

Pamela Ranel Hall, Ph.D.
curriculum vitae

CONTACT INFORMATION

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EDUCATION

- 2004 Ph.D. (Pharmacology) Case Western Reserve University, Cleveland, OH
Dissertation: The transcarboxylase multienzyme complex: Structural studies of the components of a 1.2 million-dalton carboxylation machine.
- 1999 M.S. (Molecular Biology) University of Alabama in Huntsville
Thesis: Lactate dehydrogenase release assay from Vero cells to distinguish verotoxin producing Escherichia coli from non-verotoxin producing strains.
- 1989 B.S. (Microbiology), University of Alabama in Huntsville

POSTDOCTORAL TRAINING

- 01/2006-12/2008 Post-doctoral Fellow, University of New Mexico Health Sciences Center, Albuquerque, NM. *Peptide and small molecule inhibitors of Hantavirus infection, Innate immune response to Hantavirus infection*
- 02/2005-12/2005 Post-doctoral Fellow, NIDDK, National Institutes of Health, Bethesda, MD. *Structural recognition of pathogenic ligands by TLRs*
- 05/2004-01/2005 Post-doctoral Fellow, Department of Biochemistry, Case Western Reserve University, Cleveland, OH. *Structural studies of the transcarboxylase enzyme complex*

APPOINTMENTS

- 07/2017-present Associate Professor, Department of Pharmaceutical Sciences, UNM College of Pharmacy, Albuquerque, NM
- 07/2011-06/2017 Assistant Professor, Department of Pharmaceutical Sciences, UNM College of Pharmacy, Albuquerque, NM

- 01/2009-06/2011 Research Microbiologist, New Mexico VAHCS, Albuquerque, NM
- 01/2009-06/2011 Research Assistant Professor, UNM HSC Department of Molecular Genetics and Microbiology, Albuquerque, NM

OTHER RESEARCH EXPERIENCE

- 1997-2000 Chemist, University of Alabama in Huntsville, Laboratory for Structural Biology Projects including *Structural studies of GST from a DDT-resistant strain of Anopheles gambiae*.
- 1993-1997 Microbiologist, Alabama Department of Public Health, Decatur, AL
- 1991-1993 Research Laboratory Technician, A.C. Engineering, NASA Marshall Space Flight Center, Huntsville, AL
- 1991-1991 Microbiologist/Virologist, Ross Breeders, AL
- 1990-1991 Chemical Technician, Thiokol Corporation, Huntsville, AL

RESEARCH SUPPORT

ACTIVE RESEARCH SUPPORT:

- 1) NIH/NIAID R01AI145324 01/01/2019-12/31/2023
Vaccine-mediated control of bacterial virulence regulation and infection

Role: PI

Annual direct costs to UNM \$250,000
Total direct costs to UNM \$1,250,000

The goal of this proposal is to test the preclinical potential of a vaccine strategy to control regulation of *S. aureus* virulence factor production in multiple models of SA infection and models of reduced immune function.

- 2) NIH/NIGMS P20 GM121176 (Deretic) 09/01/17-08/31/22
Autophagy, Inflammation and Metabolism (AIM) in Disease Center

Role: Mentoring Director

Annual direct costs to UNM ~\$7400

The AIM Center is a cutting edge program for examining how autophagy pathways are involved in a broad range of diseases. This program is designed to help develop new scientists in the fields of autophagy, inflammation and metabolism.

SUBMITTED/PENDING SUPPORT:

COMPLETED RESEARCH SUPPORT:

- 1) NIH, NIAID, Research Supplement to R01AI145324 01/01/2019-08/01/2020
Supplement to Promote Diversity in Health-Related Research

Role: PI

Project direct costs: \$82,188

- 2) Intramural pilot award, AIMS CoBRE/CIDI 02/24/20-06/30/20
Defining the roles of autophagy, E2 and G-1 in tolerance of S. aureus Hla
Role: PI
 Annual direct costs to UNM \$20,000
 The purpose of this project is to determine the role of autophagy in E2 and G-1 mediated tolerance to *S. aureus* Hla.
- 3) NIH/NIAID R21 AI128159-01 11/22/2016-06/30/2020 (NCE)
Sex-dependent phagocyte clearance of Staphylococcus aureus
Role: PI
 Annual direct costs to UNM \$150,000/\$125,000
 Total direct costs to UNM \$275,000
 The goal of this proposal is to determine the molecular mechanism(s) driving the sex bias in neutrophil efficacy against *S. aureus*.
- 4) NIH/NIAID, R21 AI131098 01/01/2017-06/30/2019
Inducing Immune Control of Bacterial Virulence Regulation
Role: PI
 Annual direct costs to UNM \$150,000/\$125,000
 Total direct costs to UNM \$275,000
 The goal of this proposal was to test the hypothesis that presentation of *S. aureus* autoinducing peptide AIP1 on VLPs can be used to induce adaptive immunity targeting the *S. aureus agr* virulence regulator system.
- 5) NIH/NIAID, R21 AI114706 07/01/2015-06/30/2018 (NCE)
VLP-based Vaccines for Targeting Staphylococcus aureus Secreted Virulence Factors
Role: PI
 Project direct costs to UNM: \$275,000
 Project total costs to UNM: \$410,306
 The goal of this proposal was to test the hypothesis that presentation of *S. aureus* toxin peptides on VLPs can induce adaptive immunity targeting major *S. aureus* secreted virulence factors.
- 6) NIH/NIAID, R01 AI121073 05/24/2016-04/30/2018
Mechanistic control of metabolism and virulence by fatty acid kinase in MRSA
Role: PI of subaward, PI Jeffrey Bose, KUMC
 Subaward direct costs to UNM: \$55,000
 Subaward total costs to UNM: \$83,325
 The goal of this proposal was to determine the mechanism by which VfrB regulates virulence in *S. aureus*.
- 7) NIH, NIAID, R01 AI091917 02/15/2011-01/31/2017
Apolipoprotein B and Control of S. aureus Quorum Sensing
Role: PI
 Project direct costs: \$1,211,457

Project total costs: \$1,797,527

The goals of this project were: 1) to elucidate the molecular mechanism of apolipoprotein B antagonism of *S. aureus* quorum-sensing dependent virulence and 2) to determine the contribution of apolipoprotein B to control of MRSA infections.

8) NIH, NIAID, Research Supplement (in NCE) 07/01/2012-01/31/2017

Supplement to Promote Diversity in Health-Related Research

Role: PI

Project direct costs: \$99,517

Project total costs: \$150,271

9) COP Research Pilot Project (internal funding) 01/01/2016–12/31/2016

Transcriptional analysis of sex-bias in Staphylococcus aureus infection

Role: PI

Project total award: \$10,000

10) Contract, Sandia National Laboratories (LDRD subaward) 01/01/2013-09/2014

In vivo delivery of antibiotic compounds using protocells

Role: PI, subaward Sandia PI: Eric Carnes

Project direct costs: \$99,965

Project total costs: \$150,950

The goal of this work was to help Sandia optimize mesoporous silica nanoparticle-supported lipid bilayers ('protocells') for delivery of antibiotic compounds in mouse models of invasive *Staphylococcus aureus* (MRSA) infections.

11) UNM College of Pharmacy Phase 1 RFP 06/2013-06/2015

Biomarkers of S. aureus infection in a high risk population

Role: Co-PI with Mary Vilay

Project costs: \$5,000

The goal of this pilot proposal was to test the hypothesis that specific serum protein levels can be correlated with *S. aureus* infection in hemodialysis patients.

12) Research Allocation Committee award (RAC) 08/15/2013-06/30/2014

Novel Assay for antagonists of S. aureus virulence regulator AgrA

Role: PI

Project total costs: \$10,000

This was a University of New Mexico internal award designed to provide funding for collection of preliminary data on new projects for later development into R01 applications.

13) UNM HSC CVMD 7/01/2012 - 6/30/2013

Signature Program in Cardiovascular and Metabolic Diseases (CVMD)

ApoB and Nox2 in Control of Staphylococcus aureus agrII-Dependent Virulence

Role: PI CY effort: N/A

Project direct costs: \$9,875.00

Project total costs: \$9,875.00

The goals of this project were: 1) to determine the in vitro contribution of apoB and Nox2-derived ROS to control of *S. aureus agrII*-dependent virulence and 2) to determine the in vivo contribution of apoB and Nox2-derived ROS to control of *S. aureus agrII* in a mouse model of invasive infection.

14) HSC Research Equipment Funding FY13

Role: **PI**

Project costs: \$21,500

Funds were awarded to purchase an Accuri C6 Flow Cytometry System (>50% matching funds from faculty).

15) VA Career Development Award 2 01/01/09-06/30/11

Apolipoprotein B Antagonism of Invasive Staphylococcus aureus Infection

This was a mentored career development award designed to facilitate the transition to independent researcher.

Role: **PI** CY effort: 9CM

Annual direct costs: \$147,000

16) Research Allocation Committee award (RAC) 04/01/09-03/31/10

Methicillin-Resistant S. aureus (MRSA) Infection and Host CD36

This was a University of New Mexico internal award designed to provide funding for collection of preliminary data on new projects for later development into R01 applications.

Role: **PI**

Project total costs: \$25,000

17) F32 AI074246-01A1 09/01/08-12/31/08

Characterization of innate immune response stimulation by Sin Nombre virus

Individual NRSA Post-doctoral fellowship

Role: Applicant

SUBMITTED, UNFUNDED SUPPORT:

1) NIH/NIAID R21AI144580-01A1 07/01/2020-06/30/2022

Sex modulates S. aureus specific immune responses in an Hla-dependent manner

Role: **PI**

Annual direct costs to UNM \$150,000/\$125,000

Total direct costs to UNM \$275,000

The goal of this proposal was to determine how *Staphylococcus aureus* and the secreted *S. aureus* toxin, alpha-hemolysin (Hla), foster sex-specific inflammatory responses in the host.

2) NIH/NIAID R21 AI146483-01 07/01/2019-06/30/2021

Wnt Signaling and S. aureus Skin Infection

Role: **PI**

Annual direct costs to UNM \$150,000/\$125,000

Total direct costs to UNM \$275,000

The goal of this exploratory proposal was to determine the role of the Wnt signaling pathway in

exacerbation *S. aureus* alpha-hemolysin-mediated pathogenesis in the skin.

3) NIH/NIAID R01 AI146346 07/01/2019-06/30/2024
GPER Activation Protects Against S. aureus alpha-toxin-mediated Disruption of Epithelial Barriers

Role: PI

Annual direct costs to UNM \$250,000
 Total direct costs to UNM \$1,250,000

The goal of this proposal was to determine the mechanisms by which activation of GPER promotes maintenance of epithelial barrier integrity in the face of *S. aureus* alpha-hemolysin challenge.

4) NIH/NIAID R01AI143864 04/01/2019-03/31/2024
Mechanisms of Sex Bias in the Innate Immune Response to S. aureus alpha-hemolysin

Role: PI

Annual direct costs to UNM \$250,000
 Total direct costs to UNM \$1,250,000

The goal of this proposal was to determine the mechanisms by which females are protected against *S. aureus* alpha-hemolysin pathogenesis compared to males.

5) NIH/NIAID R21AI144580 04/01/2019-03/31/2021
Sex modulates S. aureus specific immune responses in an Hla-dependent manner

Role: PI

Annual direct costs to UNM \$150,000/\$125,000
 Total direct costs to UNM \$275,000

The goal of this proposal was to determine how *Staphylococcus aureus* and the secreted *S. aureus* toxin, alpha-hemolysin (Hla), foster sex-specific inflammatory responses in the host.

6) NIH/NIAID R21AI143190 12/01/2018-11/30/2020
GPER Activation Limits Epithelial Permeability Barrier Disruption by S. aureus alpha-toxin

Role: PI

Annual direct costs to UNM \$150,000/\$125,000
 Total direct costs to UNM \$275,000

The goal of this proposal was to determine the mechanism(s) by which selective activation of the G protein-coupled estrogen receptor supports keratinocyte permeability integrity upon *S. aureus* alpha-toxin challenge.

7) University of New Mexico Women in STEM Faculty Development Award 04/01/2018-3/31/2019

ER-alpha regulates the female skin response to SA alpha-toxin

Role: PI

Total costs \$10,000

The goal of this proposal was to determine the contribution of ER-alpha to E2-mediated protection of female skin against *S. aureus* alpha-toxin-dependent pathogenesis.

8) NIH/NIAID R01AI140762 07/01/2018-06/30/2023

*Host-directed Therapy to Promote Innate Defense Against MRSA and Other AMR Pathogens***Role: PI**

Annual direct costs to UNM \$250,000

Total direct costs to UNM \$1,250,000

The goal of this proposal was to determine the translational potential of a host-directed therapeutic to protein against MRSA and other antimicrobial-resistant pathogens.

9) NIH/NIAID R01AI127757-01A1 04/01/2018-03/31/2023*Mechanisms of Sex Bias in Innate Immune Defense against S. aureus Skin Infection***Role: PI**

Annual direct costs to UNM \$250,000

Total direct costs to UNM \$1,250,000

The goal of this proposal was to define the molecular mechanism(s) of innate sex bias in SA SSTI by initially focusing on the sex-specific response to Hla.

10) NIH/NIAID R01AI132436 07/01/2017-06/30/2022*Targeting the host to enhance skin innate defense***Role: PI**

Annual direct costs to UNM \$250,000

Total direct costs to UNM \$1,250,000

The goal of this proposal was to determine the molecular mechanism(s) by which activation of the G-protein coupled estrogen receptor enhances innate defense against *S. aureus* skin and soft tissue infection.

11) American Diabetes Association Innovative Basic Science Award 01/01/2017-12/31/2020*Promoting innate immune defense to prevent diabetic infectious complications***Role: PI**

Annual direct costs to UNM \$103,000

Total direct costs to UNM \$306,000

The goal of this proposal was to determine whether *S. aureus agr*-mediated virulence disproportionately impacts the severity of infection in diabetic versus non-diabetic mice, as well as the window of opportunity for therapeutic and adjunctive anti-*agr* intervention in diabetes.

12) Defense Medical Research and Development Program

Military Infectious Diseases Basic Research Award (W81XWH-17-DMRDP-MID-ARA)*Prevention and treatment of MRSA and polymicrobial wound infections using a topical QS inhibitor*

Preproposal, January 2016

Role: PI

Project total costs: \$2,000,000

Performance period: 3Y

13) Defense Medical Research and Development Program

Military Infectious Diseases Basic Research Award (W81XWH-17-DMRDP-MID-ARA)*Prevention and treatment of wound infections using sex-specific immunoaugmentation*

Preproposal, January 2016

Role: PI

Project total costs: \$2,000,000

Performance period: 3Y

14) NIH/NIAID R01AI127757 12/01/2016-11/30/2021*Mechanisms and augmentation of sex bias in innate immune defense against S. aureus skin infection***Role: PI**

Annual direct costs to UNM \$250,000

Total direct costs to UNM \$1,250,000

The major goals of this project were 1) to define the key mediators of sex bias in *S. aureus* skin and soft tissue infection, 2) to determine the impact of sex steroid receptor modulation on phagocyte-mediated *S. aureus* clearance and 3) to define the host innate defense factors/functions by which sex steroid receptor modulation regulates phagocyte response to *S. aureus*.

15) 1NIH/NIEHS, U01 (RFA-ES-15-013) 09/01/2016-08/31/2021**Role: Co-Investigator** (20% Effort), PI, Tom Byrd (CIDI)

Direct costs to UNM: \$1,500,000

Total costs to UNM: \$2,272,500

This U01 proposal focused on generating comprehensive biological response profiles for Engineered Nanomaterials (ENMs) both in vitro and in well-established mouse models of skin and skin structure infection (SSSI) caused by the bacterial pathogen *Staphylococcus aureus*.

16) NIH/NIAID, R21 07/01/2016-06/30/2018*Role of S. aureus agr activation in diabetic skin infections***Role: PI** (10% Effort)

Project direct costs to UNM: \$293,000

Project total costs to UNM: \$438,037

The goal of this proposal was to determine the contribution of a major *S. aureus* virulence regulator, the *agr* operon, to acute and chronic infections in models of Type 1 and Type 2 diabetes.

17) NIH/NIAID, R21 07/01/2017-06/30/2018*Bivalent conjugation to improve the activity of S. aureus synbodies***Role: PI of subaward** (3% Effort), PI Chris Diehnelt, ASU

Subaward direct costs to UNM: \$40,000

Subaward total costs to UNM: \$60,600

This proposal focused on demonstrating improvement of the in vivo activity of a bivalent anti-MRSA peptide through composition and orientation.

18) NIH/NIAID, R21/R33 (RFA-AI-14-066) 12/01/2015-11/30/2020Non-Traditional Therapeutics that Limit Antibacterial Resistance*Evaluating the potential clinical utility of QS inhibition in a MRSA SSTI model***Role: PI** (15% Effort)

Project direct costs to UNM: \$1,388,850

Project total costs to UNM: \$1,814,287

The goal of this proposal was to evaluate the potential clinical efficacy an anti-virulence agent to prevent or limit disease caused by methicillin-resistance *Staphylococcus aureus* (MRSA).

19) NIH/NIAID, R21 07/01/2015-06/30-2017

Therapeutic, adjunctive and resistance potential for AgrA inhibition

Role: PI (10% Effort)

Project direct costs to UNM: \$299,750

Project total costs to UNM: \$427,875

The goal of this proposal was to determine the therapeutic and adjunction value of small-molecule inhibition of the virulence regulator AgrA for prevention of skin and soft tissue infections and the potential for resistance development.

20) NIH/NIAID, R21 07/01/2014-06/30/2016

Control of Staphylococcus aureus virulence factor production by VfrB

Role: PI of Subaward, (2% Effort Y1), PI Jeff Bose, University of Nebraska Medical Center

Subaward direct costs to UNM: \$45,000

Subaward total costs to UNM: \$67,950

The goal of this proposal was to elucidate the mechanism of VfrB regulation of *Staphylococcus aureus* virulence and its contribution to pathogenesis.

21) NIH/NIAID, R21/R33 (RFA-AI-13-019) 04/01/2014-03/31/2019

RFA: Drug Target Development and Validation for Antimicrobial-Resistant Pathogens

AgrA as a therapeutic target for the prevention of MRSA infection

Role: MPI, Co-PI, (10% Effort), Co-PI Alex Horswill, University of Iowa

Project direct costs to UNM: \$480,000

Project total costs to UNM: \$724,800

The goal of this proposal was to validate the *Staphylococcus aureus* virulence regulator AgrA as a target for identification of small-molecule inhibitors to prevent skin and soft tissue infections.

22) NIH/NIAID, U19 (U19 - RFA-AI-12-044) 03/01/2014-02/28/2019

Centers of Excellence for Translational Research (CETR)

New Mexico Center for VLP-based vaccines

Project 3: *VLP-based vaccines for targeting Staphylococcus aureus secreted virulence factors*

Role: Project 3 PI (30% Effort), Center PI: Bryce Chackerian

Project 3 direct costs: \$1,376,173

Project 3 total costs: \$2,078,022

The goal of this proposal was to test the hypothesis that presentation of *S. aureus* toxin peptides on VLPs can be used to induce adaptive immunity targeting major *S. aureus* secreted virulence factors.

23) Defense Medical Research and Development Program

Military Infectious Diseases Basic Research Award

VLP-based approach for prevention and treatment of MRSA wound infections

Pre-Application, September 2011

Role: PI

Project total costs: \$1,000,000
 Performance period: 2Y

24) UNM Health Sciences Center CTSC Pilot Program
VLP-based Vaccines for Targeting Staphylococcus aureus Virulence Factors
 Submitted 02 July 2012

Role: PI

Project total costs: \$30,000
 Performance period: 1Y

25) UNM Health Sciences Center Research Allocation Committee Award
VLP-based Vaccines for Targeting Staphylococcus aureus Virulence Factors
 Submitted 15 August 2012

Role: PI

Project total costs: \$10,000
 Performance period: 1Y

PUBLICATIONS

Citations indexes (Google Scholar, 29 Oct 2020)

All:	h-index-26	i10-index- 35	Total Citations- 2267
Since 2015:	h-index-17	i10-index- 29	Total Citations- 1205

1. Pokhrel S, Triplett KD, Daly SM, Joyner JA, Sharma G, Hathaway HJ, Prossnitz ER and **PR Hall***. Complement Receptor 3 contributes to the sexual dimorphism in neutrophil killing of *Staphylococcus aureus* (2020) *J Immunol*. Aug 7:ji2000545. doi: 10.4049/jimmunol.2000545. Online ahead of print. PMID: 32769122
2. Joyner JA, Daly SM, Peabody J, Triplett KD, Pokhrel S, Elmore BO, Adebajo D, Peabody DS, Chackerian B and **PR Hall***. Vaccination with VLPs Presenting a Linear Neutralizing Domain of *S. aureus* Hla Elicits Protective Immunity (2020) *Toxins*, 12(7), 450; <https://doi.org/10.3390/toxins12070450>.
3. Ridder MJ, Daly SM, Triplett KD, Seawell NA, **Hall PR** and Bose JL. *Staphylococcus aureus* Fatty Acid Kinase FAKA Modulates Pathogenesis During Skin Infection via Proteases (2020) *Infect Immun* 2020 Jun 8;|AI.00163-20. doi: 10.1128/IAI.00163-20.
4. Deretic V, Prossnitz E, Burge M, Campen MJ, Cannon J, Liu KJ, Liu M, **Hall P**, Sklar LA, Allers L, Mariscal L, Garcia SA, Weaver J, Baehrecke EH, Behrends C, Cecconi F, Codogno P, Chen GC, Elazar Z, Eskelinen EL, Fourie B, Gozuacik D, Hong W, Jo EK, Johansen T, Juhász G, Kimchi A, Ktistakis N, Kroemer G, Mizushima N, Münz C, Reggiori F, Rubinsztein D, Ryan K, Schroder K, Shen HM, Simonsen A, Tooze SA, Vaccaro M, Yoshimori T, Yu L, Zhang H, Klionsky DJ. Autophagy, Inflammation, and Metabolism (AIM) Center in its second year (2019) *Autophagy* Oct;15(10):1829-1833. doi: 10.1080/15548627.2019.1634444.
5. Paguigan ND, Rivera-Chavez J, Stempin JJ, Augustinovic M, Noras AI, Raja HA, Todd DA, Triplett KD, Day C, Figueroa M, **Hall PR**, Cech NB and NH Oberlies. Prenylated Diresorcinols Inhibit Bacterial Quorum Sensing (2019) *J. Natural Products* Feb 7. doi:

10.1021/acs.jnatprod.8b00925.

My role: Experimental design, *in vitro* studies, manuscript preparation.

6. Triplett KD, Pokhrel S, Castleman MJ, Daly SM, Elmore BO, Joyner JA, Sharma G, Herbert G, Campen MJ, Hathaway HJ, Prossnitz ER and **PR Hall***. GPER activation protects against epithelial barrier disruption by *Staphylococcus aureus* α -toxin (2019) *Scientific Reports*. Feb 4;9(1):1343. doi: 10.1038/s41598-018-37951-3.PMCID: 6362070.
7. Castleman MJ, Pokhrel S, Triplett KD, Kusewitt DF, Elmore BO, Joyner JA, Femling JK, Sharma G, Hathaway HJ, Prossnitz ER and **PR Hall***. Innate Sex Bias of *Staphylococcus aureus* Skin Infection Is Driven by α -Hemolysin.(2017) *J Immunol*. Dec 8. pii: ji1700810. doi: 10.4049/jimmunol.1700810. Epub ahead of print.

NOTE: Featured by the "In This Issue" section. "In This Issue" highlights articles considered to be among the top 10% of articles published in The Journal.

8. Lainson JC, Daly SM, Triplett K, Johnston SA, **Hall PR** and CW Diehnelt (2017). Synthetic Antibacterial Peptide Exhibits Synergy with Oxacillin against MRSA. *ACS Medicinal Chemistry Letters*, Publication Date (Web): July 7, 2017 (Letter), DOI: 10.1021/acsmedchemlett.7b00200.

My role: Experimental design, *in vivo* studies, manuscript preparation.

9. Daly SM, Joyner JA, Triplett KD, Elmore BO, Pokhrel S., Fietze K, Peabody D, Chackerian B and **PR Hall*** (2017). VLP-based vaccine induces immune control of *Staphylococcus aureus* virulence regulation. *Scientific Reports*, 2017 Apr 4;7(1):637. doi: 10.1038/s41598-017-00753-0. PubMed Central PMCID: PMC5429642.
10. Aragon M Topper L, Tyler C, Sanchez B, Zychowski K., Young, T, Herbert G, **Hall P**, Erdely A, Eye T, Bishop L, Ottens AK and MJ Campen (2017). Serum-Borne Bioactivity Caused by Pulmonary Multi-walled Carbon Nanotubes Induces Neuroinflammation Via Blood Brain Barrier Impairment. *PNAS*, Mar 7;114(10):E1968-E1976. doi: 10.1073/pnas.1616070114. Epub 2017 Feb 21. PubMed Central PMCID: PMC5347541.
My role: Provided knockout mouse-model, consulted on CD36-mediated biological processes and interactions.
11. Krute C, Krausz K, Markiewicz M, Joyner J, Pokhrel S, **Hall P** and J Bose. (2016). Generation of a stable plasmid for in vitro and in vivo studies of *Staphylococcus*. *Applied and Environmental Microbiology*. 2016 Sep 16. pii: AEM.02370-16. PubMed Central PMCID: PMC5103085.
My role: *In vivo* studies to evaluate plasmid stability and function.
12. Mumaw CL, Levesque S, McGraw C, Robertson S, Lucas S, Stafflinger JE, Campen MJ, **Hall P**, Norenberg JP, Anderson T, Lund AK, McDonald JD, Ottens AK, Block ML (2016) Microglial priming through the lung–brain axis: the role of air pollution–induced circulating factors. *FASEB J*. 30(5):1880-91. PubMed Central PMCID: PMC4836369.
My role: Provided knockout mouse-model, consulted on CD36-mediated biological processes and interactions.
13. Aragon M, Erdely A, Bishop L, Salmen R, Weaver J, Lui J, **Hall P**, Eye T, Kodali V, Zeidler-Erdley P, Stafflinger J, Ottens A, Campen M. (2016) MMP-9-Dependent Serum-Borne Bioactivity Caused by Multi-walled Carbon Nanotube Exposure Induces Vascular Dysfunction Via the CD36 Scavenger Receptor. *Toxicological Sciences*. Apr;150(2):488-98. PubMed Central PMCID: PMC4966280.

My role: Provided knockout mouse-model, consulted on CD36-mediated biological processes and interactions.

14. Manifold-Wheeler BC, Elmore BO, Triplett KD, Otto M and **PR Hall***. (2016) Serum lipoproteins are critical for pulmonary innate defense against *Staphylococcus aureus* quorum sensing. *J Immunol.* 2016 Jan 1;196(1):328-35.
15. Castleman MJ, Febbraio M and **PR Hall***. (2015) CD36 is essential for regulation of the host response to *Staphylococcus aureus* alpha-toxin-mediated dermonecrosis. *J Immunol.* 2015 Sep 1;195(5):2294-302.
16. Elmore BO, Triplett KD and **PR Hall***. (2015) Apolipoprotein B48, the structural component of chylomicrons, is sufficient to antagonize *Staphylococcus aureus* quorum-sensing. *PLoS One.* May 5;10(5):e0125027. doi: 10.1371/journal.pone.0125027.
17. Daly, S.M., Elmore, B.O., Kavanaugh, J.S., Triplett, K.D., Figueroa, M., Raja, H.A., El-Elimat, T., Crosby, H.A., Femling, J.K., Cech, N.B., Horswill, A.R., Oberlies, N.H. and **P.R. Hall***. (2015) ω -Hydroxyemodin Limits *Staphylococcus aureus* Quorum Sensing-Mediated Pathogenesis and Inflammation. *Antimicrobial Agents and Chemotherapy.* April 2015; 59:4 2223-2235.
18. O'Rourke J.P., Daly S.M., Triplett K.D., Peabody D., Chackerian B. and **P.R. Hall***. (2014) Development of a mimotope vaccine targeting the *Staphylococcus aureus* quorum sensing pathway. *PLoS One.* Nov 7;9(11):e111198. doi: 10.1371/journal.pone.0111198.
19. Sully E.K., Malachowa N., Elmore B.O., Alexander S.M., Femling J.K., Gray B.M., DeLeo F.R., Otto M., Cheung A.L., Edwards B.S., Sklar L.A., Horswill A.R., **Hall P.R.*** and HD Gresham. (2014) Selective chemical inhibition of *agr* quorum sensing in *Staphylococcus aureus* promotes host defense with minimal impact on resistance. *PLoS Pathogens.* Published: June 12, 2014. DOI: 10.1371/journal.ppat.1004174.
My role: Cloning, expression, purification of recombinant protein, mechanism of action studies, manuscript preparation.
NOTE: Recommended for F1000Prime (13 Feb 2015; F1000Prime.com/718457280). Selected for F1000Prime based on being of special significance in the field.
20. Bose J.L., Daly S.M., **Hall P.R.**, Bayles K.W. (2014) Identification of the *Staphylococcus aureus* *vfrAB* Operon, a Novel Virulence Factor Regulatory Locus. *Infect Immun.* 82(5):1813-22.
My role: Experimental design, *in vivo* studies, manuscript preparation.
21. Dilworth T., Ibrahim O., **Hall P.**, Sliwinski J., Walraven C. and R.C. Mercier. (2014) β -lactams enhance vancomycin activity against methicillin-resistant *Staphylococcus aureus* bacteremia compared to vancomycin alone. *Antimicrobial Agents and Chemotherapy.* 58(1):102-9.
My role: *agr* typing of *S. aureus* isolates, manuscript preparation.
22. Robertson S., Colombo E.S., Lucas S.N., **Hall P.R.**, Febbraio M., Paffett M.L., Campen M.J. (2013) CD36 mediates endothelial dysfunction downstream of circulating factors induced by O3 exposure. *Toxicological Sciences,* 134:304-11.
My role: Provided knockout mouse-model, consulted on CD36-mediated biological processes and interactions.
23. Gray B, **Hall P.**, Gresham H. (2013) Targeting *agr*- and *agr*-like quorum sensing systems for development of common therapeutics to treat multiple gram-positive bacterial infections. *Sensors.* 13: 5130-5166.
My role: Manuscript preparation.
24. Femling, J.K., West, S.D., Hauswald, E.K., Gresham, H.D. and **P.R. Hall** (2013). Nosocomial infections after severe trauma are associated with lower apolipoproteins B

- and All. *J Trauma Acute Care Surg.* 74: 1067-73.
25. **Hall, P.R.***, Elmore, B.O., Spang, C.H., Alexander, S.M., Manifold-Wheeler, B.C., Castleman, M.J., Daly, S.M., Peterson, M.M., Sully, E.K., Femling, J.K., Otto, M., Horswill, A.R., Timmins, G.S. and H.D. Gresham (2013). Nox2 modification of LDL is essential for optimal apolipoprotein B-mediated control of *agr* type III *Staphylococcus aureus* quorum-sensing. *PLoS Pathogens.* Feb;9(2):e1003166. doi: 10.1371/journal.ppat.1003166.
 26. Buranda, T., Wu, Y., Perez, D., Jett, S.D., Bondu-Hawkins, V., Ye, C., Edwards, B., **Hall, P.**, Larson, R.S., Lopez, G.P., Sklar, L.A. and Hjelle, B. (2010) Recognition of DAF and alpha(v)beta(3) by inactivated Hantaviruses, towards the development of HTS flow cytometry assays. *Anal Biochem.* 402:151-160.2010.
My role: Cloning, protein expression/purification.
 27. Prescott, J.B., **Hall, P.R.**, Acuna, M., Ye, C, Ebihara, H, Feldmann, H and Hjelle, B. (2010) New World Hantaviruses Activate IFN λ Production in Type I IFN-deficient Vero E6 Cells. *PLoS ONE.* 5:e11159.
My role: Experimental design, conducted infection, qRT-PCR and protein separation experiments, manuscript preparation.
 28. **Hall, P.R.**, Leitao, A., Ye, C., Kilpatrick, K., Hjelle, B., Oprea, T., and Larson, R.S. (2010) Small Molecule Inhibitors of Hantavirus Infection. *Bioorg Med Chem Lett.* 20:7085-91.
 29. **Hall, P.R.**, Hjelle, B., Njus, H., Ye, C., Bondu-Hawkins, V., Brown, D.C., Kilpatrick, K.A. and Larson, R.S. (2009) Phage-display selection of cyclic peptides which inhibit Andes virus infection. *J. Virol,* 83:8965-8969.
 30. Peterson, M.M., Mack, J.L., **Hall, P.R.**, Alsup, A.A., Alexander, S.M., Sully, E.K., Sawires, Y.S., Cheung, A.L., Otto, M. and Gresham, H.D. (2008) Apolipoprotein B is an Innate Barrier Against Invasive *Staphylococcus aureus* Infection. *Cell Host and Microbe.* 4: 555-566.
My role: Surface plasmon resonance determination of apoB binding to AIPs, manuscript preparation.
NOTE: Selected for F1000Prime based on being of special significance in the field.
Stock A and Barbieri C: F1000Prime Recommendation of [Peterson MM et al., Cell Host Microbe 2008, 4:555-66]. In F1000Prime, 02Jan 2009; DOI: 10.3410/f.1138871.595964.
 31. **Hall, P.R.**, Hjelle, B., Brown, D.C., Ye, C., Bondu-Hawkins, V., Kilpatrick, K.A. and Larson, R.S. (2008) Multivalent presentation of anti-hantavirus peptides on nanoparticles enhances infection blockade. *Antimicrobial Agents and Chemotherapy,* 52:2079-2088.
 32. **Hall, P.R.**, Malone, L., Sillerud, L.O., Ye, C., Hjelle, B. and Larson, R.S. (2007) Characterization and NMR solution structure of a novel cyclic pentapeptide inhibitor of pathogenic hantaviruses. *Chemical Biology & Drug Design,* 69:180-190.
 33. Prescott, J., **Hall, P.R.**, Bondu-Hawkins, V., Ye, C. and Hjelle, B. (2007) Early Innate Immune Responses to Sin Nombre Hantavirus Occur Independently of IFN Regulatory Factor 3, Characterized Pattern Recognition Receptors, and Viral Entry. *J. Immunology,* 179:1796-1802.
My role: Performed infection and qRT-PCR experiments, data analysis, manuscript preparation.
 34. Bell, J.K., Askins, J., **Hall, P.R.**, Davies, D.R, and Segal, D.M. (2006) The dsRNA binding site of human Toll-like receptor 3. *Proc. Natl. Acad. Sci. USA* 103:8792-8797.
My role: Structure determination, model fitting, manuscript preparation.

35. Bell, J.K., Botos, I., **Hall, P.R.**, Askins, J., Shiloach, J., Davies, D.R. and Segal, D.M. (2006) The molecular structure of the TLR3 extracellular domain. *J Endotoxin Res.* 12:375-378.
My role: Structure determination, model fitting, manuscript preparation.
36. Bell, J.K., Botos, I., **Hall, P.R.**, Askins, J., Shiloach, J., Segal, D.M., and Davies. D.R. (2005) The molecular structure of the Toll-like receptor 3 ligand-binding domain. *Proc. Natl. Acad. Sci. USA* 102:10976-10980.
My role: Structure determination, model fitting, manuscript preparation.
37. **Hall, P.R.**, Zheng, R., Antony, L., Pusztai-Carey, M., Carey, P.R., and Yee, V.C. (2004) Transcarboxylase 5S structures: assembly and catalytic mechanism of a multienzyme complex subunit. *EMBO J* 23: 3621-3631.
38. **Hall, P.R.**, Zheng, R., Pusztai-Carey, M., van den Akker, F., Carey, P.R., and Yee V.C. (2004) Expression and crystallization of several forms of the *Propionibacterium shermanii* transcarboxylase 5S subunit. *Acta Crystallogr. D.* 60:521-523.
39. **Hall, P.R.**, Wang, Y-F., Rivera-Hainaj, R.E., Zheng, X., Pusztai-Carey, M., Carey, P.R., and Yee. V.C. (2003) Transcarboxylase 12S crystal structure: hexamer assembly and substrate binding to a multienzyme core. *EMBO J.* 22:2334-2347.
40. Chen, L., **Hall, P.R.**, Zhou, X.E., Ranson, H., Hemingway, J., and Meehan, E.J.,. Structure of an insect δ -class glutathione S-transferase from a DDT-resistant strain of the malaria vector *Anopheles gambiae*. *Acta Crystallogr D*, 59:2211-2217, 2003.
My role: Protein expression and purification, protein crystallization, X-ray data collection, structure determination, manuscript preparation.
41. Zheng, X., Rivera-Hainaj, R.E., Zheng, Y., Pusztai-Carey, M., **Hall, P.R.**, Yee, V.C., and Carey, P.R. (2002) Substrate binding induces a cooperative conformational change in the 12S subunit of transcarboxylase: Raman crystallographic evidence. *Biochemistry*, 41:10741-10746.
My role: Protein expression and purification, protein crystallization, manuscript preparation.
42. **Roberts, P.H.**, Zhou, X., Holmes, A.M., Ranson, H., Small, G., Hemingway, J., Ng, J.D., Chen, L., and Meehan, E.J. (2001) Crystallization of agGST1-6, a recombinant glutathione S-transferase from a DDT-resistant strain of *Anopheles gambiae*. *Acta Crystallogr D*, 57:134-136.
43. **Roberts, P.H.**, Davis, K.C., Garstka, W.R., and Bhunia, A.K. (2001) Lactate dehydrogenase release assay from Vero cells to distinguish verotoxin producing *Escherichia coli* from non-verotoxin producing strains. *Journal of Microbiological Methods*, 43:171-181.

NOTE: early publications were under PH Roberts; Year of publications since joining COP are in **bold**; #Selected for commentary; *Corresponding author

ABSTRACTS/POSTERS (SINCE 2000)

Jason A Joyner, Seth M. Daly, Kathleen D. Triplett, Srijana Pokhrel, David S. Peabody, Bryce Chackerian and **Pamela R. Hall**. Virus-Like Particle-Based Vaccine Displaying *Staphylococcus aureus* Alpha Hemolysin Linear Neutralizing Domain Protects Against Hla-Mediated Pathogenesis. Bridging the Career Gap: Promoting Diversity in Biomedical Research, Rockville, MD, USA. 9-10 December 2019.

- Srijana Pokhrel, Kathleen D Triplett, Seth M. Daly, Jason A Joyner, **Pamela R Hall**. Estrogen-dependent differences in neutrophil bactericidal capacity contribute to the sex bias in *Staphylococcus aureus* skin infection. Phagocyte Gordon Seminar and Conference, Waterville Valley, NH USA. 01-07 June 2019.
- Sarah (Caroline) Jordan, Seth Daly, Renee-Claude Mercier, **Pamela R. Hall**. The Role of the Accessory Gene Regulator (agr) Operon in Biofilm Formation by *Staphylococcus aureus*. Rio Grande Branch American Society for Microbiology Meeting, New Mexico Tech, Socorro, New Mexico, USA. 12-13 April 2019
- Sarah (Caroline) Jordan, Seth Daly, Renee-Claude Mercier, **Pamela R. Hall**. The Role of the Accessory Gene Regulator (agr) Operon in Biofilm Formation by *Staphylococcus aureus*. College of Pharmacy Research Day, Albuquerque, NM, USA. 10 April 2019.
- Srijana Pokhrel, Kathleen D Triplett, Seth M. Daly, Jason A Joyner, **Pamela R Hall**. Sex-specific differences in resident skin cell inflammatory response to epicutaneous *Staphylococcus aureus* alpha-hemolysin challenge. College of Pharmacy Research Day, Albuquerque, NM, USA. 10 April 2019.
- Jason A. Joyner, Seth M. Daly, Kathleen D. Triplett, Srijana Pokhrel, David S. Peabody, Bryce Chackerian, **Pamela R. Hall**. Virus-Like Particle-Based Vaccine Induces Neutralizing Antibodies Against *Staphylococcus aureus* Alpha-Hemolysin. College of Pharmacy Research Day, Albuquerque, NM, USA. 10 April 2019.
- Srijana Pokhrel, Kathleen D Triplett, Moriah J Castleman, Seth M. Daly, Jason A Joyner, Bradley O Elmore, **Pamela R Hall**. Sex-differences in resident skin cell inflammatory response to *Staphylococcus aureus* alpha-hemolysin. Seventh International Conference on Gram Positive Pathogens. Omaha, NE, USA. 14-17 October 2018.
- Jason A. Joyner, Seth M. Daly, Bradley O. Elmore, Kathleen D. Triplett, Srijana Pokhrel, David S. Peabody, Bryce Chackerian, **Pamela R. Hall**. VLP-Based Vaccine Targeting *Staphylococcus aureus* AIP1 Induces Antibodies Capable of Cross-Recognition of AIP4. Seventh International Conference on Gram Positive Pathogens. Omaha, NE, USA. 14-17 October 2018.
- Srijana Pokhrel, Moriah J Castleman, Kathleen D Triplett, Jason A Joyner, Seth M Daly, Bradley O Elmore, **Pamela R Hall**. Neutrophils contribute to the sex-bias in innate response to *Staphylococcus aureus* skin and soft tissue infection. College of Pharmacy Research Day, Albuquerque, NM, USA. 24 April 2018.
- Jason A. Joyner, Bradley O. Elmore, Srijana Pokhrel, Kathleen D. Triplett, Seth M. Daly, David S. Peabody, Bryce Chackerian, **Pamela R. Hall**. VLP Vaccine Targeting *Staphylococcus aureus* AIP1 Induces Antibodies Capable of Cross Recognition of AIP4. College of Pharmacy Research Day, Albuquerque, NM, USA. 24 April 2018.
- Montserrat Garcia Arreguin, Srijana Pokhrel, Moriah Castleman, Kathleen Triplett and **Pamela Hall**. Innate Immune Effectors and Sex Bias in Mouse Neutrophil Bactericidal Efficacy. UPN Research Day, University of New Mexico, Albuquerque, NM, USA 04 August 2017
- Jason A Joyner, Seth M Daly, Kathleen D Triplett, Bradley O Elmore, Srijana Pokhrel, Kathryn M Fietze, David S Peabody, Bryce Chackerian, **Pamela R Hall**. Virus-Like-Particle (VLP) Vaccine Platform Targeting *S. aureus* Quorum Sensing Provides Immune Protection in SSTI. College of Pharmacy Research Day, Albuquerque, NM, USA. 18 April 2017
- Srijana Pokhrel, Moriah J Castleman, Kathleen D Triplett, Jason A Joyner, Bradley O Elmore, **Pamela R Hall**. Sex bias in host response to *Staphylococcus aureus* skin infection. College of Pharmacy Research Day, Albuquerque, NM, USA. 18 April 2017

NOTE: Won 2nd Place Pharmaceutical Sciences Graduate Student Poster Presentation

- Jason A Joyner, Seth M Daly, Kathleen D Triplett, Bradley O Elmore, Srijana Pokhrel, Kathryn Fietze, David Peabody, Bryce Chackerian, **Pamela R Hall**. Virus-Like-Particle (VLP) Vaccine Induces Immune Protection from *Staphylococcus aureus agr*-Mediated Virulence. Sixth International Conference on Gram Positive Pathogens. Omaha, NE, USA. 09-12 October 2016.
- Srijana Pokhrel, Moriah J Castleman, Kathleen D Triplett, Jason A Joyner, Bradley O Elmore, **Pamela R Hall**. Sex bias in severity of *Staphylococcus aureus* skin infection. Sixth International Conference on Gram Positive Pathogens. Omaha, NE, USA. 09-12 October 2016.
- Montserrat Garcia Arreguin, Bradley Elmore, Jason Joyner, Srijana Pokhrel, Elliott Miller, Kathleen Triplett and **Pamela Hall**. *Method for Evaluating in vivo Inhibition of Staphylococcus aureus Virulence Regulation*. 2016 UPN Research Day, University of New Mexico, Albuquerque, NM
- Emily Auwater, Moriah J. Castleman and Pamela Hall. *Sex differences in MRSA skin infection*. 2015 UPN Research Day, University of New Mexico, Albuquerque, NM (**1st place poster**)
- Moriah Castleman, Emily Auwater, Kathleen Triplett, Bradley Elmore, **Pamela Hall**. *Sex-dependent differences in susceptibility to methicillin-resistant Staphylococcus aureus skin infection*. 2015 College of Pharmacy Research Day, Albuquerque, NM, USA.
- Brett C. Manifold-Wheeler, Bradley O. Elmore, Kathleen D. Triplett, Michael Otto and **Pamela R. Hall**. *Serum Lipoproteins are Critical for Pulmonary Innate Defense against Staphylococcus aureus Quorum Sensing*. 2015 BSGP Student Research Day
- Seth M. Daly, Bradley O. Elmore, Jeffrey S. Kavanaugh, Kathleen T. Triplett, Nadja B. Cech, Alexander R. Horswill, Nicholas H. Oberlies, **P.R. Hall**. *ω -Hydroxyemodin Inhibits the Staphylococcus aureus Response Regulator AgrA and Limits Pathogenesis*. International Conference on Gram-Positive Pathogens, Omaha, NE, USA. 12-15 October 2014.
- M.J. Castleman and **P.R. Hall**. *CD36 negatively modulates inflammation and neutrophil recruitment during Staphylococcus aureus skin and soft tissue infections*. International Conference on Gram-Positive Pathogens, Omaha, NE, USA. 12-15 October 2014.
- Brett C. Manifold-Wheeler, Bradley O. Elmore, Kathleen D. Triplett, Michael Otto and **Pamela R. Hall**. *Serum Lipoproteins Contribute to Innate Immune Defense against Staphylococcus aureus pulmonary infection*. International Conference on Gram-Positive Pathogens, Omaha, NE, USA. 12-15 October 2014.
- Seth M. Daly, Bradley O. Elmore, Jeffrey S. Kavanaugh, Kathleen T. Triplett, Nadja B. Cech, Alexander R. Horswill, Nicholas H. Oberlies, **P.R. Hall**. *Omega-hydroxyemodin Inhibits Staphylococcus aureus Quorum-Sensing and Abates Dermonecrosis*. International Symposium on Staphylococci and Staphylococcal Infections, Chicago, IL, USA. 26-29 August 2014.
- M.J. Castleman and **P.R. Hall**. *CD36 regulates alpha hemolysin-mediated NLRP3 inflammasome activation during Staphylococcus aureus skin and soft tissue infection*. International Symposium on Staphylococci and Staphylococcal Infections, Chicago, IL, USA. 26-29 August 2014.
- Brett C. Manifold-Wheeler, Moriah J. Castleman, Seth M. Daly, Bradley O. Elmore, Kathleen D. Triplett, and **Pamela R. Hall**. *ApoB Containing Serum Lipoproteins Contribute to Innate Immune Defense Against Staphylococcus aureus Pulmonary Infection*. International

- Symposium on Staphylococci and Staphylococcal Infections, Chicago, IL, USA. 26-29 August 2014.
- B.O. Elmore, K. D. Triplett, B. Manifold-Wheeler and **P. R. Hall**. *Apolipoprotein B48-containing lipoprotein particles are host innate effectors against Staphylococcus aureus quorum-sensing*. International Symposium on Staphylococci and Staphylococcal Infections, Chicago, IL, USA. 26-29 August 2014.
- M.J. Castleman and **P.R. Hall**. CD36 suppresses inflammation mediated by alpha toxin during *Staphylococcus aureus* skin and soft tissue infections. College of Pharmacy Research Day, Albuquerque, NM, USA. 10 April 2014.
- Seth M. Daly, Bradley O. Elmore, Jeffrey S. Kavanaugh, Kathleen T. Triplett, Nadja B. Cech, Alexander R. Horswill, Nicholas H. Oberlies, **P.R. Hall**. *The fungal metabolite ω -hydroxyemodin inhibits the virulence regulator agr of S. aureus*. College of Pharmacy Research Day, Albuquerque, NM, USA. 10 April 2014
- Brett C. Manifold-Wheeler, Moriah J. Castleman, Seth M. Daly, Bradley O. Elmore, Kathleen D. Triplett, and **Pamela R. Hall**. *ApoB Contributes to Innate Immune Defense Against Staphylococcus aureus Pulmonary infection*. College of Pharmacy Research Day, Albuquerque, NM, USA. 10 April 2014
- E Sully, N Malachowa, B Elmore, S Alexander, J Femling, F DeLeo, A Horswill, M Otto, A Cheung, L Sklar, Gresham H. and **P Hall**. *Pharmacologic disruption of agr quorum sensing in Staphylococcus aureus protects against skin and soft tissue infection*. Gordon Research Conference on Antibacterial Discovery and Development, Ventura, CA, 16-21 March 2014.
- Daly SM, O'Rourke JP, Castleman MJ, Elmore BO, Delgado SS, Manifold-Wheeler BC, Gresham HD, Chackerian B and **PR Hall**. Vaccination targeting the *Staphylococcus aureus* virulence regulator *agr* is protective in a mouse model of skin and soft tissue infection. Mountain West Society of Toxicology Annual Meeting, Albuquerque, NM, 19 September 2013 – 20 September 2013.
- Castleman M., Daly S., Manifold-Wheeler B. Elmore B. and **P. Hall**. CD36 suppresses inflammation mediated by alpha toxin during *Staphylococcus aureus* skin and soft tissue infection. Mountain West Society of Toxicology Annual Meeting, Albuquerque, NM, 19 September 2013 – 20 September 2013.
- Manifold-Wheeler BC and **PR Hall**. Serum lipoproteins contribute to innate immune defense against *Staphylococcus aureus* pulmonary infection. Mountain West Society of Toxicology Annual Meeting, Albuquerque, NM, 19 September 2013 – 20 September 2013.
- Sully E., Malachowa N., Elmore B., Alexander S., Femling J., DeLeo F., Horswill A., Otto M., Cheung A., Sklar L., **Hall P.** & H Gresham. Pharmacologic disruption of *agr* quorum sensing in *Staphylococcus aureus* enhances host defense without induction of resistance. Gordon Research Conference: Staphylococcal Diseases. Waterville Valley, New Hampshire. July 28, 2013 – August 2, 2013.
- Gray, B.M., Sully, E.K., Lewis, M., Delgado, S., Alexander, S.M., Edward, B., Sklar, L.A., Oprea, T, **Hall, P.R.** and H.D. Gresham. Re-purposing a gout drug to target *Staphylococcus aureus* skin infections. American Society for Microbiology, General Meeting., Denver Colorado. 18 May 2013-21 May 2013.
- Daly, S.M., Castleman, M.J., Alexander, S.M., Elmore, B.O., Manifold-Wheeler, B.C., Femling, J.K., Otto, M., Horswill, A.R., Timmins, G.S. Gresham, H.D. and **P.R. Hall**. Oxidized low density lipoprotein antagonizes *agrIII* signaling in *Staphylococcus aureus*. International Conference on Gram-positive Pathogens. Omaha, Nebraska. October 7-12, 2012.

- Gray, B.M., Sully, E.K., Lewis, M., Delgado, S., Alexander, S.M., **Hall, P.R.** and H.D. Gresham. Re-purposing a gout drug to target *Staphylococcus aureus* skin and soft-tissue infections. International Conference on Gram-positive Pathogens. Omaha, Nebraska. October 7-12, 2012.
- Johnny Zavala, Seth M. Daly and **Pamela Hall**. *Alpha hemolysin inhibition using site specific antibodies generated in rabbits*. 2012 UPN Research Day, University of New Mexico, Albuquerque, NM (**1st place poster**).
- Hall, P.R.**, Spang, C.H., Alexander, S.M., Elmore, B.O., Peterson, M.M., Sully, E.K., Femling, J.K., Otto, M., Horswill, A.R., Timmins, G.S. and H.D. Gresham. Nox2 modification of LDL is essential for optimal apolipoprotein B-mediated control of *agr* type III *Staphylococcus aureus* quorum-sensing virulence. Keystone Symposia: Molecular Basis of Vascular Inflammation and Atherosclerosis, Big Sky, Montana. March 25-30, 2012.
- Hall, P.R.**, Peterson, M.M., Alexander, S.M., Sully, E., Otto, M. and H. Gresham. Apolipoprotein B differentially antagonizes invasive MRSA infections caused by *agr* 1 and *agr* 3 strains. Gram Positive Pathogens, October 10-13, 2010. Omaha, Nebraska.
- Sully, E., Alexander, S., **Hall, P.R.**, Otto, M., Edwards, B. and H. Gresham. Small Molecule Inhibition of *Staphylococcus aureus* Virulence. Gram Positive Pathogens, October 10-13, 2010. Omaha, Nebraska.
- Sully, E., Alexander, S., **Hall, P.R.** and Gresham, H.D. Enhancing innate immune defense against *Staphylococcus aureus* infection by therapeutic targeting of virulence regulation. Proceedings of the 2010 American Association of Immunologists Annual Meeting. Baltimore, Maryland.
- Peterson, M.M. Sully, E.K., Gresham, H.D. and **Hall, P.R.** Apolipoprotein B is an Innate Barrier Against Invasive *Staphylococcus aureus* Infection. Keystone Symposia, Pattern Recognition Molecules and Immune Sensors of Pathogens, Banff, Alberta, March 29-April 3, 2009.
- Hall, P.R.**, Acuna, M., Duran, W., Ye, C., Bondu-Hawkins, V., and Hjelle, B. Engagement of Sin Nombre Hantavirus by Human Pattern Recognition Receptor Leads to Rapid Induction of Interferon-Stimulated Genes. XIV. International Congress of Virology, Istanbul, August 10-15, 2008.
- Hall, P.R.**, Malone, L., Sillerud, L.O., Ye, C., Hjelle, B. and Larson, R.S. NMR Solution Structure of a Novel Cyclic Pentapeptide Inhibitor of Sin Nombre Virus. American Society for Virology 26th Annual Meeting, Corvallis, Oregon, July 14-18, 2007.
- Hall, P.R.** Rivera-Hainaj, R.E., Zheng, R., Zheng, X., Pusztai-Carey, M., Carey, P.R. and Yee, V.C. The transcarboxylase multienzyme complex: Structural studies of the components of a 1.2 million-dalton carboxylation machine. Poster presented at the Gordon Research Conference on Diffraction Methods in Structural Biology, Bates College, Lewiston, Maine, July 11-16, 2004.
- Roberts, P.H.**, Wang, Y., Rivera, R.E., Carey, P.R., Yee, V.C. The transcarboxylase multienzyme complex: structural studies of the components of a 1.2 million-dalton carboxylation machine. Poster presented at the American Crystallographic Association Annual Meeting, Los Angeles, California, July 21-26, 2001.
- Roberts, P.H.**, Chen, L., Zhou, X., Holmes, A., Ranson, H., Small, G., Hemingway, J., Ng, J., and Meehan, E. Multi-Form Crystallization of agGST1-6, a Glutathione S-Transferase from DDT-Resistant *Anopheles gambiae*. Poster presented at the American Crystallographic Association Golden Anniversary Meeting, St.Paul Minnesota, July 22-27, 2000.

INVITED TALKS

- 2019 *GPER activation 'overcomes' the sex bias in Staphylococcus aureus skin infection.* UNM CTSC Synergy Meeting, 11Feb2019, Albuquerque, NM.
- 2017 *Staphylococcus aureus α -Hemolysin drives innate sex bias in skin infection.* Infectious Diseases and Inflammation Training Program, Works-in-progress, 02Aug2017, Albuquerque, NM.
- 2017 *Sex-specific susceptibility to a Staphylococcus aureus toxin.* Society of Toxicology, 35th Annual Meeting of the Mountain West Regional Chapter, 22Sept2017, Albuquerque, NM.
- 2016 *Vaccine and small molecule approaches to combating Staphylococcus aureus virulence.* New Mexico Institute of Mining and Technology, 05Dec2016, Socorro, NM.
- 2015 *A non-traditional approach to antibiotic stewardship: inhibiting MRSA virulence using the natural product omega-hydroxyemodin.* University of Kansas Medical Center, 14 May 2015, Kansas City, KS.
- 2015 *Antibiotic stewardship through bacterial disarmament: how omega-hydroxyemodin limits MRSA pathogenesis and supports host innate defense.* The University of Oklahoma College of Pharmacy. 24 March 2015. Oklahoma City, OK.
- 2015 *Pharmacological inhibition of Staphylococcus aureus quorum-sensing: a non-traditional approach to antibiotic stewardship.* Case Western Reserve University, Department of Biochemistry, 05 February 2015, Cleveland, OH.
- 2014 *ω -Hydroxyemodin Limits Staphylococcus aureus agr-Dependent Pathogenesis and Inflammation,* International Conference on Gram Positive Pathogens, 14 October 2014, Omaha, Nebraska.
- 2014 *Pharmacological disruption of agr quorum sensing in Staphylococcus aureus protects against skin and soft tissue infection.* University of Iowa, Carver College of Medicine, 28 January 2014, Iowa City, Iowa.
- 2014 *Small molecule disruption of Staphylococcus aureus quorum sensing protects against skin and soft tissue infection,* University of New Mexico HSC, Department of Biochemistry and Molecular Biology, 31 March 2014, Albuquerque, NM.
- 2013 *OxLDL antagonizes Staphylococcus aureus quorum-sensing.* Virginia Commonwealth University, Department of Biochemistry and Molecular Biology Seminar Series. 28 January 2013, Richmond, VA.
- 2013 *OxLDL antagonizes Staphylococcus aureus quorum-sensing.* Lecture and short talk on becoming a scientist. Richmond University. Integrated Quantitative Science class. 28 January 2013. Richmond, VA.
- 2013 *The Good Side of OxLDL.* Third Annual Cardiovascular & Metabolic Disease Signature Program Research Day, UNM Health Sciences Center, 17 January 2013, Albuquerque, NM.
- 2012 *NOX2 modification of LDL promotes apolipoprotein B-mediated control of invasive agrIII Staphylococcus aureus infection.* Case Western Reserve University, Department of Pharmacology. 04 October 2012, Cleveland, OH.
- 2012 *NOX2 modification of LDL promotes apolipoprotein B-mediated control of invasive agrIII Staphylococcus aureus infection.* UNM College of Pharmacy, Department of Pharmaceutical Sciences Toxicology Seminar Series, 05 March 2012, UNM COP, Albuquerque, NM.
- 2012 *Targeting Staphylococcus aureus Virulence.* UNM HSC Center for Infectious Disease

- and Inflammation Signature Program Seminar Series. 25 January 2012. Albuquerque, NM.
- 2011 *Phagocyte NADPH oxidase modification of LDL promotes apolipoprotein B-mediated control of invasive agrIII Staphylococcus aureus infection*. Translational Science Journal Club, 12 December 2011, UNM HSC, Albuquerque, NM.
- 2011 *Phagocyte NADPH oxidase modification of LDL promotes apolipoprotein B-mediated control of invasive agrIII Staphylococcus aureus infection*. NMVAHCS, Research Service Works in Progress Seminar Series, 05 October 2011. Albuquerque, NM.
- 2011 *Host control of Staphylococcus aureus virulence*. 2011 UNM HSC Biomedical Sciences Graduate Program Student Retreat, 30 September 2011, Albuquerque, NM.
- 2009 *Small Molecule Inhibitors of Hantavirus Infection*. 2009 Biocomputing Day at UNM, 27 March 2009, Albuquerque, NM.
- 2008 *Panning for Peptide Inhibitors of Hantavirus Infection*. 13 November 2008, Lovelace Respiratory Research Institute, Albuquerque, NM.
- 2003 *Transcarboxylase Multienzyme Complex: MMCoA Bound 12S Hexamer at 2.0 Å Resolution and Towards 5S Subunit MAD Phasing*. 2003 Annual Meeting, American Crystallographic Association, Cincinnati, OH, 26-31 July 2003.

INVITED BLOG

- 2015 *Targeting the Unwilling Antigen*, PLoS Synthetic Biology,
<http://synbio.plos.org/2015/01/14/targeting-the-unwilling-antigen/>

HONORS AND AWARDS

- 2019 UNM College of Pharmacy W.M. Hadley Distinguished Scholar Award
- 2019 UNM BSGP Outstanding Mentor Award
- 2016 Honorable Mention, BUILDING SCHOLARS Mentor Award competition, Research Partner Faculty-Student category
- 2015 UNM Regents' Lecturer
- 2013 2013 Junior Faculty Excellence in Research Award, University of New Mexico Health Sciences Center
- 2009-2011 Department of Veterans Affairs Career Development Award 2 (Project: Apolipoprotein B antagonism of *Staphylococcus aureus* virulence. Mentor: Hattie Gresham, Ph.D.)
- 2008 NIH F32 Individual postdoctoral NRSA fellowship (Project: Characterization of innate immune response stimulation by Sin Nombre virus. Mentors: Brian Hjelle, M.D. and Richard Larson, M.D., Ph.D.)
- 2006-2008 Infectious Diseases and Inflammation Program, University of New Mexico, NIH T32 Training Grant Post-doctoral Fellowship
- 2002-2003 Irving Page Merit Award, Cleveland Clinic Foundation, Lerner Research Institute
- 2001-2003 Case Western Reserve University, Department of Pharmacology, NIH T32 Graduate Student Training Grant Fellowship
- 1987-1989 Academic Scholarship, University of Alabama in Huntsville
- 1985-1987 Academic Scholarship, Northeast Alabama St. Jr. College

PROFESSIONAL MEMBERSHIPS

2018- present	Organization for the Study of Sex Differences (OSSD)
2010-present	American Association of Immunologists
2008-present	American Society for Microbiology
2007-2009	American Society for Virology
1997-2005	American Crystallographic Association

PROFESSIONAL SERVICE

INTERNATIONAL

Grant Reviews

2016	Agence Nationale de la Recherche (ANR) (French National Research Agency)
2015	Medical Research Council (MRC), Infections and Immunity Board, Bacterial Disease (July 2015)

NATIONAL

Grant Reviews

2020-present	NIH, VMD Study Section, Member (July 1, 2020- June 30, 2024) Three sessions annually
2020	NIH VMD (June 2020)
2020	NIH, Host Interactions with Bacterial Pathogens (February 2020)
2019	NIH, SEP ZRG1 IDM-T (02) M (December 2019)
2019	NIH VMD (October 2019)
2019	NIH, 2019/10 ZRG1 IMM-R (50) R, Joint US-Brazil Collaborative Research Program (July 2019)
2019	NIH Dual Purpose/ Dual Benefit Review Panel (March 2019)
2018	NIH Infectious Diseases and Microbiology (November 2018)
2018	NIH Infectious Diseases and Microbiology (March 2018)
2017	NIH Infectious Diseases and Microbiology (July 2017)
2017	NIH Infectious Diseases and Microbiology (March 2017)
2017	NIH, NIAID, Special Emphasis Panel, RFA-AI16-034 (Feb/Mar 2017)
2016	NIH, Musculoskeletal, Oral and Skin Sciences Special Emphasis Panel (SEP) (Jul 2016)
2016	NIH, Musculoskeletal, Oral and Skin Sciences SEP (Feb 2016)
2016	NIH, National Institute of General Medical Sciences COBRE II panel
2015	NIH, Dermatology & Rheumatology SEP
2015	NIH Infectious Diseases and Microbiology (Oct 2015)
2015	NIH Infectious Diseases and Microbiology (July 2015)
2015	NIH Infectious Diseases and Microbiology (Mar 2015)
2014	NIH Infectious Diseases and Microbiology (Oct 2014)

2014	NIH, National Institute of General Medical Sciences COBRE panel
2014	NIH Infectious Diseases and Microbiology (Jun 2014)
2013	NIH Infectious Diseases and Microbiology (Nov 2013)
2013	NIH Topics in Microbial Pathogenesis (Mar 2013)
2012	NIH Arthritis, Connective Tissue and Skin Study Section (ACTS) (Oct 2012)
2012	NIH SEP, Fellowships: Infectious Diseases and Microbiology (March 2012)
2011	NIH SEP, RFA-AI-11-004, Chemical Approaches to Target Validation for Drug Resistant Pathogens.
2011	Maryland Industrial Partnerships Program (MIPS), University of Maryland.

Journal reviews

Annual Research and Review in Biology
 Applied Microbiology and Biotechnology
 Antimicrobial Agents and Chemotherapy
 Biochimica et Biophysica Acta (BBA) Molecular and Cellular Biology of Lipids
 British Journal of Medicine and Medical Research
 Chemical Biology and Drug Design
 Infection & Immunity
 International Journal of Environmental Research and Public Health
 International Journal of Molecular Sciences
 Journal of Clinical Microbiology
 Journal of Infectious Diseases
 Journal of Medicinal Chemistry
 mBio
 Medical Microbiology and Immunology
 mSphere
 Mucosal Immunology
 Nature Communications
 PLoS One
 Science Advances (AAAS)
 Scientific Reports
 Toxicology and Applied Pharmacology
 Toxicological Sciences
 Toxins
 Trends in Microbiology
 Vaccines

Other service

2018- present	Review Editor, <i>Frontiers in Cellular & Infection Microbiology</i> , Molecular Bacterial Pathogenesis
2016-2018	Co-Chair, Seventh International Conference on Gram Positive Pathogens (Co-I NIH R13 application, Dec 2017, Submitted through University of Nebraska Medical Center), Awarded.
2016	Session Moderator – Antibiotic Development, Sixth International Conference on Gram Positive Pathogens

- 2016 Organizing Committee Member, Sixth International Conference on Gram Positive Pathogens
- 2014 Session Moderator – Microbial manipulation, Fifth International Conference on Gram Positive Pathogens

LOCAL**UNM HSC**

- 2020 Member, BSGP Qualifying Exam Committees (Jun, Nov)
- 2019-present CTSC, KL2 Multidisciplinary Advisory Committee (MAC), Member
- 2019-present Mentoring Director and Executive Committee Member, Autophagy, Inflammation and Metabolism (AIM) CoBRE
- 2019 Member, BSGP Qualifying Exam Committee (May)
- 2019 Poster Judge, BSGP Student Research Day
- 2018 Member, BSGP Qualifying Exam Committees (Jan, Jun, Aug)
- 2018 Grant reviews, UNM Community Environmental Health Program (Jan 2018)
- 2017- present Member, Infectious Diseases and Inflammation Program Steering Committee
- 2017 Grant reviews, Native Environmental Health Equity P50 Center (May 2017)
- 2017 Poster Judge, Undergraduate Pipeline Network Research Day, 04 Aug 2017
- 2017 Member, BSGP Qualifying Exam Committee (Jun)
- 2017 Judge, Oral presentations, BSGP Student Research Day, 24 Feb 2017
- 2016 Poster Judge, Undergraduate Pipeline Network Research Day
- 2016 Member, BSGP Qualifying Exam Committee (Jun)
- 2016 Poster Judge, BSGP Student Research Day
- 2015 Member, BSGP Qualifying Exam Committee (Jun)
- 2015 Member, BSGP Qualifying Exam Committee (Jan)
- 2014-2015 Member, Senate Graduate and Professional Committee
- 2014 Reviewer, Infectious Diseases and Inflammation T32 Fellowship Applications
- 2014 CMBD Seminar Series, Host – Dr. Carl Grunfeld, University of California San Francisco
- 2014 Poster Judge, UNM HSC Cardiovascular and Metabolic Diseases Research Day
- 2014 Poster Judge, BSGP Student Research Day
- 2013 Poster Judge, BSGP Student Research Day
- 2013 Poster Judge, Third Annual Cardiovascular & Metabolic Disease Signature Program Research Day, UNM Health Sciences Center, 17 January 2013, Albuquerque, NM.
- 2013 Member, BSGP Qualifying Exam Committee
- 2013 CMBD Seminar Series, Host – Joseph A. Duncan, Univ. of North Carolina, SOM.
- 2012 Member, HSC Compliance Committee
- 2012-2013 CIDI Signature Program 3x5x5 Quarterly Seminar Series, Organizer
- 2012 CMBD Seminar Series, Host -- Maria Febbraio, Cleveland Clinic, Lerner Research Inst.

2009-2010 Member, Dept. of Molecular Genetics and Microbiology, Education Committee
 2009 CMBD Seminar Series, Host -- Frank DeLeo, NIH Rocky Mountain Laboratories.

COP

2020 Member, Search Committee for Curriculum Office Manager
 2020-present Co-Chair, Curriculum and Learning Assessment Committee (CLAC)
 2020-present Member, Curricular Oversight Group (COG)
 2017 AACP Spring Institute representative and Working Group member
 2017-2018 Member, Teaching Practices Inventory Working Group
 2017 Member, Course Review Task Force/Working Group
 2017-2018 Member, Dean Search Committee
 2015-2018 Faculty Advisor, COP Class of 2018
 2016 Acting Chair, Curriculum and Learning Assessment Committee, June
 2015-present Member, Curriculum and Learning Assessment Committee
 2015-2019 Member, Curricular Assessment Subcommittee
 2015-2016 Group Leader, Curriculum Revision Infectious Diseases Working Group
 2014-2015 Member, Faculty Governance Task Force
 2014 Member, Student Affairs Committee
 2013 Host, Women's Leadership Webinar. 19 July 2013
 2012-2013 Member, Faculty Development Committee
 2011-2012 Member, Research and Scholarship Committee
 2012 Member, Workload/Productivity Task Force
 2012 Organizer, COP 3x5x5 Quarterly Seminar Series

DEPARTMENT

2019-2020 Member, Pharmaceutical Sciences, Assistant Professor Faculty Search Committee
 2019-2020 Member, Pharmaceutical Sciences, Tenured Faculty Search Committee
 2017-2018 Chair, Pharmaceutical Sciences, Assistant Professor Faculty Search Committee
 2016 Member, Transcribed Concentration Development Task Force
 2016 Member, Graduate Student Enrollment Ad Hoc Committee
 2014 Member, Spring 2014 Department Journal Club Task Force
 2012 Member, Search committee, Staff- Senior Fiscal Services Technician
 2012 Member, Search committee, Staff – Administrative Assistant III
 2012 Pharmacology/Toxicology seminar series, Hosted guest speaker, Dr. Jessica Bell, Virginia Commonwealth University, 13-16 October 2012.

VA

2009 - 2011 Member, Research Safety Committee
 2010 - 2011 Member, Scientific Review Committee

Community

2019 Science Fair Judge, 04 Dec 2019, Corrales Elementary

- 2014 HSC News Beat, "Disarming superbug MRSA to fight antibiotic resistance,"
<http://hscnews.unm.edu/file?fid=547c991cee750e2d9a0c9382&id=524dc4097241c852e801ff41>.
- 2010 American Cancer Society Relay for Life

TEACHING/MENTORING EXPERIENCE

MENTORING (also see *Doctoral Candidates* section)

- 2020 Medical Student Research mentor, Jaimie Lin, UNM SOM
 -present Project title: Inhibition of the NLRP3 inflammasome by the GPER agonist G-1
- 2019-2020 Britney Martinez, PREP Post- baccalaureate fellow
- 2018 Sarah 'Caroline' Jordan, Pharm.D./M.S student (Awarded the COP Summer
 -present Research Fellowship in 2019)
- 2017 Seth Michael Daly, Post-doctoral fellow
 -2020 Project title: Mechanisms of host innate defense against *S. aureus* SSTI
- 2017 Montserrat Garcia Arreguin, BUILDing Scholars Summer Research Fellowship
 Project title: Innate Immune Effectors and Sex Bias in Mouse Neutrophil Bactericidal Efficacy
- 2016 Jason Alexander Joyner, BSGP graduate student
 -2020 Project title: *Vaccine strategies to limit S. aureus virulence*
- 2016 Srijana Pokhrel, BSGP graduate student
 -2020 Project title: *Innate sex bias in Staphylococcus aureus skin infection*
- 2016 Montserrat Garcia Arreguin, BUILDing Scholars Summer Research Fellowship
 Project title: *Method for Evaluating in vivo Inhibition of Staphylococcus aureus Virulence Regulation*
- 2016 Elliott Miller (P2), UNM COP Summer Research Fellowship
 Project title: *Contribution of the accessory gene regulator operon to MRSA infection in diabetic hosts*
- 2015 Emily Auwater, Undergraduate Pipeline Network, Summer
 Project title: *Sex-dependent differences in susceptibility to Methicillin-resistant Staphylococcus aureus skin infection (Research Day Poster, 1st place)*
- 2014-2016 Matt Graus, Dissertation committee member, UNM SOM, Dept. of Pathology
 Project title: *Concealing Carbohydrates: A proposal on how β -glucan masking*

alters Dectin-1 signaling

- 2011- 2016 Dominique Price, Dissertation committee member, COP, Dept. of Pharmaceutical Sciences
Project title: *Environmental mycobacteria mediate tolerance against BCG-based TB vaccines*
- 2012-2015 Seth Daly, BSGP/Pharmaceutical Sciences Graduate student
Project title: *Inhibition of virulence as treatment strategies for S. aureus infection*
- 2012-2015 Moriah Castleman, BSGP/Pharmaceutical Sciences Graduate student
Project title: *Mechanisms of innate immune regulation of dermonecrosis during S. aureus skin infections*
- 2012-2015 Brett Manifold-Wheeler, BSGP/Pharmaceutical Sciences Graduate student
Project title: *Apolipoprotein B containing lipoproteins contribute to host innate immune pulmonary defense against Staphylococcus aureus*
- 2013 Research mentor, Elizabeth Montano, Graduate student, UNM
Project title: *Anti-MRSA properties of molecules secreted by deep cave bacteria*
- 2012, 2013 Medical student research mentor, Martha Terrazas, UNM SOM, Spring 2013
Project title: *Control of S. aureus invasive infection through inhibition of quorum-sensing (QS) (Research Day Poster, 1st place)*
- 2012 Grant writing course mentor for Dr. Pavan Muttil, Assistant Professor, Dept. of Pharmaceutical Sciences, UNM COP. Fall 2012
- 2012 Johnny Zavala, summer student, Undergraduate Pipeline Network (UPN). Project title: *Alpha hemolysin inhibition using site specific antibodies generated in rabbits (Research Day Poster, 1st place)*
- 2011, 2012 Sandra Stephany Delgado, Independent Study,
Project titles: *Small molecule inhibitor of S. aureus QS-dependent virulence is effective against isolates of different agr types, and Apolipoprotein B antagonism of S. aureus agr type II signaling*
- 2011-2015 Jon Femling, MD, Ph.D., UNM HSC CTSA MAC mentor
Project title: *Novel approaches to prevention and treatment of S. aureus infection*
- 2011-2014 Brian Gray, postdoctoral fellow, Research Mentor, Academic Science Education and Research Training (ASERT)
Project title: *Repurposing a gout drug for treatment of S. aureus SSTI*
- 2011-2012 Ashlee Hebert, BSGP, graduate student rotation.
Project title: *Bead based detection of Lipoprotein binding of S. aureus AIPs*

- 2010-2011 Erin Sully, UNM BSGP, Dissertation committee member
Project title: *Small molecule inhibitors of S. aureus QS-dependent virulence*
- 2010 Problem-based learning facilitator, Immunology Block, UNM SOM
- 2009-2010 Michal Peterson, UNM BSGP, Co-mentor/Dissertation committee member
Project title: *Apolipoprotein B antagonizes S. aureus QS-dependent virulence*
- 2001-2005 Trained incoming/rotating graduate students, Yee lab, Dept. of Biochemistry, Case Western Reserve University

COURSE ADMINISTRATION/ OTHER INSTRUCTION

IOR- Instructor of Record Role- *Coordinating instructor schedules, syllabus development, submission of study materials, exam composition, and grades compilation.*

- 2020 Spring, PHRM 835, Integrated Pharmacotherapeutics 4, IOR (first half, 8 weeks)
- 2019 Spring, PHRM 830, Integrated Pharmacotherapeutics 3, co-IOR
- 2018-2019 Fall/Spring, Pharm 598, Host-pathogen journal club, IOR
- 2018 Spring, PHRM 830, Integrated Pharmacotherapeutics 3, co-IOR
- 2017-2018 Fall/Spring, PHRM 593, Toxicology/Pharmaceutical Sciences Seminar, IOR
- 2017 Spring, PHRM 598, Antimicrobial Therapy, IOR
- 2014-2016 Spring, PHRM 732, Mechanisms of Drug Action III, IOR
- 2013 Fall, PHRM 593, Toxicology/Pharmaceutical Sciences Seminar, IOR
- 2013 Spring, PHRM 598, Antimicrobial Therapy, Co-IOR w/ Graham Timmins
- 2012-2017 Spring/Fall, Pharm 598, Host-pathogen journal club, IOR
- 2010 Facilitator/Tutor, UNM, School of Medicine Immunology Block, November-December

LECTURE/TEACHING (HRS)

- 2020 Fall, PHRM 803, Aspects of Patient Care I, Participant (3 hours)
- 2020 Fall, PHRM 305/805, Pathophysiology, Bacteria and Infectious Diseases, Didactic hours (3), Total hours (5)
- 2020 Fall, PHRM 840, Integrated Pharmacotherapeutics 5, Pharmacology of Antifungals, Mycobacterial Agents and Antivirals, Didactic hours (4), Total hours (12).
- 2020 Spring, PHRM 576, Molecular and Cellular Pharmacology, Immune Pharmacology, Didactic h (3) Total h (5)

- 2020 Spring, PHRM 835, Integrated Pharmacotherapeutics 4, Pathophysiology of Bacterial Infections, Bacterial Pathogens, Pharmacology of Antibiotics, Didactic hours (9), Total hours (13).
- 2020 Spring, Gram Positive Pathogens, SOM Block, (1h)
- 2019 Fall, PHRM 803, Aspects of Patient Care I, Participant/Grading (2h)
- 2019 Fall, PHRM 843, Aspects of Patient Care V, Participant/Grading (3h).
- 2019 Fall, PHRM 825, Integrated Pharmacotherapeutics 2, Pathophysiology of Osteoarthritis (OA) and Rheumatoid Arthritis (RA), Pharmacology of Drugs for OA, RA. Didactic h (1), total hours (8)
- 2019 Fall, PHRM 840, Integrated Pharmacotherapeutics 5, Pharmacology of Antifungals, Mycobacterial Agents and Antivirals, Didactic hours (3), Total hours (11).
- 2019 Spring, PHRM 835, Integrated Pharmacotherapeutics 4, Pharmacology of Glycopeptide and Membrane Targeting Antibiotics, Didactic hours (1), Total hours (5).
- 2019 Spring, PHRM 830, Integrated Pharmacotherapeutics 3, Pathophysiology of Bacterial Infections, Bacterial Pathogens, Pharmacology of Antibiotics, Didactic hours (8), Total hours (16).
- 2019 Spring, PHRM 576, Molecular and Cellular Pharmacology, Immune Pharmacology, Didactic h (3) Total h (5)
- 2019 Spring, PHRM 580, General Toxicology, Bacterial Toxins, Didactic h (1.5)
- 2019 Spring, PHRM 833, Aspects of Patient Care IV, Participant/Grading (3h).
- 2019 Spring, PHRM 853, Aspects of Patient Care VI, Participant/Grading (3h).
- 2018 PHRM 823, Aspects of Patient Care III, Participant/Grading (5h).
- 2018 PHRM 840, Integrated Pharmacotherapeutics 5, Pathophysiology of Tuberculosis, Pharmacology of drugs for TB. Didactic h (1), total h(9).
- 2018 PHRM 825, Integrated Pharmacotherapeutics 2, Pathophysiology of Osteoarthritis (OA) and Rheumatoid Arthritis (RA), Pharmacology of Drugs for OA, RA. Didactic h (2), total hours (7).
- 2018 Pharmacy 576, Molecular and Cellular Pharmacology, *Immunopharmacology*. Didactic h (1), total hours (4)., Spring 2018.
- 2018 Pharmacy 764, Emerging Technologies in Pharmaceutical Care. *Cytokine and antibody based therapies, Vaccine clinical trials, Non-traditional approaches to antibiotic stewardship*. Didactic h (4), total hours (6). Spring 2018
- 2018 PHRM 830, Integrated Pharmacotherapeutics 3, Pathophysiology of Bacterial Infections, Bacterial Pathogens, Pharmacology of Antibiotics, Didactic hours (9), Total hours (18). Spring 2018.
- 2017 PHRM 825, Integrated Pharmacotherapeutics 2, Pathophysiology of Osteoarthritis (OA) and Rheumatoid Arthritis (RA), Pharmacology of Drugs for OA, RA. Lectures (2), exams (2), discussion hours (6) and GER (1), Fall 2017.
- 2017 Pharmacy 732, Mechanisms of Drug Action III. *Immunosuppressants, Pharmacology of Antibiotics*. Lectures (12), exams and reviews (9), course final. Spring 2017
- 2017 Pharmacy 764, Emerging Technologies in Pharmaceutical Care. *Cytokine and antibody based therapies, Vaccine clinical trials, Non-traditional approaches to antibiotic stewardship*. Lectures (4), Spring 2017

- 2016 Biomed 505, Immunopathogenesis & Immunity in Infectious Disease. Immunopathogenesis of Gram Positive Pathogens: Focus on *Staphylococcus aureus*. Lecture (1h), Journal club (2h). Fall 2016.
- 2016 Pharmacy 732, Mechanisms of Drug Action III. *Pharmacology of Antibiotics*. Lectures (9), exams and reviews (6), course final. Spring 2016
- 2016 Pharmacy 764, Emerging Technologies in Pharmaceutical Care. *Vaccine clinical trials, Non-traditional approaches to antibiotic stewardship*. Lectures (3), Spring 2016
- 2015 Pharmacy 732, Mechanisms of Drug Action III. *Pharmacology of Antibiotics*. Lectures (8), exams and reviews (3), course final. Spring 2015
- 2015 Pharmacy 764, Emerging Technologies in Pharmaceutical Care. *Vaccine clinical trials, Non-traditional approaches to antibiotic stewardship*. Lectures (3), Spring 2015
- 2014 Pharmacy 732, Mechanisms of Drug Action III. *Pharmacology of Antibiotics*. Lectures (8), exams and reviews (3), course final. Spring 2014
- 2014 Pharmacy 764, Emerging Technologies in Pharmaceutical Care. *Vaccine clinical trials*, Lectures (2), Spring 2014
- 2013 Pharmacy 732, Mechanisms of Drug Action III. *Pharmacology of Antibiotics*. Lectures (8), exams and reviews (3), course final. Spring 2013.
- 2013 Pharmacy 764, Emerging Technologies in Pharmaceutical Care. *Vaccine clinical trials*, Lectures (2), Spring 2013.
- 2012 Pharmacy 732, Mechanisms of Drug Action III. *Pharmacology of Antibiotics*. Lectures (8), exams and reviews (3), course final. April 2012
- 2010 Guest lecture, UNM Biochemistry, *X-ray crystallography*. IOR Dr. Laurel Sillerud
- 2008 Guest lecture, UNM Biochemistry, *X-ray crystallography*. IOR Dr. Laurel Sillerud
- 2008 BIOL 402 section 007, Biotechnology, Co-instructor Dr. Paul Farnsworth, UNM

GRADUATE COMMITTEES (Doctoral committee unless otherwise noted)
(*indicates principal advisor)

- 2019 **Ashvini Vaidya** (MS), UNM BSGP/ Molecular Genetics and Microbiology.
-2020 Project title: Developing a Virus-Like Particle (VLP)-Based Vaccine for *Neisseria gonorrhoeae*
- 2019 **Lucie Jelinkova**, UNM BSGP/ Molecular Genetics and Microbiology.
-present Project title: Developing a Virus-Like Particle-Based Vaccine for Malaria.
- 2019 **Miranda Ridder**, University of Kansas Medical Center.
-present Project title: Bacterial and host factors contributing to *S. aureus* skin infections
- 2018 **Diana Kao**, University of North Carolina, Greensboro. Project title: Mycology
-2019 versus MRSA: Can the Metabolites of this Microorganism against another Measure up?
- 2018 **Alexandra Fowler**, UNM BSGP/ Molecular Genetics and Microbiology

- present Project title: Virus-like particle based vaccines
- 2016
-2020 ***Jason A. Joyner**, UNM BSGP/Pharmaceutical Sciences Graduate Student
Project title: Immune control of *Staphylococcus aureus* virulence regulation
- Academic Excellence Award, UNM African American Student Services, 2020
 - UNM Biomedical Sciences Graduate Program (BSGP) Student Research Day, Oral presentation award, 2020
 - Professional Development Award, Professional Student Association, University of New Mexico, 2019
 - UNM COP Research and Scholarship Day, Poster Award, 2019
 - Student travel award, International Conference on Gram-positive pathogens, Omaha, Nebraska, 2016, 2018
 - *Current position*: Associate Scientist/Post-doctoral fellow, Merck (Vaccines Division), West Point, PA
- 2016
-2020 ***Srijana Pokhrel**, UNM BSGP/Pharmaceutical Sciences Graduate Student
Project title: Innate sex bias in *Staphylococcus aureus* skin infection
- UNM Biomedical Sciences Graduate Program (BSGP) Travel Award, 2019
 - BSGP Student Research Day, Best Oral Presentation, 2019
 - UNM COP Research & Scholarship Day, Best Poster by a Pharmaceutical Sciences Graduate Student (Second Place), 2017
 - Student travel award, International Conference on Gram-positive pathogens, Omaha, Nebraska, 2016, 2018
 - *Current position*: Post-doctoral Fellow, Department of Microbial Infection and Immunity, The Ohio State University Wexner Medical Center Columbus, Ohio
- 2014-2016 **Matt Graus**, UNM SOM, Dept. of Pathology
Project title: Concealing Carbohydrates: A proposal on how β -glucan masking alters Dectin-1 signaling
- 2011-2016 **Dominique Price**, UNM BSGP/Pharmaceutical Sciences Graduate student
Project title: Environmental mycobacteria mediate tolerance against BCG-based TB vaccines
- 2012-2015 ***Seth Daly**, UNM BSGP/Pharmaceutical Sciences
Project title: Anti-virulence strategies for prevention/treatment of *S. aureus* infection
- Awarded T32 Infectious Disease and Inflammation Predoctoral Fellowship, 2012-2013, 2014-2015
 - Student travel award, International Conference on Gram-positive pathogens, Omaha, Nebraska. October 7-12, 2012
 - *Current position*: Research Assistant Professor, University of New Mexico COP, Albuquerque, NM

- 2012-2015 ***Moriah Castleman**, UNM BSGP/Pharmaceutical Sciences
Project title: Role of CD36 in regulation of NLRP3 inflammasome activation
- Awarded predoctoral training supplement for R01AI091917
 - Student travel award, International Conference on Gram-positive pathogens, Omaha, Nebraska. October 7-12, 2012
 - *Current position*: Post-doctoral Fellow, University of Colorado, Anschutz Medical Campus, Division of Infectious Disease, Aurora, CO
- 2012-2015 ***Brett Manifold-Wheeler**, UNM BSGP/Pharmaceutical Sciences
Project title: Role of apolipoprotein B in host defense against *S. aureus* pneumonia
- Awarded Office of Graduate Studies Excellence Award for Graduate Studies (2012). One year support stipend/tuition.
 - *Current position*: Post-doctoral fellow, Laboratories of Dr. Bryce Chackerian and Dr. Cossette Wheeler, University of New Mexico SOM, Albuquerque, NM
- 2010-2011 **Erin Sully**, UNM SOM/ BSGP.
Project title: *Small molecule inhibitors of S. aureus QS-dependent virulence*
- 2009-2010 **Michal Peterson**, Co-mentor, UNM SOM/BSGP. Project title: *Apolipoprotein B antagonizes S. aureus QS-dependent virulence*

PATENTS/PATENT APPLICATIONS

US Patent Number 10,031,135 (Divisional patent, issued 2018). “Detection of Bioagents using a Shear Horizontal Surface Acoustic Wave Biosensor,” Coinventor.

US Patent Number 10,010,558 (Utility patent, issued 2018). “Frankiamicin A Compositions and Methods”, Coinventor.

US Patent Number 8,709,791 (Utility patent, issued 2014). “Detection of Bioagents using a Shear Horizontal Surface Acoustic Wave Biosensor,” Coinventor.

U.S. Patent No. 10,561,648 (Issued Feb. 18, 2020). “Inhibition and treatment of bacterial infections by sex-specific GPER targeting”, Coinventor.

U.S. Patent No. 10,821,167 (Issued November 3, 2020). “VLP-based Vaccines for Targeting Staphylococcus aureus Secreted Virulence Factors,” Coinventor.

STC Ref. No.2017-047: “A MRSA Synbody with Direct Antibacterial Activity Also Potentiates Beta-Lactam Antibiotics” developed by Chris Diehnelt and Stephen Johnston (Arizona Technology Enterprises LLC) and **Pamela Hall**. Application/Provisional Number 15/368,178 (Dec 2, 2016), Provisional 62/263,168 (Dec 4, 2015).