

Name: Rong Zhou

Address: Agro Food Park 48, Aarhus N, Denmark

Date of birth: 9. January 1989 **Gender:** Female

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h/h10-index: 16/21 (Google Scholar) **Cited times** 969 (Google Scholar)

Education

Sep. 2011–Dec. 2015 Combined master and PhD, College of Horticulture, Nanjing Agricultural University

Oct. 2014–Aug. 2015 International visit, Department of Food Science, Aarhus University (AU)

Sep. 2013–Mar. 2014 International visit, Department of Food Science, AU

Sep. 2007–Jun. 2011 Bachelor, College of Agriculture, Nanjing Agricultural University

Employment

Nov. 2018– Tenure-track assistant professor, Department of Food Science, AU, Denmark

Jan. 2016–Oct. 2018 Assistant Researcher, Jiangsu Academy of Agricultural Sciences, China

Project leadership experience

[1] The effect of elevated CO₂ concentration and exogenous melatonin on tomatoes at combined heat and drought, Aarhus University Research Foundation, Jan 2019-Dec 2022, **PI**, 2.1 million DKK.

[2] Biosubstrate, Bio based growth media for plant production, GUDP, Dec 2019-Dec, 2021, **PI**, 1.86 million DKK.

[3] The growth, physiology and non-coding RNAs response of tomatoes at drought, heat and their combination funded by National Natural Science Foundation of China Youth Fund (31601745), Jan 2017-Dec 2019, **PI**, ≈ 250,000 DKK.

[4] The biochemical effect of combined heat and drought on tomato funded by Natural Science Foundation of Youth in Jiangsu Province (BK20160579), July 2016-June 2019, **PI**, ≈ 200,000 DKK.

[5] Analysis of the genetic characteristics of tomato anthocyanin based on mixed pool analysis and molecular marker development Funded by Jiangsu Academy of Agricultural Sciences, July 2016-June 2019, **PI**, 130,000 DKK.

[6] Interreg Salfar, **Collaborating researcher**, Jul 2020-Jun 2022, 0.95 million DKK.

[7] DFF-Forskningsprojekt1 (tematisk forskning)/DFF-Research Project1 (Thematic Research), Impact of plant-based diet on the consumption of health promoting microRNA's, **Collaborating researcher**, Jan 2021-Jun 2024, 2.86 million DKK.

[8] MUDP, 'Waste to Value – Biofertilizer' med Baces A/S, **Collaborating researcher**, 2021 Jan-2022 Dec, 0.986 million DKK.

[9] Breeding of tomato with high quality and production at abiotic stress founded by National Key Research and Development Plan (2017YFD0101904), Jan 2018-Dec 2022, **Collaborating researcher**, 1.4 million DKK.

[10] Breeding of new solanaceae vegetables varieties with high quality and production at abiotic stress in the greenhouse funded by Agriculture Major New Variety Creation Project in Jiangsu

Province (PZCZ201713), July 2017-Dec 2020, **Collaborating researcher**, 2.03 million DKK.

[11] H2020, EPPN2020, Involved.

[12] EUDP greenhouse industry, Involved.

Lectures, Workshop and Conferences

Rong Zhou, Physiological and genetic response of tomato plants to combined abiotic stresses, **Keynote speaker**, The 2nd CiFOOD Conference 2022, 31th Jan-1st Feb, online, 2022

Rong Zhou, Thayna Mendanha, Karen Koefoed Petersen, Søren Ugilt Larsen, Aidan Mark Smith, Carl-Otto Ottosen. Developing plant bioassays to evaluate the performance of sustainable growing medium, **Oral presentation**, International Society for Horticultural Science, II International Symposium on Growing Media, Soilless Cultivation, and Compost Utilization in Horticulture, Belgium, Aug. 2021

Søren Ugilt Larsen, Jørgen Hinge, **Rong Zhou**, Thayna Mendanha, Aidan Mark Smith, Sven Erik Lanng. Biomasser og forbehandlingsmetoder, *Gartner Tidende* 2, 2021, Page 16-17

Søren Ugilt Larsen, Jørgen Hinge, **Rong Zhou**, Thayna Mendanha, Aidan Mark Smith, Sven Erik Lanng. Screening af dyrkningsegenskaber, *Gartner Tidende* 2, 2021, Page 18-19

Søren Ugilt Larsen and **Rong Zhou**, Bioeconomic opportunities in grass protein, biogas and biomass, **Oral presentation, Online seminar**, 26, Oct. 2020

Rong Zhou. ‘How tomato plants respond to combined abiotic stress?’ **Oral presentation, Lecture**, Huaian Institute of Agricultural Science, China, 16, Jan. 2020, Resilient Northern Crops, **Workshop**, Agro Food Park, Denmark, 5, Dec. 2019

Rong Zhou. ‘Response of tomatoes to multiple abiotic stress’ **Oral presentation, Lecture**, Jiangsu Academy of Agricultural Science, China, Jul. 2020

Rong Zhou, et al. ‘The physiological and biochemical responses of tomatoes to drought, heat and combined stress’. **Oral presentation**, the 30th International Horticultural Congress, Turkey, 12, Aug. 2018-16, Aug. 2018

Rong Zhou, et al. ‘The physiological and circRNAs responses of tomatoes to combined drought and heat’. **Oral presentation**, the Chinese Horticultural Congress, China, 5, Aug. 2018-7, Aug. 2018

Rong Zhou, et al. ‘Screening of tomatoes under high temperature by Fv/Fm and identification of heat-responsive miRNAs by high-throughput sequencing’. **Oral presentation**, the 2nd International Academic Conference for Graduate Students, China, 27, Oct. 2015 -30, Oct. 2015

Rong Zhou, et al. ‘Screening and validation of tomato genotypes under heat stress using Fv/Fm and heat-responsive miRNAs by high-throughput sequencing’. **Oral presentation**, COST meeting FA1306, Ipk Gatersleben, Germany, 21, Jun. 2015-24, Jun. 2015

Rong Zhou, et al. ‘Genetic diversity of species in tomato clade revealed by morphological and molecular markers’ and ‘Molecular diversity among tomato cultivars (*Solanum lycopersicum* L.) from America, China, Netherlands and Portugal’. **Poster presentation**, the 29th International Horticultural Congress, Australia, 17, Aug. 2014-22, Aug. 2014

Reviews of International Journals

Journal of Plant Growth Regulation; Plant and Soil; Plant Physiology and Biochemistry; Plants; Agronomy; Genomics; Scientia Agricola; Forests; Sensors; PeerJ; Plos One; International Journal

of Molecular Sciences; European Journal of Horticultural Science; Archives of Agronomy and Soil Science; International Journal of Molecular Sciences; BMC Genomics; BMC Supplement; Current Issues in Molecular Biology; Frontiers in Sustainable Food Systems; Topic editor for ‘Agronomy’; Topic editor for ‘Comparative Genomics and Functional Genomics Analyses in Plants’ for Frontiers in Genetics; Reviewer Board Member for ‘Plants’.

Supervision of students and teaching experience

Supervision: Co-supervised three master students, one PhD candidate and supervised one postdoc.

Knowledge transfer to eight visiting fellows or colleagues.

Courses:

Sep. 2018, Tomato cultivation technique, Haining, China

Nov. 2018, Breeding of tomato with high quality, Zhengjiang, China

Nov. 2018, Plant physiology, Årsløv, Denmark

Oct. 2019, Crop nutrition and physiology, Agro Food Park, Denmark

Nov 2019, Global change, Agro Food Park, Denmark

Nov. 2020, Agrobiology, Agro Food Park, Denmark

Nov. 2020, Crop nutrition and physiology, Agro Food Park, Denmark

International Publications since 2014

45 papers in total with 21 as the first or corresponding author; > 45% top10 Journal; > 75% international collaboration.

[1] **Rong Zhou**, et al. (2022). Salinity, waterlogging and elevated [CO₂] induced interactive and complicated responses in cultivated and wild tomato. *Journal of Experimental Botany*, erac080, <https://doi.org/10.1093/jxb/erac080>

[2] **Rong Zhou**, et al. (2022). Reducing the halotolerance gap between sensitive and resistant tomato by spraying melatonin. *Agronomy*, 12, 84.

[3] **Rong Zhou**^{*}, et al. (2020). The alleviation of photosynthetic damage in tomato under drought and cold stress by high CO₂ and melatonin. *International Journal of Molecular Sciences*, 21, 5587.

[4] **Rong Zhou**^{*}, et al. (2020). Genotype-dependent responses of chickpea to high temperature and moderately increased light. *Plant Physiology and Biochemistry*, 154: 353-359.

[5] **Rong Zhou**^{*}, et al. (2020). Interactive effects of elevated CO₂ concentration and combined heat and drought stress on tomato photosynthesis. *BMC Plant Biology*, 20: 1-12.

[6] **Rong Zhou**^{*}, et al. (2020). Combined high light and heat stress induced complex response in tomato with better leaf cooling after heat priming. *Plant Physiology and Biochemistry*, 151: 1-9.

[7] **Rong Zhou**^{*}, et al. (2020). Unique miRNAs and their targets in tomato leaf responding to combined drought and heat stress. *BMC Plant Biology*, 20: 107.

[8] **Rong Zhou**^{*}, et al. (2020). High throughput sequencing of circRNAs in tomato leaf responding to multiple stress of drought and heat. *Horticultural Plant Journal*, 6: 34-38.

[9] **Rong Zhou**^{*}, et al. (2019). Physiological analysis and transcriptome sequencing reveal the effects of combined cold and drought on tomato leaf. *BMC Plant Biology*, 19: 377.

[10] **Rong Zhou**, et al. (2019). Oxidative damage and antioxidant mechanism in tomatoes responding to drought and heat stress. *Acta Physiol Plant*, 41: 20-30.

[11] **Rong Zhou**, et al. (2019). Physiological response of tomatoes at drought, heat and their combination followed by recovery, *Physiol Plant*, 165: 144-154.

- [12] **Rong Zhou**, et al. (2019). Genome-wide identification of circRNAs in tomato seeds in response to high temperature. *Biol Plantarum*, 63: 97-103.
- [13] **Rong Zhou**, et al. (2018). Phenotyping of broad beans (*Vicia faba* L.) under cold and heat stress using chlorophyll fluorescence. *Euphytica*, 214: 68-80.
- [14] **Rong Zhou**, et al. (2018). Evaluation of temperature stress tolerance among cultivated and wild tomatoes using photosynthesis and chlorophyll fluorescence. *Hortic Environ Biote*, 59: 499-509.
- [15] **Rong Zhou**, et al. (2018) Genome-wide identification of circRNAs involved in tomato fruit coloration. *Biochem Bioph Res Co*, 499: 466-469.
- [16] **Rong Zhou**, et al. (2017). Drought stress had a predominant effect over heat stress on three tomato cultivars subjected to combined stress. *BMC Plant Biol*, 17: 24-36.
- [17] **Rong Zhou**, et al. (2017). Physiological response to heat stress during seedling and anthesis stage in tomato genotypes differing in heat tolerance. *J Agron Crop Sci*, 203: 68-80.
- [18] **Rong Zhou**, et al. (2016). Identification of miRNAs and their targets in tomato at moderately and acutely elevated temperatures by high-throughput sequencing and degradome analysis. *Sci Rep*, 6: 33777-33789.
- [19] **Rong Zhou**, et al. (2015). Screening and validation of tomato genotypes under heat stress using F_v/F_m to reveal the physiological mechanism of heat tolerance. *Environ Exp Bot*, 118: 1-11.
- [20] **Rong Zhou**, et al. (2015). Genetic diversity of cultivated and wild tomatoes revealed by morphological traits and SSR markers. *Genetics and Molecular Research*, 14: 13868-13879.
- [21] **Rong Zhou**, et al. (2015). Comparison of gSSR and EST-SSR markers for analyzing genetic variability among tomato cultivars. *Genetics and Molecular Research*, 14: 13184-13194.
- [22] Silvana Francesca, Sabri Najai, **Rong Zhou**, Guillaume Decros, Cedric Cassan, Frederic Delmas, Carl-Otto Ottosen, Amalia Barone, Maria Manuela Rigano. (2022). Phenotyping to dissect the biostimulant action of a protein hydrolysate in tomato plants under combined abiotic stress, *Plant Physiology and Biochemistry*, 179: 32-43
- [23] Yingbin Qi, Fangling Jiang, **Rong Zhou**, Ying Wu, Xilin Hou, Jiayi Li, Wenyuan Lin, Zhen Wu. (2021). Effects of reduced nitrogen with bio-organic fertilizer on soil properties, yield and quality of non-heading Chinese cabbage. *Agronomy*, 11: 2196.
- [24] Milan Mirosavljević, Sanja Mikić, Vesna Župunski, Ankica Kondić Špika, Dragana Trkulja, Carl-Otto Ottosen, **Rong Zhou**, Lamis Abdelhakim. (2021). Effects of high temperature during anthesis and grain filling period on physiological characteristics in winter wheat cultivars. *Journal of Agronomy and Crop Science*, 207: 823-832.
- [25] Milan Mirosavljević, Sanja Mikić, Ankica Kondić Špika, Vesna Župunski, **Rong Zhou**, Lamis Abdelhakim, Carl-Otto Ottosen. (2021). The effect of heat stress on some main spike traits in 12 wheat cultivars at anthesis and mid-grain filling stage. *Plant, Soil and Environment*, 67: 71-76.
- [26] Xiaoming Song, Zhiyong Liu, Hongjian Wan, Wei Chen, **Rong Zhou**, Weike Duan. (2021). Editorial: Comparative Genomics and Functional Genomics Analyses in Plants. *Frontiers in Genetics*, 12: 687966.
- [27] Enmei Hu, Min Liu, **Rong Zhou**, Fangling Jiang, Mintao Sun, Junqin Wen, ... & Wu, Z. (2021). Relationship between melatonin and abscisic acid in response to salt stress of tomato. *Scientia Horticulturae*, 285, 110176.
- [28] Lamis Osama Anwar Abdelhakim, Carolina Falcato Fialho Palma, **Rong Zhou**, et al. (2021). The effect of individual and combined drought and heat stress under elevated CO₂ on physiological responses in spring wheat genotypes. *Plant Physiology and Biochemistry*, 162: 301-314.

- [29] Junqin Wen, Fangling Jiang, Min Liu, **Rong Zhou**, et al. (2021). Identification and Expression Analysis of Cathepsin B-like protease 2 Genes in Tomato at Abiotic Stresses Especially at High Temperature. *Scientia Horticulturae*, 277:109799.
- [30] Xiao-Ming Song, Jingjing Hu, Tong Wu, Qihang Yang, Xuehuan Feng, Hao Lin, Shuyan Feng, Chunlin Cui, Ying Yu, **Rong Zhou**, et al. (2021). Comparative analysis of long non-coding RNAs in angiosperm and characterization of long non-coding RNAs in response to heat stress in Chinese cabbage. *Horticulture Research*, 8: 1-21.
- [31] Qiaoying Pei, Nan Li, Qihang Yang, Tong Wu, Shuyan Feng, Xuehuan Feng, Zange Jing, **Rong Zhou**, et al. (2021). Genome-wide identification and comparative analysis of ARF family genes in three Apiaceae species. *Frontiers in Genetics*, 11: 590535.
- [32] Qiaoying Pei, Tong Yu, Tong Wu, Qihang Yang, Ke Gong, **Rong Zhou**, et al. (2021). Comprehensive identification and analyses of the *Hsf* gene family in the whole/genome of three *Apiaceae* species. *Horticultural Plant Journal*, 7: 457-468.
- [33] Huawei Li, Shuxin Li, Zongshuai Wang, Shengqun Liu, **Rong Zhou**, et al. (2020). Abscisic acid-mimicking ligand AMF4 induced cold tolerance in wheat by altering the activities of key carbohydrate metabolism enzymes. *Plant Physiology and Biochemistry*, 157: 284-290.
- [34] Huawei Wei, Jia Liu, Jiaqiu Zheng, **Rong Zhou**, et al. (2020). Sugar transporter proteins in Capsicum: identification, characterization, evolution and expression patterns. *Biotechnology & Biotechnological Equipment*, 34: 341-353.
- [35] Mintao Sun, Fangling Jiang, **Rong Zhou**, et al. (2020). NADPH-H₂O₂ shows different functions in regulating thermotolerance under different high temperatures in *Solanum pimpinellifolium* L. *Scientia Horticulturae*, 261: 108997.
- [36] Mintao Sun, Fangling Jiang, **Rong Zhou**, et al. (2019). Coordinated regulation of three kinds of thermotolerance in tomato by antioxidant enzymes. *Acta Physiol Plant*, 41: 166.
- [37] Yinlei Wang, Zhidan Luo, Chen Lu, **Rong Zhou**, et al. (2019). Transcriptome profiles reveal new regulatory factors of anthocyanin accumulation in a novel purple-colored cherry tomato cultivar Jinling Moyu. *Plant Growth Regulation*, 87: 9-18.
- [38] Mintao Sun, Fangling Jiang, **Rong Zhou**, et al. (2019). Respiratory burst oxidase homologue-dependent H₂O₂ is essential during heat stress memory in heat sensitive tomato. *Scientia Horticulturae*, 258: 108777.
- [39] Lan Jin, Liping Zhao, Yinlei Wang, **Rong Zhou**, et al. (2019). Genetic diversity of 324 cultivated tomato germplasm resources using agronomic traits and InDel markers. *Euphytica*, 215.
- [40] Yinlei Wang, Jing Jiang, Liping Zhao, **Rong Zhou**, et al. (2018). Application of whole genome resequencing in mapping of a tomato yellow leaf curl virus resistance gene. *Sci Rep*, 8: 9592-9602.
- [41] Xiaqing Yu, Xixi Wang, Benita Hyldgaard, Zaobing Zhu, **Rong Zhou**, et al. (2018). Allopolyploidization in *Cucumis* contributes to delayed leaf maturation with repression of redundant homoeologous genes. *The Plant J*, 94: 393-404.
- [42] Xiaqing Yu, **Rong Zhou**, et al. (2016). Evaluation of genotypic variation during leaf development in four *Cucumis* genotypes and their response to high light stress. *Environ Exp Bot*, 124: 100-109.
- [43] Zeen Yang, Zhen Wu, Chuan Zhang, Enmei Hu, **Rong Zhou**, FangLing Jiang. (2016). The composition of pericarp, cell aging, and changes in water absorption in two tomato genotypes: mechanism, factors, and potential role in fruit cracking. *Acta Physiol Plant*, 38: 215-230.
- [44] Xue Cao, Zhen Wu, **Rong Zhou**, FangLing Jiang, Zeen Yang. (2015). A novel random amplified polymorphic DNA-based strategy for genetic diversity analysis and identification of

tomatoes. *Genetics and Molecular Research*, 14: 1650-1661.

[45] Xue Cao, Zhen Wu, FangLing Jiang, **Rong Zhou**, Zeen Yang. (2014). Identification of chilling stress-responsive tomato microRNAs and their target genes by high-throughput sequencing and degradome analysis. *BMC Genomics*, 15: 1130-1145.