CURRICULUM VITA

ROBERT W. ROBERSON

Arizona State University
School of Life Sciences
Honors Faculty
Tempe, AZ 85287
Tel: 480-457-9831
E-mail: Robert.Roberson@asu.edu

February 2025

EDUCATION

B.S. Stephen F. Austin University, Nacogdoches, TX; Biology
M.S. Stephen F. Austin University, Nacogdoches, TX; Dr. Charles W. Mims, Advisor; Biology
Ph.D. University of Georgia, Athens, GA; Dr. Melvin S. Fuller, Advisor; Plant Sciences

POSITIONS HELD

1996 – Present. Associate Professor (tenured), School of Life Sciences, Arizona State University, Tempe, AZ
1989 – 1995. Assistant Professor of Botany/Plant Biology and Supervisor of Biological Electron Microscopy Facility, Plant Biology, Arizona State University, Tempe, AZ
1985 – 1989. Electron Microscopy Technician, University of Georgia, Athens, GA
1983 – 1985. Electron Microscopy Technician, Medical School of Georgia, Augusta, GA

RESEARCH INTERESTS

- Fungal Cell Biology / Bioimaging
- Cellular mechanisms of polarized cell growth in fungi; roles of the actin and microtubule cytoskeletons
- Diversity in cellular organization and evolution in the Fungi

RESEARCH GRANTS

PREVIOUS GRANT SUPPORT

2019 – 2020. ASU: Biomimicry Seed Grant Award. 'Dendritic topology in fungal hyphae: applications in engineering.' PI: Michael Kozicki, Co-PI: Robert W. Roberson, Consultant: Stephani Dowda DeMer. $10,000. Start Date: August 1, 2019 (12 months). Biomimicry is typically defined as the imitation of natural models, systems, and elements to solve societal problems. In mining natural solutions for the benefit of society, it would make a great deal of sense to consider those on which highly

successful natural systems are totally dependent, as this would suggest that such solutions are of special significance. Dendrites readily fall into this category as they are critical to a wide-range of natural systems, including the growth of hyphae in certain fungi that are amongst the most accomplished colonizers of the planet. We intend to study the growth of fungal hyphae and analogous systems and learn how to apply this successful topology to the high efficiency transport of energy and information in engineered systems, potentially increasing the efficiency of solar cells and electric power distribution and increasing the speed of computer memory and image analysis.

2015 - 2019. NSF-DEB. 'Collaborative Research: The Zygomycetes Genealogy of Life (ZyGoLife) - the conundrum of Kingdom Fungi' (DEB-1441728). PI RW Roberson. $468,743. Start date: January 1, 2015. The Conundrum of Kingdom Fungi Zygomycetes are an ancient lineage of the Mycota. They include plant symbionts, animal and human pathogens, and decomposers of a wide variety of organic compounds. This fungal group were among the first terrestrial organisms and facilitated the origin of land plants. They represent one of the earliest origins of multicellularity and the filamentous body plan and polar cell growth that characterize most species of fungi. Despite these critical ecological roles and morphological innovations, and importance to human civilization, little is understood about their evolutionary relationships. ZyGoLife will resolve the evolutionary relationships through integration of numerous types of data including genome sequencing and analyses, discovery and description of zygomycete fossils, development of enhanced tools for detecting zygomycetes in the environment, and elucidation of novel morphological characteristics through light and electron microscopy. In addition, the project will develop educational resources for the general public for this important but poorly known group of Kingdom

2015 - 2016. NSF-DBI Major Research Instrumentation. 'Acquisition of a Cryo-Electron Microscope for Southwest Regional Center.' PI J Spence, Co-PIs RW Roberson and others. $4.0 M. Start date: August 1, 2015. Acquisition of a transmission cryo-electron microscope (cryo-EM) to be integrated into the Southwestern Center for Aberration-corrected Electron Microscopy (EM) at Arizona State University, to support the structural and cell biology communities of the Southwestern US, a region poorly served by cryo-EM facilities.

2015. Western Alliance to Expand Student Opportunities: 'Studies in Zygomycete Fungi: Growth and Phylogeny.' PI R.W. Roberson. $1,600.

2010 - 2013. Department of Energy's (DOE's) Advanced Research Projects Agency-Energy (ARPA-E): 'Cyanobacteria Designed for Solar-Powered Highly Efficient Production of Biofuels'. PI Wim Vermaas, Co-PIs RW Roberson and others. $5.2 M. The purpose of this work is to develop an innovative platform for producing renewable, green energy that is cost-effective, carbon-neutral, and does not divert high-value land from food or feed production. The proposed effort will utilize the photosynthetic cyanobacterium *Synechocystis* sp. PCC 6803 for metabolic engineering to efficiently convert solar energy to high-energy fuels such as biodiesel.

2007 - 2013. NSF-Directorate for Biological Sciences: ‘Collaborative Research: Assembling the Fungal Tree of Life: Resolving the Evolutionary History of the Fungi’ (DEB-0732503). PI RW Roberson. $210,000. This project builds upon a previous successful project and will resolve additional aspects of the evolutionary history of the Fungi by addressing outstanding higher-level questions in fungal phylogenetics.

2007 - 2009. British Petroleum/AZ Science Foundation: ‘Cyanobacteria for Generating Solar-Powered, Carbon-Neutral, and Cost-Effective’. PIs: Bruce Rittmann, Wim Vermaas. Co-PIs R.W. Robert Robeson and others; $2 M per year.

2009. Western Alliance to Expand Student Opportunities: ‘Elucidating Fungal Phylogeny: A Cell Biological Approach.’ PI R.W. Roberson. $1,600.

2006 - 2009. National Science Foundation-Division of Chemistry: 'Purchase of an Instrument for Ultrafast, Multidimensional Fluorescence Detection and Imaging'. PI: Neal Woodbury. CoPIs: R.W. Roberson and others, $500,000.

2003 - 2007. National Science Foundation: 'Emerging wildlife diseases: Threats to amphibian biodiversity'. $3,000,000. PI: J.P. Collins. CoPIs: N. Cohen, E.W. Davidson, and others.

2003. LG Life Sciences Ltd (LGLS) (20, Yeouido-dong, Youngdeungpo-gu, Seoul, Korea). ‘Visualizing the effects of compounds on fungal microtubules.’ $25,000.

2002. National Science Foundation: 'Acquisition of a Field-Emission, Controlled-Temperature Environmental Scanning Electron Microscope'. $750,000 PIs: M. McKelvy, R.W. Roberson, multiple CoPIs.

2002. National Science Foundation: 'Integrated AFM optical microscope (BioScope) for molecular and cell biology'. PI: Y. Lyubchenko; Co-PI: R.W. Roberson and three others; $198,500.

2001 - 2005. US Department of Energy: 'An integrative approach to energy, carbon, and redox metabolism in the cyanobacterium *Synechocystis* sp. PCC 6803'. $1,087,004. PI: W. Vermaas; Co-PI: R.W. Roberson, K.F. Faull, J. P. Whitelegge.

1995. Arizona State University. Title: 'Engineering Novel Biomaterials, Biointerfaces, and Small-Scale Biohybrid Devices: A Systems Approach'. Funding: 3 years, $174,000. PI: Multiple PIs (16).

1998. Arizona State University. Title: 'Asynchronous Approaches to Learning in Plant Biology 108'. $114,866. PI: L. Towill.

1998. American Cyanamid Company: Title: 'Effects of fungicides on cytoplasmic organization and behavior in plant pathogenic fungi'. Funding: one year $75,000. PI: R.W. Roberson.

1998. The W.M. Keck Foundation. Title: ' An Interdisciplinary Facility for Studying Cells Interaction with their Environment'. Funding: $750,000. PI: Doug Chandler, Multiple co-PIs (9).

1997. Arizona State University: College of Liberal Arts and Sciences Grant to Improve Undergraduate Education. Title: 'Interactive Computer and Experimental Approaches to Improve Undergraduate Education in Botany'. Funding: two years, $23,000. PIs: J. Stutz, R.W. Roberson, and M. Sommerfeld.

1997. American Cyanamid Company: Title: 'Effects of fungicides on cytoplasmic organization and behavior in plant pathogenic fungi'. Funding: one year $50,000. PI: R.W. Roberson

1997. National Science Foundation. Title: 'Interactive micro-visualization for science and engineering education.' $720,000. PI: B.L. Ramakrishna.
1994. National Science Foundation. Title: 'Acquisition of Cryo-instrumentation for Electron Microscopy'. Funding: two years, $173,000. PI: R.W. Roberson.
1992. Arizona State University Faculty Grant-In-Aid Program. Title: 'Characterization of actin protein and mRNA during spore germination and hyphal tip growth in fungi'. Funded: one year $5,389. PI: R.W. Roberson.
1991. Arizona State University International Travel Grant, CLAS. Title: Regulation of Cell Wall Deposition in Fungal Cells'. Funding: $1,000. PI: R.W. Roberson.
1991. Arizona State University Research Incentive Award. Title: 'The Cytology of Fungal Hyphal Tip Cells: Its Dynamics and Regulation'. Funding: $2,000. PI: R.W. Roberson.
1991. Southwest Center for Environmental Research and Policy. Funding: one year $12,700. Title: 'Mycorrhizae and Transplant Establishment of Trees in Dry Urban Landscapes'. PIs: C. Martin, PI; J. Stutz and R.W. Roberson.
1990. Arizona State University Faculty Grant-In-Aid Program, PI, 'Apical Growth and Morphological Events in Fungi: Involvement of the Actin and Microtubule Cytoskeletons.' Funding: one year $4,950.00. PI: R.W. Roberson.
1990. Arizona State University Summer Research Award. Title: 'Changes in Cell Wall Chemistry and Structure During Fungal Growth'. Funding: $3,000.00. PI: R.W. Roberson.
1989. Arizona State University Faculty Grant-In-Aid Program. Title: 'Cytological Analysis of Hyphal Tip Cells of the Fungus *Sclerotium rolfsii*'. Funding: one year $2,000.00. PI: R.W. Roberson
1989. Arizona State University Faculty Mini-Grant Fund. Title: 'High Pressure Freezing for Electron Microscopic Studies of Fungi'. Funding: $500.00. PI: R.W. Roberson.

PUBLICATIONS IN PEER REVIEWED JOURNALS

1. Mims CW, **Roberson RW**. 1981. TEM and SEM of teliospore germination and basidiospore formation in two species of the rust fungus *Gymnosporangium*: an overview. Texas Society for Electron Microscopy Journal 7:7-15.
2. Mims CW, **Roberson RW**. 1983. Ultrastructure of ornamentation development on aeciospores of *Cronartium quercuum* forma specialis *fusiforme*. Mycologia 7:400-411.
3. Elijah RD, Cheeks K, Bohn G, **Roberson, RW**, Green K. 1985. Pharmacological modification of corneal endothelia intracellular Ph, intracellular potential, and corneal thickness. Current Eye Research 1:343-352.
4. **Roberson RW**, Luttrell ES. 1987. Ultrastructure of teliospore ontogeny in *Tilletia indica*. Mycologia 79:753-763.
5. Mims CW, Richardson EA, **Roberson RW**. 1987. Ultrastructure of basidium and basidiospore development in three species of the fungus *Exobasidium*. Canadian Journal of Botany 65:1236-1244.
6. Mims CW, **Roberson RW**, Richardson, EA. 1988. Ultrastructure of freeze-substituted and chemically fixed basidiospores of *Gymnosporangium juniperi-virginianae*. Mycologia 80:356-364.

7. Fuller MS, **Roberson RW**. 1988. The effects of sterol biosynthesis inhibitors on cleavage in *Allomyces macrogynus*. Mycologia 80:716-724.
8. **Roberson RW**, Fuller MS. 1988. Ultrastructural aspects of the hyphal tip of *Sclerotium rolfsii* preserved by freeze substitution. Protoplasma 146:143-149.
9. Sewall TC, **Roberson RW**, Pommerville JC. 1989. Identification and characterization of Golgi equivalents from *Allomyces macrogynus*. Experimental Mycology 13:239-252.
10. **Roberson RW**, Luttrell ES. 1989. Dolipore septa in *Tilletia*. Mycologia 81:650-652.
11. **Roberson RW**, Fuller MS, Grebski C. 1989. Effects of the sterol biosynthesis inhibitor cyproconazole on hyphal tip cells of *Sclerotium rolfsii*. I A light microscopic study. Pesticide Biochemistry and Physiology 34:130-142.
12. **Roberson RW**, Fuller MS. 1990. Effects of the sterol biosynthesis inhibitor cyproconazole on hyphal tip cells of *Sclerotium* rolfsii. II An electron microscopic study. Experimental Mycology 14:124-135.
13. Fuller MS, **Roberson RW**, Gisi U. 1990. Effects of the sterol biosynthesis inhibitor cyproconazole on hyphal tip cells of *Sclerotium rolfsii*. III A cytochemical study. Pesticide Biochemistry and Physiology 36:115-126.
14. **Roberson RW**, Luttrell ES, Fuller MS. 1990. Mycoparasitisum of teliospores of the smut fungus *Ustilago bullata* by an oomycete. Canadian Journal of Botany 68:2415-2421.
15. **Roberson RW**. 1992. The actin cytoskeleton in hyphal cells of *Sclerotium rolfsii*. Mycologia 84:41-51.
16. Martin CA, Ruter JM, **Roberson RW**, Sharp WP. 1993. Elemental absorption and hydration potential of polyacrylamide gels. Commun. Soil Sci. Plant Anal. 24:539-548.
17. **Roberson RW**. 1993. Cryofixation and freeze substitution of teliospores of *Gymnosporangium clavipes*: an ultrastructural investigation. Mycological Research 97:195-20420.
18. Vargas M, Aronson JM, **Roberson RW**. 1993. Cytological organization of hyphal tip cells of *Allomyces macrogynus*. Protoplasma 176:43-52.
19. Preisig HR, Anderson OR, Corliss JO, Moestrup O, Powell MJ, **Roberson RW**, Wetherbee R. 1994. Terminology of protist cell surface structures. Protoplasma 181:1-28.
20. **Roberson RW**, Vargas M. 1994. The tubulin cytoskeleton and its sights of nucleation in *Allomyces macrogynus*. Protoplasma 182:19-31.
21. Kozicki MN, **Roberson RW**, Whidden TK, Kersey SE. 1995. Directed growth of *Uromyces* hyphae on integrated circuit substrates. The Journal of Vacuum Science and Technology 13:1808-1813.
22. Srinivasan S, Vargas M, **Roberson RW**. 1996. Functional, organizational, and biochemical analysis of actin in the hyphal tip cells of *Allomyces macrogynus*. Mycologia 88:57-80.
23. Lowry D, **Roberson RW**. 1997. The microtubule cytoskeleton during zoospore formation in *Allomyces macrogynus*. Protoplasma 196:45-54.
24. McNally HA, Kozicki MN, **Roberson RW**, Whidden TK. 1997. Electrical Characterization of *Uromyces* germ tubes grown on integrated circuit substrates. Journal of Vacuum Science and Technology 15:779-783.

25. McDaniel DP, **Roberson RW**. 1998. γ-Tubulin is a component of the Spitzenkörper and centrosomes in hyphal tip cells of *Allomyces macrogynus*. Protoplasma 203:118-123.
26. Lowry DS, Fisher KE, **Roberson RW**. 1998. Establishment and maintenance of nuclear position during zoospore formation in *Allomyces macrogynus*: roles of the cytoskeleton. Fungal Genetics and Biology 24:34-44.
27. **Roberson RW**, Tucker B, Pettie GR. 1998. Microtubule depolymerization in *Uromyces appendiculatus* by three new antineopoastic drugs. Mycological Research102: 378-382.
28. Park Y, Eggink LL, **Roberson RW**, Hoober K. 1999. Transfer of proteins from the chloroplast to vacuoles in *Chlamydomonas reinhardtii:* a pathway for degradation. Journal of Phycology 35:528-538.
29. Harding MW, Stutz JC, **Roberson RW**. 1999. Host-parasite relationships in bean cultivars of varying susceptibility to bean rust. Canadian Journal of Botany 77:1551-1559.
30. Gorur RS, **Roberson RW**, Burnham J, Hill R. 1999. Mold growth on nonceramic insulators and its impact on electrical performance. IEEE Power Engineering Society 23:345-349.
31. Fisher KE, Lowry DS, **Roberson RW**. 2000. Cytoplasmic cleavage in zoosporangia of *Allomyces macrogynus*. Journal of Microscopy 198:260-270.
32. McDaniel DP, **Roberson RW**. 2000. Microtubules are required for motility and positioning of vesicles and mitochondria in hyphal tip growth in hyphal tip cells of *Allomyces macrogynus*. Fungal Genetics and Biology 31:233-244.
33. Pettit RK, Hamel E, Verdier-Pinard P, **Roberson RW**, Hazen KC, Pettit GR, Crews LC. 2002. Antifungal and cancer cell growth inhibitory activities of 1-(rimethoxyphenyl)-2-nitroethylene. Mycosis 45:65-74.
34. Woyke T, Winkelmann G, **Roberson RW**, Pettit GR, Pettit RK. 2002. Three-dimensional visualization of microtubules during the *Cryptococcus neoformans* cell cycle and effects of auristatin PHE. Antimicrobial Agents and Chemotherapy 46:3802-3808.
35. Riquelme M, **Roberson RW**, McDaniel DP, Bartnicki-García S, 2002. The effect of ropy-1 mutation on cytoplasmic organization in mature hyphae of *Neurospora crassa*. Fungal Genetics and Biology 37:171-179.
36. Lowry DL, Fisher KF, **Roberson RW**. 2004. Functional necessity of the cytoskeleton during cleavage membrane development and zoosporogenesis in *Allomyces macrogynus*. Mycologia 96:211-218.
37. Harris SD, Read ND, **Roberson RW**, Shaw B, Seiler S, Plamann M, Momany M. 2005. Spitzenkörper meets polarisome: microscopy, genetics, and genomics converge. Eukaryotic Cell 4:225-229
38. Uchida M, **Roberson RW**, Chun S, Kim D. 2005. *In vivo* effects of the fungicide ethaboxam on microtubule integrity in *Phytophthora infestans*. Pest Management and Science 61:787-792.
39. Hohmann-Marriott MF, Blankenship RE, **Roberson RW**. 2005. The ultrastructure of *Chlorobium tepitum* chlorosomes revealed by electron microscopy. Photosynthesis Research 86:145-154.

40. Mohamed HE, Van de Meene AML, **Roberson RW**, Vermaas W. 2005. Myxoxanthophyll is required for normal cell wall structure and thylakoid organization in the cyanobacterium *Synechocystis* sp. strain PCC 6803. Journal of Bacteriology 187:6883-6892.
41. Hohmann-Marriott MF, Sharp WP, Blankenship RE, **Roberson RW**. 2005. Digital position determination system for electron microscopy. Microscopy Techniques and Methods 67:106-111.
42. van de Meen AML, Hohmann-Marriott MF, Vermaas WFJ, **Roberson RW**. 2006. The three-dimensional structure of the cyanobacterium *Synechocystis* sp. PCC 6803. Archives of Microbiology 184:259-270.
43. Mouriño-Pérez RR, **Roberson RW**, Bartnicki-García, S. 2006. Microtubule dynamics and organization during hyphal branching in *Neurospora crassa*. Fungal Genetics and Biology 43:389-400.
44. Hohmann-Marriott MF, Uchida M, van de Meene AML, Garret M, Hjelm BE, Kokoori S, **Roberson RW**. 2006. Electron tomography and its application to revealing fungal ultrastructure: Tansley Review. New Phytologist 172:208-220.
45. Uchida M, Mouriño-Pérez R R, Freitag M, Bartnicki-Garcıa S, **Roberson RW**. 2007. Microtubule dynamics and the role of molecular motors in *Neurospora crassa*. Fungal Genetics and Biology 45:683-692.
46. Köhli M, Galati V, Boudier V, **Roberson RW**, Philippsen P. 2008. Growth-speed correlated localization of exocyst and polarisome components in growth zones of *Ashbya gossypii* hyphal tips. Journal of Cell Science 121:3803-3814.
47. Bates ST, **Roberson RW**, Desjardin DE. 2009. Arizona gasteroid fungi I: Lycoperdaceae (Agaricales, Basidiomycota). Fungal Diversity 37:153-207.
48. Ramos-García SL, **Roberson RW**, Freitag M, Bartnicki-García S, Mouriño-Pérez RR. 2009. Role of cytoplasmic bulk flow and microtubule-related motor proteins in nuclear displacement in growing hyphae of *Neurospora crassa*. Eucaryotic Cell 8:1880-1890.
49. Hohmann-Marriott MF, **Roberson RW**. 2009. Exploring photosynthesis by electron tomography. Photosynthesis Research 102:177–188.
50. Delgado-Álvarez DL, Callejas-Negrete OA, Gómez, Freitag M, **Roberson RW**, Smith LG, Mouriño-Pérez RR. 2010. Visualization of F-actin localization and dynamics with live cell markers in *Neurospora crassa.* Fungal Genetics and Biology 47: 573-586
51. Flynn CR, Cheung-Flynn J, Smoke CC, Lowry D, **Roberson RW**, Sheller MR, Brophy C. 2010. Internalization and intracellular trafficking of a PTD-conjugated anti-fibrotic peptide, AZX100, in human dermal keloid fibroblasts. Journal of Pharmaceutical Sciences 99: 3100-3121.
52. Uchida M, Mouriño-Pérez RR, **Roberson RW**. 2010. Total internal reflection fluorescence microscopy of fungi. Fungal Biology Reviews 24:132-136.
53. Sánchez-León E, Verdín J, Freitag M, **Roberson RW**, Bartnicki-García S, Riquelme M. 2011. Traffic of chitin synthase 1 (CHS-1) to the Spitzenkörper and developing septa in hyphae of *Neurospora crassa*: actin dependence and evidence of distinct microvesicle populations. Eukaryotic Cell 10: 683-695.
54. Amicucci A, Balestrini R, Kohel A, Barbieri E, Saltarelli R, Faccio A, **Roberson RW**, Bonfante P, Stocchi V. 2011. Hyphal and cytoskeleton polarization in *Tuber*

melanosporum: a genomic and cellular analysis. Fungal Genetics and Biology 48:561-572.
55. **Roberson RW**, Saucedo B, MacLean D, Propster J, Unger B, Oneil TA, Parvanehgohar K, Cavanaugh C, Lowry D. 2011. The hyphal tip structure of Basidiobolus sp.: a zygomycete fungus of uncertain phylogeny. Fungal Biology 115: 485-492.
56. Riquelme M, Yarden O, Bartnicki-García S, Bowman B, Castro-Longoria E, Free SJ, Fleissner A, Freitag M, Lew RR, Mourino-Pérez R, Plamann M, Rasmussen C, Richthammer C, **Roberson RW**, Sanchez-Leon E, Seiler S, Watters MK. 2011. The architecture and development of *Neurospora crassa* hyphae - model cells for polarized growth. Fungal Biology 115: 446-474.
57. Ho CK, Hotta T, Guo F, **Roberson RW**., Lee YJ, Liu B. 2011. Interaction of anti-parallel microtubules in the phragmoplast is mediated by the microtubule-associated protein MAP65-3 in *Arabidopsis*. Plant Cell 23: 2909-2923.
58. Kumar TKA, Crow TK, Wennblom JT, Abril M, Letcher PM, Blackwell M, **Roberson RW**, McLaughlin DJ. 2011. An ontology of fungal subcellular traits. American Journal of Botany 98: 1504-1510.
59. Echauri Espinosa RO, Callejas-Negrete OA, **Roberson RW**, Bartnicki-García S, Mouriño-Pérez RR. 2012. Coronin a smooth modulator of endocytosis and tip growth in *Neurospora crassa*. PLoS ONE. 7(5): e38237.
60. van de Meene AML, Sharp WP, McDaniel JH, Friedrich, Vermaas WFJ, **Roberson RW**. 2012. Gross morphological changes in thylakoid membrane structure are associated with photosystem I deletion in *Synechocystis* sp. PCC 6803. Biochimica et Biophysica Acta 1818: 1427–1434.
61. Toome M, **Roberson RW**, Aime MC. 2013. *Blackwellia eburnea* gen. et sp. nov., *Kriegeriaceae* fam. nov. and *Kriegeriales* ord. nov. Toward resolving higher-level classification in *Microbotryomycetes*. Mycologia 105:486-495. dio:10.3852/12-251.
62. Beauvais A, Bozza S, Kniemeyer O, Formosa C, Balloy V, Henry C, **Roberson RW**, Dague E, Chignard M, Brakhage AA, Romani L, Latgé JP. 2013. Deletion of the 1,3 glucan synthase genes induces a significant restructuration of the conidial cell wall responsible for the avirulence of the human fungal pathogen *Aspergillus fumigatus*. PLOS Pathogens DOI:10.1371/journal.ppat.1003716
63. Bentivenga SP, Kumar KA, Kumar L, **Roberson RW**, McLaughlin DJ. 2013. Cellular organization in germ tube tips of *Gigaspora*. Mycologia 105:1087-1099.
64. Mouriño-Pérez RR, Linacre-Rojas LP, Román-Gavilanes AI, Lew TK, Callejas-Negrete OA**, Roberson RW**, Freitag, M. 2013. MTB-3, a microtubule plus-end tracking protein (+TIP) of *Neurospora crassa*. PLoS ONE 8(8): e70655. dio:10.1371/journal.pone.0070655
65. Tsang TK, **Roberson RW**, Vermaas WFJ. 2013. Polyhydroxybutyrate particles in Synechocystis sp. PCC 6803: facts and fiction. Photosynthesis Research. 118:37-49. dio:10.1007/s11120-013-9923-1.
66. Kumar TKA, Blackwell M, Letcher PM, **Roberson RW**, McLaughlin DJ. 2013. Research and teaching with the AFTOL SBD: an informatics resource for fungal subcellular and biochemical data. International Mycological Association Fungus 4:259-263. doi:10.5598/imafungus 2013.04.02.11

67. Riquelme M, Bredeweg EL, Callejas-Negrete O, **Roberson RW**, Ludwig S, Beltrán-Aguilar A, Seiler S, Novick P, and Freitag M. 2014. The *Neurospora crassa* exocyst complex tethers Spitzenkörper vesicles to the apical plasma membrane during polarized growth. Molecular Biology of the Cell 25:1312-1326. doi:10.1091/mbcE13-06-0299.
68. McLaughlin DJ, Healy RA, Celio GJ, **Roberson RW**, Kumar TKA. 2015. Evolution of zygomycetous spindle pole bodies: evidence from *Coemansia reversa* mitosis. American Journal of Botany 102:1-11.
69. Nguyen HDT, Chabot D, Hirooka Y, Roberson RW, Seifert KA. 2015**.** *Basidioascus undulatus*: genome, origins, and sexuality IMA Fungus. 6: 215–231.
70. Callejas-Negrete O, Plamann M, Schnittker R, Bartnicki-Garcia S, **Roberson RW**, Pimienta G, Mourino-Perez R. 2015. Two microtubule-plus-end binding proteins LIS1-1 and LIS1-2, homologues of human LIS1 in *Neurospora crassa*. Fungal Genetics and Biology 82: 213–227.
71. Upadhyay S, Xu X, Lowry D, Jackson JC, **Roberson RW**, Lin X. 2016. Subcellular Compartmentalization of Fungal PKS Melanin Biosynthetic Machinery. Cell Reports 14: 2511–2518
72. Fisher K, **Roberson RW**. 2016. Hyphal tip cytoplasmic organization in four zygomycetous fungi. Mycologia 15: 226-235.
73. Fisher K, **Roberson RW.** 2016. Fungal hyphal growth-Spitzenkörper versus spical vesicle crescent. Journal of Fungal Genomics and Biology 6:1-2
74. Spatafora JW, Benny G, Berbee M, Bonito G, Corradi N, Grigoriev I, Gryganskyi A, James T, Krings M, Lazarus K, O'Donnell K, **Roberson RW**, Smith ME, Taylor TN, Uehling J, Vilgalys R, White M, Stajich JE. 2016. Zygomycete Genealogy of Life (ZyGoLife): a phylum-level phylogenetic classification of zygomycetous fungi based on genome-scale data. Mycologia 108:1028-1046
75. Fisher K, Romberger I, Lowry D, Shange P, **Roberson RW**. 2018. Subcellular characters of the zygomycetous fungus, *Conidiobolus coronatus* (Entomophthorales). Mycologia 110: 31-3877.
76. Desirò A, Hao Z, Liber JA, Benucci GMN, Lowry D, **Roberson RW**, Bonito G. 2018. Mortierellomycotina as model organisms to investigate the interaction between mycoplasma-related endobacteria and their fungal hosts. ISME Journal 12:1743-1757.
77. Rico-Ramírez AM, **Roberson RW**, Riquelme M. 2018. Imaging the secretory compartments involved in CHS-4 biosynthesis in *Neurospora crassa.* Fungal Genetics and Biology 117:30-42.
78. Villar AR, **Roberson RW**, Callejas-Negrete OA, Mourino-Perez R. 2019. The actin motor MYO-5 effect in the intracellular organization of *Neurospora crassa*. Fungal Genetics and Biology 125:13-27.
79. Balabiyev A, Podolnikova NP, Mursalimov A, Lowry D, Newbern J, **Roberson RW**, Ugarova TP. 2020.Transition of podosomes into zipper-like structures in macrophage-derived multinucleated giant cells. Molecular Biology of the Cell. 31: 2002-2020.
80. **Roberson RW**. 2020. Sub-cellular structure and behavior in fungal hyphae. Journal of Microscopy 280: 75–85 https://doi.org/10.1111/jmi.12945

81. Rizzo J, Chaze T, Miranda K, **Roberson RW**, Gorgette O, Nimrichter L, Matondo M, Latgé JP,Beauvais A, Rodrigues M. 2020. . American Society for Microbiology 4: e00476-20.
82. **Roberson RW**, Beiner S. 2020. Sculpting Science: Inspired Artwork from the Microscopic World. Microscopy and Microanalysis. 1-1. doi:10. 1017/S1431927620015512.
83. Gonzalez B, Shange P, La Mascus R, Solis G, Baluch DP, **Roberson RW**. 2020. Obstacle-Induced Branching in Filamentous Fungi. Microscopy and Microanalysis. 1-3. doi:10.1017/S1431927620022631.
84. Ramírez-Cota R, Espino-Vazquez AN, Rodriguez-Vega TC, Carolina T, Macias-Díaz RE, Callejas-Negrete OA, Freitag M, Fischer R, **Roberson RW**, Mouriño-Pérez RR. 2022 The cytoplasmic microtubule array in *Neurospora crassa* depends on microtubule-organizing centers at spindle pole bodies and microtubule +end-depending pseudo-MTOCs at septa. Fungal Genet Biol 162:103729. doi: 10.1016/j.fgb.2022.103729.
85. Podolnikova, NP, Lishko VK, **Roberson RW**, Koh Z, Derkach D, Richardson D, Sheller M, Ugarova TP. 2023. Platelet factor 4 (pf4) improves survival in a murine model of antibiotic-susceptible and methicillin-resistant *Staphylococcus aureus* peritonitis. https://doi.org/10.1101/2023.08.25.554865
86. Martínez-Andrade JM, **Roberson RW**, Riquelme M. 2024. A bird's-eye view of the endoplasmic reticulum in filamentous fungi. Microbiol Mol Biol Rev 88:e00027-23. https://doi.org/10.1128/mmbr.00027-23
87. Pérez MR, **Roberson RW**. One hundred years of the Spitzenkörper: a story in three acts. Fungal Genet Biol. In preparation.

PUBLICATIONS IN EDITED BOOKS

1. **Roberson RW**, Howard W. 1987. *Pythium*: asexual reproduction. In: *Zoosporic Fungi in Teaching and Research*. Fuller MS, Jaworski A (eds). Southeastern Publishing Corp
2. Howard W, **Roberson RW**. 1987. *Pythium*: sexual reproduction. In: *Zoosporic Fungi in Teaching and Research*. Fuller MS, Jaworski A (eds). Southeastern Publishing Corp
3. **Roberson RW**. 1991. The hyphal tip cell of *Sclerotium rolfsii*: cytological observations. In: *Fungal Cell Wall and Immune Response*. Latge JP, Boucias D (eds). NATO Scientific Series, Springer-Verlag, Berlin, Heidelberg
4. **Roberson RW**, Chandler DE. 1998. Rapid freezing and deep etching of cells and molecules. In: *Cell Biology: A Laboratory Handbook*. Spector D, Goldman R, Leinwand,L (eds). Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York. (pp.129.1-129.23)
5. Hohmann-Marriott MF, van de Meene AML, **Roberson RW** (2008) Electron tomographic techniques: A gateway to photosynthetic structure, In: Advances in Photosynthesis and Respiration, Biophysical Techniques in Photosynthesis II, Series Editor: Govindjee, Editor: J. Matysik and T. J. Aartsma, pp 13-34, Springer, Dordrecht, The Netherlands

6. **Roberson RW**, Abril M, Blackwell M, Letcher P, McLaughlin DJ, Mouriño-Pérez RR, Riquelme M, Uchida M. 2010. Hyphal Structure, Chapter 2. In: *Cellular and Molecular Biology of Filamentous Fungi*. Borkovich K, Ebbole D (eds). ASM Press, Washington, D.C. (pp. 8 - 27)
7. Uchida M, Mouriño-Pérez RR, **Roberson RW**. 2010. Live-cell imaging of microtubule dynamics in leading hyphae of *Neurospora crassa*. In: Sharon A. (ed), Molecular and Cell Biology Methods for Fungi. The Humana Press Inc. Totowa, New Jersey, USA, 638:259-268
8. McLaughlin DJ, Kumar TKA, Blackwell M, Letcher P, **Roberson RW**. 2015. Subcellular Structure and Biochemical Characters in Fungal Phylogeny. In: McLaughlin DJ, McLaughlin EG, Lemke PA (eds), The Mycota VII Systematics and Evolution Part B. Springer-Verlag, New York.
9. Mouriño-Pérez RR, **Roberson RW**. 2015. Applications of confocal laser scanning microscopy in filamentous fungi. In: TES Dahms, K Czymmek (eds), Advanced Microscopy in Mycology. Springer International Publishing, Switzerland.
10. Riquelme M, **Roberson RW**, Sanchez-Leon E. 2016. Hyphal tip growth in filamentous fungi. The Mycota. Volume I. Growth, Differentiation and Sexuality. 3rd Edition.

BOOKS PUBLISHED

Chandler DE, **Roberson RW**. 2009. *Bioimaging: Current Concepts in Light and Electron Microscopy.* Jones and Bartlett, Boston, MA.

INVITED SYMPOSIUM/LECTURE PARTICIPATION

1988. Appalachian Region Electron Microscopy Society. Boone, North Carolina. Presentation Title: The cytology of the fungal cell preserved by freeze substitution.
1989. Molecular and Cell Biology Seminar Series. Arizona State University, Tempe, Presented by **Roberson RW**.Arizona. Presentation Title: The effects of the demethylase inhibiting fungicide, cyproconazole, on hyphal tip cells of the plant pathogenic fungus *Sclerotium rolfsii*. Presented by **Roberson RW**.
1990. Department of Biology, North Arizona University, Flagstaff, Arizona. Presentation Title: The Cytoskeletal Organization During Apical Growth and Cell Differentiation in Fungi. Presented by **Roberson RW**.
1990. Department of Botany, Arizona State University, Tempe, Arizona. Presentation Title: Apical Growth and Morphological Events: Cytological Observations'. Presented by **Roberson RW**.
1990. NATO Scientific Affairs Division Workshop: 'Fungal Cell Wall and Immune Response', Elounda Crete, Greece. Title: Apical Growth and The Cell Wall: Morphological Events. Presented by **Roberson RW**.
1992. Mycological Society of America, Symposium: 'Advanced Techniques in the Study of Fungi', Portland, Oregon. Presentation Title: Cryo-fixation and preparative approaches for microscopy. Presented by **Roberson RW**.
1992. Arizona Society for Electron Microscopy and Microbeam Analysis, Tucson, Arizona. Presentation Title: Cytological Organization in Fungal Hyphal Tip Cells: Its Dynamics and Regulation. Presented by **Roberson RW**.

1992. Department of Botany, Arizona State University, Tempe, AZ: Presentation Title: Botanical Microscopy. Presented by **Roberson RW**.
1993. Department of Plant Pathology, University of Arizona, Tucson, AZ: Presentation Title: Apical Growth in Fungal Cells: Light and Electron Microscope Studies. Presented by **Roberson RW**.
1994. Recent developments in the use of labeled probes to detect fungi and their constituents *in vivo* and *in vitro,* Fifth International Mycological Congress, Symposium, Vancouver, British Colombia, Canada. Presentation Title: Light and electron microscopic methods used in observing the fungal cytoskeleton. Presented by **Roberson RW**.
1995. The Melvin S. Fuller Symposium on Fungal Growth and Diversity, University of Georgia, Athens, Georgia. Presentation Title: Zoosporogenesis in *Allomyces macrogynus*: Roles of the cytoskeleton. Presented by **Roberson RW**.
1995. Arizona Microscopy Society Annual Meeting and the Second Annual Arizona Research Lab Imaging Workshop, University of Arizona, Tucson, Arizona. Presentation Title: Cytoplasmic cleavage during zoospore formation in an aquatic fungus. Presented by **Roberson RW**.
1995. Arizona Microscopy Society Annual Meeting and the Second Annual Arizona Research Lab Imaging Workshop, University of Arizona, Tucson, Arizona. Presentation Title: Methods for visualizing fungal cytoskeletal proteins, March Presented by **Roberson RW**.
1996. 13th Simposio Microbiologia Industrial, Micologia, Department of Biology, University of Puerto Rico, Mayaguerz, Puerto Rico: 'Modern Techniques for studying fungal cell growth: use of light and electron microcopy', March Presented by **Roberson RW**.
1996. Department of Plant Pathology, University of California, Riverside. Presentation Title: Growth and development of fungal hyphae of *Allomyces macrogynus*: roles of the cytoskeleton, May Presented by **Roberson RW**.
1996. Mycology Discussion Group, University of Georgia, Athens, GA. Presentation Title: The cytoskeleton during cell growth and differentiation in *Allomyces macrogynus*. October Presented by **Roberson RW**.
1997. Arizona State University Forum on Investigations in Modeling, Visualization, and Imaging. Presentation Title: Microfabrication of unique surfaces for studies fungal cell growth. April Presented by **Roberson RW**.
1997. Hintze, K., J.C. Stutz, R.W. Roberson, and M.R. Sommerfeld. Presentation Title: Multimedia Mycology. WIRED Symposium. American Institute of Biological Sciences. August Presented by **Roberson RW**.
1997. The Third NSF-Funded Women's Images of Science and Engineering (WISE) Workshop at Arizona State University. Presentation Title: Microscopy in Biology. July. Presented by **Roberson RW**.
1997. The Second NSF-Funded Women's Images of Science and Engineering (WISE) Workshop at Arizona State University. Presentation Title: Mycology and Microscopy. May. Presented by **Roberson RW**.
1997. First Annual Biotechnology Symposium. Arizona State University. Presentation Title: The Fungal Cytoplasm and Biotechnology, September Presented by **Roberson RW**.

1998. Department of Botany, University of Washington, Seattle, WA. Presentation Title: Cell growth and morphogenesis in the fungus *Allomyces*. November Presented by **Roberson RW**.
1999. 12th Fungal Genetics Conference, Pacific Grove, Ca. Presentation Title: Gamma-tubulin in hyphal cells of Allomyces, March. Presented by **Roberson RW**.
1999. Royal Microscopy Society, 6th International Botanical Microscopy Meeting: Plant Cell Biology, University of St. Andrews, Scotland. Presentation Title: The fungal cytoskeleton during cell growth. March. Presented by **Roberson RW**.
1999. International Botanical Congress, St. Louis, Ill. Presentation Title: The Spitzenkörper functions as a microtubule organizing center in hyphae of *Allomyces*, July. Presented by **Roberson RW**.
2000. Microscopy Society of America, Philadelphia, PA. Presentation Title: Visualization and analysis of membrane development during fungal cell differentiation, August. Presented by **Roberson RW**.
2000. Mycological Society of America, University of Vermont, Presentation Title: The dynamics of microtubules during zoospore formation in *Allomyces*, July. Presented by **Roberson RW**.
2000. Department of Biology, University of Texas at El Paso. Presentation Title: The roles of tubulins in morphogenesis of *Allomyces,* December. Presented by **Roberson RW**.
2001. Kraft Foods, Inc. Glenview, IL. Presentation Title: Light and Electron Microscopy of fungi: applications to food science, February. Presented by **Roberson RW**.
2002. Texas Society of Microscopy, El Paso, Texas. Presentation Title: Investigations of fungal cytoskeletal organization and function using light and electron microscopy, April. Presented by **Roberson RW**.
2002. Southeastern Microscopy Society, Athens, Georgia. Presentation Title: Elucidation of the mechanisms of fungal cell growth using light and electron microscopy, May. Presented by **Roberson RW**.
2002. Mycological Society of America, Oregon State University, Corvallis, Oregon. Presentation Title: Electron microscope analysis of growth mutations in fungi, June. Presented by **Roberson RW**.
2002. International Mycological Congress, Oslo, Norway. Presentation Title: Cell growth and differentiation: use of advanced light and electron microscopy methods, August Presented by **Roberson RW**.
2002. Department of Plant Biology, Arizona State University, Tempe, Arizona. Presentation Title: Cytoplasmic organization, dynamics and cell growth in fungi and plants' September. Presented by **Roberson RW**.
2003. Arizona Imaging and Microanalysis Society, University of Arizona, Tucson, AZ. Presentation Title: Visualization of Cytoplasmic Order and Dynamics During Cellular Growth and Morphogenesis in Fungi, March. Presented by **Roberson RW**.
2003. Department of Biology, Rhoads College, Memphis TN. Presentation Title: Fungal Morphogenesis and the Roles of the Cytoskeleton. October. Presented by **Roberson RW**.
2003. Department of Integrative Biology, Harvard, Cambridge MS. Presentation Title: Visualization of Fungal Morphogenesis, November. Presented by **Roberson RW**.

2004. *Neurospora* Annual Meeting (M. Uchida, E. Perry, R.W. Roberson). 'Mechanism of polarized growth and hyphal morphogenesis in *Neurospora crassa'*. Asilomar, Pacific Grove, CA. Symposium. Presentation by M. Uchida.
2004. Mycological Society of America, Ashville, North Carolina. Presentation Title: The Roles of Microtubules in Fungal Morphogenesis'. Presented by **Roberson RW**.
2004. Microscopy and Microanalysis, Savannah, GA. (van de Meene, A.M.L., Reavie, L.B., Vermaas, W.F.J., Roberson, R.W). Presentation Title: A reticulate network of filaments in the photosynthetic prokaryote Synechocystis sp. PCC 6803 identified by electron tomography. Symposium. Presentation by A.M.L. van de Meene
2004. Microscopy Society of America, Savanna, GA. Presentation Title: Polarized Growth in Fungal Hyphae: role of the Microtubule Cytoskeleton. Presented by **Roberson RW**.
2004. BASF AG, Rehhütte, Schwalbenzimmer, Presentation Title: Workshop on Tubulin Structure and Function in Fungi', October. Presented by **Roberson RW**.
2005. The roles of microtubules in polarized fungal hyphal tip growth. IUMS (American Society of Microbiology). Invited Speaker at the 'Growth' symposium, San Francisco, CA, San Francisco, CA, July 28. Presented by **Roberson RW**.
2005. Gordon Research Conference in three-dimensional electron microscopy (van de Meene, A.M.L., Auer, M., Vermaas, W.F.J., and Roberson, R.W.). Presentation Title: Macromolecules in resin embedded tomograms of *Synechocystis* sp. PCC 6803. Chair: Ken Downing. Presented by van de Meene, A.M.L.
2005. Dipartimento di Biologia Vegetale dell' Università, Istituto per la Protezione delle Piante – CNR, Sezione di Torino, Viale Mattioli 25 - 10125 Torino; Departmental Seminar: Presentation Title: Fungal cell growth and morphogenesis: roles of the cytoskeleton. Presented by **Roberson RW**.
2005. Molecular and Cellular Biology Colloquium, Arizona State University, Tempe, AZ. Presentation Title: Cell growth and morphogenesis in fungi. Presented by **Roberson RW**.
2006. Canadian Federation of Biological Societies Northern Lights Conference, University of Saskatchewan, Saskatoon, Saskatchewan, Canada. Symposium Title: 'Modern Analyses Using Electron Microscopy'. Presentation Title: Three-dimensional light and electron microscopy examination of fungal cytoplasm during cell growth and differentiation. Presented by **Roberson RW**.
2006. IXth International Fungal Biology Conference & 16th New Phytologist Symposium, Nancy, France. 18-20 September. Presentation Title: Advances in Microscopic Analysis in the Studies of Fungal Cell Biology. Presented by **Roberson RW**.
2006. Department of Biophysics Departmental Seminar, Arizona State University, Tempe, Arizona. Presentation Title: Fungi and the Cytoskeleton. Presented by **Roberson RW**.
2007. XXV Fungal Genetics Conference, Asilomar, Pacific Grove, CA. Presentation Title: Live cell imaging of microtubule dynamics in *Neurospora crassa* using total internal reflection fluorescence microscopy. **R.W. Roberson** and Maho Uchida. Presented by Maho Uchida.
2007. Fungal Cell Biology Society of Mexico. Guanquato, Mexico. Presentation Title: The microtubule cytoskeleton in fungal hyphae. Presented by **Roberson RW**.

2007. Scottsdale Museum of Contemporary Art. Scottsdale, Arizona. Presentation Title: The world within: visualized cell biology. Presented by **Roberson RW**.

2008. Mycologial Society of America Annual Meeting, State College, PA, Aug. 9-14, 2008. Symposium Title: Recent Advances in Molecular and Microscopy Tools in Fungal Biology, Chairs: Meritxell Riquelme and Brian Shaw. Presentation Title: 'In Search for the Lost Spitzenkörper.' Presented by **Roberson RW**.

2008. International Symposium of the Cellular and Molecular Biology of Fungi, Centro de Investigación Científica y Educación Superior de Ensenada. Ensenada, México, Dec. 4-5, 2008. Section Title: Fungal Biology, Chair: R.W.Roberson. Presentation Title: 'The Diversity of Hyphal Tip Organization.' Presented by **Roberson RW**.

2009. 25th Fungal Genetics Conference, Asilomar, Pacific Grove, CA, March 16-23, 2009. Symposium Title: Architecture and tip growth, Chairs: Rosa R. Mouriño-Pérez and Meritxell Riquelme. Presentation Title: 'Spitzenkörper distribution and diversity among the fungi.' Presented by **Roberson RW**.

2009. Autumn Meeting of the Society for General Microbiology, Heriot-Watt University, Edinburgh, Scotland, 7-10 September 2009. Title of Symposium: Darwin's Tree of Life; Chairs: Saul Purton, Malcolm White, Paul Dyer, and Tom Richards. Presentation Title: 'The Structure of the Fungal Hypha.' Presented by **Roberson RW**.

2009. X International Fungal Biology Conference and VIII Congreso Nacional de la Rama de Biologia Molceular y Celulary di Hongos de la Sociedad Mexicana de Bioquimica, Ensenada, Baja California, Mexico, 6-10 December 2009. Symposium Title: Charles Bracker Microscopy; Chairs: Salomon Bartnicki-Garcia and R. W. Roberson. Presentation Title.'The Cellular Diversity of Fungal Cells.' Presented by **Roberson RW**.

2009. Department of Physics ''Chalk and Talk' Seminar, Arizona State University, Tempe, Arizona. Presentation Title: The Cell Biology of Fungal Growth.' Presented by **Roberson RW**.

2010. Department of Plant Pathology, Texas A & M University, College Station, Texas. Presentation Title: 'The Structural Diversity in Growing Fungal Hyphae.' Presented by **Roberson RW**.

2010. Department of Biological Sciences, University of Alabama, Tuscaloosa, AL. Presentation Title: 'Structure and Phylogeny of Fungi.' Presented by **Roberson RW**.

2010. 9th International Mycological Congress, Edinburgh, Scotland, 1-6 August 2010. Title of Symposium: 200th Anniversary of the Hypha; Chairs: Meritxell Riquelme and Peter Sudbery. Presentation Title: 'The Evolution of Fungal Structure.' Presented by **Roberson RW**.

2011. Second International Fungal Cell Wall Meeting, Giens, France, 7-10 October. Presentation Title: 'Cytoplasmic ultrastructure and the localization of chitin synthase in hyphae and germlings of *Neurospora crassa*.' Presented by **Roberson RW**.

2012. The structure of the hyphal apex: Spitzenkörper or not? Mycological Society of America Annual Meeting, Yale University, New Haven, Conn, July. Presented by **Roberson RW**.

2014. Biology and Art Mini Lecture Series: The Art of Biology. Joint Symposium Hosted by SOLS and SOA. March 18, ASU Tempe Campus. Presented by **Roberson RW**.
2014. ASU Prep Talks: Seeing Cells Up-Close and Personal. ASU Preparatory Academy, Phoenix, AZ. Oct 15. Presented by **Roberson RW**.
2015. Multi-omics for Microbiomes Conference, September 14-16, Kennewick, WA. Session title: Chemical Imaging. Presentation title: 'Structural diversity among fungal hyphae: insights into cell growth and phylogeny.' Presented by **Roberson RW**.
2016. 10th Annual International Symposium of the Department of Microbiology, Determinants of Polarized Cell Growth in Eukaryotic Cells: Fungi and Plants. Presentation Title: 'Cellular structure and growth in the zygomycetous fungi.' Centro de Investigación Científica y Educación Superior de Ensenada, México. Nov. 3-4, 2016. Presented by **Roberson RW**.
2017. Department of Botany and Plant Pathology, Oregon State University, April 19 - 21, Corvallis OR. Presentation title: 'Cellular diversity among fungi: insights into phylogeny and cell growth.' Presented by **Roberson RW**
2018. 11th International Mycological Congress, San Juan, Puerto Rico, July 16 – 21, 2018. Presentation Title: 'An Ultrastructural View of the Endomembrane network in Hyphae of *Neurospora crassa*.' Presented by **Roberson RW**
2020. Microscopy Society of America. Milwaukie, Wisconsin, August 5th 2020. Sculpting Science: Inspired Artwork from the Microscopic World. # 271
2022. Fungal Cell Biology. Centro de Investigación Científica y Educación Superior de Ensenada, México. Nov. 24, 2022. Presented by **Roberson RW**.
2024. 32nd Fungal Genetics Conference, Pacific Grove, Ca. Presentation Title: 'Hyphal Characteristics Among the Fungi', March. Presented by **Roberson RW**.

PUBLISHED ABSTRACTS AND SCIENTIFIC PRESENTATIONS

1982. **Roberson RW**, Culhavey CD. Ultrastructure of the wounded tree beetle *Nosodendron calofornicum*, Texas Society for Electron Microscopy, Denton, Texas, Platform presentation by **Roberson RW**.
1982. **Roberson RW**, Mims CW. Ultrastructure of aeciospore ornamentation in the rust fungus *Cronartium quercuum*, Texas Society for Electron Microscopy, Denton, Texas, Platform presentation by **Roberson RW**.
1982. **Roberson RW**, Mims CW. The ultrastructure of basidium and basidiospore formation in *Exobasidium*, Texas Society for Electron Microscopy, Galveston, Texas, Platform presentation by **Roberson RW**
1985. **Roberson RW**, Luttrell ES. Formation of exogenous terminal teliospores in *Neovossia indica*, Mycological Society of America Newsletter 34:37, Platform presentation by **Roberson RW**.
1985. **Roberson RW**, Luttrell ES. Ultrastructure of teliospore formation in the karnal bunt fungus, Southeastern Electron Microscopy Society, Augusta, Georgia, Platform presentation by **Roberson RW**.

1986. **Roberson RW**, Luttrell ES, Fuller MS. An oomycete fungus parasitic on teliospores of the smut fungus *Ustilago bullata,* Mycological Society of America Newsletter 37:41, Platform presentation by **Roberson RW**.
1987. Cason KMT, **Roberson RW**, Luttrell ES. Development of the mulberry popcorn disease caused by *Ciboria carunculoides*, Mycological Society of America Newsletter 38:19, Platform presentation by Cason KMT.
1987. Fuller MS, **Roberson RW**. The effect of sterol biosynthesis inhibitors on cleavage in zoosporic fungi. Mycological Society of America Annual Newsletter 38:25, Platform presentation by Fuller MS.
1987. **Roberson RW**, Fuller MS. Effects of a sterol biosynthesis inhibitor on hyphal tip cells of three basidiomycetous fungi, Phytopathology 77:1702, Platform presentation by **Roberson RW**.
1987. **Roberson RW**. Ultrastructure of mitotic events in budding sporidia of *Ustilago bullata* preserved by freeze substitution, Southeastern Electron Microscopy Society Savanna, Georgia, Platform presentation by **Roberson RW**.
1988. **Roberson RW**, Fuller MS. The cytoskeletal organization in hyphal tip cells of the fungal plant pathogen *Sclerotium rolfsii*, Southeastern Electron Microscopy Society, Athens, Georgia, Poster presentation by **Roberson RW**.
1988. Fuller MS, **Roberson RW**. The effects of the sterol biosynthesis inhibitor, cyproconazole, on hyphal tip cells of *Sclerotium rolfsii*, Mycological Society of America Annual Newsletter 39: 29, Poster presentation by **Roberson RW**.
1988. **Roberson RW**, Fuller MS. Ultrastructural examination of hyphal tip cells of *Sclerotium rolfsii* fixed by freeze substitution, Mycological Society of America Newsletter 39: 45, Poster presentation by **Roberson RW**.
1989. **Roberson RW**, Fuller MS. The effects of the sterol biosynthesis inhibiting fungicide, cyproconazole, on the microtubule and actin cytoskeletons in hyphal tip cells of *Sclerotium rolfsii*, Mycological Society of America Newsletter 40: 24, Platform presentation by **Roberson RW**.
1990. **Roberson RW**. Light and electron microscope observations of teliospore germination in a rust fungus, Journal of the Arizona and Nevada National Academy of Sciences, 25: 7, Poster presentation by **Roberson RW**.
1990. **Roberson RW**. Microscopic observations of teliospore germination of *Gymnosporangium clavipes*, Mycological Society of America Newsletter, 41: 35, Poster presentation by **Roberson RW**.
1990. **Roberson RW**. High pressure freezing and freeze substitution of teliospores of the rust fungus *Gymnosporangium clavipes*, pp 692-693, *In*: Proceedings of the Twelfth International Congress for Electron Microscopy. San Francisco Press Inc., San Francisco, CA, Poster presentation by **Roberson RW**.
1991. Vargas M, **Roberson RW**, Aronson J. Preliminary study of hyphal tip and sporangia development in *Allomyces macrogynus*: a microscopic study, Journal of the Arizona and Nevada National Academy of Sciences, 26: 25, Poster presentation by Vargas M.
1991. Vargas M, **Roberson RW**, Aronson J. A Correlative light and electron microscope investigation of hyphal tip cells of *Allomyces macrogynus,* Inoculum 42:37, Poster presentation by Vargas M.

1991. Vargas M, **Roberson RW**, Aronson J. Microscopic observations of hyphal tip cells and zoosporangia in *Allomyces macrogynus*, Journal of Electron Microscopic Techniques 18: 331, Poster presentation by Vargas M.
1991. Garrett M, **Roberson RW**. Ultrastructure of the Host-Parasite Interface and Teliospore Formation in a Smut Fungus, Journal of Electron Microscopic Techniques 18: 331, Poster presentation by Garrett M.
1991. **Roberson RW**. Ultrastructural analysis of rust teliospores quick frozen under high pressure and freeze substituted, Journal of the Arizona and Nevada National Academy of Sciences 26: 24, Poster presentation by **Roberson RW**.
1991. **Roberson RW**. Actin distribution in fungal hyphae, Journal of Electron Microscopic Techniques, 18: 18. Poster presentation by **Roberson RW**.
1991. **Roberson RW**. Three-Dimensional Analysis of Hyphal Tip Cells of *Sclerotium rolfsii*. Inoculum 42: 31. Poster presentation by **Roberson RW**.
1992. Vargas M, **Roberson RW**. The apical body in hyphal tips of *Allomyces macrogynus*, Inoculum 43:53, Poster presentation by Vargas M.
1992. Garrett M, **Roberson RW**. The effects of pisatin on the ultrastructure of *Nectria haematococca*, Inoculum 43:52, Poster presentation by Garrett M.
1992. Sharp WP, **Roberson RW**. High-pressure freezing and freeze substitution of plant tissue, *In*: Proceedings of the 50th Annual Meeting of the Electron Microscopy Society of America. pp 748-749. San Francisco Press Inc., San Francisco, CA, Poster presentation by **Roberson RW**.
1992. Roberson RW. Cryofixation and Preparation Methods. Inoculum 43:53.
1993 **Roberson RW**, Vargas M. Evidence of a microtubule organizing center in the tips of fungal hyphae, Arizona Society for Electron Microscopy and Microbeam Analysis, Tempe, AZ, March 11-12, Platform presentation by **Roberson RW**.
1993. **Roberson RW**, Pittman H. Actin in hyphal germlings of *Aspergillus nidulans*, Inoculum 44:55, Platform presentation by **Roberson RW**.
1994. **Roberson RW**. Organization of the actin cytoskeleton in nuclear distribution mutants (nud) of *Aspergillus nidulans,* Arizona Society for Electron Microscopy and Microbeam Analysis, Tucson, AZ, March 10-11, Platform presentation by **Roberson RW**.
1994. Lowry D, **Roberson RW**. The microtubule cytoskeleton during zoospore formation in *Allomyces macrogynus*. Fifth International Mycological Congress: Vancouver, B.C., Canada, Poster presentation by Lowry D.
1995. Lowry D, **Roberson RW**. The effects of nocodazole and cytochalasin D on cytoplasmic cleavage in zoosporangia of *Allomyces macrogynus*: an ultrastructural study, Inoculum 46: 27, Poster presentation by Lowry D.
1996. Lowry D, **Roberson RW**. Cytoskeleton involvement in the establishment and maintenance of nuclear positions in zoosporangia of *Allomyces macrogynus*, Inoculum 47:20, Poster presentation by Lowry D.
1996. Harding MW, Stutz JC, **Roberson RW**. Uredinia development and host-parasite relationships in slow-rusting of bean, Inoculum 47:10, Poster presentation by Harding MW.
1996. Aldrich HC, Williams DS, **Roberson RW**, Harding MW. Improved preservation of fungi and slime molds with microwave assisted fixation. Annual Meeting of the Histochemical Society Poster presentation by Aldrich HC.

1997. Hintze K, Stutz JC, **Roberson RW**, Sommerfeld MR. Multimedia mycology, Inoculum 48:12, Poster presentation by Hintze K.
1997. Hintze K, Sommerfeld MR, Stutz JC, **Roberson RW** Development of a multimedia tutorial to teach phycology, Arizona-Nevada Academy of Science, Las Vegas, April 19, Poster presentation by Hintze K.
1997. **Roberson RW**, McDaniel DP. The ultrastructure of hyphal tip cells of *Botrytis cinerea.* Inoculum 48:33. Poster presentation by **Roberson RW**.
1997. McDaniel DP, **Roberson RW**. Isolation and characterization of microtubule-associated proteins from hyphal tip cells of *Allomyces macrogynus*. Inoculum 48:24, Poster presentation by McDaniel DP.
1998. McDaniel DP, **Roberson RW**. Localization of γ-tubulin to the Spitzenkörper of *Allomyces macrogynus*. Inoculum 49:35, Poster presentation by McDaniel DP
1999. Fisher KE, **Roberson RW**. Cleavage membrane development in *Allomyces macrogynus*. 12th Fungal Genetics Conference, Asilomar, 46:127, Poster presentation by Fisher KE.
1999. Gorur RS, **Roberson RW**, Burnham J, Hill R. Mold growth on nonceramic insulators and its impact on electrical performance. IEEE Power Engineering Society, Poster presentation by Gorur RS.
1999. **Roberson RW**. The organization and dynamics of the fungal cytoskeleton during cell growth and development. 6th International Botanical Microscopy Meeting, Royal Microscopy Society, St Andrews, Scotland. Platform presentation by **Roberson RW**.
1999. **Roberson RW**, McDaniel DP. γ-Tubulin is associated with the Spitzenkörper and centriosomes in hyphae of *Allomyces macrogynus*. 12th Fungal Genetics Conference, Asilomar,46:65, Poster presentation by McDaniel DP.
1999. **Roberson RW**, McDaniels DP. The Spitzenkörper functions as a microtubule organizing center in hyphae of *Allomyces*. International Botanical Congress, St. Louis, Ill, Platform presentation by **Roberson RW**.
2000. Sharp WP, Coufalova E, Delong A, Kolarik V, **Roberson RW**, Tsong IST. Use of the low voltage transmission electron microscope with biological specimens: a feasibility study. Microscopy Society of America, Philadelphia, PA. Poster presentation by Sharp WP.
2001. **Roberson RW**, Riquelme M, McDaniel DP, Bartnicki-García S. The effects of ropy-1 mutation on cytoplasmic organization and intracellular motility in mature hyphae of *Neurospora crassa*. XXI Fungal Genetics Conference, Asilomar, Pacific Grove, California, Poster presentation by **Roberson RW**.
2001. **Roberson RW**, Riquelme M, McDaniel DP, Bartnicki-García S. The *ropy-1* mutation disrupts cytoplasmic organization and intracellular motility in mature hyphae of *Neurospora crassa*. Mycological Society of America and American Phytopathology Society. Salt Lake City, Utah, August 5-9, Poster presentation by **Roberson RW**.
2001. Crews LC, Pettit RK, **Roberson RW**. Effects of 1-(3',4',5'-trimethoxyphenyl)-2-nitroethylene on the microtubule cytoskeleton and nuclear positioning of *Aspergillus nidulans* germlings and mature hyphae. 101st American Society for Microbiology General Meeting, Orlando, Florida. Poster presentation by Crews LC.

2001. Woyke T, **Roberson RW**, Pettie RK. Pharmacodynamics of a potent dolastatin 10 derivative and effects on cryptococcal cell division. 101st American Society for Microbiology General Meeting, Orlando, Florida, Poster presentation by Woyke T.
2001. Woyke T, **Roberson RW**, Pettie RK. In vitro preclinical evaluation of auristatin PHE and effects on microtubule integrity and nuclear location in *C. neoformans*. The Bridging Disciplines Symposium. The College of Medicine, University of Arizona, Tucson. October 17-18, Poster presentation by Woyke T.
2002. Hohmann-Marriott MF, **Roberson RW**, Vermaas W. Ultrastructural comparison of *Synechocystis* sp. PCC 6803 wildtype and mutants deficient in respiration and photosynthesis 11th Western Photosynthesis Conference, January 3-6, Asilomar Conference Grounds, Pacific Grove, California, Poster presentation by Hohmann-Marriott MF.
2002. Vermaas WFJ, **Roberson RW**, Hohmann-Marriott MF, Jenk D, Cai Z, Faull K, Whitelegge J. Genome sequence-based functional and structural analysis of a transformable cyanobacterium: the *Synechocystis* sp. PCC 6803. Microbial Cell Project; Washington, DC. Poster presentation by Vermaas WFJ.
2003. **Roberson RW**. Microtubule organization in *Neurospora crassa*. XXII Fungal Genetics Conference, Asilomar, Pacific Grove, California, Poster presentation by **Roberson RW**.
2003. Lowry DS, Fisher KE, **Roberson RW**. Functional necessity of the cytoskeleton during cleavage membrane development and zoosporogenesis in *Allomyces macrogynus*. Mycological Society of America, Asilomar, Pacific Grove, California, Platform presentation by **Roberson RW**.
2003. van de Meene AML, **Roberson RW**, Hohmann-Marriott MF, Vermaas WFJ. Thylakoid membrane organization in the cyanobacterium Synechocystis sp.PCC 6803. 12th Western Photosynthesis Conference, Monterey Bay, California, Poster presentation by van de Meene AML.
2003. van de Meene AML, Reave LB, Hohmann-Marriott MF, Vermaas WFJ, **Roberson RW**. Using light and electron microscopy to investigate gene deletion mutants of Synechocystis sp. PCC 6803. Arizona Imaging and Microanalysis Society Conference, Tucson, Arizona, Poster presentation by van de Meene AML.
2003. van de Meene AML, Mohamed HE, **Roberson RW**, Vermaas WFJ. Thylakoid membrane organization in mutants of the cyanobacterium *Synechocystis* sp. PCC 6803 lacking genes involved in carotenoid biosynthesis. 103rd General Meeting of the American Society for Microbiology, Washington D.C., Poster presentation by van de Meene AML.
2003. van de Meene AML, Reavie LB, Hohmann-Marriott MFJ, Vermaas WFJ, **Roberson RW**. Three-dimensional ultrastructure of the cyanobacterium Synechocystis sp. PCC 6803 using electron tomography. American Society for Plant Biology, Honolulu, HI, Poster presentation by van de Meene AML.
2003. van de Meene AML, Reavie LB, Hohmann-Marriott MFJ, Vermaas WFJ, **Roberson RW**. Organization of thylakoid membranes in the cyanobacterium *Synechocystis* sp. PCC 6803. American Society of Cell Biology, San Francisco, California, Poster presentation by van de Meene AML.
2004. van de Meene AML, McDaniel JH, Vermaas WFJ, **Roberson RW**. Mechanisms of thylakoid biogenesis in Synechocystis sp. PCC 6803 suggested by electron

tomography. International Workshop on Structural Analysis of Supramolecular Assemblies by Hybrid Methods. Lake Tahoe, California, Poster presentation by van de Meene AML.

2004. Hohmann-Marriott MF, Van de Meen, AML, **Roberson RW**, Blankenship RE. Ultrastructure of the Photosynthetic Machinery of *Chlorobium tepidum.* 13th Western Photosynthesis Conference, January 8-11, Asilomar Conference Grounds, Pacific Grove, California, Poster presentation by Hohmann-Marriott MF.
2004. Hohmann-Marriott MF, Blankenship RE, **Roberson RW**. The Ultrastructure of the photosynthetic machinery of the green Sulfur bacterium *Chlorobium tepidum*. International Workshop on Structural Analysis of Supramolecular Assemblies by Hybrid Methods, March 17th to 20th, Granlibakken Conference Center, Lake Tahoe, California, Poster presentation by Hohmann-Marriott MF.
2004. Uchida M, **Roberson RW**. Polarized Growth and Hyphal Morphogenesis in Filamentous Fungi. Arizona Imaging and Microanalysis Society, March 22, Poster presentation by Uchida M.
2004. Uchida M, Perry E, **Roberson RW**. Mechanism of polarized growth and hyphal morphogenesis in *Neurospora crassa*. Neurospora Supplement p. 24, Abstract 27, Poster presentation by Uchida M.
2004. Uchida M, **Roberson RW**. Towards predicting cytoplasmic function from order and dynamics: 4-D cytoplasmic analysis of polarized hyphal tip growth. Mycological Society of America, Poster presentation by Uchida M.
2004. Uchida M, Bartnicki-García S, **Roberson RW**. Mechanisms of Hyphal Tip Growth and Morphogenesis in the Filamentous Fungus *Neurospora crassa*. Microscopy and Microanalysis, Savannah, Georgia, Poster presentation by Uchida M.
2005. Cordery CK, Livo LJ, Carey C, Davidson EW, **Roberson RW**, Chandler, D.E. Growth and differentiation of *Batrachochytrium dendrobatidis*. American Society of Parasitologists, Mobile, AL, July 6-13, Poster presentation by Cordery CK.
2005. Cordery CK, Livo LJ, Carey C, Davidson EW, **Roberson RW**, Chandler, D.E. Growth and differentiation of *Batrachochytrium dendrobatidis*. Rocky Mtn Conference of Parasitiologists, Apr 28-30, Casper WY, Poster presentation by Cordery CK.
2005. Cordery CK, Livo LJ, Carey C, Davidson EW, **Roberson RW**, Chandler, D.E. Maturation of *Batrachochytrium dendrobatidis*. Arizona Imaging and Microanalysis Society, Tempe, March, Poster presentation by Cordery CK.
2005. Hohmann-Marriott M, **Roberson RW**, Blankenship RE. Electron tomographic study of the photosynthetic apparatus of the green sulfur bacterium *Chlorobium tepidum,* 13th International Congress on Photosynthesis, Satellite Workshop on Photosynthetic Light-Harvesting Systems, August 26-29, Sainte-Adèle, Quebec, Canada, Poster presentation by Hohmann-Marriott M.
2005. Mouriño-Pérez RR, **Roberson RW**, Bartnicki-García, S. Microtubule dynamics during hyphal growth and branching in *Neurospora crassa.* XXIII Fungal Genetics Conference, Asilomar, Pacific Grove, CA. March 15-19, Poster presentation by Mouriño-Pérez RR.
2005. Köhli M, Knechtle P, Boudier K, **Roberson RW**, Philippsen, P. Spitzenkörper and Polarisome of *Ashbya gossypii***.** XXIII Fungal Genetics Conference, Asilomar, Pacific Grove, CA. March 15-19, Poster presentation by Köhli M.

2005. Kalkman ER, **Roberson RW**, Read, ND. Endocytosis: A Filamentous Fungal Perspective. XXIII Fungal Genetics Conference, Asilomar, Pacific Grove, CA. March 15-19, Poster presentation by Kalkman ER.
2005. Hohmann-Marriott M, **Roberson RW**, Blankenship RE. Electron tomographic determination of chlorosome distribution in *Chlorobium tepidum.* Meeting of the Arizona Imaging Society, Arizona State University, Tempe, AZ, March 24, Poster presentation by Hohmann-Marriot M.
2005. Hohmann-Marriot M, **Roberson RW**, Blankenship, R.E. Electron tomographic study of the green sulfur bacterium *Chlorobium tepidum* Gordon Conference on Photosynthesis, Smithfield, RI, July 2005, Poster presentation by Hohmann-Marriot M.
2005. Mohamed HE, van de Meene AML, **Roberson RW**, Vermaas W. Functional analysis of Slr1125, a putative glycosyl transferase involved with the synthesis of the myxoxanthophyll and the cell wall of *Synechocystis* sp. PCC 6803, IUMS meeting, San Francisco, Poster presentation by Mohamed HE.
2006. Vermaas W, **Roberson RW**, Hamad S, Wang B, Cai Z, van de Meene AML. The Cyanobacterium *Synechocystis* sp. PCC 6803: Membrane Biogenesis, Structure and Function. Microbial Cell Project, Washington, DC, Poster presentation by Vermaas W.
2006. Mouriño-Pérez, R R, Galván-Mendoza IJ, Riquelme M, Freitag M, **Roberson RW**, Uchida M, Bartnicki-García S. Comparative dynamics of the microtubular cytoskeleton in living hyphae of *Neurospora crassa* wild type, *ropy-1* and *ropy-3.* XXIV Fungal Genetics Conference, Asilomar, Pacific Grove, CA. March 15-19, Poster presentation by Mouriño Perez RR.
2006. Altamirano C, **Roberson RW**. Characterization of polarized growth in the fungus *Rhizopus*. MARC Student Presentations. ASU. Poster presentation by Altamirano C.
2006. Mouriño-Perez RR, Uchida M, Freitag M, **Roberson RW**, Bartnicki-Garcia S. Microscopia in vivo de la dinámica del citoesqueleto microtubular de *Neurospora crassa* silvestre, ropy-1, ropy-3 y nkin. En IX Congreso Nacional de Micología. Sociedad Mexicana de Micología. Del 17 al 20 de octubre. Ensenada, B.C. México. Universidad Autónoma de Baja California, Platform presentation by Mouriño Perez RR.
2006. Mouriño-Perez RR, **Roberson RW**. *In vivo* imaging of the dynamics of the microtubular cytoskeleton of *Neurospora crassa* wild type, ropy-1 and ropy-3. Eighth International Mycological Congress, Australia, August 19-25. Poster presentation by Mouriño Perez RR.
2006. Mouriño Perez RR, Mendoza IJG, Perez M, Freitag M, **Roberson RW**, Uchida M, Bartnicki Garcia S. Comparative dynamics of the microtubular cytoskeleton in living hyphae of *Neurospora crassa* wild type, ropy-1 and ropy-3, Eighth European Conference on Fungal Genetics April 08 -11. Viena. Poster presentation by Mouriño Perez RR.
2006. Uchida M, Mouriño-Perez RR, **Roberson RW**. Microtubule dynamics in a fast-growing fungus. Arizona Imaging and Microanalysis Society Annual Meeting, Tempe, Arizona, March 23, Poster presentation by Uchida M.

2006. Uchida M, Mouriño-Perez RR, **Roberson RW**. Apical microtubule dynamic instability in *Neurospora crassa* hyphae, *Neurospora* Annual Meeting, Pacific Grove, California, March 30–April 02, Poster presentation by Uchida M.
2007. Uchida M, Mouriño-Pérez RR, Freitag M, **Roberson RW**. Live cell imaging of microtubule dynamics in *Neurospora crassa* using total internal reflection fluorescence microscopy. 23rd Fungal Genetics Conference, Asilomar, Pacific Grove, CA. Poster and invited platform by Uchida M.
2008. Echauri-Espinosa RO, Callejas-Negrete OA, **Roberson RW**, Smith LG, Mouriño-Pérez RR. A homolog of coronin is required for cell polarity development in *Neurospora crassa*. Plant and Fungal Cytoskeleton, Gordon Conference, Il Ciocco Hotel and Resort, Lucca (Barga), Italy, August 3-8 Poster presentation by Mouriño-Pérez RR.
2009. Marten MR, Zhao L, Pollack JK, Kim Y, Sripthineni U, Moss BJ, Harris SD, Schaefer D, **Roberson RW**. Unraveling the role of autophagy in filamentous fungi. Engineering Conferences International. Poster presentation by Marten MR.
2009. Echauri-Espinosa RO, Callejas-Negrete OA, **Roberson RW**, Smith LG, Mouriño-Pérez RR. Actin binding proteins and endocytosis during tip growth of *Neurospora crassa*. 25th Fungal Genetics Conference, Asilomar, Pacific Grove, CA, March 16-23, Poster presentation by Echauri-Espinosa RO.
2009. MacLean D. Saucedo B, Propster J, **Roberson RW**. Exploring Hyphal Tip Structure. Mycological Society of America Annual Meeting, Snowbird Utah, July 25-29, Platform presentation by Saucedo B
2009. Bentivenga SP, Kumar TKA, Kumar L, Celio GJ, **Roberson RW**, McLaughlin DJ. Cellular organization in germ tube tips of the Glomeromycota: the taming of *Gigaspora*. Mycological Society of America Annual Meeting, Snowbird Utah, July 25-29, Poster presentation by Bentivenga SP.
2009. **Roberson RW**, MacLean D, Propster J, Saucedo B, Unger B. Hyphal tip structure of *Basidiobolus ranarum* (Zygomycota). X International Fungal Biology Conference and VIII Congreso Nacional de Biologia Molecular y Celular de Hongos, Ensenada, Baha California, Mexico, December 6-10, Poster presentation by Saucedo B.
2010. Marten MR, Zhao L, Pollack JK, Kim Y, Sripathineni U, Moss BJ, **Roberson RW**, Harris SD, Schaefer D. The impact of autophagy on *Aspergillus nidulans* morphology and cell wall material properties. Gordon Research Conference, Presented by Marten MR.
2010. Propster J, Saucedo B, Unger B, MacLean D, Funderberg M, Oneil TA, Lowry D, **Roberson RW**. Structural diversity among fungal hyphae: insights into cell growth and phylogeny. Arizona Imaging and Microanalysis Society, Arizona State University, Tempe, AZ, March 22, Poster presentation by Propster J.
2010. Lowry D, MacLean D, Oneil TA, Propster J, Saucedo B, Unger B, **Roberson RW**. Structural Diversity Among Fungal Hyphae: Insights into Cell Growth and Phylogeny. Microscopy and Microanalyisis. Portland, Oregon Aug 2-6, Poster presentation by Lowry D.
2010. Unger B, Funderburk M, Lowry D, MacLean D, Oneil TA, Saucedo B, **Roberson RW**. Using Subcellular Structure to Provide Insights into Fungal Phylogeny.

Discover 2010 Research Symposium, Arizona State University, Tempe, AZ, April 28, Poster presentation by Saucedo B.

2010. MacLean D, Saucedo B, **Roberson RW**. Hyphal Tip Structure of *Basidiobolous ranarum*. Western Region Meeting of MGE at MSA and Western Alliance to Expand Student Opportunities, Arizona State University, Tempe, AZ, January 28, Poster presentation by Saucedo B.

2011. Dee JM, Lowry DS, Mollicone MRN, Berbee ML **Roberson RW**. It happens all the time: cytological and phylogenetic evidence for gain and loss of hyphae in the class Monoblepharidomycetes (Chytridiomycota) highlights a common transition in fungal evolution. Mycological Society of America Annual Meeting, University of Alaska, Faribanks, AK, August 1-6, Platform presentation by Dee JM.

2012. **Roberson RW**. The structure of the hyphal apex: Spitzenkörper or not? Mycological Society of America Annual Meeting, Yale University, New Haven, Conn, July 15-18, Platform presentation by **Roberson RW**.

2012. Fisher K.E., Reyes R., Lowry D.L., Roberson R.W. Changes in hyphal growth and ultrastructure in two chitin synthase mutants of *Neurospora crassa*. Mycological Society of America Annual Meeting, Yale University, New Haven, Conn, July 15-18, Poster presented by Fisher K.

2013. Fisher K, Hamel R, Lowry DL, **Roberson RW**. Hyphal tip structure and cytoplasmic organization in the Zygomycota. Mycological Society of America Annual Meeting, Austin TX, August 11-15, Poster presented by Fisher K.

2014. Healy PA, Celio GJ, Kumar TKA, **Roberson RW**, McLaughlin DJ. Ultrastructure of Mitosis and Spindle Pole Bodies in the Zygomycetous Fungus *Coemansia reversa* Using Conventional Fixation and Freeze Substitution. Microscopy and Microanalyisis. August 4-8, Indianapolis, IN, Poster presentation by Celio GJ**.**

2016. Romberger I, Koessel K, Valecourt A, Mulvaney H, Holt A, Delgado-Alvarez D, Fisher K, Lowy D, **Roberson RW**. Subcellular Characters of Three Zygomycetous Fungi. The Arizona Imaging and Microanalysis Society. March 24, Tucson, AZ. Poster presentation by Romberger I Koessel K and Valecourt A.

2016. Romberger I, Koessel K, Valecourt A, Fisher K, Lowy D, **Roberson RW**. Structure and growth of zygomycetous hyphae. Mycological Society of America Annual Meeting, August 8, University of California, Berkeley. Poster presentation by **Roberson RW**.

2016. Verdín J, **Roberson RW**, Riquelme M. Conservation of cell polarity markers in the Fungi Kingdom Fungi. Biochemistry. November 2016. Poster presentation by Verdín J.

2017. **Roberson RW**, Fisher K, Romberger I, Lowry D, Shange P. Hyphal Tip Characteristics of Conidiobolus coronatus (Zoopagomycota, Entomophthorales). 85th Annual Meeting of the Mycological Society of America, July 16-19, Athens, GA. Oral presentation by **Roberson RW**.

2021. Gonzalez B, Shange P, La Mascus R, Solis G, Baluch DP, **Roberson RW**. Obstacle-Induced Branching in Filamentous Fungi. Virtual Meeting of the Mycological Society of America, Poster presentation by B Gonzalez.

WORKSHOP ORGANIZATION

2017. ZYGOLABS: Zygolife Workshop at Arizona State University, February 25-26, 2017. Attendance (professors, postdocs, grad students): Jason Stajich, Yan Wang, Jesus Pena, Tim James, William Davis, Joey Spatafora, Ying Li, Greg Bonito, Alessandro Desiro, Merlin White, Matt Smith, Robby Roberson, Phakade Shange. Organizer: **Roberson RW**.

2017. ZYGOLABS: Zygomycete Fungi in Teaching and Research. Attendance: 25 students and instructors. Organizers: Joseph Spatafora, Jason Stajich, Andrii Gryganski, Kerry O'Donnell, Matt Smith, Nicole Reynolds, Gerald Benny, Tim James, Kevin Amses, Merlin White, Greg Bonito, Robby Roberson. 85th Annual Meeting of the Mycological Society of America, July 15, Athens, GA.

TEACHING

UNDERGRADUATE:

Spring 1993	General Mycology (PLB402)	Enrollment: 25
Summer 1993	Cell Biology (BIO353; 12 lects)	Enrollment: 40
Fall 1993	Concepts of Biology (BIO181; 5 lects)	Enrollment: 75
Spring 1994	General Mycology (PLB402)	Enrollment: 25
Fall 1994	Algae and Fungi (PLB250; 7 lects)	Enrollment: 20
Spring 1995	General Mycology (PLB402)	Enrollment: 12
Fall 1995	Algae and Fungi (PLB250; 7 lects)	Enrollment: 18
Spring 1997	General Mycology (PLB402)	Enrollment: 25
Spring 1998	General Mycology (PLB402)	Enrollment: 25
Spring 2000	General Mycology (PLB402)	Enrollment: 15
Summer 2000	Cell Biology (BIO353)	Enrollment: 50
Summer 2001	Cell Biology (BIO353)	Enrollment: 50
Spring 2002	General Mycology (PLB402)	Enrollment: 17
Summer 2002	Cell Biology (BIO353)	Enrollment: 50
Summer 2003	Cell Biology (BIO353)	Enrollment: 50
Summer 2004	Cell Biology (BIO353)	Enrollment: 50
Spring 2005	General Mycology (PLB402)	Enrollment: 20
Summer 2005	Cell Biology (BIO353)	Enrollment: 50
Summer 2006	Cell Biology (BIO353)	Enrollment: 50
Spring 2007	General Mycology (PLB402)	Enrollment: 20
Spring 2007	Cell Biology (BIO353)	Enrollment: 110
Summer 2007	Cell Biology (BIO353)	Enrollment: 50
Spring 2008	Cell Biology (BIO353)	Enrollment: 120
Summer 2008	Cell Biology (BIO353)	Enrollment: 50
Spring 2009	Cell Biology (BIO353)	Enrollment: 170
Summer 2009	Cell Biology (BIO353)	Enrollment: 50
Spring 2010	Cell Biology (BIO 353)	Enrollment: 250
Summer 2010	Cell Biology (BIO353)	Enrollment: 50
Fall 2010	Cell Biology (BIO353)	Enrollment: 300
Spring 2011	Cell Biology (BIO353)	Enrollment: 300
Summer 2011	Cell Biology (BIO353)	Enrollment: 50
Spring 2012	Cell Biology (BIO353)	Enrollment: 300

Summer 2012	Cell Biology (BIO353)	Enrollment: 50
Spring 2013	Cell Biology (BIO353)	Enrollment: 300
Summer 2013	Cell Biology (BIO353)	Enrollment: 50
Spring 2014	Cell Biology (BIO353)	Enrollment: 310
Summer 2014	Cell Biology (BIO353)	Enrollment: 50
Fall 2014	Bio Recitation (BIO189)	Enrollment: 12
Spring 2015	Cell Biology (BIO353)	Enrollment: 300
Spring 2015	Cell Biology (BIO353)	Enrollment: 309
Summer 2015	Cell Biology (BIO353)	Enrollment: 27
Spring 2016	Cell Biology (BIO353)	Enrollment: 309
Summer 2016	Cell Biology (BIO353)	Enrollment: 23
Spring 2017	Cell Biology (BIO353)	Enrollment: 300
Summer 2017	Cell Biology (BIO353)	Enrollment: 17
Spring 2018	Cell Biology (BIO353)	Enrollment: 297
Summer 2018	Cell Biology (BIO353)	Enrollment: 25
Spring 2019	Cell Biology (BIO353)	Enrollment: 310
Spring 2019	Cell Biology (BIO 394)	Enrollment: 9
Summer 2018	Cell Biology (BIO353)	Enrollment: 25
Spring 2020	Cell Biology (BIO353)	Enrollment: 349
Spring 2020	Cell Biology (BIO 394)	Enrollment: 15
Spring 2021	Cell Biology (BIO353)	Enrollment: 350
Spring 2021	Cell Biology (BIO 394)	Enrollment: 15
Spring 2022	Cell Biology (BIO353)	Enrollment: 350
Spring 2022	Cell Biology (BIO 394)	Enrollment: 15
Spring 2023	Cell Biology (BIO353)	Enrollment: 179
Spring 2023	Cell Biology (BIO 394)	Enrollment: 12
Spring 2024	Cell Biology (BIO 353)	Enrollment: 167
Spring 2024	Cell Biology (BIO 394)	Enrollment: 13
Summer 2024	Cell Biology (Bio 353)	Enrollment: 236

GRADUATE:

Spring 1990	Bioimaging Lecture (BIO505)	Enrollment: 10
Spring 1990	Bioimaging Lab (BIO502)	Enrollment: 10
Fall 1991	Bioimaging Lecture (BIO505)	Enrollment: 10
Fall 1991	Bioimaging Lab (BIO502)	Enrolment: 10
Fall 1992	Bioimaging Lecture (BIO505)	Enrollment: 7
Fall 1992	Bioimaging Lab (BIO502)	Enrolment: 7
Fall 1993	Bioimaging Lecture (BIO505)	Enrollment: 8
Fall 1993	Bioimaging Lab (BIO502)	Enrolment: 8
Fall 1994	Bioimaging Lecture (BIO505)	Enrollment: 10
Fall 1994	Bioimaging Lab (BIO502)	Enrolment: 10
Fall 1995	Bioimaging Lecture (BIO505)	Enrollment: 8
Fall 1995	Bioimaging Lab (BIO502)	Enrolment: 8
Fall 1996	Bioimaging Lecture (BIO505)	Enrollment: 8
Fall 1996	Bioimaging Lab (BIO502)	Enrolment: 8
Fall 1998	Bioimaging Lecture (BIO505)	Enrollment:

Fall	1998	Bioimaging Lab (BIO502)	Enrolment: 4
Fall	1999	Bioimaging Lecture (BIO505)	Enrollment: 7
Fall	1999	Bioimaging Lab (BIO502)	Enrollment: 7
Spring	2000	Bioimaging Lecture (BIO598)	Enrolment: 15
Spring	2000	Bioimaging Lab (BIO502)	Enrolment: 5
Spring	2001	Advanced Cell Biology (BIO550; 7 lects)	Enrolment: 3
Fall	2001	Bioimaging Lecture (BIO505)	Enrollment: 15
Fall	2001	Bioimaging Lab (BIO502)	Enrolment: 5
Spring	2002	Advanced Cell Biology (BIO550; 7 lects)	Enrolment: 35
Fall	2002	Bioimaging Lab (BIO502)	Enrolment: 5
Spring	2003	Advanced Cell Biology (BIO550; 7 lects)	Enrolment: 35
Fall	2003	Bioimaging Lecture (BIO505)	Enrollment: 19
Fall	2003	Bioimaging Lab (BIO502)	Enrolment: 5
Fall	2004	MCB (MCB555; 8 lects)	Enrollment: 21
Fall	2004	Bioimaging Lecture (BIO505)	Enrollment: 19
Fall	2004	Bioimaging Lab (BIO502)	Enrolment: 7
Spring	2004	Advanced Cell Biology (BIO550; 7 lects)	Enrolment: 35
Fall	2005	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2005	Bioimaging Lab (BIO502)	Enrolment: 5
Spring	2005	Advanced Cell Biology (BIO550; 7 lects)	Enrollment: 3
Fall	2006	Bioimaging Lecture (BIO598)	Enrollment: 24
Fall	2006	Bioimaging Lab (BIO502)	Enrolment: 5
Fall	2006	MCB (MCB555; 8 lects)	Enrollment: 25
Spring	2006	Advanced Cell Biology (BIO550; 7 lects)	Enrolment: 35
Fall	2007	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2007	Bioimaging Lab (BIO502)	Enrolment: 5
Spring	2007	Advanced Cell Biology (BIO550; 7 lects)	Enrolment: 25
Spring	2007	Bioimaging SEM (BIO503)	Enrolment: 7
Fall	2008	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2008	Bioimaging Lab (BIO502)	Enrolment: 5
Fall	2008	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2009	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2009	Bioimaging Lab (BIO502)	Enrolment: 5
Fall	2009	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2010	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2010	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2011	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2011	Bioimaging Lab (BIO502)	Enrolment: 4
Fall	2011	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2012	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2012	Bioimaging Lab (BIO502)	Enrolment: 3
Fall	2012	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2013	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2013	Bioimaging Lab (BIO502)	Enrolment: 6
Fall	2013	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2014	Bioimaging Lecture (BIO598)	Enrollment: 18

Fall	2014	Bioimaging Lab (BIO502)	Enrolment: 4
Fall	2014	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2015	Bioimaging Lecture (BIO598)	Enrollment: 18
Fall	2015	Bioimaging Lab (BIO50)3	Enrolment: 2
Fall	2015	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2016	Bioimaging Lecture (BIO504)	Enrollment: 20
Fall	2016	MCB (MCB555; 8 lects)	Enrollment: 23
Fall	2017	Bioimaging Lecture (BIO504)	Enrollment: 24
Fall	2017	MCB (MCB555; 8 lects)	Enrollment: 23
Fall	2018	Bioimaging Lecture (BIO504)	Enrollment: 23
Fall	2018	MCB (MCB555; 8 lects)	Enrollment: 25
Fall	2019	Bioimaging Lecture (BIO504)	Enrollment: 12
Fall	2019	MCB (MCB555; 8 lects)	Enrollment: 16
Fall	2020	Bioimaging Lecture (BIO598)	Enrollment: 12
Fall	2020	MCB (MCB555; 8 lects)	Enrollment: 10
Fall	2021	Bioimaging Lecture (BIO504)	Enrollment: 10
Fall	2021	MCB (MCB555; 8 lects)	Enrollment: 12
Fall	2022	Bioimaging Lecture (BIO504)	Enrollment: 7
Fall	2022	MCB (MCB555; 8 lects)	Enrollment: 21
Fall	2023	Bioimaging Lecture (BIO504)	Enrollment: 6
Fall	2023	MCB (MCB555; 8 lects)	Enrollment: 22
Fall	2024	Bioimaging Lecture (BIO504)	Enrollment: 9
Fall	2024	MCB (MCB555; 8 lects)	Enrollment: 24

UNDERGRADUATE MENTORING/RESEARCH

1992 - 1993. Harry Pittman, BOT 499
1994 - 1996. Clay Smith, BOT 499
1994 - 1995. Keith Falls, BOT 499
1996 - 1998. Steve Sayegh, BOT 2015 - 2016.
1999 - 2000. Ynez Montoya (MARC Program), Independent Research,PLB 499
2002 - 2003. Jenny Hollis, PLB 499
2003 - 2004. Lindsey Revie, PLB 499
2004 - 2005. Jonathan Noyes-Elfstrom, PLB 499
2005 - 2006. Yuliya Ivanitshaya, Independent research in my lab in collaboration with Dr. Tim Newman (Dept Physics, ASU)
2004 - 2006. Chris Altamirano (MARC Program), Independent Research. Presently: Lab Manager at Arizona Instrument LLC, Chandler AZ
2008 - 2009. Dan MacLean, CHM 392 Introduction to Research Techniques (Spring, Fall; 3 hrs/semester). Presently: CVS Clinical Pharmacist, Scottsdale, AZ
2008 - 2010. Evonne Saucedo, CHM 392 Introduction to Research Techniques (Spring, Fall; 3 hrs/semester). Presently: Laboratory Technician II, Joule Unlimited Technologies, Urenco, New Mexico
2009. Tracy Le, BIO 499 Introduction to Research Techniques (Spring; 2 hrs/semester)

2009 - 2010. Brant Unger, CHM 392 Introduction to Research Techniques (Fall, Spring; 3 hrs/semester)
2009. Jeff Propster, BIO 499 Introduction to Research Techniques (Fall 3 hrs/semester). Presently: Ph.D. program Norther Arizona State University
2010. Matthew Funderburk, MBB 484; CHM 392 Introduction to Research Techniques (Spring, 6 hrs/semester)
2010. Van-Anh Huynh, CHM 392 Introduction to Research Techniques (Spring, 3 hrs/semester)
2010. Terrence Oneil, CHM 392 Introduction to Research Techniques (Spring, Summer Fall, Fall 3 hrs/semester). .
2010 - 2011. Kymia Parvanehgohar, CHM 392 Introduction to Research Techniques (Fall, 3 hrs/semester).
2010. Kimberly A. Shaffer, Undergraduate Honors Thesis: 'Identification of an exudate produced by fungal gardens of the desert leafcutter ant *Acromyrmex versicolor*'; Committee Member
2010. Stephanie Vera, Undergraduate Honors Thesis: 'Correlation of periodontal and heart disease'; Committee Member
2010. Jordan Yaron, Undergraduate Honors Thesis: 'Microscopy based automated cytotoxicity assay: studying heterogeneity and toxic variability in neoplastic progression of Barrett's esophagus cells'; Committee Member
2010 - 2011. Alexander Kampner, CHM3 92 Introduction to Research Techniques (Spring, 3 hrs/semester)
2011 - 2013. Ricardo Reyes, Bio 495 and Undergraduate Honors Thesis: 'Fungal cell growth and development'; Committee Chair.
2013. Shannon Izuka, BIO 495 Undergraduate Research (Fall, 3 hrs/semester)
2013 - 2014. Omar Oregon, BIO 495 Undergraduate Research (Fall/Spring, 3 hrs/semester)
2014 - 2015. Charlotte Grace, BIO 495 Undergraduate Research (Spring, 3 hrs/semester)
2015 - 2016. Isobel Romberger, BIO 495 Undergraduate Research (Spring/Fall, 3 hrs/semester). Presently: Research Technician Roberson Laboratory
2015 - 2016. Archer Valecourt, BIO 495 Undergraduate Research (Fall, 3 hrs/semester)
2015 - 2016. Holly Mulvaney, BIO 495 Undergraduate Research (Fall, 3 hrs/semester)
2015 - 2016. Karissa Koessel, BIO 495 Undergraduate Research (Fall, 3 hrs/semester)
2017. Erin Wiley, BIO 495 Undergraduate Research (Fall, 3 hrs/semester)
2017. Barbara Pardue, BIO 495 Undergraduate Research (Fall, 3 hrs/semester)
2018. Matt Acosta, Undergraduate Research Volunteer
2018. Francisco Acosta, MIC 401, Reviewer
2018. Rebcca Schiavone, MIC 401, Reviewer
2018 – 2019. Phakade Shange, Undergraduate Research Volunteer
2019. Karishma Kothari, MIC 401, Reviewer
2019 – 2020. Ben Gonzalez, Undergraduate Research Volunteer
2019 – 2020. Rachel La Mascus, BIO 495 Undergraduate Research (Fall, Spring 3 hrs/semester)

2020. Gabriella Solis, Undergraduate Research Volunteer
2023. Fatima Alzowaid, MIC 401, Reviewer

ASU BARRETT HONORS COLLEGE CONTRACTS:

Jacqueline Huynh (Spring 2008)
Melissa Kelsey (Spring 2008)
Alysa Bayann (Fall 2010)
Cheyenne Ullrich (Spring 2013)
Ian Meshay (Spring 2013)
Laura Tichacek (Spring 2013)
Zachary Heth (Spring 2013)
John Zobian (Spring 2013)
Sasha Sypkens (Spring 2015)
Carlyn Harris (Spring 2015)
J. Gage Buness (Spring 2015)
Sindhu Rajan (Spring 2015)
Jenna DeRubeis (Spring 2015)
Caroline Erickson (Spring 2015)
Valerie Loo (Spring 2015)
Gage Bebak (Spring 2016)
Patricia Cosac (Spring 2016)
Alicia Darwin (Spring 2016)
Beniamin Drotar (Spring 2016)
Maya Erler (Spring 2016)
Nyle Hamidi (Spring 2016)
Achal Patel (Spring 2016)
Spencer Pearce (Spring 2016)
Adum Samuel (Spring 2016)
Aidan Schneider (Spring 2016)
Trevor Smith (Spring 2016)
Serena Suwarno (Spring 2016)

ASU BARRETT HONORS COLLEGE THESIS:

Ricardo Reyes (advisor, defended Spring 2012)
TK Tsang (second reader, defended Spring 2013)
Spenser Babb-Biernacki (second reader, defended Spring 2016)
Bradly Sommer (second reader, 2018)

GRADUATE STUDENT MENTORING

Ph.D. STUDENTS:

1997. Marie Vargas (Ph.D., Botany): Advisor. Dissertation title: 'Cell Morphogenesis in *Allomyces*.' Presently: Professor of Biology, University of Puerto Rico at Mayagüez

2000. Dennis McDaniel (Ph.D., Plant Biology), Dissertation title: 'The role of the Spitzenkörper in hyphal growth of fungi'. Presently: Director, Microscopic Imaging,

Biomedical Instrumentation Center Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Room G232, Bethesda, MD 20814.

2005. Anabelle Aranda (Co-advisor, UT, El Paso): Dissertation title: 'Cell cycle regulation in yeast.'

2006. Martin Hohmann-Marriott (Ph.D., co-advisor with Bob Blankenship)**:** Dissertation title: 'Structure of photosynthetic apparatus in *Chlorobium tepidum*'. Presently: Associate Professor, Department of Biotechnology, Norwegian University of Science and Technology, NTNU N-7491 Trondheim, Norway.

2007. Maho Uchida (SoLS, Ph.D.): Dissertation title: 'Cell growth and morphogenesis in fungal hyphae', ASU. Postdoctoral Associate in Dr. Caroline Larabell, University of California, San Francisco, 2008–2011.

2015. Ramon Echauri Espinosa (Ph.D., Co-Advisor with Dr. Mouriño-Pérez): Dissertation research: 'The role of coronin a smooth modulator of endocytosis and tip growth in *Neurospora crassa* Departamento de Microbiología, CICESE, Mexico

2015. Karen Fisher (SoLS, Ph.D.): Dissertation research: 'Understanding cell wall formation in *Neurospora crassa*: detection and mapping of chitin synthase.' Presently: Laboratory Manager in Roberson lab.

2018. Shelbi Peck (Ph.D., Co-Advisor with Dr. Page Balcuh)

2018. Bukola Obayomi (Ph.D., Co-Advisor with Dr. Page Balcuh)

2020. Guillermo Ortiz (Ph,D, Co-Advisor with Dr. Frank Bungartz)

M.S. STUDENTS:

1994. Srijayanthi Srinivasan (MS, Plant Biology). Thesis title: 'Functional, organizational, and biochemical analysis of actin in the hyphal tip cells of *Allomyces macrogynus*'.

1995. David Lowry, (MS, Plant Biology). Thesis title: 'The distribution and function of the cytoskeleton during zoospore formation in *Allomyces macrogynus*.' Presently: Lab Manager College Liberal Arts and Sciences Electron Microscopy Facility ASU.

1996. Michael W. Harding, (MS, Plant Biology). Thesis title: 'Host-Parasite Relationships of Uredinidal Infections in Fast and Slow Rusting *Culti*vars of Bean.' Presently: Research Scientist, Plant Pathology, Government of Alberta, Agriculture and Rural Development, Edmonton, Canada

1998. Matthew Garrett (MS, Plant Biology), Thesis title: 'The effects of pisatin on the growth and ultrastructure of hyphal tip cells in *Nectria haematococca*.' Presently: High School Biology Teaher, Phoenix School District.

2001. Laura Crews (MS, Molecular and Cellular Biology), Thesis title: 'Antifungal activities of 1-(3▪ , 4▪ , 5▪ -trimethoxyphenyl)-2-nitro-ethylene.'

2003. Jennifer Hollis-McDaniel (MS, Plant Biology), Thesis title: "Fungal spore formation in aqueous environments.'

2005. Scott Bates (MS, Plant Biology): Thesis title: 'The distribution and evolution of puffball fungi in Arizona.'

2007. Silvia Lucrecia Ramos García (MS, Co-Advisor with Dr. Mouriño-Pérez): Thesis title: 'Nuclear migration in *Neurospora crassa*,' Departamento de Microbiología, CICESE, Mexico.

2014. Arianne Ramírez del Villar (MS, Co-Advisor with Dr. Mouriño-Pérez): Thesis title: 'Identification and characterization of intracellular changes associated with myosin

class V in the filamentous fungus *Neurospora crassa*,' Departamento de Microbiología, CICESE, Mexico.

2019. Phakade Shange (MS, MCB). Thesis title: 'Cytoplasmic behaviors in zygomycete hyphae.' Graduated 2020.

2020. Benjamin Gonzalez (MS, MCB). Thesis title: 'Cell Branching in Ascomycota and Mucoromycota Fungi.' Graduated 2021

Member, Ph.D. Committees:

Steven Presgraves	MCB ASU; 1998-2004
Catherine Parmiter	Plant Biology ASU; 2000-2005
Linda Morse	Plant Biology ASU; 2001-2005
Laura Morse	Plant Biology ASU; 2001-2005
Sheetal Karnik	MCB ASU; 2001-2005
Ramon Grima	MCB ASU; 2002-2005
Matthew Lingard	MCB ASU; 2002-2006
Lucy Bradley	Plant Biology ASU; 2002-2006
Li Zhi	SoLS ASU; 2004-2007
Lindsey Burnett	SoLS ASU; 2004-2007
Loleta George	SoLS ASU; 2004-2007
Sawsan Hamad	SoLS ASU; 2006-2008
Scott Bates	SoLS ASU; 2004-2009
Joshua Stomel	SoLS ASU; 2005-2010
Emel Topal	Plant Biology ASU, 2005-2010
Danny Yao	SoLS ASU; 2005-2010
Pavithra Gopalan	SoLS ASU; 2009-2012
Ramon Qsvaldo	Investigadora del Departamento de Microbiología. Division de Biología Experimental y Aplicada.CICESE Carretera Ensenada-Tijuana 3918. Zona Playitas, Ensenada, B. C.;
2009 -	2013
Robin Paul	Department of Chemistry and Biochemistry; 2010-2013
Catlin Otto	SoLS ASU; 2010-2013
Anasuya Pal	Department of Chemistry and Biochemistry; 2012-2015
Robin Paul	Department of Chemistry and Biochemistry; 2012-2015
Kamesh Regmi	SoLS ASU; 2011-2016
Brandon Guida	SoLS ASU; 2011-2016
Vicki Moore	SoLS ASU; 2011-2016
Alexander Tomes	SoLS ASU; 2015-2020
Zeni Ramirez	SoLS ASU; 2017-2020
Arnat Balabiyev	SoLS ASU; 2017-2020
Lin Li	SoLS ASU; 2017-2020
Tangsiyuan Hua	SoLS ASU; 2021-Current
Mark Knappenberger	SoLS ASU; 2019-2023
Juan M. Martínez-Andrade	Investigadora del Departamento de Microbiología. Division de Biología Experimental y Aplicada.CICESE Carretera Ensenada-Tijuana 3918

POSTDOCTORAL MENTORING

2014-2015. Dr. Diego L. Delgado. Presently: Bioimaging Technician, Department of Microbiology. Centro de Investigación Científica y de Educación Superior de Ensenada, Ensenada, BC 22860, Mexico.

2001-2003. Dr. Allison van deMeene. Presently: Academic Specialist, BioSciences, The University of Melbourne, Parkville 3010 VIC Australia.

AWARDS AND HONORS OF GRADUATE AND UNDERGRADUATE STUDENTS

Evonne Saucedo: Third place poster award in the WAESO Undergraduate Poster Presentation, January, 2010. ASU. 'Using Subcellular Structure to Provide Insights into Fungal Phylogeny'

Chris Altamirano: Best Student Presentation. Arizona Imaging and Microanalysis Society, Tucson, AZ. 2006. 'Organization and dynamics of microtubules during hyphal growth in *Rhizopus*'

Martin Hohmann-Marriott: Young Investigator Certificate of Excellence, Gordon Conference on Photosynthesis, Smithfield, RI, July 2005

Dennis McDaniel: Outstanding Student Presentation. Mycological Society of America, Puerto Rico, 1998. '▪ -Tubulin localization in hyphae of *Allomyces'*

Michael W. Harding: Outstanding Student Poster Award. Mycological Society of America, Indianapolis, IN. 1996. 'Uredinia development and host-parasite relationships in slow-rusting of bean'

David Lowry: Outstanding Student Poster Award. Mycological Society of America, San Diego, Ca. 1995. 'The effects of nocodazole and cytochalasin D on cytoplasmic cleavage in zoosporangia of *Allomyces macrogynus*: an ultrastructural study'

Maria Vargas: Outstanding Student Paper Award. Mycological Society of America, Portland, OR. 1992. 'The apical body in hyphal tips of *Allomyces macrogynus*'

Benjamin Gonzalez: Best Student Poster Award. Obstacle-Induced Branching in Filamentous Fungi. Microscopy and Microanalysis, Milwaukie, Wisconsin, August 5, 2020

CONTRIBUTIONS TO SCHOLARLY ARTICLES AND BOOKS

1990. Electron micrograph used in article entitled, 'To shape a cell: an inquiry into the causes of morphogenesis of microorganisms', by F.M. Harold; Microbiological Reviews 1990, Page. 400

1990. Electron micrographs used in article entitled, 'Role of actin in tip growth' by Martin W. Steer; *In*: 'Tip Growth in Plants and Fungal Cells' (ed. I.B. Heath), Academic Press, San Diego; Figures 9a and b, Pages. 130,131.

1991. Electron micrographs used in text book entitled, 'Botany: An Introduction to Plant Biology' by J.D. Mauseth, Sanders College Publishing, Philadelphia, Pa. Page. 540.

1994. Electron micrograph used as cover illustration for newsletter publication of 'Zoosporic Fungi' (#16).

1996. Light and electron micrographs used in text book entitled, 'Introductory Mycology (Fourth Edition)' by C. Alexopoulos, C.W. Mims, and M. Blackwell, Wiley and Sons, New York, San Diego. Pages: 48, 643, 644, 715

1997. Electron micrographs used in text book entitled, 'Modern Mycology (Third Edition) by J.W. Decon, Blackwell Science. Pages: 33, 34
2001. Front cover illustration for Fungal Genetics and Biology. 31(3).
2001. Front cover illustration for Mycologia (Official journal of The American Mycological Society) 93(1).
2001. Front cover illustration of the book 'The Fungi, 2nd Ed., Academic Press.
2001. Electron micrographs contribution to 'The Way of the Cell: Molecules, Organisms and the order of Life' By F.M. Harold, Oxford Press
2005. Electron micrographs used in text book entitled, 'Modern Mycology (Forth Edition)' by J.W. Decon, Blackwell Science. Pages: 52
2005. Electron micrographs (Figures 1a, b) used in research article, 'Protein structures forming the shell of primitive bacterial organelles', Kerfeld et al., Science 309: 936-938.
2006. Electron micrograph (Figure 2) used in reveiw article, 'The Spitzenkorper: a molecular perspective', Virag, A., and S. D. Harris, Mycological Res. 110: 4-13.

ACADEMIC COMMITTEES AND SERVICES

1990-91/1995.	Plant Biology Departmental Seminar (ASU)
1991-1994.	Departmental Affirmative Action Committee (ASU)
1993-1997.	Plant Biology Computer Committee (ASU)
1994-1996.	Executive Committee for the Molecular and Cellular Biology Program (ASU)
1995-1997.	Director of Plant Biology Graduate Program (ASU)
1999-2001.	Executive Committee for the Molecular and Cellular Biology Program (ASU)
1999-2002.	Undergraduate Plant Biology Advising Committee (ASU)
2001-2002.	Molecular and Cellular Biology Graduate Studies Committee (ASU)
2001-2003.	College of Liberal Arts and Sciences Committee on Quality of Instruction (ASU)
2004-2007. (ASU)	Executive Committee for Computational Biology Concentration
2005-2007.	Honors and Awards Committee (SoLS, ASU)
2004-2006.	Bioimaging Search Committee (co-chair, SoLS)
2014.	Biofuels Search Committee (member, SoLS)
2005-present.	Center for Solid State Science Facilities Advisory Committee; The Center for Solid-State Science (ASU)
2016.	Cryo-electron Microscopy Faculty Search Committee (member, Physics)
2016.	Cryo-electron Microscopy Research Scientist Search Committee (member, Physics)
2017-2019.	Eyring Materials Center Governance Board
2023-present.	SoLS Undergraduate Committee

PROFESSIONAL COMMITTEES, SERVICE, AND AWARDS

1989-1991. Arizona State University Representative, Arizona Society for Electron Microscopy and Microprobe Analysis

1989-1993. Awards Committee, Mycological Society of America; 1992-1993 Chair.

1991. Symposium organizer and chair: 'Hyphal Tip Growth and Morphological E vents' Mycological Society of America, August 4-9, San Antonio, Texas

1992-1993. National Science Foundation Task Force on Cell Surfaces (Contributing Member)

1992-1993. President, Arizona Society for Electron Microscopy and Microprobe Analysis.

1995. Member of External Review Team for the Department of Biological Sciences Graduate and Undergraduate Programs at the University of Texas - El Paso.

1996. Symposium organizer and chair: 'New Techniques in the Analysis of Cell Structure and Function.' Arizona Imaging and Microanalysis Society. University of Arizona, Tucson, AZ. March

2000-2002. Associate Editor Mycologia

2000-2005. Associate Editor Mycological Research

2001. Symposium organizer and chair: 'The Cell Biology of Fungi.' Mycological Society of America, August 25-29, Salt Lake City, UT

2001. NSF Panel Member: Instrument Development for Biological Research December 13-14

2001-2004. Council member representing Cell Biology for the Mycological Society of America

2001-2002. Member of the International Scientific Program Committee for the VIII Fungal Biology Conference; December 2-6, 2002, Guanajuato, Mexico

2002. Symposium organizer and chair: 'Structural Fungal Biology'. VIII Fungal Biology Conference; December 2-6, Guanajuato, Mexico

2002. Guest Editor: Fungal Genetics and Biology (Volume 37) --Special Issue Honoring the work of Dr. Salomon Bartnicki-Garcia

2003. Symposium organizer and co-chair (Xin Xang): 'The Fungal Cytoskeleton'. XXII Fungal Genetics Conference, March 18 - 23. Asilomar, Pacific Grove, CA

2003. Symposium organizer and co-chair (Nick Read): 'Fungal Cell Biology.' Mycological Society of America and British Mycological Society Meeting, July 26-31. Asilomar, Pacific Grove, CA

2003. Mycological Society of America Fellow

2005. Organizer and co-chair (Gero Steinberg): 'The Fungal Microtubules.' 23rd Fungal Genetics Conference, March. Asilomar, Pacific Grove, CA

2003-2010. Steering Committee for International Fungal Biology Conference

2004. NSF Panel Member: Multi-user Biological Equipment and Instrumentation Resources, February 4-6

2004-2005. President for Arizona Imaging and Microanalysis Society

2005. NSF Panel Member: Multi-user Biological Equipment and Instrumentation Resources, February 24-25

2004-2006. Mycological Society of America Genetics and Cell Biology Committee

2005-2007. Associate Editor Mycologia
2009-2012. Associate Editor Mycologia
2009-2010. Mycological Society of America Cell Biology Counsel; Chair
2009. ZRG1 CB-Q NIH study section for review of S10 applications in the area of electron microscopy. July 7th.
2009. Symposium Co-organizer. Xth International Fungal Biology Conference and VIII Congreso Nacional de la Rama de Biologia Molceular y Celulary di Hongos de la Sociedad Mexicana de Bioquimica, Ensenada, Baja California, Mexico, 6-10 December. Symposium Title: Charles Bracker Microscopy; Chairs: Salomon Bartnicki-Garcia and R. W. Roberson.
2009. Scientific Program Committee for Xth International Fungal Biology Conference, December 6-10, 2009, Ensenada, Baha California, Mexico

PROFESSIONAL SOCIETY MEMBERSHIP

Mycological Society of America
Microscopy Society of America
Arizona Society for Electron Microscopy and Microbeam Analysis

REVIEWING ACTIVITIES

Canadian Journal of Botany, Canadian Journal of Microbiology, Protoplasma, Mycologia, International Journal of Plant Sciences, Mycological Research, Journal of Microscopy, Fungal Genetics and Biology, Fungal Biology, PLoS One, Protoplasma