

Curriculum Vitae

Chien Van Ha (Ph. D)

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A. Education:

- Doctor of Philosophy: Vietnam Academy of Agricultural Sciences, Hanoi, Vietnam.
Major: Biotechnology. Date of Graduation: May 25, 2016.
- Master of Science: Hanoi University of Science, Vietnam National University, Hanoi, Vietnam.
Major: Experimental Biology. Date of Graduation: April 6, 2010.
- Bachelor of Science: Hanoi University of Science, Vietnam National University, Hanoi, Vietnam.
Major: Biotechnology. Date of Graduation: June 22, 2007.

B. Professional experience:

- 12/2020 – current: Research Associate, Tran Lab, IGCAST, Texas Tech University
- 01/2018 – 11/2020: Postdoctoral Associate, Pandey Lab, Donald Danforth Plant Science Center, Saint Louis, Missouri, United State of America.
- 04/2017 –01/2018: Postdoctoral Researcher, Plant Genomic Network Research Team, RIKEN Center for Sustainable Resource Science, RIKEN, Wako, Japan
- 05/2016 –03/2017: Technical staff, Signaling Pathway Research Unit, RIKEN Center for Sustainable Resource Science, RIKEN, Yokohama, Japan.
- 04/2015 – 4/2016: Research Scientist/ Leader of Genetic Manipulation team, National Key Laboratory for Plant Cell Biotechnology, Agriculture Genetics Institute, Hanoi, Vietnam.
- 04/2012 –03/2015: Ph.D. student, International Program Associate fellowship, Signaling Pathway Research Unit, RIKEN Center for Sustainable Resource Science, RIKEN, Yokohama, Japan.
- 08/2007 – 03/2012: Researcher/ Leader of the Soybean transformation team, National Key Laboratory for Plant Cell Biotechnology, Agriculture Genetics Institute, Hanoi, Vietnam.

C. Grant / Fellowships / Awards:

Grant:

PI (2012-2013) and assistant manager (2015-2016) of grant “Research on transformation of Vietnamese soybean cultivars with *GmNAC* genes to enhance resistance to adverse conditions” (2012 - 2017, 220,000 USD; Project Code 03/2012/HĐ-ĐTĐL) from the Vietnam Ministry of Science and Technology, Vietnam.

Fellowship:

International Program Associate fellowship, Signaling Pathway Research Unit, RIKEN Center for Sustainable Resource Science, Japan (04/2012 – 03/2015).

Awards:

- RIKEN Center for Sustainable Resource Science incentive award FY 2016, RIKEN Center for Sustainable Resource Science, Japan, 2017.
- RIKEN Center for Sustainable Resource Science incentive award FY 2013, RIKEN Center for Sustainable Resource Science, Japan, 2014.
- American Society of Plant Biologists Travel Grant award, USA, 2020.

D. Scientific mentoring:

- Mentor of a REU internship student (Anastasiya Andriyash), Donald Danforth Plant Science Center, MO, USA (May – August, 2019).
- Mentor of a high school student (Emily Ferbet), Donald Danforth Plant Science Center, MO, USA (April – May, 2018).
- Mentor of four Master of Science (MS) students (Nga Thanh Le graduated at Vietnam National University of Agriculture in 2018; Anh Trung Nguyen graduated at Hanoi University of Science and Technology in 2017; Hung Duy Tran, and Phuong Thi Nguyen graduated at Vietnam Academy of Science and Technology in 2015), National Key Laboratory for Plant Cell Biotechnology, Agricultural Genetics Institute, Hanoi, Vietnam (April, 2015 – April, 2016).
- Mentor of a MS trainee (Yu Li), Signaling Pathway Research Unit, RIKEN Center for Sustainable Resource Science, RIKEN, Yokohama, Japan (September, 2014 – March, 2015).
- Mentor of four Bachelor of Science students (three students graduated at Thai Nguyen University in 2010 & 2011, and one student graduated at Hanoi University of Science in 2010), National Key Laboratory for Plant Cell Biotechnology, Agricultural Genetics Institute, Hanoi, Vietnam (December, 2007 – July, 2011).

E. Professional memberships and activities:

- Member, the Japanese Society Plant Physiologists, 2013-2015, & 2017
- Co-organizer, the 10th Vietnam-Japan Scientific Exchange Meeting, Tokyo, Japan 2017
- Member, American Society of Plant Biologists, 2019-current
- Reviewer of journals: Plant Molecular Biology, BMC Plant Biology, Plants, Agronomy, Plant Growth Regulation, Protoplasma, PeerJ, Scientific Reports, PloS One, Computational Biology and Chemistry, Journal of Proteome Research, Plant Signaling & Behavior, Acta Botanica Brasilica.

F. Invited speaker:

- “Roles of AGB1 and AGG3 in ABA and drought stress response at protein levels in *Arabidopsis thaliana*”, American Society of Plant Biologists Annual meeting, August 4th, 2019, San Jose, California, USA.
- “Strigolactone: a positive regulator of plant responses to drought and salt stress”, The 10th Vietnam-Japan Scientific Exchange Meeting, September 8th, 2017, Tokyo, Japan.
- “The *Arabidopsis* response regulator (ARR) 1, 10, 12 negatively and redundantly regulate in plant responses to drought”, RIKEN Center for Sustainable Resource Science, July 21st, 2017, Wako, Saitama, Japan.

Publications

Research article

1. Nguyen KH*, **Ha CV***, Nishiyama R*, Watanabe Y, Leyva-González MA, Fujita Y, Tran UT, Tanaka M, Li W, Seki M, Schaller GE, Herrera-Estrella L, Tran LS (2016). *Arabidopsis* type B cytokinin response regulators ARR1, ARR10, and ARR12 negatively regulate plant responses to drought. **Proceedings of the National Academy of Sciences of the United States of America** **113**: 3090 – 5. (* equal contribution).
2. **Ha CV**, Leyva-Gonzalez MA, Osakabe Y, Tran TU, Nishiyama R, Watanabe Y, Tanaka M, Seki M, Yamaguchi S, Dong NV, Yamaguchi-Shinozaki K, Shinozaki K, Herrera-Esterella L, Tran LS (2014). Positive regulatory role of strigolactone in plant responses to drought and salt stress. **Proceedings of the National Academy of Sciences of the United States of America** **111**:851-6.
3. **Ha CV**, Watanabe Y, Tran UT, Le DT, Tanaka M, Nguyen KH, Seki M, Nguyen DV, Tran LS (2015). Comparative analysis of root transcriptomes from two contrasting drought-responsive Williams 82 and DT2008 soybean cultivars revealed differentially expressed genes under dehydration stress. **Frontiers in Plant Science** **6**:551.
4. **Ha CV**, Esfahani MN, Watanabe Y, Sulieman S, Mochida K, Nguyen DV, Tran LS (2014). Genome-wide identification and expression analysis of the *CaNAC* family members in chickpea during development, dehydration and ABA treatments. **PLoS One** **9**: e114107.
5. **Ha CV**, Le DT, Nishiyama R, Watanabe Y, Sulieman S, Tran UT, Mochida K, Dong NV, Yamaguchi-Shinozaki K, Shinozaki K, Tran LS (2013). The auxin response factor transcription factor family in soybean: genome-wide identification and expression analyses during development and water stress. **DNA Research** **20**:511-24.
6. **Ha CV**, Le DT, Nishiyama R, Watanabe Y, Dong NV, Tran UT, Tran LS (2013). Characterization of the newly developed soybean cultivar DT2008 in relation to the model variety W82 reveals a new genetic resource for comparative and functional

- genomics for improved drought tolerance. **BioMed Research International** **2013**:759657.
7. Sulieman S, Kusano M, **Ha CV**, Watanabe Y, Abdalla MA, Abdelrahman M, Kobayashi M, Saito K, Mühling KH, and Tran LS (2019). Divergent metabolic adjustments in nodules are indispensable for efficient N₂ fixation of soybean under phosphate stress. **Plant Science** **289**: 110249.
 8. Li W, Nguyen K, **Ha CV**, Watanabe Y, Tran LS (2019). Crosstalk between the cytokinin signaling and MAX2 signaling in growth and callus formation of *Arabidopsis thaliana*. **Biochemical and Biophysical Research Communications** **511(2)**:300-306.
 9. Utsumi Y, Utsumi C, Tanaka M, **Ha CV**, Takahashi S, Akihiro Matsui, Matsunaga TM, Matsunaga S, Seo M, Okamoto Y, Moriya E, Seki M (2019). Acetic Acid Treatment Enhances Drought Avoidance in Cassava (*Manihot esculenta Crantz*). **Frontiers in Plant Science** **10** :521.
 10. Li W, Nishiyama R, Watanabe Y, **Ha CV**, Kojima M, An P, Tian C, Sakakibara H, Tran LS (2018). Effects of overproduced ethylene on the contents of other phytohormones and expression of their key biosynthetic genes. **Plant Physiology and Biochemistry** **128**: 170-177.
 11. Nguyen KH, Mostofa MG, Li W, **Ha CV**, Watanabe Y, Le DT, Thao NP, Tran LS (2018). The soybean transcription factor GmNAC085 enhances drought tolerance in *Arabidopsis*. **Environmental and Experimental Botany** **151**: 12-20.
 12. Le HTT, Nguyen AT, Nguyen DV, Nguyen VA, Le HTM, **Ha CV**, Nguyen CH (2018). The effect of single metal nanoparticles on genetic transformation of Vietnamese soybean variety DT22. **Journal of Agriculture and Rural Development** **11**, 56-60. (ISSN 1859-4581).
 13. Nguyen HM, Sako K, Matsui A, Suzuki Y, Mostofa MG, **Ha CV**, Tanaka M, Tran LS, Habu Y, Seki M (2017). Ethanol Enhances High-salinity Stress Tolerance by Detoxifying Reactive Oxygen Species in *Arabidopsis thaliana* and Rice. **Frontiers in Plant Science** **8**: 1001.
 14. Esfahani MN, Inoue K, Chu HD, Nguyen KH, **Ha CV**, Watanabe Y, Herrera-Estrella L, Mochida K, Tran LS (2017). Comparative transcriptome analysis of nodules of two *Mesorhizobium*-chickpea associations with differential symbiotic nitrogen fixation capacity under phosphate deficiency. **The Plant Journal** **91 (5)**: 911-926.
 15. Li W, Nguyen KH, Chu HD, **Ha CV**, Watanabe Y, Osakabe Y, Leyva-González MA, Sato M, Toyooka K, Voges L, Tanaka M, Seki M, Seo M, Yamaguchi S, Nelson DC, Herrera-Estrella L, Tran LS (2017). The karrikin receptor KAI2 promotes drought resistance in *Arabidopsis thaliana*. **PLoS Genetics** **13 (11)**: e1007076.
 16. Esfahani MN, Kasuno M, Nguyen KH, Watanabe Y, **Ha CV**, Saito K, Sulieman S, Herrera-Estrella L, Tran LS (2016). Adaptation of symbiotic *Mesorhizobium*-chickpea

relationship to phosphate deficiency relies on reprogramming of whole plant metabolism. **Proceedings of the National Academy of Sciences of the United States of America** **113**: 4610-4619.

17. Nguyen KH, **Ha CV**, Watanabe Y, Tran UT, Esfahani MN, Nguyen DV, Tran LS (2015). Correlation between differential drought tolerability of two contrasting drought-responsive chickpea cultivars and differential expression of a subset of *CaNAC* genes under normal and dehydration conditions. **Frontiers in Plant Science** **6**:449.
18. Sulieman S, **Ha CV**, Esfahani MN, Watanabe Y, Nishiyama R, Pham CTB, Nguyen DV, Tran LS (2015). DT2008: A promising new genetic resource for improved drought tolerance in soybean when solely dependent on symbiotic N₂ fixation. **BioMed Research International** **2015**:687213.
19. Thao NP, Thu NBA, Hoang TLX, **Ha CV**, Tran LS (2013). Differential expression analysis of a subset of drought-responsive *GmNAC* genes in two soybean cultivars differing in drought tolerance. **International Journal of Molecular Sciences** **14**: 23828-41.
20. Sulieman S, **Ha CV**, Schulze J, Tran LS (2013). Growth and nodulation of symbiotic *Medicago truncatula* at different levels of phosphorus availability. **Journal of Experimental Botany** **64**:2701-12.
21. Nishiyama R, Watanabe Y, Leyva-Gonzalez MA, **Ha CV**, Fujita Y, Tanaka M, Seki M, Yamaguchi-Shinozaki K, Shinozaki K, Herrera-Estrella L, Tran LS (2013). *Arabidopsis* AHP2, AHP3 and AHP5 histidine phosphotransfer proteins function as redundant negative regulators of drought stress response. **Proceedings of the National Academy of Sciences of the United States of America** **110**:4840-5.
22. Le DT, Aldrich DL, Valliyodan B, Watanabe Y, **Ha CV**, Nishiyama R, Guttikonda SK, Quach TN, Gutierrez-Gonzalez JJ, Tran LS, Nguyen HT (2012). Evaluation of candidate reference genes for normalization of quantitative RT-PCR in soybean tissues under various abiotic stress conditions. **PLoS One** **7**: e46487.

Book chapter

23. Mochida K, **Ha CV**, Sulieman S, Dong NV, Tran LS (2015). Databases of transcription factors in legumes, in “Biological Nitrogen Fixation”, Ed. de Bruijn FJ. Wiley-Blackwell, John Wiley & Sons, Hoboken, NJ 07030-5774, USA, pp. 817-21.

Conference

1. **Ha CV**, Anastasia A, Pandey S (2020). G-proteins negatively function in regulating plant heat stress response in *Arabidopsis thaliana*. Annual meeting of American Society of Plant Biologists, July 26-31, 2020, Washington DC, USA.

2. **Ha CV**, Anastasia A, Pandey S (2019). Roles of G-proteins in heat stress response in *Arabidopsis thaliana*. Annual scientific retreat of Plant and Microbial Biosciences, Washington University, Oct 14, Saint Louis, Missouri, USA
3. **Ha CV**, Anastasia A, Pandey S (2019). Roles of G-proteins in heat stress response in *Arabidopsis thaliana*. Fall Symposium 2019, Sep 25-27, Saint Louis, Missouri, USA.
4. **Ha CV**, Evan MC, Hicks L, Pandey S (2019). Roles of AGB1 and AGG3 in ABA and drought stress response at proteome level in *Arabidopsis thaliana*. Annual meeting of American Society of Plant Biologists, Aug 3-7, 2019, San Jose, California, USA.
5. **Ha CV**, Pandey S (2019). Developing drought tolerant crops by chemical application. Annual scientific retreat, Donald Danforth Plant Science Center, May 22-24, 2019, Missouri, USA.
6. Bashir K, Sultana S, Tanaka M, **Ha CV**, Habu Y, Tsubui Y, Kikuchi J, Watanabe S, Seo M, Ando E, Kinoshita T, Seito M, Kawaura K, Fujita M, Shinozaki K, Seki M (2019). Ethanol mediated drought stress tolerance in plants. The 59th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 13-15, Nagoya, Japan.
7. **Ha CV**, Pandey S (2018). ABA and G-protein mediate redox mechanism in *Arabidopsis*. Fall Symposium 2018, Sep 26-28, Saint Louis, Missouri, USA.
8. **Ha CV**, Evan MC, Hicks LM, Pandey S (2019). ABA- and G protein-dependent redox changes in *Arabidopsis thaliana*. Annual scientific retreat, Donald Danforth Plant Science Center, May 28-30, 2018, Missouri, USA.
9. **Ha CV**, Li Y, Mostofa MG, Watanabe Y, Li W, Nguyen KH, Tanaka M, Seki M, Sato M, Toyooka K, Osakabe Y, Tran LS (2017). The *Arabidopsis* histidine phosphotransfer AHP4 plays a negative regulatory role in plant drought response. The 58th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 16-18, Kagoshima, Japan.
10. Watanabe Y, **Ha CV**, Le DT, Nishiyama R, Tran UT, Sakakibara H, Adams E, Shin R and Tran LS (2017) *In planta* functional analysis of the drought-responsive *GmCKX13* gene from soybean. The 58th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 16-18, Kagoshima, Japan
11. Nguyen KH, **Ha CV**, Watanabe Y, Tran UT, Esfahani MN, Nguyen DV, Tran LS (2016). Genome-wide identification and expression analysis of the CaNAC family members in chickpea cultivars with contrasting drought tolerance during development, dehydration and ABA treatments. The 57th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 18-20, Morioka, Japan.
12. Watanabe Y, **Ha CV**, Le DT, Nishiyama R, Tran UT, Sakakibara H, Adams E, Shin R and Tran LS (2016) *In planta* functional analysis of the drought-responsive *GmCKX13*

gene from soybean. The 57th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 18-20, Morioka, Japan

13. Tran LS, **Ha CV**, Watanabe Y, Tran UT, Tanaka M, Seki M, Nguyen DV (2015). Comparative analysis of root transcriptomes from two contrasting drought-responsive Williams 82 and DT2008 soybean cultivars revealed differentially expressed genes under dehydration stress. Plant Genomics Congress: Asia, Mar 19-20, 2015, Kuala Lumpur, Malaysia.
14. **Ha CV**, Watanabe Y, Tran TU, Tanaka M, Seki M, Tran LS (2015). Comparative root transcriptome analyses of two soybean cultivars with contrasting drought-tolerant phenotype under well-watered and dehydration conditions. The 56th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 16-18, Tokyo, Japan.
15. Nishiyama R, Watanabe Y, Leyva-Gonzalez MA, **Ha CV**, Fujita Y, Tanaka M, Seki M, Yamaguchi-Shinozaki K, Shinozaki K, Herrera-Estrella L, Tran LS (2014). *Arabidopsis* histidine phosphotransfer proteins AHP2, AHP3 and AHP5 function as redundant negative regulators of drought stress response. The 55th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 18-20, Toyama, Japan.
16. Watanabe Y, **Ha CV**, Le TD, Nishiyama R, Tran TU, Adams R, Shin R, Sakakibara H, Tran LS (2014). *In planta* functional analysis of the drought-responsive *GmCKX13* gene from soybean. The 55th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 18-20, Toyama, Japan.
17. **Ha CV**, Leyva-Gonzalez MA, Osakabe Y, Tran TU, Nishiyama R, Watanabe Y, Tanaka M, Seki M, Yamaguchi S, Dong NV, Yamaguchi-Shinozaki K, Shinozaki K, Herrera-Esterella L, Tran LS (2014). Strigolactone: a positive regulator of plant responses to drought and salt stress. The 55th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 18-20, Toyama, Japan.
18. **Ha CV**, Le DT, Watanabe Y, Tran UT, Tran LS (2013). Transcripts of auxin/IAA-response factors and cytokinin metabolic genes in two soybean cultivars with contrasting phenotypes. The 54th Annual Meeting of the Japanese Society of Plant Physiologists, Mar 21-23, Okayama, Japan.