CURRICULUM VITAE 2026 updates

NAME: Paul R. Reynolds, Ph.D.

ADDRESS: Brigham Young University

Department of Cell Biology and Physiology
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EDUCATION: **Post-Doctoral Fellow** (2004-2006)
Department of Internal Medicine, Pulmonary Division, University of Utah Health Sciences Center, Salt Lake City, UT 84239
John R. Hoidal, M.D., Advisor.

Ph.D. Molecular and Developmental Biology (2004)
Cincinnati Children's Hospital Medical Center, University of Cincinnati, Division of Developmental and Molecular Biology, Cincinnati, OH 45229
Dissertation: "Midkine (MK) Regulates Pulmonary Vascular Remodeling During Hypoxia"
Jeffrey A. Whitsett M.D., Advisor.

M.S. Zoology (2001)
Brigham Young University, Department of Zoology, Provo, UT 84602
Thesis: "Protection of Retinoic Acid-Induced Cleft Palate in Mice by Separate and Concomitant Administration of Folic Acid and Methionine"
Robert E. Seegmiller, Ph.D., Advisor.

B.S. Human Biology (1999)
Brigham Young University, Department of Zoology, Provo, UT 84602

PROFESSIONAL EXPERIENCE:

Professor (2018-present)
Brigham Young University, Dept. of Cell Biology and Physiology, Provo, UT 84602

Visiting Scientist (Jan 2022-Jul 2022)
State University of New York (SUNY) Downstate, Department of Medicine

Associate Professor (2013-2018)
Brigham Young University, Dept. of Cell Biology and Physiology, Provo

Visiting Scientist (May 2013-Jan 2014)
University Hospitals and Clinics, University of Heidelberg, Department of Inner Medicine

Assistant Professor (2007-2013)
Brigham Young University, Dept. of Cell Biology and Physiology, Provo, UT

Assistant Research Professor (2006-2009)
University of Utah School of Medicine, Pulmonary Division, Salt Lake City, UT

Post-Doctoral Fellow (2004-2006)
University of Utah Health Sciences Center, Pulmonary Division, Salt Lake City, UT

Doctoral Candidate (2003-2004)

Developmental and Molecular Biology, Cincinnati Children's Hospital Medical Center, University of Cincinnati, Cincinnati, OH

Pre-doctoral Candidate (2001-2003)
Developmental and Molecular Biology, Cincinnati Children's Hospital Medical Center, University of Cincinnati, Cincinnati, OH

AWARDS:

Jones and Bozemen Changing Medicine's Paradigm Award (2025)
Common Sense Medicine

Ferrin L. Orton Teaching and Learning Faculty Fellowship (2017)
Brigham Young University

College of Life Sciences Outstanding Teaching Award (2017)
Brigham Young University

APS-TPS Joint Meeting Award (2016)
International Physiology Committee and the Council of the American Physiological Society

Department Distinguished Faculty Award (2015)
Physiology and Developmental Biology Department, Brigham Young University

American Physiological Society Research Career Enhancement Award (2015)
American Physiological Society

CyPlex Systems American Society of Reproductive Immunology Grant (2014)
CyPlex Systems and The American Society for Reproductive Immunology

American Physiology Minority Fellowship Award Mentor (2014)
American Physiological Society

International Union of Physiological Sciences Congress: Birmingham, England (2013)
International Travel Presentation Award

Respiratory Section New Investigator Award, (2012)
American Physiological Society

Presentation Award (2012)
Society of Developmental Biology Conference, Montreal, Canada

American Physiological Society Research Career Enhancement Award (2011)
American Physiological Society

Presentation Award (2011)
Society of Developmental Biology Conference, Chicago, IL

National Institutes of Health LRP award (2010-2012)
National Institutes of Health, NHLBI Extramural Clinical Researcher

National Institutes of Health LRP award (2008-2010)
National Institutes of Health, NHLBI Extramural Clinical Researcher

University of Utah Faculty Scholarly and Creative Research Award (2008)
University of Utah School of Medicine

Presentation/Travel Award (2007)
Society of Developmental Biology Conference, Cancun Mexico

Presentation/Travel Award (2006)
Society of Developmental Biology Conference, Ann Arbor, MI

Presentation/Travel Award (2005)
Society of Developmental Biology Conference, San Diego CA

Trainee Travel Award, National Heart, Lung and Blood Institute (2004)
13th Annual International Vascular Biology Meeting, Toronto, Canada

Young Investigator Platform Presentation Award (2004)
13th Annual International Vascular Biology Meeting, Toronto, Canada

Young Investigator Travel Award (2001)
41st Annual Teratology Society Meetings

Student Presentation Award, Plenary Platform Session (2001)
41st Annual Teratology Society Meetings

FUNDED EXTERNAL GRANTS AND FELLOWSHIPS:

2 R15HL152257-02 (2025-2029), Role: PI $454,500.00
National Institutes of Health: Heart Lung and Blood Institute
Dissecting inflammatory outcomes following eCigarette exposure.

Clinical Innovator Grant (2023-2026), PI $325,500.00
Flight Attendant Medical Research Institute
Utilization of novel bromo-domain inhibitors to ameliorate secondhand tobacco smoke-induced COPD pathogenesis.

1 R15HD108743-01 (2022-2026), Role: Co-I $454,500.00
National Institutes of Health: Child Health and Human Development
Lung and Placental RAGE Signaling Induction by Secondhand Smoke and E-Cigarette Vapor.

1 R15HL152257-01 (2020-2024), Role: PI $450,000.00
National Institutes of Health: Heart Lung and Blood Institute
RAGE targeting attenuates smoke-induced inflammation.

Rocky Mtn Center for Occ and Environ Health (2022-2023), Role: Co-PI $19,440.00
University of Utah: Research Projects in Occupational Safety and Health
Spatiotemporal and Personal Monitoring of Nepali Brick Workers Aerosol Exposures.

Research Award (2020-2022), Role: PI $58,272.00
Performance Labs, LLC
Characterizing the effects of Chlorophyll.

Collaborative Research Award (2020-2022), Role: PI $15,000.00
Dr. Daniel Orr, UNLV School of Dental Medicine
Characterizing a role for RAGE in CRS.

Clinical Innovator Grant (2016-2021), PI $469,262.50
Flight Attendant Medical Research Institute
RAGE and SAGE: Modeling secondhand smoke-induced COPD and therapeutic modalities.

NHLBI LRP Clinical Research Grant (2016-2017), Role: PI $7,927.65
National Institutes of Health: Heart Lung and Blood Institute
RAGE variability and the use of SAGEs in the treatment of smoke-induced inflammation.

American Physiological Society Research Career Enhancement (2015), Role: PI $5,000.00
American Physiological Society
Characterizing the Nuclear Functions of Translocated RAGE.

Clinical Innovator Grant (2014-2017), Role: Co-I $325,500.00
Flight Attendant Medical Research Institute
Role of OCTN1 in tobacco-induced COPD.

Clinical Innovator Grant (2012-2016), Role: PI $325,500.00
Flight Attendant Medical Research Institute
Systemic inflammation and Pulmonary RAGE expression.

American Physiological Society Research Career Enhancement (2011), Role: PI $5,000.00
American Physiological Society
Characterizing ATI Morphology in Lungs that Over-Express RAGE.

NHLBI LRP Clinical Research Grant (2010-2012), Role: PI $22,316.56
National Institutes of Health: Heart Lung and Blood Institute
Endothelial based mechanisms of COPD pathogenesis involving RAGE.

NHLBI LRP Clinical Research Grant (2008-2010), Role: PI $28,724.48
National Institutes of Health: Heart Lung and Blood Institute
Novel mechanisms of COPD pathogenesis involving RAGE.

Young Clinical Scientist Grant (2007-2012), Role: PI $542,500.00
Flight Attendant Medical Research Institute Award # 062473_YSCA
Egr-1 Mediated Effects in Secondhand Tobacco Smoke Exposure.

Parker B. Francis Fellowship in Lung Research (2006-2009), Role: PI $138,000.00
Parker B. Francis Pulmonary Research Foundation
Transcription Factor Expression During Cigarette Smoke-Induced Lung Inflammation.

Ruth L. Kirwschstein National Research Service Award (2004-2006)
National Institutes of Health HL07636-15, Jeffrey Whitsett, PI

PHS Graduate Training Grant (2001-2004)
Developmental and Perinatal Endocrinology (HD07463)

FUNDED INSTITUTIONAL GRANTS AND FELLOWSHIPS:

Life Sciences College Mentoring CEMENT Grant (2025), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Mentoring CEMENT Grant (2024), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Grants on the Edge Award (2021), PI $10,000.00
Brigham Young University, Provo UT 84602

John A. Widtsoe Grant (2023-2024), PI $25,000.00
Brigham Young University, Provo, UT 84602

Interdisciplinary Research (IDR) Origination Award (2022-2023), Co-PI $40,000.00
Brigham Young University, Provo, UT 84602

Life Sciences College Mentoring CEMENT Grant (2023), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Mentoring CEMENT Grant (2022), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Mentoring CEMENT Grant (2021), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Grants on the Edge Award (2021), PI $4,800.00
Brigham Young University, Provo UT 84602

Life Sciences College Mentoring CEMENT Grant (2020), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Mentoring CEMENT Grant (2019), PI $5,000.00
Brigham Young University, Provo UT 84602

Life Sciences College Mentoring CEMENT Grant (2018), PI $5,000.00
Brigham Young University, Provo UT 84602

BYU Mentoring Environment Grant (2017), PI $20,000.00
Brigham Young University, Provo UT 84602

Ferrin L. Orton Teaching and Learning Faculty Fellowship (2017-19), PI $15,000.00
Brigham Young University, Provo UT 84602

BYU Mentoring Environment Grant (2013), PI $20,000.00
Brigham Young University, Provo UT 84602

BYU Mentoring Environment Grant (2011), PI $20,000.00
Brigham Young University, Provo UT 84602

BYU Graduate Mentoring Award (2011), PI $4,000.00
Brigham Young University, Provo UT 84602

BYU Mentoring Environment Grant (2009), PI $20,000.00
Brigham Young University, Provo UT 84602

BYU Graduate Mentoring Award (2009), PI $4,000.00
Brigham Young University, Provo UT 84602

STUDENT GRANTS, FELLOWSHIPS and AWARDS:

American Society for Integrative Pathology Gotlieb Undergraduate Student in Pathobiology Scholarly Award, 2025
Emily Broberg

American Society for Integrative Pathology Trainee Scholar Award, 2025
Elizabeth Thurmond

American Society for Integrative Pathology Trainee Scholar Award, 2025
Katelyn Sturgis

Brigham Young University Undergraduate CURA Award, 2024
Katelyn Sturgis: V201 as a method to decrease tobacco smoke-induced lung inflammation in conjunction with RAGE signaling

Brigham Young University Graduate Student Research Travel Award, 2024
Derek Clarke, PhD student

Brigham Young University Graduate Student Research Travel Award, 2023
Katrina Curtis, PhD student and Derek Clarke, PhD student

Brigham Young University Undergraduate CURA Award, 2023
Kennedy Campbell: Chronic effects of tobacco smoke-induced lung inflammation on RAGE signaling and lung morphology

Brigham Young University Graduate Student Research Travel Award, 2022

Katrina Curtis, PhD student and Derek Clarke, PhD student

Brigham Young University Undergraduate CURA Award, 2021
Nathan Beckett: The role of RAGE in regulating the expression of neonatal TTF-1 and surfactant in the progression of Bronchopulmonary Dysplasia

Brigham Young University Undergraduate ORCA Award, 2021
Kyle Homer: The Use of SAGE, a RAGE Inhibitor, Reduces Inflammatory Symptoms in DPM-exposed Mice

College of Life Sciences Undergraduate Research Award (CURA), 2019 Poster Winner
Sam Llavina

Brigham Young University, College Undergraduate Research Award (CURA), 2018
Taylor Davis and Sam Llavina: Profiling the temporospatial effects of Fgf8 during lung morphogenesis

Brigham Young University Graduate Student Research Travel Award, 2018
Kelsey Hirschi, PhD student

Brigham Young University Undergraduate ORCA Award, 2018
Kaleb Egbert: Antenatal exposure to second-hand smoke impacts the embryology and physiology of the cardiopulmonary apparatus

Brigham Young University Graduate Student Research Travel Award, 2017
Kelsey Hirschi, PhD student

Brigham Young University Undergraduate ORCA Award, 2017
Todd Dunaway: Maternal-fetal interactions and the induction of preeclampsia by growth arrest-specific 6 (Gas6)/AXL signaling

Brigham Young University Undergraduate ORCA Award, 2017
Brent Kimbler: RAGE Functions during Secondhand Smoke-Induced Bronchopulmonary Dysplasia

Brigham Young University Undergraduate ORCA Award, 2016
Jason Gassman: Characterization of RAGE Expression in Peripheral Tissues in Response to Secondhand Smoke

Brigham Young University Graduate Student Research Travel Award, 2015
Josh Lewis, MS student

Brigham Young University Graduate Student Exposition, 2015
Rebecca Kimball, MS student mentee. Presentation Award, Grand Prize: $1,000

Brigham Young University Graduate Student Exposition, 2015
Michael Nelson, MS student mentee. Presentation Award, College Honorable Mention

The American Physiological Society Minority Travel Fellowship, Oct 2014
Felix R. Jimenez, Conditional pulmonary overexpression of Claudin 6 (Cldn6) during embryogenesis delays lung morphogenesis.

The American Physiological Society Minority Travel Fellowship, April 2014
Felix R. Jimenez, Pulmonary expression and regulation of Cldn6 by tobacco smoke

Brigham Young University Graduate Research Presentation Award, 2014
Tyler Wood: Targeted mice reveal a role for RAGE in an early inflammatory response to tobacco smoke

Brigham Young University Undergraduate ORCA Award, 2014
Steven Knapp: Novel comet assay identifies preliminary DNA damage prior to cell apoptosis in mouse models of RAGE over-expression

Brigham Young University Undergraduate ORCA Award, 2009
Phillip Beck: Premature osteoarthritis and activation of the RAGE receptor

Brigham Young University Undergraduate ORCA Award, 2011
Tyler Earley: RAGE expression in inflammatory lung diseases

Brigham Young University Undergraduate ORCA Award, 2011
Megan Stogsdill: Novel mouse model of RAGE over-expression causes inflammation in adult mouse lungs

Brigham Young University Undergraduate ORCA Award, 2011
Jason Porter: The distribution of the alpha 5 nAChR subunits in the mouse lung

Brigham Young University Undergraduate ORCA Award, 2010
Jeff Stogsdill: The role of up-regulated advanced glycation end products (RAGE) in impaired lung development and respiratory disease

Brigham Young University Undergraduate ORCA Award, 2010
Karisa Wasley: The role of RAGE in inflammatory lung disease induced by diesel particulate matter

David S. Bruce Award, Experimental Biology Meetings 2010
Karisa Wasley

Brigham Young University Undergraduate ORCA Award, 2010
Alex Geyer: TTF-1 regulates the expression of genes that are critical for lung formation and function

Brigham Young University Undergraduate ORCA Award, 2009
Cami Alison: RAGE Expression in Inflammatory Lung Diseases Triggered by Air Pollutants

PATENTS AND INVENTIONS

Provisional Patent filed 23 July 2013 and refilled Oct 2014 (Provisional patent number 61/741,814); RAGE transgenic mice are novel models for COPD pathogenesis

Provisional Patent filed 23 July 2013 (Provisional patent number 61/741,723)
Therapeutic alleviation of chronic rhinosinusitis by modeling with RAGE transgenic mice

PROFESSIONAL ORGANIZATION MEMBERSHIPS:

American Society for Integrative Pathology, ASIP (2015-present)
American Association for Dental Research, AADR (2015-present)
The American Physiological Society, APS (2007-present)
Society for Developmental Biology, SDB (2005-present)
The American Thoracic Society, ATS (2002-present)
The Teratology Society (2000-2001)

PROFESSIONAL SERVICE RENDERED

Editorial Board Memberships

Respiratory Research (**IF=3.642**); Editorial Board Member (2014-present)
Am J of Respiratory Cell and Mol Biology (**IF=4.080**); Editorial Board Member (2014-present)
MDPI: Biomedicines (**IF=6.081**); Invited Guest Editor for Special Issue, "Biophysical Methods in Drug Discovery: New Approaches and Applications" (2022-2024)

MDPI: Biomolecules (**IF=4.569**); Invited Guest Editor for Special Issue, "Cigarette Smoke Exposure and Pulmonary Diseases" (2022-2024)

International Journal of Molecular Sciences (**IF=3.257**); Invited Guest Editor for Special Issue, "Inhaled Pollutants Modulate Respiratory and Systemic Diseases" (2016-2018)

Professional Organization Leadership

American Association for Dental Research, Utah Section, Secretary (2016-2022)
President Olga Baker, DDS

Grant Review Study Sections or Steering Meetings

National Institutes of Health, NHLBI, NIDA, and NCI Study Section Member, 2025
Scientific Review Group: Tobacco Regulatory Science. 2025/06 ZRG1 BST-H (55) R

National Institutes of Health, NIGMS Study Section Member, 2024
Scientific Review Group: Support for Research E (SuRE-First); R16. 2024/05 ZGM1 RCB-T (SF)

National Institutes of Health, NIEHS Study Section Member, 2024
Scientific Review Group: Superfund hazardous substance research and training program; P42. 2024/05 ZRG1 BST-H (55) R

National Institutes of Health, Study Section Member, 2022-2023
Scientific Review Group: Tobacco Centers of Regulatory Science (TCORS) and Center for Coordinated Analysis, Science, Enhancement, and Logistics (CASEL). 2022-2023, ZRG1 ICN-R 50

WV-INBRE Cancer Biology Pilot Grant Program, 2022
National Institutes of Health, NIGMS: Regional Grant Program

National Institutes of Health, Study Section Member, 2022
Scientific Review Group: Tobacco Regulatory Science. 2022/05 ZRG1 BST-H (55) R

National Institutes of Health, Study Section Member, 2021
Scientific Review Group: Fellowships—Physiology and Pathobiology of Cardiovascular and Respiratory Systems. 2021/05 ZRG1 F10A

National Institutes of Health, Study Section Member, 2021
Scientific Review Group: Lung Injury, Repair, and Remodeling. 2021/05 LIRR (62)

National Institutes of Health, Study Section Member, 2021
Scientific Review Group: Tobacco Regulatory Science. 2021/05 ZRG1 CVRS-N (03) M

National Institutes of Health, Study Section Member, 2020
Scientific Review Group: Tobacco Regulatory Science. 2021/01 ZRG1 IFCN-E (56) R

Deutsche Forschungsgemeinschaft (DFG: German Research Foundation), Invited Referee 2020
Panel: *Alveolarization and Lung Injury*

Department of Defense Congressionally Directed Medical Research Programs (CDMRP)
Lung Cancer Research Program, 2019
Immunology and Immunotherapeutics Sectio

National Institutes of Health, Study Section Member, 2018
Scientific Review Group: Respiratory Diseases. 2019/01 ZRG1 CVRS-N (03) M

National Institutes of Health, Study Section Member, 2018
Electronic Nicotine Delivery: Basic Mechanisms of Health Effects. 2019/01 ZRG1 CVRS-N (50) R

National Institutes of Health, Study Section Member, 2017
Scientific Review Group: Tobacco Regulatory Science. 2018/01 ZRG1 BST-H (55) R

Australia National Health and Medical Research Council (NHMRC), Invited Referee 2017
Section: *Cardiovascular Medicine and Haematology*
Targeting immunosenescent innate T cells in COPD

FAMRI Competitive Grant Review Committee, Panelist 2017
Panel: *Current and Ongoing COPD Funding Outlook and Directions*
Invited to participate in meetings aimed to educate the FAMRI Board of Trustees on the current state of translational science and how best to establish future funding objectives.

Research Councils UK (RCUK): Medical Research Council (MRC), Invited Referee 2016
Cellular and Molecular Control of Human Embryonic Alveolar Development: Towards Lung Regeneration

Austrian Science Fund (FWF), Invited Referee 2016
Biological and Medical Sciences Module

Kentucky Science and Engineering Foundation (KSEF), Invited Referee 2016
KSEF-15-RDE-019 Award Mechanism

FAMRI Competitive Grant Review Committee, Invited Referee 2015
Panel: *Secondhand Tobacco Smoke Exposure, Emphysema, and COPD*

Deutsche Forschungsgemeinschaft (DFG: German Research Foundation), Invited Referee 2015
Panel: *Alveolarization and Lung Injury*

FAMRI Competitive Grant Review Committee, Invited Referee 2014
Panel: *Secondhand Tobacco Smoke Exposure, Emphysema, and COPD*

Danish Council for Independent Research (DFF), 2013
Sapere Aude: DFF Advanced Grant in Medical Sciences

Netherlands Organization for Scientific Research (NWO), 2012
Panel: Vici Grants Mechanism: Innovational Research Incentives Scheme

FAMRI Competitive Grant Review Committee, Invited Referee 2012
Panel: *Secondhand Tobacco Smoke Exposure, Emphysema, and COPD*

FAMRI Competitive Grant Review Committee, Invited Referee 2010
Panel: *Respiratory Effects of Secondhand Tobacco Smoke Exposure*

FAMRI Competitive Grant Review Committee, Invited Referee 2009
Panel: *Respiratory Effects of Secondhand Tobacco Smoke Exposure*

Southwest Environmental Health Sciences Center (NIEHS)
Pilot Grant Program. Reviewer, 2009

UNIVERSITY SERVICE

Department Faculty Search Committee Member (2026-2027)
Department Faculty Search Committee Member (2025-2026)
Department Faculty Development Committee Member (2023-present)
University IACUC Committee Chair (2024-present)
University IACUC Committee Vice Chair (2023-2024)
Department Research Committee Member (2020-2024)
University IACUC Committee Member (2018-present)
Department Faculty Search Committee Chair (2018-19)
BYU Faculty Center Pre-Continuing Faculty Status (Tenure) Liaison (2017)
BYU College of Life Sciences 3 Minute Thesis Competition judge (2016)

BYU Faculty Center International Leave Liaison (2015)
Department Graduate Committee Chair (2014-2018)
Department New Faculty Strategic Planning Committee (2011-2013)
University Pre-professional Advisement Center Mentor (2008-present)
Department Graduate Committee Member (2009-2014)
College of Life Sciences Building Planning Committee Member (2010-2012)
Department Faculty Search Committee Member (2010)
Department Faculty Search Committee Member (2008)

UNIVERSITY TEACHING

Brigham Young University is predominantly an undergraduate teaching institution. As such, all faculty members are given primary teaching responsibilities designed for majors or non-majors in their respective departments.

Current BYU Courses

CELL 325 Tissue Biology: This course is required of Cell Biology and Physiology majors and enrollees include many pre-professional students. The course covers characteristics of histology including pathology and development. Students attend two weekly lectures (1 hour each) and a weekly laboratory section for 3 hours.

CELL 484 Human Embryology: This course is an advanced course for majors that covers anatomical, molecular, and clinical aspects of embryology. The class serves majors preparing for professional school. Students attend 3 hours of lecture per week.

CELL 295, 494 and 495 Undergraduate and Advanced Undergraduate Research: These courses are designed to provide research credit for mentored undergraduate students in various phases of research sophistication.

Undergraduate Student Mentoring (number of students involved per year)

Students work in my laboratory on research projects over the course of 1-3 years and receive direct mentoring throughout their tenure. Most students then apply to graduate or professional (medical, dental, pharmacy, veterinary, or physician's assistant) school. In addition to conducting research, students are required to participate in weekly lab meetings and journal clubs designed to enhance understanding of the field as it relates to our research program.

2007	4	2008	4	2009	21	2010	26	2011	28	2012	24
2013	27	2014	26	2015	28	2016	29	2017	23	2018	23
2019	22	2020	22	2021	23	2022	26	2023	24	2024	25
2025	21	2026	18								

Undergraduate Honor's Thesis

1. Stephen D. Kasteler, 2006. "The regulation and effects of receptors for advanced glycation end-products (RAGE) in pulmonary epithelial cells exposed to cigarette smoke"
   Role: Mentor, Committee chair

Graduate Student Mentoring

Master of Science

1. Eliza Roeth, MS Student. 2025-2027. Role: Graduate Committee Member
2. Andrew Richardson, MS Student. 2026-2028. **Role: Graduate Committee Chair**
3. Isabelle Palmer, MS Student. 2022-2024. Role: Graduate Committee Member
4. Cali Warren, MS Student. 2022-2024. Role: Graduate Committee Member
5. Rebecca Viazzo, MS Student. 2019-2020. Role: Graduate Committee Member
6. Chase Walton, MS Student, BYU. 2018-2020. Role: Graduate Committee Member

7. Kelsey Phillips, MS Student, BYU. 2015-2018. Role: Graduate Committee Member
8. Aimee Hodson, MS Student, BYU. 2015-2016. Role: Graduate Committee Member
9. Rebecca Kimball, MS Student, BYU. 2014-2016. Role: Graduate Committee Member
10. Kristen Mecham, MS Student, BYU. 2014-2015. Role: Graduate Committee Member
11. Ivan Arano, MS Student, BYU. 2014-2015. Role: Graduate Committee Member
12. Michael Nelson, MS Student, BYU. 2013-2015. **Role: Graduate Committee Chair**
13. Elizabeth Chavez, MS Student, BYU. 2012-2014. Role: Graduate Committee Member
14. Tyler Wood, MS Student, BYU. 2013-2014. **Role: Graduate Committee Chair**
15. Jeffrey A. Stogsdill, MS Student, BYU. 2011-2012. **Role: Graduate Committee Chair**
16. Adam Robinson, MS Student, BYU. 2011-2012. **Role: Graduate Committee Chair**

Doctor of Philosophy

1. Jhon Sia, PhD Student. 2023-present. Role: Graduate Committee Member
2. Aubri Saxton, PhD Student. 2022-present. Role: Graduate Committee Member
3. Derek Clarke, PhD Student, BYU. 2021-2025. **Role: Graduate Committee Chair**
4. Katrina Curtis, PhD Student, 2020-2023. **Role: Graduate Committee Chair**
5. Ashley Markham, PhD Student. 2019-2023. Role: Graduate Committee Member
6. Kary Tsai, PhD Student, BYU. 2018-2021. Role: Graduate Committee Member
7. Brandon Rose, PhD Student, BYU. 2016-2022. Role: Graduate Committee Member
8. Kelsey Hirschi, PhD Student, BYU. 2016-2020. **Role: Graduate Committee Chair**
9. Caleb Cornaby, PhD Student, BYU. 2014-2017. Role: Graduate Committee Member
10. Nafiseh Poornejad, PhD Student, BYU. 2014-2017. Role: Graduate Committee Member
11. Joshua Lewis, PhD Student, BYU. 2014-2017. **Role: Graduate Committee Chair**
12. Felix Jimenez, PhD Student, BYU. 2012-2015. **Role: Graduate Committee Chair**
13. Kevin Tuttle, PhD Student, BYU. 2012-2017. Role: Graduate Committee Member
14. Mikayla Thatcher, PhD Student, BYU. 2012-2015. Role: Graduate Committee Member
15. Duane Winden, PhD Student, BYU. 2013-2014. **Role: Graduate Committee Chair**
16. Jason S. Adams, PhD Student, BYU. 2009-2012. Role: Graduate Committee Member

ORAL PRESENTATIONS AND LECTURES

1. **Vyne Therapeutics, Inc, (2023).** "Evaluation of VYN201 in Alleviating Pulmonary Fibrosis in a Bleomycin-Induced Murine Model." Seminar Presentation.
2. **Royal College of Pathologists International Lung Symposium (2022).** "Sensing of environmental particulates and coordinating resulting inflammation is modulated by RAGE signaling." Platform Presentation.
3. **State University of New York (SUNY) Downstate, Department of Medicine (2022).** "RAGE: Pulmonary functions and disease modeling." Seminar Presentation.
4. **University of Edinburgh Western General Hospital, Department of Pathology (2022).** "RAGE: Pulmonary functions and disease modeling." Seminar Presentation.
5. **Experimental Biology International Meeting, San Diego, CA (2020)** "Acute eCig vapor or SHS induces inflammatory signaling in the adult murine lung." Oral Presentation (Cancelled).
6. **Experimental Biology International Meeting, Orlando, FL (2019)** "RAGE and SAGE: Ameliorating COPD pathogenesis via RAGE Abrogation." Oral Presentation.
7. **Experimental Biology International Meeting, Orlando, FL (2019) "**RAGE implications during DNA Double Strand Breaks in trophoblast cells." Oral Presentation.
8. **Experimental Biology International Meeting, San Diego, CA (2018)** "Antenatal exposure to secondhand smoke impacts growth and cardiopulmonary energetics in 4-week-old mice." Oral Presentation.

9. **Experimental Biology International Meeting, San Diego, CA (2018)** "Differential expression of mTOR related molecules in the placenta of gestational diabetes mellitus (GDM), intrauterine growth restriction (IUGR) and preeclampsia patients." Oral Presentations.
10. **Experimental Biology International Meeting, San Diego, CA (2018)** "Semi-synthetic glycosaminoglycan ethers decrease receptors for advanced glycation end-products and increase AXL receptors in the lungs from secondhand smoke treated mice." Oral Presentation.
11. **American Association for Dental Research Meeting, Ft. Lauderdale, FL (2018) "**Reduction of CSE-induced Ca9-22 cell invasion by SAGEs." Oral Presentation.
12. **American Association for Dental Research Meeting, Ft. Lauderdale, FL (2018)** "Decreased inflammatory cytokines during Gas6-mediated invasion of gingival cells." Oral presentation.
13. **American Association for Dental Research Meeting, San Francisco, CA (2017) "**Gingival cells exposed to e-cigarette liquid express differential recognition receptors." Oral Presentation.
14. **American Association for Dental Research Meeting, San Francisco, CA (2017) "**Cigarette Smoke Extract Increases Invasion in Ca9-22 Gingival Cancer Cells." Oral Presentation.
15. **Experimental Biology International Meeting, San Diego, CA (2016)** "Organic Cation Transporter Novel Type-1 (OCTN-1) and Pulmonary Responses to Secondhand Tobacco Smoke (SHS)." Oral Presentation.
16. **Experimental Biology International Meeting, San Diego, CA (2016)** "Altered Inflammatory Responses in Tobacco Smoke-Exposed Mice that Over-Express the Tight Junctional Protein Claudin-6." Oral Presentation.
17. **Experimental Biology International Meeting, San Diego, CA (2016)** "Transgenic Up-Regulation of Claudin-6 Decreases Diesel Particulate Matter (DPM)-Induced Pulmonary Inflammation." Oral Presentation.
18. **Research Institute at Nationwide Children's Hospital, The Ohio State University. Child Health Research Center (CHRC) Seminar Series, Columbus, Ohio (2016)** "RAGE and the foreshadowing of lung disease." Oral Seminar Presentation.
19. **Experimental Biology International Meeting, Boston, MA (2015)** Platform Symposium: Neonatal Lung Development and Adult Lung Homeostasis: Common Molecular Mechanisms in Lung Disease. "RAGE mediation of developmental and adult pulmonary disorders"
20. **University Hospitals and Clinics, University of Heidelberg, Department of Inner Medicine (2013).** "RAGE: Pulmonary functions and disease modeling." Oral Seminar Presentation.
21. **Experimental Biology International Meeting, Boston, MA (2013)** "Developmental expression and transcriptional regulation of claudin-6 in the murine lung." Oral Presentation.
22. **Experimental Biology International Meeting, Boston, MA (2013)** "Over-expression of RAGE by proximal lung epithelial cells causes inflammation in adult mice." Oral Presentation.
23. **Experimental Biology International Meeting, Boston, MA (2013)** "RAGE signaling influences diesel particulate matter-induced inflammation in primary alveolar macs." Oral Presentation.
24. **Brigham Young University Physiology and Developmental Biology Seminar Series, Provo, UT (2012)** "RAGE of ALI: Conserved Pathways of Inflammatory Disease." Oral Presentation.
25. **Experimental Biology International Meeting, San Diego, CA (2012)** "RAGE signaling influences tobacco smoke-induced inflammation by pulmonary macrophages." Oral presentation.
26. **Experimental Biology International Meeting, San Diego, CA (2012)** "Diesel particulate matter (DPM) induces receptor for advanced glycation end-products (RAGE) expression by pulmonary macrophages." Oral Presentation.

27. **FAMRI Scientific Research Symposium, Miami, FL (2012)** "Characterization of a new mouse model of COPD via conditional over-expression of RAGE." Platform Oral Presentation.
28. **Roseman University of Health Sciences (2011-2016) "**Histology and Embryology for the first year Dental Student." Oral Presentation Series.
29. **Roseman University of Health Sciences (2011-2016) "**Pulmonary Biology for the first year Dental Student." Oral Presentation Series.
30. **School of Pharmacy and Pharmaceutical Sciences, Trinity College, Dublin Ireland (2011)** "Why all the RAGE: insight into lung development and disease." Oral Presentation.
31. **Experimental Biology International Meeting, Washington DC (2011)** "A new RAGE blocker, low anti-coagulant 2-O, 3-O desulfated heparin (ODSH), diminishes smoke-induced pulmonary inflammation in mice." Oral Presentation.
32. **Experimental Biology International Meeting, Washington DC (2011)** "Persistent over-expression of RAGE in adult mouse lung causes airspace enlargement and pulmonary inflammation coincident with emphysema." Oral Presentation.
33. **College of Chemistry and Biochemistry Seminar Series, BYU, Provo, UT (2011)** "Why all the RAGE: insight into the role of RAGE in lung development and disease." Oral Presentation.
34. **Southern Utah University Spring Biology Seminar Series, Cedar City, UT (2010)** "Correlations between RAGE and Lung Disease." Oral Presentation
35. **Brigham Young University Physiology and Developmental Biology Seminar Series, Provo, UT (2010)** "RAGE and Insights into Pulmonary Disease." Oral Presentation.
36. **FAMRI Scientific Research Symposium, Miami, FL (2009)** "The RAGE of Smoke Induced Pulmonary Disease." Platform Oral Presentation.
37. **Annual International Vascular Biology Meeting, Toronto, Canada (2004)** "Midkine regulates pulmonary vascular remodeling during hypoxia." Oral Presentation.
38. **The Teratology Society 41st Annual Meeting, Montreal, Canada (2001)** "Protection of Retinoic Acid-Induced Cleft Palate in Mice by Separate and Concomitant Administration of 2024, 12, x. Folic Acid and Methionine." Oral Presentation.

INVITED SESSION CHAIR AT NATIONAL MEETINGS

1. **FAMRI Competitive Grant Review Priorities (2017)**. Title: Current and Ongoing COPD Funding Outlook and Directions.
2. **Experimental Biology International Meeting, Boston MA (2015)**. Session: American Physiological Society. Title: Neonatal Lung Development And Adult Lung Homeostasis—Common Molecular Mechanisms In Lung Disease
3. **Experimental Biology International Meeting, Washington DC (2011)**. Session: American Society for Investigative Pathology: Pulmonary Pathobiology. Title: ASPI-Inflammation.

PEER-REVIEWED PUBLICATIONS Undergraduate co-authors are underlined

1. Cannon M., Peldyak J., and Reynolds P.R. 2026. Micro/nanoplastics and periodontitis: An environmental microbiology perspective on oral retention and systemic risk. *Microorganisms*, 2026, 13, x.
2. Elggren CW, Iverson CH, Morris MD, Cooper-Leavitt EF, Parker G, Richardson AW, Reynolds AP, Cortes PM, Bikman BT, and Reynolds PR. 2026. Testosterone Replacement Therapy in Women Is Associated with Improved Symptom Burden and Favorable Biomarker Changes: A Retrospective Observational Study. *JPM*, 2026, 16, 231.
3. Morris TJ, Morris MD, Parker AJ, Heggie JR, Roeth EJ, Parker G, Beus MK, Ricks R, Shafer LT, Poulos TS, Nevers DS, D'Agostino DP, Arroyo JA, Parrish RR, Reynolds PR, and Bikman BT. 2026. Disparate Hepatic Mitochondrial and Inflammatory Effects of Ketone Supplements. *Nutrients,* 2026, 18, 675.

4. Hiatt L., Davidson B.D., Beck L., Sturgis K., Evans E., Thurmond E., Boyer M., Bikman B.T., **Reynolds P.R**., and Arroyo J.A. 2026. Maternal lung inflammation and apoptosis following gestational exposure to secondhand smoke and e-cigaratte vapor: implications for maternal-fetal health. *Exp Mol Path,* 145 (2026): 105026.
5. Sturgis K.A., Davidson B.D., Richardson A.W., Hyatt O., Edwards B.C., Evans E.P., Campbell C., Radford J.H., Arroyo J.A., Bikman B.T., and **Reynolds P.R**. 2025. Potential use of Vyn202, a novel small molecular bromodomain and end-terminal inhibitor, in mitigating secondhand smoke (SHS)-induced pulmonary inflammation. *Curr. Issues Mol. Biol.,* 2025, 47, 1062.
6. Roeth E., Morris M., Reynolds A.R., Reynolds E.M., Hungerford R., Livingston E.J., Richardson A.W., Bikman B.T., and **Reynolds P.R**. 2025. Personalized Supplementation is Associated with Reduced Inflammatory Biomarkers: A 12-Week Observational Study. *MDPI Life*, 2025, 15, 1887.
7. Roeth E.J., Parker G., Cooper-Leavitt E.F., Beus C.G., Braithwaite C.R., Morris M.D., Reynolds P.R., Evans E.P., Radford J.H., Davis F.D., **Reynolds P.R**., Parrish R.R., and Bikman B.T. 2025. Effect of exogenous ketones as an adjunct to low-calorie diet on metabolic markers. *Nutrients*, 2025, 17, 3582.
8. Chou A., Frank E., Reall M., Hiatt O., Beck L., **Reynolds P.R**., Pickett B.E., and Arroyo J.A. 2025. Secondhand smoke exposure timing triggers distinct placental responses in mouse pregnancy. *Cells,* 14, 1735.
9. Hirst G., Ross Z., Rose A., Graff N., Campbell K., **Reynolds P.R**., and Terry B. 2025. Quantifying layer-specific thickness in porcine large intestine using x-ray microscopy. *Microscopy,* 2025, 00:1-7 doi: 10.1093/jmicro/dfaf041.
10. Chou A., Hiatt O., Davidson B., **Reynolds P.R.**, Pickett B.E., and Arroyo J.A. 2025. Vaping in pregnancy: Unraveling Molecular Drivers of Preeclampsia and Fetal Growth Restriction. *Int. J. Med. Sci.* 2025, 26, 10009.
11. Ponder L., Kinney R., Chatterjee A., Vu K., Sidhu H., Patel N., Desai T., Orr III D.L., Arroyo J.A., and **Reynolds P.R.** 2025. Inflammatory molecule elaboration in secondhand smoke (SHS) or conditional RAGE transgenic modeling of chronic rhinosinusitis (CRS). *Curr Issues Mol. Biol* 2025, 47, 740.
12. Chou A., Davidson B., **Reynolds P.R.**, Pickett B.E., and Arroyo J.A. 2025. Reversing preeclampsia pathology: AXL inhibition restores mitochondrial function and ECM balance. *Cells.,* 14, 1229.
13. Kinney R., Ponder L., Patel N., Chatterjee A., Vu K., Sidhu H., Bikman B.T., **Reynolds P.R.** and Arroyo J.A. 2025. Comparative effects of cigarette smoke and e-cigarette vapor on oral squamous cell carcinoma: unraveling distinct molecular pathways. *Dent Res Oral Health,* 8:97-103.
14. Palmer I.L., Parker G., Chiu A.T., Beus C.G., Evans E.P., Radford J.H., Braithwaite C.R., Van Slooten R.D., Cooper-Leavitt E.T., Moore Z.E., Clarke D.M., Parrish R., Arroyo J.A., **Reynolds P.R.**, and Bikman B.T. 2025. RAGE knockout mitigates diet-induced obesity and metabolic disruption. *Metabolites,* 15,524.
15. Beck L., Kirkham M.N., Shin M., Bikman B.T., **Reynolds P.R**., and Arroyo J.A. 2025. Impact of secondhand smoke and e-cigarette exposure on placental apoptotic and growth-regulatory proteins in mouse pregnancy. *Cells*, 14, 453.
16. Broberg E., English J., Clarke D.M., Shin M.J., Bikman B.T., **Reynolds P.R.**, and Arroyo J.A. 2024. Impact of gestational diabetes treatment modalities on placental metabolic adaptions: differential roles of PKM2, AMPK, and mTOR pathways. *Cells*, 14, 416.

17. Redford J.H., Evans E.P., Edwards I.T., Arroyo J.A., Bikman B.T., and **Reynolds P.R**. 2025. Diesel particulate matter (DPM)-induced metabolic disruption is mitigated by sodium copper chlorophyllin. *Nutrients*, 17, 717.
18. Jackson M., Gibson T.M., Frank E., Hill G., Davidson B., **Reynolds P.R**., Bikman B.T., Pickett B.E., and Arroyo J.A. 2025. Transcriptomic insights into Gas-6-induced placental dysfunction: gene targets for preeclamsia therapy. *Cells*, 14, 278.
19. Cooper-Leavitt-Cooper E.T., Shin M.J., Beus C.G., Chiu A.T., Parker G., Radford J.H., Evans E.P., Edwards I.T., Arroyo J.A., **Reynolds P.R.**, and Bikman B.T. 2025. The incretin effect of Yerbe Mate (*Ilex paragauariensis*) is partially dependent on gut-mediated metabolism of ferulic acid. *Nutrients* 2025, 17(4), 625.
20. Clarke D.M., Kirkham M.N., Beck L.B., Campbell C., Alcorn H., Bikman B.T., Arroyo J.A., and **Reynolds P.R.** 2024. Temporal RAGE over-expression disrupts lung development by modulating apoptotic signaling. *Curr. Issues Mol. Biol.,* 2024, 46, 14453-14463.
21. Remund NP, Larsen JG, Shin MJ, Warren CE, Palmer IL, Kim IJ, Cooper-Leavitt ET, Clarke DM, Beus CG, Johnson RJ, Arroyo JA, **Reynolds PR**, and Bikman BT. 2024. The role of beta-hydroxybuterate in mitigating the inflammatory and metabolic consequences of uric acid. *Metabolites,* 14, 679.
22. Clarke DM, Koutnik AP, Johnson RJ, DeBlasi JM, Bikman BT, Arroyo JA, and **Reynolds PR**. 2024. Differential rates of glycation following exposure to unique monosaccharides. *Int. J. Med. Sci.* 2024, 25, 6921.
23. Curtis KL, Chang A, Johnston JD, Beard JD, Collingwood SC, LeCheminant JD, Peterson NE, South AJ, Farnsworth CB, Sanjel S, Bikman BT, Arroyo JA, and **Reynolds PR**. 2024. Differential inflammatory cytokine elaboration in serum from brick kiln workers in Bhaktapur, Nepal. *Diseases* 2024, 12,129.
24. Clarke D, Yeates E, Davis G, Harward K, Robertson P, Licari FW, Winden DR, **Reynolds PR**, and Arroyo JA. 2024. RAGE expression and invasiveness of oral squamous cell carcinoma cells via differential expression of matrix remodeling enzymes. *J Oral Dent Health,* 8(2), 01-06.
25. Kirkham MN, Cooper C, Broberg E, Robertson P, Clarke D, Pickett BE, Bikman BT, **Reynolds PR**, and Arroyo JA. 2024. Different lengths of gestational exposure to secondhand smoke or e-cigarette vapor induce the development of placental disease symptoms. *Cells* 2024, 13, 1009.
26. Cayabyab KB, Shin MJ, Heimuli MS, Kim IJ, D'Agostino DP, Johnson RJ, Koutnik AP, Bellissimo N, Diamond DM, Norwitz NG, Arroyo JA, **Reynolds PR**, and Bikman BT. 2024. The metabolic and endocrine effects of a 12-week allulose-rich diet. *Nutrients*, 2024, 16, 1821.
27. Clarke DM, Curtis KL, Harward K, Scott J, Stapley BM, Kirkham MA, Clark ET, Robertson P, Chambers E, Warren CE, Bikman BT, Arroyo JA, and **Reynolds PR**. 2024. Embryonic mice with lung-specific RAGE up-regulation have enhanced mitochondrial respiration. *J Respir*, 2024, 4, 140-151.
28. Curtis KL, Chang A, Van Slooten R, Cooper C, Kirkham M, Armond T, deBernardi Z, Pickett BE, Arroyo JA, and **Reynolds PR**. 2024. Availability of receptors for advanced glycation end-products (RAGE) influences differential transcriptome expression in lungs from mice exposed to chronic secondhand smoke (SHS). *Int J Mol Sci.,* 2024; 25, 4940.
29. Warren CE, Campbell KM, Kirkham MN, Saito ER, Shin MJ, Remund NP, Cayabyab KB, Lim IJ, Heimuli MS, **Reynolds PR,** Arroyo JA, and Bikman BT. 2024. The effect of diesel exhaust particles on adipose tissue mitochondrial function and inflammatory status. *Int J Mol Sci.,* 2024; 25, 4322.

30. Curtis KL, Hirschi KM, Tsai K, Clark ET, Stapley BM, Bikman BT, **Reynolds PR**, and Arroyo JA. 2024. Postnatal effects of antenatal secondhand smoke (SHS) exposure and the receptor for advanced glycation end-products (RAGE). *Reprod Med.,* 5, 1-11.
31. Robin H, Trudeau C, Robbins A, Chung E, Rahman E, Gangmark-Strickland O, Licari FW, Winden DR, Orr DL, Arroyo JA, and **Reynolds PR**. 2024. A potential role for receptors for advanced glycation end-products (RAGE) in the development of secondhand smoke-induced chronic sinusitis. *Curr. Issues Mol. Biol*, 46(1), 729-740.
32. Beard JD, Collingwood SC, LeCheminant JD, Peterson NE, **Reynolds PR**, Arroyo JA, South AJ, Farnsworth CB, Fong G, Heath T, Taylor M, Sanjel S, and Johnston JD. 2024. Personal breathing zone respirable dust and crystalline silica concentrations among workers at a brick kiln in Bhaktapur, Nepal. *JOEH,* 21:4, 247-258.
33. Johnston JD, Collingwood SC, LeCheminant JD, Peterson NE, Reynolds PR, Arroyo JA, South AJ, Farnsworth CB, Chartier RT, Layton LN, Hu JH, Penrod MS, Sanjel S, and Beard JD. 2023. Personal exposure to fine particulate air pollution among brick workers in Nepal. *Atmosphere,* 14, 1783.
34. Curtis KL, Homer KW, Wendt RA, Stapley BM, Clark ET, Harward K, Chang A, Clarke DM, Arroyo JA and **Reynolds PR**. 2023. Inflammatory cytokine elaboration following secondhand smoke (SHS) exposure is mediated in part by RAGE signaling. *Int J Mol Sci.,* 24(21), 15645.
35. Walton CM, Saito E, Warren CE, Larsen JG, Remund NP, **Reynolds PR**, Hansen JM, and Bikman BT. 2023. Yerba maté (Ilex paraguariensis) supplement exerts beneficial, tissue-specific effects on mitochondrial efficiency and redox status in healthy adult mice. *Nutrients*, 15, 4454.
36. Clarke DM, Curtis KL, Wendt RA, Stapley BM, Clark ET, Beckett N, Campbell KM, Arroyo JA and **Reynolds PR**. 2023. Decreased expression of pulmonary homeobox NKX2.1 and surfactant protein C in developing lungs that over-express receptors for advanced glycation end-products (RAGE). *J. Dev. Biol.* 11,33.
37. Norton C Clarke D, Holmstrom J, Stirland I, **Reynolds PR**, Jenkins TG, and Arroyo JA 2023. Altered Placental Epigenetic Profiles in Preeclamptic and Intrauterine Growth Restricted Patients. *Cells,* 12(8):1130.
38. Robin HP, Trudeau CN, Robbins AJ, Chung EJ, Rahman E, Gangmark-Strickland OL, Jordan S, Licari FW, Winden DR, **Reynolds PR**, and Arroyo JA. 2022. Inflammation and invasion in oral squamous cell carcinoma (OSCC) cells exposed to electronic cigarette vapor extract. *Front Oncol,* 12:917862.
39. Curtis KL, Clarke D, Hanegan M, Stapley B, Wendt R, Beckett N, Litchfield C, Campbell K, **Reynolds PR**, and Arroyo JA. 2022. Lung inflammation is associated with preeclampsia (PE) development in the rat. *Cells,* 11, 1884.
40. Hirschi KM, Tsai KYF, Curtis KL, Davis GS, Theurer BK, Kruyer AMM, Homer KW, Chang A, Van Ry PM, Arroyo JA, and **Reynolds PR**. 2022. RAGE signaling during tobacco smoke-induced lung inflammation and potential therapeutic utility of SAGEs. *BMC Pulm Med,* 22(1):160.
41. Tsai KYF, Tullis B, Breithaupt KL, Fowers R, Jones N, Grajeda S, **Reynolds PR**, and Arroyo JA. 2021. A role for RAGE in DNA double strand breaks (DSBs) detected in pathological placentas and trophoblast cells. *Cells,* 10, 857.
42. Tsai KYF, Bikman BT, **Reynolds PR**, and Arroyo JA. 2021. Differential expression of mTOR related molecules in the placenta from gestational diabetes mellitus (GDM), intrauterine growth restriction (IUGR) and preeclampsia patients. *Repro Biol*, 21(2):100503.
43. Rose BJ, Weyand JA, Liu B, Smith JF, Perez BR, Goodman MA, Eggett DL, Arroyo JA, **Reynolds PR**, and Kooyman DL. 2021. Exposure to second-hand cigarette smoke

exacerbates the progression of osteoarthritis in a surgical induced murine model. *Histology and Histopath* 36(3): 347-53.

44. Tsai KYF, Tullis B, Mejia J, **Reynolds PR**, and Arroyo JA. 2020. Regulation of trophoblast cell invasion by Pyruvate Kinase isozyme M2 (PKM2). *Placenta* 103: 24-32.
45. Tsai KYF, Hirschi Budge KM, Lepre AP, Rhees MS, Ajdaharian J, Geiler J, Epperson DG, Astle KJ, Winden DR, Arroyo JA and **Reynolds PR**. 2020. Cell invasion, RAGE expression and inflammation in oral squamous cell carcinoma (CSCC) cells exposed to e-cigarette flavoring. *Clin Exp Dent Res*. 2020 Dec;6(6):618-625.
46. Hirschi KM, Tsai KYF, Davis T, Clark JC, Knowlton MN, Bikman BT, **Reynolds PR**, and Arroyo JA. 2020. Growth Arrest Specific Protein (Gas)-6/AXL Signaling Induces Preeclampsia (PE) in Rats. *Biol Reprod.* 102(1):81.
47. Gibbs JL, Dallon BW, Lewis JB, Walton CM, Arroyo JA, **Reynolds PR**, and Bikman BT. 2019. Diesel exhaust particle exposure compromises alveolar macrophage mitochondrial bioenergetics. *Int. J. Mol. Sci*., 20 (22): 5598; doi:10.3390.
48. Tsai KYF, Hirschi KM, Llavina S ,Davis T, Long M, Bennett A, Sitton B, Arroyo JA, and **Reynolds PR**. RAGE and AXL expression following secondhand smoke (SHS) exposure in mice. 2019. *Exp Lung Res*, 45:9-10, 297-309.
49. Mejia J, Hirschi K, Tsai KYF, Long M, Tullis B, Bitter EEK, Bikman BT, **Reynolds PR** and Arroyo JA. 2019. Differential placental ceramide levels during gestational diabetes mellitus (GDM). *Reprod Biol Endocrinol* 17(1):81.
50. Hirschi KM, Tsai KYF, Edwards MM, Hall P, Mejia JF, **Reynolds PR**, and Arroyo JA. 2019. The mTOR family of proteins and the regulation of trophoblast invasion by Gas6. *J Cell Signal* 4:2, DOI: 10.4172/2576-1471.1000203.
51. Poornejad N, Momtahan N, Salehi ASM, Scott D, Fronk C, Roeder BL, **Reynolds PR**, Bundy B, and Cook AD. 2018. Corrigendum: Efficient Decellularization of whole porcine kidneys improves reseeded cell behavior. *Biomed Mater.* doi: 10.1088/1748-605X/aadd22.
52. Hirschi KM, Chapman S, Hall P, Ostergar A, Winden DR, **Reynolds PR**, and Arroyo JA. 2018. Gas6 induces invasion and reduces inflammatory cytokines in oral squamous cell carcinoma cells. *J Oral Pathol Med*. 2018 Jun 1. doi: 10.1111/jop.12738.
53. Lewis JB, Bodine JS, Gassman JR, Munoz SA, Milner DC, Dunaway DM, Egbert KM, Monson TD, Broberg DS, Arroyo JA, and **Reynolds PR**. 2018. Transgenic up-regulation of Claudin-6 decreases fine diesel particulate matter (DPM)-induced pulmonary inflammation. *Environ Sci Pollut Res*, 25(18): 18179-88.
54. Lewis JB, Jimenez FR, Merrell BJ, Kimbler B, Arroyo JA, and **Reynolds PR**. 2018. The expression profile of Claudin family members in the developing mouse lung and expression alterations resulting from exposure to secondhand smoke (SHS). *Exp Lung Res*, 2018 Feb;44(1):13-24.
55. Chapman S, Mick M, Hall P, Mejia C, Sue S, Wase BA, Nguyen MA, Whisenant EC, Wilcox SH, Winden DR, **Reynolds PR**, and Arroyo JA. 2018. Cigarette smoke extract induces oral squamous cell carcinoma cell invasion in a receptor for advanced glycation end-product-dependent manner. *Eur J Oral Sci*, 2018 Feb;126(1):33-40.
56. Lewis JB, Mejia C, Jordan C, Monson TD, Bodine JS, Dunaway TM, Egbert KM, Lewis AL, Wright TJ, Ogden KC, Broberg DS, Hall PD, Nelson SM, Hirschi KM, **Reynolds PR** and Arroyo JA. 2017. Inhibition of the receptor for advanced glycation end-products (RAGE) protects from secondhand smoke (SHS)-induced intrauterine growth restriction (IUGR) in mice. *Cell Tissue Res,* 2017 Sep 26. doi: 10.1007/s00441-017-2691-z.
57. Kumar V, Fleming T, Terjung S, Gorzelanny C, Gebhardt C, Agrawal R, Mall MA, Ranzinger J, Zeier M, Madhusudhan T, Ranjan S, *Iserman B,* Liesz A, Deshpande D, Häring HU, Biswas SK, **Reynolds PR**, Hammes HP, Peperkok R, Angel P, Herzig S and Nawroth PP. 2017.

Homeostatic nuclear RAGE-ATM interaction is essential for efficient DNA repair. *Nuc Acid Res,* 2017 Aug 9. doi: 10.1093/nar/gkx705.

58. Poornejad N, Buckmiller E, Schaumann L, Wang H, Wisco J, Roeder B, **Reynolds P**, and Cook A. 2017. Re-epithelialization of whole porcine kidneys with renal epithelial cells. *J Tissue Eng* 8:1-22, DOI 10.1177/2041731417718809.
59. Taylor OJ, Thatcher MO, Carr ST, Gibbs J, Trumbull AM, Harrison ME, Winden DR, Pearson MJ, Tippetts TS, Holland WL, **Reynolds PR,** and Bikman BT. 2017. High-mobility Group Box 1 disrupts metabolic function with cigarette smoke exposure in a ceramide-dependent manner. *Int J Mol Sci.* 18(5):1099; doi: 10.3390/ijms18051099.
60. Napa K., Baeder AC, Witt JE, Rayburn ST, Miller MG, Dallon BW, Gibbs JL, Wilcox SH, Winden DR, **Reynolds PR,** and Bikman BT. 2017. LPS from *P. Gingivalis* negatively alters gingival cell mitochondrial bioenergetics. *Int J Dentistry* 2017: 2697210.
61. Monson T, Wright T, Galan HL, **Reynolds PR,** and Arroyo JA. 2017. Caspase dependent and independent mechanisms of apoptosis across gestation in a sheep model of placenta insufficiency and intrauterine growth restriction. *Apoptosis* 22(5): 710-718.
62. Lewis JB, Hirschi KM, Arroyo JA, Bikman BT, Kooyman DT, and **Reynolds PR.** 2017. Plausible roles for RAGE in conditions exacerbated by direct and indirect (secondhand) smoke exposure. *Int J Mol Sci.* 18(3):652; doi:10.3390/ijms18030652.
63. Sanders NT, Dutson DJ, Durrant JW, Lewis JB, Wilcox SH, Winden DR, Arroyo JA, Bikman BT, and **Reynolds PR.** 2017. Cigarette Smoke Extract (CSE) Induces RAGE-Mediated Inflammation in the Ca-9-22 Gingival Carcinoma Epithelial Cell Line. *Archives of Oral Biology* 80:95-100.
64. Black CS, Creapeau PK, Sheffiend ID, Macdonald JR, Wooton DJ, Maek M, Eggett DL, **Reynolds PR**, and Kooyman DL. 2017. Identification of the tidemark line of calcification in osteoarthritic cartilage using a stain for alkaline phosphatase. *J Arthritis* 6:230.
65. Jimenez FR, Lewis JB, Belgique ST, Milner DC, Lewis AL, Dunaway TM, Egbert KM, Winden DR, Arroyo JA, and **Reynolds PR.** 2016. Cigarette smoke and decreased oxygen tension inhibit pulmonary Claudin-6 expression. *Exp Lung Res*, Dec 42(10):440-452.
66. Lewis JB, Milner DC, Lewis AL, Dunaway TM, Egbert KM, Albright SC, Merrell BJ, Monson TD, Broberg DS, Gassman JR, Thomas DB, Arroyo JA and **Reynolds PR.** 2016. Up-regulation of Claudin-6 in the distal lung impacts secondhand smoke-induced inflammation. *Int J Environ Res Public Health*, 2016 Oct 17;13(10). pii: E1018.
67. Mejia C, Lewis J, Jordan C, Mejia J, Ogden C, Monson T, Winden D, **Reynolds PR,** and Arroyo JA. 2016. Decreased activation of placental mTOR family members is associated with the induction of intrauterine growth restriction (IUGR) by secondhand smoke (SHS) in the mouse. *Cell Tissue Res,* 9 Sept 2016, **DOI**: 10.1007/s00441-016-2496-5.
68. Poornejad N, Schaumann LB, Buckmiller EM, Momtahan N, Gassman JR, Ma HH, Roeder BL, **Reynolds PR** and Cook AD. 2016. The impact of decelluralization agents on renal tissue extracellular matrix. *J Biomater Appl* 31(4):521-533.
69. Chavez EM, Mecham DK, Black JW, Graf JW, Wilhelm SK, Anderson KM, Mitchell JA, Macdonald JR, Hollis WR, Eggett DL, **Reynolds PR,** and Kooyman DL. 2016. Malocclusion Model of Temporomandibular Joint Osteoarthritis in Mice with and Without Receptor For Advanced Glycation End Products. *Archives of Oral Biology*, 69:47-62.
70. Long E, Motwani R, Reece D, Pettit N, Hepworth J, Wong P, **Reynolds PR**, and Seegmiller RE. 2016. The role of TGF-b1 in osteoarthritis of the temporomandibular joint in two genetic mouse models. *Arch Oral Biol* 67:68-73.
71. Poornejad N, Momtahan N, Salehi ASM, Scott D, Fronk C, Roeder BL, **Reynolds PR**, Bundy B, and Cook AD. 2016. Efficient decellularization of whole procine kidneys improves reseeded behavior. *Biomed Materials* 11(2):025003.

72. Baeder AC, Napa K, Richardson ST, Taylor OJ, Anderson SG, Wilcox SH, Winden DR, **Reynolds PR**, and Bikman BT. 2016. Oral Gingival Cell Cigarette Smoke Exposure Induces Muscle Cell Metabolic Disruption. *Int J Dentistry* 2016: 2763160.
73. Alexander KL, Mejia CA, Jordan C, Nelson MB, Howell BM, Jones CM, **Reynolds PR**, and Arroyo JA. 2016. Differential Receptor for Advanced Glycation End-Products (RAGE) Expression in Preeclamptic, Intrauterine Growth Restricted, and Gestational Diabetic Placentas. *Am J Reprod Immunol*. 75(2):172-180.
74. Kimball R, Wayment M, Merrill D, Wahlquist T, **Reynolds PR**, and Arroyo JA. 2015. Hypoxia reduces placental mTOR activation in a hypoxia-induced model of intrauterine growth restriction (IUGR). *Physiol Rep* 3(12):e12651.
75. Poornejad N, Nielson J, Morris R, Gassman J, **Reynolds PR**, Roeder BL, and Cook AD. 2015. Comparison of four decontamination treatments on porcine renal dECM structure, composition, and support of human RCTE cells. *J Biomater Appl* 0885328215615760, doi:10.1177/0885328215615760
76. Siebert M, Wilhelm SK, Kartchner JZ, Mecham D, **Reynolds PR**, and Kooyman DL. 2015. Effect of pharmacological blocking of TLR4 on osteoarthritis in mice. *J Arthritis*: 164. Doi:10.4172/2167-7921.1000164.
77. Olsen DS, Goar WA, Nichols BA, Bailey KT, Christensen SL, Merriam KR, **Reynolds PR,** Wilson E, Weber KS, and Bridgewater LC. 2015. Targeted mutation of nuclear bone morphogenetic protein 2 (nBMPR2) impairs secondary immune response in a mouse model. BioMed Res Int, 2015:975789. doi:10.1155/2015/975789.
78. Momtahan N, Poornejad N, Struk JA, Castleton AA, Herrod BJ, Vance BR, Eatough JP, Roeder BL, **Reynolds PR,** and Cook AD. 2015. Automation of pressure control improves whole porcine heart decellularization. *Tissue Engineering C*, DOI: 10.1089/ten.tec.2014.0709.
79. Jimenez FR, Belgique ST, Lewis JB, Albright SA, Jones CM, Howell BM, Mika AP, Jergensen TR, Gassman JR, Morris RJ, Arroyo JA, and **Reynolds PR.** 2015. Conditional pulmonary over-expression of Claudin-6 (Cldn6) during embryogenesis delays lung morphogenesis. *Int J Dev Biol,* 2015;59(10-12):479-85.
80. Nelson MB, Swensen AC, Winden DR, Bodine JS, Bikman BT, and **Reynolds PR.** 2015. Cardiomyocyte mitochondrial respiration is reduced by receptor for advanced glycation end-products (RAGE) signaling in a ceramide-dependent manner. *AJP: Heart and Circulation Physiology* 309:H63-H69.
81. Poornejad N, Frost TS, Scott DR, Elton BB, **Reynolds PR**, Roeder BL, and Cook AD. 2015. Freezing/thawing without cryoprotectant damages native but not decellularized porcine renal tissue. *Organogenesis* 11(1):30-45.
82. Tippetts TS, Winden DR, Swensen AC, Nelson MB, Thatcher MO, Saito RR, Condie TB, Simmons KJ, Judd AM, **Reynolds PR**, and Bikman BT. 2014. Cigarette smoke increases cardiomyocyte ceramide accumulation and inhibits mitochondrial respiration. *BMC Cardiovasc Disord,* 14(1):165.
83. Bodine BG, Bennion BG, Leatham E, Jimenez FR, Wright AJ, Jergensen ZR, Erickson CJ, Jones CM, Johnson JP, Knapp SM, and **Reynolds PR** 2014. Conditionally induced RAGE expression by proximal airway epithelial cells in transgenic mice causes lung inflammation. *Respir Res,* 15(1):133.
84. Winden DR, Barton DB, Betteridge BC, Bodine JS, Jones CM, Rogers GD, Chavarria M, Wright AJ, Jergensen ZR, Jimenez FR, and **Reynolds PR** 2014. Antenatal exposure of maternal secondhand smoke (SHS) increases fetal lung expression of RAGE and induces RAGE-mediated pulmonary inflammation. *Respir Res,* 15(1):129.

85. Thatcher MO, Tippetts TS, Nelson MB, Swensen AC, Winden DR, Hansen ME, Anderson MC, Johnson IE, Porter JP, **Reynolds PR**, and Bikman BT 2014. Ceramides mediate cigarette smoke-induced metabolic disruption in mice. *AJP: Endocrine Metabolism,* 307(10):E919-27.
86. Wood TT, Winden DR, Marlor DR, Wright AJ, Jones CM, Chavarria M, Rogers GD, and **Reynolds PR** 2014. Acute secondhand smoke-induced pulmonary inflammation is diminished in RAGE knock out mice. *AJP: Lung Cell Mol Physiol.* 307(10):E919-27.
87. Jimenez FR, Lewis JB, Belgique ST, Wood TT, and **Reynolds PR** 2014. Developmental lung expression and transcriptional regulation of Claudin-6 by TTF-1, Gata-6, and FoxA2. *Respir Res,* 15(1):70.
88. Barton DB, Betteridge BC, Earley TD, Curtis CS, Robinson AB, and **Reynolds PR** 2014. Primary alveolar macrophages exposed to diesel particulate matter increase RAGE expression and activate RAGE signaling. *Cell Tissue Res* 358(1):229-238.
89. Winden DR, Ferguson NT, Bukey BR, Geyer AJ, Wright AJ, Jergensen ZR, Robinson AB, Stogsdill JR, and **Reynolds PR** 2013**.** Conditional over-expression of RAGE by embryonic alveolar epithelium compromises the respiratory membrane and impairs endothelial cell differentiation. *Respir Res* 14(1):108.
90. Larkin DJ, Kartchner JZ, Doxey AS, Hollis WR, Rees JL, Wilhelm SK, Draper CS, Peterson DM, Jackson GG, Ingersoll C, Haynie SS, Chavez E, **Reynolds PR**, Kooyman DL 2013. Inflammatory markers associated with osteoarthritis after destabilization surgery in young mice with and without Receptor for Advanced Glycation End-Products (RAGE). *Frontiers in Integ Physiol* **4**: 121. doi: 10.3389/fphys.2013.00121.
91. Stogsdill MP, Stogsdill JA, Bodine BG, Fredrickson AC, Sefcik TL, Wood TT, Kasteler SK, and **Reynolds PR** 2013. Conditional RAGE over expression in the adult murine lung causes airspace enlargement and induces inflammation. *Am J Resp Cell Mol Biol* 49(1):128-134.
92. Ricks ML, Farrell JT, Falk DJ, Holt DW, Rees M, Carr J, Williams T, Nichols BA, Bridgewater LC, **Reynolds PR,** Kooyman DL, and Seegmiller RE 2013. Osteoarthritis in temporomandibular joint of *Col2a1* mutant mice. *Archives in Oral Biology* 58(9):1092-9.
93. Robinson AB, Stogsdill JA, Lewis JP, Wood TT, and **Reynolds PR** 2012. RAGE and tobacco smoke: Insights into modeling Chronic Obstructive Pulmonary Disease. *Frontiers in Resp Physiol* **3:**301. doi: 10.3389/fphys.2012.00301.
94. Robinson AB, Dickson, KD, Bennion BG, and **Reynolds PR** 2012. RAGE signaling by alveolar macrophages influences tobacco smoke-induced inflammation. *AJP: Lung Cell Mol Physiol* 302(11):L1192-9.
95. Stogsdill JA, Stogsdill MP, Porter JL, Hancock JM, Robinson AB, and **Reynolds PR** 2012. Embryonic over-expression of RAGE by alveolar epithelium induces an imbalance between proliferation and apoptosis. *Am J Resp Cell Mol Biol.* 47(1):60-6.
96. **Reynolds PR**, Stogsdill JA, Stogsdill MP, and Heimann NB 2011. Up-Regulation of RAGE by Alveolar Epithelium Influences Cytodifferentiation and Causes Severe Lung Hypoplasia. *Am J Resp Cell Mol Biol* 45(6): 1195-202.
97. Bukey BR, Geyer AJ, and Porter JL and **Reynolds PR** 2011. Immunohistochemical detection and regulation of alpha 5 nicotinic acetylcholine receptor (nAChR) subunits by FoxA2 during mouse lung organogenesis. *Respir Res* 12(1):82.
98. **Reynolds PR**, Allison CH, and Willnauer CP 2010. TTF-1 Regulates Alpha 5 Nicotinic Acetylcholine Receptor (nAChR) Subunits in Proximal and Distal Lung Epithelium. *Respir Res* 11:175.
99. **Reynolds PR**, Wasley KM, and Allison CH 2010. Diesel Particulate Matter Induces RAGE Expression in Pulmonary Epithelium and RAGE Signaling Influences NF-κB-Mediated Inflammation. *Environ Health Per* 119(3):332-9.

100. **Reynolds PR**, Kasteler SD, Schmitt RE and Hoidal JR 2010. RAGE Signals Through Ras During Tobacco Smoke-Induced Pulmonary Inflammation. *Am J Resp Cell Mol Biol* 45(2):411-8.
101. Rao NV, Argyle B, Xu Z, **Reynolds PR**, Walenga JM, Prechel M, Prestwich GD, Hoidal JR, and Kennedy TP 2010. Low Anticoagulant Heparin Targets Multiple Sites in Inflammation, Suppresses Heparin-Induced Thrombocytopenia and Inhibits Interaction of RAGE with its Disparate Ligands. *Am J Physiol Cell Physiol* 299(1):C97-110.
102. **Reynolds PR**, Kasteler S.D, Sturrock A, Sanders K, Kennedy TP and Hoidal JR 2009. RAGE Targeting Protects Against Hyperoxia-Induced Lung Injury in Mice. *Am J Resp Cell Mol Biol* 42(5):545-51.
103. **Reynolds PR**, Kasteller S, Cosio MG, Sturrock A, Huecksteadt TP and Hoidal JR 2008. RAGE: Developmental Expression and Positive Feedback Regulation by Egr-1 During Cigarette Smoke Exposure in Pulmonary Epithelial Cells. *AJP: Lung Cell Mol Physiol* 294(6):L1094-101.
104. **Reynolds PR** and Hoidal JR. 2006. Cigarette Smoke-Induced Egr-1 Upregulates Pro-Inflammatory Cytokines in Pulmonary Epithelial Cells. *Am J Resp Cell Mol Biol* 35(3):314-9.
105. **Reynolds PR** and Hoidal JR. 2005. Temporal-Spatial Expression and Transcriptional Regulation of α_7 Nicotinic Acetylcholine Receptor (nAChR) by TTF-1 and Egr-1 During Murine Lung Development. *J Biol Chem*. 280(37):32548-54.
106. Mukherjee TP, **Reynolds PR** and Hoidal JR 2005. Differential Effect of Estrogen Receptor Alpha and Beta Agonists on the Receptor for Advanced Glycation End Product Expression in Human Microvascular Endothelial Cells. *Biochim Biophys Acta* 1745(3):300-9.
107. **Reynolds PR**, Mucenski ML, LeCras TD, Nichols WC and Whitsett JA. 2004. Midkine is regulated by hypoxia and causes pulmonary vascular remodeling. *J Biol. Chem.* 279(35):37124-32.
108. **Reynolds PR,** Mucenski ML, and Whitsett JA. 2003. Thyroid Transcription Factor (TTF)-1 Regulates the expression of Midkine (MK) During Lung Morphogenesis. *Dev. Dyn.* 227:227-237.
109. **Reynolds PR,** Schaalje GB, and Seegmiller RE. 2003. Combination Therapy with Folic Acid and Methionine in the Prevention of Retinoic Acid-Induced Cleft Palate in Mice. *BDRA* 67:168-173. Hansen, JM, **Reynolds PR**, Booth GW, Schaalje GB, and Seegmiller RE. 2000. Developmental Toxicity of Carbon Black Oil in Mice. *Teratology* 62:227-232.

PUBLISHED ABSTRACTS

This CV lists peer-reviewed journal articles; an additional 130+ peer-reviewed abstracts have been presented at major national and international scientific meetings.

BOOKS AND REVIEWS

1. **Reynolds P.R.,** and R.E. Seegmiller. 2001. Review of Human Histology. Brigham Young University, Department of Zoology.