Investigate molecular mechanisms underlying detrimental effects of hyperglycemia in diabetic stroke
- Course co-director and site director of Host Defense (the course covers Immunology, Bacteriology and Virology)
- Course director of IU School of Medicine Medical Research Elective

# Assistant Professor 2013 - 2020

# Department of Microbiology and Immunology, Indiana University School of Medicine, IN

- Studied immune-mediated CNS inflammation in the disease of ischemic stroke and multiple sclerosis
- Investigated anti-inflammation and neuroprotection of Nrf2 pathway in ischemic stroke and MS
- Investigated the role of IRG1 in immunometabolism in the context of neuroinflammation
- Investigated molecular mechanisms underlying detrimental effects of hyperglycemia in diabetic stroke
- Site director of Host Defense course
- Course director of Medical Microbiology and Immunology

# Associate Scientist 2009 - 2012

# Department of Microbiology and Immunology, Temple University School of Medicine, PA

- Investigated the molecular mechanisms involved in the effects of IFNβ in models of multiple sclerosis, experimental autoimmune encephalomyelitis (EAE)
- Investigated molecular mechanisms of beneficial effects of IFNβ therapy in ischemic stroke
- Studied the immunomodulatory effect of IFNβ and DHA on microglia
- Studied the effects of omega-3 and omega-6 fatty acid on IL-17-producing γδ T cells
- Studied the role of Muc1, a mucin-like protein, in EAE
- In charge of maintaining the departmental flow cytometry facility and training new users

# Post-Doctoral Fellow 2007 - 2009

- Department of Microbiology and Immunology, Temple University School of Medicine, PA
- Studied the role of IFNβ in dendritic cell migration and apoptosis

- Studied the role of the omega 3 fatty acid DHA in inflammatory and autoimmune diseases
- Maintained and operated departmental flow cytometry facility and training new users

# Research Assistant 2006 - 2007

# Department of Physiology, Temple University School of Medicine, PA

- Studied the effects of Prostaglandin E2 (PGE2) on dendritic cell migration
- Trained students in advanced molecular techniques
- Set up and maintained the laboratory flow cytometry unit
- Maintained the laboratory colonies of transgenic and knockout mice

#### Teaching Assistant 2002 - 2005

#### Department of Biological Sciences, Rutgers University, NJ

- Studied the role of prostaglandin E2 (PGE2) on CD11c expression in dendritic cells
- Lectured in General Biology and Microbiology for undergraduate students
- Rated over 4 (out of a maximum of 5 points) by students in overall class quality each semester

# Awards and Honors

	ind Honors
2023	Indiana University Trustee Teaching Award
2022	Outstanding Professor of Basic Science, IU School of Medicine Class of 2022 Faculty Award
2022	Dr. Michael Mirro Award. Outstanding contributions to the Student Education and
	Research Fellowship Program, IU School of Medicine-Fort Wayne.
2021	The American Association of Immunologists Laboratory Grant. IMMUNOLOGY, 2021.
2020	Outstanding Professor of Basic Science, IU School of Medicine Class of 2020 Faculty Award
2019	The American Association of Immunologists Early Career Faculty Travel Grant,
	IMMUNOLOGY, 2019. San Diego, CA
2018	AAI Travel Grant for the 5 <sup>th</sup> European Congress of Immunology
2018	Outstanding Professor of Basic Science, IU School of Medicine Class of 2018 Faculty Award
2017	Outstanding reviewer as the top 10 <sup>th</sup> percentile of reviewers in terms of the number of
	manuscript reviews completed in the last two years for the Journal "Brain Behavior and
	Immunity"
2017	Indiana University Trustee Teaching Award
2016	The American Association of Immunologists Early Career Faculty Travel Grant, the 103 <sup>rd</sup>
	Annual Meeting of the American Association of Immunologists, Seattle, WA
2015	Outstanding reviewer as the top 10 <sup>th</sup> percentile of reviewers for the Journal "Brain Behavior
	and Immunity"
2015	The American Association of Immunologists Early Career Faculty Travel Grant, the 102 <sup>nd</sup>
	Annual Meeting of the American Association of Immunologists, New Orleans, LA
2014	The American Association of Immunologists Early Career Faculty Travel Grant, the 101 <sup>st</sup>
	Annual Meeting of the American Association of Immunologists, Pittsburgh, PA
2013	The American Association of Immunologists Early Career Faculty Travel Grant, the 100 <sup>th</sup>
	Annual Meeting of the American Association of Immunologists, Honolulu, HI
2012	The Milstein Travel Award, Cytokine 2012, the 10 <sup>th</sup> Joint Annual Meeting of the
	International Cytokine Society (ICS) and the International Society for Interferon and
	Cytokine Research (ISICR), Geneva, Switzerland
2011	The American Association of Immunologists Trainee Travel Award, the 98th Annual Meeting
0040	of the American Association of Immunologists, San Francisco, CA
2010	The American Association of Immunologists Travel Grant for the 14 <sup>th</sup> International Congress
0040	of Immunology, Kobe, Japan
2010	The American Association of Immunologists Trainee Travel Award, the 97 <sup>th</sup> Annual Meeting
0000	of the American Association of Immunologists, Baltimore, MD
2009	The American Association of Immunologists Trainee Travel Award, the 96 <sup>th</sup> Annual Meeting
0000	of the American Association of Immunologists, Seattle, WA
2009	Keystone Symposia Scholarship, Multiple Sclerosis, Keystone Symposia, Santa Fe, NM
2008	The American Association of Immunologists Trainee Travel Award, the 95 <sup>th</sup> Annual Meeting
0000 07	of the American Association of Immunologists, San Diego, CA
2006-07	Rutgers Graduate School Excellence Fellowship
2006-07	Travel Award, Taipei Economic Cultural Office in New York

- 2006 Travel Award, Great Lakes International Imaging and Flow Cytometry Association 15<sup>th</sup> annual meeting, Pittsburgh, PA
- 2004 Travel Award, Graduate School, Rutgers University
- 2003-05 Johnson & Johnson Fellowship in Neuroimmunology
- 2002-05 Rutgers Graduate School Teaching Assistantship
- 1998 Excellent Graduation Thesis, Microbiology Department, Soochow University, Taiwan

# Scientific Grant Reviewer

- 2024.04 Chair & Reviewer, grant review, IU Fort Wayne Research Grant
- 2023.09 Reviewer, grant review, the Florida Department of Health Ed and Ethel Moore Alzheimer's Disease Research Program
- 2023.02 Reviewer, grant review, Cellular & Molecular Biology of Glia Study Section (CMBG), NIH
- 2022.09 Reviewer, grant review, the Florida Department of Health's Alzheimer's Disease Research Program
- 2022.06 Reviewer, grant review, ZNS1 SRB-L (10) K01 & MOSAIC K99 Application Review Panel, NIH
- 2022.03 Reviewer, grant review, Special Emphasis Panel, Cellular and Molecular Neuroscience, NIH
- 2021.06 Reviewer, grant review, Special Emphasis Panel, Cellular and Molecular Neuroscience, NIH
- 2021.05 Reviewer, grant review: 2021 Spring Core Pilot Funding program, CTSI, Indiana
- 2021.02 Reviewer, grant review, Cellular & Molecular Biology of Glia Study Section (CMBG), NIH
- 2021.02 Reviewer, grant review: Spinal Cord and Brain Injury Fund Research Grant Program, Indiana State Department of Health
- 2019.10 Reviewer, grant review: Postdoc and Predoctoral Fellowships, Brain II, Basic Science Committee, American Heart Association
- 2019.10 Reviewer, Alzheimer's Research UK, the UK's leading dementia research charity
- 2019.03 Member, grant reviewer, ZAT1 AJT (10) 1 NCCIH Training and Education Review Panel, NIH
- 2018.10 Reviewer, grant review, Cellular & Molecular Biology of Glia Study Section (CMBG), NIH
- 2018.10 Reviewer, Alzheimer's Research UK, the UK's leading dementia research charity
- 2018.09 Member, grant review: Postdoc and Predoctoral Fellowships, Brain II, Basic Science Committee, American Heart Association
- 2018.02 Member, grant review: Postdoc and Predoctoral Fellowships, Brain II, Basic Science Committee, American Heart Association
- 2018.01 Member, grant review: Spinal Cord and Brain Injury Fund Research Grant Program, Indiana State Department of Health
- 2016.10 Reviewer, grant reviewer, Cellular & Molecular Biology of Glia Study Section (CMGB), NIH

# Scientific Journal Editor

- 2023 Present Review Editor of Frontiers in Molecular Neuroscience
- 2022 Present Associate Editor of Frontiers in Cellular Neuroscience.
- 2021 2023 Topic editor, Ischemic Stroke as Systemic Disorder Involving Both Nervous and Immune Systems. Frontiers in Cellular Neuroscience.

# Scientific Journal Reviewer

2023 – present Cell Reports, iScience, Clinical & Translational Research, Advanced Materials

- 2022 present Hormone & Metabolic Research, Frontiers in Neurology, Communications Biology, Frontier in Neuroscience
- 2021 present Science Translational Medicine, Brain Research Bulletin, CNS Neuroscience & Therapeutics, International Immunopharmacology, Inflammation, Journal of Neuroimmune Pharmacology,
- 2020 present European Journal of Neuroscience, Cell cycle, Frontiers in Immunology, Brain Research
- 2019 present Neuroscience, Neuropsychiatric Disease and Treatment, Acta Pharmaceutica Sinica B
- 2018 present Journal of Neurological Science, Prostaglandins, Leukotrienes and Essential Fatty Acids Canadian Journal of Physiology and Pharmacology, European Journal of Pharmacology

- 2017 present Neural Regeneration Research, Phytomedicine
- 2016 present Journal of Neuroinflammation; Brain and Behavior; Journal of Cerebral Blood Flow & Metabolism; Journal of Visualized Experiments
- 2014 Acta Neuropathologica
- 2014 PLOS ONE
- 2013 present Brain, Behavior, and Immunity
- 2012 present Journal of Leukocyte Biology
- 2011 Neurochemistry International
- 2010 British Journal of Pharmacology

#### Conference, Symposium and Meeting Chair

- 2022-23 IU School of Medicine Regional Research Monthly Meeting
- 2019 Block symposia: Innate Cells in Anti-Pathogen and Cytokine Responses session, the annual meeting of American Association of Immunologists (AAI), 2019

Research **Research Support Ongoing Research Support** NIH R01NS102449-01A1 Yen (PI) 06/15/18-10/31/24 Interferon beta modulates neuroinflammation and extends tPA therapeutic window in ischemic stroke The goal of this study is to assess the effects of interferon beta on the suppression of neuroinflammation and extension of tPA therapeutic window in ischemic stroke. Role: PI Anna Yoder MS Fund Yen (PI) 07/01/18-06/30/25 The role of Itaconate in CNS immunometabolism following MS/EAE The goal of this study is to access the anti-inflammatory effect of Itaconate through modulating CNS immunometabolism in MS/EAE. Role: PI Indiana University Research Start-up Fund Yen (PI) 01/01/13-12/31/24 Indiana University School of Medicine Research Start-up Fund The purpose of this grant is to fund PI's preliminary studies for extramural grant submission. Role: PI AARG Yen (Co-PI) 06/01/24-05/31/27 Impact of systemic interferon responses in Alzheimer's disease The project aims to identify the crosstalk between cellular and the interferon axis regulating microglia and determine neurodegeneration deteriorated by interferon-responsive microglia. Role: Co-PI NIH R21AG070971-01A1 Yu (PI) 03/01/22-01/31/25 Dynamic immune cell landscape in late-onset Alzheimer's disease: role of ApoE-mediated microglial lipid metabolism The goal of this study is to elucidate the role of ApoE in microglial lipid metabolism related to late-onset Alzheimer's disease development. Role: Co-Investigator Pending NIH R01 NS136425 Yen (PI) 10/01/24-09/30/29 Role of IRG1 in diabetic neuroinflammation and cerebrovascular dysfunction

The goal of this study is to elucidate the molecular and cellular mechanisms by which diabetes-induced IRG1 suppression exacerbates neuroinflammation and cerebrovascular dysfunction in ischemic stroke.

Role: PI

NIH R01 04/01/25 - 03/31/30 Agalliu (PI) Endothelial type I interferon signaling in vascular remodeling and blood-brain barrier restoration after ischemic stroke The goal of this study is to unveil the role of brain endothelial type I interferon signaling in vascular remodeling and blood-brain barrier restoration after ischemic stroke. Role: Co-Investigator **Completed Research Support** AHA SDG 12SDG8170005 Yen (PI) 01/01/12-12/31/16 IFNβ modulates inflammatory responses in cerebral ischemia The doal of this study is to assess the protective effect of IFNB treatment in cerebral ischemia and to evaluate the modulatory effects of IFN $\beta$  in ischemia-induced neuroinflammation. Role: PI Anna Yoder MS Fund Yen (PI) 07/01/13-06/30/16 Novel function of anti-inflammatory compound D3T for the treatment of MS The goal of this study is to assess the therapeutic effect of D3T in the animal model of MS and to investigate the molecular mechanisms underlying the protective effect of D3T in MS. Role: PI 07/01/16-06/30/18 Anna Yoder MS Fund Yen (PI) Novel agents with anti-inflammatory properties for the treatment of MS/EAE The goal of this study is to assess the therapeutic effect of novel anti-inflammatory agents in EAE and to evaluate the therapeutic potential of using these novel anti-inflammatory agents in MS. Role: PI Indiana University Research Enhancement Grant Yen (PI) 07/01/17-06/30/18 IFNβ modulates neuroinflammation and extends tPA therapeutic window in ischemic stroke The purpose of this grant is to support PI's stroke research for NIH R01 grant submission. Role: PI Indiana CTSI Core Pilot Yu (PI) 03/01/19-02/28/21 Deciphering ischemic stroke-induced molecular signatures in innate immune cells using single-cell RNA sequencing. The goal of this study is to develop single-cell RNA sequencing technology for neuroinflammation research. Role: Co-PI Pre-Clinical Neuroimaging Pilot Grant Yu (PI) 07/01/21-06/30/22 Identifying novel MRI markers of cerebral small vessel dysfunction in a mixed vascular and Alzheimer's dementia mouse model. The objective of this project is to apply MRI techniques to examine cerebral vessel health in a mixed vascular and Alzheimer's dementia preclinical model. Role: Co-Investigator. Center for Diabetes and Metabolic Disease Pilot & Feasibility Grant Yu (PI) 07/01/21-05/31/23 Deciphering the molecular crosstalk of obesity-related cerebrovascular dysfunction in vascular cognitive impairment and dementia. The goal of this project is to determine how obesity-induced neuroinflammation dysregulates molecular and

cellular interactions in the blood-brain barrier network and leads to neurovascular dysfunction. Role: Co-Investigator

#### Invited/Public Presentations

2024

 Neuroscience of 2024, Society of Neuroscience. Nanosymposium. Title: Microglial cellular stress response and type-I interferon axis aggravate neurotoxic amyloid-beta pathology in a mouse model of Alzheimer's disease. October 8<sup>th</sup>.

2023

- Institute of Biomedical Sciences, National Chung Hsing University. Title: The role of type I interferon signaling in neuroinflammation. December 21<sup>st</sup>.
- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: Ischemiainduced endogenous Nrf2/HO-1 axis activation modulates microglial polarization and restrains ischemic brain injury. December 15<sup>th</sup>.
- Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taiwan. Title: Neuroimmunology & Neuroinflammation. December 14<sup>th</sup>.
- Center for Shockwave Medicine and Tissue Engineering, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan. Title: Interferon-β modulates neuroinflammation and ameliorates delayed tPAexacerbated brain injury in preclinical stroke models. December 11<sup>th</sup>.
- Medical Research Department, E-DA Healthcare Group, Taiwan. Title: IFNβ modulates neuroinflammation in delayed-tPA exacerbated ischemic brain injury. August 9<sup>th</sup>.
- Center for Neuropsychiatric Research, National Health Research Institutions, Taiwan. Title: Interferonβ promotes microglial polarization and modulates neuroinflammation in delayed-tPA exacerbated ischemic brain injury. July 25<sup>th</sup>.
- Department of Microbiology & Immunology Retreat, Indiana University School of Medicine, IN. Title: Interferon beta ameliorates delayed tPA-exacerbated ischemic brain injury by modulating microglial polarization. May 25<sup>th</sup>.

2022

- Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taiwan. Title: Neuroimmunology. December 15<sup>th</sup>.
- Department of Medical Research, Tzu Chi General Hospital, Taiwan. Title: The role of interferon-β in neuroinflammation and microglial polarization. December 13<sup>th</sup>.
- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: The role of interferon-β in neuroinflammation and microglial polarization. December 9<sup>th</sup>.
- College of Medicine, Kaohsiung Medical University, Taiwan. Title: The role of interferon-β in neuroinflammation and microglial polarization. December 7<sup>th</sup>.
- Selected oral presentation. Brain & Brain PET 2022. May 29 to June 1, Glasgow, UK. Title: Immunoresponsive gene 1 modulates neuroinflammation and brain injury in ischemic stroke.
- Invited summer school faculty & speaker, Formosa Immunology Spring School & Symposium. August 3 to 6, Taipei, Taiwan. Title: CNS & Immunology

2021

- Graduate Institute of Physiology, National Taiwan University College of Medicine, Taiwan. Title: The role of immunoresponsive gene 1 (IRG1) in neuroinflammation. December 23<sup>rd</sup>.
- Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taiwan. Title: Neuroinflammation. December 23<sup>rd</sup>.
- Institute of Biopharmaceutical Sciences, National Sun Yat-Sen University, Taiwan. Title: Interferon beta modulates neuroinflammation & alleviates tPA-induced adverse effects in ischemic stroke. December 22<sup>nd</sup>.
- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: The role of IRG1/Itaconate axis in neuroinflammation. December 17<sup>th</sup>.
- Center for Brain Health, Louisiana State University Health, Shreveport, Louisiana. Title: Interferon beta modulates neuroinflammation & alleviates tPA-induced adverse effects in ischemic stroke. September 1<sup>st</sup>.
- Virtual Indiana CTSI Regional Campuses Retreat, IN. Title: Immunoresponsive gene 1 modulates the severity of brain injury in cerebral ischemia. July 16<sup>th</sup>.

2020

 Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taiwan. Title: Neuroinflammation. December 17<sup>th</sup>.

- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: The role of IRG1 in neuroinflammation. December 12<sup>th</sup>.
- Faculty retreat. Department of Microbiology and Immunology, Indiana University School of Medicine, IN. Title: IFNβ alleviates delayed tPA-induced adverse effects via modulation of MMP3/9 production in ischemic stroke. August 5<sup>th</sup>.
- Department of Neurology and Neurological Institute, General Taipei Veterans Hospital, Taiwan. Title: Interferon beta modulates neuroinflammation & extends tPA therapeutic window in ischemic stroke. January 14<sup>th</sup>.
- The Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taiwan. Title: Single-sell RNA sequencing analysis of ischemic brain following cerebral ischemia. January 13<sup>th</sup>.

- Indiana University Trustees visit of IUSM-FW, IN. Title: Neuroinflammation research at IUSM-FW. June 13<sup>th</sup>.
- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: Applying Single-Cell RNA Sequencing for Neuroinflammation Research. September 12<sup>th</sup>.

# 2018

- Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taiwan. Title: Stroke and Neuroinflammation. November 22<sup>nd</sup>.
- Anatomy and Cell Biology Fall Research Forum, IN. Title: Inhibition of Neuroinflammation by D3T through Nrf2 Defense Pathway. October 13<sup>th</sup>.
- Anna Yoder MS Fund education/outreach event, IUSM-FW, IN. Title: The protective role of Nrf2 in MS. October 10<sup>th</sup>.
- Manchester University College of Pharmacy, Fort Wayne, IN. Title: D3T as a Novel Therapeutic Agent for the Treatment of Ischemic Stroke & Multiple Sclerosis. August 16<sup>th</sup>.
- Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis, IN. Title: Interferon Beta as a Novel Therapeutic Agent for the Treatment of Ischemic Stroke. June 14<sup>th</sup>.
- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: Interferon beta modulates neuroinflammation & extends tPA therapeutic window in ischemic stroke. November 16<sup>th</sup>.
- Graduate Institute of Clinical Medical Sciences, Chang Gung University, Taiwan. Title: Interferon beta modulates neuroinflammation & extends tPA therapeutic window in ischemic stroke. November 21<sup>st</sup>.
- Institute of Clinical Medicine, National Yang-Ming University, Taiwan. Title: Interferon beta modulates neuroinflammation & extends tPA therapeutic window in ischemic stroke. November 23<sup>rd</sup>.
- National Laboratory Animal Center, Taiwan. Title: D3T as a novel therapeutic agent for the treatment of multiple sclerosis and ischemic stroke. November 26<sup>th</sup>.

- Division of Basic Medical Sciences, General Kaohsiung Veterans Hospital, Taiwan. Title: D3T as a Novel Therapeutic Agent for the Treatment of Ischemic Stroke & Multiple Sclerosis. December 1<sup>st</sup>.
- Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taiwan. Title: Nrf2 Pathway and Neuroinflammation. November 23<sup>rd</sup>.
- Department of Biology, University of Saint Francis, Fort Wayne, IN. Title: D3T as a Novel Therapeutic Agent for the Treatment of Ischemic Stroke & Multiple Sclerosis. November 10<sup>th</sup>.
- Multiple Sclerosis Art Show, Fort Wayne, IN. Title: Therapeutic effect of D3T in the treatment of MS/EAE. October 4<sup>th</sup>
- Academia in the US. Panel Discussions. Boston Taiwanese Biotechnology Association. Boston. August 5<sup>th</sup>.
- Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis, IN. Title: The role of Nrf2 in neuroinflammation. June 8<sup>th</sup>.
- Anna Yoder MS Fund education/outreach event, IPFW. Title: Multiple Sclerosis: Immunopathogenesis, Research, Diet. May 24th.
- InSight TV interview to promote Anna Yoder MS Fund education/outreach event. May 19<sup>th</sup>. http://www.wpta21.com/clip/13344310/anna-yoder-ms-fund

- Institute of Biomedical Sciences, Academia Sinica, Taiwan. Title: Interferon modulates neuroinflammation in ischemic stroke. December 5<sup>th</sup>.
- General Kaohsiung Veterans Hospital, Taiwan. Title: Interferon modulates neuroinflammation in ischemic stroke. December 2<sup>nd</sup>.
- China Medical University, Taiwan. Title: 3H-1, 2-dithiole-3-thione as a novel therapeutic agent for the treatment of experimental autoimmune encephalomyelitis. November 29<sup>th</sup>.
- The Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taiwan. Title: Interferon modulates neuroinflammation in ischemic stroke. November 21<sup>st</sup>.
- Anna Yoder MS Fund education/outreach event, Kosciusko Community Hospital. Title: MS: What you
  need to know about multiple sclerosis. November 3<sup>rd</sup>.
- Anatomy and Cell Biology Fall Research Forum. Title: Interferon modulates neuroinflammation in ischemic stroke. October 29<sup>th</sup>.
- Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis, IN. Title: Interferon modulates neuroinflammation in ischemic stroke. October 6<sup>th</sup>.
- Anna Yoder MS Fund education/outreach event, Parkview Noble Hospital wellness Center. Title: MS: What you need to know about multiple sclerosis. June 23<sup>rd</sup>.
- Disease management, imaging and therapeutics, The 2016 Annual Meeting of the Consortium of Multiple Sclerosis Centers. Title: 3H-1, 2-dithiole-3-thione as a novel therapeutic agent for the treatment of experimental autoimmune encephalomyelitis. June 3<sup>rd</sup>.
- Indiana University School of Medicine-North West, Gary, IN. Title: Interferon modulates inflammatory response in ischemic stroke. May 5<sup>th</sup>.

#### 2015

- Anna Yoder MS Fund education/outreach event, Fort Wayne Self Help Group, Rehabilitation Hospital of Fort Wayne, IN. Title: Beneficial effects of omega-3 DHA and anti-inflammatory compound in multiple sclerosis. June 1<sup>st</sup>.
- Anna Yoder MS Fund education/outreach event, Indiana University School of Medicine, Fort Wayne, IN. Title: Beneficial effects of omega-3 DHA in multiple sclerosis. April 16<sup>th</sup>.
- Anna Yoder MS Fund education/outreach event, Indiana University School of Medicine, Fort Wayne, IN. Title: Beneficial effects of omega-3 DHA in multiple sclerosis. April 9<sup>th</sup>.
- Anna Yoder MS Fund education/outreach event, Decatur, IN. Title: Beneficial effects of omega-3 DHA and anti-inflammatory compound in multiple sclerosis. February 16<sup>th</sup>.

#### 2014

- Anna Yoder MS Fund education/outreach event, Indiana University Purdue University, Fort Wayne, IN. Title: Beneficial effects of omega-3 DHA in multiple sclerosis. September 23<sup>rd</sup>.
- Anna Yoder MS Fund education/outreach event, DeKalb Memorial Hospital, Auburn, IN. Title: Beneficial effects of omega-3 DHA in multiple sclerosis. September 15<sup>th</sup>.
- Anna Yoder MS Fund education/outreach event, Huntington University, Huntington, IN. Title: Beneficial effects of dietary omega-3 DHA in multiple sclerosis. May 22<sup>nd</sup>.

- Division of Basic Medical Sciences, Kaohsiung Veterans General Hospital, Taiwan. Title: Interferon Beta & Neuroinflammation: Relevance to Multiple Sclerosis and Ischemic Stroke. November 25<sup>th</sup>.
- Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taipei, Taiwan. Title: Interferon Beta & Neuroinflammation: Relevance to Multiple Sclerosis and Ischemic Stroke. November 18<sup>th</sup>.
- The 2013 Boston Taiwanese Biotechnology Symposium, MIT, Boston. Title: A novel function of IFNβ in promoting the generation of anti-inflammatory M2-like microglia in vitro and in vivo. June 15<sup>th</sup>.
- Department of Anatomy and Cell Biology, Indiana University School of Medicine, Indianapolis, IN. Title: Interferon Beta & Neuroinflammation. May 22<sup>nd</sup>.
- Block Symposium, the 100<sup>th</sup> Annual Meeting of the American Association of Immunologists. Title: Higher susceptibility to experiment autoimmune encephalomyelitis in Muc1-difficient mice is associated with increased Th1/Th17 responses. May 6<sup>th</sup>.
- Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis, IN. Title: Interferon Beta & Neuroinflammation. March 17<sup>th</sup>.

- Morton Klein Conference, Temple University School of Medicine. Title: IFNβ modulates inflammatory immune responses in dendritic cells and Th1/Th17 cells. October 29<sup>th</sup>.
- Department of Microbiology and Immunology, Chicago Medical School, Rosalind Franklin University. Title: Interferon Beta & Neuroinflammation. September 25<sup>th</sup>.
- 10th Joint Annual Meeting of the International Cytokine Society (ICS) and International Society for Interferon and Cytokine Research (ISICR), Geneva, Switzerland. Title: A novel function of IFNβ in promoting the generation of anti-inflammatory M2-like microglia in vitro and in vivo. September 3<sup>rd</sup>.
- Indiana University School of Medicine-Fort Wayne, IN. Title: Interferon Beta & Neuroinflammation. June 27<sup>th</sup>.
- Temple Autoimmunity Center Annual Retreat. Title: IFNβ promotes the conversion of pro-inflammatory M1-like into anti-inflammatory M2-like microglia. June 15<sup>th</sup>.
- Department of Biological Sciences, University of Toledo, Toledo, OH. Title: Interferon Beta modulates neuroinflammation. May 16<sup>th</sup>.
- Department of Pathology, Microbiology and Immunology, University of South Carolina School of Medicine, Columbia, SC. Title: Interferon Beta & Neuroinflammation. February 22<sup>nd</sup>.

2011

• Block Symposium, the 98<sup>th</sup> Annual Meeting of the American Association of Immunologists. Title: ERK activation is required for PGE2-induced MMP-9 production in bone-morrow derived DCs. May 9<sup>th</sup>.

#### 2010

- Block Symposium, the 97<sup>th</sup> Annual Meeting of the American Association of Immunologists. Title: IFNβ: an anti-inflammatory cytokine which inhibits dendritic cell migration and proinflammatory cytokine production.
- Graduate Institute of Microbiology, College of Medicine, National Taiwan University, Taiwan. Title: The molecular mechanisms involved in the beneficial effect of IFNβ treatment in autoimmune disease, Multiple Sclerosis.
- Institute of Biomedical Sciences, National Sun Yat-Sen University, Taiwan. Title: The molecular mechanisms of IFNβ treatment in autoimmune disease, Multiple Sclerosis.
- Temple Autoimmunity Center Annual Retreat. Title: IFNβ exerts its anti-inflammatory effects through inhibiting dendritic cell migration and pro-inflammatory cytokine production.
- Graduate Institute of Life Science, National Chengchi University, Taiwan. Title: Anti-inflammatory properties of IFNβ in autoimmune disease, Multiple Sclerosis.

# 2009

- Block Symposium, the 96<sup>th</sup> Annual Meeting of the American Association of Immunologists. Title: IFNβ inhibits DC migration in vitro and in vivo.
- Morton Klein Conference, Temple University School of Medicine. Title: IFNβ inhibits DC migration through STAT-1 mediated suppression of CCR7 and MMP-9.

#### 2008

- Block Symposium, the 95<sup>th</sup> Annual Meeting of the American Association of Immunologists. Title: IFNβ induces mature dendritic cell apoptosis through the caspase-11/caspase-3 pathway.
- Cell Survival and Programmed Cell Death, the 4<sup>th</sup> Congress of the Federation of Immunology Societies of Asia-Oceania (FIMSA 2008). Title: IFNβ selectively induces apoptosis in mature dendritic cells through the caspase-11/caspase-3 pathway.
- Eicosanoids and Other Mediators of Chronic Inflammation, Keystone Symposium. Title: PGE2 induced MMP-9 promotes dendritic cell migration in vitro and in vivo.
- Department of Microbiology and Immunology, National Cheng Kung University, Taiwan. Title: IFNβ regulates mature DC apoptosis.
- Morton Klein Conference, Temple University School of Medicine. Title: IFNβ induces apoptosis through the caspase-11/caspase-3 pathway in mature dendritic cells.

2007

• Block Symposium, the 94<sup>th</sup> Annual Meeting of the American Association of Immunologists. Title: Prostaglandin E2 induces MMP-9 production in myeloid dendritic cells.

#### Peer-reviewed Publications

#### \*Corresponding author

# 2023

- 1. Q. Liu, Y. Wang, **JH J. Yen\***. Editorial: Ischemic Stroke as Systemic Disorder Involving both Nervous and Immune Systems. **Frontiers in Cellular Neuroscience**. 2023. 17. doi: 10.3389/fncel.2023. 1208787.
- P-C. Kuo, W-T. Weng, B. A. Scofield, H. C. Paraiso, P. Bojrab, B. Kimes, I-C. I. Yu, J-H. J. Yen\*. Interferon-β modulates microglial polarization to ameliorate delayed tPA-exacerbated brain injury in ischemic stroke. Frontiers in Immunology. 2023 Mar 31;14:1148069.
- 3. **J-H. J. Yen**, I-C. I. Yu. The role of ApoE-mediated microglial lipid metabolism in brain aging and disease. **Immunometabolism.** 2023 Jan 23;5(1):e00018.
- 4. Clauser K, Salae, J, Leavell B, John-Pikel KS, Kuo PC, **Yen JH**, Brown DA. Evaluation of benzoylacetonitriles as novel anti-neuroinflammatory agents. **Med Chem Res**. 2023 (32), 802–807.
- C-T. Liu, S-J. Yu, J-H. J. Yen, D. Brown, Y-C. Song, M-Y. Chu, P-Y. Wu, H-R. Yen. Targeting Nrf2 to moderate OXPHOF-driven oxidative stress by 3H-1,2-dithiole-3-thione attenuates IL-17A-induced psoriasis. Biomed Pharmacother. 2023 Jan 25;159:114294.

#### 2022

- W-T. Weng, P-C. Kuo, B. A. Scofield, H. C. Paraiso, D. A. Brown, I-C. Yu, and J-H. Yen\*. 4-Ethylguaiacol modulates neuroinflammation and promotes heme oxygenase-1 expression to ameliorate brain injury in ischemic stroke. Frontiers in Immunology. 2022. 13:887000
- L-W. Chen, P-H. Chen, C-H. Tang, and J-H. Yen\*. Adipose-derived stromal cells reverse insulin resistance through inhibition of M1 expression in a type 2 diabetes mellitus mouse model. Stem Cell Research & Therapy. 2022: 13:357.

#### 2021

- 8. P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, I-C. Yu, and **J-H. Yen\***. Immunoresponsive gene 1 modulates the severity of brain injury in cerebral ischemia. **Brain Communications**. 2021;16(5):e0252153
- L-W. Chen, P-H. Chen, and J-H. Yen\*. Inhibiting adipose tissue M1 cytokine expression decreases DPP4 activity and insulin resistance in a type 2 diabetes mellitus mouse model. PLoS One. 2021;16(5):e0252153
- W-T. Weng, P-C. Kuo, D. A. Brown, B. A. Scofield, D. Furnas, H. C. Paraiso, P-Y. Wang, I-C. Yu, and J-H. Yen\*. 4-Ethylguaiacol modulates neuroinflammation and Th1/Th17 differentiation to ameliorate disease severity in experimental autoimmune encephalomyelitis. J Neuroinflammation. 2021 May 11;18(1):110

#### 2020

- P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, A. J. Intriago, K. D. Bosi, I-C. Yu, and J-H. Yen\*. Interferon beta alleviates delayed tPA-induced adverse effects via modulation of MMP3/9 production in ischemic stroke. Blood advances. 2020. Sep 22;4(18):4366-4381
- P-C. Kuo, W-T. Weng, B. A. Scofield, H. C. Paraiso, D. A. Brown, P-Y. Wang, I-C. Yu, and J-H. Yen\*. Dimethyl itaconate, an itaconate derivative, exhibits immunomodulatory effects on neuroinflammation in experimental autoimmune encephalomyelitis. J Neuroinflammation. 2020 Apr 29;17(1):138
- H. C. Paraiso, X. Wang, P-C. Kuo, D. Furnas, B. A. Scofield, F-L. Chang, J-H. Yen and I-C. Yu. Isolation of Mouse Cerebral Microvasculature for Molecular and Single-Cell Analysis. Front Cell Neurosci. 2020 Apr 9;14:84.

#### 2019

 L-L. Teng, G-L. Lu, W-S. Lin, Y-Y. Cheng, T-E. Hsueh, Y-C. Huang, N-H. Hwang, J-W. Yeh, R-M. Liao, S-Z. Fan, J-H. Yen, T-F. Fu, T-F. Tsai, M-S. Wu, L-C. Chiou, P-Y. Wang. Serotonin receptor HTR6-operated mTORC1 signaling mediates dietary restriction-induced memory enhancement. PLoS Biology. 2019. Mar 18;17(3):e2007097

- B. Gabet, P-C. Kuo, S.I Fuentes, Y. Patel, A. Adow, M. Alsakka, P. Avila, T. Beam, J-H. Yen, and D. A Brown. Identification of N-benzyl tetrahydroisoquinolines as novel anti-neuroinflammatory agents. Bioorganic & Medicinal Chemistry. 2018 Nov 15;26(21):5711-5717
- 16. W-S Lin, S-R Yeh, S-Z Fan, L-Y Chen, **J-H Yen**, T-F Fu, M-S Wu, and P-Y Wang. Insulin-like signaling in female Drosophila links diet and sexual attractiveness. 2018. **FASEB**. doi: 10.1096/fj.201800067R
- 17. P-C. Kuo, D. A. Brown, B. A. Scofield, H. C. Paraiso, P-Y. Wang, I-C. Yu, and **J-H Yen\***. Dithiolethione ACDT Suppresses Neuroinflammation and Ameliorates Disease Severity in Experimental Autoimmune Encephalomyelitis. 2018. **Brain, Behavior, and Immunity.** 70(2018) 76-87
- 18. H. C. Paraiso, E.T, P-C. Kuo, E. T. Curfman, H. J. Moon, R. D. Sweazey, **J-H. Yen**, F-L. Chang, and I-C. Yu. Dimethyl fumarate protects CNS against to reactive microglia and long-term memory deficits in response to systemic inflammation. 2018. **Journal of Neuroinflammation**. 2018 15:100

- 19. W-S. Lin, J-H. Lo, J-H. Yang, H-W. Wang, S-Z. Fan, **J-H. Yen**, and P-Y. Wang. Ludwigia octovalvis extract improves glycemic control and memory performance in diabetic mice. 2017. **Journal of Ethnopharmacology.** 207(2017) 211-219
- I-C. Yu, P-C. Kuo, J-H. Yen, H. C. Paraiso, E. T. Curfman, B. C. Hong-Goka, R. D. Sweazey, and F-L. Chang. A combination of three repurposed drugs administered at the time of reperfusion as a promising therapy for post-ischemic brain injury. 2017. Translational Stroke Research. 2017 Jun 17. doi: 10.1007/s12975-017-0543-5
- P-C. Kuo, I-C. Yu, B. A. Scofield, D. A. Brown, E. T. Curfman, H. C. Paraiso, F-L. Chang, and J-H. Yen\*. 3H-1, 2-dithiole-3-thione as a novel therapeutic agent for the treatment of ischemic stroke through Nrf2 defense pathway. 2017, Brain, Behavior, and Immunity. 62(2017) 180-192.
- 22. **J-H. Yen\*.** Immunomodulatory effect of G-CSF on the CNS infiltrating monocytes in ischemic stroke. 2017. **Brain, Behavior, and Immunity**. Brief commentary. 60 (2017) 13–14.
- 23. K. M Hooper, **J-H. Yen**, W. Kong, K. M Rahbari, P-C. Kuo, A. M Gamero, and D. Ganea. Prostaglandin E2 inhibition of IL-27: a novel mechanism which involves IRF1. 2017. **J. Immunol**. 198:1521-1530.

2016

- 24. D. A. Brown, S. Betharia, **J-H. Yen**, P-C. Kuo, and H. Mistry. Further structure-activity relationships study of dithiolethiones: correlation of electronic properties to glutathione induction, toxicity, and neuroprotection. Chemistry Central Journal. **Chemistry Central Journal.** 2016 10:64 DOI: 10.1186/s13065-016-0210-z
- 25. P-C. Kuo, D. A. Brown, B. A. Scofield, I-C. Yu, F-L. Chang, P-Y. Wang, and **J-H. Yen\***. 3H-1, 2dithiole-3-thione as a novel therapeutic agent for the treatment of experimental autoimmune encephalomyelitis. 2016. **Brain, Behavior, and Immunity**. 57(2016) 173-186.
- 26. P-C. Kuo, B. A. Scofield, I-C. Yu, F-L. Chang, D. Ganea, and J-H. Yen\*. Interferon beta modulates inflammatory response in cerebral ischemia. 2016. J Am Heart Assoc. 2016;5:e002610 doi: 10.1161/JAHA.115.002610.

# 2015

- W-S. Lin, C-W. Huang, Y-S. Song, J-H. Yen, P-C. Kuo, T-F. Fu, M-S. Wu, H. Wang, P-Y. Wang. Reduced gut acidity induces an obese-like phenotype in Drosophila melanogaster and in mice. PLOS ONE. 2015 Oct 5;10(10):e0139722. doi: 10.1371/journal.pone.0139722
- J-H. Yen, W. Kong, K. M. Hooper, F. Emig, K. M. Rahbari, P-C. Kuo, B. A. Scofield, and D. Ganea. Differential effects of IFNβ on IL-12, IL-23, and IL-10 expression in TLR-stimulated dendritic cells. 2015. J. Leukoc. Biol. 98: 689–702

# ► Journal of Leukocyte Biology highlighted "Leading Edge Research" with a dedicated editorial.

 C-W. Huang, H. Bai, M-S Wu, J-H. Yen, T-F. Fu, M. Tatar, and P-Y. Wang. Tequila regulates insulinlike signaling and extends life span in Drosophila melanogaster. 2015. J Gerontol A Biol Sci Med Sci. 70(12):1461-9

#### 2014

 D. A. Brown, S. Betharia, J-H. Yen, Q. Tran, H. Mistry, and K. Smith. Synthesis and structure-activity relationships study of dithiolethiones as inducers of glutathione in the SH-SY5Y neuroblastoma cell line. 2014. Bioorganic & Medicinal Chemistry Letters. 24(2014):5829-5831

 J-H. Yen, S. Xu, Y. Park, D. Ganea and K. Kim. Higher susceptibility to experiment autoimmune encephalomyelitis in Muc1-difficient mice is associated with increased Th1/Th17 responses. Brain, Behavior, and Immunity. 2013. Brain, Behavior, and Immunity. 29(2013):70-81

#### 2012

- J. H. Nishimori, T. N. Newman, G. O. Oppong, G. J. Rapsinski, J-H. Yen, S. G. Biesecker, R. P. Wilson, B. P. Butler, M. G. Winter, R. M. Tsolis, D. Ganea and C. Tukel. Microbial amyloids induce IL-17A/IL-22 responses via Toll-like receptor 2 activation in the intestinal mucosa. 2012. Infect. Immun. 80(12):4398-408
- V. P. Kocieda, S. Adhikary, F. Emig, J-H. Yen, M. G. Toscano and D. Ganea. Prostaglandin E2induced IL-23 is regulated by CREB and C/EBPβ in bone marrow derived dendritic cells. 2012. J. Biol. Chem. 287(44):36922-35
- S. Adhikary, V. Kocieda, J-H. Yen, R. Tuma and D. Ganea. Signaling through cannabinoid receptor 2 suppresses dendritic cell migration by inhibiting matrix metalloproteinase-9 expression. 2012. Blood. 120(18):3741-9

#### 2011

- J-H. Yen, V. P Kocieda, H. Jing and D. Ganea. PGE2 induces matrix metalloproteinase-9 expression in murine dendritic cells through two independent signaling pathways leading to AP-1 activation. 2011.
   J. Biol. Chem. 286(45):38913-38923
- D. Ganea, V. Kocieda, W. Kong and J-H. Yen. Modulation of dendritic cell function by PGE2 and DHA: A framework for understanding the role of dendritic cells in neuroinflammation. 2011. Clinical Lipidology. 6(3): 277-291
- W. Kong, J-H. Yen and D. Ganea. Docosahexaenoic acid prevents dendritic cell maturation, inhibits antigen-specific Th1/Th17 differentiation and suppresses experimental autoimmune encephalomyelitis. 2011. Brain, Behavior, and Immunity. 25(2011):872-882

#### 2010

- 38. **J-H. Yen**, W. Kong, and D. Ganea. IFN-β inhibits dendritic cell migration through STAT-1 mediated transcriptional suppression of CCR7 and metalloproteinase-9. 2010. **J. Immunol**. 184:3478-3486
- W. Kong, J-H. Yen, E. Vassiliou, S. Adhikary, M.G. Toscano and D. Ganea. Docosahexaenoic acid prevents dendritic cell maturation and in vitro and in vivo expression of the IL-12 cytokine family. Lipids Health Dis. 2010 Feb 1;9(1):12

#### 2009

40. **J-H. Yen** and D. Ganea. Interferon beta induces mature dendritic cell apoptosis through caspase-11/caspase-3 pathway. 2009. **Blood**. 114(7): 1344-1354

#### 2008

- T. Khayrullina, J-H. Yen, H. Jing and D. Ganea. In vitro differentiation of dendritic cells in the presence of prostaglandin E2 alters the IL-12/IL-23 balance and promotes differentiation of Th17 cells. 2008. J. Immunol. 181: 721-735
- 42. **J-H. Yen,** T. Khayrullina and D. Ganea. PGE2-induced metalloproteinase-9 is essential for dendritic cell migration. 2008. **Blood**. 111(1): 260-270

#### 2007

- 43. A. F. Sheibanie, **J-H. Yen**, T. Khayrullina, F. Emig, M. Zhang, R. Tuma and D. Ganea. The proinflammatory effect of prostaglandin E2 in experimental inflammatory bowel disease is mediated through IL-23→IL-17 axis. 2007. **J. Immunol**. 178:8138-8147
- 44. L. Liu, J-H. Yen and D. Ganea. A Novel VIP Signaling Pathway in T cells: cAMP→Protein Tyrosine Phosphatase (SHP-2?)→JAK2/STAT4→Th1 differentiation. Peptides. 2007. Peptides. 28(9): 1814-1824

- 45. H. Jing, **J-H. Yen** and D. Ganea. A novel-signaling pathway mediates the inhibition of CCL3/4 expression by prostaglandin E2. 2004. **J. Biol. Chem**. 279(53): 55176-55186
- 46. D. Srinivasan, **J-H. Yen**, D. Joseph and W. Friedman. Cell Type-Specific IL-1 Signaling in CNS. 2004. **J. Neurosci**. 24(29): 6482-6488

#### **Conference Abstracts**

- M. C. Tuohy, P-C. Kuo, A. Chelminski, E. Muharremi, C. D. Sanctis, A. Russo, E. Hillman, J. J. Crary, J-H. J. Yen, D. Agalliu. Endothelial type I interferon signaling modulates vascular response to ischemic brain injury. International Stroke Conference. February 5-7, 2025, Los Angeles, CA.
- H. C. Paraiso, H. Huang, G. Maag, B. A. Scofield, J-H. J. Yen, I-C. I. Yu. Microglial cellular stress response and type-I interferon axis aggravate neurotoxic amyloid-beta pathology in a mouse model of Alzheimer's disease. Neuroscience 2024. October 5-9, 2024, Chicago, IL.
- 3. H. Huang, P-C. Kuo, H. C. Paraiso, B. A. Scofield, **J-H. J. Yen**, I-C. I. Yu. Transient cerebral ischemia exacerbates neuropathology and cognitive decline in the human APP knock-in mouse model of Alzheimer's disease. Neuroscience 2024. October 5-9, 2024, Chicago, IL.
- 4. C. W. Jasper-Duruzor, S. Cisz, B. A. Scofield, P-C. Chang, and **J-H. J. Yen**. CD36 Scavenger Receptor Promotes Adaptive T-cell CNS Infiltration and Neuroinflammation in AppSAA Knock-in Mouse Model of Alzheimer's disease. Neuroscience 2024. October 5-9, 2024, Chicago, IL.
- 5. P-C. Kuo, W-T. Weng, B. A. Scofield, H. C. Paraiso, I-C. I. Yu, and **J-H. J. Yen**. Ischemia-induced endogenous microglial Nrf2/HO-1 axis activation restrains ischemic brain injury. IMMUNOLOGY 2024. May 3-7, 2024, Chicago, IL.
- P-C. Kuo, W-T. Weng, B. A. Scofield, H. C. Paraiso, D. A. Brown, I-C. I. Yu, and J-H. J. Yen. Dimethyl Itaconate Exhibits Immunomodulatory Effects on Suppressing Neuroinflammation in the Animal Model of Multiple Sclerosis. Parkview Neuroscience Symposium, October 16, 2023, Fort Wayne, IN
- 7. A. Rodefeld, P-C. Kuo, B. A. Scofield, **J-H. J. Yen**. Interferon Beta Modulation of Brain Endothelial Cell Activation in Ischemic Stroke. Parkview Neuroscience Symposium, October 16, 2023, Fort Wayne, IN
- 8. I-C. I Yu, H. C. Paraiso, S. S. Shahid, S. Moh, S. D-R. Pierre, Y-C. Wu and **J-H. J. Yen**. Metabolic syndrome disrupts brain microvascular metabolism and rhythm; the link to amyloid-beta vascular pathology in Alzheimer's disease. Keystone Symposia. Neuroimmune Interactions: From Basic Mechanisms to Novel Therapeutic Directions May 15-19, 2023, Whistler, BC, Canada
- P-C. Kuo, B. A. Scofield, H. C. Paraiso, I-C. I. Yu, and J-H. J. Yen. Interferon-β ameliorates delayed tPA-exacerbated ischemic brain injury by modulating microglial polarization. Keystone Symposia. Neuroimmune Interactions: From Basic Mechanisms to Novel Therapeutic Directions May 15-19, 2023, Whistler, BC, Canada
- P-C. Kuo, B. A. Scofield, H. C. Paraiso, I-C. I. Yu, and J-H. J. Yen. Interferon-β Modulates Microglial Polarization to Ameliorate Delayed tPA-Exacerbated Brain Injury in Ischemic Stroke. International Stroke Conference 2023. February 8–10, 2023, Dallas, TX.
- 11. S. S. Shahid, **J-H. Yen**, H. C. Paraiso, Y-C Wu, and I-C. Yu. Understanding the role of amyloid on cerebral microvasculature in Alzheimer's disease. Alzheimer's Association International Conference. July 31-August 4, 2022, Sand Diego, CA.
- J-H. YEN, P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, and I-C. Yu. Immunoresponsive gene 1 modulates neuroinflammation and brain injury in ischemic stroke. BRAIN & BRAIN PET 2022. May 29 – June 1, 2022, Glasgow, UK.
- 13. P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, I-C. Yu, and **J-H. Yen**. Immunoresponsive gene 1 modulates neuroinflammation through the induction of heme oxygenase-1. IMMUNOLOGY, 2022. May 6-10, 2022, Portland, Oregon.
- 14. P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, I-C. Yu, and J-H. Yen. Immunoresponsive gene 1 modulates the severity of brain injury in cerebral ischemia. Virtual Keystone Symposia: Neurodegenerative Diseases: Genes, Mechanisms and Therapeutics. June 7-9, 2021.
- 15. I-C. Yu, H. C. Paraiso, P-C. Kuo, B. A. Scofield, F-L. Chang, and **J-H. Yen**. Single-cell transcriptome analysis reveals CNS innate immune landscape plasticity in diet-induced obesity and type 2 diabetes. Virtual IMMUNOLOGY 2021. May 10-15, 2021
- 16. P-C. Kuo, W-T. Weng, D. A. Brown, B. A. Scofield, H. C. Paraiso, A. I-C. Yu, and J-H. Yen. 4-Ethylguaiacol modulates neuroinflammation and Th1/Th17 differentiation to ameliorate disease severity in experimental autoimmune encephalomyelitis. Virtual IMMUNOLOGY 2021. May 10-15, 2021. This study was selected for the oral presentation at Block Symposium.
- P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, A. J. Intriago, K. D. Bosi, I-C. Yu, and J-H. Yen. Interferon beta ameliorates delayed tPA-exacerbated brain injury through alleviating tPAinduced adverse effects in ischemic stroke. International Stroke Conference. March 17–19, 2021.
- P-C. Kuo, W-T. Weng, B. A. Scofield, D. Furnas, H. C. Paraiso, A. J. Intriago, K. D. Bosi, I-C. Yu, and J-H. Yen. Interferon beta ameliorates neuroinflammation and alleviates delayed tPA-induced adverse effects in ischemic stroke. Keystone Symposia: Neuro-Immune Interactions in the Central Nervous System. June 19-23, 2020, Keystone, CO.

- I-C. Yu, H. C. Paraiso, P-C. Kuo, D. J. Furnas, B. A. Scofield, W-T. Weng, R. D. Sweazey, F-L. Chang, and J-H. Yen. Single-cell transcriptome profiling reveals heterogeneity of brain myeloid cells and unique subsets that regulate T cell immunity and cerebrovascular inflammation in diet-induced obesity. IMMUNOLOGY, 2020. May 8-12, 2020, Honolulu, Hawaii.
- 20. P-C. Kuo, W-T. Weng, B. A. Scofield, H. C. Paraiso, D. A. Brown, P-Y. Wang, I-C. Yu, and **J-H. Yen**. Dimethyl itaconate, an itaconate derivative, exhibits immunomodulatory effects on neuroinflammation in experimental autoimmune encephalomyelitis. IMMUNOLOGY, 2020. May 8-12, 2020, Honolulu, Hawaii.
- 21. H. C. Paraiso, P-C. Kuo, B. A. Scofield, W-T. Weng, R. D. Sweazey, J-H. Yen, F-L. Chang, I-C. Yu. Loss of Nrf2 in microglia results in impaired homeostasis and induces a pro-inflammatory subset of disease-associated microglia. Neuroscience 2019. October 19.23, 2019, Chicago, IL. *This study was selected for an oral presentation at the session of "Microglial activation in disease states".*
- 22. I-C. Yu, H. C Paraiso, P-C. Kuo, B. A. Scofield, R. D. Sweazey, F-L. Chang1, and J-H. Yen. Functional Nrf2 restrains inflammatory and transcriptional phenotypes in microglia and its deficiency recapitulates the aging phenotype. IMMUNOLOGY, 2019. May 9-13, 2019, San Diego, CA. *This study was selected for an oral presentation at the section of "Innate cells in anti-pathogen and cytokine responses".*
- 23. P-C. Kuo, D. A. Brown, B. A. Scofield, H. C. Paraiso, P-Y. Wang, and J-H. Yen. Dithiolethione ACDT suppresses neuroinflammation and ameliorates disease severity in experiment autoimmune encephalomyelitis. 5<sup>th</sup> European Congress of Immunology. September 2-5, 2018, Amsterdam, Netherlands.
- 24. P-C. Kuo, D. A. Brown, B. A. Scofield, H. C. Paraiso, P-Y. Wang, and **J-H. Yen**. Dithiolethione ACDT suppresses neuroinflammation and ameliorates disease severity in experiment autoimmune encephalomyelitis. Keystone Symposia. Neuroinflammation. June 17-21, 2018, Keystone, CO.
- 25. P-C. Kuo, I-C. Yu, B. A. Scofield, D. A. Brown, E. T. Curfman, H. C. Paraiso, F-L. Chang, and **J-H. Yen**. Induction of Nrf2/HO-1 pathway suppresses neuroinflammation in ischemic stroke. Keystone Symposia. Neuroinflammation. June 19-23, 2017, Keystone, CO.
- 26. P-C. Kuo, I-C. Yu, B. A. Scofield, D. A. Brown, E. T. Curfman, H. C. Paraiso, F-L. Chang, and J-H. Yen. Induction of Nrf2/HO-1 pathway suppresses neuroinflammation in ischemic stroke. The 104<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 12-16, 2017, Washington, D.C.
- 27. P-C. Kuo, B. A. Scofield, D. A. Brown, and **J-H. Yen**. Amelioration of cerebral ischemic stroke by induction of Nrf2/HO-1 pathway. Neuroscience 2016. November 12-16, 2016, San Diego, CA
- 28. H. C. Paraiso, P-C. Kuo, **J-H Yen**, G. A. Wemhoff, R. D. Sweazey, F-L Chang, I-C Yu. Dimethyl fumarate modulates pro-inflammatory microglia activation via the nuclear-erythroid factor 2-independent and -dependent pathways. Neuroscience 2016. November 12-16, 2016, San Diego, CA
- P-C. Kuo, D. A. Brown, B. A. Scofield, I-C. Yu, F-L. Chang, and J-H. Yen. 3H-1, 2-dithiole-3-thione as a novel therapeutic agent for the treatment of experimental autoimmune encephalo-myelitis. The 2016 Annual Meeting of the Consortium of Multiple Sclerosis Centers. June 1-4, 2016, Washington D.C. *This study was selected for the oral presentation at Block Symposium.*
- K. M Hooper, J-H. Yen, W. Kong, and D. Ganea. PGE2 and IL-27: novel pro-inflammatory mechanisms involving dendritic cells and Tr1 cells. The 103<sup>rd</sup> Annual Meeting of the American Association of Immunologists. May 13-17, 2016, Seattle, WA
- 31. P-C. Kuo, D. A. Brown, B. A. Scofield, I-C. Yu, F-L. Chang, and J-H. Yen. 3H-1, 2-dithiole-3-thione as a novel therapeutic agent for the treatment of experimental autoimmune encephalo-myelitis. The 103<sup>rd</sup> Annual Meeting of the American Association of Immunologists. May 13-17, 2016, Seattle, WA
- P-C. Kuo, B. A. Scofield, D. A. Brown, and J-H. Yen. Induction of phase II detoxification enzymes through Nrf2 pathway provides protective effects in cerebral ischemic stroke. Neuroscience 2015. October 17-21, 2015, Chicago, IL.
- 33. I-C. Yu, **J-H. Yen**, P-C, Kuo, B. C. Hong-Goka, R. D. Sweazey, and F-L. Chang. Targeting ischemic brain injury with cocktail drugs during reperfusion ameliorates delayed neuronal cell death following transient global cerebral ischemia. Neuroscience 2015. October 17-21, 2015, Chicago, IL.
- 34. P-C. Kuo, B. A. Scofield, D. A. Brown, and **J-H. Yen**. Activation of Nrf2 pathway provides a protective effect in cerebral ischemic stroke. 2015 IUSM Postdoc Symposium. October 9, 2015, Indianapolis, IN
- P-C. Kuo, B. A. Scofield, and J-H. Yen. Interferon-beta provides protective effects in ischemic stroke through its anti-inflammatory properties. Indiana CTSI 6<sup>th</sup> annual meeting. September 11, 2015, Indianapolis, IN

- 36. T. James, B. A. Scofield, and J-H. Yen. Suppression of inflammatory cytokine IL-12 and IL-23 by novel anti-inflammatory compounds in LPS-activated dendritic cells. 28<sup>th</sup> Annual Midwest Alliance for Health Education Student Research Fellowship Program Reception. August 5, 2015, Fort Wayne, IN
- 37. I-C. Yu, **J-H. Yen**, P-C, Kuo, B. C. Hong-Goka, R. D. Sweazey, and F-L. Chang. Early combination drug treatment ameliorates neuronal cell death and tissue damage after transient global and focal cerebral ischemia. Brain 2015. June 27-30, 2015, Vancouver, Canada
- 38. J-H. Yen, W. Kong, K. M. Hooper, F. Emig, K. M. Rahbari, P-C. Kuo, B. A. Scofield, and D. Ganea. Differential effects of IFNβ on IL-12, IL-23, and IL-10 expression in TLR-stimulated dendritic cells. The 102<sup>nd</sup> Annual Meeting of the American Association of Immunologists. May 8-12, 2015, New Orleans, LA
- K. M Hooper, J-H. Yen, W. Kong, and D. Ganea. IL-27 is negatively regulated by PGE2 in bone marrowderived dendritic cells and macrophages. The 102<sup>nd</sup> Annual Meeting of the American Association of Immunologists. May 8-12, 2015, New Orleans, LA
- P-C. Kuo, B. A. Scofield, and J-H. Yen. Interferon-Beta confers protective effects against ischemic stroke through its anti-inflammatory properties. 12<sup>th</sup> International Congress of Neuroimmunology. November 9-13, 2014, Mainz, Germany
- 41. P-C. Kuo, B. A. Scofield, and **J-H. Yen**. Interferon-Beta provides protective effects in ischemic stroke through its anti-inflammatory properties. Neuroscience 2014. November 15-19, 2014, Washington, DC
- 42. Z. D. Biehl, B. A. Scofield, and **J-H. Yen**. The effects of interferon-beta treatment on adult microglia and BV-2 microglial cell line. 27<sup>th</sup> Annual Midwest Alliance for Health Education Student Research Fellowship Program Reception. August 6, 2014, Fort Wayne, IN
- 43. J-H. Yen, W. Kong, K. M Hooper, P-C Kuo, and D. Ganea. Distinct roles of IFNβ and IFNγ in the production of proinflammatory and antiinflammatory cytokines in bone marrow-derived dendritic cells. The 101<sup>st</sup> Annual Meeting of the American Association of Immunologists. May 2-6, 2014, Pittsburgh, PA
- 44. K. M Hooper, J-H. Yen, and D. Ganea. Prostaglandin E2 inhibits IL-27 production by bone marrowderived dendritic cells. The 101<sup>st</sup> Annual Meeting of the American Association of Immunologists. May 2-6, 2014, Pittsburgh, PA
- 45. **J-H. Yen**, D. Ganea and K. Kim. Higher susceptibility to experiment autoimmune encephalomyelitis in Muc1-difficient mice is associated with increased Th1/Th17 responses. The 100<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 3-7, 2013, Honolulu, Hawaii
- 46. **J-H. Yen** and D. Ganea. A novel function of IFNβ in promoting the generation of anti-inflammatory M2like microglia in vitro and in vivo. Cytokines 2012. September 11-14, 2012, Geneva, Switzerland
- 47. J-H. Yen and D. Ganea. IFNβ promotes the conversion of pro-inflammatory M1-like into antiinflammatory M2-like microglia. The 99<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 4-8, 2012, Boston, MA
- 48. **J-H. Yen**, V. P Kocieda, J. Huie and D. Ganea. PGE2-induced MMP-9 expression in dendritic cells through two independent signaling pathways leading to AP-1 activation. The Annual Dawn Marks Research Day. June 20, 2011. Philadelphia, PA
- 49. Z. W. Reichenbach, **J-H. Yen**, W. Kong and R. Tuma. Development of a novel method for Rhodamine administration for intravital microscopic evaluation of white blood cell/endothelial cell interactions. The Annual Dawn Marks Research Day. June 20, 2011. Philadelphia, PA
- 50. W. Kong, **J-H. Yen**, S. Akhikary and D. Ganea. Docosahexaenoic acid modulates CD4+ T cell differentiation and is protective in experimental autoimmune encephalomyelitis. The Annual Dawn Marks Research Day. June 20, 2011. Philadelphia, PA
- 51. **J-H. Yen**, V. P Kocieda, J. Huie and D. Ganea. PGE2-induced MMP-9 production in bone-morrow derived DCs is mediated through ERK activation. The Temple University Autoimmunity Center Retreat. May 20, 2011. Philadelphia, PA
- 52. W. Kong, **J-H. Yen**, S. Akhikary and D. Ganea. Docosahexaenoic acid modulates CD4+ T cell differentiation and is protective in experimental autoimmune encephalomyelitis. The Temple University Autoimmunity Center Retreat. May 20, 2011. Philadelphia, PA
- 53. J-H. Yen, V. P Kocieda and D. Ganea. ERK activation is required for PGE2-induced MMP-9 production in bone-morrow derived DCs. The 98<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 13-17, 2011, San Francisco, CA
- 54. W. Kong, J-H. Yen, S. Akhikary and D. Ganea. Docosahexaenoic acid modulates CD4+ T cell differentiation and is protective in experimental autoimmune encephalomyelitis. The 98<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 13-17, 2011, San Francisco, CA

- 55. S. Xu, **J-H. Yen**, D. Ganea and K. C. Kim. Muc-1 mucine in dendritic cells: It's possible role in CD4+ T cell immune responses. 2011 American Thoracic Society International Conference. May 13-18, 2011, Denver, CO.
- 56. **J-H. Yen** and D. Ganea. IFNβ acts as an anti-inflammatory cytokine to inhibit dendritic cell migration and proinflammatory cytokine production. The 14<sup>th</sup> International Congress of Immunology, August 22-27, 2010, Kobe, Japan
- 57. W. Kong, **J-H. Yen** and D. Ganea. Dendritic cells a crucial target for the anti-inflammatory effects of docosahexaenoic acid (DHA). Keystone Symposium on Bioactive Lipids. June 5-11, 2010, Kyoto, Japan
- 58. **J-H. Yen**, W. Kong and D. Ganea. IFNβ exerts its anti-inflammatory effects through inhibiting dendritic cell migration and pro-inflammatory cytokine production. The Temple University Autoimmunity Center Retreat. May 14, 2010. Merion Station, PA
- 59. W. Kong, **J-H. Yen**, S. Adhikary, M. Toscano and D. Ganea. Docosahexaenoic acid prevents bone marrow-derived dendritic cell maturation and modulates T cell differentiation. The Temple University Autoimmunity Center Retreat. May 14, 2010, Merion Station, PA
- 60. T. Newman, N. Carpino, D. Ganea, F. Saffadi, **J-H. Yen** and A. Tsygankov. TULA proteins are key to the regulation of T-cell driven inflammatory responses. The Temple University Autoimmunity Center Retreat. May 14, 2010, Merion Station, PA
- 61. **J-H. Yen**, W. Kong and D. Ganea. IFNβ: an anti-inflammatory cytokine which inhibits dendritic cell migration and proinflammatory cytokine production. The 97<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 7-11, 2010, Baltimore, MD
- 62. W. Kong, **J-H. Yen**, S. Adhikary, M. Toscano and D. Ganea. Docosahexaenoic acid inhibits cytokine production in dendritic cells and modulates T cell differentiation. The 97<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 7-11, 2010, Baltimore, MD
- 63. T. Newman, N. Carpino, D. Ganea, F. Saffadi, **J-H. Yen** and A. Tsygankov. TULA-family proteins are the key to the regulation of T-cell driven inflammatory responses. The 97<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 7-11, 2010, Baltimore, MD
- 64. **J-H. Yen** and D. Ganea. IFNβ inhibits DC migration in vitro and in vivo. The 96<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 8-12, 2009, Seattle, WA
- 65. W. Kong, **J-H. Yen** and D. Ganea. Anti-Inflammatory properties of docosahexaenoic acid (DHA) in bone marrow-derived dendritic cells. The 96<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 8-12, 2009, Seattle, WA
- 66. J-H. Yen and D. Ganea. Induction of mature dendritic cells apoptosis by IFNβ through the activation of caspase-11/caspase-3 pathway. Multiple Sclerosis, Keystone Symposia, January 21 26, 2009, Santa Fe, New Mexico
- 67. **J-H. Yen** and D. Ganea. IFNβ selectively induces apoptosis in mature dendritic cells through the caspase-11/caspase-3 pathway. The 4th Congress of the Federation of Immunology Societies of Asia-Oceania (FIMSA 2008), October 17-20, 2008, Taipei, Taiwan.
- 68. **J-H. Yen** and D. Ganea. IFNβ induces mature DC apoptosis through the caspase-11/caspase-3 pathway. Experimental Biology, April 5-9, 2008, San Diego, CA
- 69. T, Khayrullina, **J-H. Yen** and D. Ganea. Dendritic cell differentiation in the presence of PGE2 primes dendritic cells for a proinflammatory response, induces IL-23, and promotes Th17 differentiation. Experimental Biology, April 5-9, 2008, San Diego, CA
- 70. **J-H. Yen** and D. Ganea. PGE2 induced MMP-9 promotes dendritic cell migration. The 10<sup>th</sup> Annual Winter Eicosanoid Conference, March 9-12, 2008, Baltimore, MD
- 71. **J-H. Yen,** T. Khayrullina and D. Ganea. PGE2 induced MMP-9 promotes dendritic cell migration in vitro and in vivo. Keystone Symposia, January 7-12, 2008, Big Sky, Montana
- 72. **J-H. Yen,** T. Khayrullina and D. Ganea. Metaloproteinase-9 induced by PGE2 is essential for dendritic cell migration in vitro and in vivo. Seventh Annual Dawn B. Marks research conference, December 11, 2007, Philadelphia, PA
- 73. **J-H. Yen** and D. Ganea. PGE2 induced Metaloproteinase-9 is essential for dendritic cell migration. The International Society for Biological Therapy of Cancer. November 2-4, 2007, Boston, MA
- 74. J-H. Yen, T. Khayrullina and D. Ganea. PGE2 induces MMP-9 production in myeloid dendritic cells. The 94<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 18-22, 2007, Miami Beach, FL
- 75. T. Khayrullina, **J-H. Yen** and D. Ganea The role of PGE2 in EAE. The 94<sup>th</sup> Annual Meeting of the American Association of Immunologists. May 18-22, 2007, Miami Beach, FL

- 76. H. Jing, **J-H. Yen** and D. Ganea. PGE2 inhibits chemokine expression in dendritic cells through a novel signaling pathway. Keystone Symposia, February 25-March 2, 2007, Keystone, CO
- 77. M. Zhang, **J-H. Yen**, T. Khayrullina, D. Ganea and R. Tuma. Cannabinoid CB<sub>2</sub> receptor agonists attenuate experimental autoimmune encephalomyelitis (EAE) and reduce MOG-specific T cell proliferation. Experimental Biology, April 12-15, 2007, Washington, DC
- 78. **J-H. Yen** and D. Ganea. The role of PGE2 in DC CD11c integrin expression. Sixth Annual Dawn B. Marks research conference, Nonmember 20, 2006, Philadelphia, PA
- J-H. Yen and D. Ganea. PGE2 downregulates the expression of CD11c in dendritic cells. Great Lakes International Imaging and Flow Cytometry Association (GLIIFCA) 15<sup>th</sup> annual meeting, September 29-October 1, 2006, Pittsburgh, PA
- 80. **J-H. Yen** and D. Ganea. PGE2 downregulates the expression of CD11c in dendritic cells. The 93<sup>rd</sup> Annual Meeting of the American Association of Immunologists, May 12-16, 2006, Boston, MA
- H. Jing, J-H. Yen and D. Ganea. A novel-signaling pathway mediates the inhibition of CCL3/4 expression by PGE2. The 92<sup>nd</sup> Annual Meeting of the American Association of Immunologists, April 2-6, 2005, San Diego, CA

#### Society Membership

American Association of Immunologists American Heart Association

#### Teaching

- 2023-24 IU School of Medicine, **Statewide Course Co-director**, Host Defense Course (Immunology and Microbiology). A total of 366 MS1 students took the course.
- 2023-24 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course Student Evaluations: **4.97** (1-5 scale)
- 2022-23 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course Student Evaluations: **5.0** (1-5 scale)
- 2021-22 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course Student Evaluations: **5.0** (1-5 scale)
- 2021-22 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course Student Evaluations: **4.89** (1-5 scale)
- 2022.3.28 Topic: T cell development and maturation. T cell activation and differentiation. Course: PHRM 318: Immunology. Manchester University College of Pharmacy. Spring 2022
- 2021-22 Course: Preparing for professional practice. Facilitator, IU School of Medicine MS1.
- 2021.08 Elective Medical Research. Course director. Topic: Neuroinflammation in stroke and aging.
- 2021.5.7 Small group activity facilitator; Topic: Multiple Sclerosis; Course: Neuroscience & Behavior.
- 2020-21 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course Student Evaluations: **4.9** (1-5 scale)
- 2021.3.8 Topic: T cell development and maturation. T cell activation and differentiation. Course: PHRM 318: Immunology. Manchester University College of Pharmacy. Spring 2021
- 2020.5.1 Small group activity facilitator; Topic: Multiple Sclerosis; Course: Neuroscience & Behavior.
- 2019-20 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course (Lecture Immunology, Bacteriology, and Virology to the first-year medical school students) Student Evaluations: **5.0** (1-5 scale)
- 2018-19 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course (Lecture Immunology, Bacteriology, and Virology to the first-year medical school students) Student Evaluations: **4.95** (1-5 scale)
- 2017-18 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course (Lecture Immunology, Bacteriology, and Virology to the first-year medical school students) Student Evaluations: **5.0** (1-5 scale)
- 2016-17 IU School of Medicine-Ft. Wayne site director and instructor of Host Defense course (Lecture Immunology, Bacteriology, and Virology to the first-year medical school students) Student

Evaluations: **3.88** (1-4 scale)

- 2015-16 Course director and instructor of Medical Microbiology and Immunology (Lecture Immunology, Bacteriology, and Virology to the first-year medical school students) – Student Evaluations: **4.94** (1-5 scale)
- 2015-16 Medical Pathology (Lecture immune system disease and Infectious disease to the second year medical school students
- 2014-15 Course director and instructor of Medical Microbiology and Immunology (Lecture Immunology, Bacteriology, and Virology to the first-year medical school students) – Student Evaluations: **4.75** (1-5 scale)
- 2014-15 Medical Pathology (Lecture immune system disease and Infectious disease to the second year medical school students
- 2013-14 Medical Immunology (Lecture Immunology to the first-year medical school students) Student Evaluations: **4.90** (1-5 scale)
- 2005-06 General Microbiology laboratory
- 2004-05 General Microbiology laboratory
- 2003-04 General Biology laboratory
- 2002-03 General Biology laboratory

Mentoring .					
<ul> <li>Individual</li> <li>*Ping-Chang Kuo, Ph.D. / Assistant Research Professor</li> <li>The American Association of Immunologists Early Career Faculty Travel Grant, IMMUNOLOGY, 2021</li> </ul>	<b>Role</b> Mentor	Date 07/2020- present			
*Chichi Jasper-Duruzor / Graduate Student Project: The role of CD36 in Alzheimer's disease	Mentor	10/2023- present			
*Zih-Jie Shen, Ph.D. / Postdoctoral Fellow Project: Neuroinflammation in ischemic stroke, multiple sclerosis, and Alzheimer's disease.	Mentor	01/2023- 10/2023			
*Wen-Tsan Weng, Ph.D. / Postdoctoral Fellow Project: Neuroinflammation in ischemic stroke, multiple sclerosis, and Alzheimer's disease.	Mentor	01/2019- 12/2021			
*Sarah Cisz / Undergraduate Student	Mentor	10/2023- Present			
*August Rodefeld / MS2 student, IU School of Medicine	Mentor	06/2023- 07/2024			
*Daniela Vultorius / MS2 student, IU School of Medicine	Mentor	06/2022- 04/2024			
*Angela Zhao / MS2 student, IU School of Medicine	Mentor	05/2022- 06/2023			
*Paul Bojrab / MS3 student, IU School of Medicine	Mentor	05/2021- 06/2023			
*Brandon Kimes / MS2 student, IU School of Medicine	Mentor	09/2021- 08/2022			
*Ping-Chang Kuo, Ph.D. / Postdoctoral Fellow	Mentor	07/2013-			

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<ul> <li>Project: The effects of anti-inflammatory agents in the treatment of ischemic stroke and multiple sclerosis</li> <li>09/2015 Invited to present stroke research at Eli Lilly and Company</li> <li>10/2015 Selected for oral presentation at IUSM Postdoc Research Symposium</li> <li>05/2016 Selected for oral presentation at 2016 annual meeting of American Association of Immunologists</li> <li>05/2016 Travel award, 2016 annual meeting of American Association of Immunologists</li> <li>10/2016 Selected for oral presentation at IUSM Postdoc Research Symposium</li> <li>10/2016 Selected for oral presentation at IUSM Postdoc Research Symposium</li> <li>10/2017 Selected for oral presentation at IUSM Postdoc Research Symposium</li> </ul>		06/2020
*David Failinger, B.S. / MS1 student, IU School of Medicine Student Research Fellowship Program	Mentor	05/2020- 08/2020
*Kristopher D. Bosi, B.S. / MS1 student, IU School of Medicine Student Research Fellowship Program	Mentor	05/2019- 08/2019
*Destin Furnas, M.S. / Purdue University Research technician	Mentor	09/2018- 06/2020
*Alexander Intriago, M.A / MS1 student, IU School of Medicine Student Research Fellowship Program Project: <i>Interferon beta as a novel therapeutic agent for the treatment</i> <i>of ischemic stroke</i>	Mentor	05/2018- 08/2018
*Isabella Betancourt / IPFW student Research Technician	Mentor	09/2017- 08/2018
*Caitlin Holtmeyer / Homestead High School Student Biology Research Project	Mentor	09/2017- 04/2018
*Yvonne Chang / Visiting scholar Learning in vitro cell cultures and in vivo animal models	Mentor	09/2016- 10/2016
*Jelena Nguyen / Canterbury High School Student Summer Research Program	Mentor	06/2016- 08/2016
*Taylor James / IPFW student MAHE Student Research Fellowship Program Project: <i>Suppression of inflammatory cytokine IL-12 and IL-23 by</i> novel anti-inflammatory compounds in LPS-activated dendritic cells	Mentor	05/2015- 08/2015
*Zachary Biehl, B.S. / MS1 student, IU School of Medicine Midwest Alliance For Health Education (MAHE) Student Research Fellowship Program Project: <i>The effects of interferon beta treatment on mouse adult</i> <i>microglia and BV-2 microglia cell line</i>	Mentor	05/2014- 08/2014
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#### Service

2024.07- 2024.08Search Committee member, Associate Center Director, IU School of Medicine-FW2024.01 - presentChair, Search Committee, Assistant Professor, Department of Biochemistry and<br/>Molecular Biology, IU School of Medicine-FW

- 2023.10 present Co-Chair, IU Fort Wayne Research & Scholarly Activity Committee (RSAC).
- 2022.09 2022.12 Search Committee member, Tenure-track Assistant Professor, Department of Anatomy, Cell Biology and Physiology, IU School of Medicine-FW
- 2022.08 present Regional Campus Representative, Faculty Steering Committee, IUSM
- 2022.08 present Advisor, Student Fund Committee, IUSM-FW
- 2022.02 2022.09 Search Committee member, Assistant/Associate Professor, Department of Anatomy, Cell Biology and Physiology, IU School of Medicine-FW
- 2021.08 2022.07 Advisor, IU School of Medicine-FW Public Health Student Interest Group
- 2021.08 Facilitator, IU School of Medicine Achieving Inclusivity in Medicine
- 2021.06 2024.06 Committee member, Diversity, Equity, and Inclusion, Department of Microbiology & Immunology, IU School of Medicine

2020.08 - 2022.07 Chair, Nomination and Elections Committee, Indiana University Fort Wayne

- 2020.08 Co-Organizer, Department of Microbiology and Immunology Faculty Retreat, IU School of Medicine
- 2018.07 Search Committee Chair, Assistant Research Professor, IU School of Medicine-FW
- 2018.07 Search Committee Chair, Assistant Research Professor of Microbiology and Immunology, IU School of Medicine-FW
- 2017.04 Basic science faculty Representative member, IU School of Medicine LCME Reaccreditation
- 2015.09 present Interviewer, IU School of Medicine Admission Interview
- 2014.07 Promotion Committee, Clinical Associate Professor of Orthopedic Surgery, IU School of Medicine-FW
- 2014.04 Search Committee member, Tenure-track Assistant Professor of Anatomy and Cell Biology IU School of Medicine-FW
- 2014.03 Search Committee member, Assistant/Associate Research Professor of Anatomy and Cell Biology, IU School of Medicine-FW