Curriculum Vitae

Jennifer Susan Stancill, Ph.D.

Medical University of South Carolina
Dept. of Biochemistry and Molecular Biology
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EDUCATION AND POSITIONS

Assistant Professor, tenure-track — Aug 2023 – Present
Medical University of South Carolina, Charleston, SC
Department: Biochemistry and Molecular Biology

Postdoctoral Fellowship — July 2017 – July 2023
Medical College of Wisconsin, Milwaukee, WI
Advisor: John A. Corbett, Ph.D.
Department: Biochemistry

Graduate Education (Ph.D.) — Aug 2011 – May 2017
Vanderbilt University, Nashville, TN
Advisor: Mark A. Magnuson, M.D.
Department: Cell and Developmental Biology

Undergraduate research assistant (Summer Scholar Program) — Summer 2009 & 2010
Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC
Advisor: Jan Rohozinski, Ph.D.
Department: Human Genetics

Undergraduate Education (B.S.) — Aug 2007 – May 2011
University of North Carolina, Chapel Hill, NC
Major: Biology
Dual minors in Chemistry and Music

CURRENT FUNDING

NIH/NIDDK Pathway to Independence Award (R00DK129709) — Aug 2023 – July 2026
"Protective Mechanisms in Pancreatic Beta-cells"

PAST FUNDING

NIH/NIDDK Pathway to Independence Award (K99DK129709) — Sept 2021 – July 2023
"Protective Mechanisms in Pancreatic Beta-cells"

MCW Cardiovascular Center Research Pilot Award — July 2022 – June 2023
"The Role of Glutathione Peroxidase 3 in Pancreatic Alpha-cells"

MCW Cardiovascular Center Research Pilot Award — Sept 2021 – Aug 2022
"Protective Responses of Human Pancreatic Beta-Cells to Inflammatory Cytokines"

MCW Cardiovascular Center A.O. Smith Postdoctoral Fellowship (T32HL134643) — Dec 2017 – Nov 2020
"Training in Signature Transdisciplinary Cardiovascular Sciences"

ACHIEVEMENTS AND AWARDS

MCW Postdoctoral Professional Development Award	2022
Travel Award: SfRBM National Conference	2022
Poster Presentation Award: UW Madison Diabetes Research Day	2022
Postdoctoral Excellence in Science Award (Awarded to one postdoc at MCW each year)	2021
Young Investigator Award: SfRBM National Conference	2021
Poster Award: 31st Annual MCW Research Poster Session	2021
Oral Presentation Award: 13th Annual Midwest Islet Club Meeting	2021
Poster Award: MCW Cardiovascular Center Research Retreat	2021
Oral Presentation Award: UW Madison Diabetes Research Day	2021
Poster Award: 30th Annual MCW Research Poster Session	2021
Edward J. Lennon, MD, Award for Outstanding Woman Postdoctoral Researcher (Awarded to one female postdoc at MCW each year)	2020
Poster Award: University of Illinois at Chicago Diabetes and Obesity Research Day	2020
MCW Postdoctoral Professional Development Award	2020
MCW Postdoctoral Travel Award	2018
Poster award: University of Chicago Diabetes Day	2018
Young Investigator Award: SfRBM and MCW Regional Redox Biology Symposium	2018
Oral Presentation Award: 10th Annual Midwest Islet Club Meeting	2017

TEACHING

Co-course director, BMB 607: Biochemistry & Molecular Biology Journal Club at MUSC	2024-present
Small group discussion facilitator in the medical student Clinical & Translational Research Pathway course at MCW	2020-2023
Small group discussion leader for Responsible Conduct in Research training at MCW	2020-2023
Certificate in College Teaching, Vanderbilt University Center for Teaching	2016
Contributing Editor to AAAS *Science* in the Classroom teaching resource	2014-2017

TRAINEES

Kate Glorioso (Ph.D. student)	2024-present
Kendall Cashion (Undergraduate student)	2024-present
Anna Tingler (Rotating Ph.D. student)	2024

SERVICE

AHA Arteriosclerosis, Thrombosis, and Vascular Biology Women's Leadership Committee	2024-present
Reviewer for the SCTR TL1 pre-doctoral training program (T32) at MUSC	2024-present
English Proficiency Interviewer for MUSC Dept of Biochemistry and Molecular Biology	2024-present
Interviewer for MUSC interdisciplinary Ph.D. program	2024-present
Grant reviewer for American Heart Association	2024-present
Oral presentation judge: 58th Annual Perry V. Halushka Research Day, MUSC	2023
AHA Arteriosclerosis, Thrombosis, and Vascular Biology Early Career Committee	2022-present
Search committee: MCW Assistant/Associate Dean of Postdoctoral Education	2022
Oral presentation session chair: SfRBM and MCW Regional Redox Biology Symposium	2021
Reviewer: Medical Student Honors in Research Theses at MCW	2020-2023
Organizing committee: SfRBM and MCW Redox Biology Symposium	2019-2021
Trainee chair: MCW Cardiovascular Center Research Retreat	2019
Poster judge: NAVBO Vasculata Conference	2019
Scholarship/Abstract Selection Committee for the 2019 NAVBO Vasculata Conference	2019
Judging committees: MCW Excellence in Science Award (2018), the Edward J. Lennon, MD, Award for Outstanding Woman Postdoctoral Researcher (2019, 2021), the MCW postdoctoral professional development award (2019, 2021), and the MCW Outstanding Postdoc Mentor Award (2022)	2018-2022
MCW Cardiovascular Center T32 Training Grant Executive Committee	2018-2019
MCW Postdoctoral Advisory Committee Co-chair (2020-2022)	2018-2022

AD HOC REVIEWER

Endocrinology	2023-present
Scientific Reports	2022-present
Acta Biochimica et Biophysica Sinica	2021-present
Cellular and Molecular Life Sciences	2021-present
Diabetes	2021-present

PROFESSIONAL AFFILIATIONS

Society for Redox Biology and Medicine (SfRBM)	2018-present
American Heart Association (AHA)	2018-present
American Diabetes Association (ADA)	2018-2019

INVITED TALKS

1. “Career Transitions: Writing a K99 and Entering the Job Market.” American Heart Association Scientific Sessions. Philadelphia, PA. November 10, 2023.

2. “The “Not-So-Vulnerable” Beta-Cell: Resistance to Oxidative Damage Relies on Thioredoxin Reductase.” SfRBM and MCW Regional Redox Biology Symposium. Virtual. May 14, 2021.

SELECTED SCIENTIFIC PRESENTATIONS

1. “Thioredoxin reductase 1 is required for maintenance of pancreatic β-cell function and identity” Society for Redox Biology and Medicine (SfRBM) National Conference. Orlando, Florida. Nov 19. 2022. **Winner of Travel Award*.

2. “Chronic thioredoxin reductase deficiency disrupts redox homeostasis and impairs β-cell function.” Society for Redox Biology and Medicine (SfRBM) National Conference. Virtual. Nov 16. 2021. **Winner of Young Investigator Award*.

3. “Protective responses of pancreatic islet cells to inflammatory cytokines.” 13th Annual Midwest Islet Club Meeting. Virtual. July 2021. * *Winner of oral presentation award.*

4. “Interleukin-1 promotes protective responses while repressing pancreatic islet identity factors.” University of Wisconsin at Madison Diabetes Day. Virtual. March 16, 2021. **Winner of oral presentation award.*

5. “IL-1β promotes protective responses in islet endocrine cells.” University of Illinois at Chicago Diabetes and Obesity Research Day. Virtual. Oct 13, 2020. **Winner of poster award.*

6. “Single-cell RNA sequencing of mouse islets exposed to inflammatory cytokines.” American Diabetes Association Annual Sessions. Virtual. June 15, 2020. **Selected for poster presentation by committee.*

7. “Single-cell RNA sequencing of mouse islets exposed to inflammatory cytokines.” Islet Biology: From Gene to Cell to Micro-Organ (Keystone Symposium). Santa Fe, New Mexico. January 30, 2020. **Selected for poster presentation by committee.*

8. “The ‘not-so-vulnerable’ β-cell.” 11th Annual Midwest Islet Club Meeting. Washington University, St. Louis. May 14, 2018. **Selected for oral presentation by committee.*

9. “The ‘not-so-vulnerable’ β-cell.” Chicago Diabetes Day. University of Chicago. Chicago, IL. May 12, 2018. **Winner of poster award.*

10. “The ‘not-so-vulnerable’ β-cell.” MCW Redox Biology Symposium. Milwaukee, WI. April 12, 2018. **Winner of Young Investigator Award.*

PUBLISHED ABSTRACTS

1. Kelly, M.I., **Stancill, J.S.**, Ashwood, C., Corbett, J.A., and Gundry, R.L. Glycan signatures as mechanistic markers of beta cell injury in diabetes. *Glycobiology*. 2020 December 1; 30 (12).

2. **Stancill, J.S.,** Kasmani, M.Y., Khatun, A., Cui, W., and Corbett, J.A. 2132-P: Single-cell RNA-sequencing of mouse islets exposed to proinflammatory cytokines. *Diabetes.* 2020 June; 69 (Supplement 1).

3. **Stancill, J.S.**, Broniowska, K.A.*, Happ, J.T., Oleson, B.J., Naatz, A., and Corbett, J.A. 214 - The “not-so-vulnerable” β-cell. *Free Radical Biology and Medicine*. 2018 November 20; 128 (Supplement 1).

REVIEWS

1. **Stancill, J.S.** and Corbett, J.A. The role of thioredoxin/peroxiredoxin in the β-cell defense against oxidative damage. *Front Endocrinol (Lausanne).* 2021 Sep 7;12:718235. (Peer-reviewed). PMID: 34557160.

BOOK CHAPTERS

1. **Stancill, J.S.** and Corbett, J.A. Hydrogen peroxide detoxification through the peroxiredoxin/thioredoxin antioxidant system: A look at the pancreatic β-cell oxidant defense. *Vitam Horm.* 2023;121:45-66. doi: 10.1016/bs.vh.2022.11.001. Epub 2022 Dec 29. PubMed PMID: 36707143.

PEER-REVIEWED PUBLICATIONS

1. **Stancill, J.S.‡,** Kasmani, M.Y., Cui, W., and Corbett, J.A‡. Single Cell RNAseq analysis of cytokine-treated human islets: Association of cellular stress with impaired cytokine responsiveness. *Function (Oxf).* 2024. Jul 11;5(4):zqae015. doi: 10.1093/function/zqae015. ‡Co-corresponding authors. PMID: 38985000.

2. Jones Lipinski, R.A., **Stancill, J.S.,** Nuñez, R., Wynia-Smith, S.L., Sprague, D.J., Nord, J.A., Bird, A., Corbett, J.A., and Smith, B.C. Zinc-chelating BET bromodomain inhibitors equally target islet endocrine cell types. *Am J Physiol Regul Integr Comp Physiol.* 2024 Jun 1;326(6):R515-R527. doi: 10.1152/ajpregu.00259.2023. Epub 2024 Apr 15. PMID: 38618911.

3. Yeo, C.T., Kropp, E.M., Hansen, P.A., Pereckas, M., Oleson, B.J., Naatz, A., **Stancill, J.S.,** Ross, K.A., Luecke, L.B., Gundry, R.L., and Corbett, J.A. β-cell selective inhibition of DNA damage response signaling by nitric oxide is associated with an attenuation in glucose uptake. *J. Biol. Chem.* 2023 Mar;299(3):102994. doi: 10.1016/j.jbc.2023.102994. PMID: 36773802.

4. **Stancill, J.S.‡,** Hansen, P.A., Mathison, A.J., Schmidt, E.E., and Corbett, J.A‡. Deletion of thioredoxin reductase disrupts redox homeostasis and impairs β-cell function. *Function (Oxf)*. 2022 Jul 4;3(4):zqac034. doi: 10.1093/function/zqac034. ‡Co-corresponding authors. PMID: 35873655.

5. **Stancill, J.S.‡,** Kasmani, M.Y., Khatun, A., Cui, W., and Corbett, J.A‡. Cytokine and nitric oxide-dependent gene regulation in islet endocrine and nonendocrine cells. *Function (Oxf).* 2021 Dec 1;3(1):zqab063. doi: 10.1093/function/zqab063. ‡Co-corresponding authors. PMID: 34927076.

6. **Stancill, J.S.‡,** Kasmani, M.Y., Khatun, A., Cui, W., and Corbett, J.A‡. Single-cell RNA-sequencing of mouse islets exposed to proinflammatory cytokines. *Life Science Alliance.* 2021 Apr 21;4(6):e202000949. Print 2021 Jun. ‡Co-corresponding authors. PMID: 33883217.

7. Volberding, P.J., Xin, G., Khatun, A., **Stancill, J.S.**, Martinez, E., Corbett, J.A., and Cui, W. Suppressive neutrophils require PIM1 for metabolic fitness and survival during chronic viral infection. *Cell Reports.* 2021 May 25;35(8):109160. PMID: 34038722.

8. Yeo, C.T., **Stancill, J.S.**, Oleson, B.J., Schnuck, J.K., Stafford, J.D., Naatz, A., Hansen, P.A., and Corbett, J.A. Regulation of ATR-dependent DNA damage response by nitric oxide. *J Biol Chem*. Jan-Jun 2021;296:100388. doi: 10.1016/j.jbc.2021.100388. Epub 2021 Feb 7. PMID: 33567339.

9. Osipovich, A.B., **Stancill, J.S.**, Cartailler, J.P., Dudek, K., and Magnuson, M.A. Excitotoxicity and Overnutrition Additively Impair Metabolic Function and Identity of Pancreatic β-Cells. *Diabetes.* 2020 Jul;69(7):1476-1491. PMID: 32332159.

10. **Stancill, J.S.**, Happ, J.T.†, Broniowska, K.A., Hogg, N., and Corbett, J.A. Peroxiredoxin 1 plays a primary role in protecting pancreatic β-cells from hydrogen peroxide and peroxynitrite. *Am J Physiol Regul Integr Comp Physiol.* 2020 May 1;318(5):R1004-R1013. †Undergraduate mentee. PMID: 32292063.

11. Shaheen, Z.R., Stafford, J.D., Voss, M.G., Oleson, B.J., **Stancill, J.S.**, and Corbett, J.A. The location of sensing determines the pancreatic β-cell response to the viral mimetic dsRNA. *J Biol Chem*. 2020 Feb 21;295(8):2385-2397. PMID: 31915247.

12. **Stancill, J.S.***, Broniowska, K.A.*, Oleson, B.J., Naatz, A., and Corbett, J.A. Pancreatic β-cells detoxify H_2O_2 through the peroxiredoxin/thioredoxin antioxidant system. *J Biol Chem*. 2019 Mar 29;294(13):4843-4853. *Authors contributed equally. PMID: 30659092.

13. **Stancill, J.S.***, Osipovich, A.B.*, Cartailler, J.P., and Magnuson, M.A. Transgene-associated hGH expression in pancreatic β-cells impairs identification of sex-based gene expression differences. *Am J Physiol Endocrinol Metab.* 2019 Feb 1;316(2):E196-E209. *Authors contributed equally. PMID: 30532991.

14. Fahey, J.M., **Stancill, J.S.**, Smith, B.C., Girotti, A.W. Nitric oxide antagonism to glioblastoma photodynamic therapy and mitigation thereof by BET bromodomain inhibitor JQ1. *J Biol Chem*. 2018 Apr 6; 293(14):5345-5359. PMID: 29440272.

15. **Stancill, J.S.**, Cartailler, J.P., Clayton, H.W., Dickerson, M., Dadi, P., Osipovich, A.B., Jacobson, D., and Magnuson, M.A. Chronic β-cell depolarization impairs β-cell identity by disrupting a network of Ca^{2+}-regulated genes. *Diabetes*. 2017 August; 66 (8): 2175-2187. PMID: 28550109.

16. Clayton, H.W., Osipovich, A.B., **Stancill, J.S**., Schneider, J.D., Vianna, P.G., Shanks, C.M., Yuan, W., Gu, G., Manduchi, E., Stoeckert, C.J., and Magnuson, M.A. Pancreatic Inflammation Redirects Acinar to Beta Cell Reprogramming. *Cell Rep*. 2016 November 15; 17 (8): 2028-2041. PMID: 27851966.

17. Brouwers, B., de Faudeur, G., Osipovich, A., Goyvaerts, L., Lemaire, K., Boesmans, L., Cauwelier, E.J.G., Granvik, M., Pruniau, V.P.E.G., Van Lommel, L., Van Schoors, J., **Stancill, J.S.**, Smolders, I., Goffin, V., Binart, N., in't Veld, P., Declercq, J., Magnuson, M.A., Creemers, J.W.M., Schuit, F., and Schraenen, A. Impaired islet function in commonly used transgenic mouse lines due to human growth hormone minigene expression. *Cell Metab*. 2014 December 2; 20 (6): 979-90. PMID: 25470546.