

MAY 2020

DEPARTMENT NEWS

Congratulations To..

Dr. Beth Tran on her promotion to Full Professor.

Dr. Clint Chapple on receiving the Fellow of American Society of Plant Biologists (ASPB) Award! Established in 2007, the Fellow of ASPB award may be granted in recognition of distinguished and long-term contributions to plant biology and service to the Society by current members in areas that include research, education, mentoring, outreach, and professional and public service. Current members of ASPB who have contributed to the Society for at least 10 years are eligible for nomination. Recipients of the Fellow of ASPB honor, which may be granted to no more than 0.2% of the current membership each year, receive a certificate of distinction and a lapel pin.

Dr. Orla Hart on receiving the CoA Outstanding Teaching Award for Clinical Faculty.

GRANTS

In the past few months, several faculty members have received the following grants:

- **Drs. Clint Chapple** (PI) and **Brian Dilkes** (co-PI) received \$2,460,615 over a three-year grant period from the Office of Science, U.S. Department of Energy for their proposal entitled “Coupling Metabolic Source Isotopic Pair Labeling and Genome Wide Association for Metabolite and Gene Annotation in Plants”
- **Drs. Brian Dilkes** (co-PI) and **Majid Kazemian** (co-Pi) received \$499,982 from the NIH for their proposal “Nutrigenetics of Intestinal Ca Absorption”
- **Dr. Vikki Weake** (PI) received \$376,148 over two-year grant period from the NIH for her proposal “R-Loops as a Novel Driver of Photoreceptor Aging”
- **Dr. Andy Mesecar** received for the 3rd year, \$252,097 from the NIH/NIAID for his proposal “Structural Genomics Centers for Infectious Diseases”
- **Dr. Andy Mesecar** received \$205,020 from the NIH/NIAID for his proposal “Structural Genomics Centers for Infectious Diseases”
- **Dr. Andy Mesecar** received \$25,000 from Pfizer for Drug Testing COVID-19
- **Dr. Joe Ogas** received \$917,686, a three-year grant, from the National Science Foundation for his proposal entitled “Functional analysis of a novel epigenetic pathway incorporating a CHD chromatin remodeler, the histone variant H2A.Z, and the repressive modification H3K27me3”.

Awards

Due to the COVID-19 pandemic, the annual Spring Awards Convocation was cancelled.

We still want to recognize everyone and their accomplishments! For the full list of award winners click the link:

[Biochemistry Awards 2020.pdf](#)

NEW FACES



Jenny Wilson joined the department in October 2019 as an associate administrative assistant/seminar coordinator. She lives in Fowler, with her husband and 4 kids. Prior to coming to Purdue, she worked for the Benton County Economic Development office. When she isn't running to her kids' sports events, she likes to read, shop and cook. She's excited to be here at Purdue!



Rhonda Hostetter joined the department in January 2020 as the new lead administrative assistant. She has been at Purdue since 2004 where she started at a Secretary IV with ITaP. Prior to coming to Purdue, she worked in public education for the Delphi Community School Corporation. Rhonda and her husband moved to Delphi 26 years ago from northwest Indiana. She has two adult children and one granddaughter born this year. Some of Rhonda's outside interests include walking, running, cooking, reading, traveling and spending time with family

Dr. Yanyan Du who was a research scientist in Dr. Andy Tao's lab has returned as a visiting scholar for one year. (February 2020-2021)

Jeffrey Simpson (post doc, Chapple lab) was transferred to a research scientist staff position effective 1/5/2020

Saying Goodbye....

Erin Sorlein- Postdoc (Ogas lab) left on December 31, 2019. We wish her luck on her future adventures!

GRADUATE STUDENT NEWS

Graduate students **Samantha Lee** (Golden lab) and **Lee Stunkard** (Lohman lab) graduated in December 2019. We wish them luck on their future adventures!

Next Stop: Sam lives in Chicago and will travel as a Field Applications Scientist for TTP Labtech.



Next Stop: Lee will be a Postdoc at Stanford University in Dr. Chaitan Khosla's lab.



RECENT PUBLICATIONS

Mao, X., **V.M. Weake** and **C. Chapple**. 2019. Mediator function in plant metabolism revealed by large-scale biology. *Journal of experimental botany*. **70**(21): 5995-6003.

Jl Kim, X. Zhang, PE Pascuzzi, CJ Liu, **C. Chapple**. 2019. Glucosinolate and phenylpropanoid biosynthesis are linked by proteasome dependent degradation of PAL. *New Phytologist*. **225** (1) 154-168.

Ibrahim IM, H.Wu, R Ezhov, G Kayanja, S.Zakharov, Y.Du, W.A.**Tao**, Y.Pushkar,W.A.Cramer, **S. Puthiyaveetil** (2020) An evolutionarily conserved iron-sulfur cluster underlies redox sensory function of the Chloroplast Sensor Kinase. *Communications Biology* **3**(1): 13.

Macadlo LA, I.M.Ibrahim, **S.Puthiyaveetil** (2020) Sigma factor 1 in chloroplast gene transcription and photosynthetic light acclimation. *Journal of Experimental Botany*. **71**(3): 1029-1038.

McKenzie SD, I.M.Ibrahim, U.K. Aryal, **S.Puthiyaveetil** (2020) Stoichiometry of protein complexes in plant photosynthetic membranes. *BBA – Bioenergetics* **1861**(2): 148141.

Wang P., C.C. Hu, Y. Du, P. Zhu, C. Zhao, X. Fu, C. Zhang, J.S. Paez, A.P. Macho, **W.A. Tao**, J.K. Zhu. 2020. Mapping proteome-wide targets of protein kinases in plant stress responses. *Proc Natl Acad Sci U.S.A.* **117**(6):3270-3280.

Wang Q., G. Qin, M. Cao, R. Chen, Y. He, L. Yang, Z. Zeng, Y. Yu, Y. Gu, W. Xing, **W.A. Tao**, T. Xu. 2020. A phosphorylation-based switch controls TAA1-mediated auxin in biosynthesis in plants. *Nature Communications* **11**(1):679.

Aguilar H.A., A.B. Iliuk, I.H. Chen, **W.A. Tao**. 2020. Sequential phosphoproteomics and N-glycoproteomics of plasma-derived extracellular vesicles. *Nature Protocol* **15**(1):161-180.

Kolva, M., E. West, N. Kunz, D. Chauss, E. A. Moseman, J. Rahman, T. Freiwald, M. Balmer, J. Lotscher, S. Dimeloe, E.C. Rosser, L.R. Wedderburn, K.D. Mayer-Barber, A. Bohrer, P. Lavender, A. Cope, L.Wang, M.J.Kaplan, N.M.Moutsopiulos, D. McGavern, S.M.Holland, C.Hess, **M.Kazemian**,B.Afzali, C.Kemper, (2020) Diapedesis-Induced Integrin Signaling via LFA-1 Facilitates Tissue Immunity by Inducing Intrinsic Complement C3 Expression in Immune Cells *Immunity* **52** (513-527).

Ren, M., **M. Kazemian**, M. Zheng, J.P. He, P.Li, J. Oh, W. Liao, J. Li, I. Rajaseelan, B.L.Kelsall, G. Peltz, W.J. Leonard. 2020. Transcription Factor p73 Regulates Th1 Differentiation. *Nature Communications* **11** (1) 1475.

Martinez-Fabregas, J., S. Wilmes, L.Wang, M.Hafer, E. Pohler, J. Lokau, C.Garbers, A. Cozzani, P.K.Fyfe, J.Piebler, **M. Kazemian**, S. Mitra, I. Moraga. 2019. Kinetics of Cytokine Receptor Trafficking Determine Signaling and Functional Selectivity. *Elife* **8**.

Chakravorty, S., B.Yan, C.Wang, L. Wang, J.T. Quaid, C.F. Lin, **S. Briggs**, J. Majunder, D.A. Canaria, D. Chauss, G. Chopra, M. Olsen, B. Zhao, B. Afzali, **M. Kazemian**. 2019. Integrated Pan-Cancer Map of EBV-Associated Neoplasms Reveals Functional Host-Virus Interactions. *Cancer Research* **79** (23) 6010-6023.

GOING THE EXTRA MILE

Gilbert Kayanja, Steven D. McKenzie, Iskander Ibrahim and Sujith Puthiyaveetil attended the 45th Annual Midwest/Southeast Photosynthesis meeting, Turkey Run, October 25-27, 2019.

Iskander gave an oral presentation entitled “An evolutionarily conserved iron-sulfur underlies sensory function of the Chloroplast Sensor Kinase”. Congratulation to Iskander for winning the prize for best talk by a postdoctoral researcher!

Steven gave an oral presentation entitled “Stoichiometry of electron transport complexes in plant photosynthetic membrane”.

Gilbert presented a poster entitled “Redox and light dependent plastid gene transcription in *Phaeodactylum tricornutum*”.

Three members of the Department of Biochemistry attended the 2020 DOE Genomic Sciences Program meeting in Washington DC in February. Clint Chapple, Jeff Simpson, and Brian Dilkes presented on their grant entitled “Coupling Metabolic Source Isotopic Pair Labeling and Genome Wide Association for Metabolite and Gene Annotation in Plants”. Brian Dilkes attended because he is part of a multi-institutional team conducting a DOE-funded project led by the Donald Danforth Center entitled “Elucidating the Molecular Mechanisms Underlying Drought Resilience in Sorghum”.

Orla Hart and Sherry Pogranichniy attended the ASBMB North Central Regional Meeting “Molecules in the Midwest” on March 7 in Madison, Wisconsin. They learned more about hosting a regional Student Chapters meeting so that the Purdue Biochemistry Club might host a future meeting.

Marco Hadisurya received a travel stipend award (\$500) to take a course titled “Design and Analysis of Quantitative proteomic Experiments: Introduction to Statistical Methods and Practical Examples using Skyline, R, and MS State” and attend the US Human Proteome Organization (US HUPO) 2020 conference in Seattle WA on March 6th-11th, 2020. (The conference was cancelled due to coronavirus outbreak and is currently being rescheduled).

Marco received a registration fee waiver (\$400) and a travel fellowship (\$1825) to take course titled “Targeted proteomics with Skyline, Intermediate R and data visualization, Statistics for quantitative MS, and Capstone: Case studies in data-independent acquisition (DIA)” at the May Institute on Computation and Statistics for Mass Spectrometry and Proteomics at Northeastern University, Boston, MA on April 27-May 8, 2020. (Conference was cancelled due to COVID-19).