

CURRICULUM VITAE

Yusheng Wu

Professor of Biology
University of the Southwest
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Education

Ph.D. in Biological Sciences, South Dakota State University (SDSU), Brookings, South Dakota 2004 – 2009
Title: Genetic analyses of amylose content in maize (*Zea mays* L.)
Advisor: Dr. Donald Auger
Funding source: Germplasm Enhancement of Maize Program of United States Department of Agriculture
M.S. in Agronomy, Beijing Agricultural University, Beijing, China 1985 – 1988
B.S. in Agronomy, Beijing Agricultural University, Beijing, China 1981 – 1985

Employment

Professor of Biology, University of the Southwest (USW) Aug. 2019 – present
Assistant Professor of Biology, University of the Southwest Aug. 2010 – Jul. 2019
Post-Doctoral Research Associate, SDSU Jul. 2009 – Jul. 2010
Graduate Teaching Assistant and Research Assistant, SDSU 2006 – Jun. 2009
Graduate Research Assistant, SDSU 2004 – 2006
Associate Professor and graduate faculty at master degree level in crop genetics and breeding, Yunnan Agricultural University (YAU) Kunming Yunnan, China 1996 – 2003
Lecturer in crop genetics and breeding, YAU 1991 – 1996
Assistant Professor in crop genetics and breeding, YAU 1988 – 1991

Teaching and Design Experience

Current

Traditional and Online Professor – USW – Hobbs, NM: 2010-

Undergraduate:

General Biology I & II & Lab, Principles of Chemistry I & II & Lab, Physical Geology and Lab, Statistics, Organic Chemistry I & II & Lab, Genetics & Lab, Cell Biology & Lab, Biochemistry and Lab, Physics I & II & Lab, Intro Biology & Lab, Environmental Science & Lab

Graduate:

Molecular Genetics, Advanced Biochemistry, Advanced Biostatistics, Advanced Cell Biology, Research Methods

Past

Graduate Teaching Assistant – SDSU – Brookings, SD: 2006-2009

Undergraduate:

Genetics, Cellular and Organismal Biology Laboratory

Associate Professor, Lecture & Assistant Professor – YAU – Kunming, China: 1988 – 2003

Graduate:

Advanced Crop Breeding (Mandarin Chinese)

Undergraduate:

Introductory Plant Genetic Engineering, Introductory Statistics, Crop Breeding & Lab (Mandarin Chinese)

Personnel Supervisory Experience

Coordinator of MS biology program USW Apr 2020 – present

Director of STEM undergraduate research USW Jun 2018 – present

Coordinator of undergraduate biology program: advising students in Biology and PreMed degree plans, arranging the courses each semester and developing the biology curriculum, USW Aug. 2015 – May 2018

One undergraduate student for the program of Research Experiment for Undergraduate sponsored by National Science Foundation Project: Genetically engineering cyanobacteria to produce ethanol, SDSU Jun. – Aug. 2010

Four undergraduate students for their field experiments and nine undergraduate students for their lab experiments, Project: Genetic analyses of amylose content in maize, SDSU 2005 – 2008

One graduate student, Minhong Chen; Project: Mesophyll protoplast culture and genotypic identification using RAPD markers in tobacco. In collaboration with Dr. Xuejun Chen at Yunnan Tobacco Research Institute, Kunming Yunnan, China 2000 – 2003

Language Skills

Fluent in American English and Mandarin Chinese

Research Project Experience/Management

Liaison for Fostering Retention in STEM Disciplines at Minority Serving Institutions. (NSF funded research study, Host: Tuskegee University) 2016 – 2019

Prototype mineral dust advisories for communities in New Mexico and Arizona 2010 – 2011

Genetically engineering cyanobacteria to produce urea 2009 – 2010

Genetic analyses of amylose content in maize 2004 – 2009

Genetic diversity of waxy maize germplasm in Yunnan (project leader: fund-raising and project management) 2001 – 2002

Utilization of exotic maize germplasm in Yunnan (project leader: fund-raising and project management) 2001 – 2004

DNA fingerprinting of hybrids and inbred lines in maize using RAPD markers (project leader: fund-raising and project management) 2000 – 2003

Selection of elite inbred lines and utilization of heterosis in maize in Yunnan (project leader: fund-raising and project management) 1993 – 1995

Selection of maize inbred lines for high yield and disease resistance in Yunnan (project leader: fund-raising and project management) 1991 – 1992

Selected Publications (“*” indicates full article assembled and printed in English only.
Remaining articles were printed in Chinese with an English abstract.)

1. *Unique Stock, Heidi Stringfellow, **Yusheng Wu** 2021 The study on genetic patterns of eye color and wing presence in *Drosophila melanogaster* Southwest Journal of Arts and Sciences 1(1): 38-41
2. ***Yusheng Wu**, Unique Stock, Joshua Garcia-Matta, Isabel Chavez 2020 A study on inheritance patterns on wing shape, body color and eye color in *Drosophila melanogaster* New Mexico Journal of Science 54(1): 57-66
3. *Meghan Morey, Heidi Stringfellow, Chantley Wilson, **Yusheng Wu** 2019 The analysis of the water quality for different samples in Hobbs New Mexico New Mexico Journal of Science 53(1): 4-10
4. ***Wu Y**, R Huang, D Auger, M Campbell and Y Yen 2015. A high-amylose modifier locus revealed by analysis of a homozygous *amylose-extender* mapping population. Crop Science 55:1163-1169
5. *Jiang H, Campbell M, **Wu Y**, Du S, Srichuwang S, Jane L 2015 Dosage effect of high-amylose modifier gene(s) on the starch structure of maize amylose-extender mutant. Journal of Agricultural and Food Chemistry 63:433-439
6. *Jiang H, Acevedo D, Schrenker D, Jane JL, Campbell M, **Wu Y** 2010 Variations in starch chemical and physical properties with a generation means analysis study using amylo maize V and amylo maize VII parents. Journal of Agricultural and Food Chemistry 58(9):5633-5639
7. ***Wu Y**, Campbell M, Yen Y, Wicks Z, Ibrahim AMH 2009 Genetic analysis of high amylose content in maize (*Zea mays* L.) using triploid endosperm model. Euphytica 166:155-164
8. **Wu Y**, Zheng Y, Sun R 2004 Genetic diversity of waxy corn and popcorn landraces in Yunnan by SSR markers. Acta Agronomica Sinica 30(1):36-42
9. **Wu Y**, Li J, Gu H 2003 The study on combining ability and heterosis of some corn germplasm in Yunnan. Journal of Yunnan Agricultural University 18(4):407-412
10. **Wu Y**, Yang W, Zheng Y 2003 Establishment of fingerprinting for three hybrids and their parents by SSR markers. Acta Agronomica Sinica 29(4):496-500
11. **Wu Y**, Li B, Gu H 2003 The Analysis of variety stability by AMMI model in sweet corn. Journal of Huazhong Agricultural University 22(1):4-8
12. **Wu Y**, Cheng Z, Xu Y 2002 Establishment of fingerprinting for different types of maize by RAPD. Seed (6):11-14
13. Rong T, **Wu Y**, Li C 2001 Agricultural experiments and statistical methods (2nd edition) Sichuan University Press 77-88

Poster Presentations

A study on inheritance patterns on wing shape, body color and eye color in *Drosophila melanogaster* Unique Stock, Joshua Garcia-Matta, Isabel Chavez, **Yusheng Wu** New Mexico Academy of Science Research Symposium (Virtual) Nov. 9, 2020

The study on genetic patterns of eye color and wing presence in *Drosophila melanogaster* Unique Stock, Heidi Stringfellow, **Yusheng Wu** New Mexico Academy of Science Research Symposium Nov. 1, 2019

The analysis of the water quality for different samples in Hobbs New Mexico Meghan Morey, Heidi Stringfellow, Chantley Wilson, **Yusheng Wu** New Mexico Academy of Science Research Symposium Nov. 1, 2019

QTL mapping for amylose content in maize (*Zea mays* L.) using SSR markers **Yusheng Wu**, Yang Yen, Mark Campbell, Zeno Wicks III, Donald Auger 51th Maize Genetics Conference Pheasant Run St. Charles, IL Mar. 12 – 15 2009

QTL mapping for high amylose starch content in maize (*Zea mays* L.) **Yusheng Wu**, Yang Yen, Mark Campbell, Zeno Wicks III, Donald Auger 50th Maize Genetics Conference Washington DC Feb. 27 – Mar. 2 2008

Generation means analysis for amylose content in Amylomaize VII in maize (*Zea mays* L.) **Yusheng Wu**, Mark Campbell, Donald Auger, Dawn Gustafson, Zeno Wicks III 49th Maize Genetics Conference Pheasant Run St. Charles, IL Mar. 22 – 25 2007

Amylose content in amylo maize VII varied in different generations and at different locations **Yusheng Wu**, Mark Campbell, Yang Yen, Dawn Gustafson, Zeno Wicks III Crop Science Society of America Annual Meetings Indianapolis, IN Nov. 12 – 16 2006

Research Methods/Techniques/Computer Software Experience

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| Nucleic acid extraction and purification | Colorimetry determination using spectrophotometer |
| Polymerase chain reaction | Near infrared transmittance spectroscopy |
| Electrophoresis | Differential scanning calorimetry |
| Bacterial culture preparations | Statistical Analysis System programming language |
| Antibiotic plate preparations | MapManager QTX |
| Plasmid isolation and construction | Windows QTL Cartographer 2.5 |
| Heat shock transformation | Diploid genetic modeling and triploid genetic modeling |
| Electroporation transformation | Word, Excel, and PowerPoint |
| Blue-white colony screening method | Blackboard 9.1 |
| Bacteria conjugation transformation | |
| Site-directed mutation | |
| Wet milling starch extraction | |
| Starch purification | |

Workshop and Conference

Virtual workshop: Bridging Research and Education Workshop (BREW) by Genetics Society of America Jun. 7 2021

Virtual Conference for Campus Safety, Health, and Environmental Management Association (CSHEMA) Jul 14-15 2020

Virtual workshop: Bridging Research and Education Workshop (BREW) by Genetics Society of America Jul. 13 2020

Virtual workshop: Cultivating Communities: Making Sense of Host-Microbiome Interactions Through the Lens of Genetics The Allied Genetics Conference Jun. 18 2020

Virtual workshop: Single Cell Approaches in Animal Development The Allied Genetics Conference Jun. 16 2020

Virtual workshop: Genetic Puzzles The Allied Genetics Conference Jun. 4 2020

Virtual workshop: Chemoreception, Physiology, and Social Behavior: A Genetic Perspective The Allied Genetics Conference May 21 2020

Virtual presentation: The study on genetic patterns of eye color and wing presence in *Drosophila melanogaster* The Allied Genetics Conference 2020 USA (Online) Apr. 26 2020
New Mexico Academy of Science Research Symposium Albuquerque, NM Nov. 1 2019
New Mexico Academy of Science Research Symposium Albuquerque, NM Oct. 27 2018
Workshop for Fostering Retention in STEM Disciplines at Minority Serving Institutions
Tuskegee University Tuskegee, AL May 23-26 2018
Webinar: 2018 Annual MCAT Opening Webinar for Pre-health Advisors 2018
Webinar: Why Isn't Anyone Talking to Me? Online Course Discussion Do's, Don'ts, and Best Practices for Faculty Oct. 2014
Webinar: Instructor Training for LockDown Browser and Respondus Monitor: Prevent Cheating During Exams May 2014
Webinar: MCAT2015 Q-UPP May 2014
Webinar: The Four E's of Effective Learning: Teaching Tips for Helping Students Become More Effective Learners Apr. 2014
Webinar: Elevate Thinking with MindTap for Biology Mar. 2014
Webinar: Rethinking Probability in the Introductory Statistics Course Feb. 2014
The Meeting of West Texas Chapter of Health Physicist Society at USW Sep. 2011, Dec. 2012 and Sep. 2013
The Meetings of Southeastern New Mexico Genealogical Society in Hobbs, NM 2012-present
Teleconference: Mastering Biology Demonstration May 2012
Webinar: LabSkills for General and Organic Chemistry Mar. 2012
Quality Matters (QM) Rubric Workshop for Online Course Design and Evaluation, Certificate of Applying the QM Rubric Dec. 2011
Online Course Design and Development Workshop at USW Jun. 2011

Awards and Certificates

Outstanding Faculty Member for the 2017-2018 academic year, USW 2018
Certificate of Completion of the National Institutes of Health web-based training course "Protecting Human Research Participants." 2018
Completion Report of Collaborative Institutional Training Initiative Program "Human Subjects Research – BASIC" 2016
Certificate of Appreciation in recognition of valuable contributions to Department of Arts and Sciences USW 2013
Certificate of Completion of Sexual Harassment Prevention – Employees provided online by in2vate, llc. 2013
Certificate of Completion of Applying the QM Rubric - FY12 (APPQMR) 2012
Teaching Assistant Award for Outstanding Performance in Biology & Microbiology Department, SDSU 2008

Academic Membership

EnergyPlex Toastmaster 2015
Genetics Society of America 2012
Southeastern New Mexico Genealogical Society 2012 – 2014
American Institute of Biological Sciences 2011 – 2012

West Texas Chapter of the Health Physics Society 2010 – 2014
Crop Science Society of America 2006 – 2009
China Agronomy Association 1990 – 2003

Other Experience

Editor: Southwest Journal of Arts and Sciences USW 2019-present

A member and the chair of Institutional Review Board USW 2019-present

A member of Professional Development Committee at College of Arts and Sciences USW 2018-present

A member of Recruiting Committee at College of Arts and Sciences USW 2018-2020

A member of hospitality team for Jack Maddox Distinguished Lecture Series speaker Dr.

Michio Kaku Hobbs, NM October 2016

Initiating the pre-med internship program at USW with Nor-Lea General Hospital Lovington NM April 2015

Volunteer judge for Science Fair in elementary school in Lovington, NM Feb. 2015

Initiating the pre-dental mentorship program at USW with Pre-Dental Society of New Mexico May 2012

Volunteer judge for the regional Science Fair in middle school in Hobbs, NM Jan. and Nov. 2012

Revising Biology Degree Plans with Emphases in Pre-Medicine, Pre-Dental, Pre-Nursing, Pre-Optometry, Pre-Veterinary, Pre-Pharmacy, Energy & Environmental Science, and Education Degree Plans Dec. 2011

Part-time instructor in chemistry at New Mexico Junior College in Hobbs, NM Jun. 2011

Volunteer Judge for New Mexico High School Debate Tournament at USW Mar. 2011

Working in winter nursery to propagate maize mutants in Hawaii Jan. 2009

Volunteer judge for the regional Science Fair in middle school and high school in Brookings and Hayti, South Dakota and Kirksville, Missouri 2007 – 2008

Senior visiting scholar, National Key Laboratory of Crop Genetic Improvement, Huazhong Agricultural University, Wuhan, Hubei China Project: Genetic diversity of waxy maize germplasm in Yunnan China Funding source: Ministry of Education of the People's Republic of China 2001 – 2002

A reviewer for Journal of Yunnan Agricultural University, China 1999 – 2002