

LIVER DIGEST

March 24, 2023

A bi-weekly update of PLRC happenings

PITTSBURGH LIVER RESEARCH CENTER

A partnership of University of Pittsburgh & UPMC

In this issue:

• PLRC Faculty Highlights

- Dr. Bharat Bhushan receives NIH/NIDDK-R01
- Dr. Wen Xi recognized as AAAS fellow for Pharmaceutical Sciences
- Dr. Juliane Beier publishes in Toxicological Sciences & is elected to Vice president-elect in Society of Toxicology Specialty Section
- Dr. Marlies Meisel coauthors a publication in Nature Immunology

• PLRC Seminars

- March 28 @ noon Dr. Luke Wiseman S120 BST & Zoom
- April 18th @ noon Dr. David Wink, 1105 Scaife & Zoom
- April 25th @ noon Dr. Irina Kirpich, S123 BST & Zoom

• Announcements

- CLA Program & Events
- Pathology Retreat registration is OPEN!
- AASLD "Liver Meeting" Abstract Portal OPEN!

• Funding Opportunities

• Want Ads :

- 2 Open positions posted
- 4 Jobseekers posted

Please acknowledge all support from the PLRC in your publications and presentations. Note the grant number and all CORES used. (NIH/NIDDK P30DK120531)

Please continue to share your relevant accolades (grants, publications, awards and other news worthy items) with us, as it relates to the PLRC mission, so we can share with all of our members.

Visit the PLRC website (www.livercenter.pitt.edu) for up-to-date news, and upcoming seminar and event information.

Contact Aaron Bell (bellaaro@pitt.edu) if you have specific questions or suggestions.

FACULTY HIGHLIGHT

Bharat Bhushan, MS, PhD,

Assistant professor in the pathology department and former PLRC P&F awardee received R01 funding from the NIH/NIDDK for his grant entitled "*Diverging roles of EGFR and MET in acetaminophen-induced acute liver injury*". **Congratulations!**



CONGRATULATIONS
NIH FUNDING

Bharat Bhushan
Assistant Professor, Pathology

Diverging roles of EGFR and MET in acetaminophen-induced acute liver injury



FACULTY HIGHLIGHT

Dr. Wen Xi MD, PhD., Endowed Chair and Professor in the department of Pharmaceutical Sciences was elected as 2022 AAAS Honorary fellow of the American Association for the **Advancement of Science (AAAS)**. **Congratulations!**

"AAAS Fellows are a distinguished cadre of scientists, engineers and innovators who have been recognized for their achievements across disciplines, from research, teaching, and technology, to administration in academia, industry and government, to excellence in communicating and interpreting science to the public."

[PITTSWIRE ARTICLE](#)



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Faculty Highlight

Dr. Juliane I. Beier, PhD.,

Assistant Professor in the Department of Medicine, in partnership with the US Environmental Protection Agency published a study on the effects of Vinyl Chloride exposure in the journal of Toxicological Sciences, entitled:

“Vinyl Chloride Enhances High Fat Diet-Induced Proteome Alterations in the Mouse Pancreas Related to Metabolic Dysfunction”.

Ge Y, Bruno M, Nash MS, Haykal Coates N, Chorley BN, Cave MC, Beier JI. *Toxicol Sci.* 2023 Mar 9:kfad024. doi: 10.1093/toxsci/kfad024. Epub ahead of print. PMID: 36892438.

[FULL TEXT LINK](#)

Abstract:

Alterations in physiological processes in pancreas have been associated with various metabolic dysfunctions and can result from environmental exposures, such as chemicals and diet. It was reported that environmental vinyl chloride exposure, a common industrial organochlorine and environmental pollutant, significantly exacerbated metabolic-related phenotypes in mice fed concurrently fed high-fat diet but not low-fat diet. However, little is known about the role of the pancreas in this interplay, especially at a proteomic level. The present study was undertaken to examine the protein responses to VC exposure in pancreas tissues of C57BL/6J mice fed LFD or HFD, with focus on the investigation of protein expression and/or phosphorylation levels of key protein biomarkers of carbohydrate, lipid, and energy metabolism, oxidative stress and detoxification, insulin secretion and regulation, cell growth, development, and communication, immunological responses and inflammation, and biomarkers of pancreatic diseases and cancers. We found that the protein alterations may indicate diet-mediated susceptibility in mouse pancreas induced by HFD to concurrent exposure of low levels of inhaled VC. These proteome biomarkers may lead to a better understanding of pancreas-mediated adaptive or adverse response and susceptibility to metabolic disease.

In recognition of her great contributions and success in the field, Dr. Beier was recently elected to the office of Vice President-elect in the Society of Toxicology, Mechanisms Specialty Section, the societies' largest specialty section. Congratulations!

SOT Society of
Toxicology
Toxicological Sciences



**Vinyl Chloride
Enhances High Fat
Diet-Induced
Proteome Alterations
in the Mouse
Pancreas Related to
Metabolic
Dysfunction**

Toxicological Sciences, kfad024,
<https://doi.org/10.1093/toxsci/kfad024>

Juliane I Beier, PhD.



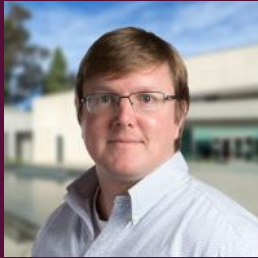
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PLRC SEMINARS

- March 28 12:00 pm – 1:00 pm **HYBRID**
S120 BST & via Zoom



R. Luke Wiseman, Ph.D.

Professor: Department of
Molecular Medicine
The Scripps Research
Institute

Title: Pharmacologically Targeting the Unfolded Protein Response: *Where do we go from here?*

- April 18 12:00 pm – 1:00 pm **HYBRID**
1105 Scaife Hall & via Zoom



David Wink Jr, PhD.

Deputy Chief
Cancer Innovation Laboratory
National Cancer Institute

Title: TBD

- April 25 12:00 pm – 1:00 pm **HYBRID**
S123 BST & via Zoom



Dr. Irina Kirpich, PhD, MPH

Associate Professor of
Medicine
Department of Microbiology
and Immunology
University of Louisville

TITLE: TBD

Faculty Highlight

nature immunology
**IFN γ -induction of
TH1-like regulatory T
cells controls
antiviral responses**



Marlies Meisel, PhD.,
Assistant Professor in
the Department of
Immunology and former
PLRC Pilot &
Feasibility
grant awardee,
coauthored a
manuscript in Nature
Immunology entitled,
“IFN γ -induction of T_H1-

like regulatory T cells controls antiviral responses”, which
was an extension of her P&F research project.

Gocher-Demske, A.M., Cui, J., Szymczak-Workman, A.L. et al. Nat Immunol (2023). <https://doi.org/10.1038/s41590-023-01453-w> [PDF link](#)

ABSTRACT: Regulatory T (T_{reg}) cells are an immunosuppressive population that are required to maintain peripheral tolerance and prevent tissue damage from immunopathology, via anti-inflammatory cytokines, inhibitor receptors and metabolic disruption. Here we show that T_{reg} cells acquire an effector-like state, yet remain stable and functional, when exposed to interferon gamma (IFN γ) during infection with lymphocytic choriomeningitis and influenza A virus. T_{reg} cell-restricted deletion of the IFN γ receptor (encoded by *Ifngr1*), but not the interleukin 12 (IL12) receptor (encoded by *Il12rb2*), prevented T_H1-like polarization (decreased expression of T-bet, CXC motif chemokine receptor 3 and IFN γ) and promoted T_H2-like polarization (increased expression of GATA-3, CCR4 and IL4). T_H1-like T_{reg} cells limited CD8⁺ T cell effector function, proliferation and memory formation during acute and chronic infection. These findings provide fundamental insights into how T_{reg} cells sense inflammatory cues from the environment (such as IFN γ) during viral infection to provide guidance to the effector immune response. This regulatory circuit prevents prolonged immunoinflammatory responses and shapes the quality and quantity of the memory T cell response.

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ANNOUNCEMENTS

[Communityliveralliance.org](https://communityliveralliance.org)



- **2023 Pathology Research Day & Retreat [May 17th 2023](#). Registration is OPEN!**
Abstracts Due by April 7th to Shanning Wan (shw126@pitt.edu).
Register at: <https://www.path.pitt.edu/events/department-pathology-2023-research-day-and-retreat>
- **AASLD “THE LIVER MEETING” Nov. 10-14, 2023 @ Bostn MA.**
Abstracts due by 5/24/23: [Link to Abstract Submission Site](#)

WANT ADS

This section is available for PLRC members to communicate wants or needs in your laboratories.

Available positions / Collaboration ideas / Equipment needs

Please send any “wants/needs” to be advertised to Aaron Bell (bellaaro@pitt.edu)

OPEN POSITIONS:

- **Postdoc/Technician: [Bone cell Differentiation](#) \$45K; PI: Harry Blair: US citizen ONLY! Contact: 412-383-9616 or hcblair@pitt.edu**
- **Postdoc: [engineering immune tolerance by combining mRNA technologies, nanoparticles and epigenetic editing \(CRISPR\)](#): PI: Dr. Samira Kiani skiani@pitt.edu ([more JOB details here](#))**

JOB SEEKERS:

- **[An ECFMG certified medical graduate](#) from Hyderabad, India, currently working as a research fellow at Mayo Clinic, Rochester, MN in the department of Gastroenterology and Hepatology Artificial Intelligence lab is seeking a 1 yr paid research fellow position starting from June/July 2023 in Gastroenterology at UPMC ([More info and CV available here](#)) or email bellaaro@pitt.edu**
- **[Research Assistant Professor](#), Pathology Dept, UPMC Hillman Cancer Ctr. With experience in Bioinformatics, proteomics, genomics, molecular biology. liz45@pitt.edu [link to CV](#)**
- **[Senior Lab Scientist](#), UPMC Dept of Pediatrics, with broad molecular biology experience and work in liver and breast cancer. suk85@pitt.edu [Link to CV](#)**
- **Research Tech/Assistant/Associate: Clinical molecular and microbiology & virology experience Seeking position July 2023. anneudoh22@gmail.com [Link to Resume](#)**

FUNDING OPPORTUNITIES

Gilead Research Scholars-Liver Disease program. [Junior Faculty . May 1, 2023](#)

- **To see all NIH Grants sorted by week, please visit: [NIH Guide: 2023](#)**

- **Or click below:**

Week of: [Mar 24](#) [Mar 17](#) [Mar 10](#)

[Click here](#) for all current NIDDK Funding opportunities