

Zhian N. Kamvar

Curriculum Vitae

Education

- 2011–Present **Ph. D. Botany and Plant Pathology**, *Oregon State University*, Corvallis, OR.
Expected 2017
- 2003–2007 **Bachelor of Science Biology**, *Truman State University*, Kirksville, MO.
Minor: Chemistry

Experience

Research

- 2012–Present **Graduate Research Assistant**, *Grünwald Lab*, Corvallis, OR.
Utilizing population genomic tools to analyze patterns of differentiation in populations of the plant pathogen *Phytophthora syringae* in Oregon Nurseries.

Details:

- Designed simulation analyses for populations of partially clonal diploids
- Authored R package for genetic analysis with mixed (sexual/clonal) reproduction (<https://github.com/grunwaldlab/poppr>)
- Isolated, maintained, and extracted DNA from cultures of *Phytophthora syringae*
- **Research Advisor: Dr. Niklaus J. Grünwald**

- Fall/Winter **Graduate Research Assistant**, *Jaiswal Lab*, Corvallis, OR.

- 2011 Engaged in various research projects combining bioinformatic-based text mining of databases, wet lab, and greenhouse work. **Research Advisor: Dr. Pankaj Jaiswal**

- 2006–2007 **Undergraduate Research Assistant**, *Biology Discipline*, Truman State University, Kirksville, MO.

As part of a team of undergraduate students, contributed to the annotation of over 2,000 maize genes determined by microarray hybridization analysis to be involved in maize shoot apical meristem functional and leaf primordial formation.

Details:

- Became proficient in performing and interpreting BLAST and InterProScan searches on sequences, identifying and assessing pertinent primary literature, and using a variety of databases to determine the putative function of maize genes.
- Collaborated with other researchers on the same project.
- **Research Mentors: Drs. Brent Buckner and Diane Janick-Buckner**

Teaching

Spring 2012 **Graduate Teaching Assistant, Biology Dept.**, OSU, Corvallis, OR.

Appointed as teaching assistant for undergraduate intro biology course for science majors.

Details:

- Developed introductory presentations for quizzes and labs
- Proctored all tests and quizzes
- Graded assignments and provided students with timely feedback
- Held office hours once a week

2009–2011 **English Instructor, Herald NIE**, Joong-Dong, Daegu, South Korea.

Taught basic to intermediate English to Korean students ranging from elementary to middle school with an emphasis on task-based learning techniques.

Details:

- Took charge of 18 different classes per week
- Monitored language acquisition of each student via monthly evaluations based on interviews and speaking tests
- Wrote tests, assigned and graded homework pertinent to the level of the students. Initiated and mediated interesting topics for discussion courses

2008–2009 **English Instructor, GnB English**, Sangin-2-Dong, Daegu, South Korea.

Taught basic to intermediate English to Korean students ranging from elementary to middle school in tandem with one of the nine Korean English teachers at the academy.

Details:

- Assisted with at least 30 different classes per week
- Monitored language acquisition of students throughout the year
- Gained the ability to be prepared for sudden changes in curriculum and classroom size.

Fall Semester, 2006/07 **Undergraduate Teaching Assistant, Biology Discipline**, Truman State University, Kirksville, MO.

Appointed as teaching assistant for undergraduate cell biology course.

Details:

- Helped prepare instructional labs for students of Dr. Diane Janick-Buckner's Cell Biology Students
- Responded to student lab questions and referred to professor questions outside of my expertise/knowledge base

Radio

Summer 2005 **Summer Station Manager, KTRM FM**, Truman State University, Kirksville, MO.

I was the primary authority on personnel decisions, after input from team members. I organized the weekly schedule of DJs, determined the salaries of station directors and balanced a budget.

2004–2007 **Radio Announcer, KTRM FM**, Truman State University, Kirksville, MO.

I ensured successful operation of the transmitter, covered extra scheduled shifts to ensure KTRM stayed on air, and selected appropriate playlists for listeners.

Awards

2014 Most Innovative Program – Intercollegiate Broadcasting System

Computer skills

Basic BASH, Inkscape
Intermediate PYTHON, PERL, C, L^AT_EX, OpenOffice, Linux, OSX
Advanced R

Lab Skills

Sterile Technique, DNA extraction, GBS library prep

Presentations

Talks

- 2013/11/21 **Ph.D. Proposal Seminar**, *Department of Botany and Plant Pathology*, Oregon State University, Corvallis, OR.
Determination of pattern and process in the evolution of the plant pathogen *Phytophthora syringae*
- 2013/03/02 **Conference Presentation**, *Biology Graduate Student Symposium*, Hatfield Marine Science Center, Newport, OR.
Poppr: An R package for genetic analysis of populations with mixed (clonal/sexual) reproduction

Posters

- 2013/03/12-17 **Fungal Genetics Conference**, *Genetics Society of America*, Asilomar, CA.
Poppr: An R package for genetic analysis of populations with mixed (clonal/sexual) reproduction
- 2012/09/21 **OSU Fall CGRB Conference**, *Oregon State University*, Corvallis, OR.
Poppr: An R package for population genetic analysis
- 2007/04/03 **TSU Student Research Conference**, *Truman State University*, Kirksville, MO.
Annotation and Analysis of Global Gene Expression Studies: Creation of a Maize Shoot Apical Meristem Expression Database
- 2007/03/22-25 **Maize Genetics Conference**, St. Charles, IL.
Annotation and Analysis of Global Gene Expression Studies: Creation of a Maize Shoot Apical Meristem Expression Database

Languages

English **Mother tongue**
Korean **Intermediate** *Can manage basic conversation*

Extracurricular

- 2012–Present **Radio Co-host**, *Inspiration Dissemination*, KBVR, Corvallis.
Co-created, produced, and hosted a weekly radio show interviewing graduate students in STEM fields about their research and experiences in graduate school.
- Details:
- Provided opportunity for graduate students a unique form of outreach.
 - Facilitated education of media students by providing audio editing opportunities post producing recorded episodes.
 - Actively worked with graduate students to improve their science communication skills.
- 2012–Present **Treasurer**, *Graduate Student Association*, Department of Botany and Plant Pathology, Oregon State University.
Balanced the budget, served on bi-annual travel awards committee, helped organize and coordinate group social functions.
- 2012–Present **Active Contributor**, *Bioinformatics Users Group*, Oregon State University.
Contributed presentations and discussions relevant to use of bioinformatics tools.

Publications

- **Kamvar ZN**, Tabima JF, Grünwald NJ. (2014) *Poppr*: an R package for genetic analysis of populations with clonal, partially clonal, and/or sexual reproduction. *PeerJ* **2**: e281 <http://dx.doi.org/10.7717/peerj.281>
- Buckner B, Beck J, Browning, K, Hoxha E, Grantham L, **Kamvar Z**, Lough A, Nikolova O, and Schnable PS, Scanlon MJ, and Janick-Buckner D. (2007) Involving undergraduates in the annotation and analysis of global gene expression studies: creation of a maize shoot apical meristem expression database. *Genetics* **176**: 741-747