



Plant Breeding & Plant Genetics

UNIVERSITY OF WISCONSIN-MADISON

August 2021 Newsletter

Letter from the Chair

Summer is typically a very stimulating and eventful time of the year for the UW Plant Breeding and Plant Genetics (PBPG) program, as students, staff and faculty devote time generating important resources and collecting critical field data, advancing research efforts and serving our campus and connected communities. After almost 18 months from the beginning of the pandemic, this summer has been particularly meaningful as we gradually segue back to our “new normal” world with gratitude and acquired resilience. I just couldn’t be any prouder of the ingenuity, camaraderie and continued commitment of the PBPG members as we navigated the many changes brought about by the pandemic and I am delighted to share with you the many important activities and significant accomplishments of this group in the last six months. I hope you can join me to celebrate these successes and support the advancement of our program and all its members.

Although this coming fall will not be a completely typical semester, UW is preparing to welcome all students back on campus in a few short weeks as the majority of classes and most university related events are planned to be held in person. And like the rest of campus, our program is preparing to move in the same direction, including our Friday 3:30PM PBPG student seminar series and all program related teaching and training activities. During the last two semesters, seminars were still occurring in virtual format. Thanks to the support of alumni and industry partners, in the last year our program welcomed 3 invited speakers including, Dr. Amy Marshall-Colon from the University of Illinois, Dr. Beronda Montgomery from Michigan State, and Natalie Mueller from Washington University. During this year of uncertainty that just passed, we clearly learned how to connect in new and creative ways, but we are excited for the opportunity to re-learn our way around buildings and facilities and look forward to getting to see our colleagues in person again.

Since the beginning of the year, nine PBPG graduate students (6 Ph.D. and 3 M.S.) have completed their graduate degrees (page 3) and have joined the workforce in industry, academia and governmental positions in the agricultural arena within the US and around the world. At the same time, we are delighted to highlight the numerous important awards and recognitions received by current PBPG faculty and students (page 4) during this same period of time. Among some important developments, and as described below, PBPG members continue significant efforts to promote racial and cultural awareness within our program and connected activities.

As mentioned in our last newsletter, we are delighted to announce the addition of two new faculty members to the PBPG program in late 2020, Dr. Shelby Allison (department of Horticulture) and Dr. Jacob Brunkard (department of Genetics). Earlier this year, we were also thrilled to welcome Dr. Al Kovaleski (department of Horticulture) to the program (page 2).

In February of this year, we congratulated Mike Havey as he announced his retirement after more than 30 years of service to UW and in particular in his role as chair of PBPG on two different occasions throughout his career.

In April 18th of this year, we celebrated the 100th birthday of Dr. Buck Gabelman, one of the first trainers of PBPG grad students. The 53 years' history of our program and Buck's career are intimately connected and the more than 40 students that he trained have had long and impactful careers that have connected back to our program in more ways than I can possibly describe in a single communication. The virtual birthday celebration included the presence of many of those students and we were happy to share this landmark occasion in the life of this PBPG pioneer.

Our program continues to prosper and grow and your contributions and support keep making it stronger and better. Many of the activities that support the training of the students couldn't be possible without the support of our alumni, emeritus faculty, staff, and other friends of the program. We are enormously thankful to each and every one of you for your many contributions.

Hope you enjoy the last bits of this special summer season and we look very much forward to seeing many of you at the alumni and friends tailgating event that our program is organizing on October 2 of this year or whenever you have the opportunity to visit us in Madison.

With appreciation,

Natalia de Leon
PBPG Program Chair

Welcome Our New Affiliated Faculty Members!

Shelby Ellison



Plant genetics and genomics, plant domestication, germplasm characterization and improvement of alternative crops with an emphasis in hemp

Jacob Brunkard



Functional genomics, regulation of metabolism, TARGET OF RAPAMYCIN (TOR) signaling, developmental genetics.

Al Kovaleski



Physiological and molecular basis of winter survival in woody perennial plants (dormancy and cold hardiness).

Faculty Spotlight: Shelby Ellison

Shelby Ellison, originally from Plover, Wisconsin, obtained her BS in Genetics from the University of Wisconsin - Madison. After becoming exposed to the field of plant breeding in Horticulture 501, she decided to pursue a PhD in Genetics, with a focus on plant breeding and diversity, at UC Davis. There she worked under the supervision of Dr. Paul Gepts to elucidate the genetic control of determinate growth habit in common bean. While in Davis, she also worked closely with Dr. Fred Bliss and published on the knowledge, experiences, and skills needed in the next generation of plant breeders. Next Shelby moved back to Madison to begin her NSF postdoctoral fellowship with Dr. Phil Simon where she worked on carotenoid genetics and domestication in carrot. This experience solidified her interest in bridging the genomics, breeding, and phenomics gap between major crops and crops with fewer resources but potential value in the face of economic and climatic uncertainty. In her new role as an assistant professor, she will focus on characterizing and utilizing genetic diversity in alternative crops, such as hemp, to help create regionally adapted, high yielding cultivars for Wisconsin farmers.



Student Profile: Adam D'Angelo

PBPG student Adam D'Angelo has been filming videos about the research and breeding activities of the Goldman Carrot, Onion, and Beet Lab. His videos are meant to help engage people in a conversation about building a healthier, more sustainable, and more accessible food system using science and communication. In addition to showing the exciting (and often beautiful!) process of plant breeding, his videos explain plant science concepts in a manner suited for viewers of all ages and knowledge levels.

Subscribe to his YouTube channel, [The Seed Scholar](#), to be notified when new videos are released!



Recent Graduates

Keo Corak (Fall 2020 PhD)

Solveig Hanson (Fall 2020 PhD)

Bridget McFarland (Fall 2020 PhD)

Madeline Olberg (Fall 2020 PhD)

Scott Brainard (Spring 2021 PhD)

Emily Martin-Millar (Spring 2021 MS)

Daniel Matusinec (Summer 2021 MS)

Erin Lalor (Summer 2021 MS)

Zach Keyser (Summer 2021 PhD)

Recent Awards

Horticulture assistant professor **Yi Wang** was recently selected to receive an Alfred Toepfer Faculty Fellow Award. The one-year award is bestowed on pre-tenure faculty whose research benefits agricultural activities within the United States and whose areas of interest lie in the scientific fields of crop research, improvements in crop yield and quality, or animal sciences.

Natalia de Leon received the inaugural Leadership Award from the Maize Genetics Cooperation. The [Maize Genetics Leadership Award](#) recognizes maize cooperators who have inspired the lives and careers of other maize researchers through mentorship, leadership, outreach, and education, with a special emphasis on those who have shown a strong impact in the areas of inclusion, diversity and equity.

Julie Dawson received the 2021 Louise Hemstead award. This award honors individuals who exhibit components of Louise's legacy of advancing agriculture through innovation and cooperation, stewardship for natural resources and communities, the tenacity to overcome odds, and a history of getting things done through service leadership.

Xuehua Zhong has been awarded the 2021-2022 [H. I. Romnes Faculty Fellowship](#), recognizing her academic success and providing an opportunity for continued development of her outstanding research program.

Jenyne Loarca was awarded the Graduate Student Service Scholarship, which recognizes and honors the graduate students who volunteer to take on service roles in addition to their research, work, and family obligations.

Chandler Meyer was selected as recipient of the Gabelman-Seminis Wisconsin Distinguished Graduate Fellowship.

Alexa Baker was selected as recipient of the Gabelman-Shippo Wisconsin Distinguished Graduate Fellowship.

Raegan Hoefler was awarded the O. N. Allen Agronomy Graduate Scholarship, Agronomy Outstanding student award, CALS Royce Bringhurst Memorial Scholarship, the Crop Science Society of America Gerald O. Mott Award and the Irwin Smith Family fellowship.

Maria Ines Berro and **Dylan Schoemaker** were awarded Elwood & Lydia Brickbauer Research Scholarships.

Neal Tilhou was awarded an O.N. Allen Agronomy Graduate Scholarship.

Alden Perkins and **Dylan Schoemaker** have been selected as Research Ambassadors by The National Corn Growers Association (NCGA).

Jose Varela, **Katharina Wigg**, **Kathryn Michel**, and **Alden Perkins** were selected to participate in Launching Tomorrow's Leaders, a student leadership partnership with with Bayer Corporation and BONSAI.

Retirement

Congratulations to **Mike Havey** on his recent retirement after over 30 years with the UW. He has been a leader in the development of molecular tools for onion breeding, genetics, and genomics. He has played an important role internationally in advancing our knowledge of the onion genome and has trained many people from around the world in these genomic tools. Mike served as co-advisor of more than 30 graduate students as well as co-directed the research of at least 7 post-docs. He also served many years as the Chair of PBPG.

Summer Field Season



Members of the corn breeding group still smiling even after weeks in the field pollinating - July 2021



Corn abiotic stress experiment in Hancock, WI



A picture of the Goldman lab planting carrots in Randolph, Wisconsin in early May, 2021.



Katharina Wigg cutting onion bulbs for planting at the Arlington Farm.



2019



2021

Harvest of oats, barley, and wheat is underway for the Cereals Breeding and Quantitative Genetics Group! This is the first season using our new combine, and although we will miss our old machine, “Bubbles”, we are very excited about the new combine and the more streamlined processing of seeds it allows.

PBPG Alumni and Friends Tailgate

We would like to welcome everyone to campus this fall for a PBPG reunion and outdoor tailgating event! Help us cheer on the Badgers on **October 2nd** against Michigan. We will provide food, drinks, lawn games and will also be hosting a raffle (including tickets to the game)!

Please fill out this [RSVP](#) if you are interested in attending, or if you may be interested, by Friday September 10th. Up to 4 family members and loved ones are welcome to join you at the event. If you need special accommodations, please let us know via email (caitlin.collies@wisc.edu). Knowing if we can count on your presence and how many people there will be in your party will help us plan for this event.

Raffle: We will be raffling off some great items to raise money for PBPG including 4 pairs of tickets to the game. For every \$20 donated you will receive one raffle entry. Donations must be received by September 8th to count towards this raffle. Winners will be announced September 24th. If you are not planning on attending the event but would still like to participate in the raffle we can ship the items to you if you win. Please use the following link to make your donations/raffle purchases: <https://www.supportuw.org/giveto/pbpg>

Happy Birthday to Buck Gabelman!

Buck Gabelman, one of the first trainers of PBPG graduate students, is pictured here on his 100th birthday on April 18, 2021. Buck began breeding carrots, onions, and beets at Wisconsin in 1949 with the goal of testing the feasibility of F1 hybrids in those crops. He developed some of the first inbred lines in these crops that were eventually used worldwide to produce hybrid cultivars. Buck also trained a number of students in PBPG who went on to work in the global seed industry.



Thank You To Our Supporters!

Your support provides funding for research and student development within the program.

If you would like to give back to the Plant Breeding & Plant Genetics program, please go to <https://www.supportuw.org/giveto/pbpg> or contact the UW Foundation at <https://www.supportuw.org/contact-us/>

Alumni

We want to hear from our alumni! Send any alumni updates including current positions, awards, research, publications, etc. to caitlin.collies@wisc.edu

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