Tanner A. Robison

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Education

Utah State University, Logan, UT
B.S. in Biology 2012-2017, Minor in Chemistry with Honors
M.S. in Biology August 2017-present

Awards and Honors

USU College of Science Dean's List - Spring 2016

For maintaining over 3.5 GPA while taking over 15 credits

Richard J. and Marion A. Shaw Scholarship - 2016-2017

Merit based undergraduate scholarship to those interested in plant biology

Undergraduate Research and Creative Opportunity Grant Recipient - Spring 2017

Award given to undergraduates to fund research proposal

Utah State University Undergraduate Research Scholar - Summer 2017

For having over 2 years of undergraduate research experience

Joseph E. Greaves Endowed Scholarship - Summer 2018

Scholarship given to outstanding graduate students at Utah State University

Botanical Society of America Graduate Student Travel Award - Summer 2018

Travel award given to presenting students at the annual Botany conference

Research Experience

Nischwitz Lab, Utah State University - *Undergraduate Researcher*
April 2015 - August 2016

Plant pathology

Basic molecular techniques (PCR, gel electrophoresis, ELISA, DNA/ RNA extraction)

Independent research project investigating tomato seed treatments against Tobacco Mosaic Virus

Wolf Lab, Utah State University - *Student Researcher*
August 2016 - Present

Organellar genome assembly and annotation

Phylogenomic analysis of plastome variation

Target sequence capture assembly and analysis

Orthogroup identification and discovery

Developing and optimizing laboratory growth conditions for hornworts

Kelchner Lab, Utah State University *- Genome Informatician*

May 2017- August 2017

Genome annotation
Encoding length variation

Teaching Experience

Undergraduate Teaching Fellow for Principles of Genetics, Utah State University
August 2015 - December 2016 (3 semesters)
Instructed and aided students with homework
Graduate Teaching Assistant for Plant Physiology, Utah State University
August 2017 - Present
Led lab discussions
Oversaw lab setup and cleanup
Graded lab assignments
Graduate Teaching Assistant Principles of Genetics, Utah State University
August 2017-Present
Instructed and aided students with homework
Graded problem sets and tests
Lectured when instructor was sick

Technical Skills

Molecular Techniques:
PCR, DNA extraction, RNA extraction, gel electrophoresis and ELISA
Programming Languages:
R and python
Bioinformatic Techniques:
Genome assembly, genome annotation, paralog analysis and orthogroup identification

Reviewer for Journals

Bioinformatics

Journal of Plant Research

Publications

P.G. Wolf, **T.A. Robison**, M.G. Johnson, M.A. Sundue, C.J. Rothfels. 2018. Target Sequence Capture of Nuclear-Encoded Genes for Phylogenetic Analysis in Ferns. Applications in Plant Sciences.

T.A. Robison, A.L. Grusz, B. Fauskee, J.P. Mower, K Sosa, P.G. Wolf, E. Schuettpelz. 2018. Mobile elements shape plastome evolution in ferns. Genome Biology and Evolution.

Fay-Wei Li, Paul Brouwer, Lorenzo Carretero-Paulet, Shifeng Cheng, Jan de Vries, Pierre-Marc Delaux, Ariana Eily, Nils Koppers, Li-Yaung Kuo, Zheng Li, Mathew Simenc, Ian Small, Eric Wafula, Stephany Angarita, Michael S. Barker, Andrea Bräutigam, Claude dePamphilis, Sven Gould, Prashant S. Hosmani, Yao-Moan Huang, Bruno Huettel, Yoichiro Kato, Xin Liu, Steven Maere, Rose McDowell, Lukas A. Mueller, Klaas G. J. Nierop, Stefan A. Rensing, **Tanner Robison**, Carl J. Rothfels, Erin M. Sigel, Yue Song, Prakash R. Timilsena, Yves Van de Peer, Hongli Wang, Per K. I. Wilhelmsson, Paul G. Wolf, Xun Xu, Joshua P. Der, Henriette Schluepmann, Gane K.-S. Wong & Kathleen M. Pryer. 2018. Fern genomes elucidate land plant evolution and cyanobacterial symbioses. Nature Plants.

T.A. Robison. P.G. Wolf. 2018. ReFernment: an R package for annotating RNA editing in plastid genomes. *In preparation for Applications in Plant Science.*

Presentations

T.A. Robison, B. Fauskee, J.P. Mower, M.R. McKain, P.G. Wolf, E. Schuettpelz,A.L. Grusz. 2018. Mobile elements shape plastome evolution in ferns. Botany Conference.

T.A. Robison and Paul G. Wolf. 2017. Extreme Makeover: Fern Edition. Utah State University Department of Biology Undergraduate Research Symposium

T.A. Robison and C. Nischwitz. 2016. Effectiveness of Seed Treatments in Reducing TMV Infection. Utah State University Department of Biology Undergraduate Research Symposium.