News, Awards and Recognitions

University Distinguished Research Professor Dr. Richard Dixon was elected as a Fellow of the Royal Society. The Royal Society is a fellowship of over 1600 eminent scientists, engineers and technologists who have made substantial contributions in improving natural knowledge in the sciences. Dr. Dixon was also elected as a Fellow of the American Society of Plant Biologists (ASPB). The Fellow of ASPB recognizes distinguished and long-term contributions to plant biology and service to the Society.

Nobel Laureate Dr. Randy Schekman from the University of California at Berkeley was the Guest of Honor at the Biology Graduate Student Association hosted 15th Departmental Research Day, which was held April 19-20. He was honored as the UNT VIP Distinguished Lecturer for his lecture “Sorting of small RNAs for Secretion in Exosomes by Cultured Human Cells”, which was delivered on April 20th. Later that evening, Dr. Schekman gave a second talk “From Pond Scum to Stockholm: A Life in Basic Science”, which was hosted by the UNT Office of the President. Dr. Schekman was awarded the Presidential Award by UNT President Dr. Neal Smatresk.

The Research Day activities also included over forty presentations by graduate and undergraduate students, including research talks and posters. Students competed for prizes in several categories. The prize for Best Graduate Student Talk was awarded to Devasantosh Mohanty, with Moon Twayana earning honorable mention. The Best Graduate Student Poster prize went to Amith Reddy Devireddy, with Dua’a Quedan and Fathy El-Gebaly earning honorable mentions. Kody Hughes won the Best Undergraduate Poster award, with Jessica Barba receiving an honorable mention. The Best Artwork prize was awarded to Kody Hughes and Emmanuel Ortiz. Congratulations to our winners and all of our student participants! Additional photos of the event can be found on the BGSA Facebook page https://www.facebook.com/UNTBGSA/.

At the May 2018 commencement, Regent’s Professor Dr. James Kennedy and Associate Professor Dr. Lee Hughes were honored with the College of Science Excellence in Teaching Award, Associate Professor Dr. Dane Crossley was honored with the College of Science Excellence in Research Award, and University Distinguished Research Professor Dr. Jyoti Shah and Lecturer and Senior Undergraduate Advisor Dr. Jill Dewey were honored with the College of Science Excellence in Service Award.
Brittany Harried, graduate student in Dr. David Hoeinghaus’s lab was awarded the “Outstanding Student Presentation Award” for her presentation entitled “Mercury body burden and maternal transfer, egg quality and fecundity of Alligator Gar in the lower Trinity River: Are bigger fish always better for recruitment?” at the Texas Chapter American Fisheries Society meeting. Part of her financial award is to support her to present her study at the national American Fisheries Society meeting in Atlantic City this August as part of the Outstanding Student Award session.

Ashley Cannon, post-doctoral associate in Dr. Kent Chapman’s lab received a NSF Midwest Plant Cell Dynamics Travel Award that funded her registration and housing while attending the Midwest Plant Cell Dynamics Meeting in Madison, WI from May 29th – June 1, 2018

Staff Appointments

A warm welcome to the new staff members in the department of Biological Sciences and the BioDiscovery Institute.

Dr. Fernanda R Castro-Moretti joined the BioDiscovery Institute (BDI) as a Postdoctoral Research assistant. She received dual PhD degrees in Translational Plant Sciences from The Ohio State University, and in Cellular and Molecular Plant Biology from The University of Sao Paulo, Brazil. Her research interests are in the fields of plant-microbe interactions, plant pathology and metabolomics. She is working in Associate Professor Dr. Ana Paula Alonso’s Lab on a project aimed at unveiling the metabolic interactions between different species from the Rubiaceae family (including coffee) and their endophytic communities.

Wendy Rounsley joined the department of Biological Sciences as Administrative Coordinator. In this position, she will be involved with budget management, billing, copier management, computer rollout, etc. Wendy has worked at educational institutes for over 20 years, holding positions such as HR/PR Director, Risk Manager, and Asst. Business Manager. She joined UNT in 2014. Prior to joining the department, she worked in Payroll and Procurement Services and served the College of Science as their Senior Buyer.

Ryan O'Shaughnessy joined the department of Biological Sciences as the Scientific Instrument Technician Supervisor. He will be assisting the Biological Sciences and the Chemistry departments with scientific instrument repairs and maintenance. For the last four years Ryan was a Biomedical Equipment Repair Service Manager. He has serviced and repaired a wide berth of medical and scientific analyzers, instruments, and electronics ranging from hematology, immunology, and chemistry analyzers to centrifuges, microscopes, CPUs, and amplifiers.

Sarah Houdek joined the department of Biological Sciences as an Administrative Specialist. She is a graduate of Baylor University and has worked in the advertising production industry, public schools and non-profits. She will work along with Kim Piccolo on Instructional and Lab Fees, equipment set-aside schedule, payroll processes, TAGSA assignments, schedule of classes and related Curriculum, and adjunct and hourly hiring. In addition, she will provide graduate administrative support and assist with organizing and hosting department graduate student orientation.

Thesis and Dissertations

Khadiza Zaman and Feroza Kaneez Choudhury successfully defended their Ph.D. dissertations. Dr. Zaman studied the neuroprotective effect of estradiol. Her dissertation title was “Revisiting the neuroprotective role of 17β-estradiol (E2): A multi-omics-based analysis of the rat brain and serum”. Dr. Choudhury studied the effect of light stress on metabolic changes in plants. Her dissertation title was “Rapid metabolic response of plants to light stress”. Dr. Vladimir Shulaev, Professor in the department of Biological Sciences and the BioDiscovery Institute was the graduate advisor for Drs. Zaman and Choudhury.

Recent Publications


**Extramural Grants and Contracts**

Developing and characterizing soybean cultivars with increased oil while maintaining protein and yield. Smith & Bucklin. Co-PIs: Ana Paula Alonso (University of North Texas, $100,840); PI: McHale (Ohio State University); Other Co-PIs: Bacon (University of Arkansas), Chen (Missouri University), Clemente (University Nebraska-Lincoln), Mian (USDA-ARS).


**Seminars/ Talks**

*A Putative Resistance Gene Homolog of RPW8.1 4 (HR4) is Required for Plant Defense Against the Green Peach Aphid.* 15th Annual Graduate Student Research Day, Department of Biological Sciences, University of North Texas, April 19-20, 2018. Talk by Moon Twayana (PhD student); Co-author: Jyoti Shah. Moon Twayana received honorable mention for her oral presentation

*Adaptive Consequences of Developmental Oxygen for Reptiles.* Linkoping University, Linkoping Sweden May 2018. Invited Seminar by Dr. Dane A Crossley II.

*Biosynthesis and Metabolic Engineering of Phenylpropanoid Natural Products for Plant Quality Improvement.* Department of Biological Sciences, Texas A and M University, College Station. Invited talk by Rick Dixon, February 22 2018

*Cotton’s secret fiber: Manipulating lignin biosynthesis for bast development* (Abstract #64). 20th Annual Texas National McNair Scholars Research Conference in Denton, February 22-25, 2018. Invited talk by Emmanuel Ortiz (McNair Scholar); co-authors Drs. Roisin C. McGarry and Brian G Ayre.

*Current Applications of Next Generation Sequencing for Plant Research.* Southern Section of the American Society of Plant Biologists, New Orleans, LA, March 24-26, 2018. Invited talk by Dr. Xiaolan Rao

*Environmental Oxygen and Developmental Phenotypic Plasticity: Cardiovascular Phenotype in Reptiles.* International Oxygen Symposium" In honor of the 80th birthday of Professor Roy Weber. Denmark May 2018. Invited Talk by Dr. Dane A Crossley II.


Lipid Droplet Biogenesis in Plants. Laboratory of Membrane Biogenesis, Universite de Bordeaux, Centre National del la Recherche Scientifique (CNRS), Bordeaux, France May 24, 2018. Invited Seminar by Dr. Kent Chapman.

Metabolic Pathways Leading to Industrially Relevant Fatty Acids. Interdisciplinary Plant Group Symposium on Advances in Plant Metabolism, Columbia, MO, May 30 - June 1, 2018. Invited talk by Dr. Ana Paula Alonso.

MS-Spectrometry based metabolomics for systems biology. 36th Informal Meeting on Mass Spectrometry. Koszeg, Hungary, May 6-9, 2018. Invited talk by Dr. Vladimir Shulaev


Novel Approaches for Enhancing Resistance to Fusarium Head Blight in Wheat. 15th Annual Graduate Student Research Day, Department of Biological Sciences, University of North Texas, April 19-20, 2018. Talk by Syeda Alam (PhD student); Co-author: Jyoti Shah and Nidhi Rawat.

Novel Insights Into Crude Oil and PAH Toxicity in Teleost Fishes. Society of Environmental Toxicology and Chemistry, South Central Regional Meeting, Junction, TX, April 27, 2018. Invited talk by Ed Mager.


Redesigned the Cotton Plant’s Architecture to Improve Yield and Quality for Robot Harvesting. 2018 Precision Cotton Researcher’s Meeting, Beltwide Cotton Conferences in San Antonio, TX, January 3-5, 2018. Invited talk by Dr. Brian G. Ayre; co-author Dr. Roisin C. McGarry.

Regulation of Lipid Droplet Accumulation in Plants. Department of Biological Sciences. Texas Women’s University, Denton, USA, April 6, 2018. Invited Seminar by Dr. Kent Chapman.


Understanding the Role of DAR1, a Putative O-fucosyl transferase, in Plant Systemic Immunity and Flowering. 15th Annual Student Research Day, Department of Biological Sciences, University of North Texas, April 19-20, 2018. Talk by Devasantosh Mohanty (Ph.D student). Co-authors: Zulkarnain Chowdhury and Jyoti Shah. Devasantosh Mohanty won the best prize for oral presentation.

Conference Presentations


Hughes, K. (McNair Scholar), McGarry, RC., and Ayre, BG. (2018). Upland cotton (Gossypium hirsutum) genetic variation and bast fiber modification. 2018 Beltwide Cotton Conferences in San Antonio, TX


Shaikh, M., Yadav UP., Ayre BG. (2108). Understanding the crosstalk between carbohydrate transport and phosphate use in plants with enhanced phloem partitioning from source to sink. Federation of North Texas Area Universities Graduate Student 2018 Research Symposium at Texas Women’s University, Denton, TX.

