DEPARTMENT OF BIOLOGICAL SCIENCES
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BIOsphere

March 2022 Volume 9 Issue 1

Awards and Recognitions

Congratulations to **Dr. James H. Kennedy**, Regents Professor in the Department of Biological Sciences and director of the Elm Fork Education Center and Natural Heritage Museum, for receiving the UNT Foundation Eminent Faculty Award. This faculty award recognizes a faculty member, who has made outstanding and sustained contributions to scholarly-creative activity, teaching, and service and has served as an inspiration to the University of North Texas community. This award is one of the university's highest faculty honors and is given to one full-time faculty member annually. Read more about the award and the winners at https://vpaa.unt.edu/fs/recognition/SFE-award-winners22. Watch the video tribute at https://vimeo.com/696307828/34e729f99b

Dr. James Kennedy

Award Presentation

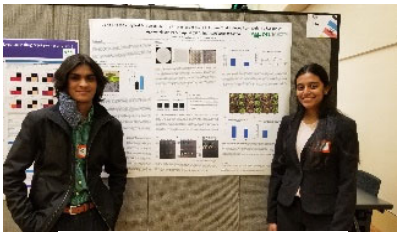
Congratulations to University Distinguished Research Professor Emeritus **Dr. Richard Dixon** on being named the ASPB Pioneer by the American Society of Plant Biologists. Dr. Dixon served as ASPB President (2015-2016). "Pioneer Members of ASPB provided the education and research training for many members of the plant biology community, and in some cases the leadership of the Society and its journals. Their recognition as a Pioneer comes from former graduate students, postdocs, colleagues, family members, and friends who collectively contributed $5,000 or more to honor them" (https://aspb.org/membership/aspb-pioneer-members/).

Dr. Richard Dixon

Sabrina Moore

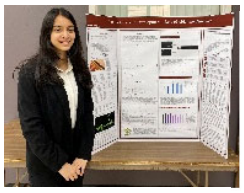
Congratulations to **Sabrina Moore** for receiving the Faculty Senate's Outstanding Teaching Fellows/Teaching Assistants Award for the 2021-22 academic year (https://facultysenate.unt.edu/faculty-senate-awards). This award recgonizes and celebrates outstanding graduate students who have served as Teaching Fellows or Teaching Assistants during the previous calendar year and is accompanied with a $500 scholarships. Candidates nominated for these awards have demonstrated superior teaching and academic performance as graduate students.

UNT students conducting research in Biology labs won big at the recently concluded Fort Worth Regional Science and Engineering Fair (FWSERF), which was held virtually in February (https://fwrsef.org/), and the Texas Science and Engineering Fair (TXSEF), which was held in March at College Station (https://txsef.tamu.edu/awards/category-awards/).



Siddhartha Shah and Shreya Nair

Texas Academy of Mathematics and Science (TAMS) student **Shreya Nair** and Guyer High School student **Siddhartha Shah's** project "*Using a Yeast-2-Hybrid Screen to Identify Interactors of RGPA1: A Gene That Induces Plant Defense Responses Against Green Peach Aphid (GPA) in Arabidopsis thaliana*" received 1st place in the Plant Sciences Senior Division Category and was placed among the Best of Fair Senior Division at FWSERF. Their project also received two special awards: 2nd place for the Lockheed Martin Leadership Association Award and 3rd place for the University of Texas-Arlington College of Science Award. As a Best of Fair, their project received direct entry to the Regeneron International Science and Engineering Fair, which will be held in Atlanta in May 2022. Shreya and Siddhartha Shah's project also received 2nd in the Plant Sciences Senior Division category at the TXSEF. Dr. Anil Girija is Shreya and Siddhartha's research mentor.



Simali Shah

Etash Bhat

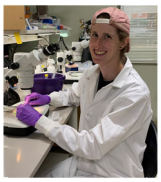
TAMS student **Simali Shah**'s project '*The Role of Abietane Diterpenoid on Plant Defense and Development*', was placed 2nd in the Plant Sciences Senior Division category at FWSERF and 3rd in the Plant Sciences Senior Division category at the TXSEF. Simali's mentor is graduate student Mohammad Alatoum.

Etash Bhat's project "*Conversion of Specific Single-Carbon Compounds to γ-Aminobutyric Acid (GABA) Via Native and Heterologous Expression in the Methylococcus capsulatus Metabolic Biochemical Cascade*" was awarded 1st place in the Cellular and Molecular Biology Senior Division at TXSEF. Etash's mentor is Assistant Professor Dr. Calvin Henard.

Staff and Student News

Dr. Jaime Barros, postdoctoral associate in Dr. Richard Dixon's lab in the BioDiscovery Institute and Department of Biological Sciences, was awarded the Future Faculty – Faculty Diversity (PFFFD) Scholarship by the PPFFD Postdoctoral Program at the University of Missouri – Columbia. The primary goal of the PFFFD program is to recruit exceptional postdoctoral scholars to retain in tenure-track faculty positions and increase faculty diversity at Mizzou (https://gradschool.missouri.edu/postdoctoral-education/preparing-future-faculty-postdoctoral-program-for-faculty-diversity/). Dr. Barros will be a member of the Division of Plant Science & Technology and the Interdisciplinary Plant Group at the University of Missouri. Dr. Barros' research interests focus on the biochemistry and genetic engineering of plant natural products. Dr. Barros said, "I would like to take this opportunity to show my gratitude to Dr. Dixon and the Department for giving me the opportunity to work with you over these last 9 years." Dr. Barros will start in this new position on August 1st, 2022.

Dr. Jaime Barros



Jordan LaChance

Congratulations to **Jordan LaChance** on being recognized by the UNT chapter #230 for membership in The Honor Society of Phi Kappa Phi. Membership in The Honor Society of Phi Kappa Phi is earned based on outstanding academic performance. Their mission is "to recognize and promote academic excellence in all fields of higher education and engages the community of scholars in service to others." (https://www.phikappaphi.org/)

The Transfer Student Success Initiative Program in the Department of Biological Sciences works with our community college transfer students to improve retention and success, while simultaneously reducing time for completion. It connects our transfer students with our advising team and engages them before and after transfer to UNT. As part of this program, our transfer student workshop was held on March 23rd and April 21st. This program is supported by a Transfer Student Success Initiative Grant from the Office of Faculty Success to Biology Advisors Drs. Lisa Welch, Hyunju Kim, Purnima Neogi, Ana Hoeinghaus, Jim Bednarz, and Jessica Moore.

Biology Research in the News

Broader Impacts in Plant Communication. Dr. Kent Chapman, director of the BioDiscovery Institute and Regents Professor of plant biochemistry, and Dr. Mina Aziz, research assistant professor of Biological Sciences, have received a $1 million grant from the National Science Foundation to look into the process used by plants and microorganisms to communicate. They're studying the role of fatty acid amide hydrolases (FAAHs) in the signaling process. Dr. Aziz solved the crystal structure of one protein family member, and that achievement has allowed them to conduct their current research, which ultimately could help improve the health of crops in the field and lead to a greater understanding of chemical communications in other species. An undergraduate research class also is participating in the project. "Students learn a little bit about when things go wrong how to troubleshoot," Dr. Chapman says. "And when things go right, they're feeling just as proud as I am about the outcome." Read the full article and find out more about the research, at https://research.unt.edu/news/broader-impacts-plant-communication

Big Problems, Big Bold Solutions. Eight TAMS students make up the first UNT student group to participate in the iGEM Competition, in which teams from around the world each choose a problem they believe can be solved by synthetic biology. The UNT team is trying to mitigate the environmental impact of nylon production, one of the largest producers of nitrous oxide — which is about 300 times stronger than carbon dioxide in the atmosphere. Their idea is to recycle methane gas from the air into nylon, creating a biological process for its sustainable production through chemicals made by bacteria, rather than making it out of fossil fuels. That would also help reduce methane, another significant contributor to global warming. Mentored by Drs. Calvin Henard and Mauricio Antunes, assistant professors of biological sciences, the team members have genetically engineered the bacteria required and are optimistic they can prove it successful in a few months. Read the full article and find out more about the research and the team, at https://research.unt.edu/news/big-problems-big-bold-solutions

Staff Appointments

Welcome to our new staff, **Shelby Garry** and **Luis Revilla Mata**.

Shelby joined the Department of Biological Sciences as the Biology Stockroom Specialist. In this new role Shelby will assist with maintaining inventory and procurement for research and teaching. Shelby attended UNT pursuing a degree in Marketing and Advertising. Shelby has several years of management and sales experience, most recently being the Wine Supervisor at Total Wine and More. In her five years there she taught wine classes, handled ordering for customers and displays, training employees, and managed the wine inventory. In the early days of COVID, Shelby established the web ordering process for her store, took on training new team members, and managed her sales team. She is looking forward to helping and being part of the UNT family.

Shelby Garry

Luis Revilla Mata

Luis joined the Department of Biological Sciences as the Student and Program Coordinator. In his role as the Student and Program Coordinator Luis will coordinate the Biology Advising Office operations. In addition, Luis will provide staff oversight of departmental graduate program, coordinate institutional effectiveness assessment and reporting, and assist the curriculum and scholarship committees. Luis graduated from UNT in Spring '21 with a BS in Ecology for Environmental Science. After graduation he worked for the National Ecological Observatory Network (NEON) doing ecological sampling in the Lyndon B. Johnson Grassland as well as at the Marvin Klemme Range Research Station in Oklahoma.

Thesis and Dissertation

Congratulations to our graduate students who successfully defended their thesis/dissertation.

Angélica Valencia Torres

Janak Sunuwar

Craig McCain

Angélica Valencia Torres successfully defended her Ph.D. dissertation in Environmental Science titled "*Ecosystem Services and Sustainability: A Framework for Improving Decision-Making in Urban Areas*". Her dissertation seeks to improve our understanding of the role of ecosystem services at the landscape level and provides an operational framework to support sustainable land use planning in the context of food security. Angelica's major professors were Drs. Sam Atkinson and Chetan Tiwari.

Janak Sunuwar successfully defended his Ph.D. dissertation titled "*A sensitive and robust machine learning-based framework for deciphering antimicrobial resistance*". Janak's major professor was Dr. Rajeev Azad. Janak has accepted a Bioinformatics Analyst position at University of California San Diego, School of Medicine.

Craig McCain successfully defended his MS thesis in Environmental Science titled "*Metacommunity dynamics of medium- and large-bodied mammals in the LBJ National Grasslands*". Dr. Jaime Jiménez (UNT) was his major professor. Craig will start Ph.D. in Biology at UNT this upcoming fall semester with Dr. David Hoeinghaus as his major professor.

Arland Alberts successfully defended her Ph.D. dissertation titled "*Assessing Student Perceptions in Short Research Experiences and Course Research Experiences in Undergraduate Biology Laboratories*". Arland's major advisor was Dr. Lee Hughes.

Jaya Swetha Gullapalli successfully defended her MS thesis titled "*Investigation of Gene Functions in the Cyanotrophic Bacterium Pseudomonas fluorescens NCIMB 11764*". Jaya's major professor was Dr. Daniel Kunz.

Extramural Grants and Contracts

Aquatic ecosystem restoration research and development for Lake Austin, Texas. U.S. Army Corps of Engineers and City of Austin. PIs – Atkinson (UNT) and Schad (Corps of Engineers); 3-year renewal, $150,000.

Elucidating Cyclic Fatty Acid Biosynthesis and Compartmentalization to Improve Cottonseed Value. USDA- National Institute of Food and Agriculture (NIFA). Co-PIs -- Patrick Horn (East Carolina State University) and Kent Chapman (UNT), $294,000.

Genetic Manipulation of Cottonseed Protein Reserves. Cotton Incorporated. PI: Kent Chapman, $121,000.

Pest- and pathogen- resistant cotton through gene editing. Cotton Incorporated. PIs: Roisin C. McGarry and Brian G. Ayre, $25,000.

Redesigning the cotton plant's architecture to improve yield and quality. Cotton Incorporated. PIs: Roisin C. McGarry and Brian G. Ayre, $25,000.

United States Department of Energy. The Center for Bioenergy Innovation- Lignin Design and Valorization. (Richard A. Dixon, PI; Fang Chen, Co-PI). $250,000.

Publications

Adivi, A., Lucero, J., Simpson, N., McDonald, J.D., and Lund, A.K. (2022) Traffic-generated air pollution - Exposure mediated expression of factors associated with demyelination in a female apolipoprotein E-/- mouse model. Neurotoxicol Teratol. 90: 107071. https://doi.org/10.1016/j.ntt.2022.107071

Adolfo, L.M., Rao, X., and Dixon, R.A. (2022) Identification of *Pueraria* spp. through DNA barcoding and comparative transcriptomics. BMC Plant Biology 22: 10, https://doi.org/10.1186/s12870-021-03383-x

Arias, C.L.[1], Quach, T. [1], Nguyen, H., Huynh, T., Moretti, A., Shi, Y., Guo, M., Rasoul, A., Van, K., McHale, L.K., Clemente, T., Alonso, A.P.*, and Zhang, C.*. (2022) Expression of AtWRI1 and AtDGAT1 during soybean embryo development influences oil and carbohydrate metabolism. Plant Biotechnology Journal. [1]These authors contributed equally to this work; * Co-corresponding authors. https://doi.org/10.1111/pbi.13810

Atkinson, S.F., Kala, A.B. and Tiwari, C. (2022) Cascading effects of COVID-19 on population mobility and air quality: An exploration including place characteristics using geovisualization", Geospatial Health, Vol. 17, DOI 10.4081/gh.2022.1056, 12 pgs. https://www.geospatialhealth.net/index.php/gh/article/view/1056

Bonatesta, F., Emadi, C., Price, E., Wang, Y., Greer, J., Xu, E., Schlenck, D., Grosell, M., and Mager, E. (2022) The developing zebrafish kidney is impaired by Deepwater Horizon crude oil early-life stage exposure: a molecular to whole-organism perspective. Science of the Total Environment. 808: 151988.

Busta, L., Chapman, K.D., Cahoon, E.B. (2022) Better together: Protein partnerships for lineage-specific oil accumulation. Current Opinion in Plant Biology 66: 102191. https://doi.org/10.1016/j.pbi.2022.102191.

Dongus, J.A., Bhandari, D.D., Penner, E., Lapin, D, Stolze, S.C., Harzen, A., Patel, M., Archer, L., Dijkgraaf, L., Shah, J., Nakagami, H., and Parker, J.E. (2022) Cavity surface residues of PAD4 and SAG101 contribute to EDS1 dimer signaling specificity in plant immunity. Plant Journal, First published: 24 March 2022. https://doi.org/10.1111/tpj.15747

Kang, B.H., Anderson, C.T., Arimura, S., Bayer, E., Bezanilla, M., Botella, M.A., Brandizzi, F., Burch-Smith, T.M., Chapman, K.D., Dünser, K., Gu, Y., Jaillais, Y., Kirchhoff, H., Otegui, M.S., Rosado, A., Tang, Y., Kleine-Vehn, J., Wang, P., Zolman, B.K. (2022) A glossary of plant cell structures: Current insights and future questions, Plant Cell, 34(1): 10–52. https://doi.org/10.1093/plcell/koab247

Lee, J., Messerschmidt, V., Bonatesta, F., Naderi, A., Chintapula, U., Nguyen, K., Cao, H., and Mager, E. (2022) In vivo evaluation of non-viral NICD plasmid-loaded PLGA nanoparticles in developing zebrafish to improve cardiac function. Frontiers in Physiology. 13: 819767.

Li, M., Pu, Y., Meng X, Chen, F., Dixon, R.A. and Ragauskas, A.J. (2022). Strikingly high amount of tricin-lignin observed from Vanilla (*Vanilla planifolia*) aerial roots. Green Chemistry 24: 259. https://doi.org/10.1039/D1GC03625D. !

Liao, P., Lechon, T., Romsdahl, T., Woodfield, H., Fenyk, S., Fawcett, T., Wallington, E., Bates, R.E., Chye, M.L., Chapman, K.D., Harwood, J.L., Scofield, S. (2022) Transgenic manipulation of triacylglycerol biosynthetic enzymes in *B. napus* alters lipid-associated gene expression and lipid metabolism. Nature Scientific Reports 12, 3352. https://doi.org/10.1038/s41598-022-07387-x

Malhotra, R., Jiménez, J.E., and Harris, N.C. (2021) Patch characteristics and domestic dogs differentially affect carnivore space use in fragmented landscapes in southern Chile. Diversity and Distributions 27:2190-2203. https://doi.org/10.1111/ddi.13391

Nayek, S., Lund, A.K., and Verbeck, G.F. (2022) Inhalation exposure to silver nanoparticles induces hepatic inflammation and oxidative stress, associated with altered renin-angiotensin system signaling, in Wistar rats. Environ Toxicol. 37:457-467. doi: 10.1002/tox.23412.

Phillippi, D. T., Daniel, S., Pusadkar, V., Youngblood, V. L., Nguyen, K. N., Azad, R. K., McFarlin, B. K., & Lund, A. K. (2022) Inhaled diesel exhaust particles result in microbiome-related systemic inflammation and altered cardiovascular disease biomarkers in C57Bl/6 male mice. Particle and Fibre Toxicol. 19(1): 10. https://doi.org/10.1186/s12989-022-00452-3.

Price, E., Bonatesta, F., McGruer, V., Schlenck, D., Roberts, A., and Mager, E. (2022) Exposure of zebrafish larvae to water accommodated fractions of weathered crude oil alters steroid hormone concentrations with minimal effect on cholesterol. Aquatic Toxicology. 242: 106045.

Schüttler, E., L. Saavedra-Aracena & J.E. Jiménez. (2022) Spatial and temporal plasticity in free-ranging dogs in sub-Antarctic Chile. Applied Animal Behaviour Science. https://doi.org/10.1016/j.applanim.2022.105610

Zhou, C., Wang, X., Docampo-Palacios, M., Xiao, X., Sanders, B.C., Engle, N.L., Tschaplinski, T.J., Hendry J., Maranas, C., Chen, F. and Dixon, R.A. (2022) Developmental changes in lignin composition are driven by both monolignol supply and laccase specificity. Science Advances 8, eabm8145, 9 March 2022. https://doi.org/10.1126/sciadv.abm8145

Oral Presentations

Chemical-guided identification of primary metabolic targets in Physaria fendleri: An ACCase and plastidic malic enzyme connection? BioDiscovery Institute Seminar, University of North Texas, Denton, TX, March 7, 2022. Talk by Christopher Johnston (postdoc Alonso lab).

Expression of AtWRI1 and AtDGAT1 during soybean embryo development influences oil and carbohydrate metabolism. SOYBEAN BREEDERS WORKSHOP. Virtual conference, February 14-16th, 2022. Invited talk by Dr. Arias. Co-authors, Quach T, Nguyen H, Huynh T, Moretti A, Shi, Y; Guo M; Rasoul A, Van K, McHale LK, Clemente T, Alonso AP and Zhang C.

Expression of AtWRI1 and AtDGAT1 during soybean embryo development influences oil and carbohydrate metabolism. BDI seminar series, March 7th, 2022. Presentation by Dr. Arias. Co-authors, Quach T, Nguyen H, Huynh T, Moretti A, Shi, Y; Guo M; Rasoul A, Van K, McHale LK, Clemente T, Alonso AP and Zhang C.

Functional Analysis of Candidate Genes Involved in Oil Storage and Stability in Pennycress. 2022 Genomic Science Program Annual PI Meeting (Virtual), February 28-March 2. Talk by Dr. Ana P. Alonso. Co-authors: Chapman K., Grotewold E.

Inhalation Exposure to Diesel Exhaust Particles in Conjunction with a High-fat Diet Alters Expression of Receptors Associated with COVID-19 Infection, which is Mitigated by Probiotic-Treatment in C57Bl/6 Male Mice. Platform Presentation, Texas A&M University, College Station Texas, January 13-14, 2022. Lone Star Society of Toxicology (SOT), Featured Undergraduate Student Presentation by Kayla Nguyen (Biology Undergraduate Student and entering Ph.D. student Fall 2022). Co-authors: Sarah Daniel (previous Ph.D. student), Danielle Phillippi (previous Ph.D. student), Leah Schneider (Ph.D. student), and Amie Lund.

Investigating function of candidate genes involved in lipid storage and stability in pennycress (*Thlaspi arvense* L.) BDI Retreat, February 27 2022, UNT Denton. Enlightening talk by Dr. Athanas Guzha.

Johnston, C., Garcia-Navarrete, L.T., Ortiz, E., Romsdahl, T., Guzha, A., Chapman, K., Grotewold, E., and Alonso, A.P. (2022). Comparative "omics" analysis points to mechanisms for improving fatty acid production in pennycress (Thlaspi arvense L.). 2022 BioDiscovery Institute Retreat, Univ. North Texas, Denton, TX.

Pennycress: Future indispensable Renewable Energy (FiRE). BDI Retreat, UNT, Denton, TX, February 27, 2022. Enlightening 1-minute Talk by Dr. Umesh P. Yadav. Co-authors: Trevor B. Romsdahl, Kent D. Chapman, and Ana P. Alonso. *2nd place prize winner for the presentation.

SEIPINs interactions in support of Lipid Droplet biogenesis. BDI Retreat, February 27 2022, UNT Denton. Enlightening talk by Dr. Nicolas Esnay.

The role of pennycress (*Thlaspi arvense* L.) proteins in the modulation of lipid droplet abundance. 2022. Meeting of Southern Section of the American Society of Plant Biologists, Birmingham, Alabama, March 27, 2022. Talk by Julius Ver Sagun (postdoc Alonso lab).

Traffic-generated pollutant-exposure combined with high-fat diet exacerbates the expression of factors associated with Alzheimer's disease pathophysiology in aged C57BL/6 wild-type mice. Society of Toxicology National Meeting, San Diego, CA. March 30, 2022. Invited Platform Presentation by Tyler Armstrong (Ph.D. Student). Co-Author: Amie Lund.

Poster Presentations

Arias-Gaguancela, O., Aziz, M., Chapman, K. D. (2022) Fatty Acid Amide Hydrolases (FAAHs) Regulate Growth and Development in Cotton (Gossypium hirsutum L.). BDI Retreat 2022, UNT, Denton, TX.

Armstrong, T., and Lund, A.K. (2022) Traffic-generated pollutant-exposure combined with high-fat diet exacerbates the expression of factors associated with Alzheimer's disease pathophysiology in aged C57BL/6 wild-type mice. Lone Star Society of Toxicology Regional Meeting, Texas A&M, College Station, TX, January 13-14, 2022.

Esnay, N., Cai, Y., Greer, M.S., Mullen, R.T., Dyer, J.D., and Chapman, K.D. (2022). SEIPINs interactions in support of Lipid Droplet biogenesis. BDI Retreat 2022, UNT, Denton, TX.

Bhat, E. and Calvin, H.A. Conversion of Specific Single-Carbon Compounds to γ-Aminobutyric Acid (GABA) Via Native and Heterologous Expression in the Methylococcus capsulatus Metabolic Biochemical Cascade. Texas Science and Engineering Fair, College Station, TX. March, 2022.

Guzha, A., ver Sagun, J., Arias, C., Navarrete, T., Johnston, C., Barbaglia, A.M., Grotewold, E., Ana Paula Alonso, A.P., Chapman, K.D. (2022) The overexpression of field pennycress (Thlaspi arvense L.) seed oil related genes in the leaves of Nicotiana benthamiana alters fatty acid abundance and composition. BDI Retreat 2022, UNT, Denton, TX.

LaChance, J., Sagun, J., Wallace, M., and Alonso, A.P. (2022). A Multi-Omics Approach for Improving Hydroxy-fatty Acid (HFA) production by Physaria fendleri. Biodiscovery Institute Retreat 2022, Denton, TX. *3rd Place Best Graduate Poster at 2022 BDI Retreat

LaChance, J., Sagun, J., Wallace, M., and Alonso, A.P. (2022). Metabolic Engineering of Physaria fendleri to Improve Hydroxy-fatty Acid Content. 2022 Meeting of Southern Section of the American Society of Plant Biologists, Birmingham, AL.

Sagun, J.V., Guzha, A., Barbaglia, A., Cruz Gómez, M., Grotewold, E., Chapman, K.D., and Alonso, A.P. (2022). Identification of pennycress (Thlaspi arvense L.) proteins that influence lipid droplet abundance. BDI- Retreat, Denton, TX, February 27, 2022.

Nair, S. and Shah, S. (2022) Using a Yeast-2-Hybrid Screen to Identify Interactors of RGPA1: A Gene That Induces Plant Defense Responses Against Green Peach Aphid (GPA) in Arabidopsis thaliana. Fort Worth Science and Engineering Fair, Virtual. February 2022.

Nair, S. and Shah, S. (2022) Using a Yeast-2-Hybrid Screen to Identify Interactors of RGPA1: A Gene That Induces Plant Defense Responses Against Green Peach Aphid (GPA) in Arabidopsis thaliana. Texas Science and Engineering Fair, College Station, March, 2022.

Nguyen, K.N., Daniel, S., Phillippi, D.T., Schneider, L., and Lund, A.K. (2022) Inhalation Exposure to Diesel Exhaust Particles in Conjunction with a High-fat Diet Alters Expression of Receptors Associated with COVID-19 Infection, which is Mitigated by Probiotic-Treatment in C57Bl/6 Male Mice. Society of Toxicology National Meeting, San Diego, CA. March 26-31, 2022.

Penaredondo, B., Suwannasual, U., Lucero, J., McDonald, J.D., and Lund, A.K. (2022) Angiotensin -II signaling mediates expression of atherogenic factors in the vasculature resulting from inhalation exposure to traffic-generated air pollution in Apolipoprotein E knockout mice. Society of Toxicology National Meeting, San Diego, CA. March 26-31, 2022.

Sagun, J.V., Guzha, A., Barbaglia, A., Cruz Gómez, M., Grotewold, E., Chapman, K.D., and Alonso, A.P. (2022). Identification of pennycress (Thlaspi arvense L.) proteins that influence lipid droplet abundance. Genomic Sciences Program Annual PI Meeting (virtual), February 28-March 2, 2022.

Schneider, L.J., Penaredondo B., Lin, Y., Bucher, D., Anderson, L., and Lund, A.K. (2022) Inhalation Exposure to Mixed Vehicle Emissions and/or Consumption of a High Fat Diet Induces Proteoform Alterations that may Contribute to the Development of Non-Alcoholic Fatty Liver Disease in C57Bl/6 Mice. Society of Toxicology National Meeting, San Diego, CA. March 26-31, 2022.

Shah, S. (2022). The Role of Abietane Diterpenoid on Plant Defense and Development. Fort Worth Science and Engineering Fair (Virtual). February 2022.

Shah, S. (2022). The Role of Abietane Diterpenoid on Plant Defense and Development. Texas Science and Engineering Fair, College Station, TX. March 2022.

Yadav, U.P., Romsdahl, E., Chapman, K.D. Alonso, A.P. (2022). Using 13C-labeling to Unravel the Temporal and Spatial Production of Seed Oil in Developing Embryos of Pennycress, a Promising Source for Sustainable Aviation Fuel. BioDiscovery Institute (BDI) Retreat 2022, February 27.

Yadav, U.P., Romsdahl, E., Chapman, K.D. Alonso, A.P. (2022). Using 13C-labeling to Unravel the Temporal and Spatial Production of Seed Oil in Developing Embryos of Pennycress, a Promising Source for Sustainable Aviation Fuel. Biological and Environmental Research (BER), 2022 Genomic Science Program Annual PI Meeting (Virtual), February 28-March 2.

BIOsphere is a quarterly newsletter of the Department of Biological Sciences, University of North Texas

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