## HUANZHONG WANG, Ph.D.

Professor in Plant Molecular Biology Department of Plant Science and Landscape Architecture University of Connecticut 1376 Storrs Road Storrs, CT 06269-4067

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## **EDUCATION**

- Ph. D., Molecular genetics, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, 2006
- M.S., Plant physiology, Agricultural University of Hebei, 1998
- B.S., Crop science, Agricultural University of Hebei, 1995

# RESEARCH AND PROFESSIONAL EXPERIENCE

### **University of Connecticut**

Assistant, Associate, and Professor at the Department of Plant Sciences and Landscape Architecture in 2011, 2017, and 2023.

Member, Institute for Systems Genomics (ISG). Jan 2016-present

### Samuel Roberts Noble Foundation

Postdoctoral researcher, Plant Biology Division, June 2008-Aug 2011

Advisor: Richard Dixon, member of NAS

## University of California at Berkeley/ USDA

Postdoctoral scholar, UC Berkeley/USDA Plant Gene Expression Center, Aug 2006-June 2008

Advisor: Sheila McCormick, member of AAAS

## **Chinese Academy of Sciences, China**

Research assistant, Institute of Genetics and Developmental Biology, 2002-2006

Advisor: Jiayang Li, foreign associates of NAS

## **Agricultural University of Hebei**

Lecturer and researcher, Department of Agronomy, 1998-2002

#### **RESEARCH INTEREST**

My research falls into two major areas of plant development, vascular stem cell maintenance and secondary cell wall formation. We use genetic, biochemical, and genomic approaches to decipher the regulatory mechanisms of biological pathways.

Vascular stem cells produce progeny cells, which either maintain their stem cell property or differentiate into xylem toward the center and phloem toward the periphery of plant stems. We have identified regulatory pathways and transcription factors (TFs) in vascular patterning and stem cell maintenance. Dissecting the molecular mechanisms of these regulators will provide new insights into plant stem cell maintenance.

Xylem tissues develop secondary cell walls (SCWs) and form the majority of terrestrial cellulosic biomass. Our research focuses on the regulation of the coordinated biosynthesis of three cell wall components, e.g., cellulose, hemicelluloses, and lignin. We have elucidated the functions of microRNAs, class III HD-ZIP TFs, NAC and WRKY domain TFs in SCW development.

### **PUBLICATIONS**

#### In revision:

1. Qian Du, Bingjian Yuan, Gaurav Thapa Chhetri, Liying Qi and Huanzhong Wang (under review) A C2H2 zinc finger transcription repressor HVA promotes vascular cambium activity through auxin transport in *Arabidopsis* stem. New Phytologist

### **Published:**

- 1. Jonathan D. Mahoney, Sining Wang, Liam A. Iorio, Jill L. Wegrzyn, Matthew Dorris, Derek Martin, Bradley W. Bolling, Mark H. Brand and Huanzhong Wang\* (2022) *De novo* assembly of a fruit transcriptome set identifies AmMYB10 as a key regulator of anthocyanin biosynthesis in *Aronia melanocarpa*. **BMC Plant Biology** 22, 143 https://doi.org/10.1186/s12870-022-03518-8
- 2. Bingjian Yuan and **Huanzhong Wang**\* (2021) Peptide Signaling Pathways Regulate Plant Vascular Development. **Frontiers in Plant Science** 12: 719606. September 3, https://doi.org/10.3389/fpls.2021.719606
- Kwang-Hee Lee, Sining Wang, Qian Du, Gaurav Thapa Chhetri, Liying Qi & Huanzhong Wang\* (2021) The XVP/ NAC003 protein associates with the plasma membrane through KR rich regions and translocates to the nucleus by changing phosphorylation status, Plant Signaling & Behavior 16(11), 1970449, Taylor & Francis, 2021/11/2, https://doi.org/10.1080/15592324.2021.1970449
- 4. Shuo Yang, Sining Wang, Shujia Li, Qian Du, Liying Qi, Wenguang Wang, Jingtang Chen and Huanzhong Wang\* (2020) Activation of ACS7 in *Arabidopsis* affects vascular development and demonstrates a link between ethylene synthesis and cambial activity. *Journal of Experimental Botany* 71(22):7160-7170. https://doi.org/10.1093/jxb/eraa423

- 5. Ren Li, Shuai Sun, Haijing Wang, Ketao Wang, Hong Yu, Zhen Zhou, Peiyong Xin, Jinfang Chu, Tongmin Zhao, Huanzhong Wang, Jiayang Li & Xia Cui (2020) FIS1 encodes a GA2-oxidase that regulates fruit firmness in tomato. *Nature Communications* 11: 5844, https://doi.org/10.1038/s41467-020-19705-w
- Sinning Wang and Huanzhong Wang (2020) Coordination of multi-layered signalling pathways on vascular cambium activity. *Annual Plant Reviews* online 3(3): 457–472. https://doi.org/10.1002/9781119312994.apr0754
- Jung Hyun Yang, Kwang-Hee Lee, Qian Du, Shuo Yang, Bingjian Yuan, Liying Qi and Huanzhong Wang\* (2020) A membrane associated NAC domain transcription factor XVP interacts with TDIF co-receptor and regulates vascular meristem activity. *New Phytologist* 226(1):59-74. DOI: https://doi.org/10.1111/nph.16289

Highlighted by a Commentary at the same issue https://rdcu.be/b2oCn

- 8. **Huanzhong Wang**\* (2019), Regulation of vascular cambium activity, *Plant Science*, 291:110322 https://doi.org/10.1016/j.plantsci.2019.110322
- Kwang Hee Lee, Qian Du, Chunliu Zhuo, Liying Qi, Huanzhong Wang\* (2019) LBD29-involved auxin signaling represses NAC master regulators and fiber wall biosynthesis. *Plant Physiology* 181(2): 595–608. DOI: https://doi.org/10.1104/pp.19.00148
- Kwang-Hee Lee, Utku Avci, Liying Qi and Huanzhong Wang\* (2018). The α Aurora kinases function in vascular development in *Arabidopsis*. *Plant and Cell Physiology*. 60(1): 188-201. DOI: https://doi.org/10.1093/pcp/pcy195
- 11. Hsuan Chou, **Huanzhong Wang** and Gerald Berkowitz (2016) Shoot apical meristem size measurement. *Bio-protocol* 6:(23)

## Pre-tenure publications

- Qian Du and Huanzhong Wang \* (2016) Retarded Embryo Development 1 (RED1) regulates embryo development, seed maturation and plant growth in *Arabidopsis*. *Journal of Genetics and Genomics*. 43:439-449, https://doi.org/10.1016/j.jgg.2016.04.009.
- Jung Hyun Yang and Huanzhong Wang \* (2016) Molecular mechanisms for vascular development and secondary cell wall formation. *Frontiers in Plant Science* 7:356, https://doi.org/10.3389/fpls.2016.00356.
- 14. Huanzhong Wang<sup>\*</sup>, Jung Hyun Yang, Fang Chen, Ivone Torres-Jerez, Yuhong Tang, Mingyi Wang, Qian Du, Xiaofei Cheng, Jiangqi Wen, and Richard A. Dixon (2016). Transcriptome analysis of secondary cell wall development in *Medicago truncatula*. *BMC Genomics* 17:23, https://doi.org/10.1186/s12864-015-2330-6
- Qian Du and Huanzhong Wang\* (2015). The role of HD-ZIP III transcription factors and miR165/166 in vascular development and secondary cell wall formation. *Plant signaling and Behavior* 10:10 https://doi.org/10.1080/15592324.2015.1078955

- 16. Qian Du, Utku Avci, Shengben Li, Lina Gallego-Giraldo, Sivakumar Pattathil, Liying Qi, Michael G. Hahn and Huanzhong Wang\* (2015). Activation of miR165b represses AtHB15 expression and induces pith secondary wall development in Arabidopsis. *Plant Journal*, 83(3): 388–400. https://doi.org/10.1111/tpj.12897
- Gallego-Giraldo, L., Shadle, G., Shen, H., Barros-Rios, J., Fresquet Corrales, S., Wang, H. and Dixon, R.A. (2015) Combining enhanced biomass density with reduced lignin level for improved forage quality. *Plant Biotechnology Journal*, 14(3): 895-904. https://doi.org/10.1111/pbi.12439
- Huanzhong Wang and Richard A. Dixon (2012). On-Off switches for secondary cell wall biosynthesis. *Molecular Plant*, 5 (2): 297-303. https://doi.org/10.1093/mp/ssr098
- Shen, H., He, X., Poovaiah, C. R., Wuddineh, W. A., Ma, J., Mann, D. G. J., Wang, H., Jackson, L., Tang, Y., Stewart, C. N., Chen, F. and Dixon, R. A. (2012), Functional characterization of the switchgrass (*Panicum virgatum*) R2R3-MYB transcription factor PvMYB4 for improvement of lignocellulosic feedstocks. *New Phytologist*, 193: 121–136. https://doi.org/10.1111/j.1469-8137.2011.03922.x
- 20. Huanzhong Wang, Qiao Zhao, Fang Chen and Richard A. Dixon (2011). NAC domain function and transcriptional control of a secondary cell wall master switch. *Plant Journal*, 68 (6): 1104-1114. https://doi.org/10.1111/j.1365-313X.2011.04764.x
- 21. Huanzhong Wang, Utku Avci, Jin Nakashima, Michael G. Hahn, Fang Chen, and Richard A. Dixon (2010). Mutation of WRKY transcription factors initiates pith secondary wall formation and increases stem biomass in dicotyledonous plants. *Proceedings of the National Academy of Sciences (USA)* 107: 22338-22343. https://doi.org/10.1073/pnas.1016436107

Featured in Science, Editors' Choice, titled "Boosting Biofuel" Science 2011, 331:11

- 22. Qiao Zhao, Huanzhong Wang, Yanbin Yin, Ying Xu, Fang Chen, and Richard A. Dixon (2010). Syringyl lignin biosynthesis is directly regulated by a secondary cell wall master switch. *Proceedings of the National Academy of Sciences (USA)* 107: 14496-14501. https://doi.org/10.1073/pnas.1009170107
- 23. Qiao Zhao, Lina Gallego-Giraldo, Huanzhong Wang, Yining Zeng, Shi-You Ding, Fang Chen and Richard A. Dixon (2010). A NAC transcription factor orchestrates multiple features of cell wall development in *Medicago truncatula*. *Plant Journal* 63: 100-114. https://doi.org/10.1111/j.1365-313X.2010.04223.x
- 24. Xia Cui, Chunmin Ge, Renxiao Wang, **Huanzhong Wang**, Weiqi Chen, Zhiming Fu, Xiangning Jiang, Jiayang Li and Yonghong Wang (2010). The BUD2 mutation affects plant architecture through altering cytokinin and auxin responses in *Arabidopsis*. *Cell Research* 20: 576-586. https://doi.org/10.1038/cr.2010.51
- 25. **Huanzhong Wang**, Leonor C. Boavida, Mily Ron and Sheila McCormick (2008). Truncation of a protein disulfide isomerase, PDIL2-1, delays embryo sac maturation

and disrupts pollen tube guidance in *Arabidopsis thaliana*. *The Plant Cell* 20: 3300–3311. https://doi.org/10.1105/tpc.108.062919

- 26. Ya Dai<sup>#</sup>, Huanzhong Wang<sup>#</sup>, Li Baohua, Juan Huang, Xinfang Liu, Yihua Zhou, Zhonglin Mou and Jiayang Li (2006) Increased expression of MAP KINASE KINASE7 causes deficiency in polar auxin transport and leads to plant architectural abnormality in *Arabidopsis*. *The Plant Cell* 18: 308–320. https://doi.org/10.1105/tpc.105.037846 <sup>#</sup> these authors contributed equally to this work.
- 27. **Huanzhong Wang**, Yanming Li, Jianping Zhang and Liyan Zhang (2000). A preliminary study on the dynamics of endogenous hormones of early maturing wheat and its parents. *Journal of Agricultural University of Hebei*, 23(4): 10-14
- 28. **Huanzhong Wang**, Yanming Li and Liyan Zhang. (2000). Review on early maturity and its chemical control in winter wheat. *Journal of Triticeae crops*, 20(1): 87-90

### **Book Chapters:**

1. **Huanzhong Wang**, Yonghong Wang and Jiayang Li (2004). The metabolism and functional mechanism of plant hormones. In *Agricultural bioengineering*, Keqiang Mang, ed (Beijing, China, Chemical industry publishers), pp 56-77

# PATENTS

 Transcription Factors for modification of lignin content in plants Patent No. US 9,045,549 B2 Date of Patent: June 2, 2015 Inventors: Huanzhong Wang, Fang Chen and Richard A. Dixon

## **INVITED TALKS/CONFRENCE PRESENTATIONS**

- 1. **Huanzhong Wang** (2022) Biofuels, biomass and plant vascular stem cells, Invited seminar for Science teachers participating ECE workshop at UConn, October 28
- 2. **Huanzhong Wang** (2022) How plants grow wider: the stories of vascular cambium and secondary cell wall, Invited talk Plant Biochemistry Symposium, Biodiscovery Institute, University of North Texas, October 7<sup>th</sup>, 2022
- 3. Gaurav Thapa Chhetri, Qian Du, Bingjian Yuan, Liying Qi and **Huanzhong Wang** (2022) A C2H2 zinc finger transcription repressor promotes vascular bundle formation in Arabidopsis stem". ASPB Plant Biology 2022, July 9-13. Portland, OR
- 4. **Huanzhong Wang** (2022) Biofuels, biomass and plant vascular stem cells, Guest seminar for visiting high school class form E. O. Smith High School, June 3<sup>rd</sup>, 2022
- 5. Shuo Yang, Sining Wang, Qian Du, Liying Qi, Jingtang Chen and **Huanzhong Wang** (2020) Mechanism linking ethylene synthesis to cambial activity derived from activation of ACS7 in Arabidopsis. ASPB Plant Biology on-line Conference.

- Jonathan D. Mahoney, Liam A. Iorio, Jill L. Wegrzyn, Matthew Dorris, Derek Martin, Bradley W. Bolling, Mark H. Brand and Huanzhong Wang (2020) De novo assembly of Aronia melanocarpa fruit transcriptome to identify genes involved with anthocyanin biosynthesis. Plant & Animal Genome Conference. San Diego, California. January 11-15, 2020
- 7. **Huanzhong Wang** (2019) How does tree trunk get wider: the function of vascular stem cells and secondary cell walls, Invited Seminar at the Department of Pathobiology and Veterinary Science, UConn Storrs, CT, Sep 12, 2019
- Jung Hyun Yang, Kwang-Hee Lee, Qian Du, Shuo Yang, Liying Qi and Huanzhong Wang \* (2019) A NAC domain transcription factor XVP regulates vascular stem cell function. San Jose, CA, Aug 3-7, 2019
- Iorio, L., Mahoney, J., Brand, M., Wang, H. (2019). *Transcription factor interactions and regulation of polyphenol biosynthesis in Aronia melanocarpa fruit*. Presentation for the Plant and Animal Genome Confernce, San Diego, CA, Jan 12-16, 2019
- Mahoney, J., Iorio, L., Wegrzyn, J., Brand, M., Wang, H. (2019). *Transcriptome analysis of Aronia melanocarpa fruit identifies genes involved in polyphenol biosynthesis*. Presentation for the Plant and Animal Genome Confernce, San Diego, CA, Jan 12-16, 2019
- 11. **Huanzhong Wang** (2018) "Biofuels, biomass and plant vascular stem cells" at the Woodstock Academy for Caroline Chute's class, Woodstock, CT, Dec 12, 2018.
- 12. Qian Du, Kwang-Hee Lee, Liying Qi and **Huanzhong Wang** (2018) Annual Plant Biology Symposium at UMass, "The role of auxin in repressing secondary wall development in fibers of Arabidopsis" UMass Amherst, MA, Oct 13, 2018
- 13. **Huanzhong Wang** (2018) Regulation of Vascular Development in Arabidopsis, Invited Seminar at the Department of Plant Science and Landscape Architecture, Storrs, CT, Sep 14, 2018
- 14. **Huanzhong Wang,** Kwang-Hee Lee, Qian Du, Liying Qi (2018) Plant Biology 2018 title "The role of auxin in repressing secondary wall development in fibers of Arabidopsis" Montreal, Quebec, July 14-18, 2018
- 15. Kwang-Hee Lee, Utku Avci, Liying Qi and **Huanzhong Wang** (2018). Title "The α Aurora kinases function in vascular development in Arabidopsis." 2018 Northeast ASPB Section annual meeting, Amherst, MA, Apr 28 29, 2018
- 16. **Huanzhong Wang** (2017) "Biofuels, biomass and plant vascular stem cells" at the Woodstock Academy for Caroline Chute's class, Woodstock, CT, Dec 8, 2017.

- 17. **Huanzhong Wang** (2016) at the Agricultural Genome Institute at Shenzhen, Chinese Academy of Agricultural Science (CAAS) titled "Bosting Biofuels by switching on-off secondary cell wall development" Shenzhen, China, Jul 21, 2016
- 18. **Huanzhong Wang** (2016) at the Agricultural University of Hebei titled "Molecular control of vascular development and secondary cell wall biosynthesis" Baoding, China, Jul 11, **2016**.
- 19. **Huanzhong Wang** (2016) at the Plant Biology Discussion group at UConn "Biofuels, biomass and plant vascular stem cells" Storrs CT, May 19, 2016.
- 20. **Huanzhong Wang** (2016) at the Woodstock Academy "Biofuels, biomass and plant vascular stem cells" Woodstock, CT, Mar 18, 2016.
- 21. **Huanzhong Wang** (2015) for the Plant biology graduate program seminars at University of Massachusetts at Amherst titled "Boosting biofuels by switching onoff secondary cell wall development." Amherst, MA, Dec 3, 2015.
- 22. **Huanzhong Wang** (2015) Invited talk for Plant Biology Symposium 2015 -University of Maryland, titled "Boosting biofuel by molecular regulation of Biomass formation" Baltimore, MD, May 27-29, 2105
- 23. Huanzhong Wang, Qian Du and Liying Qi (2014) Identification of new regulators of cell wall development in *Arabidopsis*. Plants and BioEnergy 2014 Congress, Guelph, Canada. June 4 -7, 2014 Invited Talk, Session B2. Genetic Improvement of Plant Biomass II
- Huanzhong Wang, Qian Du, and Jung Yang (2013) Characterization of an Irregular Xylem Mutant in *Medicago truncatula*. ASPB Meeting at Providence, RI, July 21-24, 2013.
- 25. Du, Q., Ali, R., **Huanzhong Wang** (2012) Characterization of an Irregular Xylem Mutant in *Medicago truncatula*", 10th Annual Symposium in Plant Biology at UMass. Amherst, MA, October 6, 2012.
- 26. Huanzhong Wang, Utku Avci, Jin Nakashima, Michael G. Hahn, Fang Chen, and Richard A. Dixon (2011). Mutation of WRKY transcription factors initiates pith secondary wall formation and increases stem biomass in dicotyledonous plants. ASPB Meeting, Minneapolis, MN, August 6-10, 2011. Minismposium 9: Biofuel titled "WRKY transcription factor and biomass density"
- 27. Huanzhong Wang, Fang Chen and Richard A. Dixon (2010). Identification of transcription factors involving in secondary wall thickening in *Medicago truncatula*. International Association for Plant Biotechnology Congress (IAPB), America's Center, Saint Louis, MO. Jun 6-11, 2010.
- 28. Huanzhong Wang, Fang Chen and Richard A. Dixon (2009). Transcription

regulation of secondary wall development in *Medicago truncatula*. Golden Research Conference on plant cell wall synthesis, Bryant University, Smithfield, RI. August 2-7, 2009.

Postdoctoral Researcher Poster Competition Award

29. Fang Chen, **Huanzhong Wang**, Qiao Zhao, Hui Shen, Rui Zhou, Lisa Jackson, Gail Shadle, Tim Hernandez, Liying Qi and Richard A. Dixon (2009). A functional genomics approach to understanding and remodeling plant cell walls of bioenergy crops. ASPB Annual Meeting, Honolulu HI. Jul 18-22, 2009.

### **COURSES TEACHING**

- 1. SPSS 4210 Plant Physiology (3 credits). Spring 2017-present.
- 2. SPSS 4650: Plant Tissue Culture (3 credits). Fall 2015
- 3. SPSS 3210: Molecular Laboratory Techniques (3 credits). Fall 2012- present, odd years
- 4. SPSS 3230: Biotechnology: Science, Impact, Perception and Ethics (3 credits). Fall 2011-2017, Fall 2018- present, even years

## ADVISING ACTIVITIES:

### As Major Advisor:

1. Post-doctoral researchers

Rashid Ali, Aug-Dec 2012, Current Position, Research Asst. Prof. at UAEU Kwang Hee Lee, Aug 2015-Aug, 2018 Bingjian Yuan Jan 2019-Jan 2021 Tong Wang, Oct 2022-present

2. PhD Students:

Sanjay Palakurthy	Aug, 2022-Present
Gaurav Thapa Chhetri	Aug, 2020-Present
Noorpreet Kaur	Aug, 2018 – Jan 2020
Qian Du	Aug, 2012 - Dec, 2018, Current, Postdoc at Cornell

Visiting PhD students: Singning Wang, Aug 2019-Dec 2021 Shuo Yang, Jun 15, 2018-Jan, 2020

- Master Students: Jung Hyun Yang, Jan 2013-June 2016
- 4. As academic advisor to Undergraduate students:

Evan Forrest Grover	2023-
Shynaijah Aniya Hall	2023-
Alexandria Izabella Novak	2023-
Tanner Mario Jameson	2022-
Abigail Josephine Mccabe	2022-

# 5. Advising Undergraduate Students for research:

Alexander Francoeur	Sep 2021-present	
Jasmine Maggio	Oct 2021-May 2022	
Liam A. Iorio	Sep 2016-Dec 2019 (SURF awardee, summer 2018;	
	poster presentation on PAG conference, Jan 2018; co-	
	author on a publication in prep)	
Tianyi Zhang	Sep 2019-May 2020	
Gagganpreet Singh	Jan 2017-May 2020 (Great student, acknowledged in the	
	Plant Physiology paper)	
Maria V. Grishanina	Feb 2016-Jun 2018	
Tiara A. Cova	Oct 2018-Dec 2018	
Emreen Bharara	Oct 2017-Dec 2017	
Adrian Gutowski	Aug 2017-Dec 2017	
Kaylia J Giammatteo	Sep 2016-June 2017	
Haley McMullen	Dec 2015-May 2016	
Kimberly McLaughlin	Aug 2015-Dec 2016	
Sean Lee	Jan 2016-Aug 2016	
Brandon D. Nguyen	Feb 2016-Jun 2016	
Manvitha Chintapatla	Sep 2015-Dec 2015	

6. High School Intern Students:

Helena Hand	May-Aug 2022
Laila Almotwaly	May-Aug 2019
Paul Isaac	June-Aug 2019 (admitted to UConn)
Alexa DeAndreade	May-Aug 2017 and Jun-Aug 2018 (Admitted to
	UConn, Double major in SPSS)

# As Associate Advisor:

1. PhD Students:

Nora Doonan	Major Advisor	Haiying Tao	2023-present
Roshani Budhathoki	Major Advisor	Yi Li	2022-present
Gang Ma	Major Advisor	Gerald Berkowitz	2019-2022
Rahul Kumar	Major Advisor	Yi Li	2018-2022

Hongfei Chen	Major Advisor	Yaowu Yuan	2019-2022
Amy LaFountain	Major Advisor	Yaowu Yuan	2018-2021
Qiaoshan Lin	Major Advisor	Yaowu Yuan	2018-2022
Vandana Gurung	Major Advisor	Yaowu Yuan	2018-2022
Jonathan Mahoney	Major Advisor	Mark Brand	2017-2020
Yanjun Li	Major Advisor	Yi Li	2017-2022
Yer Huseyin	Major Advisor	Yi Li	2016-2022
Lorenzo Katin-Grazzini	Major Advisor	Yi Li	2016-2018
Rania Elptanbouly	Major Advisor	Yi Li	2016-2018
Wei Li	Major Advisor	Yi Li	2013-2017
Alice Zelman	Major Advisor	Gerald Berkowitz	2013-2021
Hsuan Chou	Major Advisor	Gerald Berkowitz	2013-2016
Hao Yu	Major Advisor	Yi Li	2012-2015
Yichen Zhao	Major Advisor	Gerald Berkowitz	2012-2015

2. Master Students:

Major Advisor	Yaowu Yuan	2023-
Major Advisor	Gerry Berkowitz	2021-2022
Major Advisor	Gerry Berkowitz	2020-2021
Major Advisor	Mark Brand	2014-2015
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#### **PROFESSIONAL AWARDS:**

- Research Excellence Program (REP) Award, Office of Vice President of Research UConn. August 8, 2022.
- 2. Recognition for Excellence in Teaching, UConn Office of the Provost, Fall 2020
- 3. Recognition for Excellence in Teaching, UConn Office of the Provost, Fall 2019
- Faculty Early Career Development Program (CAREER) award from NSF, June 1, 2015.
- 5. Research Excellence Program (REP) Award, Office of Vice President of Research UConn. March 1, 2015.
- Travel award, Pan America Plants and BioEnergy 2014 Congress. Invited talk titled "Identification of new regulators of cell wall development in Arabidopsis." Session B2. Genetic Improvement of Plant Biomass II, Guelph, Canada June 4 -7, 2014

 Postdoctoral Researcher Poster Competition Award, Golden Research Conference on plant cell wall synthesis, Bryant University, Smithfield, RI. August 2-7, 2009

#### **OTHER SCHOLARLY ACTIVITIES**

#### Review Panel for Federal, local, and international funding agencies:

- 1. Panel member for federal agencies: **Department of Energy, Plant Genome Research Program (2020), National Science Foundation (2017, 2022)**
- Ad hoc reviewer for funding agencies: Israel Science foundation, China National Science Foundation, ANR French Research Agency, the Research Grant Council (RGC) of Hong Kong, and Louisiana Board of Regents.

#### **Review service for professional journals:**

- 1. Associate Editor for Frontiers in Plant Science (Impact Factor 4.407). 2020-present
- 2. Associate Editor for Plants (Impact Factor 3.899). 2020-present
- **3.** Serve as **Guest Editor** for the Frontiers in Plant Science. Organized a Research Topic "Plant cell walls as extra cellular matrices (ECMs) and biosensors", Handling the review process for 11 papers in 2016.
- 4. Regular reviewer for refereed academic and scholarly journal manuscript submissions, including the top journals in the field such as *Plant Cell, Plant Journal, Plant Physiology, Scientific Reports, BMC Plant Biology, Journal of Plant Physiology, Plant Cell Report, Biotechnology for Biofuels, Planta, BMC Genomics, PLOS one, Frontiers in Plant Science, New Phytologist, Gene, Biomolecule, Plants etc.*
- **5.** Ad hoc reviewer on a book proposal for *Wiley-Blackwell*, an imprint of John Wiley and Sons, Inc. in April 2013.

#### **SERVICES:**

#### **University Level:**

OVPR Internal Competitions Advisory Board (ICAB), Feb 2020-2021, 2023 Research Advisory Committee, Jul 2017- Aug 2019 Institutional Biosafety Committee, Jan 2013- Jan 2016

### **College Level:**

Excellence Award Committee, 2013- 2016; 2020-present Laboratory and Studio Course for fall semester committee (Covid), 2020 Dean's PTR Advisory committee, Aug 2019- Aug 2021 Diversity and Inclusion Committee, 2018- 2020 Faculty Panel for Competitive Hatch Funding, 2017 - 2020

### **Department Level:**

Departmental PTR Committee, member Aug 2020-2022, Chair 2023 Department Award Committee (ad hoc), Chair 2022 Communication Committee, Aug 2019-present Undergraduate Courses and Curriculum Committee, Aug 2019-present Seminar Committee, 2017- present Graduate Faculty Committee, Jan 2012- present Greenhouse Committee, 2022-present