

Curriculum Vitae

Hiroshi Maeda, PhD

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EDUCATION:

- Dec. 2006 **Ph.D.** in Cell and Molecular Biology Program / DOE-Plant Research Laboratory,
Michigan State University, U.S.A.
- Mar. 2001 **M.S.** in Biotechnology, Osaka University, Japan
- Mar. 1999 **B.S.** in Biotechnology, Osaka University, Japan

EMPLOYMENT:

- 2017 - present **Associate Professor (tenured)**
Department of Botany, University of Wisconsin-Madison
- 2011-2017 **Assistant Professor (tenure-track)**
Department of Botany, University of Wisconsin-Madison
- 2007-2011 **Postdoctoral research associate** with Natalia Dudareva
Department of Horticulture and Landscape Architecture, Purdue University
- 2007 **Postdoctoral research associate** with Dean DellaPenna
Department of Biochemistry and Molecular Biology, Michigan State University

PUBLICATIONS: (Maeda lab members, *corresponding author)

1. **Lopez-Nieves S.**, Yang Y., Timoneda A., **Wang M.**, Feng T., Smith S.A., Brockington S.F., and **Maeda H.A.*** (2018) Relaxation of Tyrosine Pathway Regulation Underlies the Evolution of Betalain Pigmentation in Caryophyllales. *New Phytol.* 217, 896-908 Featured in the Cover and Commentary, and, *Nature Plants*, *USDA-NIFA News*, *New York Times* and *BBC (spanish)*
2. **Schenk C. A.**, **Men Y.** and **Maeda H.A.*** Conserved Molecular Mechanism of TyrA Dehydrogenase Substrate Specificity Underlying Alternative Tyrosine Biosynthetic Pathways in Plants and Microbes. *Frontiers Mol. Biosci.*, 4. 73.
3. **Schenk C.A.** and **Maeda H.A.*** Tyrosine Biosynthesis, Metabolism, and Catabolism in Plants. *Phytochemistry*, under revision.
4. **Schenk C.A.**, Holland C.K., **Schneider M.**, **Men Y.**, Lee S.G., Jez J. and **Maeda H.A.*** (2017) Molecular Basis of the Evolution of Two Alternative Tyrosine Biosynthetic Routes in Plants. *Nature Chem. Biol.* 13, 1029-1035. Featured in *Nature Plants*.
5. **Wang M.** and **Maeda H.A.*** (2017) Aromatic Amino Acid Aminotransferases in Plants. *Phytochemistry Reviews*, online DOI:10.1007/s11101-017-9520-6
6. **Wang M.**, **Lopez-Nieves S.**, Goldman I. and **Maeda H.A.*** (2017) Limited Tyrosine Utilization

Explains Lower Betalain Contents in Yellow than Red Table Beet Genotypes. *J Agric Food Chem.* 65, 4305–4313.

7. **Wang M., Toda K., and Maeda H.A.*** (2016) Biochemical Properties and Subcellular Localization of Tyrosine Aminotransferases from *Arabidopsis thaliana*. *Phytochemistry*, 132, 16–25
8. **Maeda H.A.** (2016) Lignin Biosynthesis: Shortcut From Tyrosine. *Nature Plants*, 16080 | DOI: 10.1038/NPLANTS.2016.80 (Invited review)
9. **Schenck C.A., Chen S., Siehl D., Maeda H.A.*** (2015) Non-Plastidic, Tyrosine-Insensitive Prephenate Dehydrogenases from Legumes. *Nature Chem. Biol.*, 11, 52-57, Highlighted in the Cover of the issue.
10. **Maeda H.A.** (2015) Non-Plastidic Tyrosine Biosynthetic Pathway in Legumes. *Bioscience and Bioindustry*, 73, 308-310 (Japanese, invited review)
11. Luby C., Vernon R., **Maeda H.A.**, Goldman I.* (2015) Lack of Correspondence Between Experimentally-Determined Values of Vitamin E in Carrot (*Daucus carota* L.) and Those Reported in the USDA National Nutrient Database *Hort. Science* 50, 1595-1597.
12. **Dornfeld C.**, Weisberg A.J., Dudareva N., Jelesko J.G., **Maeda H.A.*** (2014) Phylobiochemical Characterization of Prephenate Aminotransferases Reveals Evolution of the Plant Arogenate Phenylalanine Pathway. *Plant Cell*, 26, 3101-3114
13. Luby C., **Maeda H.A.**, Goldman I.* (2014) Genetic and Phenological Variation of Tocochromanol (Vitamin E) Content in Wild (*Daucus carota* L. var. *carota*) and Domesticated Carrot (*D. carota* L. var. *sativa*) *Horticulture Research* 1:15
14. **Maeda H.**, Song W., Sage T.L., DellaPenna D.* (2014) Role of Callose Synthases in Transfer Cell Wall Development of Arabidopsis Tocopherol Deficient Mutants. *Frontiers Plant Sci.* 5, 46
15. Yoo H., Widhalma J.R., Qiana Y., **Maeda H.**, Cooper B.R., Jannasch A.S., Gondae I., Lewinsohne E., Rhodes D., Dudareva D.* (2013) An Alternative Pathway Contributes to Phenylalanine Biosynthesis in Plants via a Cytosolic Tyrosine:Phenylpyruvate Aminotransferase. *Nature Commun.* 4:2833, doi:10.1038/ncomms3833
16. Muhlemann J.K., **Maeda H.**, Chang C.Y., San Miguel P., Baxter I., Cooper B., Perera M.A., Nikolau B.J., Vitek O., Morgan J.A., Dudareva N.* (2012) Developmental Changes in the Metabolic Network of Snapdragon Flowers. *PLoS ONE*, e40381
17. **Maeda H.** and Dudareva N. (2012) The Shikimate Pathway and Aromatic Amino Acid Biosynthesis in Plants. *Ann. Rev. Plant Biol.*, 67, 73-105
18. **Maeda H.** (2010) Plant-Specific Phenylalanine Biosynthesis and its Regulation. *Bioscience and Bioindustry*. 68, 418-420 (Japanese, invited review)
19. **Maeda H.**, Yoo H., and Dudareva N.* (2011) Prephenate Aminotransferase Directs Plant Phenylalanine Biosynthesis via Arogenate. *Nature Chem. Biol.* 7, 19-21

20. **Maeda H.**, Shasany A.K., Schnepf J., Orlova I., Taguchi G., Cooper B.R., Rhodes D., Pichersky E. and Dudareva N.* (2010) RNAi Suppression of *Arogenate Dehydratase1* Reveals That Phenylalanine Is Synthesized Predominantly via the Arogenate Pathway in Petunia Petals. *Plant Cell* 22, 832-849 *Described as a Research Highlight in *Nature Chem. Biol.* 6, 310
21. Song W., **Maeda H.**, and DellaPenna D.* (2010) Mutations of the ER to Plastid Lipid Transporters (*TGD1*, 2, 3 and 4) and the ER Oleate Desaturase (*FAD2*) Suppress the Low Temperature-Induced Phenotype of *Arabidopsis* Tocopherol Deficient Mutant *vte2*. *Plant J.* 62, 1004-1018
22. Orlova I., Nagegowda D.A., Kish C.M., Gutensohn M., **Maeda H.**, Varbanova M., Fridman E., Yamaguchi S., Hanada A., Kamiya Y., Krichevsky A., Citovsky V., Pichersky E., and Dudareva N.* (2009) The Small Subunit Snapdragon Geranyl Diphosphate Synthase Modifies the Chain Length Specificity of Tobacco Geranylgeranyl Diphosphate Synthase in Planta. *Plant Cell* 21, 4002-4017
23. **Maeda H.**, Sage T.L., Isaac G., Welti R., and DellaPenna D.* (2008) Tocopherols Modulate Extra-Plastidic Polyunsaturated Fatty Acid Metabolism in *Arabidopsis* at Low Temperature. *Plant Cell* 20, 452-470 Described in the Featured Article of the issue, *Plant Cell* 20, 246
24. **Maeda H.** and DellaPenna D.* (2007) Tocopherol Functions in Photosynthetic Organisms. *Curr. Opin. Plant Biol.* 10, 260-265
25. **Maeda H.**, Song W., Sage T.L. and DellaPenna D.* (2007) Tocopherols Play a Limited Role in Photoprotection but a Crucial Role in Chilling Adaptation in *Arabidopsis* Leaves. In Current Advances in the Biochemistry and Cell Biology of Plant Lipids, C. Benning and J. Ohlrogge, eds (Aardvark Global Publishing Company, LLC, Salt Lake City, UT), pp. 112-115
26. **Maeda H.**, Song W., Sage T.L. and DellaPenna D.* (2006) Tocopherols Play a Crucial Role in Low Temperature Adaptation and Phloem Loading in *Arabidopsis*. *Plant Cell* 18, 2710-2732 Highlighted on the Cover of the issue.
27. Sakuragi Y., **Maeda H.**, DellaPenna D. and Bryant D.A.* (2006) α -Tocopherol Plays a Role in Photosynthesis and Macronutrient Homeostasis of the Cyanobacterium *Synechocystis* sp. PCC 6803 That is Independent of its Antioxidant Function. *Plant Physiol.* 141, 508-521
28. **Maeda H.**, Sakuragi Y., Bryant D.A., and DellaPenna D.* (2005) Tocopherols Protect *Synechocystis* sp. Strain PCC 6803 from Lipid Peroxidation. *Plant Physiol.* 138, 1422-1435
29. Cheng Z., Sattler S., **Maeda H.**, Sakuragi Y., Bryant D.A., and DellaPenna D.* (2003) Highly Divergent Methyltransferases Catalyze a Conserved Reaction in Tocopherol and Plastoquinone Synthesis in Cyanobacteria and Photosynthetic Eukaryotes. *Plant Cell* 15, 2343-2356
30. Okazawa A., **Maeda H.**, Fukusaki E., Katakura Y., and Kobayashi A.* (2000) *In Vitro* Selection of Hematoporphyrin Binding DNA Aptamers. *Bioorg. Med. Chem. Lett.* 10, 2653-2656
31. Fukusaki E., Kato T., **Maeda H.**, Kawazoe N., Ito Y., Okazawa A., Kajiyama S. and Kobayashi A.* (2000) DNA Aptamers that Bind to Chitin. *Bioorg. Med. Chem. Lett.* 10, 423-425

PATENT:

1. **Schenck C.A.** and **Maeda H.A.** (2014) Prephenate Dehydrogenases and Arogenate Dehydrogenases that Are Insensitive to Tyrosine Inhibition and Methods of Using the Same, *US patent P130167US02*, USSN: 14/548216 <http://www.patentsencyclopedia.com/app/20150150157>
2. **Schenck C.A.** and **Maeda H.A.** (2017) *Provisional U.S. patent #62/451,124*
3. **Lopez-Nieves S., de Oliveira M.V.V., Maeda H.A.** (2017) *Provisional U.S. patent #62/459,798*

AWARDS:

- 2017 **Samuel Lopes-Nieves** obtained the Best Oral Presentation Award at the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) meeting, Salt Lake City, Utah Oct 19th, -21st
- 2016 Elsevier-Phytochemistry Young Investigator Award from the Phytochemical Society of North America (PSNA)
- 2016 Arthur C. Neish Young Investigator Award from PSNA
- 2015 **Craig Schenck** obtained the Best Graduate Oral Presentation Award at Gordon Research Seminar on Plant Metabolic Engineering
- 2011 Eric E. Conn Young Investigator Award from the American Society of Plant Biologists
- 2011 Best postdoc poster award at Purdue Horticulture Departmental Retreat
- 2009 Best poster award at Gordon Research Conference on Plant Metabolic Engineering
- 2006 Anton Lang Memorial Graduate Student Award of MSU DOE-Plant Research Laboratory
- 2006 Best oral presentation award at MSU Plant Science Graduate Student Symposium
- 2000 Poster prize at 78th national meeting of the Chemical Society of Japan

GRANTS AND FELLOWSHIPS:

- 2016 Elsevier-Phytochemistry Young Investigator Award, 09/01/2016-08/31/2018
- 2016 UW Graduate School, Fall Research Competition, *Co-evolution of Plant Primary and Secondary Metabolism: Phylogeny-Guided Structure-Function Analysis of Tyrosine Pathway Regulation* (PI, Hiroshi Maeda)
- 2014 **USDA NIFA (2015-67013-11631139)**, *Elucidation and Engineering of the Tyrosine Biosynthetic Pathway in Betalain-Producing Beta Vulgaris* (PD, Hiroshi Maeda; Co-PD, Irwin Goldman, UW Horticulture), 03/01/2015-02/28/2018
- 2014 **NSF IOS-1354971**, *Defining the Tyrosine Biosynthetic Pathways in Plants* (PI, Hiroshi Maeda), 09/01/2014-8/31/2018
- 2013 UW Graduate School, Annual cross-campus Research Committee competition, *Elucidation and Engineering of the Tyrosine Biosynthetic Pathway in Table Beets* (PI, Irwin Goldman, UW Horticulture; Co-PI, Hiroshi Maeda)
- 2010 - 2015 Co-authored in the US Agriculture and Food Research Initiative competitive grant (2010-65115-20385) from the USDA National Institute of Food and Agriculture
- 2008 - 2010 Postdoctoral research fellowship from Japan Society for the Promotion of Science

- 2006 Dissertation completion fellowship from MSU College of Natural Science
 2006 Travel grant for annual meeting of the American Society of Plant Biologists
 2001 - 2003 Graduate research assistantship from MSU DOE-Plant Research Laboratory

TEACHING:

- 2012 Spring, 2012 Fall, 2013 Fall, 2014 Fall, 2015 Fall, 2016 Spring, Fall 2017
General Botany BOT130, 5 credit course at UW Madison, 20 lectures covering Basic plant biology topics, ~200 students (mostly sophomores and juniors)
 Co-instructors: Eve Emshwiller (Spring 2012), David Baum (Fall 2012, 2013), Ken Cameron (Fall 2014), Tom Brandner (Fall 2015), Anne Pringle (Spring 2016), Ken Cameron (Fall 2017)
- 2013 Spring, 2015 Spring, 2017 Spring
Plant Biochemistry BOT/BCH621, 3 credit course at UW Madison, 20 lectures (75 min) covering advanced topics in plant biochemistry, 8 and 16 students in 2013 and 2015, respectively (graduate students and senior undergraduate students)
 Co-instructors: Sebastian Bednarek, John Ralph (Biochemistry Department)
- 2017 Fall A short invited lecture on **Plant Metabolism** “Converting CO₂ into Morphine”.
 4 lectures (90 min) at the Nara Institute of Science and Technology (NAIST), Japan
- 2016 Fall **Plant Metabolite Analysis Workshop BOT858**, 1 credit course at UW Madison.
 8 lecture/lab (75 min) with ten graduate students. The course provides hands-on training on basic metabolite analysis from plant tissues. Goals are that students will be able to 1) find/read analytical methods from literature, 2) choose right instrumentation, 3) prepare metabolite extracts, 4) operate HPLC and GCMS, and 5) conduct data analysis (on targeted metabolites).
- 2012 Fall, 2015 Fall
Plant Physiology BOT960, 1 credit course at UW Madison, 20 graduate students.
 Topics: Biosynthesis of Plant Hormones (2012 Fall)
 Biosynthesis and Functions of Plant Specialized Metabolites (2015 Fall)
- 2014 Fall **Plant Breeding & Plant Genetics (PBPG) Seminar HORT957**, 1 credit course at UW Madison, 11 seminars (50 min) with 20 graduate students. Topics: Toward improving and deploying nutritional, flavor, and medicinal phytochemicals in crops.
 Co-instructors: Phillipp Simon
- 2009 Fall Guest lecture in HORT640, Plant Physiology and Metabolism course, at Purdue
 2008 - 2011 Research supervisor of one graduate and three undergraduate students at Purdue
 2003 - 2006 Research supervisor of one graduate and three undergraduate students at MSU
 2003 Spring Teaching assistant in Biochemistry Laboratory course BMB471 at MSU

STUDENT MENTORING AND ADVISING:

Postdoctoral Fellow

2017 - present **Ryo Yokoyama**

2015 - present **Marcos Viana de Oliveria**

2014 - 2017 **Minmin Wang**

2012 – 2013 **Julian Verdonk**, currently an Assistant Professor at Wageningen UR (University and Research Center)

Visiting Scientists

2011 - 2012 **Kyoko Toda**

Senior Researcher at Department of Upland Crop Research,
National Institute of Crop Science, Independent Administrative Agency

2014 - 2015 **Xuan Chen**

Associate professor of Horticulture College, Nanjing Agricultural University

2016 spring **Micha Wijesingha Ahchige** (visiting student from Germany)

Graduate students

2012 - present **Samuel Lopez-Nieves**, Botany graduate program

2012 - 2017 **Craig Schenck**, Botany graduate program, obtained Ph.D. in May 2017

Undergraduate students for the Independent Study

2017- present **Yar Xin Phang**, Biochemistry major

2017- present **Caroline Hanson**, Genetics and Plant Pathology majorS

2016- present **Yusen Men**, Biology major, Pharmacology-Toxicology Program

2016- 2017 **Daniel Griffith**, molecular biology and mathematics major

2015 - 2016 **Aditya Dewanjee**, biochemistry major

2015 - 2017 **Matthew Schneider**, biochemistry major

2016 summer **Sai Batchu**, Department of Biology, The College of New Jersey
The Integrated Biological Sciences Summer Research Program (IBS-SRP)

2015 - 2016 **Josh Westphal**, biochemistry major

2014 - 2015 **Un (Rosia) Schmidt**, biochemistry major

2015 spring **Stephanie Miller**, botany major

2015 spring **Meichen (Echo) Pan**, food science major

2014 - 2015 **James Shupryt**, biochemistry major

2013 - 2015 **Kelly William**, botany and biochemistry majors

2013 - 2014 **Siyu (Sylvia) Chen**, nutritional science major

2011 - 2014 **Camilla Dornfeld**, pre-med

2011 - 2014 **Zoe Retzlaff**, major in biology and environmental studies

2012 - 2014 **Xing Jin**, Biology major

2012 - 2013 **Jacob Litman**, biochemistry major

OUTREACH:

- 2017 “Pigment-Art”, Science Nights at Lake View Elementary School, Madison
Marcos Oliveira, Yusen Men, Hiroshi Maeda, Dan Griffith
- 2016 “Pigment-Art”, Science Nights at Huegel Elementary School, Madison
Matthew Schneider, Minmin Wang, Craig Schenck, Aditya Dewangee,
Micha Wijesingha-Ahchige
- 2016 “Making Scents Out of Botany”, UW Botany Department
Minmin Wang, Ken Keefover-Ring, Mo Fayyaz, Cara Streekstra, Sarah Friedrich
We invited people from the Botany Department to harvest smelly plants from the Botany
Greenhouse, extract scents, and analyze them using GC-MS. We hope to develop database of
scent profiles from the collection of many plant species that we have by bring in people from
department, undergraduate courses, and eventually public.
- 2015 “Pigment-Art”, Saturday Science, Secret of Foods, at Wisconsin Institute of Discovery
Samuel Lopez-Nieves, Rosia Schmidt, Matthew Schneider, Minmin Wang
“Pigment-Art”, the Science Expedition at Univ. of Wisconsin – Madison
Craig Schenck, Samuel Lopez-Nieves, Kelly William, Sylvia Chen, Minmin Wang
- 2014 “Pigment-Art”, the Science Expedition at Univ. of Wisconsin – Madison
Craig Schenck, James Shupryt, Kelly William, Sylvia Chen, Zoe Retzlaff, Camilla Dornfeld
- 2013 “Pigment-Art”, the Science Expedition at Univ. of Wisconsin – Madison
Together with Craig Schenck and Samuel Lopez-Nieves (grads) and Jacob Litman and Zoe
Retzlaff (undergrads), Maeda Lab organized an outreach event, called “Pigment-Art”, where
children enjoyed painting with natural pigments. We extracted betalains, anthocyanins,
chlorophylls, and carotenoids from various plants and showed how different pigments migrate
on paper chromatography (using water and ethanol as a mobile phase).

PROFESSIONAL ACTIVITIES:

- 2018 July Chair of mini symposium "Plant Biochemistry" at 2018 ASPB meeting (scheduled)
- 2017 - present ASPB Young Investigator Award committee
- 2017 - present External Advisory Board (EAB) of the North American Arabidopsis Steering
Committee (NAASC)
- 2017 - present Faculty Advisory Committee of the Wisconsin Crop Innovation Center (WCIC)
- 2016 July Chair of mini symposium "Metabolic Diversity" at 2016 ASPB meeting
- 2016 March Chair of symposium " Harnessing Catalytic and Regulatory Diversity of Plant
Metabolism" at 2016 JSPP meeting
- 2014 - present grant panel of National Science Foundation (NSF), US Dept. of Agriculture (USDA)
- 2013 - present reviewer of NSF, USDA, Israel Science Foundation (ISF),
The U.S.-Israel Binational Science Foundation (BSF)
- 2011 - present Reviewer for *Nature Chem. Biol.*, *Nature. Comm.*, *Nature Plants*, *Plant Cell*,
Plant J., *Plant Physiol.*, *Mol. Plant*, *J. Exp. Bot.*, *New Phytol.*, *PLoS ONE*,

Plant Cell Physiol., *Phytochemistry*, *Front. Plant Physiol.*, *Curr. Opin. Plant Biol.*,
etc.

- 2006 - 2011 Reviewer for *Plant Cell*, *Plant J.*, *J. Exp. Bot.*, *Plant Cell Physiol.*,
Mol. Plant, *Plant Biol.*, *Plant Cell Rep.*, *Pesticide Biochem. Physiol.*
- 2011 July Chair of 2011 Gordon Research Seminar on Plant Metabolic Engineering
- 2008 - 2010 Initiating/organizing the Purdue Plant Science Student/Postdoc Seminar Series
- 2009 May A member of organizing committee for Purdue Horticulture Retreat
- 2004 - 2005 Seminar committee at MSU DOE-Plant Research Laboratory
- 2003 - 2004 Personal affair committee at MSU DOE-Plant Research Laboratory

INVITED TALKS (since 2011):

1. Botany 2018, “Evolution of Plant Chemical Diversity: Renaissance of Comparative Biochemistry,” in Rochester MN – July 21-25, 2018 (scheduled)
2. Annual Meeting of the American Society of Plant Biologists (ASPB), Montreal – July, 14-18, 2018 (scheduled)
3. Kyoto University, Kyoto, Japan – November 30, 2017 **Regulation of plant aromatic amino acid biosynthesis across plant phylogeny.**
4. Nara Institute of Science and Technology, Nara, Japan – November 28-29, 2017 **De-regulation of tyrosine biosynthesis facilitated evolutionary expansion of diverse plant natural products.**
5. Phytochemical Society of North America (PSNA), University of Missouri, MO – August 5-9, 2017 **Plant Metabolic Diversity: Interspecies Variations of Tyrosine Biosynthetic Pathway Architecture and Regulation.**
6. Fourth International Conference on Plant Metabolism (ICPM), Dalian, China – July 16-20, 2017 **Plant Metabolic Diversity: Interspecies Variations of Tyrosine Biosynthetic Pathway Architecture and Regulation.**
7. Washington University in St. Louis, Department of Biology, April 3rd, 2017 **Co-evolution of plant primary and secondary metabolism: Discovery and application of interspecies variations of tyrosine pathway regulation**
Phytochemical Society of North America (PSNA), Davis, CA – August 7th, 2016 **Relaxed Regulation of Tyrosine Biosynthesis During the Evolution of Betalain Pigmentation**
8. Shizuoka University, Shizuoka, Japan – June 27th, 2016 **Diversification of Tyrosine Biosynthetic Pathways in Plants**
9. University of Osaka, Suita, Japan – June 16th, 2016 **Diversification of Tyrosine Biosynthetic Pathways in Plants**
10. 4th Annual Meeting of the Frontier Society of Plant Secondary Metabolism Hanamaki Japan – March 22th, 2016 **Evolutionary Diversification of Aromatic Amino Acid Biosynthetic Pathways in Plants**
11. 57th Annual Meeting of the Japanese Society of Plant Physiologists (JSPP) Morioka Japan – March 18th, 2016 **Diversification of Tyrosine Biosynthetic Pathways in Plants: Non-Plastidic, Tyrosine-Insensitive Prephenate Dehydrogenases in Legumes**

12. 4th Annual Michigan State University Symposium on Plants for Health and Sustainability East Lansing, MI – October 9th, 2015
Divergence of Tyrosine Biosynthetic Pathways in Legumes
13. Phytochemical Society of North America (PSNA), Urbana-Champaign, IL – August 10th, 2015
Diversification of Tyrosine Biosynthetic Pathways in Plants
14. Iowa State University, Ames, IA – April 23th, 2015
Diversification of Primary Tyrosine Biosynthetic Pathways in Legumes
15. Annual Meeting of the American Society for Biochemistry and Molecular Biology (ASBMB) Boston, MA – March 28th – April 1st, 2015
Diversification of Tyrosine Biosynthetic Pathways in Plants: Non-Plastidic, Tyrosine-Insensitive Prephenate Dehydrogenases in Legumes
16. Annual Meeting of the American Society of Plant Biologists, Portland, OR – July, 2014
Phylobiochemical Characterization of Prephenate Aminotransferases Reveals Evolution of the Plant Arogenate Phenylalanine Pathway
17. 4th Banff Conference on Plant Metabolism, Banff, Canada – June, 2014
Phylobiochemical Characterization of Prephenate Aminotransferases Reveals Evolution of the Plant Arogenate Phenylalanine Pathway
18. MidWest Plant Cell Dynamics Meeting, Madison WI – June, 2014
Diversification of Tyrosine Biosynthetic Pathways in Plants: Non-Plastidic, Tyrosine-Insensitive Prephenate Dehydrogenases in Legumes
19. Texas A&M University, College Station, TX – April 17th, 2014
Evolutional Diversification of Phenylalanine and Tyrosine Biosynthesis in Plants
20. University of Missouri, IPG (Interdisciplinary Plant Group) seminar series, Columbia, MO – March 31st, 2014
Evolutional Diversification of Phenylalanine and Tyrosine Biosynthesis in Plants
21. 13th International Congress on Amino Acids, Peptides and Proteins (ICAPP) Galveston, Texas – October 7th, 2013
Molecular Evolution of the Plant Phenylalanine and Tyrosine Biosynthesis
22. International Conference on Plant Chemical Biology, Berkshire, UK – April 24th, 2012 **Aromatic Amino Acid Biosynthesis and its Regulation in Plants** (Plenary Lecture)
23. University of Osaka, Suita, Japan – March 2012 **Phenylalanine Biosynthesis in Plants: Carbon Allocation Towards Phenolic Compound Production**
24. Department of Botany, University of Wisconsin - Madison – March 2011
Phenylalanine biosynthesis: carbon allocation toward the production of phenolic compounds in plants