

Curriculum Vitae
Wade R. Roberts

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Research Interests

Ecological and evolutionary genomics; phylogenomics and comparative biology; evolutionary-developmental biology; genetics of flower development; species boundaries and hybridization; biogeography and conservation

Education and Training

- 2018 – present **Postdoctoral Fellow**
University of Arkansas
Advisor: Andrew J. Alverson
- 2018 **Ph.D., Molecular Plant Sciences, Washington State University**
Dissertation: “Evolutionary genomics of flower diversification in the magic flowers (*Achimenes*, Gesneriaceae)”
Advisor: Eric H. Roalson
- 2012 **B.S., Biology, Whitworth University, cum laude**
2012 **B.A., Art, Whitworth University, cum laude**
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Publications

In review

5. Kleinkopf JA, **Roberts WR**, Wagner WL, Roalson EH. Diversification of Hawaiian *Cyrtandra* (Gesneriaceae) under the influence of incomplete lineage sorting and hybridization.

In revision

4. **Roberts WR**, Roalson EH. Distinct genetic modules underlie the convergent evolution of diverse floral forms in *Achimenes* (Gesneriaceae).

Published

3. **Roberts WR**, Roalson EH. 2018. Phylogenomic analyses reveal extensive gene flow within the magic flowers (*Achimenes*). *American Journal of Botany* 105(4): 726-740. doi: 10.1002/ajb2.1058
2. **Roberts WR**, Roalson EH. 2017. Comparative transcriptome analyses of flower development in four species of *Achimenes* (Gesneriaceae). *BMC Genomics* 18(1): 240. doi: 10.1186/s12864-017-3623-8
1. Roalson EH, **Roberts WR**. 2016. Distinct processes drive diversification in different clades of Gesneriaceae. *Systematic Biology* 65(4): 662-684. doi: 10.1093/sysbio/syw012
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Grants and Awards

- 2016 **Doctoral Dissertation Improvement Grant**, National Science Foundation [DEB 1601003]
“Evolution of gene expression in floral diversification of Neotropical Gesneriaceae”
PI: Eric Roalson, Co-PI: Wade Roberts, \$19,323
- 2016 **Elvin McDonald Research Endowment Fund**, The Gesneriad Society
“Characterizing a red-to-blue flower color transition in *Achimenes* (Gesneriaceae)”
PI: Wade Roberts, \$1,750
- 2016 **Best Poster Presentation**, Inland Northwest Genomics Symposium
- 2015 **Travel Award** to Botany meeting, American Society of Plant Taxonomists, \$300
- 2012 **Global Plant Sciences Initiative Fellowship**, Washington State University
- 2011 **Synthetic Biology Research Experience (REU) Fellow**, National Science Foundation, North Carolina State University
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Presentations

Contributed talks

- 2018 "Gene co-expression network connectivity is an important determinant of selective constraint during flower diversification in the magic flowers (*Achimenes*, Gesneriaceae)", Botany meeting, Rochester, MN
- 2017 "Genomic evidence for gene flow between species of magic flowers (*Achimenes*, Gesneriaceae)", Evolution meeting, Portland, OR
- 2017 "Dissecting floral diversification in the magic flowers (*Achimenes*, Gesneriaceae)", School of Biological Sciences Graduate Student Symposium, WSU
- 2015 "Understanding flower diversification in *Achimenes* (Gesneriaceae) using a comparative transcriptomics approach", Botany meeting, Edmonton, AB

Invited departmental seminars

- 2017 "Evolutionary genomics in the magic flowers (*Achimenes*, Gesneriaceae)", Washington State University
- 2016 "Floral diversification in Gesneriaceae: macroevolutionary and genomics approaches", Washington State University

Poster presentations

- 2018 "Phylogenomic analyses reveal extensive gene flow within the magic flowers (*Achimenes*)", Botany meeting, Rochester, MN
- 2018 "Phylogenomic analyses reveal extensive gene flow within the magic flowers (*Achimenes*)", Academic Showcase, Washington State University, Pullman, WA
- 2017 "Exploring phylogenetic relationships in *Achimenes* (Gesneriaceae) using transcriptome sequencing", School of Biological Sciences Graduate Student Symposium, Moscow ID
- 2017 "Exploring phylogenetic relationships in *Achimenes* (Gesneriaceae) using transcriptome sequencing", Plant Sciences Retreat, Washington State University, Pullman, WA
- 2016 "Using comparative transcriptomics to understand flower diversification: an example from *Achimenes* (Gesneriaceae)", Inland Northwest Genomics Research Symposium, Moscow, ID
- 2016 "Using comparative transcriptomics to understand flower diversification: an example from *Achimenes* (Gesneriaceae)", Academic Showcase, Washington State University, Pullman, WA
- 2016 "Using comparative transcriptomics to understand flower diversification: an example from *Achimenes* (Gesneriaceae)", Plant Sciences Retreat, Washington State University, Pullman, WA
- 2015 "Understanding flower diversification in *Achimenes* (Gesneriaceae) using a comparative transcriptomics approach", Pan-Am Evo-Devo inaugural meeting, Berkeley, CA
- 2015 "Geographic processes drive diversification in different clades of Gesneriaceae", School of Biological Sciences Graduate Student Symposium, Moscow, ID
- 2015 "Geographic processes drive diversification in different clades of Gesneriaceae", Plant Sciences Retreat, Washington State University, Pullman, WA
- 2011 "Cloning and evolutionary analysis of *SEPALLATA3* genes in dogwoods—deciphering the genetic links to bract petaloidy", North Carolina State University Undergraduate Summer Research Symposium, Raleigh, NC

Teaching

- 2018 Guest Lecturer, Biol 332 Systematic Botany, Washington State University
- 2013 – 2018 Teaching Assistant, Washington State University
Biol 332 Systematic Botany, 3 semesters
Biol 120 Introductory Botany, 3 semesters
Biol 106 Introductory Biology: Organismal Biology, 5 semesters
- 2012 Supplemental Instructor, Whitworth University
Biol 140 General Biology I: Organismal Biology, 1 semester
- 2010 – 2012 Teaching Assistant, Whitworth University
Biol 363 Genetics, 1 semester
Biol 153 Plant Biology, 2 semesters

Service and Outreach

Journal Referee *International Journal of Genomics, PhytoKeys, Plant Growth Development*

- 2018 Volunteer Botanist, Palouse Conservation District
- 2016 – 2018 Faculty Representative, Molecular Plant Sciences Graduate Student Organization
- 2017 Co-Lead Organizer, Plant Science Day, Washington State University

2014 – 2016 Co-Lead, Palouse Discovery Science Center Committee
2016 Exhibit Leader, Plant Science Day
2015 Native Plant Guide, Palouse Outdoor Science Day
2014 – 2015 Greenhouse Tour Guide, Biology Open House

Additional Experience

2016 – 2018 Fieldwork and Floristics, Hudson Biological Reserve, Washington State University
2010 – 2012 Greenhouse worker, Whitworth University
2011 Undergraduate Research Assistant, Whitworth University
2011 Synthetic Biology Research Experience (NSF REU), North Carolina State University

Training

2017 Software Carpentry Workshop, Center for Environmental Research, Education and Outreach, Washington State University
2017 Parallel Programming Workshop, Center for Environmental Research, Education and Outreach, Washington State University

Professional Society Membership

2012 – present Botanical Society of America
2012 – present The Gesneriad Society
2014 – present Society for the Study of Evolution
2013 – 2017 American Society of Plant Taxonomists
2014 – 2016 Pan-American Society for Evolutionary Developmental Biology

Mentoring

Graduates

Joseph Kleinkopf, M.S., 2016 – 2018
Nan Zhang, visiting scholar, 2017 – 2018
Raimundo Luciano Saores Neto, visiting Ph.D., 2017

Undergraduates

Mara Huang, WSU, Summer 2017
Connor McLeod, WSU, Summer 2017
Tia Prudholm, WSU, Summer 2017
Bethany Tegt, WSU, Summer 2017

Honorific Names

'Wade Riley', M. Roberts, Tall Bearded Iris, The American Iris Society, 2007
