

## Curriculum Vitae

### MARCIN NOWICKI, PhD

University of Tennessee – Knoxville  
Institute of Agriculture / Entomology and Plant Pathology  
2505 E J Chapman Drive  
Knoxville, TN 37996-4560

Email: [mnowicki@utk.edu](mailto:mnowicki@utk.edu)

[ResearchGate profile](#)

[Scholar Google profile](#)

[Web of Science profile](#)

[Departmental webpage](#)

[Laboratory webpage](#)

## EDUCATION

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### Doctor of Philosophy (Dr. Rer. nat.)

Aug 2006

Biochemistry and molecular biology  
RWTH – Aachen, Germany

- Dissertation title: “Characterization of the cardiolipin synthase from *Arabidopsis thaliana*” published [online](#).  
PI: Prof. Dr. M. Frentzen

### Master of Science (MSc)

Oct 2002

Biotechnology – specialty of Plant Production; Biochemistry  
Warsaw University of Life Sciences; School of Biotechnology – Warsaw, Poland

- Thesis title: “Functions and characteristics of glutamate dehydrogenase from germinating *Triticale* seeds”  
PI: Dr. J. Kwinta

### Grad Student Exchange program

Oct 2001-Oct 2002

Hiroshima University – Higashi Hiroshima, Japan

- Awarded full Hiroshima University Study Abroad scholarship  
PI: Prof. Dr. K. Kondo

## APPOINTMENTS

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### Research Assistant Professor (Full time: 40h / week)

Nov 2019-current

Department of Entomology and Plant Pathology  
Institute of Agriculture  
University of Tennessee – Knoxville, TN

### Postdoctoral Research Associate (Full time: 40h / week)

Oct 2016-Oct 2019

Department of Entomology and Plant Pathology  
Institute of Agriculture  
University of Tennessee – Knoxville, TN

- Projects: “Molecular diversity of woody ornamentals”; “Plant pathology of dogwoods”; “Population genetics of rubber dandelions”; PI: Univ. Prof. Dr. R.N. Trigiano
- Responsible for laboratory experiments supervision and greenhouse plant collection management.
- (Under)Grad student mentoring, PhD students and postdoctoral fellows’ training
- Grant preparation, peer-review, manuscript writing

### Senior Research Associate (Postdoctoral. Full time: 40h/week)

Oct 2010-Jan 2017

Research Institute of Horticulture – Skierniewice, Poland

- Projects: “Vegetable crops resistance breeding”; “Tomato and cucumber pathogen diversity”; “Molecular detection of vegetable crops pathogens”; PI: Prof. Dr. E.U. Kozik
- Responsible for laboratory experiments supervision and greenhouse plant collection management.
- Technical personnel supervision and training; Rotation students training
- Grant preparation, peer-review, manuscript writing
- Funding ID: Polish Ministry of Agriculture and Rural Development

### Postdoctoral Research Associate (Full time: 40h / week)

Nov 2006-Oct 2009

Plant Research Laboratory  
Michigan State University – East Lansing, MI

- Projects: “Analyses of *Arabidopsis* pectin mutants”; “Tomato pectin mutants phenotyping”; PI: Prof. Dr. M. Pauly

- Responsible for laboratory experiments supervision and greenhouse plant management.
- (Under)Grad student mentoring, PhD students and postdoctoral fellows' training
- Funding ID: U.S. DoE-PRL and MSU

**MaxPlanck Research Fellow (Full time: 40h / week)**

**Sep 2006-Oct 2006**

MaxPlanck Intitute for Molecular Plant Physiology –Golm, Germany

- Projects: “Genotyping and selection of *Arabidopsis* pectin double mutants”; “Tomato pectin mutants cDNA synthesis”; PI: Prof. Dr. Markus Pauly
- Responsible for greenhouse experimental plant management and materials shipment to US.
- Funding ID: MaxPlanck Gesellschaft (Germany)

**Freelance Translator**

**Dec 2009-current**

[St. Adalbert Publishing House](#) - Poznan, Poland

- English↔Polish translations; six books available, one achieved bestseller status with five editions.

VOG Inc. – Skierniewice, Poland

- German↔Polish and English↔Polish translations.

**Outsource CaseStudy Employee (Part-time employment; max.20h/week)**

**Sep 1999-May 2001**

AstraZeneca Poland – Warsaw, Poland

- Projects: “Chronic obstructive pulmonary disease (COPD) data entry and quality check”; “Experimental cancer drug study – data entry and quality check”; PI: E. Rutkowska, MSc
- Acquaintance with Good Laboratory Practice and Good Manufacturing Practice.

**PEER-REVIEWED PUBLICATIONS (@: Corresponding Author)**

1. Arabidopsis UDP-D-glucuronic acid 4-epimerase 6 (GAE6) impacts pectin abundance and interacts with the putative UDP-sugar transporter UTR6 (submitted to Molecular Plant) Xiong G., Rädisch S., Poree F., **Nowicki M.**, Pauly M.®
2. Species diversity and phyleogeography of *Cornus kousa* (Asian dogwood) captured by genomic and genic microsatellites (2020; submitted to Evolutionary Applications). **Nowicki M.**®, Houston L.C., Boggess S.L., Aiello A.S., Payá -Milans M., Staton M.E., Hayashida M., Yamanaka M., Eda S., Trigiano R.N.
3. Fine-scale population structure of *Cercis canadensis* L. (Eastern redbud): the effect of habitat fragmentation on genetic diversity and differentiation (2019; accepted with revisions in Ecology and Evolution; revised and submitted). Ony M.A., Nowicki M., Boggess S.L., Klingeman W.E., Zobel J.M., Trigiano R.N., and Hadziabdic D.®
4. Effect of thermal processing on antioxidant and cytotoxic activities of waste potato juice - in vitro study (2019) Kowalczewski P.M., Olejnik A., Białas W., Siger A., **Nowicki M.**, Lewandowicz G. *Open Life Sci* 14: 150–157. DOI: 10.1515/biol-2019-0017. Cited: 5
5. Development and characterization of genic microsatellites for the ornamental plant Green and Gold (*Chrysogonum virginianum*) (2019). **Nowicki M.**®, Schilling E.E., Boggess S.L., Houston L.C., Huff M.L., Staton M.E., Lampley J.A., Trigiano R.N. *HortScience* 54 (2), 395-400. DOI: 10.21273/HORTSCI13739-18
6. *Taraxacum kok-saghyz* (Russian dandelion) genomic microsatellite loci: cross-species amplification and population genetics applications (2019). **Nowicki M.**®, Zhao Y., Boggess S.L., Fluess H., Payá-Milans M., Staton M.E., Houston L.C., Hadziabdic D., Trigiano R.N. *Scientific Reports* 9 (1915), 1-17. DOI: 10.1038/s41598-019-38532-8. Cited: 1
7. Characterization of fifteen microsatellite loci and genetic diversity analysis for the Ghanaian food security crop *Solenostemon rotundifolius* (Frafra potato) (2018). Hua L., Hadziabdic D., Amisah N., **Nowicki M.**, Boggess S.L., Staton M.E., Teng N., Trigiano R.N.® (2018) *African Journal of Biotechnology* 17(47): 1352-1357. DOI: 10.5897/AJB2018.16666
8. Haplotyping of *Cornus florida* and *C. kousa* chloroplasts: insights into species-level differences and patterns of plastic DNA variation in cultivars (2018). **Nowicki M.**®, Boggess S.L., Saxton A.M., Hadziabdic D., Xiang Q.-Y., Molnar T., Zhao Y., Trigiano R.N. (2018) *PLOS ONE* 13(10): e0205407 DOI: 10.1371/journal.pone.0205407
9. *Alternaria brassicicola* - Brassicaceae pathosystem: insights into the infection process and resistance mechanisms under optimized artificial bio-assay (2018). Nowakowska M., Wrzesińska M., Kamiński P., Szczechura W., Lichocka M., Tartanus M., Kozik E.U., **Nowicki M.**® *European Journal of Plant Pathology* 153: 131-151. DOI: 10.1007/s10658-018-1548-y. Cited: 3
10. Cellular and biochemical mechanisms of cucumber resistance against *Pseudoperonospora cubensis* (2016). **Nowicki M.**, Kłosińska U., Szczechura W., Markiewicz M., Sowik I., Michalczyk L., Kozik, E.U.® [Proceedings of 11<sup>th</sup> Eucarpia Meeting on Genetics and Breeding of Cucurbitaceae 2016](#), pp.128-132. Cited: 1
11. Screening for *Alternaria brassicicola* resistance in the *Brassicaceae*: Bio-assay optimization and confocal microscopy insights into the infection process (2016). Nowakowska M., Wrzesińska M., Kamiński P., Nowicki M., Lichocka M., Tartanus M., Kozik E.U.® PeerJ PrePrints No. e1360v2. Cited: 2
12. Development of LAMP-HRM for sensitive and specific detection of *Phytophthora infestans* (2015). **Nowicki M.**®, Nowakowska M., Wrzesińska M., Kozik E.U. ScienceOpen Posters DOI: 10.14293/P2199-8442.1.SOP-AG.PZXDWN.v1
13. Appraisal of artificial screening techniques of tomato to accurately reflect field performance of the late blight resistance (2014). Nowakowska M., **Nowicki M.**, Kłosińska U., Maciorowski R., Kozik E.U.® *PLOS ONE* 9 (10), e109328. Cited: 22

14. Low temperature seed germination of cucumber: Genetic basis of the tolerance trait (2013). Kłosińska U., Kozik E.U., **Nowicki M.**, Wehner T.C. *Journal of Horticultural Research* 21 (2), 125-130; DOI: 10.2478/johr-2013-0031. Cited: 3
15. Late blight of tomato (2013). **Nowicki M.**, Kozik E.U., Foolad M.R.®, In: *Genomics applications in plant breeding. Volume II: Improvement for biotic stresses*, ed. Rajeev K Varshney & Roberto Tuberosa; Wiley-Blackwell Publishers, USA; DOI: DOI: 10.1002/9781118728475.ch13. Cited: 30
16. More than meets the eye: A multi-year expressivity analysis of tomato sterility in *ps* and *ps-2* lines (2013). **Nowicki M.**®, Kozik E.U., Nowakowska M., Staniaszek M., Dyki B., Stępowaska A. *Australian Journal of Crop Science* 7(13):2154-2161. Cited: 1
17. A simple dual stain for detailed investigations of plant-fungal pathogen interactions (2012). **Nowicki M.**, Lichočka M., Nowakowska M., Kłosińska U., Kozik E.U. *Vegetable Crops Research Bulletin*; 77(1):61-74; DOI: 10.2478/v10032-012-0016-z; Cited: 13
18. *Alternaria* black spot of crucifers: Symptoms, importance of disease, and perspectives of resistance breeding (2012). **Nowicki M.**, Nowakowska M., Niezgoda A., Kozik E.U. *Vegetable Crop Research Bulletin* 76:5-19; DOI: 10.2478/v10032-012-0001-6. Cited: 86
19. Potato and tomato late blight caused by *Phytophthora infestans*: An overview of pathology and resistance breeding (2012). **Nowicki M.**, Foolad M.R., Nowakowska M., Kozik E.U. (Feature article) *Plant Disease* 96(2):4-17; DOI: 10.1094/PDIS-05-11-0458. Cited: 201
20. Glutamate dehydrogenase of the germinating triticale seeds (2011). Grabowska A., **Nowicki M.**, Kwinta J. *Acta Physiologiae Plantarum* 33(5): 1981-1990; DOI: 10.1007/s11738-011-0801-1). Cited: 26
21. Characterization of the cardiolipin synthase from *Arabidopsis thaliana* (2006; Ph.D. monography). **Nowicki M.**, published online, <http://darwin.bth.rwth-aachen.de/opus/volltexte/2006/1629>. Cited: 3
22. Cardiolipin synthase of *Arabidopsis thaliana* (2005). **Nowicki M.**, Müller F., Frentzen M. (*FEBS Letters* 579, 2161-2165). Cited: 57
23. Functional and biochemical characterization of cardiolipin synthase of *Arabidopsis thaliana*. (2004). **Nowicki M.**, Müller F., Frentzen M. *Botanikertagung (Braunschweig, Germany) Book of Abstracts*, p.94
24. Characterization of cardiolipin synthase of *Arabidopsis thaliana*. (2004). **Nowicki M.**, Müller F., Frentzen M., *Proceedings of 16<sup>th</sup> International Plant Lipid Symposium, Budapest, Hungary*, p.80

**Total cited:** [Google Scholar Profile](#): 454; **h-index:** 7  
[Web of Science profile](#): 170; **h-index:** 4

### **(INVITED) PLENARY PRESENTATIONS** (underlined: Presenting Author)

1. Kissing cousins: Comparative genomics and population genetics of pathogenic *Pseudoperonospora cubensis* and *Ps. humuli*, to unbraid the species **Nowicki M.**, Kanetis L., Wadl P.A, Ojiambo P.S., Cubeta M.A., Spring O., Thines M., Boggess S.L., Hadziabdic D., Trigiano R.N., at: the 6<sup>th</sup> International Horticulture Research Conference, Venice, Italy, , Sep 30<sup>th</sup> - Oct 5<sup>th</sup> , 2019
2. First clear evidence of population structure in *Cornus kousa* (Asian dogwood). **Nowicki M.**, Houston L.C., Boggess S.L., Hadziabdic D., Aiello A.S., Yamanaka M., Hayasida M., Trigiano R.N., at: ASHS 2018 Annual Conference, 31 July – 3 August 2018, Washington, DC, USA
3. Genetic structure of the native *Cornus kousa* (Asian dogwood) populations from Eastern Asia. **Nowicki M.**, Houston L.C., Boggess S.L., Hadziabdic D., Aiello A.S., Yamanaka M., Hayasida M., Trigiano R.N., at: 5<sup>th</sup> International Horticulture Research Conference, July 20-24, 2018 Beijing, China
4. Haplotyping of *Cornus florida* and *C. kousa* (flowering dogwood) indicates differences among cultivars and species. **Nowicki M.**, Boggess S.L., (...) Trigiano R.N., at: 4<sup>th</sup> International Horticulture Research Conference, 16-20 July 2017, NIAB EMR, East Malling, United Kingdom
5. Cellular and biochemical mechanisms of cucumber resistance against *Pseudoperonospora cubensis*. **Nowicki M.**, Kłosińska U., Szczechura W., et al., at: 11<sup>th</sup> Eucarpia Meeting on Cucurbit Genetics & Breeding, 24–28 July 2016 ([http://www.inhort.pl/files/konferencje\\_2016/cucurbitaceae/Conference%20proceedings%20book.pdf](http://www.inhort.pl/files/konferencje_2016/cucurbitaceae/Conference%20proceedings%20book.pdf)), Warsaw, Poland
6. *Alternarias* in vegetable crops: Brassicas and tomatoes. Opening the bottlenecks for resistance breeding. **Nowicki M.**, Nowakowska M., Wrzesińska M., Kamiński P., Kozik E.U., at: EuroBlight workshop, Brasov, Romania, 10-13 May, 2015 ([euroblight.net/fileadmin/euroblight/Workshops/Brasov/EuroBlight\\_Scientific\\_ProgrammeFinal.pdf](http://euroblight.net/fileadmin/euroblight/Workshops/Brasov/EuroBlight_Scientific_ProgrammeFinal.pdf)).
7. Genetic potential of 3 vegetable species regarding their tolerance to abiotic stresses during germination and seedling establishment. **Nowicki M.**, Nowak R., Kaminski, P., Kozik E.U., at: Wrocław University of Life Sciences, Poland, November 2014, invited lecture.
8. Tomato sterility: Genetic and molecular background of the *ps* and *ps-2* tomatoes. **Nowicki M.**, Nowakowska M., Kozik E.U., at: Research Institute of Horticulture, Skierniewice, Poland. Institute seminar series, May 2014.
9. Late blight resistance level among the tomato accessions in relation to various testing methods. **Nowakowska M.**, **Nowicki M.**, Niezgoda A., Kozik E.U., at: Research Institute of Horticulture, Skierniewice, Poland. Institute seminar series, March 2012.
10. Molecular and phenotypic analyses of Polish isolates of *Phytophthora infestans* from tomato. Nowakowska M., **Nowicki M.**, Niezgoda A., Kozik E.U., at: Research Institute of Horticulture, Skierniewice, Poland. Institute seminar series, March 2012.
11. Not only potato. Advancements in tomato late blight research and breeding (invited oral lecture). **Nowakowska M.**, **Nowicki M.**, Niezgoda A., Kozik E.U., at: IHAR (Plant Breeding and Acclimatization Institute) Młochów, Poland, 02/20/2012.

12. Molecular characterization of new sources of tomato resistance against late blight (oral presentation) Nowakowska M., **Nowicki M.**, Kozik E.U., at: Polish Ministry of Agriculture and Rural Development - yearly retreat, University of Life Sciences (Uniwersytet Rolniczy), Cracow, Poland, December **2011**.
13. Towards new sources of resistance against late blight in tomato (oral presentation) Nowakowska M., **Nowicki M.**, Kozik E.U., at: Polish Ministry of Agriculture and Rural Development yearly retreat, Warsaw University of Life Sciences (SGGW), Warsaw, Poland, December **2010**.
14. Protein-protein interactions in plant nucleotide-sugar interconversion pathway (invited seminar). **Nowicki M.**, Rädisch S., Porree F., Pauly M., Research Institute of Vegetable Crops, Skierniewice, Poland, August **2010**.
15. Plant nucleotide-sugar metabolism: Evidence for substrate channeling in pectin biosynthesis (invited oral presentation) **Nowicki M.**, Rädisch S., Porree F., Pauly M. at: Gordon research Conference in Plant Cell Wall Biosynthesis, Bryant University RI, US, August **2009** (<http://www.grc.org/programs.aspx?year=2009&program=plantcell>).
16. Protein-protein interactions in pectin biosynthesis (invited oral presentation) **Nowicki M.**, Rädisch S., Porree F., Pauly M. at Plant Cell Walls Gordon-Kenan Research Seminar, Bryant University RI, USA, August **2009** ([http://www.grc.org/programs.aspx?year=2009&program=grad\\_pcw](http://www.grc.org/programs.aspx?year=2009&program=grad_pcw)).
17. Identification of putative substrate channel protein complexes involved in plant nucleotide-sugar metabolism (oral presentation), **Nowicki M.**, Rädisch S., Porree F., Pauly M. at: 3<sup>rd</sup> Conference on Cell Wall Biosynthesis, Asilomar CA, USA, June **2008** (<http://www.cellwallbio3.prl.msu.edu/>).
18. Functional role of *Arabidopsis thaliana* cardiolipin synthase (invited seminar) **Nowicki M.**; MaxPlanck Institute, Golm, Germany, June **2006**.
19. Functional role of phosphatidylglycerol and cardiolipin in plants (oral presentation), **Nowicki M.**, Müller F., Frentzen M., at: 2<sup>nd</sup> European Symposium on Plant Lipids, Copenhagen, Denmark, (<http://www.eurofedlipid.org/meetings/archive/copenhagen/index.htm>), August **2005**.

## POSTER PRESENTATIONS (underlined: Presenting Author)

1. Evaluation of genetic diversity of Asian callery pear, *Pyrus calleryana* (2020) Sapkota, S., Boggess, S.L., Coyle, D., Klingeman, W.E., Hadziabdic-Guerry, D., Trigiano, R.N, **Nowicki, M.** @ 30<sup>th</sup> USDA Interagency Research Forum on Invasive Species, Annapolis MD, January 14-17, 2020.
2. Genomic microsatellites evidence species diversity and origin of *Peronospora tabacina*, an important pathogen of tobacco (2019). **Nowicki M.**, Hadziabdic D., Boggess S.L., Runge F., Thines M., Ristaino J.B., Spring O., Trigiano R.N. APS Plant Health 2019, Cleveland OH, August 3-7 2019. DOI: 10.1094/PHYTO-109-10-S2.1
3. Road Trips for Redbuds: An Assessment of the Genetic Diversity and Spatial Distribution of *Cercis canadensis* in the US (2019). M Ony, **M Nowicki**, W Klingeman, SL Boggess, SE Everhart, M Ginzler, J Zobel, RN Trigiano, D Hadziabdic. APS Plant Health 2019, Cleveland OH, August 3-7 2019. DOI: 10.1094/PHYTO-109-10-S2.1
4. Biochemical and molecular events underlying cucumber resistance to downy mildew (*Pseudoperonospora cubensis*) Szczechura W., Klosinska U., Nowakowska M., Markiewicz M., Niezgoda A., Nowak K., **Nowicki M.** at: 2018 ASHS Annual Conference July 31 - August 03, 2018 Washington DC, USA. DOI: 10.13140/RG.2.2.14469.45283
5. Transcriptome analyses of the cucumber-*Pseudoperonospora cubensis* pathosystem. **Nowicki M.**, Kłosińska U., Szczechura W., Kozik E.U., at: XI<sup>th</sup> Eucarpia Meeting on Cucurbit Genetics & Breeding, Warsaw, Poland, 24-28 July 2016 ([http://www.inhort.pl/files/konferencje\\_2016/cucurbitaceae/Detailed\\_Conference\\_Program.pdf](http://www.inhort.pl/files/konferencje_2016/cucurbitaceae/Detailed_Conference_Program.pdf))
6. Development of LAMP-HRM for sensitive and specific detection of *Phytophthora infestans*. **Nowicki M.**, Nowakowska M., Wrzesińska M., Kozik E.U., at: EuroBlight workshop, Brasov, Romania, 10-13 May, 2015 ([http://euroblight.net/fileadmin/euroblight/Workshops/Brasov/EuroBlight\\_Scientific\\_ProgrammeFinal.pdf](http://euroblight.net/fileadmin/euroblight/Workshops/Brasov/EuroBlight_Scientific_ProgrammeFinal.pdf)).
7. Substrate channels: Protein-protein interactions in plant nucleotide-sugar interconversion pathway. **Nowicki M.**, Rädisch S., Porree F., Pauly M. at: 2008 MSU – DOE Plant Research Laboratories retreat, Lansing MI, USA, 08.2008.
8. Plant nucleotide-sugar metabolism: Evidence for protein-protein interactions. **Nowicki M.**, Rädisch S., Porree F., Pauly M. at: XI Cell Wall Meeting, Copenhagen, Denmark, August 2007([www.cw2007.kvl.dk/program/Finalprogramme.pdf](http://www.cw2007.kvl.dk/program/Finalprogramme.pdf)).
9. Characterization of Cardiolipin Synthase of *Arabidopsis thaliana* (poster). **Nowicki M.**, Müller F., Frentzen M. at: 16<sup>th</sup> International Plant Lipid Symposium, Budapest, Hungary, June 1-4 2004 ([www.mete.mtesz.hu/pls/proceedings/eloadasok/pdf/final-abstractbook.pdf](http://www.mete.mtesz.hu/pls/proceedings/eloadasok/pdf/final-abstractbook.pdf)). Mentioned in DOI: 10.1007/s11183-005-0061-2
10. Functional and biochemical characterization of cardiolipin synthase of *Arabidopsis thaliana* (poster). **Nowicki M.**, Müller F., Frentzen M. at: Botanikertagung, Braunschweig, Germany, September 5-11 2004.
11. Cardiolipin synthase of *Arabidopsis thaliana* (poster). **Nowicki M.**, Müller F., Frentzen M. At: 1st European Symposium on Plant Lipids, Aachen, Germany, **2003** ([www.eurofedlipid.org/meetings/archive/aachen/poster.htm](http://www.eurofedlipid.org/meetings/archive/aachen/poster.htm)).
12. Izoformy dehydrogenazy glutaminianowej w kielkujących ziarniakach pszenżyta (Isoforms of glutamate dehydrogenase in germinating Triticale). **Nowicki M.**, Kwinta J. at: 37<sup>th</sup> Conference of Polish Biochem. Society, Toruń, Poland, September 2001.

## AWARDS, HONORS, AND DISTINCTIONS

1. Graduate Student Senate Travel Award for S. Sapkota (\$290) **Dec 2019**  
Accompanied by Department/Program Funding: \$200; College Funding: \$200. Towards 30<sup>th</sup> USDA Interagency Research Forum on Invasive Species, Annapolis MD, January 14-17, 2020.
2. 5<sup>th</sup> International Horticulture Research Conference, Beijing, China Travel Award **July 20-24, 2018**

Reimbursement of registration: \$450; hotel stay: \$1,500; partial reimbursement of air ticket: \$400). Awarded 3 individuals from ~50 who applied, based on the poster presentations submitted.

3. [EURēCA](#) cash awards for Logan C. Houston (mentee) **April 2018**  
1<sup>st</sup> place among CASNIR-UTK; 1<sup>st</sup> Golden Award for Second Day of competition from 4 awarded; over 600 presentations in competition).
4. Research Institute of Horticulture: Director's awards for distinguished publications **2013, 2014**  
\$1,500 each, two awards received.
5. Placed 1<sup>st</sup> in Top10 Downloaded Publications (Plant Disease DOI: 10.1094/PDIS-05-11-0458) **Dec 2012**
6. 1<sup>st</sup> Gordon Research Seminar in Plant Cell Walls (Best plenary presentation) – **Aug 2009**  
Reimbursement of registration fee, travel expenses, and hotel charges; \$1,200.
7. Dean's Honors for contributions to School of Biotechnology (Warsaw Life Sciences University) **Oct 2002**
8. HUSA scholarship **Oct2001-Oct 2002**  
Hiroshima University Study Abroad scholarship; covered tuition, courses, travel, living expenditures, and monthly stipend).

## PROFESSIONAL ACTIVITIES AND COMMUNITY SERVICE

### Professional Society Memberships

1. Elected Financial Co-Officer for [International Society for Pest Information](#) 2016-current.
2. Member of American Society for Horticultural Science 2018-current
3. Member of American Phytopathological Society 2018-current
4. Member of International Society for Pest Information 2012-current.
5. Member of Polish Society of Experimental Plant Biology 2010-2015
6. Member of Federation of European Societies of Plant Biology 2010-2015
7. Member of Polish Society of Horticultural Sciences 2010-2015

### Community service and Scientific Judging:

1. Apr 2019: ASHS Ornamental Publication Award Committee member. Judging overall hundreds of 2018 papers in 3 ASHS journals. Member of 5-person jury, selected based on prior published research.
2. Apr 2019: Southern Appalachian Science and Engineering Fair. Lead Judge for Plant Sciences discipline.
3. July 31-Aug 03, 2018: Graduate Student Poster Competition judge (2018 ASHS Annual Conference Washington DC, USA)
4. July 20-24, 2018: Session Chair ([5<sup>th</sup> International Horticulture Research Conference](#), Beijing, China: Group 3: Horticultural Crop Production and Protected Culture)
5. Jan 2018-current: Social Committee member (Department of Entomology and Plant Pathology; University of Tennessee – Knoxville, TN)
6. July 16-20 2017: Poster Competition judge (4<sup>th</sup> International Horticulture Research Conference, NIAB EMR, East Malling, United Kingdom,)
7. July 24-28 2016: Organizing Committee of [CUCURBITACEAE 2016: 11<sup>th</sup> Eucarpia Meeting on Cucurbit Genetics & Breeding](#) (Warsaw, Poland).
8. Aug 2008-July 2009: Post-doctoral representative in the Academic Personnel Council (Michigan State University – Department of Energy Plant Research Laboratory; East Lansing, MI).

### Acknowledged for copy-editing and manuscript contributions:

1. Level of sterility and morphological flowers differentiation of petaloid male-sterile plants of carrot (2012). Kozik E.U. *et al.* *Journal of Agricultural Science* 4(2):187-194.
2. Heritability and genetic variance estimates for resistance to downy mildew in cucumber accession Ames 2354 (2013) Kozik E.U. *et al.*, *Crop Science* 53:177-182; DOI: 10.2135/cropsci2012.05.0297.
3. Low genetic diversity suggests the recent introduction of dogwood powdery mildew to North America (2019). Wyman C.R., Hadziabdic D., Boggess S.L., Rinehart T.A., Windham A., Wadl P., Trigiano R.N. *Plant Disease*; DOI: 10.1094/PDIS-01-19-0051-RE.

### Editorial Board memberships:

1. Member of Editorial Board [Journal of Horticultural Research](#) (since Sep 2012; 8 reviews; 4 submissions handled).
2. Invited member of Editorial Board of *Open Journal of Molecular and Integrative Physiology* (Oct 2013-Oct 2014; 1 review).
3. *Journal of Plant Studies* (Oct 2012-Oct 2014; 6 reviews).
4. *Journal of Molecular Biology Research* (Oct 2012-Oct 2014; 2 reviews).
5. *International Journal of Biology* (Oct 2012-Oct 2014; 6 reviews).
6. *Journal of Agricultural Science* (Oct 2012-Feb 2014; 8 reviews).

### Ad-hoc and Invited Reviews

1. Invited Reviewer *Plant Pathology* (1 review; October 2019).
2. Invited Reviewer at *Physiological and Molecular Plant Pathology* (February 2019)
3. Invited Reviewer at *Electronic Journal of Biotechnology* (1 review; June 2014).
4. Invited Reviewer at *The Journal of Horticultural Science and Biotechnology* (1 review; Mar 2018).
5. Invited Reviewer at *APS Phytopathology* (1 review; Jan 2018).
6. Invited Reviewer at *APS Plant Disease* (2 reviews; Apr 2019).

7. Inviter Reviewer at Journal of Plant Pathology (1 review; May 2019).
8. Invited Reviewer at Anais da Academia Brasileira de Ciências (2 reviews; Dec 2018).
9. Reviewer at Acta Physiologiae Plantarum (32 reviews; Feb 2014-current).
10. Reviewer at PLOS One (3 reviews; July-Oct 2014).
11. Reviewer at Australian Journal of Crop Science (4 reviews; Feb 2013-Dec 2013).
12. Reviewer at European Journal of Plant Pathology (4 reviews; Jan 2016 – current).
13. Invited Reviewer at MDPI Biomolecules (1 review; May 2017).
14. Invited Reviewer at MDPI Diversity (2 reviews; Mar 2017).
15. Invited Reviewer at MDPI Genes (1 review; Mar 2019).
16. Invited Reviewer at MDPI International Journal of Molecular Sciences (5 reviews; Sep 2017-current).
17. Invited Reviewer at MDPI ncRNA (1 review; Aug 2017).
18. Invited Reviewer at MDPI Plants (2 reviews; Dec 2017).
19. Invited Reviewer at Plant Knowledge Journal (1 review; Sep 2013).
20. Reviewer at Tropical Plant Pathology (1 review; Mar 2019).

## MENTORING AND TEACHING EXPERIENCE

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### M.Sc. laboratory classes and students:

- Aug 2019 – current: Shiwani Sapkota (UTIA – EPP). Project: Diversity of invasive callery pear (MS Thesis advisor).
- Aug 2019 – current: Trinity Hamm (UTIA – EPP). Project: chlorotyping of eastern Redbud (MS committee member).
- May 2004-June 2006: Teaching assistant for Modul Zellbiologie (Wet lab); RWTH-Aachen, Germany

### Rotation, MSc and PhD students:

- Jan 2019-current: Zaklina Pavlovic MSc (UTIA – EPP), Project: Molecular tracking of utility traits in dogwoods.
- Aug 2017-current: Meher Ony (UTIA – EPP). Project: population genetics of eastern Redbud.
- May-Aug 2008: Rachel Miller, BS, Michigan State University, Project: Analyses of pectin mutants.
- May-June 2018: Jayne A. Lample MSc (UT EEB); Project: Population genetics of *Chrysogonum* spp.

### • Undergraduate students and Research Assistants:

- Oct 2016-current: Logan C. Houston; Monil Mehta, Peyton Thomas, Evette Chavez, Clive Sarpong (University of Tennessee – Knoxville; undergrad student helpers); Project: Population genetics of woody ornamental plants.
- Oct 2010-Jan 2017: Marzena Czajka, Karolina Lelonkiewicz, Research Institute of Horticulture (Skierniewice, Poland; technical staff)
- Aug 2013: Krzysztof Zieliński, Małgorzata Wrzesińska (summer students)
- July 2012: Karolina Kusiak, Natalia Romanowska, Paulina Seliga (summer students)
- Aug 2011: Agnieszka Kołodziejczyk, Sandra Frączak (summer students); Project: Genotyping of tomato hybrid lines.
- Dec 2006-Oct 2009 Kyle Korolowicz, Cassidy Nguyen, (Michigan State University – East Lansing, MI; undergrad student helpers) Project: Analyses of *A. thaliana* pectin mutants.

## GRANTS AWARDED

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1. **2019** **\$4,646; PI**  
University of Tennessee, Student/Faculty Research Award (Fall 2019), for S. Sapkota and M. Nowicki: “Evaluation of genetic diversity of Asian callery pear, *Pyrus calleryana*”.
2. **2018** **\$1,500**  
University of Tennessee Institute of Agriculture travel grant (2018 ASHS Annual Conference July 31 - August 03, 2018 Washington DC, USA).
3. **2015-2018** **\$200,000; PI**  
Research Institute of Horticulture (Skierniewice, Poland; InHort). Funding body: Polish Ministry of Agriculture and Rural Development grant in Biological Progress 2015-2021 series. Ranked 3<sup>rd</sup> among several dozen applications (5 top-ranked proposals were awarded). PB96: Cytological and biochemical mechanisms of vegetable plant resistance in pathosystems tomato – *Phytophthora infestans* and cucumber – *Pseudoperonospora cubensis*.
4. **2015-2020** **\$400,000; Co-PI**  
InHort. Funding body: Polish Ministry of Agriculture and Rural Development grant in Multi-Annual Program 2015-2020 series. PW1.1: Generation of parental materials for F<sub>1</sub> hybrids of chosen vegetable crops, regarding quality, resistance, and nutritional traits.
5. **2015-2020** **\$300,000; Co-PI**  
InHort. Funding body: Polish Ministry of Agriculture and Rural Development grant in Biological Progress 2015-2021 series. PB104: Analyses of genetic and molecular mechanisms of onion (*Allium cepa* L.) tolerance to drought.
6. **2014-2020** **\$300,000; Co-PI**  
InHort. Funding body: Polish Ministry of Agriculture and Rural Development grant in Biological Progress 2015-2020 series. PB102: Genetic, physiological, and biochemical mechanisms of cucumber (*Cucumis sativus* L.) tolerance to drought.
7. **2014-2018** **\$270,000; Co-PI**

InHort. Funding body: Polish Ministry of Agriculture and Rural Development grant in Biological Progress 2015-2020 series. PB66: Studies on the development of molecular methods for identifying genes responsible for important traits of tomato.

8. **2013-2015** **\$20,000; PI**

InHort. Funding body: Internal grant of Research Institute of Horticulture (Polish Ministry of Science and Higher Education). InHort1.3.8: *Phytophthora infestans* and use thereof towards assessment of molecular diversity of isolates infecting tomato.

9. **2012** **\$1,000; PI**

InHort. Funding body: Research Institute of Horticulture (Skierniewice, Poland). Award for Young Scholars – mini-grant. Analyses of tomato gene expression changes upon *Phytophthora infestans* infection.

## QUALIFICATIONS AND TECHNICAL SKILLS

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### Expert in molecular biology and microbiology techniques

- Nucleic acids isolation and analyses: gDNA, RNA, plDNA (restriction, agarose/polyacrylamide/capillary gel electrophoresis, Southern blot), PCR techniques (standard, nested, touch-down, gradient, reverse transcription, [semi-]quantitative [SYBRGreen RealTime], LAMP), ligation, cloning (Gateway, TOPO, USER, restriction-driven), sequence analyses and operations, primer design and optimization.
- Plant suspension culture and transformation (initiation, handling, and analyses); Bacterial cell culture and transformation; Yeast culture and transformation (selection, expression analyses, and propagation).

### Expert in proteomic techniques

- Protein over-expression studies in bacteria, yeast, and plant host systems (stable and transient); Optimization and analyses ([2D]-SDS-PAGE, Native Blue PAGE with activity stains, western blot).
- Purification and characterization of soluble/hydrophobic (solubilization) proteins; HPLC; enzyme activity assays.
- Handling radio-chemicals (multi-step biosynthesis; labeling experiments and analyses of the extracts; TLC; enzyme activity assays).
- Complex carbohydrates analyses (Quantification; Monosaccharide composition via GC-MS; Oligosaccharide Fingerprinting by MALDI-TOF MS; Colorimetric assays).
- Cell Biology (Antibody labeling; (Immuno-)Fluorescence microscopy; Confocal microscopy; Live-cell imaging; Subcellular protein localization; Split-YFP cloning and *in-situ* scanning microscopy analyses).

### Expert in general and technical computer literacy

- Population genetics programs and data analyses (STRUCTURE; InStruct; PopTree; FigTree; Mesquite; SeaView; GenAlEx; Arlequin; Populations; SplitsTree; DIYABC; Ima2/3; packages for R/RStudio).
- Programming and data analyses in R (R/RStudio), Deducer, UNIX; MS Windows/ Linux; MS Office, Office Libre.
- Professional (biological) programs/ services/ databases (ClustalX, GeneDoc, CloneManager, Vector NTI, LaserGene suite, Geneious, Chromas, AIDA, eXpasy, ARAMEMNON, NCBI; PubMed, ISI/ CabAbstracts; Thomas Reuters – Web of Knowledge, EndNote).

### Continued Education

- August 3-7 2019: Bioinformatics Basics workshop: Teaching Bioinformatics to Undergraduates and Novices; 'Plant Health' APS Annual Meeting', Cleveland
- March 15-16, 2018: MG-RAST Workshop (UT Bioinformatics Resource Center)
- June 2017: RNAseq Data Analyses (University of Tennessee Institute of Agriculture workshop; dr. Meg Staton group).
- 2013-2014: Completed online courses (MOOC): "Writing in the Sciences" (StanfordX; Fall 2013); "Stat2.1x ÷ 2.3x" [Descriptive Statistics; Probability; Inference] (BerkleyX; Spring 2014); "MedStats" with R (StanfordX; Summer 2014); "The Analytics Edge" (15.071x MITx; Spring 2014); "PH525x Data Analysis for Genomics" (HarvardX; Summer 2014); "KIexplorx Explore Statistics with R" (Karolinska Institute, Autumn 2014); "UT.7.01x Foundations of Data Analysis" (UTAustinX, 2014).
- May-June 2006: Professional communication workshops attended: "Fit for the teaching", "Time management" (RWTH – Aachen, Germany).

### Advanced Communication Skills

- Polish – full written and oral proficiency.
- German – fluent (C1): written and oral proficiency.
- Japanese – basic: Intermediate-level courses taken at the Hiroshima University (Japan) and Michigan State University (USA).
- French – basic.
- Russian – basic.
- Spanish – communicative (B1).

## SCIENTIFIC COLLABORATIONS

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1. Herbaria (limited destructive sampling): University of Tennessee, Carnegie Museum of Natural History, USDA National Arboretum Herbarium, Harvard University Herbarium; Idaho State University, Kent University, Montana State University, University of Washington, Indiana University, University of Arizona, Illinois Natural History Survey.
2. Arboreta (samples of live plant specimens): University of New Jersey – Rutgers, Pennsylvania State University Morris Arboretum, GRIN ARS-USDA Arboretum, Morton Arboretum; Arnold Arboretum; U.S. National Arboretum.

3. David R. Coyle, Clemson University, Diversity of the invasive callery pear, *Pyrus calleryana*.
4. R. H. Houtkooper and F. M. Vaz, University of Amsterdam, The Netherlands, Characterization of molecular species of cardiolipin in *A. thaliana*.
5. H. P. Braun, Leibniz-Universitaet Hannover, Germany, *A. thaliana* suspension cell culture; 2D (Native-Blue) protein gel electrophoresis.
6. S. Offerman and C. Peterhaensel, RWTH-Aachen, Germany, *A. thaliana* RealTime-PCR [SYBRGreen].
7. F. Brandizzi, Michigan State University, USA, Tobacco transformation, transient protein expression studies, and live cell imaging (split-YFP, confocal microscopy).
8. L. Danhoff and K. Keegstra, Michigan State University, USA, *A. thaliana* crosses and analyses.
9. J. Landgraf, Michigan State University, USA, Sequence and RealTime-PCR (tomato) data analyses.
10. A. Ahad and G. Haughn, University of British Columbia, Canada, *A. thaliana* seed mucilage stain and analyses.
11. J. Śliwka and W. Marczewski, Plant Breeding and Acclimatization Institute, Młochów, Poland, Phenotypic and molecular analyses of *P. infestans* isolates.
12. M. R. Foolad, Pennsylvania State University, USA, Genetics of tomato late blight resistance.
13. M. Varbanova and R. Day, Michigan State University, USA, RNA-seq and molecular mechanisms conferring downy mildew resistance in cucumber.
14. M. Lichočka, Institute of Biochemistry and Biophysics, Polish Academy of Sciences (Laboratory of Confocal and Fluorescent Microscopy), Warsaw, Poland, confocal analyses of vegetable pathosystems.

## REFERENCES

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**Prof. Dr. Christoph Peterhaensel**  
(PhD Co-Advisor)  
Leibniz-Universitaet Hannover  
Institut fuer Botanik  
Herrenhaeuser StraÙe 2  
30419 Hannover, Germany  
cp@botanik.uni-hannover.de

**Prof. Dr. Stefan Malepszy**  
(MSc School Dean;  
Polish Academy of Sciences Co-Chair)  
Warsaw University of Life Sciences  
Department of Plant Genetics, Breeding, and  
Biotechnology  
Nowoursynowska Str. 166  
02-787 Warsaw, Poland  
stefan\_malepszy@sggw.pl

**Univ. Prof. Dr. Robert N. Trigiano**  
UTK – UTIA Professor  
Ornamental Plant Biotechnology and Plant  
Pathology  
374 Plant Biotechnology Building  
2505 E J.Chapman Dr  
Knoxville TN 36996, USA  
rtrigian@utk.edu