Pam M. Van Ry, Ph.D.
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Education

Institution	Degree	Year	Major
University of Nevada Reno	B.S.	2000	Chemistry Field of Concentration
University of Nevada Reno	Ph.D.	2014	Cellular and Molecular Pharmacology and Physiology

Positions and Employment

07/01/2023-present	**Associate Professor,** Department of Chemistry and Biochemistry, Brigham Young University, Provo, Utah.
07/2018-present	**BYU MRI Facility Board of Directors,** Department of Chemistry and Biochemistry, Brigham Young University, Provo, Utah.
07/2017-07/2023	**Assistant Professor,** Department of Chemistry and Biochemistry, Brigham Young University, Provo, Utah.
7/2016-05/2017	**Professional Research Scientist**, (supervisor) Dr. Ryan Wuebbles, Strykagen Corp., Reno, Nevada
09/2014-06/2017	**Postdoctoral Fellow**, Dr. Dean Burkin, Department of Pharmacology, University of Nevada, Reno, Nevada.
07/2010-08/2014	**Ph.D. Candidate/Research Assistant,** Department of Pharmacology, University of Nevada, Reno, Nevada.
05/2007-07/2010	**Lab Technician/Chemist,** Sierra Environmental Monitoring, Sparks, Nevada

Academic and Professional Honors

- Department of Pharmacology Graduate Research Student of the Year, University of Nevada School of Medicine 2014-2015
- University of Nevada Reno Graduate Research Travel Grant Award, 2012, 2013 and 2014
- University of Nevada Reno Faculty Research Travel Grant Award, 2015.
- University of Nevada Reno Postdoctoral Research Travel Grant Award, 2016.
- New Directions in Biology and Disease of Skeletal Muscle Conference Outstanding Poster Award, 2016
- New Directions in Biology and Disease of Skeletal Muscle Conference Industry Outreach Workshop Award (Fast-track Grant and Pilot Grant Opportunity), 2016.
- Simmons Center for Cancer Research Fellow 2020-2021 (Jonard Valdoz)
- Student Innovator of the Year 2020. Honorable Mention (Jonard Valdoz, Dallin Jacobs, Collin Cribbs, Ben Johnson)
- Nikon Small World 2020 Honorable Mention (Jonard Valdoz, Pam Van Ry)
- Three-Minute Thesis 2021 First Place Department of Chemistry and Biochemistry, Second Place College of Physical and Mathematical Sciences (Ashley Chang)
- BYU CPMS Spring Research Conference Talks First Place 2019 and 2021, Second Place 2020. ACS Local Chapter Award for placing. (Ashley Chang)

- BYU Student Research Conference Top Presenter, ACS Local Chapter Award. Jacob Luddington, 2021
- Roland K. Robins Graduate Spring/Summer Fellowship 2023, Aubrianna Saxton and Jhon Sia
- BYU Student Research Conference 1st Place Presenter in Session, ACS Local Chapter Award. Daniel Poulson, 2021
- The BYU: Women's Faculty Association award for Excellence in Scholarship for the year of 2024.

Professional Memberships

National Postdoctoral Association (NPA)	3 Years
American Thoracic Society (ATS)	2018-present
American Society of Gene and Cell Therapy (ASGCT)	2019-present
America Chemical Society (ACS)	2020-present
American Society for Matrix Biology (ASMB)	2023-present

Students Mentored: Graduate or Undergraduate Student Advisee

Name	**Place and Dates of Supervision**	**Current Institution**	**Degree Completed**
Danielle Segura	UNR, 2011-2012	Pharmacy School	BS (2015)
Susan Alaei	UNR, 2012-2013	UNSOM	BS/MD (2018)
Vivian Cruz	UNR, 2012-2015	WCSD	MS (2017)
Name	**Place and Dates of Supervision**	**Current Institution**	**Degree Completed**
Pricilla (Minogue) Henson	UNR, 2012-13	UNSOM	BS/MD (2019)
Megan Keys	UNR, 2013-14	Graduated	BS (2014)
Jordan Tice	UNR, 2014-16	Graduated	H-BS (2016)
Melissa Sacasas	UNR, 2014-16	Graduated	BS (2016)
Brandon Connor	UNR, 2015-17	UNSOM	BS-MD Honors
Laura Hayes	UNR, 2016-current	Post-Graduate	BS (2016, Vanderbilt)
Starting at Brigham Young University			
Hunter Chamberlin	Brigham Young University, 2017-2018, URA		BS (2019)
Brooke Brady	Brigham Young University, 2017-2018, URA		BS (2019)
Stefannia Esparsa	Brigham Young University-Idaho, 01/2018-04/2018		BS (Talmage Fellow)
Konner Welch	Brigham Young University, 08/2017-12/2018, URA		BS (2019)
Bryan Landro	Brigham Young University, 08/2017-12/2018, URA		BS (2019)
James Wood	Brigham Young University, 08/2018-05/2019, URA		BS (2020)
Ann Gariety	Brigham Young University, 08/2018-05/2019		BS (2019)
Cecilia Foster	Brigham Young University, 08/2018-07/2019, URA		BS (2020)
Daniel Poulson	Brigham Young University, 05/2018-05/2022, URA		BS (2021)
Conner Knight	Brigham Young University, 05/2018-05/2022, URA		BS (2020)
Spenser Hayes	Brigham Young University, 05/2018-05/2022, URA		BS (2021)
R. Alejandro Zegarra	Brigham Young University, 12/2018-12/2020, URA		BS (2021)
Mathias Santos	Brigham Young University, 08/2019-08/2020		BS (2020)
Dean Slocum	Brigham Young University, 01/2019-05/2021, URA		BS (2021)
Hailie Gill	Brigham Young University, 12/2019-05/2022		BS (2021)
Braden Kartchner	Brigham Young University, 08/2019-05/2022, URA		BS (2021)
Adrienne Iosua	Brigham Young University, 08/2019-5/2021,		BS
Matthew Teynor	Brigham Young University, 01/2018-05/2019, URA		BS
Caleb Stowell	Utah Valley University, 09/2018-05/2019		BS
Megan Granger	Brigham Young University, 12/2018-08/2019, URA		BS
Jacob Luddington	Brigham Young University, 08/2019-05/2022, URA		BS (2022)
Maren (Morgan) Kenison	Brigham Young University, 05/2019-12/2021, URA		BS (2022)
Alexa Urrea	Brigham Young University, 08/2019-05/2021, URA		BS
Ethan Dodson	Brigham Young University, 12/2019-05/2023, URA		BS (2023)

Nick Franks	Brigham Young University, 06/2019-12/2022, URA	BS
Alessandra Hoopes	Brigham Young University, 01/2019-12/2022, URA	BS
Ana Vazquez	Brigham Young University, 11/2020-05/2022, URA	BS
Lucus Wang	Brigham Young University, 11/2020-05/2022, URA	BS
Kristen Noyes	Brigham Young University, 11/2021-05/2022, URA	BS
Seth Garfield	Brigham Young University, 01/2020-05/2023, URA	BS
Christian Arnold	Brigham Young University, 09/2020-05/2023, URA	BS
Jonathan Spallino	Brigham Young University, 01/2020-05/2022, URA	BS
Ethan Durham	Brigham Young University, 01/2020-present, URA	BS
Tomas Carmona	Utah Valley University, 01/2020-05/2022,	BS
Ben Johnson	Brigham Young University, 01/2020-05/2022, URA	BS
Ethan Dodson	Brigham Young University, 01/2020-present, URA	BS
Collin Cribs	Brigham Young University, 01/2020-07/2023, URA	BS
Luke Westhoff	Brigham Young University, 12/20201-present,	BS
Whitney Davis	Brigham Young University, 12/20201-present,	BS

Students Mentored: Graduate Student Advisee

Name	Place and Dates of Supervision	Current Institution	Degree Completed
Monica Rice	University of Nevada, 2011-2012	University of Nevada	PhD (2017)
Senny Wong	University of Nevada, 2011-2012	University of Nevada	PhD (2017)
Apurva Sarathy	University of Nevada, 2012-2015	NIH	PhD (2016)
Starting at Brigham Young University			
Rebecca Viazzo	BYU, 2018-12/2020		Masters (12/2020)
Matthew Rathgeber	BYU, 2018-12/2020,		Masters (12/2020)
Jonard Voldoz	2018-03/2022	Millipore Sigma	PhD (03/2022)
Mary Vallecillo	BYU 2017-12/2021,	PostDoc Harvard	PhD (12/2021)
Ashley (Markham) Chang, BYU 2018-05/2022			PhD (05/2022)
Aubrianna Saxton	Brigham Young University, 2022-present		PhD
Stefannia Esparza	Brigham Young University, 2023-present		MS
Jhon Sia	Brigham Young University, 2023-present		PhD
Denise Procopio	Brigham Young University, 2024-present		PhD

Grants

Completed

1. Million Dollar Bike Ride Grant Program, Orphan Disease Center, University of Pennsylvania, **Van Ry, P.M. (PI)** 01/01/2014-12/31/2015: *Galectin-1 protein therapy for the treatment for Laminin alpha2 related Congenital Muscular Dystrophy*
2. University of Washington Sub-award, Brigham Young University, $57,000, Van Ry, P.M., (PI), 8/2018-12/2019: *Studies of AvB6 integrin binders in rodent models of idiopathic pulmonary fibrosis.*
3. Earl M. Woolley Research Innovation Award, Brigham Young University, $35,000, Van Ry, P.M., (PI), 10/2018-10-2019: *Idiopathic Pulmonary Fibrosis sub-clinical Gastric Reflux and the use of $\alpha V\beta 6$ binder as a therapeutic.*
4. Jain Foundation Research Grant, $96,394, Van Ry, P.M. (PI), 11/2019-11/2020: *Galectin-1: A potential protein therapy for Limb Girdle Muscular Dystrophy Type 2B.*
5. University of Washington Sub-award, Brigham Young University, $65,000, Van Ry, P.M., (PI), 2/2020-12/2021: *Studies of AvB6 integrin binders in rodent models of idiopathic pulmonary fibrosis.*
6. Jain Foundation Research Grant, $169,000, Van Ry, P.M. (PI), 11/2020-12/2021: *Galectin-1: A potential protein therapy for Limb Girdle Muscular Dystrophy Type 2B, Year 2.*

7. Jain Foundation Research Grant, $171,307, Van Ry, P.M. (PI), 01/2022-12/2022: *Galectin-1: A potential protein therapy for Limb Girdle Muscular Dystrophy Type 2B, Year 3.*
8. Earl M. Woolley Innovation in Research Award, Brigham Young University, $45,000, Van Ry, P.M., (PI), 10/2022-10-2023: *Unraveling fibroblasts-ECM roles for an improved lung alveolar model.*
9. College High-Impact Research Program (CHIRP) through the College of Physical and Mathematical Sciences at BYU, $25,000, Watt, Richard and Van Ry, Pam, 06/2022-06/2023. *Validating that the HIV Protease Inhibitor Nelfinavir Inhibits Fibrosis: A Potential Drug Repurposing Treatment for Fibrotic Diseases.*
10. Jain Foundation Research Grant, $171,238, Van Ry, P.M. (PI), 01/2023-12/2023: *6-month treatment with Galectin-1 improves functional, histological and biochemical markers of dysferlinopathy (Year 4).*

Current

1. Jain Foundation Research Grant, $167,751, Van Ry, P.M. (PI), 01/2023-12/2023: *Galectin-1 improves chronic macrophage polarization exhibited in dysferlinopathy.*
2. Earl M. Woolley Innovation in Research Award, Brigham Young University, $45,000, Van Ry, P.M., (PI) Richard Watt (PI), 08/2023-08-2024, Validating that the HIV Protease Inhibitors Block Fibrosis Pathways
3. Fritz. B. Burns Cancer Research Award through Brigham Young University, $234,222, Van Ry P.M. (PI), 04/2024 – 04/2026. *LM332 signaling increases PI3K/AKT activation and metastatic potential in NSCLC.*

Pending or submitted:

NIH-STTR, $ 2,498,570, Avanti Biosciences, Inc., Gian Luca Araldi (PI), Van Ry, P.M. (Sub-award), *01/01/2025-1231/2026, Development and Evaluation of ABI-171 for Idiopathic Pulmonary Fibrosis (IPF) Treatment.*

Technology Development

Patents and Patent Applications

1. U.S. Patent: US20130065242 A1, “Methods for diagnosing, prognosing and treating muscular dystrophy,” January 16, 2018, Inventors: Dean Burkin (Reno, NV), Ryan Wuebbles (Reno, NV) and Pam Van Ry (Provo, UT).
2. IP Australia: 2013299392, Reference #: 45557BOA/VPB, “Methods for diagnosing, prognosing and treating muscular dystrophy,” June 7, 2018, Inventors: Dean Burkin (Reno, NV), Ryan Wuebbles (Reno, NV) and Pam Van Ry (Provo, UT).
3. U.S. non-provisional patent application: Docket No. 82570-335896, “Galectin-1 Immunomodulation and Myogenic Improvements in Muscle Diseases and Autoimmune Disorders,” March 15, 2021, Inventors Pam M. Van Ry (Provo Utah) Mary Vallecillo (Provo, Utah).
4. US. Provisional patent: 63185423, Docket # 2021-012, “A suspension-based 3D culture method for stable or primary cells and a fluorescent lung triculture organoid,” receipt date: May 07,2021. Inventors: Pam M. Van Ry (Provo, Utah) and Jonard Corpuz Valdoz (Provo, Utah).

Publications:

Online link to full bibliography:

https://www.ncbi.nlm.nih.gov/myncbi/pam.van%20ry.1/bibliography/public/

Peer-Reviewed

1. **Van Ry, P. M.,** P. Minogue, B. L. Hodges and D. J. Burkin (2014). "Laminin-111 improves muscle repair in a mouse model of merosin-deficient congenital muscular dystrophy." Hum Mol Genet 23(2): 383-396. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3869356/
2. **Van Ry, P. M.,** R. D. Wuebbles, M. Keys and D. J. Burkin (2015). "Galectin-1 protein therapy prevents pathology and improves muscle function in the mdx mouse model of Duchenne muscular dystrophy." Mol Ther. https://doi.org/10.1038/mt.2015.105
3. Griffiths, G. S., J. Doe, M. Jijiwa, **P. Van Ry,** V. Cruz, M. de la Vega, J. W. Ramos, D. J. Burkin and M. L. Matter (2015). "Bit-1 is an essential regulator of myogenic differentiation." J Cell Sci 128(9): 1707-1717. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4446732/
4. Doe, J., A. M. Kaindl, M. Jijiwa, M. de la Vega, H. Hu, G. S. Griffiths, T. M. Fontelonga, P. Barraza, V. Cruz, **P. Van Ry**, J. W. Ramos, D. J. Burkin and M. L. Matter (2017). "PTRH2 gene mutation causes progressive congenital skeletal muscle pathology." Hum Mol Genet 26(8): 1458-1464. https://pubmed.ncbi.nlm.nih.gov/28175314/
5. Lewon, M., C. M. Peters, **P. M. Van Ry,** D. J. Burkin, K. W. Hunter and L. J. Hayes (2017). "Evaluation of the behavioral characteristics of the mdx mouse model of duchenne muscular dystrophy through operant conditioning procedures." Behav Processes 142: 8-20.
6. **Van Ry, P. M.,** T. M. Fontelonga, P. Barraza-Flores, A. Sarathy, A. M. Nunes and D. J. Burkin (2017). "ECM-Related Myopathies and Muscular Dystrophies: Pros and Cons of Protein Therapies." Compr Physiol 7(4): 1519-1536. https://pubmed.ncbi.nlm.nih.gov/28915335/
7. Willmann, R., H. Gordish-Dressman, S. Meinen, M. A. Rüegg, Q. Yu, K. Nagaraju, A. Kumar, M. Girgenrath, C. B. M. Coffey, V. Cruz, **P. M. Van Ry,** L. Bogdanik, C. Lutz, A. Rutkowski and D. J. Burkin (2017). "Improving Reproducibility of Phenotypic Assessments in the DyW Mouse Model of Laminin-α2 Related Congenital Muscular Dystrophy." J Neuromuscul Dis 4(2): 115-126. https://pubmed.ncbi.nlm.nih.gov/28550268/
8. Wuebbles, R. D., V. Cruz, **P. Van Ry,** P. Barraza-Flores, P. D. Brewer, P. Jones and D. J. Burkin (2019). "Human Galectin-1 Improves Sarcolemma Stability and Muscle Vascularization in the mdx Mouse Model of Duchenne Muscular Dystrophy." Mol Ther Methods Clin Dev 13: 145-153. https://pubmed.ncbi.nlm.nih.gov/30788383/
9. Robinson, B. S., C. M. Arthur, B. Evavold, E. Roback, N. A. Kamili, C. S. Stowell, M. L. Vallecillo-Zúniga, **P. M. Van Ry,** M. Dias-Baruffi, R. D. Cummings and S. R. Stowell (2019). "The Sweet-Side of Leukocytes: Galectins as Master Regulators of Neutrophil Function." Front Immunol 10: 1762. https://doi.org/10.3389/fimmu.2019.01762.
10. Warr, C., J. C. Valdoz, B. P. Bickham, C. J. Knight, N. A. Franks, N. Chartrand, **P. M. Van Ry,** K. A. Christensen, G. P. Nordin and A. D. Cook (2020). "Biocompatible PEGDA Resin for 3D Printing." ACS Appl Bio Mater 3(4): 2239-2244. https://doi.org/10.1021/acsabm.0c00055
11. Vallecillo-Zúniga, M. L., M. F. Rathgeber, P. D. Poulson, S. Hayes, J. S. Luddington, H. N. Gill, M. Teynor, B. C. Kartchner, J. Valdoz, C. Stowell, A. R. Markham, C. Arthur, S. Stowell and **P. M. Van Ry** (2020). "Treatment with galectin-1 improves myogenic potential and membrane repair in dysferlin-deficient models." PLoS One 15(9): e0238441. https://doi.org/10.1371/journal.pone.0238441
12. Valdoz, J. C., D. J. Jacobs, C. G. Cribbs, B. C. Johnson, B. M. Hemeyer, E. L. Dodson, J. A. Saunooke, N. A. Franks, P. D. Poulson, S. R. Garfield, C. J. Knight and **P. M. Van Ry** (2021). "An Improved Scalable Hydrogel Dish for Spheroid Culture." Life (Basel) 11(6). https://doi.org/10.3390/cells10113210.
13. Sanchez Noriega, J. L., N. A. Chartrand, J. C. Valdoz, C. G. Cribbs, D. A. Jacobs, D. Poulson, M. S. Viglione, A. T. Woolley, **P. M. Van Ry,** K. A. Christensen and G. P. Nordin (2021). "Spatially and optically tailored 3D printing for highly miniaturized and integrated microfluidics." Nat Commun 12(1): 5509. https://doi.org/10.1038/s41467-021-25788-w
14. Vallecillo-Zúniga, M. L., P. D. Poulson, J. S. Luddington, C. J. Arnold, M. Rathgeber, B. C. Kartchner, S. Hayes, H. Gill, J. C. Valdoz, J. L. Spallino, S. Garfield, E. L. Dodson, C. M. Arthur, S. R. Stowell and **P. M. Van Ry** (2021). "Therapeutic Benefit of Galectin-1: Beyond Membrane

Repair, a Multifaceted Approach to LGMD2B." Cells 10(11). https://doi.org/10.3390/life11060517.

15. Valdoz, J. C., B. C. Johnson, D. J. Jacobs, N. A. Franks, E. L. Dodson, C. Sanders, C. G. Cribbs and **P. M. Van Ry** (2021). "The ECM: To Scaffold, or Not to Scaffold, That Is the Question." Int J Mol Sci **22**(23). https://pubmed.ncbi.nlm.nih.gov/34884495/
16. Valdoz, J. C., N. A. Franks, C. G. Cribbs, D. J. Jacobs, E. L. Dodson, C. J. Knight, P. D. Poulson, S. Garfield, B. C. Johnson, B. M. Hemeyer, M. T. Sudo, J. A. Saunooke, M. L. Vallecillo-Zúniga, M. Santos, B. Chamberlain, K. A. Christensen, G. P. Nordin, Raghu, Ganesh and **P. M. Van Ry**, (2022) "Soluble ECM Promotes organotypic formation in lung alveolar model." Biomaterials https://doi.org/10.1016/j.biomaterials.2022.121464
17. Vallecillo-Zúniga, M. L., M. Rathgeber, D. Poulson, B. Kartchner, J. Luddington, H. Gill, S. Hayes, M. Teynor, C. S. Stowell, C. M. Arthur, S. R. Stowell and **P. M. Van Ry** (2022). "Evaluating Therapeutic Activity of Galectin-1 in Sarcolemma Repair of Skeletal Muscle." Methods Mol Biol **2442**: 663-683. https://link.springer.com/book/10.1007/978-1-0716-2055-7#about
18. Hirschi-Budge, K. M., K. Y. F. Tsai, K. L. Curtis, G. S. Davis, B. K. Theurer, A. M. M. Kruyer, K. W. Homer, A. Chang, P. M. Van Ry, J. A. Arroyo and P. R. Reynolds (2022). "RAGE signaling during tobacco smoke-induced lung inflammation and potential therapeutic utility of SAGEs." BMC Pulm Med **22**(1): 160. https://doi.org/10.1186/s12890-022-01935-x
19. Yiran Liang, Thy Truong, Aubrianna J. Saxton, Hannah Boekweg, Samuel H. Payne, Pam M. Van Ry, and Ryan T. Kellyu. "HyperSCP: Compining Isotopic and Isobaric Labeling for Higher Throughput Single Cell Proteomics." *Analytical Chemistry* **2023** *95* (20), 8020-8027. https://doi.org/10.1021/acs.analchem.3c00906
20. Roy, A., L. Shi, A. Chang, X. Dong, A. Fernandez, J. C. Kraft, J. Li, V. Q. Le, R. V. Winegar, G. M. Cherf, D. Slocum, P. D. Poulson, G. E. Casper, M. L. Vallecillo-Zúniga, J. C. Valdoz, M. C. Miranda, H. Bai, Y. Kipnis, A. Olshefsky, T. Priya, L. Carter, R. Ravichandran, C. M. Chow, M. R. Johnson, S. Cheng, M. Smith, C. Overed-Sayer, D. K. Finch, D. Lowe, A. K. Bera, G. Matute-Bello, T. P. Birkland, F. DiMaio, G. Raghu, J. R. Cochran, L. J. Stewart, M. G. Campbell, P. M. Van Ry, T. Springer and D. Baker (2023). "De novo design of highly selective miniprotein inhibitors of integrins αvβ6 and αvβ8." Nat Commun **14**(1): 5660. https://doi.org/10.1038/s41467-023-41272-z
21. Chang, A., P. M. Van Ry and G. Raghu (2023). "Idiopathic pulmonary fibrosis: aligning murine models to clinical trials in humans." Lancet Respir Med **11**(11): 953-955. https://doi.org/10.1038/s41467-023-41272-z
22. Viglione, M. S., A. Saxton, D. Downs, A. T. Woolley, K. A. Christensen, P. M. Van Ry and G. P. Nordin (2024). "Integrated biocompatible 3D printed isoporous membranes with 7 μm pores." Lab Chip **24**(8): 2202-2207. https://doi.org/10.1039/D4LC00014E
23. Ellsworth, P. N., J. A. Herring, A. H. Leifer, J. D. Ray, W. S. Elison, P. D. Poulson, J. E. Crabtree, P. M. Van Ry and J. S. Tessem (2024). "CEBPA Overexpression Enhances β-Cell Proliferation and Survival." Biology (Basel) **13**(2). https://doi.org/10.3390/biology13020110

Invited Oral Presentations

1. **Van Ry, PM,** Priscilla Minogue, Ryan D. Wuebbles, Dean J. Burkin, August 2013. Galectin-1 protein therapy for the treatment of Duchenne Muscular Dystrophy. Abstract for oral presentation, Annual Bioscience Retreat, University of Nevada-Reno School of Medicine, Reno, NV.
2. **Van Ry PM,** August 2011. The Role of LARGE on α7β1 integrin. Abstract for oral presentation, Annual Bioscience Retreat, University of Nevada-Reno, Reno, NV.
3. **Van Ry PM,** January 11, 2012. The Role of Large on α7β1 integrin. Abstract for oral presentation, 29th Annual George G. Bierkamper Student Research Convocation, University of Nevada-Reno School of Medicine, Reno, NV.

4. **Van Ry, PM,** Priscilla Minogue, Bradley L. Hodges and Dean J. Burkin, January 2013. Laminin-111 protein therapy improves muscle repair in mouse model for merosin-deficient congenital muscular dystrophy. Abstract for oral presentation, 30th Annual George G. Bierkamper Student Research Convocation, University of Nevada-Reno School of Medicine, Reno, NV.
5. **Van Ry PM**, Ryan D. Wuebbles, Jordan Tice, Vivian Cruz, Melissa Sacasas, Keely Thoreson, Tatiana M. Fontelonga and Dean J Burkin, June 28-July 2, 2016, Galectin-1 ameliorates disease pathology in two mouse models of Duchenne Muscular Dystrophy (Talk and poster), New Directions in Biology and disease of Skeletal Muscle Conference. Orlando, Florida at the Renaissance Orlando at SeaWorld
6. **Van Ry, PM**, February 29th- March 1st, 2016, Protein Replacement Therapeutic Strategies: Part 2, (Invited speaker), LAMA2 CMD Scientific Meeting at Sick Kids, Galectin-1 treatment in LAMA2-CMD, Toronto, Canada.
7. **Van Ry, PM (presenter),** February 20, 2020, Utah Center for Clinical and Translational Science Collaboration Meeting (invited speaker), Galectin-1 a novel protein therapy for LGMD2B.
8. **Van Ry, PM (presenter),** March 15-18, 2021, MDA Clinical & Scientific Conference (invited speaker), Galectin-1 a novel protein therapy for LGMD2B, virtual meeting.
9. **Van Ry, PM (presenter),** June 14-15, 2021, 2nd Advanced Chemistry World Congress (invited speaker-virtual), Galectin-1 a novel protein therapy for LGMD2B, Berlin, Germany (hybrid meeting)
10. **Van Ry, PM (presenter),** August 22-26, 2021, ACS, Division of Biochemical Technology (invited speaker), Novel organotypic lung triculture technologies paving the way to personalized medicine, hybrid meeting Atlanta, Georgia.
11. Valdoz, J. C. (presenter), N. A. Franks, C. G. Cribbs, D. J. Jacobs, E. L. Dodson, C. J. Knight, P. D. Poulson, S. Garfield, B. C. Johnson, B. M. Hemeyer, M. T. Sudo, J. A. Saunooke, M. L. Vallecillo-Zúniga, M. Santos, B. Chamberlain, K. A. Christensen, G. P. Nordin, Raghu, Ganesh and **P. M. Van Ry**, Novel organotypic lung triculture technologies paving the way to personalized medicine, August 22-26, 2021, ACS, Division of Biochemical Technology, virtual.
12. Sanchez Noriega, J. L., N. A. Chartrand, J. C. Valdoz, M. S. Viglione, A. T. Woolley, **P. M. Van Ry,** K. A. Christensen and G. P. Nordin (presenter), Re-envisioned 3D Printing as an Enabler for Extreme Microfluidic Component Miniaturization, October 2021, Chemical and Biological Microsystems Socitey, MicroTAS, Palm Springs, California
13. Valdoz, J. C., N. A. Franks, C. G. Cribbs, D. J. Jacobs, E. L. Dodson, C. J. Knight, P. D. Poulson, S. Garfield, B. C. Johnson, B. M. Hemeyer, M. T. Sudo, J. A. Saunooke, M. L. Vallecillo-Zúniga, M. Santos, B. Chamberlain, K. A. Christensen, G. P. Nordin, Raghu, Ganesh and **P. M. Van Ry (presenter)**, Novel organotypic lung triculture technologies paving the way to personalized medicine, March 10, 2022, University of Utah and Intermountain Health Care pulmonary Division Grand Rounds.
14. Vallecillo-Zúniga, M. L., P. D. Poulson, J. S. Luddington, C. J. Arnold, M. Rathgeber, B. C. Kartchner, S. Hayes, H. Gill, J. C. Valdoz, J. L. Spallino, S. Garfield, E. L. Dodson, C. M. Arthur, S. R. Stowell and **P. M. Van Ry (presenter),** Therapeutic Benefit of Galectin-1: Beyond Membrane Repair, a Multifaceted Approach to LGMD2B, April 27-27, 2022, Jain Foundation: Dysferlin on Galectin-1 Therapy,
15. Vallecillo-Zúniga, M. L., P. D. Poulson, J. S. Luddington, C. J. Arnold, M. Rathgeber, B. C. Kartchner, S. Hayes, H. Gill, J. C. Valdoz, J. L. Spallino, S. Garfield, E. L. Dodson, C. M. Arthur, S. R. Stowell and **P. M. Van Ry (presenter and session leader),** Therapeutic Benefit of Galectin-1: Beyond Membrane Repair, a Multifaceted Approach to LGMD2B, April 20-23, 2023, The American Physiology Summit, Long Beach, CA.
16. Saxton, Aubri J., Sia, Jhon and **P. M. Van Ry (presenter),** Development of Tissue Engineering Techniques for Investigations of Cell-ECM Crosstalk in NSCLC, May 2, 2024, Utah Cancer Research Symposium, University of Utah, SLC, UT

17. Pam M. Van Ry **(presenter),** Mary L. Vallecillo-Zúniga, Stefania Esparza, Daniel Poulson, Ethan Durham, Luke Westhoff, Braden Kartchner, Colten Hansen, Carter Stowell, Parker Nelso[1], Connie Arthur and Sean Stowell, Galectin-1 Treatment Improves Overall Muscle Health in Limb-Girdle Muscular Dystrophy R2 Models, May 8-11, 2024, Jain Foundation Scientific Conference 2024, Huston, TX.
18. Saxton, Aubri J., Sia, Jhon and **P. M. Van Ry (presenter)**, Development of Tissue Engineering Techniques for Investigations of Cell-ECM Crosstalk in NSCLC, June 9,2024, Simmons Center for Cancer Research Series, BYU, Provo, UT

Posters and Abstracts

1. Kostecki D, **Van Ry PM**, Singer CA, May 2011. T-bet regulates expression of miR-25 to modulate human airway smooth muscle cell phenotype. Abstract for Poster presentation, American Thoracic Society International Conference. Denver, CO.
2. **Van Ry PM**, Katie Flynn, Senny Wong, Ryan D. Wuebbles, Dean J. Burkin, April 22-24, 2012. Laminin-111 protein therapy improves muscle repair in mouse model for MDC1A. Abstract for poster presentation, Myomatrix 2012: The Solution is Simple, University of Nevada-Reno School of Medicine, Reno, NV.
3. **Van Ry PM**, Ryan D. Wuebbles, Dean J. Burkin, June 17-21, 2012, LARGE glycosylates the alpha7beta1 integrin and regulates expression and laminin-binding in muscle. Abstract for poster presentation, New Directions in Biology and disease of Skeletal Muscle Conference. Westin New Orleans Canal Place, New Orleans, Louisiana.
4. **Van Ry PM**, Katie Flynn, Senny Wong, Ryan D. Wuebbles, Dean J. Burkin, August, 2012. Laminin-111 protein therapy improves muscle repair in mouse model for MDC1A. Abstract for poster presentation, Annual Bioscience Retreat, University of Nevada-Reno School of Medicine, Reno, NV.
5. **Van Ry, PM**, Priscilla Minogue, Chelsey M. Lamb and Dean J. Burkin, April 21-24, 2013. Laminin-111 protein therapy improves muscle repair in mouse model for MDC1A. Abstract for poster presentation, The MDA Scientific Conference: Therapy Development for Neuromuscular Diseases: Translating Hope into Promise, Washington DC.
6. **Van Ry PM**, Megan Keys, Ryan D. Wuebbles, Dean J. Burkin, October, 2013, Galectin-1 protein therapy for the treatment of Duchenne Muscular Dystrophy. Abstract for poster presentation. 31th Annual George G. Bierkamper Student Research Convocation, University of Nevada-Reno School of Medicine, Reno, NV.
7. **Van Ry PM**, Megan Keys, Ryan D. Wuebbles, Dean J. Burkin, June 29-July 2, 2014, Galectin-1 protein therapy for the treatment of Duchenne Muscular Dystrophy. Abstract for poster presentation, 2014 New Directions in Biology and disease of Skeletal Muscle Conference. Chicago Marriott Downtown Magnificent Mile, Chicago, Illinois.
8. **Van Ry, PM**, Ryan D. Wuebbles, Suzann Duan, Jordan Tice, Vivian Cruz, Megan Key and Dean J. Burkin, March 11-14, 2015, Galectin-1 protein therapy improves muscle pathology and function in the *mdx* mouse model of Duchenne muscular dystrophy, Abstract for poster presentation 2015, Muscular Dystrophy Conference, Washington D.C.
9. **Van Ry, PM**, Ryan D. Wuebbles, Suzann Duan, Jordan Tice, Vivian Cruz, Megan Key and Dean J. Burkin, March 11-14, 2015, Galectin-1 protein therapy improves muscle pathology and function in the *mdx* mouse model of Duchenne muscular dystrophy, Abstract for poster presentation 2015, Muscular Dystrophy Conference, Washingto D.C.
10. KM Hirschi (presenter), Kyf Tsai, T. Davis, S. Llavina, B. Stitton, C. Clark, E. Plothow , H. Aanderlund-Tanner, N. Mella, A.R. Markham (Chang), **P.M. Van Ry**, J.A. Arroyo, and P.R. Reynolds, Rage and Sage: Ameliorating COPD Pathogenesis Via Rage Abrogation, Abstract for poster presentation, April 5-9, 2019, Experimental Biology Conference, Orlando, Florida.

11. Christina R. Smith (presenter), **Pam M. Van Ry** Ryan D. Wuebbles, Dean J. Burkin, Recombinant human galectin-1 protein therapy forestalls muscle pathology and extends life expectancy of the dyW mouse model of LAMA2-CMD, Abstract for poster presentation, April 13-19,2019, 2019 MDA Clinical and Scientific Conference, Orlando, Florida.
12. Mary L Vallecillo (presenter), Matthew S Teynor, Jonard C Valdoz, Spencer D Hayes, Matthew F Rathgeber, Sean R Stowell, and **Pam M Van Ry**, Galectin-1: A potential Protein Therapy for Limb-Girdle Muscular Dystrophy 2B, Abstract for poster presentation, April 13-19,2019, 2019 MDA Clinical and Scientific Conference, Orlando, Florida.
13. N. Chartrand (presenter), Sanchez Noriega, J. L., J. C. Valdoz, Boak, Malwa, Chamberlain, Brandon, Silva, Ethan, C. J. Knight, N. A. Franks, G. P. Nordin , **P. M. Van Ry,** and K. A. Christensen**,** High Resolution 3D-Printed Microfluidics for In Vitro Co-Culture and Dose-Response Testing of Sphereoids, November 2019, 2019 Chemical and Biological Defense Science & Technology Conference (Defense Threat Reduction Agency), Cincinatti, OH.
14. B. C. Kartchner (presenter), Vallecillo-Zúniga, M. L, M. Rathgeber, P. D. Poulson, S. Hayes, J. S. Luddington, H. Gill, J. C. Valdoz, J. L. Spallino, S. Garfield, E. L. Dodson, C. M. Arthur, S. R. Stowell and **P. M. Van Ry** Recombinant human Galectin-1 improves membrane repair capabilities in dysferlin -/- myotubes, March 21-25, 2020, ACS Spring 2020 National Meeting and Expo https://doi.org/10.1021/scimeetings.0c02786
15. Vallecillo-Zúniga (presenter), M. L., M. F. Rathgeber, P. D. Poulson, S. Hayes, J. S. Luddington, H. N. Gill, M. Teynor, B. C. Kartchner, J. Valdoz, A. R. Markham, C. Stowell, C. Arthur, S. Stowell and **P. M. Van Ry,** Sarcolemma Repair and decreases inflammatory response in LGMD2B models. March 15-18, 2021, MDA Clinical & Scientific Conference 2021, Galectin-1 a novel protein therapy for LGMD2B, virtual meeting. https://mdaconference.org/node/1131
16. Vallecillo-Zúniga (presenter), M. L., M. F. Rathgeber, P. D. Poulson, S. Hayes, J. S. Luddington, H. N. Gill, M. Teynor, B. C. Kartchner, J. Valdoz, A. R. Markham, C. Stowell, C. Arthur, S. Stowell and **P. M. Van Ry,** Treatment with Galectin-1 improves myogenesis and membrane repair in dysferlin-deficient models, March 15-18, 2021, MDA Clinical & Scientific Conference 2021Galectin-1 a novel protein therapy for LGMD2B, virtual meeting. https://mdaconference.org/node/1134
17. P. D. Poulson, S. Hayes, J. S. Luddington, C. Arnold and **P. M. Van Ry,** Galectin-1 treatment lowers inflammatory markers in models of LGMD2B, March 15-18, 2021, MDA Clinical & Scientific Conference 2021Galectin-1 a novel protein therapy for LGMD2B, virtual meeting. https://mdaconference.org/index.php/node/1132
18. A. Chang (presenter), A. Roy, L. Shi, R. Viazzo, **P.M. Van Ry**, G. Raghu, L. Stewart, D. Baker, BP2_disulf: A Novel Therapeutic for Idiopathic Pulmonary Fibrosis Improves Clinically Relevant Endpoints in Bleomycin Mouse Model, May 14-19, American Thoracic Society 2021, virtual.
19. Valdoz, J. C. (presenter), N. A. Franks, C. G. Cribbs, D. J. Jacobs, E. L. Dodson, C. J. Knight, P. D. Poulson, S. Garfield, B. C. Johnson, B. M. Hemeyer, M. T. Sudo, J. A. Saunooke, M. L. Vallecillo-Zúniga, M. Santos, B. Chamberlain, K. A. Christensen, G. P. Nordin, Raghu, Ganesh and **P. M. Van Ry**, Soluble basement membrane promotes organotypic growth of a lung triculture, August 22-26, 2021, ACS, Division of Biochemical Technology, virtual.
20. Valdoz, J. C., D. J. Jacobs (presenter), C. G. Cribbs, B. C. Johnson, B. M. Hemeyer, E. L. Dodson, J. A. Saunooke, N. A. Franks, P. D. Poulson, S. R. Garfield, C. J. Knight and **P. M. Van Ry** (2021). An Improved Scalable Hydrogel Dish for Spheroid Culture, August 22-26, 2021, ACS, Division of Biochemical Technology, virtual.
21. **Pam M. Van Ry,** Jonard C. Valdoz, Nicholas A. Franks, Collin G. Cribbs, Dallin J. Jacobs, Ethan L. Dodson, Connor J. Knight , P. Daniel Poulson, Seth R. Garfield, Benjamin C. Johnson, Brandon M. Hemeyer, Miranda T. Sudo, Jordan A. Saunooke, Braden C. Kartchner, Aubrianna Saxton, Mary L. Vallecillo-Zuniga, Matheus Santos, Brandon Chamberlain, Kenneth A.

Christensen, Greg P. Nordin, A. Sampath Narayanan, Ganesh Raghu, Soluble ECM promotes organotypic formation in lung alveolar model, October 1-5, 2022, 21st International Colloquium on Lung and Airway Fibrosis (ICLAF), Reykjavik, Iceland.

22. **Pam M. Van Ry**, Jonard C. Valdoz, Connor Knight, P. Daniel Poulson, Seth R. Garfield, Benjamin C. Johnson, Brandon M. Hemeyer, Miranda T. Sudo, Jordan A. Saunooke, Braden C. Kartchne[1], Aubrianna Saxton, Ashley Chang, Mary L. Vallecillo-Zuniga, Matheus Santos, Brandon Chamberlain, Haeun Gim, Mary B. Scholand, Kenneth A. Christensen, Greg P. Nordin, A. Sampath Narayanan, Anindya Roy, Lance J. Stewart, David Baker, Ganesh Raghu, Novel Organotypic Lung Triculture Method Paving the Way to Personalized Medicine, October 22-25, 2023,2023 Joint Meeting of the American Society for Matrix Biology (ASMB), The Histochemical Society (HCS), and the American Society for Investigative Pathology (ASIP), SLC, Utah.
23. Aubrianna Saxton, Ashley Chang, Collin Cribbs, Nick Franks, Haeun Gim, Seth Garfield, Dawson Downs, Hailey Hepworth, Kyle Nielson, Jon Valdoz, Jhon Sia, Daniel Poulson, A. Sampath Narayan, Mary B. Scholand, Ganesh Raghu, and **Pam Van Ry**. October 22-25, 2023,2023 Joint Meeting of the American Society for Matrix Biology (ASMB), The Histochemical Society (HCS), and the American Society for Investigative Pathology (ASIP), SLC, Utah.
24. Mary L. Vallecillo-Zúniga, Stefania Esparza, Daniel Poulson, Ethan Durham, Luke Westhoff, Braden Kartchner, Colten Hansen, Carter Stowell, Parker Nelso[1], Connie Arthur, Sean Stowell and **Pam M. Van Ry**, 6-months treatment with Galectin-1 favorably alters functional, histological, and biochemical markers in Limb Girdle Muscular Dystrophy R2, May 8-11, 2024, Jain Foundation Scientific Conference 2024, Huston, TX.
25. **Pam Van Ry**, Aubrianna Saxton, Jhon Sia, Ashley Chang, Collin Cribbs, Nick Franks, Dawson Downs, Hailey Hepworth, Kyle Nielson, Seth Wood, Garrett Casper, Lance Markham, Clayton Moore, A. Sampath Narayan, Mary B. Scholand, Ganesh Raghu, Developing Tissue Engineering Techniques for the Study of Crosstalk between Healthy Cells and Fibrotic Extracellular Matrix in Idiopathic Pulmonary Fibrosis, May 17-22, 2024, San Diego CA.

Teaching Activities

Formal Teaching (Fall=F, Winter=W, Spring=Sp, S=Summer)

CHEM 285 Biochemistry, BYU (Primary Lecturer):	F2017, F2018, Sp2019, Sp2020, W2021, Sp2021, Sp2022, W2023, Sp2023
CHEM 481 Biochemistry	W2018, W2022, F2023, W2024
CHEM 481 Biochemistry (online)	F2024, W2025
CHEM 699 Thesis/Dissertation	W2017- present
CHEM 297R Research training Experience	F2017-present
CHEM 497R Mentored Learning in Biochemistry	W2017-present
CHEM 497R Capstone Mentored Learning in Biochemistry	F2018-present
CHEM 697R Graduate Research	F2018-present
CHEM 692R Current Topics Course,	W2019, F2019, F2022, W2025
CHEM 495R Current Topics Course	W2019
UNIV 101	F2024

Guest Lecturer

ENT401 New Venture Creation	Spring 2015
CMPP 794 Journal Club: Current Problems in Muscular Dystrophy	Spring 2015
Biochemistry (Guest lecturer), Virginia Polytechnic Institute and State University	Fall 2014

CHEM 481M Biochemistry for Chem. Majors (Guest lecturer), Brigham Young University, Fall 2017
CHEM Special Topics Course, Brigham Young University (Participant), Fall 2017, Winter 2018, Fall 2020

HONRS 120 Introduction to Interdisciplinary Thinking	Fall 2021

Professional Development

- Write Winning Grant Proposals: NSF/NIH Grant Writing Workshop, October 7, 2016 by David Morrison, Ph.D., -Reynolds School of Journalism, University of Nevada, Reno.
- Meeting on Scientific Integrity by Dr. Francis Macrina the Vice President for Research and Innovation at Virginia Commonwealth University on December 1, 2016 at University of Nevada, Reno.
- Teacher Development Training Brigham Young University August 2017.
- Faculty Development Series, Brigham Young University Fall 2017-Fall 2018.
- Blended Class Room Seminar-BYU, June 25, 2020.
- STEMFI, Teaching development summer symposium, May 2021-May 2022

Member of the Editorial board of the Cell Adhesion and Migration specialty section of Frontiers in Cell Developmental Biology