HONGHONG WU

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POSITION

2019. 09 – **Full Professor, Huazhong Agricultural University, China**

2015.12 – 2019.09 **Postdoctoral Researcher**, **University of California, Riverside, USA**

2011.09 – 2012.11 **Research Associate**, **University of Tasmania, Australia**

EDUCATION

2012.11 – 2015.11 **Ph.D.** in Stress Physiology, **University of Tasmania, Australia**

2008.09 – 2011.06 **M.Sc.** in Biochemistry and Molecular Biology, **Nanjing Agricultural University**

2004.09 – 2008.06 **B.Sc.** in Biotechnology (Microbiology), **Jiangxi Agricultural University**

EDITORIAL ROLES

4. Functional Plant Biology (Associate Editor)
http://www.publish.csiro.au/fp/EditorialStructure

3. Frontiers in Plant Science (Review Editor, Guest Associate Editor)
https://loop.frontiersin.org/people/497189/overview

2. Frontiers in Agronomy (Associate Editor)
https://www.frontiersin.org/journals/agronomy/sections/plant-soil-interactions#editorial-board

1. Journal of Chemistry (Academic Editor)
https://www.hindawi.com/journals/jchem/editors/biochemistry/

JOURNAL REVIEWER

36. **ACS Nano**

35. **Environmental Science & Technology**

34. **Plant, Cell & Environment**

33. **Environmental Pollution**

32. **Critical Reviews in Microbiology**

31. **Industrial Crops and Products**

30. **Tree Physiology**

29. **European Journal of Agronomy**

28. Planta

27. Crop Journal

26. Plant Physiology and Biochemistry

25. Environmental and Experimental Botany

24. Frontiers in Plant Science

23. Ecotoxicology and Environmental Safety

22. Plant Methods

21. International Journal of Molecular Sciences

20. Genes

19. Scientific Reports

18. Functional Plant Biology

17. Plant Growth Regulation

16. Horticultural Plant Journal

15. PeerJ

14. Plants

13. Agronomy

12. Environmental Science and Pollution Research

11. Molecular Biology Reports

10. Journal of Plant Research

9. Environmental Monitoring Assessment

8. PLOS One

7. FLORA

6. Turkish Journal of Botany

5. Brazilian Journal of Botany

4. Agriculture

3. Biocatalysis and Agricultural Biotechnology

2. Environments

1. Bio-Protocol

https://publons.com/author/1323020/honghong-wu#profile

PEER-REVIEWED ARTICLES

Total citations: 1201. H index 18.

[#] indicates co-first author, and * indicates corresponding author.

44. **Wu H**[#], Nißler R[#], Morris V, Herrmann N, Hu P, Jeon SJ, Kruss S*, Giraldo JP*. (2020) Monitoring plant health with near infrared fluorescent H_2O_2 nanosensors. **Nano Letters** 20: 2432-2442. (citations, 5)

43. Santana I, **Wu H**, Hu P, Giraldo JP*. (2020) Targeted biochemical delivery to chloroplasts by traceable nanomaterials in plants. **Nature Communications** 11: 2045

(citations, 2)

42. Zhao L*, Zhang H, Lu L, Wang A, Huang M, **Wu H***, Xing B, Wang Z, Ji R. (2020) Nano-biotechnology in agriculture: Use of nanomaterials to promote plant growth and stress tolerance. **Journal of Agricultural and Food chemistry** 68: 1935-1947. (citations, 4).

41. Zhang X[#], **Wu H**[#], Chen J[#], Chen L, Wan X*. (2020) Chloride, citric acid, and amino acids are associated with K-mitigated drought stress in tea (*Camellia sinensis* L.). **Functional Plant Biology** 47: 398–408. (citations, 2)

40. Zhang X[#], **Wu H**[#], Chen J[#], Chen L, Chang N, Ge G, Wan XC*. (2020) Higher ROS scavenging ability and plasma membrane H^+-ATPase activities are associated with better potassium retention in drought tolerant tea plants. **Journal of Plant Nutrition and Soil Science** 183: 406–415.

39. Liu J, Hu J, Li Y, Li G, **Wu H***. (2020) Chapter 10: Calcium channels and transporters in plants under salinity stress. Calcium Transport Elements in Plants, edited by Dr. Santosh Upadhyay, published by Elsevier (**Paperback ISBN:** 9780128217924).

38. An J, Hu P, Li F, **Wu H**, Yu Shen Y, Jason C. White JC, Tian X, Li Z*, Giraldo JP*. (2020) Molecular mechanisms of plant salinity stress tolerance improvement by seed priming with cerium oxide nanoparticles. **Environmental Science: Nano** 7:2214–2228.

37. Hu P[#], An J[#], Faulkner M, **Wu H**, Li Z, Tian X, Giraldo JP*. (2020) Nnaoparticle charge and size control foliar delivery efficiency to plant cells and organelles. **ACS Nano** 14: 7970–7986. (citations, 1).

36. Khan MN, Khan Z, Luo T, Liu J, Rizwan M, Fahad S, Zhang J, Xu Z, **Wu H**, Hu Li*. (2020) Seed priming with gibberellic acid and melatonin in rapeseed: Consequences for improving yield and seed quality under drought and non-stress conditions. **Industrial Crops and Products** 156: 112850.

35. Giraldo JP*, **Wu H**, Newkirk G, Kruss S. (2019) Nanobiotechnology approaches for engineering smart plant sensors. **Nature Nanotechnology** 14: 541-553. (citations, 54).

34. **Wu H***, Shabala L, Zhou M, Su N, Wu Q, Ul-Haq T, Zhu J, Mancuso S, Azzarello E, Shabala S*. (2019) Root vacuolar Na^+ sequestration but not exclusion from uptake correlates with barley salt tolerance. **Plant Journal** 100: 55-67. (citations, 14).

33. **Wu H***, Li Z*. (2019) The importance of Cl^- exclusion and vacuolar Cl^- sequestration: revisiting the role of chloride transport in plant salt tolerance. **Frontiers in Plant Science** 10: 1418. (citations, 2).

32. Zhang X[#], **Wu H**[#], Chen L, Li Y, Wan XC*. (2019) Efficient iron plaque formation on tea

(*Camellia sinensis*) roots contributes to acidic stress tolerance. **Journal of Integrative Plant Biology** 61: 155–167. (citations, 7)

31. Zhang X[#], **Wu H**[#], Chen L, Wang N, Wei C, Wan XC*. (2019) Mesophyll cells' ability to maintain potassium is correlated with drought tolerance in tea (*Camellia sinensis*). **Plant Physiology and Biochemistry** 136: 196–203. (citations, 5)

30. Li J[#], **Wu H**[#], Santana I, Fahlgren M, Giraldo JP*. (2018) Standoff optical glucose sensing in photosynthetic organisms by a quantum dot fluorescent probe. **ACS Applied Materials & Interfaces** 10: 28279-28289. (citations, 14).

29. **Wu H**, Shabala L, Shabala S, Giraldo JP*. (2018) Hydroxyl radical scavenging by cerium oxide nanoparticles improves *Arabidopsis* salinity tolerance by enhancing leaf mesophyll potassium retention. **Environmental Science: Nano** 5: 1567-1583. (citations, 48).

28. **Wu H**, Shabala L, Azzarello E, Huang Y, Pandolfi C, Su N, Wu Q, Cai S, Bazihizina N, Wang Lu, Zhou M, Mancuso S, Chen Z, Shabala S*. (2018) Na^+ extrusion from the cytosol and tissue-specific Na^+ sequestration in roots confer differential salt stress tolerance between durum and bread wheat. **Journal of Experimental Botany** 69: 3987–4001. (citations, 26).

27. **Wu H***. (2018) Plant salt tolerance and Na^+ sensing and transport. **The Crop Journal** 6: 215–225. (citations, 54).

26. **Wu H**[#,*], Zhang X[#], Giraldo JP, Shabala S*. (2018) It is not all about the sodium: revealing tissue specificity and signaling role of potassium in plant responses to salt stress. **Plant and Soil** 431: 1–17. (**invited "Marschner" review, featured in cover page**, citations, 47).

25. Zhang X[#], **Wu H**[#], Chen L, Liu L, Wan X*. (2018) Maintenance of mesophyll potassium and regulation of plasma membrane H^+-ATPase are associated with physiological responses of tea plants to drought and subsequent rehydration. **The Crop Journal** 6: 611–620. (citations, 18)

24. Newkirk G[#], **Wu H**[#], Santana I, Giraldo JP*. (2018) Catalytic scavenging of plant reactive oxygen species *in vivo* by anionic cerium oxide nanoparticles. **JOVE-Journal of Visualized Experiments** 138: e58373. (citations, 6)

23. Zhang X, Chen L, **Wu H**, Wan XC*. (2018) Root plasma membrane H^+-ATPase is involved in low pH-inhibited nitrogen accumulation in tea plants (*Camellia sinensis* L.). **Plant Growth Regulation** 86: 423-432. (citations, 5)

22. **Wu H**, Tito N, Giraldo JP*. (2017) Anionic cerium oxide nanoparticles protect plant photosynthesis from abiotic stress by scavenging reactive oxygen species. **ACS Nano** 11: 11283-11297. (citations, 59).

21. **Wu H**[#], Wang X[#], Zhou X[#], Zhang Y, Huang M, He J, Shen WB*. (2017) Targeting the middle region of CP4-EPSPS protein for its traceability in highly processed soy-related products. **Journal of Food Science and Technology-Mysore** 54: 3142–3151. (citations, 1)

20. **Wu H**[#], Santana I[#], Dansie J, Giraldo JP*. (2017) In vivo delivery of nanoparticles into plant leaves. **Current Protocols in Chemical Biology** 9: 269-284. (citations, 10)

19. Shabala L, Zhang J, Pottosin I, Bose J, Zhu M, Fuglsang AT, Velarde-Buendia A, Massart A, Hill CB, Roessner U, Bacic A, **Wu H**, Azzarello E, Pandolfi C, Zhou M, Poschenrieder C, Mancuso S, Shabala S*. (2016) Cell-type specific H^+-ATPase activity enables root K^+ retention and mediates acclimation to salinity. **Plant Physiology** 172: 2445-2458. (citations, 64)

18. Zhang XC, Gao HJ, Yang TY, **Wu HH**, Wang YM, Zhang ZZ, Wan XC*. (2016) Al^{3+}-promoted fluoride accumulation in tea plants (*Camellia sinensis*) was inhibited by an anion channel inhibitor DIDS. **Journal of the Science of Food and Agriculture** 96: 4224-4230. citations, 12)

17. Zhang XC, Gao HJ, Yang TY, **Wu HH**, Wang YM, Zhang ZZ, Wan XC*. (2016) Anion channel inhibitor NPBB inhibited fluoride accumulation in tea plants (*Camellia sinensis*) is related to the regulation of Ca^{2+}, CaM and depolarization of plasma membrane potential. **International Journal of Molecular Sciences** 17: 57. (citations 14)

16. **Wu H**, Shabala L, Liu X, Azzarello E, Pandolfi, C, Zhou M, Chen, ZH, Bose J, Mancuso S, Shabala S*. (2015) Linking salinity stress tolerance with tissue-specific Na^+ sequestration in wheat roots. **Frontiers in Plant Science** 6: 71. (citations, 71).

15. **Wu H**, Shabala L, Zhou M, Stefano G, Pandolfi, C, Mancuso S, Shabala S*. (2015) Developing and validating a high-throughput assay for salinity tissue tolerance in wheat and barley. **Planta** 242: 847–857. (citations, 16).

14. **Wu H**, Zhu M, Shabala L, Zhou M, Shabala S*. (2015) K^+ retention in leaf mesophyll, an overlooked component of salinity tolerance mechanism: a case study for barley. **Journal of Integrative Plant Biology** 57: 171–185. (citations, 86).

13. **Wu H**, Shabala L, Zhou M, Shabala S*. (2015) Chloroplast-generated ROS dominates NaCl-induced K^+ efflux in wheat leaf mesophyll. **Plant Signaling & Behavior** 10: 5, e1013793. (citations, 11).

12. **Wu H**, Shabala L, Zhou M, Shabala S*. (2015) MIFE technique-based screening for K^+ retention in the leaf mesophyll as a tool for crop breeding for salinity stress tolerance. **Bio-Protocol** 5: 1–10. (citations, 1)

11. Shabala S*, **Wu H,** Bose J. (2015) Salt stress sensing and early signalling events in plant roots: current knowledge and hypothesis. **Plant Science** 241: 109–119. (citations, 76)

10. Zhang XC, Gao HJ, **Wu HH**, Yang TY, Zhang ZZ, Mao JD, Wan XC*. (2015) Ca^{2+} and CaM are involved in Al^{3+} pretreatment-promoted fluoride accumulation in tea plants (*Camellia sinesis* L.) **Plant Physiology and Biochemistry** 98: 288–295. (citations, 25)

9 **Wu H**, Shabala L, Zhou M, Shabala S*. (2014) Durum and bread wheat differ in their ability to retain potassium in leaf mesophyll: implications for salinity stress tolerance. **Plant and Cell Physiology** 55: 1749–1762. (citations, 42).

8. **Wu H**, Shabala L, Barry K, Zhou M, Shabala S*. (2013) Ability of leaf mesophyll to retain potassium correlates with salinity tolerance in wheat and barley. **Physiologia Plantarum** 149: 515–527. (citations, 74).

7. **Wu H**, Zhang Y, Zhu C, Xiao X, Zhou X, Xu S, Shen WB*, Huang M*. (2012) Presence of CP4-Epsps components in Roundup Ready soybean-derived food products. **International Journal of Molecular Sciences** 13: 1919–1932. (citations, 15)

6. Xiao X, **Wu H**, Zhou X, Xu S, He J, Shen WB*, Zhou G, Huang M*. (2012) The combination of quantitative PCR and Western blot detecting CP4-EPSPS component in Roundup Ready soy plant tissues and commercial soy-related food stuffs. **Journal of Food Science** 77: C603–C608. (citations, 16)

5. Cui T, Li L, Gao Z, **Wu H**, Xie Y, Shen WB*. (2012) Haem oxygenase-1 is involved in salicylic acid-induced alleviation of oxidative stress due to cadmium stress in *Medicago sativa*. **Journal of Experimental Botany** 64: 5521–5534. (citations, 59)

4. Zhou XH, Zhu CQ, Wu HH, Shen WB, Zhou GH, Huang M*. (2012) Effects of the storage temperature and time on *cp4-epsps* gene and protein in genetically modified soybean. Journal of Nanjing Agricultural University 35: 131–136. (citations 2, in Chinese)

3. Cui W, Fu G, **Wu H**, Shen WB*. (2011) Cadmium-induced heme oxygenase-1 gene expression is associated with the depletion of glutathione in the roots of *Medicago sativa*. **Biometals** 24: 93–103. (citations, 52)

2. Wu T, Xu S, Sun Y, **Wu H**, Shen WB*. (2010) Alleviation of exogenous carbon monoxide on iron-induced oxidative damage in detached leaves of *Oryza sativa* L. Plant Physiology Journal 46: 120–124. (citations 2, in Chinese)

1. Chen X, Ding X, Xu S, Wang R, Xuan W, Cao Z, Chen J, Wu HH, Ye MB and Shen WB*. (2009) Endogenous hydrogen peroxide plays a positive role in the upregulation of heme oxygenase and acclimation to oxidative stress in wheat seedling leaves. **Journal of Integrative Plant Biology** 51: 951–960. (citations, 76)

PATENTS

4. Giraldo J.P., **Wu H**, Tito N. Nanoceria augmentation of plant photosynthesis under abiotic stress. **U.S.** provisional patent (US Application patent, publication number: US20170367325A1) (citations, 1)
https://patents.google.com/patent/US20170367325A1/en

3. Giraldo JP, Hu P, Santana I, Newkirk G, **Wu H**. Compositions and methods for chloroplast genetic and biochemical bioengineering *in planta*. US provisional patent. Filed December11, 2017

2. Huang M, Shen W, **Wu H**, Xiao X, Xu S, Zhou X, He J, Zhou G. Polyclonal antibody performing specific antigen-antibody reaction with CP4-EPSPS protein and application thereof. Patent No. ZL 201010225353.3 (China)
http://epub.cnki.net/kns/brief/result.aspx?dbPrefix=SCPD

1. Shen W, Huang M, **Wu H**, Xiao X, Zhou X, Xu S, Xie Y, He J, Zhou G. Method and kit for detecting cp4-epsps gene soybeans and transgenic components in deeply processed product of cp4-epsps gene soybeans. Patent No. ZL 201010249480.7 (China)
http://epub.cnki.net/kns/brief/result.aspx?dbPrefix=SCPD

GRANTS

6. **Wu H**. Mechanisms underlying the modulation of K^+ outward rectifying channels in selenium doped carbon quantum dots improved cotton salt tolerance. ￥580,000 (RMB), 2021/01/01-2024/12/30

5. **Wu H**. The mechanisms underlying Mn_3O_4 nanoparticles improved cotton salt tolerance. Fundamental Research Funds for the Central Universities, ￥ 500,000 (RMB), 2020/05-2023/04

4. **Wu H**. CeO_2 nanoparticles improve cotton salinity stress tolerance by maintaining Na^+ and K^+ homeostasis. NSFC grant (31901464), ￥250,000 (RMB), 2020/01/01-2022/12/30

3. **Wu H**. Plant nanobiotechnology for crop stress tolerance and creating transgenic crops. Fundamental Research Funds for the Central Universities, ￥ 2000,000 (RMB), 2019.09-2024.09

2. **Wu H**, Zhang XC. The role of mesophyll K^+ retention in drought stress tolerance in tea plants. The Open Fund of State Key Laboratory of Tea Plant Biology and Utilization at Anhui Agricultural University (SKLTOF20170112), ￥60, 000 (RMB), 2017/11-2019/10

1. Zhang XC, **Wu H**, Feng L. The role of plasma membrane H^+-ATPase in tea plant's adaption to ammonium nutrient under low pH. Science Foundation for Anhui Province (KJ2017A126), ￥40, 000 (RMB), 2017/01-2018/12

ORAL TALKS

19. 26th, September, 2020, "Plant nanobiotechnology approach for improving plant stress tolerance: A case study of salinity stress", Shihezhi University (**Invited talk**)

18. 8th, August, 2020, "The mechanisms underlying nanomaterials improved plant salt tolerance and its application", Jiangsu Normal University (**Invited talk**)
http://kjc.jsnu.edu.cn/a4/f3/c3828a304371/page.htm

17. 10th, May, 2020, "Forum of the advances of plant nanobiotechnology", Huazhong Agricultural University and Bio-protocol, organizer/speaker
http://news.hzau.edu.cn/2020/0510/57212.shtml

16. 23rd – 25th October 2019, Plant nanobiotechnology: from improving plant stress tolerance to creating smart plant sensor. 2nd International Conference on Plant & Molecular Biology. Amsterdam, Nertherlands. (**Invited talk**)
https://www.plant-biology-conference.hazelgroup.org/featured-speaker.php#

15. 04th – 06th March 2019, Plant nanobionics: a case study of mechanisms underlying cerium oxide nanoparticles improved plant salinity stress tolerance. International Conference on Plant Sciences Research (Plant-2019), Baltimore, U.S.A. (**Invited talk**)
https://unitedscientificgroup.com/conferences/plant/pdfs/Plant-2019-Program.pdf

14. 18th November 2018, The mechanisms beyond low Ce^{3+}/Ce^{4+} cerium oxide nanoparticles enhanced plant abiotic stress tolerance. Jiangxi Agricultural University (**Invited talk**)

13. 15th November 2018, The mechanisms beyond low Ce^{3+}/Ce^{4+} cerium oxide nanoparticles enhanced plant abiotic stress tolerance. Huazhong Agricultural University (**Invited talk**)

12. 14th November 2018, Plant nanobionics and mechanisms beyond cerium oxide nanoparticles enhanced plant abiotic stress tolerance. Gansu Agricultural University (**Invited talk**)
http://smkx.gsau.edu.cn/info/1004/3552.htm

11. 12th – 14th November 2018, The importance of root meristem zone in plant salinity stress sensing. Lanzhou University (**Invited talk**)
http://caoye.lzu.edu.cn/lzupage/2018/11/12/N20181112095646.html

10. 12th – 14th November 2018, Plant nanobionics and *in vivo* stand-off glucose monitoring. Lanzhou University (**Invited talk**)

http://caoye.lzu.edu.cn/lzupage/2018/11/12/N20181112095646.html

9. 12th – 14th November 2018, The mechanisms beyond cerium oxide nanoparticles improved plant salinity stress tolerance. Lanzhou University (**Invited talk**)
http://caoye.lzu.edu.cn/lzupage/2018/11/12/N20181112095646.html

8. 7th November 2018, The mechanisms beyond cerium oxide nanoparticles improved plant salinity stress tolerance. China Agricultural University (**Invited talk**)
http://cab.cau.edu.cn/art/2018/11/5/art_24507_594954.html

7. 3rd – 4th February 2018, Anionic cerium oxide nanoparticles protect plants from abiotic stresses by engineering ROS-mediated physiological responses. Western Regional ASPB 2018 Meeting, Fullerton, California, U.S.A
https://western.aspb.org/wp-content/uploads/2018/02/Western-ASPB-2018-Full-Program.pdf

6. 17th January 2018, Hydroxyl radical scavenging by cerium oxide nanoparticles enhances leaf mesophyll K^+ retention thus improving salinity tolerance in *Arabidopsis*. University of California, Riverside, 2018 BPSC 250 Winter Seminar Series, U.S.A. (**Invited talk**)

5. 24th – 28th June 2017, Cerium oxide nanoparticles improve *Arabidopsis* salinity stress tolerance by enabling leaf mesophyll K^+ retention. Botany 2017 meeting (Botanical Society of America), Fort Worth, Texas, U.S.A.
http://2017.botanyconference.org/engine/search/index.php?func=detail&aid=152

4. 24th – 28th June 2017, Plant nanobionic protection from abiotic stress enhances the light and carbon reactions of photosynthesis in *Arabidopsis*. Botany 2017 meeting (Botanical Society of America), Fort Worth, Texas, U.S.A
http://2017.botanyconference.org/engine/search/index.php?func=detail&aid=132

3. 16th December 2016, Plant nanobionic protection from abiotic stress enhances plant photosynthetic performance. University of California, Riverside, 14th annual CEPCEB Award Symposium, U.S.A

2. 21st September 2016, "Nanobionic photooxidative protection by anionic cerium oxide nanoparticles enhances plant photosynthetic carbon assimilation." University of California, Riverside, 2016 Postdoctoral Symposium, U.S.A.

1. 9th – 10th March 2015, "The role of K^+ retention and tissue specific vacuolar Na^+ sequestration in plant salt tolerance." Lanzhou University, China. (**Invited talk**)
http://caoye.lzu.edu.cn/lzupage/2015/03/09/N20150309112012.html

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CONFERENCE PUBLICATIONS/POSTERS

 # indicates co-first author, and * indicates corresponding author.

21. Wu H*. (2019) Plant nanobiotechnology: from improving plant stress tolerance to creating smart plant sensor. 2nd International Conference on Plant & Molecular Biology, 23rd-25th, October 2019, Amsterdam, Netherlands.

20. **Wu H**, Shabala L, Shabala S, Giraldo JP*. (2019) Improving Arabidopsis salinity tolerance through cerium oxide nanoparticle scavenging of ROS and enhancement of leaf mesophyll K^+ retention. ASPB (American Society of Plant Biologists) Plant Biology 2019, 3rd-7th, August 2019, San Jose, California, U.S.A.

19. **Wu H**, Hu P, Santana I, An J, Newkirk G, Giraldo JP*. (2019) Improving plant stress tolerance and resource use through chloroplast nanobiotechnology. ACS National Meeting & Exposition, 31st March – 4th April 2019, Orlando, Florida, U.S.A.

18. Hu P#, An J#, Faulkner M, **Wu H**, Li Z, Tian X, Giraldo JP*. (2019) Elucidating the influence of nanoparticle chemical and physical properties on their translocation and distribution in crop leaves. ACS National Meeting & Exposition, 31st March – 4th April 2019, Orlando, Florida, U.S.A.

17. **Wu H**, Shabala L, Shabala S, Tito N, Giraldo JP*. (2019) Plant nanobionics: a case study of mechanisms underlying cerium oxide nanoparticles improved plant salinity stress tolerance. International Conference on Plant Sciences Research (Plant-2019), 04th – 06th March 2019, Baltimore, Maryland, U.S.A.

16. **Wu H**, Shabala L, Shabala S, Giraldo JP*. (2018) Hydroxyl radical scavenging by cerium oxide nanoparticles improves *Arabidopsis* salinity stress tolerance by enhancing leaf mesophyll potassium retention. Nanoscale Horizons symposium, 05th October 2018, San Diego, California, U.S.A.

15. **Wu H**, Shabala L, Azzarello E, Pandolfi C, S Cai, Bazihizina N, Wang Lu, Mancuso S, Zhou M, Z Chen, Shabala S*. (2018) Cell- and organelle-specific Na^+ sequestration in roots confers differential salt stress tolerance between durum and bread wheat. Root Research at the Forefront of Science International Symposium, 8th – 12th July 2018, Ma'ale HaHamisha, Israel

14. Li J#, **Wu H#**, Santana I, Fahlgren M, Giraldo JP*. (2018) In vivo standoff glucose imaging in photosynthetic organisms by quantum dot ratiometric probe. The 5th Annual CEPCEB Postdoctoral Symposium, University of California, Riverside, 1st June 2018, Riverside, California, U.S.A.

13. Santana I, **Wu H**, Giraldo JP*. (2018) Nanotechnology approach to study chloroplasts-generated ROS regulation of plant abiotic stress gene clusters. The 5th Annual CEPCEB Postdoctoral Symposium, University of California, Riverside, 1st June 2018, Riverside, California, U.S.A.

12. **Wu H**, Shabala L, Shabala S, Giraldo JP*. (2018) Anionic cerium oxide nanoparticles protect plants from abiotic stresses by engineering ROS-mediated physiological responses. ASPB Western section 2018, 3rd – 4th February 2018, Fullerton, California, U.S.

11. Santana I, **Wu H**, Giraldo JP*. (2018) Nanotechnology approach to study chloroplasts ROS regulation of plant abiotic stress gene clusters. ASPB (American Society of Plant Biologists) Western section 2018, 3rd – 4th February 2018, Fullerton, California, U.S.A.

10. **Wu H**, Shabala L, Shabala S, Giraldo JP*. (2017) Cerium oxide nanoparticles improve *Arabidopsis* salinity stress tolerance by enabling leaf mesophyll K^+ retention. Botany2017 annual meeting (Botanical Society of America), 24th – 28th June 2017, Fort Worth, Texas, U.S.A.

9. **Wu H**, Tito N, Giraldo JP*. (2017) Plant nanobionic protection from Abiotic stress enhances the light and carbon reactions of photosynthesis in *Arabidopsis*. Botany2017 annual meeting (Botanical Society of America), 24th – 28th June 2017, Fort Worth, Texas, U.S.A.

8. **Wu H,** Shabala L, Bose J, Zhou M, Shabala S*. (2016) Sensing and signaling salt stress in plants. Proceedings of 4th International Symposium on Plant Signaling and Behavior, 19th – 24th June 2016, St. Petersburg, Russia

7. **Wu H,** Shabala L, Bose J, Zhou M, Shabala S*. (2015) Sensing and signaling salt stress in plant roots. 2nd International Conference on "Physiological, Biochemical and Molecular Arguments for Salt Tolerance", 11th – 14th October 2015, Doha, Qatar

6. **Wu H,** Shabala L, Zhou M, Mancuso S, Azzarello E, Shabala S*. (2015) Vacuolar Na^+ sequestration but not Na^+ exclusion from uptake confers salt tolerance in barley. SEB Prague conference, 30th June – 03rd July 2015, Prague, Czech Republic

5. **Wu H**, Zhu M, Shabala L, Zhou M, Shabala S*. (2014) Sodium and potassium nutrition in the context of the salinity stress tolerance in cereals. ComBio2014, 28th September – 02nd October 2014, Canberra, Australia

4. Zhu M, **Wu H**, Zhou M, Shabala L, Shabala S*. (2014) Linking osmotic adjustment and stomatal characteristics with salinity stress tolerance in barley. ComBio2014, 28th September – 02nd October 2014, Canberra, Australia

3. Shabala S*, Bose J, Shabala L, Zeng F, **Wu H**, Zhu M, Adem G, Panta S, Percey W, Zhou M. (2014) Abiotic stress tolerance and crop yield: a physiologist's perspective. ComBio2014, 28th September – 02nd October 2014, Canberra, Australia

2. **Wu H**, Shabala SN, Zhou M, Shabala L*. (2013) Quantifying contribution of SOS1 and GORK plasma membrane transporters towards salinity tolerance in barley by the MIFE

technology, The 16th Australian Barley Technical Symposium, 08th – 11th September 2013, Melbourne, Australia

1. Shabala SN*, **Wu H**, Shabala L, Zhou M. (2013) Functional genomics of salinity stress tolerance in barley assessed by the MIFE™ technology, pp. 20 – 25. VIR conference – "Modern methods of use of genetic resources in breeding barley and oats", 01st – 05th July 2013, St. Petersburg, Russia

RESEARCH INTEREST

4. Improving plant abiotic stress tolerance using nanoparticles

3. Membrane ion transport, abiotic stress sensing and adaptive response in plants

2. Targeted delivery of functionalized nanoparticles into plant cell compartments

1. Plant nanobionics for precision agriculture

ACADEMIC WEBPAGE

2. ResearchGate: https://www.researchgate.net/profile/Honghong_Wu?ev=hdr_xprf

1. Google Scholar: http://scholar.google.com.au/citations?user=RhRMFcMAAAAJ&hl=en