

CURRICULUM VITAE

Yunfei Jiang, PhD, AAg, PMP

I. Current position and contact details

Assistant Professor (Jan. 2022 – present)

Plant Science Honours Program Coordinator (April 2022 – present)

Board of Member at Center for Sustainable Soil Management (January 2022 – present)

Department of Plant, Food, and Environmental Sciences,

Faculty of Agriculture, Dalhousie University

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<https://www.dal.ca/faculty/agriculture/plant-food-env/faculty-staff/our-faculty/Yunfei-Jiang.html>

II. Academic Credentials

Doctor of Philosophy - Plant Sciences

Sept. 2013 - Jan. 2017

Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

- Thesis: Effect of heat stress on pollen development and seed set in field pea

Master of Science - Plant Sciences

Sept. 2010 - Mar. 2013

Dalhousie University Faculty of Agriculture, Truro, Nova Scotia, Canada

- Thesis: Effect of environmental and management factors on growth and seed quality of selected genotypes of *Camelina sativa* L. Crantz

Bachelor of Science – Horticulture

Sept. 2006 - Jun. 2010

Fujian Agriculture and Forestry University, Fujian Province, China

- 4th year undergraduate thesis: *In vitro* conservation of plantlets in *Tagetes erecta* L

III. Research Experience

Research Associate

Dec. 2018 – Dec. 2021

Aquatic and Crop Resource Development, National Research Council Canada, Saskatoon, Saskatchewan, Canada

- Project lead: Sateesh Kagale
- Projects: (1) Dynamic coding and noncoding RNA interactions coordinate gene expression during meiosis in wheat; (2) Exploring gene expression and regulatory network during different stages of seed development in canola seed coat and embryo for different seed compositions; (3) RNA-seq transcriptome analysis during microspore embryogenesis in wheat cultivars with contrasting embryo generation abilities.
- Research experience: (1) bioinformatic data analyses: differentially expressed gene analysis, co-expression network analysis, gene ontology enrichment analysis, comparative genomics; (2) data analyses using R and Unix programming languages; (3) isolation of plant meiotic tissues.

NSERC Postdoctoral Fellow

Mar. 2017- Dec. 2018

Department of Plant Agriculture, University of Guelph, Guelph, Ontario, Canada

- Supervisor: Peter K Pauls
- Project: Evaluation of beneficial and inhibitory effects of nitrate on nodulation in common bean
- Research experience: (1) plant-microbe interactions; (2) molecular techniques including RNA

extraction, determination of RNA quantity and quality, and RNA-sequencing library preparation;
(3) RNA-sequencing data analyses.

PhD Student

Sept. 2013 - Jan. 2017

Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

- Supervisors: Rosalind Bueckert, Arthur Davis
- Research experience: (1) Pollination and plant reproductive development; (2) Microscopic techniques including sample preparation, light microscope, scanning electron microscope, and transmission electron microscope; (3) Sample analyses using mid-infrared spectroscopy and spectral data analysis; (4) Population structure analyses using Structure and R statistical software; (5) Association mapping of quantitative traits using Tassel; (6) Statistical data analyses: analysis of variance, factorial design, regression analysis, repeated measures analysis, principal component analysis, and additive main effects and multiplicative interaction statistical model using SAS and Minitab.

Research Assistant

Feb. 2013 – Aug. 2013

Nova Scotia Crop Development Institute, Truro, Nova Scotia, Canada

- Supervisor: Claude Caldwell, Doug MacDonald
- Duties: (1) Data analyses, scientific report writing, and manuscript preparation for field projects including cereal fungicide trials and canola trials; (2) Field work including disease rating, cereal harvest, hand weeding, and data collection.

MSc Student

Sept. 2010 - Jan. 2013

Dalhousie University Faculty of Agriculture, Truro, Nova Scotia, Canada

- Supervisor: Claude Caldwell
- Research experience: (1) Field research design and implementation: plot layout, agronomic production techniques (land preparation, fertilization, crop monitoring and weed & pest control), disease rating, sample collection, data collection, harvesting and seed cleaning; (2) Lab analysis: hands-on experience and competency with near-infrared spectroscopy of protein and oil, and gas chromatography analysis of fatty acids and glucosinolates. Experience includes sample preparation.

Undergraduate Research Student

July 2008 – May 2010

Fujian Agriculture and Forestry University, Fuzhou, Fujian, China

- Supervisor: Zhongxiong Lai
- Research experience: Micro-propagation (tissue culture) of chrysanthemum
- The title of my undergraduate research project was “*In vitro* conservation of plantlets in *Tagetes erecta* L”. Recipient of outstanding undergraduate thesis (Best Undergraduate Thesis in Horticulture, 2010).

IV. Teaching Experience

Instructor, Cereals Based Cropping Systems (AGRN2001)

Sept. – Dec. 2022

Department of Plant, Food, and Environmental Sciences, Dalhousie University, Truro, NS, Canada

- Duties: Undertaking scheduled teaching and teaching-related duties (100% of lectures and labs)

Instructor, Plant Propagation Techniques (PLSC2001)

Sept. – Dec. 2022

Department of Plant, Food, and Environmental Sciences, Dalhousie University, Truro, NS, Canada

- Duties: Undertaking scheduled teaching and teaching-related duties (25% of lectures)

Teaching Assistant, Statistical Methods (PLSC214) Sept. – Dec. 2016
Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

- Supervisor: Krista Wilde
- Duties: Guided students through laboratory assignments and answered their questions

Guest Lecturer, Introduction to Field Crops (PLSC222) Sept. 2016
Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

- Supervisor: Rosalind Bueckert
- Duties: Offered three lectures covering two topics: (1) overview of oilseed crops; (2) overview of legume crops.

Sessional Lecturer, Crop Physiology (PLSC417) Mar. – Apr. 2016
Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

- Supervisor: Yuguang Bai, Rosalind Bueckert
- Duties: Undertaking scheduled teaching and teaching-related duties (20% of the full course)

Teaching Assistant, Plant Metabolism (PLSC240) Sept. – Dec. 2014 and 2015
Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

- Supervisor: Susan Slater
- Duties: Monitoring quizzes and marking exam papers

Teaching Assistant, Plant Eco-physiology (PLSC4002) Sept. 2011 – Nov. 2011
Dalhousie University Faculty of Agriculture, Truro, Nova Scotia, Canada

- Supervisor: Raja Lada
- Duties: (1) Helping with preparation for labs; (2) Cultivating plants in greenhouse for labs; (3) Assisting students with uses of biological lab techniques (chlorophyll meter, LCA4 portable photosynthesis system, soil moisture meter, leaf area index meter, SC-1 leaf porometer); (4) Taught a lab class; (5) Marking student lab reports.

Teaching Assistant, Agroecology (Course no. 0101060) Feb. – Jun. 2008, 2009 and 2010
Fujian Agriculture and Forestry University, Fuzhou city, Fujian Province, China

- Supervisors: Claude Caldwell, Songliang Wang
- Duties: (1) Helping with preparation for labs; (2) Marking student assignments.

V. Peer-reviewed publications

1. **Jiang, Y.**†, N'Diaye, A.†, Koh, C.S.†, Quilichini, T.D.†, Shunmugam, A.S.K., Kirzinger, D., Konkin, Y., Bekkaoui, Y., Sari, E., Pasha, A., Esteban, E., Provart, N.J., Higgins, J.D., Rozwadowski, K., Sharpe, A.G., Pozniak, C.J., Kagale, S. (2023) The coordinated regulation of early meiotic stages is dominated by non-coding RNAs and stage-specific transcription in wheat. *The Plant Journal*. doi.org/10.1111/tbj.16125 †Equal contribution.
2. Boutagayout, A., Belmalha, A., Nassiri, L., Alami, N.E., Bouiamrine, E.H., **Jiang, Y.**, Rachid, L. Weed competition, land equivalent ratio and yield potential of faba bean-cereals intercropping under low input conditions in Meknes region, Morocco. Accepted in *Vegetos* on January 30, 2023. Manuscript ID: VTOS-D-22-00581R1
3. Lahlali, R., Ezrari, S., Radouane, N., Belabess, Z., **Jiang, Y.**, Mokrini F., Tahiri A., Peng G. (2022)

Book chapter: *Bacillus* spp.-mediated drought stress tolerance in plants: current and future prospects. In book: *Bacilli in agrobiotechnology - plant stress tolerance, bioremediation, and bioprospecting*. Publisher: Springer International Publishing. 487-518. DOI: 10.1007/978-3-030-85465-2_21

4. **Jiang, Y.**, MacLean, D., Perry, G., Marsolais, F., Hill, B., Pauls, K.P. (2020) Evaluation of beneficial and inhibitory effects of nitrate on nodulation and nitrogen fixation in common bean (*Phaseolus vulgaris*). *Legume Science*. 2: e45.
5. **Jiang, Y.**, Davis, A.R., Warkentin, T.D., Bueckert, R.A. (2020) Pea pollen viability and seed set response to high night temperatures. *Canadian Journal of Plant Science* 100: 336-339.
6. **Jiang, Y.**, Lindsay, D., Davis, A.R., Wang, Z., MacLean, D.E., Warkentin, T.D., Bueckert, R.A. (2020) Impact of heat stress on pod-based yield components in field pea (*Pisum sativum* L.). *Journal of Agronomy and Crop Science* 206: 76-89.
7. **Jiang, Y.**, Davis, A.R., Vujanovic, V., Bueckert, R.A. (2019) Reproductive development response to high daytime temperature in field pea. *Journal of Agronomy and Crop Science* 205: 324-333.
8. **Jiang, Y.**, Lahlali, R., Karunakaran, C., Warkentin, T.D., Davis, A.R., Bueckert, R.A. (2019) Pollen, ovules and pollination in pea: success, failure and resilience in heat. *Plant Cell and Environment* 42: 354-372.
9. Shunmugam, A.S.K., Kannan, U., **Jiang, Y.**, Daba, K.A., Gorim, L.Y. (2018) Physiology based approaches for breeding of next-generation food legumes. *Plants* 7(3): 72.
10. **Jiang, Y.**, Bueckert, R.A., Warkentin, T.D., Davis, A.R. (2018) Effects of high temperature on *in vitro* pollen germination and pollen-tube growth and their relationship with seed set in field pea. *Canadian Journal of Plant Science* 98: 71-80.
11. Gao, L., Caldwell, C., **Jiang, Y.** (2018) Photosynthesis and growth of camelina (*Camelina sativa*) and canola (*Brassica napus*) in response to water deficit and applied nitrogen. *Crop Science* 58: 393-401.
12. **Jiang, Y.**, Diapari, M., Tar'an, B., Bueckert, R.A., Warkentin, T.D. (2017) Population structure and association mapping of traits related to reproductive development in field pea. *Euphytica* 213: 215.
13. Tanino, K., Willick, I.R., Hamilton, K., Vijayan, P., **Jiang, Y.**, Brar, G.S., Yu, P., Kalcsits, L., Lahlali, R., Smith, B., Fowler, B., Kutcher, R., Bueckert, R.A., Warkentin, T., Karunakaran, C. (2017) Incorporating synchrotron techniques as a tool to improve agricultural production under increasing complexities. *Canadian Journal of Plant Science* 97: 972-981.
14. Caldwell, C.D., MacDonald, D., **Jiang, Y.**, Cheema, M., Li, J. (2017) Effect of fungicide combinations for FHB control on disease incidence, grain yield and quality of winter wheat, spring wheat and barley. *Canadian Journal of Plant Science* 97: 1036-1045.
15. **Jiang, Y.**, Li, J., Caldwell, C.D. (2016) Glucosinolate content of camelina genotypes as affected by applied nitrogen and sulphur. *Crop Science* 56: 3250-3262.
16. **Jiang, Y.**, Caldwell, C.D. (2016). Effect of nitrogen fertilization on camelina seed yield, yield

components, and downy mildew infection. *Canadian Journal of Plant Science* 96: 17-26.

17. **Jiang, Y.**, Lahlali, R., Karunakaran, C., Kumar, S., Davis, A.R., Bueckert, R.A. (2015). Seed set, pollen morphology and pollen surface composition response to heat stress in field pea. *Plant Cell and Environment* 38: 2387-2397.
18. Lahlali, R., **Jiang, Y.**, Kumar, S., Karunakaran, C., Liu, X., Borondics, F., Hallin, E., Bueckert, R.A. (2014). ATR-FTIR spectroscopy reveals involvement of lipids and proteins of intact pea pollen grains to heat stress tolerance. *Frontiers in Plant Science* 5: 747.
19. **Jiang, Y.**, Caldwell, C.D., Falk, K. (2014). Camelina seed quality in response to applied nitrogen, genotype and environment. *Canadian Journal of Plant Science* 94: 971-980.
20. **Jiang, Y.**, Caldwell, C.D., Falk, K., Lada, R., MacDonald, D. (2013). Camelina yield and seed quality response to combined nitrogen and sulphur. *Agronomy Journal* 105: 1847-1852.

VI. Non-peer reviewed Publication

Jiang, Y., Caldwell, C. Agricultural sustainable intensification through intercropping. Atlantic Grains Council newsletter, Spring 2022. <https://atlanticgrainscouncil.ca/agc-newsletter-spring-2022/>

VII. Conferences/Events

Oral presentations

1. [Invited talk] **Jiang, Y.** (2023). Integration of agronomy, crop physiology, and omics for field crop improvement. Invited by Agriculture and Agri-Food Canada. Feb. 22, 2023.
2. [Invited talk] **Jiang, Y.** (2021). Transcriptional dynamics during meiosis and microspore embryogenesis in wheat. National Research Council Canada (NRC) Aquatic and Crop Resource Development Centre (ACRD) Special Seminar Series. November 12, 2021.
3. **Jiang, Y.** (2021). Dynamic coding and noncoding RNA interactions coordinate gene expression during meiosis. National Research Council Canada (NRC) TechX. November 1, 2021.
4. **Jiang, Y.**, Ferrie, A.M.R., Bollina, V., Enns, J.L., Kagale, S. (2021). Transcriptional dynamics during microspore reprogramming to embryogenesis in wheat. The 2021 Canadian Society of Plant Biologists Annual Meeting (virtual). National conference.
5. **Jiang, Y.**, N'Diaye, A., Koh, C.S., Quilichini, T.D., Shunmugam, A.S.K., Kirzinger, M., Konkin, D., Bekkaoui, Y., Sari, E., Rozwadowski, K., Sharpe, A.G., Pozniak, C.J., Kagale, S. (2021). Dynamic mRNA-sRNA interactions coordinate gene expression during meiosis in wheat. The 2021 Canadian Society of Plant Biologists Annual Meeting (virtual). National conference.
6. **Jiang, Y.**, MacLean, D., Perry, G., Pauls, K.P. (2018). Beneficial and inhibitory effects of nitrate application on nitrogen fixation in common bean. The 2018 American Society of Agronomy – Crop Science Society of America International Annual Meeting. Baltimore, MD, USA. International conference.
7. **Jiang, Y.**, MacLean, D., Perry, G., Pauls, K.P. (2018). Evaluation of beneficial and inhibitory effects of nitrate application on nitrogen fixation in common bean. The 11th Canadian Pulse Research Workshop, Edmonton AB, CA. National conference.

8. **Jiang, Y.**, Davis, A.R., and Bueckert, R.A. (2016) Effect of heat stress on pollen-pistil interactions and patterns of seed development in field pea (*Pisum sativum*). 2016 American Society of Agronomy – Crop Science Society of America – Soil Science Society of America International Annual Meeting. Phoenix, AZ, USA. International conference.
9. **Jiang, Y.**, Davis, A.R., Warkentin, T., and Bueckert, R.A. (2016) Effect of ovule, pod and node position on patterns of seed formation in field pea plants exposed to heat stress. 52nd Canadian Botanical Association Annual Meeting. Victoria BC, CA. National Conference.
10. **Jiang, Y.**, Davis, A.R., Warkentin, T., and Bueckert, R.A. (2016) How ovule and node positions affect seed development in field pea plants exposed to heat stress. 2016 Soils and Crops. Saskatoon SK, CA. Provincial conference.
11. **Jiang, Y.**, Warkentin, T., Davis, A.R., Lahlali, R., Karunakaran, C., and Bueckert, R.A. (2015) Impact of timing and severity of heat stress on reproductive development in field pea. 2015 American Society of Agronomy – Crop Science Society of America – Soil Science Society of America International Annual Meeting. Minneapolis MN, USA. International conference.
12. **Jiang, Y.**, Davis, A.R., Lahlali, R., Karunakaran, C., and Bueckert, R.A. (2015) Seed set, pollen morphology and pollen surface composition response to heat stress in field pea. Botany 2015. Edmonton AB, CA. National conference.
13. **Jiang, Y.**, Davis, A.R., Lahlali, R., Karunakaran, C., and Bueckert, R.A. (2015) Effect of heat stress on pollen development and seed set in field pea. The 31st Annual Plant Science Graduate Student Symposium. Winnipeg MN, CA. National conference.
14. **Jiang, Y.** Davis, A.R., and Bueckert, R.A. (2014) Effect of heat stress on pollen development and seed set in field pea. The 30th Annual Plant Science Graduate Student Symposium. Mar. 2014, Saskatoon, SK. Regional conference.
15. **Jiang, Y.**, and Caldwell, C. (2013) Effect of environmental and management factors on growth and seed quality of selected genotypes of *Camelina sativa* L. Crantz. 2013 4th Camelina Annual General Meeting. Truro NS, Canada. Regional conference.
16. **Jiang, Y.**, and Caldwell, C. (2012) Effects of genotype, nitrogen, sulphur and boron on the growth and seed quality of *Camelina sativa*. 3rd Camelina Annual General Meeting. St. John's NL, Canada. Regional conference.
17. **Jiang, Y.**, and Caldwell, C. (2012) Effects of genotype and nitrogen on the growth, yield and seed quality of *Camelina sativa* in Nova Scotia in 2011. 2012 “CSA-CSHS-CCA-AIC” meeting (“Adapting Crops to Change”, “Technology Transfer in the 21st Century”). Saskatoon SK, Canada. National conference.
18. **Jiang, Y.**, and Caldwell, C. (2012) A promising genotype of *Camelina sativa* – Line CDI007. 2012 Dalhousie University Faculty of Agriculture “Graduate Research Day”. Truro NS, Canada. Institutional conference.
19. **Jiang, Y.**, and Caldwell, C. (2011) Effect of nitrogen and water stress on germination and growth of *Camelina sativa*. 2011 2nd Camelina Annual General Meeting. Truro NS, Canada. Institutional conference.

Poster presentations

1. **Jiang, Y.**, Caldwell, C. (2022) Improving soil health and land use efficiency through intercrops with pulses. Nova Scotia Ministers Conference for Agriculture.
2. **Jiang, Y.**, N'Diaye, A., Koh, C.S., Quilichini, T.D., Shunmugam, A.S.K., Kirzinger, M., Konkin, D., Bekkaoui, Y., Cekik, V., Sari, E., Rozwadowski, K., Sharpe, A.G., Pozniak, C.J., Kagale, S. (2021) Transcriptional landscape of meiosis in wheat. The 2021 Women in Science virtual conference at National Research Council Canada.
3. Kagale, S., **Jiang, Y.**, Shunmugam A.S.K., Koh, K., Bollina, V., Pozniak, C., Sharpe, A., Rozwadowski, K. (2019) Meiosis-specific gene discovery in wheat. 1st International Wheat Congress. Saskatoon SK, Canada. International conference.
4. **Jiang, Y.**, Edwards, J., MacLean, D., Martin, B., Good, B., Lee, E. (2018) Genetic Architecture of Grain Yield Within the Elite Cornbelt Dent Germplasm Pool. 2018 National Association of Plant Breeders (NAPB) meeting. Guelph ON, Canada. International conference.
5. Bueckert, R.A., **Jiang, Y.**, Warkentin, T. (2015) Leaf and canopy architecture for heat resistance in field pea. 2015 American Society of Agronomy – Crop Science Society of America – Soil Science Society of America International Annual Meeting. Minneapolis MN, USA. International conference.
6. **Jiang, Y.**, Lahlali, R., Karunakaran, C., Davis, R., Bueckert, R. (2014) Heat stress on pollen development and seed set in pea. The joint conference of the 6th International Food Legumes Research Conference and the 7th International Conference on Legume Genetics and Genomics. Saskatoon SK, Canada. International conference.
7. **Jiang, Y.**, Caldwell, C. (2011) Effect of environmental and management factors on germination, growth of selected genotypes of *Camelina sativa*. 2011 Dalhousie University Faculty of Agriculture “Graduate Research Day”. Truro NS, Canada. Institutional conference.

VIII. Media Coverage

1. “Motivation and Innovation with Dr. Jiang”. Researcher Spotlight: Dr. Yunfei Jiang, Eastern Canadian Oilseed Development Alliance. <https://www.ecodainc.ca/researcher-spotlight/>
2. “Crop production and resiliency”. https://www.dal.ca/faculty/agriculture/news-events/news/2023/01/31/crop_production_and_resiliency.html
3. Benefits and challenges of intercropping. Podcast episode - Outstanding in the Field (Perennia Food and Agriculture Corporation). <https://anchor.fm/out-standing-in-the-field/episodes/Season-2--Episode-3-Intercropping-with-Yunfei-Jiang-e1t7nja/a-a958u0i>
4. “Better together – 10 10 years of planting seeds and growing potential at Dal’s Faculty of Agriculture.” https://www.dal.ca/news/2022/12/12/better-together.html?utm_campaign=dalnews&utm_medium=sharethis&utm_source=twitter
5. New Agronomy Professor at Dal-AC. <https://atlanticgrainscouncil.ca/agc-newsletter-spring-2022/>

6. Top Crop Manager. March 9, 2017. Bruce Barker. “Heat stress effect on pea pollination and seed set. Microscopic photography reveals the impact of heat on this field crop.” Public press version of research by Jiang, Y., Bueckert, R., Davis, R. <https://www.topcropmanager.com/seedling-planting/heat-stress-effect-on-pea-pollination-and-seed-set-19895>
7. Top Crop Manager. November 2016. Bruce Baker. “Camelina responds well to nitrogen.” Public press version of research by Jiang, Y., Caldwell, C. <https://www.topcropmanager.com/fertility-nutrients/camelina-responds-well-to-nitrogen-19697>
8. “Temperature increases affecting crop yields. Scientists discover the ‘why’ of heat tolerance in peas.” March 24, 2015. Press release by Canadian Light Source on this project featuring Rosalind Bueckert and Yunfei Jiang and CLS scientists Chithra Karunakaran and Rachid Lahlali. This research was later featured by Farmgate in April, 2015 on CTV by Bob Simpson. http://www.lightsource.ca/news/details/temperature_increases_affecting_crop_yields2.html

IX. Honors and Awards

International level

1. Third place in graduate student oral presentation competition, Crop Science Society of America Annual Meeting – the Division C2 and C4 (\$100 USD), 2016
2. First place in graduate student oral presentation competition, Crop Science Society of America Annual Meeting – the Division C2 and C4 (\$300 USD), 2015

National level

1. Outstanding Early Career Scientist Award issued by National Research Council Canada, December 2021
2. Natural Sciences and Engineering Research Council of Canada (NSERC) Postdoctoral Fellowship, 2017 (\$90,000 CAD for 2017-2019)
3. Best Paper in graduate student oral presentation competition for the Lionel Cinq-Mars Award (\$250 CAD), 2016
4. Macoun Travel Award to the annual Canadian Botanical Association meeting (\$500 CAD), 2016
5. Plant Canada travel grant at Botany 2015 (\$500 CAD), 2015
6. First place in graduate student oral presentation competition in the 31st Annual Plant Science Graduate Student Symposium - the Division of Plant Pathology and Physiology Division (\$300 CAD), 2015
7. Chinese National Scholarship for university students (¥8,000 Chinese Yuan), China, 2008

Provincial level

1. 2015 Saskatchewan Innovation and Opportunity Scholarship (\$20,000 CAD), 2015
2. 2014 Saskatchewan Innovation and Opportunity Scholarship (\$10,000 CAD), 2014

University level

1. Paulden F. and Dorathea I. Knowles Postgraduate Scholarship in Crop Science (\$6,000 CAD), 2016
2. Rene Vandeveld Postgraduate Scholarship in Crop Science (\$2,000 CAD), 2015
3. University of Saskatchewan AgBio postgraduate award (\$8,000 CAD), 2015
4. 2014 Plant Sciences PhD Outstanding Graduate Student (\$500 CAD), 2015
5. Syngenta Graduate Research Award in Pulse Production (\$5,000 CAD), 2014
6. 2011 Dalhousie University Dr. Chesley E. Smith Memorial Graduate Scholarship (\$500 CAD), 2011
7. Dalhousie University International Fee Waiver, 2010
8. 2010 Dalhousie University Dr. Chesley E. Smith Memorial Graduate Scholarship (\$500 CAD), 2010
9. Selected as one of the “Top Ten University Students” in Fujian Agriculture and Forestry University in 2010 (one of ten in a field of 20,000 students), 2010
10. 2009 Fujian Agriculture and Forestry University First Class Scholarship (¥2,000 Chinese Yuan)
11. 2008 Fujian Agriculture and Forestry University First Class Scholarship (¥2,000 Chinese Yuan)
12. 2007 Fujian Agriculture and Forestry University First Class Scholarship (¥2,000 Chinese Yuan)

X. Research Grant Application

1. **Project funded:** “Identification and validation of candidate genes related to nitrogen fixation in common bean.” Successfully funded by the Natural Sciences and Engineering Research Council of Canada (NSERC) in January 2017. NSERC Postdoctoral Fellowship (\$90,000 CAD, Mar. 2017 – Feb. 2019) in University of Guelph. Role: primary applicant.
2. **Project funded:** “Leveraging comparative genomics and machine learning to model environmental adaptation in leguminous invasives and field crops”. Government of Canada Genomics Research and Development Initiative Shared Priorities in Climate Change. Status: Letter of intent was submitted on February 5, 2021; Decision about being funded was received on March 8, 2021. Role: co-applicant.

XI. Scientific Society Memberships

- Saskatchewan Institute of Agrologists
- American Society of Plant Biologist
- Crop Science Society of America
- America Society of Agronomy
- Canadian Society of Agronomy
- Canadian Botanical Association

XII. Reviewing of Manuscripts for International Journals

- Agronomy Journal
- All Life
- Crop Science

- Euphytica
- HortScience
- New Phytologist
- Plant Cell, Tissue & Organ Culture

XIII. Valid Certification and Licenses

1. **Project Management Professional (PMP)®** issued by Project Management Institute. Issued November 2021; expires November 2024. Certificate number: 3186157. Credential URL: https://www.credly.com/badges/bce5c458-2e4f-4823-bead-44197ada7bc0?source=linked_in_profile
2. **Project Management Principles and Practices Specialization** issued by University of California, Irvine on Coursera. Specialization certificate earned in Mar. 2021. Credential URL: <coursera.org/verify/specialization/8M94NEXGSXS6>

The specialization contains the following four courses:

- (1) Initiating and Planning Projects issued by University of California, Irvine on Coursera. Course certificate earned in Sep. 2020. Credential URL: <coursera.org/verify/6LAABS2RZXWR>
- (2) Budgeting and Scheduling Projects issued by University of California, Irvine on Coursera. Course certificate earned in Nov. 2020. Credential URL: <coursera.org/verify/S8NCC8GCV6CN>
- (3) Managing Project Risks and Changes issued by University of California, Irvine on Coursera. Course certificate earned in Dec. 2020. Credential URL: <coursera.org/verify/KJHDM7TLCCBS>
- (4) Project Management Project issued by University of California, Irvine on Coursera. Course certificate earned in Mar. 2021. Credential URL: <coursera.org/verify/YBNXTGUZ45W4>

3. **Plant Bioinformatics Specialization** issued by University of Toronto on Coursera. Specialization certificate earned in Feb. 2021. Credential URL: <coursera.org/verify/specialization/78MYVV9BQ74A>

The specialization contains the following four courses:

- (1) Bioinformatic Methods I issued by University of Toronto on Coursera. Course certificate earned in Feb. 2021. Credential URL: <coursera.org/verify/N759V4227HAU>
- (2) Bioinformatic Methods II issued by University of Toronto on Coursera. Course certificate earned in Dec. 2020. Credential URL: <coursera.org/verify/PEN3XY5CJHEM>
- (3) Plant Bioinformatics issued by University of Toronto on Coursera. Course certificate earned in Aug. 2020. Credential URL: <coursera.org/verify/TQTFRF2XFJRS>
- (4) Plant Bioinformatics Capstone issued by University of Toronto on Coursera. Course certificate earned in Jan. 2021. Credential URL: <coursera.org/verify/H3B8KLMJ6FWY>

4. Genomic Data Science

- (1) Introduction to Applied Genomics issued by Johns Hopkins University on Coursera. Course certificate earned in Feb. 2021. Credential URL: [coursera.org /verify/RE9VWK2ZV2YA](https://coursera.org/verify/RE9VWK2ZV2YA)
- (2) The Data Scientist's Toolbox by Johns Hopkins University on Coursera. Course certificate earned in Feb. 2021. Credential URL: coursera.org/verify/RE9VWK2ZV2YA
5. Completion of GSR 989: Philosophy and Practice of University Teaching issued by the College of Graduate Studies and Research and the Gwenna Moss Centre for Teaching Effectiveness, University of Saskatchewan. Certificate earned in Apr. 2016.
6. Certificate of 2015 Canadian Light Source summer school, 2015
7. Microscopy certificate obtained from Norwegian University of Life Sciences, 2015