

Jeffrey K Schachterle

Assistant Professor
Brigham Young University
Department Microbiology and Molecular Biology
4007 Life Sciences Building
Provo, UT 84604

Education:

Ph.D. Genetics, Michigan State University, East Lansing, MI
2014 – 2019

B.S. Biochemistry; Genetics and Biotechnology, Brigham Young University, Provo, UT
2007 – 2014; Magna Cum Laude

Research Experience:

Assistant Professor

Brigham Young University, Provo, UT
Dept. Microbiology & Molecular Biology
Virulence of phytopathogenic bacteria
Aug. 2023 – Present

Research Plant Pathologist

USDA–ARS, ETSARC, Cereal Crops Research Unit, Fargo, ND
Bacterial diseases of wheat and barley
July 2021 – July 2023

Research Geneticist (Research Associate)

USDA–ARS, U.S. National Arboretum, Floral and Nursery Plants Research Unit, Beltsville, MD
Qi Huang Lab
Regulation and mechanisms of *Ralstonia solanacearum* cool-temperature virulence
Aug. 2019 – June 2021

Graduate Research Fellow

Michigan State University, East Lansing, MI
George W. Sundin Lab
Erwinia amylovora sRNA regulation of virulence
Aug. 2014 – July 2019

Research Assistant

Brigham Young University, Provo, UT

David L. Erickson Lab

Yersinia pseudotuberculosis regulation of biofilm formation

Aug. 2011 – July 2014

Peer Reviewed Publications:

Payne, S., Longhurst, J., Correa Lazaro, E., Jackson, M., Scott, J., Daines, S., Brink, C., Chamberlain, H., Gwilliam, J., Higgins, G., Domike, M., Moffat, R., Larson, A., Danielson, P., Hwang, H., Aggabao, S., Peless, H., Bogh, A., Radke, K., Van Oostendorp, B., Harrell, C., Johnson, A., Olsen, N., Danielson, P., Wilhite, T., **Schachterle, J.K.**, Avery, S., Breakwell, D., Pickett, B. Genome sequences of Four A1 Subcluster *Mycobacterium smegmatis* Bacteriophages. *Microbiology Resource Announcements (submitted)*. 2024.

Radke, K., Peless, H., Chamberlain, H., Aggabao, S., Ridd, R., Amsbury, D., Cannon, J., Fisher, T., Danielson, P., Jackson, M., Hyunbi, H., Scott, J., Correa Lazaro, E., Bogh, A., Longhurst, J., Payne, S., Olsen, N., Van Oostendorp, B., Harrell, C., Johnson, A., **Schachterle, J.K.**, Avery, S., Breakwell, D., Pickett, B. Genome sequence of Cluster A6 Bacteriophage Lilbunny, Isolated using *Mycobacterium smegmatis* mc²155. *Microbiology Resource Announcements (submitted)*. 2024.

Jackson, M., Hwang, H., Danielson, P., Walbom, E., Van Oostendorp, B., Harrell, C., Johnson, A., Olsen, N., Danielson, P., Wilhite, T., **Schachterle, J.K.**, Avery, S., Breakwell, D., Pickett, B. Genome sequence of Cluster F1 *Mycobacterium smegmatis* phage Fastidio. *Microbiology Resource Announcements (submitted)*. 2024.

*Radke, K., *Rivers, B., *Simpkins, M., *Hardy, J., **Schachterle, J.K.** Characterization and genomics of pectinolytic bacteria isolated from soft rot symptomatic produce. *Pathogens*. 2024. doi: 10.3390/pathogens13121096.

Radke, J., Ochoa-Repáraz, J., Nixon, J., Acharya, S., Bridgewater, H., Burger, J., Cheever, A., Darby, R., Doyle, W., Gaur, A., Githuku, E., Goodman, R., Haynie, C., Hedelius, H., Hill, K., Iqbal, M., Laabi, S., Moreno, C., Moss, M., Parveen, N., Rapier-Sharman, N., Sadeghi, S., Saleh, S., Schumacher, S., Sharp, M., Souza, N., Thapa, S., Aggabao, S., Amsbury, D., Bautista, S., Bogh, A., Bohn, A., Brink, C., Bryner, B.S., Cannon, J., Carrington, S., Chamberlain, H., Cherry, A., Cole, M., Corrales, E., Cullimore, C., Daines, S., Danielson, P., Domike, M., East, M., Ellis, B., Evans, T., Fears, Z., Fellars, P., Fisher, T., Floyd, B., Gibson, T., Gueller, M., Gupta, H., Gwilliam, J., Hansen, M., Hardy, J., Harrell, C., Hassell, R., Hendricks, W., Hendrix, C., Henstrom, H., Hernandez Sanguino, K., Higgins, G., Hwang, H., Jackson, M., Jensen, C., Johnson, A., Kang, C., Kim, S., LaFollette, A., Larsen, P., Larson, A., Leary, B., Longhurst, J., Mann, M., Martinez, I., Matthews, B., McStraw, C., Mireill, N., Moffat, R., Mourik, P., Mudrow, M., Odell, M., Oler, B., Olsen, N., Paymard, N., Payne, S., Pearson, L., Peter, J., Peterson, T., Puentes Navarro, D., Radke, K., Richardson, J., Ridd, R., Rowe, A., Schmanski, R.,

Scott, J., Scott, J., Simpkins, M., Sisk, M., Smith, T., Smith, B., Sy, J., Trejo, G., Van Oostendorp, B., Walbom, E., Whetten, R., Zollinger, D., Braunsten, M., Breakwell, D.P., Chakraborty, A., Crook, M., Culumber, M., Hatch, W., Jimenez, V., Nematollahi, W., Olson, M., Poritz, M., Ririe, S., **Schachterle, J.K.**, Wiltbank, L., Kelson, T., Pickett, B. A Summary of the Main Themes and Findings Presented at the ASM Intermountain Branch Meeting (2024). *mSphere*. 2024. doi: 10.1128/msphere.00481-24.

Acharya, K., Liu, Z., **Schachterle, J.K.**, Kumari, P., Xu, S.S., Faris, J.D., Green, A.J. Genetic mapping of QTLs for resistance to bacterial leaf streak in hexaploid wheat. *Theoretical and Applied Genetics*. 2024. doi:10.1007/s00122-024-04767-x.

Karki, M., Chu, C.N., Anderson, K.M., Nandety, R.S., Fiedler, J.D., **Schachterle, J.K.**, Bruggeman, R., Liu, Z., Yang, S. Genome-wide association study of host resistance to Hessian fly in barley. *Phytopathology*. 2023. Doi: 10.1094/PHYTO-06-23-0192-R.

Schachterle, J.K.; Huang, Q. Differentiation of cool-virulent strains in *Ralstonia solanacearum* species complex by melt curve of DNA fragment from effector gene *ripS1*. *Phytofrontiers*. 2023. doi: 10.1094/PHYTOFR-09-22-0097-R.

Schachterle, J.K.; Shi, G.; Baldwin, T.; Liu, Z. Complete genomes of two *Xanthomonas translucens* pv. *translucens* strains isolated from barley. *Microbiology Resource Announcements*. 2022. doi: 10.1128/mra.00010-22.

Schachterle, J.K.; Gdanetz, K.; Pandya, I.; Sundin, G.W. Identification of novel virulence factors in *Erwinia amylovora* through temporal transcriptomic analysis of infected apple flowers under field conditions. *Molecular Plant Pathology*. 2022. doi: 10.1111/mpp.13199.

Slack, S.M.; **Schachterle, J.K.**; Sweeney, E.M.; Kharadi, R.R.; Peng, J.; Botti-Marino, M.; Bardaji Goiketxea, L.; Pochubay, E.A.; Sundin, G.W. In-orchard population dynamics of *Erwinia amylovora* on apple flower stigmas. *Phytopathology*. 2022. doi: 10.1094/PHYTO-01-21-0018-R.

Schachterle, J.K.; Huang, Q. Implication of the type III effector RipS1 in the cool-virulence of *Ralstonia solanacearum* strain UW551. *Front. Plant Sci*. 2021. doi: 10.3389/fpls.2021.705717.

Schachterle, J.K.; Huang, Q. A high-throughput virulence screening method for the *Ralstonia solanacearum* species complex. *J. Microbiol. Methods*. 2021. 187:106270.

Kharadi, R.R.; **Schachterle, J.K.**; Yuan, X.; Castiblanco, L.F.; Peng, J.; Slack, S.M.; Zeng, Q.; Sundin, G.W. Genetic dissection of the *Erwinia amylovora* disease cycle. *Annu. Rev. Phytopathol*. 2021. doi: 10.1146/annurev-phyto-020620-095540.

Peng, J.; **Schachterle, J.K.**; Sundin, G.W. Orchestration of virulence factor expression and modulation of biofilm dispersal in *Erwinia amylovora* through activation of the Hfq-dependent small RNA RprA. *Mol. Plant Pathol*. 2021. 22(2): 255-270.

Zeng, Q.; Pulawska, J.; **Schachterle, J.K.** Early events in fire blight infection and pathogenesis of *Erwinia amylovora*. *J. Plant Pathol*. 2020. doi: 10.1007/s42161-020-00675-3.

Schachterle, J.K.; *Onsay, D.M.; Sundin, G.W. Small RNA ArcZ regulates oxidative stress response genes and regulons in *Erwinia amylovora*. *Front Microbiol.* 2019. 10:2775.

Shin, G.Y.; **Schachterle, J.K.;** Shyntum, D.Y.; Moleleki, L.N., Coutinho, T.A.; Sundin, G.W. Functional characterization of a global virulence regulator Hfq and identification of Hfq-dependent sRNAs in the plant pathogen *Pantoea ananatis*. *Front Microbiol.* 2019. 10:2075.

Schachterle, J.K.; Sundin, G.W. The leucine-responsive regulatory protein Lrp participates in virulence regulation downstream of small RNA ArcZ in *Erwinia amylovora*. *mBio.* 2019. 10(3):e00757-19.

Peng, J.P.; Triplett, L.; **Schachterle, J.K.;** Sundin, G.W. Identification and functional characterization of a chromosomally-encoded *hok/sok* toxin-antitoxin system in the fire blight pathogen *Erwinia amylovora*. *Appl. Environ. Microbiol.* 2019. 85(15):e00724-19.

Schachterle, J.K.; Zeng, Q.; Sundin, G.W. Three Hfq-dependent small RNAs regulate flagellar motility in the fire blight pathogen *Erwinia amylovora*. *Mol Microbiol.* 2019. doi: 10.1111/mmi.14232.

Schachterle, J.K.; Stewart, R.; Schachterle, M.B.; Calder, J.; Kang, H.; Prince, J.T.; Erickson, D.L. *Yersinia pseudotuberculosis* BarA-UvrY two-component regulatory system represses biofilms via CsrB. *Front Cell Infect Microbiol.* 2018. 8:323. doi: 10.3389/fcimb.2018.00323.

Presentations:

*Hardy, J., *Radke, K., *Rivers, B., *Simpkins, M., **Schachterle, J.K.** Genomic and phenotypic diversity of pectinolytic bacteria associated with post-harvest soft rot disease. BYU Life Sciences Research Conference, Provo, UT, October 2024. ¶§

*Cherry, A., *Longhurst, J., **Schachterle, J.K.** The potential use of bacteriophages as a biocontrol against the causative agents of soft rot disease. BYU Life Sciences Research Conference, Provo, UT, October 2024. ¶§

*Hardy, J., *Radke, K., *Rivers, B., *Simpkins, M., **Schachterle, J.K.** Genomic and phenotypic diversity of pectinolytic bacteria associated with post-harvest soft rot disease. Molecular Genetics of Bacteria and Phages Meeting, Madison, WI, August 2024. ¶

Velasco, D., Belen, G., **Schachterle, J.K.,** Liu, Z., Baldwin, T. Understanding local field diversity of *Xanthomonas translucens* pv. *translucens* in North Dakota through comparative accessory genome analysis. International Conference on Plant Pathogenic Bacteria, Blacksburg, VA, July 2024. ¶§

Walbom, E.W., Danielson, P.C., Pearson, L., Bautista, S.I.G., Hwang, H., Olsen, N.A., Johnson, A.M., Van Oostendorp, B., Harrell, C.C., Danielson, P., Wilhite, T., Avery, S., **Schachterle, J.K.,** Breakwell, D.P., Pickett, B.E. Three novel F1 subcluster Mycobacteriophages. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

Ridd, R.T., Fisher, T.G., East, M.J., Cannon, J.R., Amsbury, D.C., Danielson, P., Harrell, C.C., Johnson, A.M., Olsen, N.A., Van Oostendorp, B., Wilhite, T., Avery, S., **Schachterle, J.K.**, Breakwell, D.P., Pickett, B.E. Lilbunny – A siphovirus isolated from compost containing rabbit manure. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

Payne, S.T., Daines, S.B., Brink, C.B., Chamberlain, H.H., Jackson, M.N., Longhurst, J.S., Scott, J.D., Gwilliam, J.D., Higgins, G., Domike, M.D., Moffat, R.E., Larson, A.R., Van Oostendorp, B., Harrell, C.C., Johnson, A.M., Olsen, N.A., Danielson, P., Wilhite, T., **Schachterle, J.K.**, Avery, S., Breakwell, D.P., Pickett, B.E. Comparative genomics of four novel A1 subcluster Mycobacterium phages. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

Olsen, N.A., Harrell, C.C., Johnson, A.M., Van Oostendorp, B., Wilhite, T.J., Danielson, P., Avery, S., **Schachterle, J.K.**, Breakwell, D.P., Pickett, B.E. The big phat audacious phage project. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

*Oler, B., *Cherry, A., **Schachterle, J.K.** Characterizing the contributions to virulence of small RNAs in the fire blight pathogen. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

*Nottingham, E., *Odell, M., **Schachterle, J.K.** Effects of restricted respiration on *Pectobacterium carotovorum*. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

*Rivers, B., *Radke, K., *Simpkins, M., *Hardy, J., *Silva, J., *Porter, J., **Schachterle, J.K.** Survey and characterization of pectinolytic bacteria on infected produce in Utah County. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

*Richardson, J., **Schachterle, J.K.** Potential improvement of diazotrophic bacteria as biofertilizers through lab facilitated evolution. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

*Hernandez Sanguino, K., *Sy, J., *Guellar, M., **Schachterle, J.K.** Investigating the role of β -galactosidase on the virulence mechanisms of plant-pathogenic bacteria. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

Hassell, R.E., Leary, B.S., Aggabao, S.M., Bautista, S.I., Danielson, P., Harrell, C.C., Johnson, A.M., Olsen, N.A., Van Oostendorp, B., Wilhite, T.J., Avery, S., **Schachterle, J.K.**, Breakwell, D.P., Pickett, B.E. Three E cluster phages containing novel putative proteins. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

*Longhurst, J., *Cherry, A., **Schachterle, J.K.** Potential biocontrol agents antagonistic to the causative agents of soft rot disease. ASM Intermountain Branch Meeting, Provo, UT, April 2024. ¶§

Acharya, K., Green, A., Liu, Z., **Schachterle, J.K.**, Kumari, P., Mana, F., Xu, S., Faris, J.D. Identification of QTLs associated with BLS resistance derived from wheat variety Boost and the synthetic hexaploidy wheat W-7984 under greenhouse and field conditions. Bacterial Leaf Streak Conference, Columbus, OH, Apr. 2024. §

Acharya, K., Green, A., Liu, Z., **Schachterle, J.K.**, Kumari, P., Manan, F., Faris, J. D. Genetic mapping of resistance QTLs to bacterial leaf streak in wheat. Plant and Animal Genome Conference, San Diego, CA, Jan. 2024. ¶§

*Alaofin, S., Velasco, D.D.P., Li, D., Liu, Z., Baldwin, T., **Schachterle, J.K.** Natural variations in extracellular protease impact virulence in bacterial leaf streak of barley caused by *Xanthomonas translucens*. International Society of Molecular Plant Microbe Interactions Congress, Providence, RI, July 2023. ¶

Acharya, K., Green, A., Liu, Z., **Schachterle, J.K.**, Manan, F., Faris, J. Identification of QTLs conferring resistance to bacterial leaf streak in the wheat variety Boost. Bacterial Leaf Streak Conference, Fargo, ND, March 2023. §

Velasco, D.D.P., Benz, B.R., Navasca, A.R., **Schachterle, J.K.**, Friskop, A., Liu, Z., Baldwin, T. Population diversity of *Xanthomonas translucens* pv. *translucens* in North Dakota, Montana, and Idaho. Bacterial Leaf Streak Conference, Fargo, ND, March 2023. §

*Alaofin, S., **Schachterle, J.K.** The contribution of extracellular protease to virulence and virulence-associated behaviors of *Xanthomonas translucens* pv. *translucens*. Bacterial Leaf Streak Conference, Fargo, ND, March 2023. §

Li, D., **Schachterle, J.K.** New tools for faster and simpler site-directed mutagenesis in *Xanthomonas*. Bacterial Leaf Streak Conference, Fargo, ND, March 2023.

Schachterle, J.K. Discovering how bacterial diseases of plants succeed using high-throughput approaches. Brigham Young University, Microbiology and Molecular Biology Department Seminar, Provo, UT, February 2023.

Schachterle, J.K. Development of genetic tools to study molecular genetics in *Xanthomonas translucens*. APS Plant Health, Pittsburgh, PA, August 2022. ¶

Schachterle, J.K., Huang, Q. Development of a seedling assay for high-throughput virulence screening of *Ralstonia solanacearum* species complex strains. APS Plant Health, Online, August 2021. ¶

Schachterle, J.K. Probing host-pathogen interactions with high-throughput approaches. Cereal Crops Research Unit, Fargo, ND [Virtual], November 2020.

Schachterle, J.K., Huang, Q. Genetic screen to identify temperature dependent regulation in cool-virulent strains of the bacterial phytopathogen, *Ralstonia solanacearum*. APS Plant Health, Online, August 2020. ¶

Schachterle, J.K. Small RNAs and fire blight. USDA-ARS Molecular Plant Pathology Lab Seminar, Beltsville, MD, October 2019.

Schachterle, J.K. Small RNA ArcZ regulates catalase and peroxide susceptibility in *Erwinia amylovora*. 2nd International Symposium on Fire Blight of Rosaceous Plants, Traverse City, MI, June 2019.

Schachterle, J.K., Bardaji Goiketxea, L., *Bi, J., *Pandya, I., Sundin, G.W. Systematic study of the roles of Hfq-dependent sRNAs in regulation of virulence-associated traits in *Erwinia amylovora*. 2nd International Symposium on Fire Blight of Rosaceous Plants, Traverse City, MI, June 2019. ¶

Slack, S.M.; **Schachterle, J.K.**; Sweeney, E.M.; Botti-Marino, M.; Kharadi, R.R.; Peng, J.; Pochubay, E.A.; Sundin, G.W. In-orchard population dynamics of *Erwinia amylovora* on apple flower stigmas. 2nd International symposium on Fire Blight of Rosaceous Plants, Traverse City, MI, June 2019. §

Schachterle, J.K. Roles of Hfq-dependent sRNAs in *E. amylovora* regulation of virulence. Michigan State University - Genetics Seminar, East Lansing, MI, June 2019.

*Pandya, I., **Schachterle, J.K.**, Sundin, G.W. Small RNAs with Big Impacts on Bacterial Virulence Factors. Michigan State University UURAF, East Lansing, MI, April 2019. ¶§

Schachterle, J.K. Small RNAs regulating ROS warfare between apple and the fire blight pathogen, *Erwinia amylovora*. Plant Science Graduate Student Research Symposium, East Lansing, MI, March 2019.

Schachterle, J.K. Regulation of virulence-associated traits by ArcZ in *Erwinia amylovora*. Michigan State University, BioMolecular Science Gateway Forum, East Lansing, MI, January 2019.

Schachterle, J.K., Sundin, G.W. Small RNA ArcZ regulates key virulence factors through global regulator Lrp in *Erwinia amylovora*. International Congress of Plant Pathology, Boston, MA, August 2018. ¶

*Onsay, D., **Schachterle, J.K.**, Sundin, G. W. The small RNA ArcZ differentially regulates the catalase genes of *Erwinia amylovora*. Michigan State University UURAF, East Lansing, MI, April 2018. ¶§

Schachterle, J.K. Study of small RNA ArcZ regulatory pathway identifies novel virulence factor in fire blight pathogen *Erwinia amylovora*. Plant Science Graduate Student Research Symposium, East Lansing, MI, March 2018.

Schachterle, J.K., Sundin, G.W. Hfq-dependent Small RNA ArcZ regulates motility and exopolysaccharide production through the global regulator Lrp in *Erwinia amylovora*. Regulating with RNA in Bacteria & Archaea, Sevilla, Spain, March 2018. ¶

Schachterle, J.K. Transcriptomics of Bacteria inside of a plant: What is *Erwinia amylovora* really doing during fire blight disease development? Michigan State University, Genetics Research Forum, East Lansing, MI, February 2018.

Schachterle, J.K. Small RNA ArcZ regulates virulence in plant pathogen *Erwinia amylovora*. Michigan State University, BioMolecular Science Gateway Forum, East Lansing, MI, January 2018.

Schachterle, J.K., Sundin, G.W. Leucine-responsive regulatory protein regulates flagellar motility epistatic to small RNA ArcZ in *Erwinia amylovora*. ASM Microbe, New Orleans, LA, June 2017. ¶

Schachterle, J.K. Regulation of flagellar motility by the small RNA ArcZ in the fire blight pathogen, *Erwinia amylovora*. The Ohio State University, Plant Pathology Seminar, Wooster, OH, November 2017.

Schachterle, J.K., Zeng, Q., Sundin, G.W. Regulation of flagellar motility by the small RNA ArcZ in *Erwinia amylovora*. ASM Microbe, Boston, MA, May 2016. ¶

Schachterle, J.K., *Benson, B.B., Erickson, D.E. Identifying CsrA targets that affect exopolysaccharide production in *Yersinia pseudotuberculosis*. ASM Intermountain Branch Meeting, Provo, UT, March 2014. ¶

Schachterle, J.K., Trent, B.J., Erickson, D.L. How does the BarA/UvrY two-component regulatory system control exopolysaccharide synthesis in *Yersinia pseudotuberculosis*? Wind River Conference on Prokaryotic Biology, Estes Park, CO, June 2013. ¶

Dickson, M., **Schachterle, J.K.**, Erickson, D.L. The BarA/UvrY two-component system and associated sRNA regulate biofilm in *Yersinia pseudotuberculosis*. ASM Intermountain Branch Meeting, Pocatello, ID, April 2012. ¶

Select Awards:

BYU MMBio New Faculty Startup Funding – 2023-

BYU Life Sciences New Faculty Startup Funding – 2023-

Outstanding Genetics Student of the Year – MSU Genetics 2019

Dissertation Completion Fellowship – MSU College of Natural Sciences 2019

Graduate Research Fellowship – National Science Foundation 2015 – 2019

Recruitment Fellowship – MSU College of Natural Sciences 2014

Undergraduate Writing Student of the Year – BYU Chemistry 2014

Kenneth W. Brighton Scholarship – BYU 2014

Best Undergraduate Presentation – Wind River Conference on Prokaryotic Biology 2013

Undergraduate Research ORCA Fellowship - BYU 2013 – 2014

Undergraduate Research ORCA Fellowship - BYU 2012 – 2013

Heritage Scholarship – BYU 2007, 2010 – 2013

Service and Affiliations

Review Editor: Frontiers in Plant Science, Plant Pathogen Interactions section, 2024 – Present

BYU College of Life Sciences Belonging Committee, 2024 – Present

BYU MMBio Curriculum Committee, 2023 – Present

Affiliate Faculty, NDSU Department of Plant Pathology, 2021 – Present
Associate Editor: Molecular Plant Microbe Interactions (MPMI), 2023 – Present
American Phytopathological Society, member: 2017 – Present
American Society of Microbiology, member: 2015 – Present
Ad-hoc Peer Reviewer: 2020 – Present (including: Agronomy, Agriculture, Journal of Plant Pathology, Phytopathology, Frontiers in Microbiology, International Journal of Molecular Sciences, Plant, Journal of Applied Microbiology, Molecular Plant Microbe Interactions)

Mentored Students

Charlie Chou (PhD rotation, 10/2024-12/2024, BYU)
Tanner Gunnell (undergraduate, 10/2024-, BYU)
Emmelia Wevers (undergraduate, 09/2024-, BYU)
Johnathon Brim (undergraduate, 08/2024-, BYU)
Ryan Bjazevich (undergraduate, 08/2024-, BYU)
Paola Martinez (undergraduate, 08/2024-12/2024, BYU)
Nathan Walker (PhD rotation, 05/2024-08/2024)
Foxy Naylor (undergraduate, 04/2024-, BYU)
Ethan Shreeve (undergraduate, 04/2024-, BYU)
Juliana Silva (undergraduate, 02/2024-, BYU)
Mya Simpkins (undergraduate, 02/2024-, BYU)
Kyla Radke (undergraduate, 02/2024-, BYU)
Brandon Rivers (undergraduate, 02/2024-, BYU)
Matt Elmer (undergraduate, 01/2024-, BYU)
Mason Guellar (undergraduate, 12/2023-, BYU)
Miranda Sharp (MS rotation; 11/2023-12/2023, BYU)
Rajesh Bogati (MS committee; 10/2023-, BYU)
Jacob Hardy (undergraduate, 10/2023-, BYU)
Blake Oler (undergraduate, 10/2023-, BYU)
Kyson Jensen (PhD committee; 9/2023-, BYU)
Karla Tanner (undergraduate; 9/2023-, BYU)
Jacob Sy (undergraduate; 9/2023-, BYU)
Joseph Richardson (undergraduate; 9/2023-, BYU)
Joshua Porter (undergraduate; 9/2023-, BYU)
Mailon Odell (undergraduate; 9/2023-, BYU)
Evan Nottingham (undergraduate; 9/2023-, BYU)
Jayden Longhurst (undergraduate; 9/2023-, BYU)
Kelly Hernandez (undergraduate; 9/2023-, BYU)
Alex Cherry (undergraduate; 9/2023-, BYU)
Jordan Corzette (undergraduate; 1/2023-7/2023, NDSU)
Sefunmi Alaofin (PhD chair; 9/2022 – 7/2023, NDSU)

Ibukunoluwa Bankole (MS committee; 4/2022-2023, NDSU)
Diel Velasco (PhD committee; 12/2021-2024, NDSU)
Justin Bi (As high school student, and subsequently as undergraduate; 2017 – 2019, MSU)
Daphne Onsay (undergraduate; 2018 – 2019, MSU)
Arielle Buckley (undergraduate; 2018, MSU)

Teaching:

Advanced Bacterial Physiology, **MMBio461** Brigham Young University, W24
Advanced Mentored Research, **MMBio494R** Brigham Young University, W24, Sp24, Su24, F24
Mentored Research, **MMBio294R** Brigham Young University, F23, W24, Sp24, Su24, F24

Guest lecture on research in MMBio121 at Brigham Young University
March 2024 – Topic: Understanding and controlling soft rot disease

Guest lecture in undergraduate Introduction to Microbiology (MMBIO221) at Brigham Young University
February 2023 – Topic: Sterilization and Disinfection

Guest lecture in graduate level Physiology of Plant Disease (PPTH751) at North Dakota State University
January 2023 – Topic: Cloning methodology

Guest lecture in graduate level Phytobacteriology (PLP881) at Michigan State University
March 2019 – Topic: Quorum Sensing

Teaching Assistant for undergraduate Genetics (ZOL341) at Michigan State University
Fall 2015 – Taught weekly recitation section and instructed students in small groups in office hours.

*Denotes students directly mentored in research projects.

¶Denotes poster presentations

§Denotes the primary presenter was other than Jeffrey K. Schachterle