# Julianne H. Grose, Ph.D.

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I am currently a Professor in the Department of Microbiology and Molecular Biology at Brigham Young University. My university position consists of 45% effort for teaching, 45% effort for mentoring/research and 10% effort for citizenship. I teach approximately 12 credit hours of undergraduate courses per year (approximately 6 courses) and currently mentor three graduate students and 15 undergraduates in my research lab. My teaching is dedicated to bringing novel research experiences into the classroom through an international program, Phage Hunters (HHMI SEA- PHAGES program). Research in my laboratory is dedicated to two main projects: 1) the study of metabolism and its relation to disease, and 2) the study of microbiomes and their contribution to the health of organisms, including bacteriophages that infect the *Enterobacteriaceae* family of bacteria. The latter is a continuation of the Phage Hunters course/program. My long-term goal is to mentor students in the classroom and lab through high quality research experiences as well as to contribute novel scientific findings to our fields of study.

### **EDUCATION AND TRAINING**

#### Education

2003 Ph.D. Biology, University of Utah

1996 B.S. Chemistry, Math minor, University of Utah

# **Research Positions**

2021-present	<b>Professor</b> , Brigham Young University, Department of Microbiology and Molecular Biology
2015– 2021	<b>Associate Professor</b> , Brigham Young University, Department of Microbiology and Molecular Biology.
2008 – 2015	<b>Assistant Professor</b> , Brigham Young University, Department of Microbiology and Molecular Biology.
2006 – 2008	<b>Research Associate</b> , BioEnergenix (Pharmaceutical company), Department of Biochemistry, University of Utah. PAS kinase inhibitors in the treatment of diabetes and hyperlipidemia.
2004 – 2008	<b>Postdoctoral Scholar</b> , Lab of Dr. Jared Rutter, Department of Biochemistry, University of Utah. Molecular characterization of PAS kinase.
1996-2003	<b>Ph.D. Student</b> ,Lab of Dr. John Roth, Department of Biology, University of Utah. Regulation of NAD(P) metabolism in <i>Salmonella typhimurium</i> .
1994-1995	Undergraduate Research Assistant, Lab of Dr. Marion Woods MD. 1992-1993 ACCESS Program for Women in Mathematics and Science

#### PROFESSIONAL HONORS AND FELLOWSHIPS

BYU College of Lifesciences Research Award (2021)

C. Joseph Rowberry Teaching and Learning Faculty Fellowship, Brigham Young University (2018)

Maesar Excellence in Teaching Award, Brigham Young University (2017)

First place award -NSF Community College Innovation Challenge, team advisor (2017)

Alcuin Fellowship, Brigham Young University (2017)

**Technology Transfer Award, Brigham Young University (2016)** 

Faculty Women's Association Scholarship Award, Brigham Young University (2016)

Guest Speaker Travel Award, 2nd International Symposium on Fire Blight of Rosaceous Plants (2019),

Traverse City, Michigan

Travel Award, Annual SEA-PHAGES Conference (2012, 2015)

Travel Award, SEA-PHAGES Advanced Genomics Workshop (2015)

Travel Award, IR-4 Biopesticide Workshop (2014, 2015, 2016, 2017, 2018)

**Teaching Award**, Highest Student Ratings in a 100-level Course (2013)

Travel Award, ASM Early-career Faculty Travel Award (2009)

Postdoctoral Fellowship, Multidisciplinary Cancer Research Training Grant (2004-2006)

Postdoctoral Fellowship, Ruth L. Kirschstein National Research Service Award (2006, gratefully declined)

#### PROFESSIONAL ACTIVITIES

Member of the Arnold and Mabel Beckman Foundation Young Investigator Executive Committee (2021-current)

Member of the Arnold and Mabel Beckman Foundation Equity Committee (2021-current)

Chair of the Scientific Advisory Board for Beekeeping-101 LLC (2021-current)

President of the Intermountain Branch of the American Society for Microbiology (ASM) (2017-2018)

Member of the Science Education Alliance (SEA), American Heart Association (AHA),

American Society for Microbiology (ASM), American Society for Cell Biology (ASCB), Genetics Society of America (GSA), Member of the Indonesian Phage Group

IGEM Jamboree Judge (America's -2013, International - 2014)

Editorial Board Member, Nutrients (MDPI) (2019-current)

Ad-hoc Reviewer for Pilot Research Projects Southwest Environmental Health Sciences Center (2012), the National Science Foundation Graduate Research Fellowship Program (NSF GRFP), and the Human Frontier Science Program Career Development Award (HFSF CDA), and for many scientific journals including but not limited to: Acta Biochimica et Biophysica Sinica, Archives of Virology, Environmental Microbiology and Environmental Microbiology Reports, FEBS Letters, FEMS IJMS, Microbiology Letters, Journal of Bioprocessing & Biotechniques, Molecules, Molecular Biology of the Cell, Nutrients, PLOS ONE and Trends in Microbiology, Viruses, Journal of Virology.

# TOTAL EXTRAMURAL RESEARCH SUPPORT

# **Current**

Regulation and function of PAS kinase: PASsing glucose to control respiration, lipogenesis and cell cycle

Role: Principle Investigator

National Institutes of Health 2R15 GM100376-02

Amount: \$1,223,167 End date: 1/31/2024

# **Completed**

Manipulating the Microbiome of Small Hive Beetles and Varroa Mites Role: Principle Investigator

**Private Investor** 

Amount: \$79,000 End date: 8/31/2021

Beckman Scholars Program

Role: Co-principle Investigator and Beckman Scholar Mentor The

Arnold and Mabel Beckman Foundation Amount: \$109,200 End date: 9/2020

DNA packaging and delivery by dsDNA viruses

Role: Subcontract Principle Investigator

National Institutes of Health 5R01 GM114817

Amount (Subcontract): \$15,000 End date: 7/31/2020

Characterizing a kinase regulator of ataxin-2 as a therapeutic target for ALS

Role: Co-Principle Investigator with Aaron Gitler

Robert Packard Center for ALS Research Amount: \$50,000 End date: 3/31/2019

Manipulation of Phage-derived Bacteriocin Production Role: Subcontract Principal Investigator USDA National Institute of Food and Agriculture Award 2016-67014-24850

Phage Hunters: Discovery and Bioinformatics

Role: Co-Principal Investigator

Private donor

Amount: \$200,000 End date: 7/1/2017

A Natural Treatment for Fire Blight: Pilot Test in Apple Orchards

Role: Principal Investigator

United States Department of Agriculture (USDA) USDA via UC Davis

Amount: \$5000 End date 7/1/2017

A Natural Treatment for Fire Blight: Pilot Test in Apple Orchards

Role: Principal Investigator

United States Department of Agriculture (USDA) USDA via UC Davis

Amount: \$5000 End date 7/1/2016

A Natural Treatment for Fire Blight: Pilot Test in Apple Orchards

Role: Principal Investigator IR-4 Biopesticide Grant

United States Department of Agriculture (USDA) USDA via UC Davis

Amount: \$25000 End date 2/1/2015

#### **INTRAMURAL RESEARCH GRANTS**

# **Completed**

PAS Kinase as a Potential Moderator of Heart Disease

Role: Co-Principle Investigator

2020 Gerontology Research Grant Award Amount: \$8,260 End date: 11/30/2020

Impact of mutant Atypical Chemokine Receptors on Chemokines and Inflammation

Role: Co-Principle Investigator Inflammation Research Award – BYU Amount: \$6,254 End date: 1/31/2018 BYU Mentoring Environment Grant

Balancing the cellular budget: Dissecting PAS kinase-dependent glucose partitioning

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$20,000 End date: 1/31/2017

Identifying Genetic Factors Involved in the Development of Diabetes

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$20,000 End date: 1/31/2016

Enhancing Learning Through Novel, Publishable Viral Research

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$8,400 End date: 11/31/2016

Elucidating a Precise Role for the Small Heat Shock Proteins CryAB and HspB2 in Cardiac Robustness

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$20,000 End date: 3/31/2015

A Phage-Based Treatment for Fire Blight and American Foulbrood Role: co-Principal Investigator BYU Technology Transfer Bridging Fund

Amount: \$15,000 End date: 12/13/2014 BYU Teaching Enhancement Grant

Teaching Enhancement Through a Mentored Research-based Course

Role: Principal Investigator

Award: \$8,500

BYU Teaching Enhancement Grant

Molecular Characterization of Pathways Involved PAS Kinase Regulation and Function.

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$20,000 End date: 1/31/2014

Characterization of PAS Kinase Regulation and Novel PAS Kinase Substrates.

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$20,000 End date: 1/31/2013

Regulation and Function of Yeast PAS kinase.

Role: Principal Investigator

BYU Mentoring Environment Grant Amount: \$20,000 End date: 1/31/2012

The Function of Yeast PAS kinase. Role: Principal Investigator BYU Mentoring Environment Grant Amount: \$20,000 End date: 1/31/2011

# **PUBLICATIONS** (49 peer-reviewed publications)

- 49. Newy, C, Taylor, A, Olausson, A.T., Applegate, A, Reid, A, Robison, RA, Grose, JH. Presence and Stability of SARS-CoV-2 on Environmental Currency and Money Cards in Utah Reveals a Lack of Live Virus. PLOS One. In press.
- 48. Franson, JJ, Grose, JH, Williams, KW, Bridgewater, L. Gut microbiota regulates the interaction between diet and genetics to influence glucose tolerance. Medicines 2021 8(7):34. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8304968/
- 47. Greene W, Chan B, Bromage E, Grose JH, Walsh C, Kortright K, Forres S, Perry G, Byrd L, Stamper MA. The use of bacteriophages and immunological monitoring for the treatment of a case of chronic systemic cutaneous ulcerate disease (SCUD) in a loggerhead sea turtle (Caretta caretta). J Aquat Anim Health 2021 https://doi.org/10.1002/aah.10130.
- 46. Thurgood TL, Sharma R, Call JJ, et al. Genome Sequences of 12 Phages That Infect Klebsiella pneumoniae.Microbiol Resour Announc 2020;9. <a href="https://doi.org/10.1128/MRA.00024-20">https://doi.org/10.1128/MRA.00024-20</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/32299868">https://www.ncbi.nlm.nih.gov/pubmed/32299868</a>.
- 45. Pape JA, Grose JH. The effects of diet and sex in amyotrophic lateral sclerosis. Rev Neurol (Paris) 2020;176:301-15. https://doi.org/10.1016/j.neurol.2019.09.008. https://www.ncbi.nlm.nih.gov/pubmed/32147204.
- 44. Murcia JDG, Weinert A, Freitas CMT, et al. Atypical chemokine receptor ACKR2-V41A has decreased CCL2 binding, scavenging, and activation, supporting sustained inflammation and increased Alzheimer's disease risk. Sci Rep 2020;10:8019. <a href="https://doi.org/10.1038/s41598-020-64755-1">https://doi.org/10.1038/s41598-020-64755-1</a>.

https://www.ncbi.nlm.nih.gov/pubmed/32415244.

- 43. Thompson DW, Casjens SR, Sharma R, Grose JH. Genomic comparison of 60 completely sequenced bacteriophages that infect Erwinia and/or Pantoea bacteria. Virology 2019;535:59-73. https://doi.org/10.1016/j.virol.2019.06.005. https://www.ncbi.nlm.nih.gov/pubmed/31276862.
- 42. Sharma R, Pielstick BA, Bell KA, et al. A Novel, Highly Related Jumbo Family of Bacteriophages That Were Isolated Against Erwinia. Front Microbiol 2019;10:1533. <a href="https://doi.org/10.3389/fmicb.2019.01533">https://doi.org/10.3389/fmicb.2019.01533</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/31428059">https://www.ncbi.nlm.nih.gov/pubmed/31428059</a>.
- 41. Handoko YA, Wardani AK, Sutrisno A, et al. Genome Sequences of Two Bacillus Phages Isolated from Indonesia. Microbiol Resour Announc 2019;8. <a href="https://doi.org/10.1128/MRA.01058-19">https://doi.org/10.1128/MRA.01058-19</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/31831605">https://www.ncbi.nlm.nih.gov/pubmed/31831605</a>.
- 40. DeMille D, Pape JA, Bikman BT, Ghassemian M, Grose JH. The Regulation of Cbf1 by PAS Kinase Is a Pivotal Control Point for Lipogenesis vs. Respiration in Saccharomyces cerevisiae. G3 (Bethesda) 2019;9:33-46. https://doi.org/10.1534/g3.118.200663. https://www.ncbi.nlm.nih.gov/pubmed/30381292.
- 39. Yost DG, Chang C, LeBlanc L, et al. Complete Genome Sequences of *Paenibacillus larvae* Phages Halcyone, Heath, Scottie, and Unity from Las Vegas, Nevada. Microbiol Resour Announc 2018;7. <a href="https://doi.org/10.1128/MRA.00977-18">https://doi.org/10.1128/MRA.00977-18</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/30533661">https://www.ncbi.nlm.nih.gov/pubmed/30533661</a>.

38. Willis SD, Stieg DC, Ong KL, et al. Snf1 cooperates with the CWI MAPK pathway to mediate the degradation of Med13 following oxidative stress. Microb Cell 2018;5:357-70. <a href="https://doi.org/10.15698/mic2018.08.641">https://doi.org/10.15698/mic2018.08.641</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/30175106">https://www.ncbi.nlm.nih.gov/pubmed/30175106</a>.

- 37. Walker JK, Merrill BD, Berg JA, et al. Complete Genome Sequences of *Paenibacillus larvae* Phages BN12, Dragolir, Kiel007, Leyra, Likha, Pagassa, PBL1c, and Tadhana. Genome Announc 2018;6. <a href="https://doi.org/10.1128/genomeA.01602-17">https://doi.org/10.1128/genomeA.01602-17</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29903825">https://www.ncbi.nlm.nih.gov/pubmed/29903825</a>.
- 36. Stieg DC, Willis SD, Ganesan V, et al. A complex molecular switch directs stress-induced cyclin C nuclear release through SCF(Grr1)-mediated degradation of Med13. Mol Biol Cell 2018;29:363-75. <a href="https://doi.org/10.1091/mbc.E17-08-0493">https://doi.org/10.1091/mbc.E17-08-0493</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29212878">https://www.ncbi.nlm.nih.gov/pubmed/29212878</a>.
- 35. Stamereilers C, Fajardo CP, Walker JK, et al. Genomic Analysis of 48 Paenibacillus larvae Bacteriophages. Viruses 2018;10. https://doi.org/10.3390/v10070377. https://www.ncbi.nlm.nih.gov/pubmed/30029517.
- 34. Sharma R, Berg JA, Beatty NJ, et al. Genome Sequences of Nine Erwinia amylovora Bacteriophages. Microbiol Resour Announc 2018;7. <a href="https://doi.org/10.3389/fmicb.2019.01533">https://doi.org/10.3389/fmicb.2019.01533</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/31428059">https://www.ncbi.nlm.nih.gov/pubmed/31428059</a>.
- 33. Pape JA, Newey CR, Burrell HR, et al. Per-Arnt-Sim Kinase (PASK) Deficiency Increases Cellular Respiration on a Standard Diet and Decreases Liver Triglyceride Accumulation on a Western High-Fat High-Sugar Diet. Nutrients 2018;10. <a href="https://doi.org/10.3390/nu10121990">https://doi.org/10.3390/nu10121990</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/30558306">https://www.ncbi.nlm.nih.gov/pubmed/30558306</a>.
- 32. Merrill BD, Fajardo CP, Hilton JA, et al. Complete Genome Sequences of 18 *Paenibacillus larvae* Phages from the Western United States. Microbiol Resour Announc 2018;7. <a href="https://doi.org/10.1128/MRA.00966-18">https://doi.org/10.1128/MRA.00966-18</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/30533693">https://www.ncbi.nlm.nih.gov/pubmed/30533693</a>.
- 31. Berg JA, Merrill BD, Breakwell DP, Hope S, Grose JH. A PCR-Based Method for Distinguishing between Two Common Beehive Bacteria, *Paenibacillus larvae* and *Brevibacillus laterosporus*. Appl Environ Microbiol 2018;84. <a href="https://doi.org/10.1128/AEM.01886-18">https://doi.org/10.1128/AEM.01886-18</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/30217838">https://www.ncbi.nlm.nih.gov/pubmed/30217838</a>.
- 30. Arens DK, Brady TS, Carter JL, et al. Characterization of two related Erwinia myoviruses that are distant relatives of the PhiKZ-like Jumbo phages. PLoS One 2018;13:e0200202. <a href="https://doi.org/10.1371/journal.pone.0200202">https://doi.org/10.1371/journal.pone.0200202</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/29979759">https://www.ncbi.nlm.nih.gov/pubmed/29979759</a>
- 29. Hanauer DI, Graham MJ, Sea P, et al. An inclusive Research Education Community (iREC): Impact of the SEA-PHAGES program on research outcomes and student learning. Proc Natl Acad Sci U S A 2017;114:13531-6. https://doi.org/10.1073/pnas.1718188115. https://www.ncbi.nlm.nih.gov/pubmed/29208718.
- Esplin IND, Berg JA, Sharma R, et al. Genome Sequences of 19 Novel E*rwinia amylovora* Bacteriophages. Genome Announc 2017;5. https://doi.org/10.1128/genomeA.00931-17. https://www.ncbi.nlm.nih.gov/pubmed/29146842.
- 27. Dedrick RM, Jacobs-Sera D, Bustamante CA, et al. Prophage-mediated defence against viral attack and viral counter-defence. Nat Microbiol 2017;2:16251. <a href="https://doi.org/10.1038/nmicrobiol.2016.251">https://doi.org/10.1038/nmicrobiol.2016.251</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/28067906">https://www.ncbi.nlm.nih.gov/pubmed/28067906</a>.
- 26. Merrill BD, Ward AT, Grose JH, Hope S. Software-based analysis of bacteriophage genomes, physical ends, and packaging strategies. BMC Genomics 2016;17:679. <a href="https://doi.org/10.1186/s12864-016-3018-2">https://doi.org/10.1186/s12864-016-3018-2</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/27561606">https://www.ncbi.nlm.nih.gov/pubmed/27561606</a>.
- 25. Casjens SR, Grose JH. Contributions of P2- and P22-like prophages to understanding the enormous diversity and abundance of tailed bacteriophages. Virology 2016;496:255-76. <a href="https://doi.org/10.1016/j.virol.2016.05.022">https://doi.org/10.1016/j.virol.2016.05.022</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/27372181">https://www.ncbi.nlm.nih.gov/pubmed/27372181</a>.
- 24. Berg JA, Merrill BD, Crockett JT, et al. Characterization of Five Novel Brevibacillus Bacteriophages and Genomic Comparison of Brevibacillus Phages. PLoS One 2016;11:e0156838. <a href="https://doi.org/10.1371/journal.pone.0156838">https://doi.org/10.1371/journal.pone.0156838</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/27304881">https://www.ncbi.nlm.nih.gov/pubmed/27304881</a>.
- 23. Sheflo MA, Gardner AV, Merrill BD, et al. Correction for Sheflo et al., Complete Genome Sequences of Five Brevibacillus laterosporus Bacteriophages. Genome Announc 2015;3. <a href="https://doi.org/10.1128/genomeA.01113-15">https://doi.org/10.1128/genomeA.01113-15</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/26430035">https://www.ncbi.nlm.nih.gov/pubmed/26430035</a>

22. Pope WH, Bowman CA, Russell DA, et al. Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity. Elife 2015;4:e06416. <a href="https://doi.org/10.7554/eLife.06416">https://doi.org/10.7554/eLife.06416</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25919952">https://www.ncbi.nlm.nih.gov/pubmed/25919952</a>.

- 21. Merrill BD, Berg JA, Graves KA, et al. Genome Sequences of Five Additional *Brevibacillus laterosporus* Bacteriophages. Genome Announc 2015;3. <a href="https://doi.org/10.1128/genomeA.01146-15">https://doi.org/10.1128/genomeA.01146-15</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/26494658">https://www.ncbi.nlm.nih.gov/pubmed/26494658</a>.
- 20. Grose JH, Langston K, Wang X, et al. Characterization of the Cardiac Overexpression of HSPB2 Reveals Mitochondrial and Myogenic Roles Supported by a Cardiac HspB2 Interactome. PLoS One 2015;10:e0133994. <a href="https://doi.org/10.1371/journal.pone.0133994">https://doi.org/10.1371/journal.pone.0133994</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/26465331">https://www.ncbi.nlm.nih.gov/pubmed/26465331</a>.
- 19. DeMille D, Badal BD, Evans JB, Mathis AD, Anderson JF, Grose JH. PAS kinase is activated by direct SNF1-dependent phosphorylation and mediates inhibition of TORC1 through the phosphorylation and activation of Pbp1. Mol Biol Cell 2015;26:569-82. <a href="https://doi.org/10.1091/mbc.E14-06-1088">https://doi.org/10.1091/mbc.E14-06-1088</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25428989">https://www.ncbi.nlm.nih.gov/pubmed/25428989</a>.
- 18. Merrill BD, Grose JH, Breakwell DP, Burnett SH. Characterization of *Paenibacillus larvae* bacteriophages and their genomic relationships to firmicute bacteriophages. BMC Genomics 2014;15:745. <a href="https://doi.org/10.1186/1471-2164-15-745">https://doi.org/10.1186/1471-2164-15-745</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25174730">https://www.ncbi.nlm.nih.gov/pubmed/25174730</a>.
- 17. Grose JH, Jensen JD, Merrill BD, Fisher JN, Burnett SH, Breakwell DP. Genome Sequences of Three Novel Bacillus cereus Bacteriophages. Genome Announc 2014;2. <a href="https://doi.org/10.1128/genomeA.01118-13">https://doi.org/10.1128/genomeA.01118-13</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/24459255">https://www.ncbi.nlm.nih.gov/pubmed/24459255</a>.
- 16. Grose JH, Jensen GL, Burnett SH, Breakwell DP. Genomic comparison of 93 Bacillus phages reveals 12 clusters, 14 singletons and remarkable diversity. BMC Genomics 2014;15:855. Correction: BMC Genomics 2014;15:1184. https://doi.org/10.1186/1471-2164-15-855.https://www.ncbi.nlm.nih.gov/pubmed/25280881.
- 15. Grose JH, Casjens SR. Understanding the enormous diversity of bacteriophages: the tailed phages that infect the bacterial family Enterobacteriaceae. Virology 2014;468-470:421-43. <a href="https://doi.org/10.1016/j.virol.2014.08.024">https://doi.org/10.1016/j.virol.2014.08.024</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25240328">https://www.ncbi.nlm.nih.gov/pubmed/25240328</a>.
- 14. Grose JH, Belnap DM, Jensen JD, et al. The genomes, proteomes, and structures of three novel phages that infect the Bacillus cereus group and carry putative virulence factors. J Virol 2014;88:11846-60. <a href="https://doi.org/10.1128/JVI.01364-14">https://doi.org/10.1128/JVI.01364-14</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25100842">https://doi.org/10.1128/JVI.01364-14</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/25100842">https://www.ncbi.nlm.nih.gov/pubmed/25100842</a>.
- 13. DeMille D, Bikman BT, Mathis AD, et al. A comprehensive protein-protein interactome for yeast PAS kinase 1 reveals direct inhibition of respiration through the phosphorylation of Cbf1. Mol Biol Cell 2014;25:2199-215. <a href="https://doi.org/10.1091/mbc.E13-10-0631">https://doi.org/10.1091/mbc.E13-10-0631</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/24850888">https://doi.org/10.1091/mbc.E13-10-0631</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/24850888">https://www.ncbi.nlm.nih.gov/pubmed/24850888</a>.
- 12. Banerjee Mustafi S, Grose JH, Zhang H, et al. Aggregate-prone R120GCRYAB triggers multifaceted modifications of the thioredoxin system. Antioxid Redox Signal 2014;20:2891-906. <a href="https://doi.org/10.1089/ars.2013.5340">https://doi.org/10.1089/ars.2013.5340</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/24180415">https://www.ncbi.nlm.nih.gov/pubmed/24180415</a>.
- 11. Smith KC, Castro-Nallar E, Fisher JN, Breakwell DP, Grose JH, Burnett SH. Phage cluster relationships identified through single gene analysis. BMC Genomics 2013;14:410. <a href="https://www.ncbi.nlm.nih.gov/pubmed/23777341">https://www.ncbi.nlm.nih.gov/pubmed/23777341</a>.
- 10. DeMille D, Grose JH. PAS kinase: a nutrient sensing regulator of glucose homeostasis. IUBMB Life 2013;65:921-9. https://doi.org/10.1002/iub.1219. https://www.ncbi.nlm.nih.gov/pubmed/24265199.
- 9. Breakwell DP, Barrus EZ, Benedict AB, et al. Genome sequences of five b1 subcluster mycobacteriophages. Genome Announc 2013;1. <a href="https://doi.org/10.1128/genomeA.00968-13">https://doi.org/10.1128/genomeA.00968-13</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/24285667">https://www.ncbi.nlm.nih.gov/pubmed/24285667</a>.
- 8. Adebayo J, Southwick T, Chetty V, Yeung E, Yuan Y, Goncalves J, Grose J, Prince J, Stan G, Warnick S. Dynamical structure function identifiability conditions enabling signal structure reconstruction. 2012 IEEE 51st IEEE Conference on Decision and Control (CDC), 4635-4641.
- http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.727.2729&rep=rep1&type=pdf

- 6. Grose JH, Sundwall E, Rutter J. Regulation and function of yeast PAS kinase: a role in the maintenance of cellular integrity. Cell Cycle 2009;8:1824-32. <a href="https://doi.org/10.4161/cc.8.12.8799">https://doi.org/10.4161/cc.8.12.8799</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/19440050">https://www.ncbi.nlm.nih.gov/pubmed/19440050</a>.
- 5. Grose JH, Smith TL, Sabic H, Rutter J. Yeast PAS kinase coordinates glucose partitioning in response to metabolic and cell integrity signaling. EMBO J 2007;26:4824-30. <a href="https://doi.org/10.1038/sj.emboj.7601914">https://doi.org/10.1038/sj.emboj.7601914</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/17989693">https://www.ncbi.nlm.nih.gov/pubmed/17989693</a>.
- 4. Grose JH, Joss L, Velick SF, Roth JR. Evidence that feedback inhibition of NAD kinase controls responses to oxidative stress. Proc Natl Acad Sci U S A 2006;103:7601-6. <a href="https://doi.org/10.1073/pnas.0602494103">https://doi.org/10.1073/pnas.0602494103</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/16682646">https://www.ncbi.nlm.nih.gov/pubmed/16682646</a>.
- 3. Grose JH, Bergthorsson U, Xu Y, Sterneckert J, Khodaverdian B, Roth JR. Assimilation of nicotinamide mononucleotide requires periplasmic AphA phosphatase in Salmonella enterica. J Bacteriol 2005;187:4521-30. <a href="https://doi.org/10.1128/JB.187.13.4521-4530.2005">https://doi.org/10.1128/JB.187.13.4521-4530.2005</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/15968063">https://www.ncbi.nlm.nih.gov/pubmed/15968063</a>.
- 2. Grose JH, Bergthorsson U, Roth JR. Regulation of NAD synthesis by the trifunctional NadR protein of Salmonella enterica. J Bacteriol 2005;187:2774-82. <a href="https://doi.org/10.1128/JB.187.8.2774-2782.2005">https://doi.org/10.1128/JB.187.8.2774-2782.2005</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/15805524">https://www.ncbi.nlm.nih.gov/pubmed/15805524</a>.
- 1. Jacobsen RB, DelaCruz RG, Grose JH, McIntosh JM, Yoshikami D, Olivera BM. Critical residues influence the affinity and selectivity of alpha-conotoxin MI for nicotinic acetylcholine receptors. Biochemistry 1999;38:13310-5. <a href="https://doi.org/10.1021/bi9907476">https://doi.org/10.1021/bi9907476</a>. <a href="https://www.ncbi.nlm.nih.gov/pubmed/10529206">https://www.ncbi.nlm.nih.gov/pubmed/10529206</a>.

# **BOOK CHAPTERS (2 Peer-reviewed)**

- 1. Grose JH. (2010), Ch. 15, The Lure of Bacterial Genetics: a Tribute to John Roth. Eds. Maloy, S., Hughes, K.T., and Casadesus, J, ASM Press, Washington, DC, 9-22.
- 2. Grose JH and Casjens, SR. (2019) Bacteriophage Diversity. Encyclopedia of Virology; 4th addition. Academic Press. Cambridge Massachusetts. ISBN-13: 978-0123739353

# RATIFIED INTERNATION COMMITTEE ON THE TAXONOMY OF VIRUSES (ICTV) PROPOSALS (4 peer-reviewed)

- 1. Svircev, AM, Yagubi, AI, Kropinski, AM, Adriaenssens EM, Grose, JH. To create one (1) new genus, Agricans257virus, including five (5) new species in the family Myoviridae. https://talk.ictvonline.org/ICTV/proposals/2016.066a- dB.A.v1.Agrican357virus.pdf
- 2. Wittmann J, Grose JH, Yagubi, Al, Svircev, AM and Kropinski, AM. To create a new genus, EA92virus, including 2 (two) new species within the family Prodoviridae.
- https://talk.ictvonline.org/ICTV/proposals/2016.078 a-dB.A.v1. Ea92 virus.pdf
- 3. Grose, JH, Kropinski, AM, Adriaenssens, EM, Kuhn, J, Hope, S. To create one (1) new genus, Abouovirus, including two (2) new species in the family Myoviridae.

DO - 10.13140/RG.2.2.13252.22405

5. Klumpp Barylski J, Kropinski A, Grose JH, Adriaenssens EM (2015). ICTV taxonomic proposal 2015.036a-dD.A.v2.Cp51virus. Create genus Cp51virus including 3 new species within the family Myoviridae. http://www.ictvonline.org/proposals-15/2015.036a-dD.A.v2.Cp51virus.pdf

#### TELEVISION/RADIO BROADCASTS

- 1. Grose, JH (May 2020) "What you should know about COVID-19 and CASH". Guest on Get Gephardt, KSL TV.
- 2. Grose, JH (May 2019) "Finding your Purpose". BYU Devotional Speaker, International Broadcast on BYU TV.
- 3. Grose, JH (December 2018) "Phage therapy and Antibiotic Resistant Bacteria". Guest on BYU Top of Mind radio

show.

- 4. Grose, JH (April 2016) "Save a Life: Bone Marrow Donation". Guest on BYU Top of Mind radio show.
- 5. Grose, JH (April 2015) "Phage therapy in agriculture". Guest on Kim Powers Show radio show

### RESEARCH PRESENTATIONS (2008- present; 233 total) National/International (90 total, 2008-present)

- 1. Grose, JH and Green, W. (2021) "Bacteriophage Therapy in a Loggerhead Sea Turtle" Phaves 24.
- 2. Briscoe, J, Kim, M, Pattillo, C, Soule, S, Carr, E, Whitten, M, Ayers, H, Grose, JH. (2021) "Investigating the Phage Genome Packaging Strategy of AJGECKO". 2021 SEA Symposium. Hosted Virtually by the Howard Hughes Medical Institute.
- 3. Andrew, J, Brandt, M, Dean, J, Gurecki, A, Heaps, C, Hernandez, A, Jones, C, Marsden, I, Ayers, H, Carr, E, Flor, S, Harris, E, Soule, C, Grose, JH (2021) "Isolation and Basic Sequence Analysis of Gordonia rubripertincta Phage AJGECKO". 2021 SEA Symposium. Hosted Virtually by the Howard Hughes Medical Institute.
- 4. Abbott, KL, Aldous, S, Bell, A, Folsom, P, Owen, D, Smith, A, Stewart, JB, Brown, HM, Newey, C, Eberhard, N, Grose. JH. (2021) "Isolation and Analysis of Gordonia phage SummitAcademy". 2021 SEA Symposium. 2021 SEA Symposium. Hosted Virtually by the Howard Hughes Medical Institute.
- 5. Brandt, M, Green, C, Rolfson, A, Parker, C, Whitten, M, Griffin, H, Carr, E, Ayers, H, Grose, JH. (2021) "Characterizing Gordonia phage AJGECKO Through Llfecycle Analysis." 2021 SEA Symposium. Hosted Virtually by the Howard Hughes Medical Institute.
- 6. Moulton, R, Wolthuis, S, Nagidi, SH, Shaner, C, Lee, H, Augenstein, E, Flor, S, Grose, JH. (2021) "Mass spectrometry analysis of Gordonia phage AJGECKO" 2021 SEA Symposium. Hosted Virtually by the Howard Hughes Medical Institute.
- 7. Carr, E, Cobbley, H, Cranston, A, Danielson, P, Eberhard, N, Gordon, B, Rallison, J, Wells, L, Wolthuis, S, Zaugg, E, Grose, JH. (2021) "Burst Size and Lifecycle Timing of Gordonia rubripertincta Bacteriophage SummitAcademy". 2021 SEA Symposium. Hosted Virtually by the Howard Hughes Medical Institute.
- 8. Grose, JH. (2019) PAS kinase as a putative therapeutic target for the treatment of ALS. Invited seminar speaker, Johns Hopkins University Packard Center for ALS research, Baltimore, Maryland
- 9. Gitler, AD and Grose, JH. (2019) New Genome-wide Approaches to define C9ORF72 function and role in ALS. Annual Robert Packard Center for ALS Research Symposium. Baltimore, Maryland
- 10. Newey, C, and Grose, JH. (2019) PAS kinase as a Potential Therapeutic Target for Treating Metabolic Disease. World Conference for Undergraduate Research. Germany
- 11. Grose JH. (2019) Microbial Biotechnology in the Face of Industrial Revolution 4.0. International Conference on Green Agroindustry and Bioeconomy. Malang, Indonesia
- 12. Grose JH. (2019) Phighting Fireblight with Phage. Balijestro Research Institute for Citrus and Subtropical Fruites. East Java, Indonesia
- 13. Grose JH. (2019) Current Virology. Three in one Program Keynote. Brawijaya University, Malang, Indonesia
- 14. Grose JH. (2019) Manipulating the Microbiome in Veterinary Care. Brawijaya University Veterinary School, Malang, Indonesia
- 15. Grose JH. (2019) Phighting Fireblight with Phage. Satya Wacana Chrisian University. Jojakarta, Indonesia
- 16. Grose , JH. (2019) Fire Quencher: a Microbiome Replacement Therapy for Apple Trees.

  Second International Symposium on Fire Blight in Roseaceous Plants. Travese City, Michigan
- 17. Carr, E, Breakwell, DP and Grose, JH. Isolating Mycobacteriophages from Raw Sewage for Greater Clinical Significance. (2019) 11th Annual SEA-Phages Symposium, Ashburn, Virginia
- 18. Thompson ,D, Grose JH. (2019) The toolkit utilized by bacteriophages to infect and lyse bacteria. Second International Symposium on Fire Blight in Roseaceous Plants. Travese City, Michigan
- 19. Grose, JH. (2018) Uncovering a protein kinase signaling pathway for PASsing glucose. IMYA 13th International Meeting on Yeast Aging and Apoptosis, Leuven, Belgium

20. Grose, JH. (2018) Phighting Phire Blight with Phage. 9th annual International Pest Management (IPM) Symposium. Baltimore, Maryland

- 21. Potts, E, Thurgood, T, Thompson, D, Breakwell, DP and Grose JH. (2018) Searching for Jumbo Bacteriophages that Infect Mycobacterium. 10th Annual SEA-Phages Symposium, Ashburn, Virginia
- 22. Grose, JH. (2018) Exploring a protein kinases of ATAXIN-2 as a potential therapeutic target. John's Hopkins University Packard Center Investigator's Meeting, Baltimore, Maryland
- 23. Gitler, AD and Grose, JH. (2018) Identifying kinase regulators of Ataxin-2. 18th Annual Robert Packard Center for ALS Research Symposium. Baltimore, Maryland
- 24. Grose, JH. (2018) The role of PAS kinase in PASsing Glucose. (2018) Analytical Genetics Meeting, San Diego, California
- 25. Grose, JH. (2018) The role of PAS kinase in PASsing Respiration. Rowan University Departmental Seminar Series, Glassboro, New Jersey.
- 26. Pielstick BC, Arens D, Pape J and Grose JH. (2018) The Effects of PAS kinase and Cbf1 on Cellular Respiration. The Beckman Foundation Annual Symposium. San Francisco, California
- 27. Potts, E, Thurgood, T, Thompson, D, Breakwell, DP and Grose JH. (2018) Searching for Jumbo Bacteriophages that Infect Mycobacterium. 10th Annual SEA-Phages Symposium, Ashburn, Virginia
- 28. Arens, D, and Grose JH. (2018) Ecological niche plays major role in determining host specificity of two novel jumbo Erwinia myoviruses. Analytical Genetics Meeting, San Diego, California
- 29. Thompson, D, and Grose JH. (2018) Fighting FireBlight with Phages. (2018) Analytical Genetics Meeting, San Diego, California
- 30. Pape, J, and Grose JH. (2018) PAS kinase and Cbf1/USF1 alter cellular respiration through ATP synthase. 2018 Analytical Genetics Meeting, San Diego, California
- 31. Colby, BA, and Grose JH. (2018) Novel regulators of Cellular Respiration Revealed through a suppressor screen. Analytical Genetics Meeting, San Diego, California
- 32. Ong, K and Grose JH. (2018) Understanding AMPK-oxysterol binding protein signaling in controlling cell death and mitochondrial function using Saccharomyces cerevisiae model. Analytical Genetics Meeting, San Diego, California
- 33. Grose, JH. (2017) Phighting FireBlight with Phage. Western Region IR-4 Biopesticides Meeting. Denver, Colorado
- 34. Grose, JH. (2017) PAS kinase: PASsing Glucose and Cell Death. 12th International meeting on Yeast Apoptosis. Bari, Italy.
- 35. Colby, BA, Ballard, TP, Fajardo, CP, Kruger, J, Duncan, S, Webb, CJ, Sharma, R, Breakwell, DP, Hope, S, and Grose JH. (2017) The Bee's and the Tree's: Phage Hunting at BYU 2016-2017. 9th Annual SEA-Phages Symposium, Ashburn, Virginia
- 36. Duncan, S., Farjardo, C, and Grose JH. (2017) Weekly Exercises Aimed at Improved Understanding of Key Concepts for the Phage Hunters Classroom. 9th Annual SEA-Phages Symposium, Ashburn, Virginia
- 37. Azadani, DN, Pray, R, Ramirez, J, Grose, JH and Hatherill, JR. (2017) Slowing Antibiotic Resistance with EnteroSword. NSF Community College Innovation Challenge Boot Camp, Arington, Virginia
- 38. Ong, KL, Rees, A, Franson, J, White, J, Hilton, A, Choksi, N, Pattison, J Nickle, T, Laub, S, Harris, M, Dallon, B, Bikman, B, Bridgewater, L, Grose JH. (2017) PAS kinase deficient mice display increased rates of cellular respiration. Keystone Mitochondria Communication, Taos, New Mexico
- 39. Pattison, J, DeMille, D, Bikman, B, and Grose JH. (2017). The Role of PAS kinase in Cellular Respiration. Keystone Mitochondria Communication, Taos, New Mexico.
- 40. Grose, JH. (2016) PAS kinase:: A key to PASsing respiration. LDS Lifescience Research Symposium. Lehi, Utah
- 41. Franson, J., White, J., Ong, KL, Choksi, N., Hilton, A., Rees, A., Resolme, J., Zhao, J., Sevey, R., Olsen, KB, Grose JH, Bridgewater, L. (2016) Effect of Diet, Genes, and Microbiota on Glucose Tolerance in a Mouse Model with a Genetically Increased Metabolic Rate. LDS Lifescience Research Symposium. Lehi, Utah
- 42. Pattison, J, DeMille, D, Bikman, B, and Grose JH. (2016) The Role of PAS kinase in Cellular Respiration. LDS

- Lifescience Research Symposium. Lehi, Utah
- 43. Zhao, J, Grossarth, S, Bridgewater, L, Grose JH. (2016) Phage hunting through the human gut. Phage Phield Day, Provo, Utah
- 44. Esplin, I, Grose, JH. (2016) Fighting Fire with Phages. Phage Phield Day, Provo, Utah
- 45. Allen, R, Bybee, RN, Furhiman, DA, Ririe, DB, Thomson, SE, Usher, BK, Breakwell, DP, Sharma, R, Putnam, R, Grose, JH. (2016) Genomic characterization and comparison of five different families of bacteriophages infecting *Erwinia amylovora*. Phage Phield Day, Provo, Utah.
- 46. Kruger, J, Tatlow, PJ, Grose, JH. (2016) Isolation and Characterization of Deimos-Minion, the Largest *Erwinia amylovora* Bacteriophage. Phage Pheild Day, Provo, Utah
- 47. Harris, N, Hurst, E, James, B, Pollock, S, Smith, H, Webb, CJ, Breakwell, DP, Grose, JH, Hope, S. (2016) Phage Honeybear and Related Phage Toothless. Phage Phield Day, Provo, Utah
- 48. Bloomfield, T, Buhler, B, Duncan, S, Knabe, B, Stephensen, M, Wells, M, Wright, C, Breakwell, DP, Hope, S, Grose, JH. (2016) Genomic Analysis and Characterization of PBL1C: The First Discovered *Paenibacillus Larvae* Phage. Phage Phield Day, Provo, Utah
- 49. Duncan S, Hurst E, Berg J, Ward A, Hilton J, Breakwell D, Grose JH, Hope S. (2016) *Paenibacillus Larvae* Phages Contain Regions of Conserved Synteny Despite Large Genomic Differences. Poster presentation. 8th Annual SEA-Phages Symposium, Ashburn, Virginia
- 50. Hancock, J, Cook, M, Grose, JH, Bridgewater, L, Weber, KS. (2016) Role of PAS kinase and metabolism on immune cells. Autumn Immunology Conference 44th Annual Meeting. Chicago, Illinois
- 51. Grose, JH, Buckley, A, and Casjens, S. (2016) Understanding the enormous diversity of tailed bacteriophages: Investigating the Relationships of Bacteriophages within a Class Reveals Obvious Borders Between Bacterial Orders. Analytical Genetics Meeting, Rotorua, New Zealand
- 52. DeMille D, Pattison, Jand Grose, JH. (2016) The Role of PAS kinase in Cellular Respiration. Analytical Genetics Meeting, Rotorua, New Zealand
- 53. Grose, JH. (2016) Phage Therapy for Roseaceae plants. Western region IR-4 meeting Denver, Colorado
- 54. Grose JH (2015) PAS kinase: PASsing glucose. Invited Departmental eminar. Washington University, Illinois
- 55. Grose JH. (2015) Fire Quencher: A Phage-based Treatment for Fire Blight. Podium presentation. IR-4/USDA Biopesticides Workshop. Atlanta, Georgia
- 56. Mathews, M8 and Grose JH (2015) FireQuencher: A phage-based therapy for fire blight. IR-4 Biopesticide Workshop, Atlanta, Georgia
- 57. Grose JH (2015) Investigating the Relationships of Bacteriophages with a Class Reveals Obvious Boarders Between Bacterial Orders, 8th Annual SEA-Phages Symposium. HHMI Janelia Farms, Virginia
- 58. Berg, J, Esplin, E, Breakwell, DP, Hope, S, Grose, JH. (2015) Isolation and Characterization of *Paenibacillus larvae* and *Brevibacillus laterosporus* Bacteriophages to Understand Their Evolutionary Relationships. 7th Annual SEA-Phages Symposium, Ashburn, Virginia
- 59. DeMille D, Bikman B, and Grose JH (2015) The role of PAS kinase in controlling cellular respiration. Cell Symposia: Multifacited Mitochondria, Chicago, Illinois
- 60. Hancock, J, Cook, M, Grose, JH., Bridgewater, L. (2015) Role of PAS kinase and metabolism on immune cells. Autumn Immunology Conference Chicago, Illinois.
- 61. Wienclaw TM, Taylor AS, Bairett SR, Ashcroft CR, Merrill BD, Schoenhals JE, Esplin ID, Breakwell DP, Grose JH, and Burnett SH (2014) Phage Jenst provides a unique genome with gene products new to *Paenibacillus larvae* phages. 6th Annual HHMI SEA-Phages Symposium, Ashburn, Virginia
- 62. Grose JH. (2014) PASsing glucose: Balancing the Cellular Budget. Oral Presentation. Center for Microbial Sciences, SDSU, California
- 63. Jensen, JL, Berg, JA, Esplin, ID, Foy, BM, Grossarth, SE, Harbaugh, K, Ingersoll, K, Kruger, JL, Peck, MD, Ransom, EK, Smith, HG, Stratton, JL, Breakwell, DP, Burnett, SH, and Grose JH. (2013) Isolation and

- Characterization of Eleven Phages that Infect *Erwinia amylovora*. Oral presentation. 6th Annual HHMI SEA-PHAGES Symposium, Janelia Farms, Virginia *Honorable mention*
- 64. Merrill BD, Sheflo MA, Ayer PA, Beckstead AP, Fajardo CP, Ferguson NC, Fisher JNB, Gardner AV, Graves KA, Hartmann KA, Kennedy AK, Liu JE, Lunt BL, Merrill CA, Russell RC, Wake BN, WilliamsKR, Zimmerman LJ, Grose JH, Breakwell DP, Burnett SH. (2013) Discovery and Characterization of Novel Paenibacillus larvae Bacteriophages. 5th Annual SEA-Phages Symposium, Ashburn, Virginia
- 65. Ferguson, NC, Irons, DL, Marlow, SC, McCord, TM, Herring JA, Deus LM, Manci AM, Meadows HN, Heiner ME, Willyerd HJ, Gardner AV, Fisher JNB, SmithK, Grose JH, Breakwell DP, Burnett SH (2013) Phage cluster and subcluster identification using Tape Measure Protein primers in a PCR reaction. 5th Annual SEA-Phages Symposium, Ashburn, Virginia
- 66. Jensen, JD, Fisher, JNB, Grose, JH, Burnett, SH, and Breakwell, DP. (2013) Isolation and Characterization of Three Novel Bacteriophages of Bacillus cereus. American Society for Microbiology General Meeting, Denver, Colorado
- 67. Badal, B, DeMille, D, Mackay, J, Grose JH. Interplay between the yeast nutrient sensing kinases Snf1, TORC1 and PAS kinase. (2013) Poster presentation. Analytical Genetic Meeting. Hayes, W, Langston, KT, Neubert, J, Benjamin, IJ, and Grose, JH. Characterizing the Role of HSPB2 and CRYAB in Cardiac Metabolism and Muscle Structure. Analytical Genetics Meeting Alta, Utah
- 68. DeMille, D, and Grose JH. (2013) A Comprehensive Interactome for Yeast PAS Kinase Reveals Direct Regulation of Respiration Through the Phosphorylation of Cbf1. Podium presentation. Analytical Genetics Meeting, Alta, Utah
- 69. Mackay, J, DeMille, D, and Grose JH. (2013) Uncovering Regulation and Function of the Yeast NAD Kinase Utr1. Poster presentation. Analytical Genetics Meeting, Alta, Utah
- 70. Brown, A, Christopher, A, Harrison, C, Kiser, K, Lasko, D, Li, X, Merrill, B, Peck, K, Perry, LJ, Sabin, N, Schellhous, M, Smith, K, Koooyman, D, Price, P, and Grose JH. (2013) Phage Pharming. Podium and poster presentations. iGEM Worldchampionship Jamboree, MIT, Cambridge, Massachusetts
- 71. Brown, A, Christopher, A, Harrison, C, Kiser, K, Lasko, D, Li, X, Merrill, B, Peck, K, Perry, LJ, Sabin, N, Schellhous, M, Smith, K, Koooyman, D, and Grose JH. (2013) Phage Pharming. Podium and poster presentations. iGEM Regional Jamboree, Toronto, Canada *Gold Medal Awarded and Invitation to the iGEM Word Champsionship Jamboree*
- 72. Anderson, J, Buckley, A, Cabeza Pezoa, Y, Emery, H, Fullwood, R, Hecht, K, Jackson, K, Jones, E, Mackay, J, Meek, J, Nordgren, K, Rees, J, Ritchie, D, Shumway, J, Yates, J, Kooyman, D, and Grose, JH. (2012) E. colin: A Two-circuit System for Colin Cancer Detection. Podium and poster presentations. iGEM Regional Jamboree, Stanford, California
- 73. DeMille, D, Mackay, J, Sowa, S, Hall, T, Lawrence, E, and Grose, JH. (2012) The Role of Yeast PAS kinase in Passing Glucose. Poster presentation. Yeast Molecular Biology and Genetics Meeting, Princeton University, New Jersey
- 74. Chetty, V, D, Abedayo, J, Mathis, A, DeMille, D, Morley, S, Anthonymuthu, T, Yuan, Y, Goncalves, J, Grose, JH, Prince, Guy-Bart, S, and Warnick, S. (2012) In-Silico Robust Reconstruction of the Per-Arnt-Sim Kinase Pathway Using Dynamical Structure Functions. Foundations of Systems Biology and Engineering FOSBE), Keio University, Japan
- 75. Mathis, A, Morley, S, Southwick, T, DeMille, D, Abedayo, J, Warnick, S, Grose JH, and Prince, J. (2012) Definitive Network Reconstruction of the Yeast PAS Kinase Network via Mass Spectrometry Proteomics and Phosphoproteomics. US HUPO: The Future of Proteomics, New Mexico
- 76. Gardner, AV, Adawi, EC, Christiansen, MR, Ferguson, NC, Irons, DL, Jensen, J, Kennedy, A, Lloyd, JS, Marlow, S, Mason, S, McCord, TM, Merrill, BD, Nelson, EP, Norton, CS, Pettersson, SM, Poe, DE, , RC, Smith, TC, Sullivan, S, Williams, KR, Morrell, JD, Brighton, AK, Fisher, JNB, Sheflo, MA, Breakwell, DP, Burnett, SH, Grose, JH. (2012) Proposal for A1 Subcluster Division and Evidence of Evolutionary Events in B1 and B4 Subcluster Phage. Howard Hughes Medical Institute 4th Annual Phage Symposium, Ashburn, Virginia
- 77. Rice, J, Neubert, J, Langson, K, Nelson, F, Wood, J, and Grose, JH. (2012) Characterizing the Role of HspB2 in

- Cardiac Mitochondrial Function. Poster presentation. National Conference for Undergraduate Research (NCUR), Weber State University, Utah
- 78. Price, K, Chapman, K, Cutler, C, Hoops, W, Lee, S, Louis, K, Nguyen J, and Grose, JH. (2012) Molecular Mechanisms of R120G CryAB-induced Cardiomyopathy. National Conference for Undergraduate Research (NCUR), Weber State University, Utah
- 79. Mackay, J, DeMille, D, Gessel A, Lawrence, E, Hall, T, and Grose, JH. (2012) A Yeast Two- hybrid Screen Reveals Novel Roles for Yeast PAS kinase.. National Conference for Undergraduate Research (NCUR), Weber State University, Utah
- 80. Findlay, R, Teng, J, Bevard, K, Thornock, S, and Grose, JH (2012) The Regulation of PAS Kinase, a Key Sensory Kinase Required for Glucose Homeostasis. National Conference for Undergraduate Research (NCUR), Weber State University, Utah
- 81. Brighton, AK, Fisher, JNB, Lunt, BL, Taylor, MA, Smith, KC, Baker, B, Barrus, EZ, Chapman, KM, Drake, EA, Jackson, KR, Kartchner, BJ, Kiser, CD, Kiser, JT, Kitchen, JCB, McDaniel, SW, Ormsby, WR, Parker, M, Sheide, MG, Steck, RP, Vance, KS, Breakwell, DP, Burnett, SH, and Grose, JH. (2011) Additional Evidence for Frameshifts in A2 and Gene Mosaicism in F Mycobacteriophage. Howard Hughes Medical Institute Third Annual Phage Symposium, Ashburn, Virgina
- 82. Grose, JH, Breakwell, DP, and Burnett, SH. (2011) Out of the SEA: Getting Students to Crawl on Land. Howard Hughes Medical Institute Third Annual Phage Symposium, Ashburn, Virgina
- 83. Grose, JH. (2011) The Role of PAS Kinase in PASsing Cellular Glucose. Analytical Genetic Meeting, Carmona, Spain
- 84. DeMille, D, Mackay, J, Gessel, A, Lawrence, E, Hall, T, and Grose J.H. (2011) The Role of Yeast PAS kinase in Metabolic Regulation. Analytical Genetic Meeting, Carmona, Spain
- 85. Biggs, M, Roberts, JA, Sabin, D, Sabin, M, Merrill, M, Allley, A, Chamberlain, C, Adebayo, J, Kooyman, DL, and Grose, JH. (2011) E. colonoscopy. Podium and poster presentation. iGEM Worldchampsionship Jamboree, MIT, Boston, Massachusetts
- 86. Biggs, M. Roberts, JA, Sabin, D, Sabin, M, Merrill, M, Alley, A, Chamberlain, C, Adebayo, J, Kooyman, DL, and Grose, JH. (2011) E. colonoscopy. Podium and poster presentation. IGEM Regional Jamboree, Indianapolis, MN. Gold Medal Awarded and Invitation to the iGEM Word Champsionship Jamboree
- 87. Swenson, C, Breakwell DP and Grose, JH. (2010) Mendelian Segregation of Alleles in *Saccaharomyces cerevisiae*. ASMCUE, UC San Diego, California
- 88. Grose, JH. (2009) PASsing Glucose- the Role of PAS Kinase in Regulating Cellular Glucose Metabolism. Analytical Genetic Meeting, Asilomar, California
- 89. Breakwell, DP, and Grose, JH. (2009) The NAD Cycle: Exercises for Teaching Biosynthetic Pathways. ASMCUE, Colorado State University, Colorado
- 90. Grose, JH, and Breakwell, DP.(2009) A Modified Ames Test to Teach Mutations and Mutagens.. ASMCUE, Fort Collins, Colorado State University, Colorado

### Regional/Local (2008- present, 143 total)

- 1. Harris, E. and Grose, JH. (2021) Testing Novel Bacteriophage Against Bacillus anthracis Spores. (2021) Intermountain Branch ASM meeting. Hosted online.
- 2. Hughes, S. and Grose, JH. (2021) An Analysis of Racial Demographics in Research Surrounding Autoimmunity Intermountain Branch ASM meeting. Hosted online.
- 3. Newey, C, Taylor, A, Applegate, A., Reid, A, Robison, RA, Grose, JH. (2021) Stability of SARS-CoV-2 on Currency Intermountain Branch ASM meeting. Hosted online.
- 4. Gibbons, A, Lee H, Grose, JH. (2021) Phage isolation of Acinetobacter and Characterization of its Virion proteins
- 5. Intermountain Branch ASM meeting. Hosted online.
- 6. Gorden, B, Rallison, J, Grose, JH. (2021) Comparison of the Host Range of 18 T1-like Phages Capable of Infecting Clinical Klebsiella Isolates. Intermountain Branch ASM meeting. Hosted online
- 7. Ellsworth, S, Grose JH. (2021) The two sides of Cbf1: a transcription factor's direction of cell metabolism in its

- phosphorylated and unphosphorylated forms
- 8. Zaugg, E, Grose, JH. (2021) Isolation of Yersinia phages and Characterization of its Virion proteins. Intermountain Branch ASM meeting. Hosted online
- 9. Moulton, R, Grose JH. (2021) Isolation and characterization of Cronobacter phages. Intermountain Branch ASM meeting. Hosted online
- 10. Hyer, C, Grose JH. (2021) A Klebsiella Pneumonie Infecting Phage with Potential Applications in Phage Therapy ASM meeting. Hosted online
- 11. Cobbley, H, Evans S, Grose, JH. (2021)Genomic Characterization of Proteus mirabilis Bacteriophages and Host Range Analysis. Intermountain Branch ASM meeting. Hosted online.
- 12. Hyer, C., Patillo, C., Grose, JH. (2021) A Klebsiella pneumoniae infecting phage with potential clinical application. Intermountain Branch ASM meeting. Hosted online.
- 13. Sirrine, M, and Grose JH. (2020) Finding the interactors of Cbf1 and its role in the regulation of respiration and lipid biosynthesis. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 14. Barnett, L,Hoopes, W, Nielson, N, Colby, B, Farnesworth, R, Kiser K, Jarvis, J, and Grose JH. (2019) Understanding the functions of CryAB and its role in disease. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 15. Carr, E., Grose, J.H (2019) Discovery of Geographical Gene Variants in Related Pseudomonas aeruginosa Bacteriophages. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 16. Flor, S., Loertscher, E., Urrea, L., Tovar, K., Melhado, E., Sharma, R., Thurgood, T., Grose, J.H. (2019) Isolating Bacteriophages to Combat Pathogenic Bacteria. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 17. Gaertner, R and Grose, JH. (2019) A Better Understanding of Viruses Means Furthering Medicinal Technology. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 18. Barnett, L,Hoopes, W, Nielson, N, Colby, B, Farnesworth, R, Kiser K, Jarvis, J, and Grose JH. (2019) Understanding the functions of CryAB and its role in disease. Poster Conference for Undergraduate Research Awards (CURA), Brigham Young University, Utah
- 19. Arens, D and Grose JH. (2019) Characterizing novel pathways at the pivotal point for controlling the balance between respiration and lipid biosynthesis in yeast. Intermountain Branch American Society for Microbiology (ASM) Meeting. Brigham Young University, Provo, Utah
- 20. Newey, C, Pape, J and Grose, JH. (2019) PAS kinase as a Potential Therapeutic Target for Metabolic Diseases. Intermountain Branch American Society for Microbiology (ASM) Meeting. Brigham Young University, Provo, Utah
- 21. Carr, E, Carter, N, Gleave, A, Loertscher, E, Melhado, E, Hope, S, Breakwell DP, and Grose, JH. (2019) Characterization of 12 Bacteriophage Families Based on Distinct Protein Profile. 2019 Intermountain ASM Meeting, Provo, Utah
- 22. Carr, E, Carter, N, Gaertner, R, Gleave, A, Rodriguez, A, Loertscher, E, Melhado, E, Hope, S, Breakwell, DP, and Julianne H. Grose. (2019) Discovery of Novel but Ubiquitous Family of Serratia Siphoviridae Phages. 2019 Intermountain ASM Meeting, Provo, Utah
- 23. Divis, T, Elton, D, Flor, S, Hanis, T, Moe, B, Robinson, C, Stoker, T, Kruger, JL, Uricoechea, L, Thurgood, TL, Hope, S, Breakwell, DP, Grose, JH. (2019) Discovering Antibiotic-Resistant Genes in Bacteriophages. 2019 Intermountain ASM Meeting, Provo, Utah
- 24. Davis, R, Dotter, D, Gaertner, R, Taylor, A, Thurgood, TL, Hope, S, Breakwell, DP, Grose, JH. (2019) Characterization of Novel Serratia marcescens Bacteriophage Family: FaintSaint and Tlacuache. 2019 Intermountain ASM Meeting, Provo, Utah
- 25. Chamberlain JD, Ellis KJ, Abrams S, Allen C, Calder B, Carter O, Clarke T, Cluff E, Davis B, Doxey E, Eastley D, Hendricks MC, Merrill B, Miller P, O'Brien C, Ochsner R, Olsen H, Phillips H, Riddle A, Routsong J, Torgersen K, Wadsworth S, Weatherred M, Weeks S, Hope S, Grose JH, Breakwell, DP. (2019) Phages Infect, But Not All Phages Infect Absolutely. Or Something Like That. 2019 Intermountain ASM Meeting, Provo, Utah
- 26. Olsen H, Weatherred M, Abrams S, Allen C, Calder B, Carter O, Clarke T, Cluff E, Davies B, Doxey E, Eastley D,

Hendricks MC, Merrill B, Miller P, O'Brien C, Ochsner R, Phillips H, Riddle A, Routsong J, Torgersen K, Wadsworth S, Weeks S, Chamberlain JD, Ellis KJ, Hope S, Grose JH, Breakwell, DP. (2019) The Genome of Squally, A Novel T4-like Sinorhizobium meliloti Phage. 2019 Intermountain ASM Meeting, Provo, Utah

- 27. Boyd, KD, Boyd, C, Hamula, J, Alger, TJ, Keshek, C, Hope, S, Grose, JH, Breakwell, DP. (2019) Novel Protein Interaction Screen with Bacteriophage. 2019 Intermountain ASM Meeting, Provo, Utah
- 28. Rodriguez, Carr, EL, Gaertner, R, Hope, S, Breakwell, DP, Grose, JH. (2019) Isolation and Characterization of Novel but Ubiquitous Family of Serratia Phages. 2019 Intermountain ASM Meeting, Provo, Utah
- 29. Gleave, A, Carr, EL, Hope, S, Breakwell, DP Grose, JH. (2019) Characterization of 18 Bacteriophage Families Based on Distinct Protein Profile. 2019 Intermountain ASM Meeting, Provo, Utah
- 30. Thurgood, T, Robison, R, Grose, JH. (2019) A Case Study of Phage Therapy in Response to Multi-Antibiotic-Resistant Bacterial Infections. 2019 Intermountain ASM Meeting, Provo, Utah
- 31. Thompson, DW, Grose, JH. (2019) Phighting Phytopathogens with Phage. 2019 Intermountain ASM Meeting, Provo, Utah
- 32. Rodriguez, A, Allen, K, Hope, S, Breakwell, DP, Grose, JH. (2019) Characterization of diversity in T-4 like Bacteriophages. 2019 Intermountain ASM Meeting, Provo, Utah.
- 33. Brundage, B, Findley, JM, Larson, W, Hope, S, Breakwell, DP, Grose, JH. (2019) PCR analysis of widespread human fecal samples to identify common bacteriophage.2019 Intermountain ASM Meeting, Provo, Utah
- 34. Pielstick, B, Pape J and Grose JH. (2018) Investigating a novel unknown controller of respiration. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 35. Arens, D and Grose, JH. (2018) Characterizing novel pathways at the pivotal point for controlling the balance between respiration and triglyceride biosynthesis in yeast. Tri-branch ASM meeting, Durango, Colorado
- 36. Pape, J, and Grose JH. (2018) PAS kinase and Cbf1/USF1alter cellular respiration through ATP synthase. Tri-branch ASM meeting, Durango, Colorado
- 37. Roark, B, Choksi, N, and Grose JH. (2018) Using Yeast to Uncover a Critical Pathway Involved in Neurodegenerative Disease. Tri-branch ASM meeting, Durango, Colorado
- 38. Pielstick, B, Arens, D, Pape, J, and Grose JH. (2018) Novel Regulators of Cellular Respiration Revealed Through a Suppressor Screen. Tri-branch ASM meeting, Durango, Colorado
- 39. Flake, P, Sharma, R, and Grose JH. (2018) Quantifying biological "dark matter": novel hypothetical proteins encoded by the phages that infect the Enterobacteriaceae family. Tri-branch ASM meeting, Durango, Colorado
- 40. Thurgood, T, and Grose JH. (2018) Regulation of cellular apoptotic pathway through phosphorylation of apoptosis-related protein BI-1 by metabolic protein Per-Arnt-Sim Kinase (PASK). Tri-branch ASM meeting, Durango, Colorado
- 41. Fajardo C, Meredith S, Roll C, Griffitts JS, Hope S, Grose JH, and Breakwell DP. (2018) Proof of Concept: Determining Phage Adsorption Using Flow Cytometry. Tri-branch ASM meeting, Durango, Colorado
- 42. Whitlock, T, Greene, N, Creaser, I, Knowles, A, Dalton KD, Nelson, N, Barton, K, Bateman, J, Quist, N, Hendrickson, J, Ellis, K, Chamberlain, N, Jenkins, J, Fajardo, C, Fuhriman, DA, Griffitts JS, Hope S, Grose JH, and Breakwell DP. (2018) The genomes of CW76, a unique phage, and XTREME, a T4-like phage infecting Sinorhizobium meliloti. Tribranch ASM meeting, Durango, Colorado
- 43. Jenkins, J, Whitlock, T, Greene, N, Creaser, I, Knowles, A, Dalton KD, Nelson, N, Barton, K, Bateman, J, Quist, N, Hendrickson, J, Ellis, K, Chamberlain, N, Fajardo, C, Fuhriman, DA, Griffitts JS, Hope S, Grose JH, and Breakwell DP. (2018) Host Range and Receptor Binding of 13 Newly-Isolated Phages Infecting Sinorhizobium meliloti. Tri-branch ASM meeting, Durango, Colorado
- 44. Birch, EK, Brantley, SB, Eberhard, BD, Fairholm, JD, Flindt, K, Foster, KW, Himes, SR, Ruesch, S, Uricoechea Urrea, LV, Thurgood, T, Breakwell, DP, Hope, S and Grose JH. (2018) Novel Application of Common Genetic Screening Technique Used to Characterize Phage Proteins and Assign Putative Functions. Tri-branch ASM meeting, Durango, Colorado
- 45. Doney, J, Hadden, R, Holmstead, J, Eardley, R, Hansen, E, Grose JH. (2018) Developing a phage therapy for Anthrax. Tri-branch ASM meeting, Durango, Colorado

46. Anderson, K, Barker, A, Carroll, M, Hogan, T, Nieman, T, Parsons, M, Simister, A, Steffensen, A, Todd, J, Breakwell, DP, Hope, S and Grose JH. (2018) Screening for antibiotic-resistance genes in a sewage phage population. Tribranch ASM meeting, Durango, Colorado

- 47. Melhado, E, Chow, J, Wiley, M, Sarabia, R, Standing, S, Breakwell, DP, Hope, S and Grose JH. (2018) Isolation and Characterization of Sewage Phages. Tri-branch ASM meeting, Durango, Colorado
- 48. Hyer, MG, Call, JJ, Dawson, DD, Chronis, JD, Ayala, MA, Finnegan, Z, Fox, A, Hielscher, T, Yeates, EL, Breakwell, DP, Hope, S and Grose JH. (2018) Identification of promiscuous sewage phage. Tri-branch ASM meeting, Durango, Colorado
- 49. Potts, E, Sirrine, M, Meeks, T, Rodriguez, W, Wilkey, A, Tovar, K, Porter, M, Lambert, A, Yeates, E, Breakwell, DP, Hope, S and Grose JH. (2018) A phage-based strategy for safe and effective treatment of antibiotic-resistant bacteria. Tri-branch ASM meeting, Durango, Colorado
- 50. Yeates, E, Nieman, T, Sharma, R, and Grose JH. (2018) A comparison of three families of bacteriophages that infect Erwinia amylovora. Tri-branch ASM meeting, Durango, Colorado
- 51. Grose, JH. (2017) PASsing respiration: the role of PAS kinase in inhibiting respiration and the consequences in diabetes. Utah Valley University, Utah
- 52. Grose, JH. (2017) Phighting Phireblight with Phage. Intermountain Branch ASM meeting, Weber State University, Utah
- 53. Cardinal, J, Gille, J, Fe, K, Salazar, EG, Sharma, R, Breakwell, D, Hope, S, and Grose, JH. (2017) Discovery of Likely Transcriptional Regulons and Hypothesized Protein Function in Phage RAY of the Deimos-Minion Family through Motif Analysis. Intermountain Branch ASM meeting, Weber State University, Utah
- 54. Freestone, C, Hughes, J, Loertscher, E, Sharma, R, Duncan, S, Breakwell, D, Hope, S, and Grose, JH. (2017) Genome Comparison of Five Erwinia amylovora Bacteriophages. Intermountain Branch ASM meeting, Weber State University, UT
- 55. McColley, A, Leavitt, P, Fajardo, C, Kruger, J, Webb, CJ, and Grose, JH. (2017) A Host Range Analysis of the Yoloswag Bacteriophage Family. Intermountain Branch ASM meeting, Weber State University, Utah
- 56. Judge, L, Harley, K, Sharma, R, Duncan, S, Breakwell, D, and Hope, S, and Grose, JH. (2017) Comparative Genomics of Four Erwinia Bacteriophages and N4, a Pathogenic Driving Force in E. coli. Intermountain Branch ASM meeting, Weber State University, Utah
- 57. Colby, B, Stubbs, O, Bell, K, Rader, K, Sharma, R, Duncan, S, Breakwell, D, Hope, S, and Grose, JH. (2017) Analysis of Interesting Proteins in Deimos-Minion Bacteriophage Family. Intermountain Branch ASM meeting, Weber State University, Utah
- 58. Ng, CWD, Malmrose, J, Ong, KL and Grose, JH. (2017) Understanding the Functions of Oxysterol Binding Protein using Yeast Model. Intermountain Branch ASM meeting, Weber State University, Utah
- 59. Walton, D, Judd, J, Jensen, H, Fajardo, C, Kruger, J, Webb, CJ, and Grose, JH. (2017) The Host Range of Bacteriophage Phamilies "Cobes" and "Kyle". Intermountain Branch ASM meeting, Weber State University, Utah
- 60. Kruger, J, Esplin, I, Hurst, E, Knabe, B, Pollock, S, Severe, J, Webb, CJ and Grose, JH. (2017) Quenching Fireblight: A Search for Stable Phage Therapy. Intermountain Branch ASM meeting, Weber State University, Utah
- 61. Ward, C, Walker, J, Johnson, L, Fajardo, C, Kruger, J, Webb, CJ and Grose, JH. (2017) Frozen Phage Family Not as Specific as We Once Thought: A Host Range Study. Intermountain Branch ASM meeting, Weber State University, Utah
- 62. Luke, L, Bodhaine, C, Sharma, R, Duncan, S, Breakwell, D, Hope, S, and Grose, JH. (2017) Interesting Proteins within Phages Found within the "Frozen" Phage Family. Intermountain Branch ASM meeting, Weber State University, Utah
- 63. Hansen, E, Eardley, R, Melville, M, Kruger, J, Webb, CJ, Fajardo, C and Grose, JH. (2017) Host Range of the Rising Sun Phage Family. Intermountain Branch ASM meeting, Weber State University, Utah
- 64. Ballard, T, Withers, J, Duncan, S, Breakwell, D, Hope, S, and Grose, JH. (2017) Dots, Dots, Lines: A Dot Plot Comparison of the Erwinia Phage Frozen. Intermountain Branch ASM meeting, Weber State University, Utah
- 65. Nieman, T, Yeates, E, Hovenden, T, Sharma, R, Duncan, S, and Grose, JH. (2017) Phinding Phamily for Phage

- Deimos-Minion: A Phylogenetics Study. Intermountain Branch ASM meeting, Weber State University, Utah
- 66. Choi, M, Ferguson, H, and Grose, JH. (2017) The Natural Bacterial Flora of a Healthy Apple Tree. Intermountain Branch ASM meeting, Weber State University, Utah
- 67. Ong, KL, Christensen, M, Ng, CWD, Malmrose, J, Badal, B, and Grose, JH. (2017) Understanding AMPK-Oxysterol Binding Protein Signaling in Controlling Cell Death and Mitochondrial Function using Saccharomyces cerevisiae Model. Intermountain Branch ASM meeting, Weber State University, Utah
- 68. Roundy, S, Scott, M, Jiminez, J, Workman, A, and Grose, JH. (2017) PAS Kinase and its Effects in Cellular Respiration. Intermountain Branch ASM meeting, Weber State University.
- 69. Sharma, R, and Grose, JH. (2017) Deimos-Minion: A Phage So Big it is Hard To See. Intermountain Branch ASM meeting, Weber State University, Utah
- 70. Arens, D, Pattison, J, DeMille, D, and Grose, JH. (2017) Using Yeast to Understand the Regulation of Cellular Respiration by PAS Kinase Dependent Pathways. Intermountain Branch ASM meeting, Weber State University, Utah
- 71. Pattison, J, DeMille, D, Bikman, B, and Grose JH. (2016) The Role of PAS kinase in Cellular Respiration. Utah Conference for Undergraduate Research. University of Utah, Utah
- 72. Harris, N, Hurst, E, James, B, Pollock, S, Smith, H, Webb, C, Fajardo, C, Hilton, J, Ward, A, Grose, JH, Breakwell, DP, Hope,S. (2016) Genomic Characterization of Honeybear and Related Phage Toothless. Intermountain Branch ASM Meeting, SLC, Utah
- 73. Kruger, J, Tatlow, PJ, Grose, JH. (2016) Isolation and Characterization of Deimos-Minion, the Largest Erwinia amylovora Bacteriophage. Utah Conference for Undergraduate Research, Salt Lake City, Utah
- 74. White, J, Franson, J, Rees, A, Hilton, A, Ong, KL, Choksi, N, Resolme, J, Zhao, J, Grose JH, Bridgewater, L. (2016) Effect of Diet, Genes, and Microbiota on Glucose Tolerance in a Mouse Model with a Genetically Increased Metabolic Rate. LDS Lifescience Research Symposium. Lehi, Utah
- 75. White, J, Franson, J, Rees, A, Hilton, A, Ong, KL, Choksi, N, Resolme, J, Zhao, J, Grose JH, Bridgewater, L. (2016) PAS kinase and its Role in the Development of Diabetes and Obesity in Mice. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 76. Harris, K, Evans, B, Andros, T, Grose JH, (2015) Yeast PAS kinase as a Model for Cellular Control. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 77. Pattison, J, Grose JH, (2015) The transcription factor centromere binding factor 1 (Cbf1) as a central point of control to upregulate mitochondrial activity and decrease lipid biogenesis in the yeast Saccharomyces cerevisiae. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 78. Barnett, D, Grose JH, (2015) Regulation of NAD kinase by PAS kinase. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 79. DeMille, D, Bikman, B, and Grose JH. (2015) The Role of Yeast PAS Kinase in Controlling Cellular Respiration through Cbf1. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 80. Pattison, J, DeMille, D, Bikman, B, and Grose, JH. (2015) The transcription factor centromere binding factor 1 (Cbf1) as a central point of control to upregulate mitochondrial activity and decrease lipid biogenesis in the yeast Saccharomyces cerevisiae. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 81. Sharma, R, and Grose JH. (2015) Understanding the Relationship between Bacteriophages of the Enterobacteriaceae and Pseudomonaceae Family. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 82. Barnett, D, and Grose JH (2015) The Role of Yeast PAS Kinase in NAD Homeostasis. Tri-branch ASM meeting, Fort Collins, Colorado State University, C Colorado
- 83. Berg, J, and Grose JH. (2015) Characterization and Analysis of Six Novel Erwinia Phages Reveals Relationship to Enterobacteriaceae Family Members. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 84. Esplin, I, and Grose JH. (2015) Study of Novel E. amylovora Phages to Reveal Host Coevolution and Test Phage Therapy as a Treatment for Fire Blight. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 85. Crockett, JT, Esplin KE, Hyde, JR, Grose, JH, Donald P. Breakwell, Sandra Hope. Brevibacillus Bacteriophages Xane

- and Jenst Reveal a DNA Motif Indicating a Gene Regulatory Sequence. (2015) Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 86. Simister, A, Thurgood, T, Heaton, K, Berg, J, Merrill, B, Burnett, SD, Breakwell, DP, and Grose JH. (2015) The Mosaic Nature and Evolution of Three Brevibacillus Phages and Their Impact on Brevibacillus laterosporus and Other Bacteria. Tri-branch ASM meeting. Fort Collins, Colorado State University, Colorado
- 87. McBride, M, Evans, MR, Brundage, BM, Berg, J, Merrill, B, Burnett, SD, Breakwell, DP, and Grose JH. (2015) Comparing Protein Structures of a Transcriptional Regulator Repeated in Brevibacillus Phages. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado Third place best poster presentation
- 88. Hilton, JA, Schouten, JT, Berg, J, Merrill, B, Burnett, SD, Breakwell, DP, and Grose JG. (2015) Discovery of Two Novel Phage Clusters in Brevibacillus laterosporus Using Comparative Genomics. Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 89. Ferguson, H, Krugar, J, Burnett, SD, Breakwell, DP, and Grose JG. Isolation and analysis of two Erwinia phages and their relationship to phages that infect the Enterobacteriaceae and Pseudomonaceae Family. (2015) Tri-branch ASM meeting, Fort Collins, Colorado State University, Colorado
- 90. Rees, A, White, J, Ong, KL, Hilton, A, Choksi, N, Franson, J, Bridgewater, LB, and Grose, JH. (2015). The role of PAS kinase and the Gut Microbiome on Metabolism and Obesity Onset in Mice. Tri-branch ASM meeting, Fort Collins, Colorado State
- 91. Barnett, D and Grose JH. (2014) Regulation of UTR1 by PAS kinase and the Effects on Cell Growth and Proliferation. BYU Cancer Research Center Retreat, BYU, Provo, Utah
- 92. Hayes, W. and Grose JH. (2014) Characterization of Disease-associated HSPB2 and CRYAB Variants Reveals Chaperone Dysfunction. Podium presentation. BYU Cancer Research Center Retreat, BYU, Provo, Utah
- 93. Anderson, J. and Grose JH. (2014) Interplay Between the Yeast Nutrient Sensing Kinases TORC1, AMPK, and PAS kinase. BYU Cancer Research Center Retreat, BYU, Provo, Utah
- 94. Jarvis, T, Esplin, I, and Grose JH. (2014) Isolation and Characterization of 11 Erwina amylovora Phages. ASM Intermountain Branch Meeting, BYU, Provo, Utah, Best oral presentation
- 95. Anderson, J, and Grose JH. (2014) Interplay Between the Yeast Sensory Kinases TOR, Snf1 and PAS Kinase. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 96. Barnett, DM, Pattison, JA, DeMille, D, Mackay, JT, Mathis, AD, Hall, TD, Sowa, SW, Prince, JT, and Grose JH. (2014) Large-scale Screening Uncovers PAS Kinase Interactome. ASM Intermountain Branch Meeting, BYU, Provo, Utah Runner up best poster presentation
- 97. Hayes, WH, Langston, K, and Grose, JH. (2014) Characterization of Disease-associated HspB2 and CryAB Variants Reveals Chaperone Dysfunction. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 98. Harris, KE, Crist, AC, and Grose JH. (2014) Identifying Unique Roles of PAS Kinase. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 99. Taylor, AS, Bairett, SR, Wienclaw, TM, Ashcroft, CR, Esplin, ID, Schoenhals, JE, Merrill, BD, Breakwell, DP, Grose, JH, and Burnett SH. (2014) Isolation and Characterization of Paenibacillus Iarvae Bacteriophage Jenst. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 100. Ransom, E, Berg, J, Grossarth, S, Smith, H, Anieves, D, Esplin, ID, Merrill, BD, Schoenhals, JE, Breakwell, DP, Burnett, SH, and Grose JH. (2014) Comparative Genome Analysis of Seven Novel Erwinia Phages Reveals Orthologous Proteins and Allows for Formation of a Cluster with Three Known Enterobacteriaceae Phages. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 101. Stratton, M, Harbaugh, K, Foy, B, Anieves, D, Paz, H, Shurtleff, C, Kruger J, Peck, M, Jensen, G, Esplin, ID, Merrill, BD, Schoenhals, JE, Breakwell, DP, Burnett, SH, and Grose JH. (2014) Discovery and Genomic Analysis of an N4-like Erwinia amylovora Phage. ASM Intermountain Branch Meeting, BYU, Provo, Utah.
- 102. Ingersoll, K, Jensen, G, Kruger, J, Foy, B, Grossarth, S, Harbaugh, K, Paz, H, Esplin, ID, Schoenhals, JE, Merrill, BD, Burnett, SH, Breakwell, DP, and Grose JH. (2014) Isolation and Characterization of Deimos-Minion, the Largest Erwinia amylovora Bacteriophage. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 103. Schoenhals, JE, Merrill, BD, Graves, KA, Grose, JH, Burnett, SH, and Breakwell DP. (2014) DNA Packaging

- Strategies for Bacteriophages Identified Using Phylogenetic Analysis of Large Terminase Proteins. ASM Intermountain Branch Meeting, BYU, Provo, Utah
- 104. Grose JH, (2013) The Role of Sensory Protein Kinases in Cancer. BYU Cancer Research Center Summer Symposium, Provo, Utah
- 105. Badal, B, and Grose JH. (2013) Snf1 Directly Phosphorylates and Activates Yeast PAS Kinase. Podium presentations. ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 106. Anderson, J, Roark, B, Buckley, A, Cabeza, Pezoa Y, Emery, H, Fullwood, R, Hecht, K, Jackson, K, Jones, E, Mackay, J, Meek, J, Nordgren, K, Rees, J, Ritchie, D, Shumway, J, Yates, J, Kooyman, D, and Grose JH. (2013) E. colin: A Two-circuit System for Colin Cancer Detection. Podium presentation, ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 107. Merrill BD, Sheflo MA, Ayer PA, Beckstead AP, Fajardo CP, Ferguson NC, Fisher JNB, Gardner AV, Graves KA, Hartmann KA, Kennedy AK, Liu JE, Lunt BL, Merrill CA, Russell RC, Wake BN, WilliamsKR, Zimmerman LJ, Grose JH, Breakwell DP, Burnett SH. (2013) Discovery and Characterization of Novel Paenibacillus larvae Bacteriophages. ASM Intermountain Branch Meeting, Idaho State University, Pocatello, Idaho
- 108. Bevard, K, Thornock, S, Collins, G, Ramsey, M, and Grose JH. (2013) Characterizing Yeast PAS Kinase Through Random Mutagenesis. Utah Undergraduate Conference for Research, Utah State University, Utah
- 109. Grose, JH. Molecular Biology and Genetics. (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018) Oral presentation. Expanding Your Horizons, Utah Valley University, Utah
- 110. DeMille, D, and Grose, JH. (2012) New Roles for PAS kinase Revealed Through Protein- protein Interaction Studies.. Intermountain Branch ASM meeting, Idaho State University, Idaho. Best Biomedical Oral Presentation
- 111. DeMille, D, Mackay, J, Sowa, S, Hall, T, Gessel, A, Lawrence, E, and Grose, JH. (2012) The Role of Yeast PAS kinase in Glucose Partitioning. Intermountain Branch ASM Meeting, Idaho State University, Idaho
- 112. Findley, R, Thornock, S, Bevard, K, and Grose, JH. (2012) The Regulation of PAS kinase, a Key Sensory Kinase Required for Glucose Homeostasis.. Intermountain Branch ASM Meeting, Idaho State University, Idaho
- 113. Price, K, Chapman, K, Cutler, C, Hoops, W, Lee, S, Nguyen, J, and Grose, JH. (2012) Molecular Mechanisms of R120G CryAB-induced Cardiomyopathy. Intermountain Branch ASM Meeting, Idaho State University, Idaho
- 114. Anderson, J, Meek, J, Dean, R, Roark, B, and Grose, JH. (2012) A Novel Method for Malaria Detection. Podium presentation. Intermountain Branch ASM Meeting, Idaho State University, Idaho
- 115. Roberts, J, Emery, H, Jones, E, Nordgren, K, Reese, J, Shumway, J, Yates, J, and Grose, JH. (2012) A Dual AND Gate for Sensing ROS and Heat.. Intermountain Branch ASM Meeting, Idaho State University, Idaho
- 116. Buckley, A, Cabeza Pezoa, Y, Fullwood, R, Hecht, K, Jackson, K, and Grose, JH. (2012) E. colera: A Cholera Detection and Elimination system.. Intermountain Branch ASM Meeting, Idaho State University, Idaho
- 117. Ferguson, NC, Irons, DL, Marlow, SC, McCord, TM, Brighton, AK, Fisher, JNB, Sheflo, MA, Breakwell, DP, Grose, JH, Burnett, SH (2012) Division of the Mycobacteriophage A1 Subcluster Based on Phylogenetic Comparison. Poster presentation. ASM Intermountain Branch Meeting, Idaho State University, ID. Mason, SJ, Gardner, AV, Nelson, EP, Christiansen, MR, Brighton, AK. Fisher, JNB, Sheflo, MA, Breakwell, DP, Grose, JH, Burnett, SH (2012) Mislabeling of the Second Tape Measure Protein. Poster presentation. ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 118. Jensen, JD, Merrill, BD, Russell, RC, Smith, TC, Brighton, AK, Fisher, JNB, Sheflo, MA, Breakwell, DP, Burnett, SH, Grose, JH. (2012) Phylogenetic Origin of Glutaredoxin Gene Shared by Mycobacteriophage A1 Sub-cluster, Distantly Related Bacteria, and other bacteriophages. Poster presentation. ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 119. Lloyd, JS, Norton, CS, Sullivan, S, Pettersson, SM, Brighton, AK, Fisher, JNB, Sheflo, MA, Breakwell, DP, Erickson, D, Burnett, SH, and Grose, JH. (2012) Lack of Correlation between Phage Clusters and Ecoregions in the United States. Poster presentation. ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 120. Williams, KR, Adawi, EC, Kennedy, AK, Poe, DE, Brighton, AK, Fisher, JNB, Sheflo, MA, Breakwell, DP, Burnett, SH, Grose, JH. (2012) Divergent Evolution of a RuvC Holliday Junction Resolvase in the B1 Subcluster.

- Poster presentation. ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 121. Gardner, AV, Brighton, AK, Fisher, JNB, Sheflo, MA, Breakwell, DP, Grose, JH, and Burnett, SH. (2012) Environmental Effect on Phage Genomes: Analysis of the B4 Subcluster. ASM Intermountain Branch Meeting, Idaho State University, Idaho
- 122. Grose, JH. (2012) E. colonoscopy: Synthetic Biology as a Platform for Learning.. Current Topics in Chemistry, Brigham Young University, Utah
- 123. DeMille, D, and Grose J.H. (2012) The Role of Yeast PAS kinase in PASsing Glucose. MMBIO Graduate Student Retreat, BYU, Utah
- 124. Grose, JH. Evidence for Disparate Yet Overlapping Function for the Small Heat Shock Proteins CryAB and HspB2. (2011) Protein Aggregation Disease (PAD) Interest Group, University of Utah,
- 125. DeMille, D, and Grose JH. (2011) The Role of Yeast PAS kinase in Metabolic Regulation. MMBIO Graduate Student Retreat, BYU, Utah
- 126. Jarvis, K, Cutter, C, Van De Graaff, S, Chapman, K, Weist, KB, Benjamin, I, and Grose, JH. (2011) Discovering Pathways Involved in Alpha/B-crystalline Dependent Cardiomyopathy. Utah Conference for Undergraduate Research (UCUR), Weber State University, Utah
- 127. Biggs, M, Roberts, JA, Sabin, D, Sabin, M, Merrill, M, Allley, A, Chamberlain, C, Adebayo, J, Williams, L, Kooyman, DL and Grose, JH. (2011) Evolving a Thermoswitch Sensitive to Narrow Temperature Shifts. IBE Western Regional Student Conference, Utah State University, Utah. Best Biomedical Presentation
- 128. DeMille, D, and Grose JH. (2011) The Role of Yeast PAS kinase in Metabolic Regulation. (2011) ASM Intermountain Branch Meeting, Weber State University, UT.
- 129. Jarvis, K, Weist, K, Van De Graaff, S, Cutter, C, Chapman, K, Neubert, J, Benjamin, I and Grose, JH. (2011) Discovering Pathways Involved in alpha/β-crystalline Dependent Cardiomyopathy. ASM Intermountain Branch Meeting, Weber State University, Utah
- 130. Mackay, J, Sowa, S, Loeb, S, Haines, C, and Grose JH. (2011) Finding Interacting Partners for PAS kinase. ASM Intermountain Branch Meeting, Weber State University, UT.
- 131. Brighton, AK, Kaitlyn, SV, Parker, M, Jackson, KL, Steck, RP, Ormsby, WR, Taylor, MA, Fisher, J, and Lunt, B, Burnett, S.H, Grose, JH. and Breakwell, DP. (2011) Gene Mosaicism Demonstrated in Mycobacteriophage Shauna1. ASM Intermountain Branch Meeting, Weber State University, Utah
- 132. Barrus, EZ, Sheide, MG, Taylor, MA, Fisher, J, and Lunt, B, Burnett, SH, Grose, JH. and Breakwell, DP. (2011) Shauna1 Mycobacteriaphage Holin Gene Confirms Common Ancestry of All F cluster Phage. Poster presentation. ASM Intermountain Branch Meeting, Weber State University, Utah
- 133. Kartchner, BJ, Kiser, JT, Kiser, CD, McDaniel, SW, Taylor, MA, Fisher, J, Lunt, B, Burnett, SH, Grose, JH, and Breakwell, DP. (2011) Clustering of Mycobacteriophage in the Utah Landscape. ASM Intermountain Branch Meeting, Weber State University, Utah
- 134. Smith, KC, Burnett, SH, Grose, JH, and Breakwell, DP. (2011) Degenerate PCR Primers to Identify Mycobacteriophage Clusters and Sub-Clusters. ASM Intermountain Branch Meeting, Weber State University, Utah
- 135. Chapman, KM, Baker, B, Drake, EA, Kitchen, JCB, Taylor, MA, Fisher, J, and Lunt, B, Burnett, SH, Grose, JH, and Breakwell, DP. (2011) TA17A: A Unique Member of the Mycobacteriophage Sub-Cluster A2. ASM Intermountain Branch Meeting, Weber State University, Utah
- 136. Kitchen, JCB, Brighton, AK, Chapman, KM, Baker, B, Taylor, MA, Fisher, J, and Lunt, B, Burnett, SH, Grose, JH, and Breakwell, DP. (2011) Morphological Traits of Mycobacteriophage Clusters and Sub-Clusters. ASM Intermountain Branch Meeting, Weber State University, Utah
- 137. Grose, JH. (2011) Identifying Novel Binding Partners for CryAB. Protein Aggregation Disease (PAD) Interest Group, University of Utah, Utah
- 138. Sowa, S, Harris, KT, and Grose JH. (2010) A Yeast Two-hybrid Screen for Novel PAS Kinase Substrates. ASM Intermountain Branch Meeting, Brigham Young University, Utah
- 139. Johnson, C, and Grose, JH. (2010) Redox Currency, NAD/NADP Biosynthesis and Function. Poster presentation. ASM Intermountain Branch Meeting, Brigham Young University, Utah

140. Jarvis, K, Neubert, JC, and Grose JH. (2010) Yeast as a Model for Studying R120G- CryAB Cardiomyopathy. ASM Intermountain Branch Meeting, Brigham Young University, UT.

- 141. Grose, JH. (2010) Saccaharomyces cerevisiae as a Model for Studying Protein Aggregation Cardiomyopathy. Protein Aggregation Disease (PAD) Interest Group, University of Utah, UT.
- 142. Grose, JH. (2009) Functional Clustering: Can it Identify New Roles for an Old Molecule (NAD)? Bacterial Supergroup, Brigham Young University, Utah
- 143. Grose, JH. (2008) NAD(P) Metabolism; the Center of Cellular Control. Bacterial Supergroup, Brigham Young University, Utah

#### **GENBANK GENOME PUBLICATIONS**

264 GenBank publications of complete phage genomes. All genomes include full genomes (not genome fragments) with complete annotation of all genes and tRNAs. Genomes were peer reviewed by GenBank prior to acceptance and publication.

# **TEACHING**

### Courses taught

IAS 369R: International Internship Prep (1 credit)

Honors 220: Unexpected Connections: DNA as a Language (3 credits)

MMBIO151: Intro to Microbiology (4 credits); 3 hours lecture and 3 hours lab per week MMBIO194A: Phage Hunters

Discovery (4 credits); 1 hour lecture plus 6 hours lab per week

MMBIO194: Phage Discovery (4 credits); 1 hour lecture plus 6 hours lab per week

MMBIO195: Phage Genomics (4 credits); 1 hour lecture plus 6 hours lab per week

MMBIO221: General Microbiology (3 credits); 3 hour lecture per week MMBIO395: Readings in Molecular Biology (1

credit); 1 hour lecture per week MMBIO470: Synthetic Biology (2 credit); 6 hours lab per week

MMBIO390R: Readings in Molecular Biology (1 credit)

MMBIO691: Graduate seminar (1 credit): 1 hour seminar per week MMBIO551R: Bacteriophages (1 credit); 1 hour lecture per week

**MMBIO551R**: Lifesciences and the Restored Gospel of Jesus Christ (2 credits), 2 lectures per week, team taught (JHG organized and oversaw and provided 9 lectures)

MMBIO661: Molecular Biology of the Cell (3 credits); 3 hours lecture per week, team taught (JHG taught 12 lectures) MMBIO665: Genomics, team taught (1 credit); JHG taught 7 lectures and lead a special research project MMBIO494R: Mentored Research (1-3 credits); taught each semester

# **Study Abroad Programs**

Study Abroad Title	Faculty	Brief Description	Number	Associated
	involved		of	Courses
			Students	
Emerging Disease in	Dr. Grose	4 week experience in India,	12-15	IAS 369R
India	(Lead)	studying and isolating contributions		MMBIO390R
	Dr. Robison	to emerging disease. Planned to		LFSCI399
		run every odd year (2021, 2023,		MMBIO471
		etc.)		
Scientific	Gr. Grose	5-6 week experience traveling to	25-30	TBA
EXXcelence: Women	Dr. Suli	the UK, France Germany, Poland,		
in Science	Dr. Davis	Norway and Italy. Planned to run		
		every even year (2022, 2024, etc.)		

#### FELLOWSHIPS AWARDED TO STUDENTS IN THE GROSE LAB

# **Graduate Fellowships (10)**

BYU Gerontology Fellowship(1)

Daniel Arens (2020) The role of Cbf1/USF1 in cancer metabolism

**BYU Graduate Studies Fellowship (2)** 

Ruchira Sharma (2015) Characterization of bacteriophages that infect *Erwinia amylovora* Whitney Hayes. (2014) Characterization of disease-associated HSPB2 and CRYAB variants reveals chaperone dysfunction.

**BYU Cancer Research Center Fellowships (14)** 

Colleen Newey (2020) Characterizing stress granule Regulation in mammalian cells due PAS kinase and ataxin-2 inhibition

Daniel Arens (2019) The role of Cbf1/USF1 in cancer metabolism

Kai Li Ong (2019) The role of Osh6/Snf1 in apoptosis

Kai Li Ong (2018) The role of Osh6/Snf1 in apoptosis

Jenny Pape (2017) Characterizing the role of Cbf1 in respiration

Brooke Roark (2017) Characterizing the interaction between PAS kinase and its substrates

Kai Li Ong (2017) The role of Osh6/Snf1 in apoptosis

Kai Li Ong (2016) The role of Osh6/Snf1 in apoptosis

Nidhi Choksi (2016) Characterizing the role for PAS kinase and ataxin-2 in stress granule formation

Kai Li Ong (2015) The role of Osh6/Snf1 in apoptosis

Desiree DeMille (2015) The effects of PAS kinase on Cell Cycle

Joe Anderson. (2014)Interplay between the yeast nutrient sensing kinases TORC1, AMPK, and PAS kinase

Whitney Hayes. (2014) Characterization of disease-associated HSPB2 and CRYAB variants reveals chaperone dysfunction

Bryan Badal. (2013) Activation of PAS kinase by the metformin target AMPK/Snf1.

#### **Undergraduate Fellowships**

#### BYU Beckman Scholar(1)

Brittany Pielstick (2017-2018)

#### BYU Cancer Research Center Fellowship (5)

Abigail Taylor (2020)

Daniel Barnett (2014, 2015)

Jenny Pattison (2015,2016)

#### BYU ORCA/CURA Grants (21)

Taylor, Abigail (2021)

Cobbley, Hunter (2021)

Harris, Evan (2021)

Carr, Emilee (2020)

Sirrine, Michael (2020)

Barnett, Laura (2019)

Ng, Denise. (2017)

Nicholes, Sam. (2017)

Jenny Pattison(2016)

Andrew Rees (2016)

Brighton, Alicia. (2016)

Brown, Amber (2015)

Jarvis, Todd. (2015)

Hall, Tacie (2015)

Mackay, Jordan. (2012)

Hoopes, Whitney. (2012)

Mackay, Jordan. (2011)

Loeb, Serena. (2011)

Neubert, Jonathan. (2011)

Sowa, Steve. (2011)

Jarvis, Kent. (2010)

# **CITIZENSHIP**

# **University-wide**

BYU Microscopy Committee (2019-present)

BYU Committee for Experiential Learning Summit (2019)

Faith and Learning Faculty Advisement Committee (2016-present)

Cougars vs Cancer student Association – faculty advisor (2016-present)

BYU Be the Match on Campus - faculty advisor (2016-present)

# Department/College-wide

Deans Advisory Committee (Chair, 2015-present) Graduate Committee

(2013-present) Undergraduate Committee (2008 -2012)

Ad-hoc Committees:

BYU How to write a grant training, speaker

BYU Cancer Research Center grant reviewer Mentoring Environment Grant

(MEG) reviewer ORCA reviewer (undergraduate research fellowships)

BYU Beckman Scholar Committee

#### Other activities

My citizenship efforts outside of my department are focused on encouraging women in science supporting science fair teams and expanding contacts within my field of study.

2019-2020	<b>Team Advisor.</b> Timpview 9 <sup>th</sup> grade Ecybermission Team: Care4Air: State Second Place Winners
2019-2020	<b>Team Advisor.</b> Mountain Heights 8 <sup>th</sup> grade Ecybermission Team: Fueling Change: State First Place Winners, Regional Winners and National Finalists
2019-2020	<b>Team Advisor.</b> Mountain Heights 10 <sup>th</sup> -grade Lexus Science Fair Regional Finalists.
2020	Guest Speaker for Summit Academy High School. Lead two one hour discussions.
2020	Break out Discussion Leader in She's a Scientist. Brigham Young University
2019	Round Table Discussion Leader at BYU Experiential Learning Summit
2019	<b>Guest Lecturer</b> (5 lectures) in the 3 in 1 Biotechnology program, Brawijaya University, Indonesia
2018-2019	<b>Team Advisor.</b> Mountain Heights 9 <sup>th</sup> grade Ecybermission Team: Phantastic Phage Phinders. First place National Winner.
2017-2018	<b>Organizer</b> of the Tri-branch ASM meeting, Durango, Colorado. Initiated and organized a conference that will include seven states and three branches of the ASM.
2016	<b>Organizer</b> of the Phage Phield Day, Provo, Utah. Organized the entire conference including choice of venue, invited guests, schedule, abstracts accepted for oral and poster presentation, and guest speaker (Stanley Malloy). Approximately 40 students in attendance from Brigham Young University and Gettysburg University.

2010-2019	Instructor, Expanding Your Horizons, Utah Valley University. Designed and presented two, 1-hour Molecular Biology clinics each year for young women ages 11-18 for this international program designed to encourage women in science.
2013-2015	<b>Instructor</b> , ACCESS program for women in science, University of Utah. Designed and implemented a yearly, four-day, 8 hour/day lecture and lab molecular biology clinic for 42 incoming female freshman.
2010-2014	<b>Co-organizer and Instructor</b> , Women in Science Club advisor.  Designed and implemented yearly microbiology activities for outreach to local elementary schools in conjunction with students from the women in science club.
2013	<b>Co-organizer</b> of the international Analytical Genetics Meeting, Alta, Utah. Organized the entire conference including choice of venue, invited guests, schedule, abstracts accepted for oral and poster presentation, etc. Approximately 94 scientists in attendance from throughout the world.
2010 – 2015	<b>Founder and Organizer</b> of the BYU Metabolism Interest Group. Organized monthly meetings to present and discuss research with faculty from multiple departments.
2010 – 2018	<b>Founder and Organizer</b> of the annual Microbiology and Molecular Biology Career Symposium. Organization includes choice of venue, invitation to 20+ companies, advertising, etc. Between 100-200 students attend each year

# **GRADUATE STUDENT TRAINEES (15)**

Desiree DeMille	Ph.D. student	2010-2015 (graduated)
Jenny Pape	Ph.D. student	2017-2019 (graduated)
Ruchira Sharma	Ph.D. student	2014-2019 (graduated)
Kai Li Ong	Ph.D. student	2014-2019 (graduated)
Daniel Arens	Ph.D. student	2017-2021 (graduated)
Daniel Thompson	Ph.D. student	2017-present
Jonathan Neubert	M.S. student	2011-2012 (graduated)
Kelsey Langston	M.S. student	2011-2013(graduated)
Bryan Badal	M.S. student	2012-2014 (graduated)
Bryan Badal Whitney Hayes	M.S. student M.S. student	2012-2014 (graduated) 2013-2016 (graduated)
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Whitney Hayes	M.S. student	2013-2016 (graduated)
Whitney Hayes Nidhi Choksi	M.S. student M.S. student	2013-2016 (graduated) 2014-2016 (graduated)
Whitney Hayes Nidhi Choksi Brooke Roark	M.S. student M.S. student M.S. student	2013-2016 (graduated) 2014-2016 (graduated) 2017-2019 (graduated)
Whitney Hayes Nidhi Choksi Brooke Roark Elise Melhado	M.S. student M.S. student M.S. student M.S. student	2013-2016 (graduated) 2014-2016 (graduated) 2017-2019 (graduated) 2017-2019 (graduated)
Whitney Hayes Nidhi Choksi Brooke Roark Elise Melhado Trever Thurgood	M.S. student M.S. student M.S. student M.S. student M.S. student	2013-2016 (graduated) 2014-2016 (graduated) 2017-2019 (graduated) 2017-2019 (graduated) 2017-2019 (graduated)

# **MENTORED UNDERGRADUATE RESEARCH ASSISTANTS (182)**

Undergraduates trained in the Grose Lab. An asterisk indicates students who have presented their research at a conference or in a publication.

Abigail Taylor\* Jordan Berg\* Adam Gardner\* Jordan Jensen\* Addison Alley\* Jordan Mackay\* Albin Taylor\* Joseph (Joe) White\* Alex Crist\* Joseph Anderson\* Alexis Polson\* Joseph White\* Alicia Brighton\* Joshua Findley\* Alistair Hilton\* Joshua Gillman Amber Brown\* Joshua Rice\* Andrew Gessel\* Julie Roberts\* Andrew Lambert\* Julius Adebeyo\* Andrew Mathis\* Justin Doney\* Andrew Rees\* Kade Foster Andrew Wilkey\* Karina Tovar\* Arick Christopher\* Katelyn Perry\* Ashley Tam\* Katherine Price\* Audrey Buckley\* Kayla Bevard\* Audrey Workman\* Kelsey Langston\* Aurora Rodriguez\* Kent Foster\* Austen Gleave\* Kent Jarvis\* Austen Steffensen\* Kelton Peck\* Benjamin Donnovan Kevin Weist\* Blake Dallon\* Kimball Harley\*

Bradley Knabe\* Kimberley Bell-Young\*

Brady Evans\* Kristy Radar\*
Bridger Woods Kyle Smith\*
Briton Moe\* Kylie Chapman\*

Brittany (Colby) Pielstick\* Laura Barnett Anthony\*
Cameron Sargent\* Laura Uricoechea Urrea\*

Casey Cuttler\* Mackay Coffee
Charles (CJ) Webb\* Mackay Merrill\*
Chetty Vasu\* Marina Ramsay
Cheuk Wing Denise Ng\* Mark Herzog\*
Cheyanne Green Mark Sabin\*

Cheyanne Green Mark Sabin\*
Christina Keshek\* Mathew Biggs\*
Christina Swenson\* Mathewy Hyer\*
Christopher Bird\* Matthew Sheppard\*
Christopher Skaggs Mckay Wilson

Coby Soule Micah Putnum\*
Colby Haines\* Michael Christiansen\*

Colby Faller

Colby Soule

Michael Criticiansen

Michael Fry\*

Michael Scott \*

Colt Halter

Michael Sirring \*

Colt Halter Michael Sirrine \*
Cooper Vandemerwe\* Michael Wells\*
Curtis Hoffmann Minsey Choi\*
Daniel Barnett\* Mitch Harrison\*
Daniel Dawson\* Moon He
David Fuhriman\* Moroni Ayala\*

David Herbert\*
Devin Sabin\*
Dione King
Eliza Lawrence\*
Emilee Carr\*
Emily Hansen\*
Emily Hurst\*
Emily Potts\*
Evan Harris
Evangeline Taylor
Finnegan Zach\*
Foster Openshaw

Fredrick Nelsen\*
Garrett Jensen\*
Gillman, Joshua
Govinda Dhakai
Grace Brummer\*
Haley Burrell\*
Haley Mickelsen
Hannah Ferguson\*
Hannah Winn

lan Esplin\*
Igor Baldow\*
Jackson Call\*
Jacob Fairholm\*
Jared Kruger\*
Jared Larkin\*
Jared Resolme\*
Jason Tseng\*

Jeffrey Zhao\*
Jenny Pattison\*
Jens Jimenez\*
Jeralyn Franson\*
Jeremy Severe\*
Jerilyn Franson\*
Jill Hughes\*
Joe Castillo
John Collins T
John Hancock\*
Jonathan Bowan
Jonathan Neubert\*
Jonathan Wood\*

Jonny Malmrose\*

Nathan Quinton
Nathaniel Eberhard
Nick Nielsen\*
Nicole Phipps\*
Nolan Beatty\*

Paul Leavitt\*

**Paul Rogers** 

Philip (PJ)Tatlow\* Rachel Findley\* Rebecca Eardley\* Rochelle Gaertner\*

Ryan Perry\*
Sam Brantley\*
Sam Himes\*
Sam Rutter
Samantha Laub\*
Samuel Flor\*
Samuel Nicholes\*
Samuel Pollock\*
Samuel Weeks
Savannah Grossarth\*

Serena Loeb\*
Seth Evans
Sierra Freed
Silvia Soule
Sinjon Roush\*
Spencer Thornock\*
Steve Sowa\*

Steve Van de Graff\*
Steven Duncan\*
Steven Hallam\*
Steven Roundy\*
Tacie Hall\*
Todd Jarvis\*
Tommy Andros
Trever Southwick\*
Trever Thurgood\*
Truman Davidson
Tyler Hielscher\*
Tysen Nickle\*
Tyson Stoker
Weston Larson\*
Whitney Hoopes\*