

CURRICULUM VITAE

Jessica Olson PhD

**Director, Associate Professor
Department of Institute for Health and Equity
Division of Community Health**

OFFICE ADDRESS:

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EDUCATION:

08/2003 - 05/2007 B.S., Northern Illinois University, DeKalb, IL
08/2007 - 05/2010 M.S., Northern Illinois University, DeKalb, IL
07/2009 - 05/2015 Ph.D., Medical College of Wisconsin, Milwaukee, WI
08/2015 - 05/2017 M.P.H, Medical College of Wisconsin, Milwaukee, WI

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

06/2015 - 02/2017 Instructor/Fellow, Academic Fellowship in Primary Care Research, Institute for Health and Society, Family and Community Medicine, Medical College of Wisconsin, 8701 Watertown Plank Rd, Milwaukee, WI 53226
04/2020 - 04/2021 Transdisciplinary Research in Energetics and Cancer, Yale School of Public Health, Yale University, New Haven, CT

FACULTY APPOINTMENTS:

02/2017 - Present Assistant Professor, Institute for Health & Equity, Community Health, Medical College of Wisconsin, Milwaukee, WI

ADMINISTRATIVE APPOINTMENTS:

2020 - Present Director, Evaluation and Innovation, Office of Diversity and Inclusion, Medical College of Wisconsin, Milwaukee, WI

EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

2017 - Present Director, Basic and Translational Science Program, Clinical and Translational Science Institute, Medical College of Wisconsin, Milwaukee, WI

AWARDS AND HONORS:

2012 - 2015 Graduate Student Travel Award, Medical College of Wisconsin
2014 24th Annual Graduate School of Biomedical Sciences Research Poster Session Award, Medical College of Wisconsin
2015 Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award, American Physiological Society
2015 Kayoko Ishizuka Award for Presentation at International Conferences, Medical College of Wisconsin
2016 President's Community Engagement Award, Medical College of Wisconsin
2017 Program of the Year Award, Milwaukee Academy of Sciences
2019 Early Career Investigator Award, Radiation Research Society
2019 Nonprofit Collaboration of the Year Award, Milwaukee Business News

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

2012 - 2023 Women in Science Committee
2012 - 2015 American Physiological Society
2012 - 2015 American Society of Anesthesiologists
2015 - 2017 American Evaluation Association
2016 - Present National Lung Cancer Roundtable
2017 - 2020 American Association of Cancer Research

LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2013 - 2014 Physiology Representative, Graduate Student Association, Medical College of Wisconsin
2014 - 2015 Vice President, Graduate Student Association, Medical College of Wisconsin
2016 - 2022 Executive Committee Member, Alumni Association, Medical College of Wisconsin
2016 - 2023 Chair, Women in Science, Medical College of Wisconsin
2022 - 2023 President, Alumni Association, Medical College of Wisconsin

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2017 - Present Chair, State-Based Initiatives Task Force, National Lung Cancer Roundtable

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title: Clinical and Translational Science Award
Source: NIH
Role & Effort: Co-Investigator
PI: Shaker
Dates: 08/2021 - 03/2027
Direct Funds: \$20,311,044 ((total for all years))

Title: Community and Cancer Science Network - Integration Hub
Source: Advancing a Healthier Wisconsin Endowment
Role & Effort: Co-Investigator
PI: Stolley
Dates: 02/2022 - 01/2027
Direct Funds: \$1,678,891 ((total for all years))

Title: Every Day Counts: A Lifestyle Program for Women with Metastatic Breast Cancer
Source: NIH
Role & Effort: Co-Investigator
PI: Stolley
Dates: 02/2022 - 01/2027
Direct Funds: \$3,641,133 ((total for all years))

Title: Community and Cancer Science Network - Research and Community Scholars
Source: Advancing a Healthier Wisconsin Endowment
Role & Effort: Co-Investigator
PI: Stolley
Dates: 02/2022 - 01/2027
Direct Funds: \$1,010,889 ((total for all years))

Title: Public Health Scholarship Program
Source: HRSA
Role & Effort: Co-Investigator
PI: Nelson
Dates: 09/2022 - 09/2025
Direct Funds: \$1,272,123 ((total for all years))

Title: Title V Maternal and Child Health
Services Block Grant
Source: Wisconsin Department of Health
Services
Role & Effort: Faculty
PI: Blackwell
Dates: 01/2023 - 12/2023
Direct Funds: \$75,000 ((total for all years))

Title: WeRISE Community-Based Doula
Training
Source: ARPA/Wisconsin Department of Health
Services
Role & Effort: Faculty
PI: Blackwell
Dates: 01/2023 - 06/2024
Direct Funds: \$500,000 ((total for all years))

Title: Phase II Breastfeeding Challenge
Source: Office on Women's Health
Role & Effort: Faculty
PI: Blackwell
Dates: 01/2023 - 12/2023
Direct Funds: \$30,000

Title: Transdisciplinary and Equitable
Approach to Maternal Health (TEAM)
[U54 Component]
Source: NIH
Role & Effort: Principal Investigator
PI: Olson
Dates: 07/2023 - 07/2030
Direct Funds: \$2,500,000 ((total for all years))

Title: Building Trust and Uniting Teams
Through Doula Partners (BUNDLE)
[U54 Component]
Source: NIH
Role & Effort: Principal Investigator
PI: Olson
Dates: 07/2023 - 07/2030
Direct Funds: \$2,500,000 ((total for all years))

Title: Addressing Key Social-Structural Risk
Factors for Racial Disparities in
Maternal Morbidity in Southeastern
Wisconsin (ASCEND WI)
Source: NIH
Role & Effort: Multi-Principal Investigator

PI: Palatnik, Olson, Williams, Dickson-Gomez
Dates: 07/2023 - 07/2030
Direct Funds: \$10,231,603 ((total for all years))

Prior

Peer Review

Title: Cross-Cutting Initiative
Source: Advancing a Healthier Wisconsin
Endowment

Role & Effort: Faculty
PI: Stolley
Dates: 11/2016 - 11/2024
Direct Funds: \$20,000,000 ((total for all years))

Title: Mitochondrial function disparities
contributing to cardiovascular toxicity
from radiation therapy

Source: Cancer Center, Medical College of
Wisconsin

Role & Effort: Core Director
PI: Medhora
Dates: 07/2017 - 06/2019
Direct Funds: \$200,000 ((total for all years))

Title: Illness Perceptions in Congestive Heart
Failure

Source: Advancing a Healthier Wisconsin
Endowment

Role & Effort: Co-Investigator
PI: Gaglianella
Dates: 01/2018 - 12/2019
Direct Funds: \$200,000 ((total for all years))

Title: Radiation Induced Heart Disease
Population Study

Source: Children's Hospital of Wisconsin

Role & Effort: Co-Investigator
PI: Baker
Dates: 06/2018 - 06/2019
Direct Funds: \$13,936 ((total for all years))

Title: Student Centered Pipeline to Advance
Research in Cancer Careers for
Underrepresented Minority Students

Source: NIH
Role & Effort: Co-Investigator
PI: Rader
Dates: 09/2018 - 08/2023
Direct Funds: \$937,389 ((total for all years))

Title: Men Moving Forward: A Lifestyle
Intervention for African American
Prostate Cancer Survivors: Research
Supplement

Source: NIH

Role & Effort:	Faculty
PI:	Stolley
Dates:	09/2019 - 09/2021
Direct Funds:	\$145,000 ((total for all years))
Title:	WeRISE Community-Based Doulas Responding to COVID-19
Source:	Wisconsin Partnership Program
Role & Effort:	Faculty
PI:	Blackwell
Dates:	02/2020 - 12/2022
Direct Funds:	\$250,000 ((total for all years))
Title:	Phase I Breastfeeding Challenge
Source:	Office on Women's Health
Role & Effort:	Faculty
PI:	Blackwell
Dates:	12/2020 - 12/2022
Direct Funds:	\$15,000 ((total for all years))
Title:	Patient Similarity for Decision-Making in Prevention of Cardiovascular Toxicity
Source:	Clinical and Translational Science Institute
Role & Effort:	Co-Investigator
PI:	Brown
Dates:	06/2021 - 10/2022
Direct Funds:	\$279,422 ((total for all years))
Title:	Development of a Team-Based Infrastructure for the Application of Personalized Medicine for Cardiovascular Risk Prediction in Cancer Patients and Survivors using Artificial Intelligence Algorithms
Source:	Clinical and Translational Science Institute
Role & Effort:	Co-Investigator
PI:	Brown
Dates:	06/2021 - 05/2022
Direct Funds:	\$34,957

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

Local

- Olson, J., Introduction to Cell Culture, Integrating STEM through Biomedical Science for High School Educators, Medical College of Wisconsin, Milwaukee WI, 07/2014
- Olson, J., Williams, A., Interpreting Scientific Data, Wauwatosa STEM School Presentation for 4th and 5th graders, Wauwatosa, WI., 03/2015
- Olson, J., Pursuing a PhD in Biomedical Sciences, Project Pioneer Presentation, Carroll College, Milwaukee, WI, 04/2015
- Olson, J., Nelson, D., Translating Research into the Community, DSHREP Lunch and Learn, Medical College of Wisconsin, Milwaukee, WI, 07/2015
- Olson, J., Scientific Research Careers at the Medical College of Wisconsin, Milwaukee Area Workforce Investment Board's Earn and Learn Summer Luncheon for Youth Development, Discovery World, Milwaukee, WI, 08/2015

PEER REVIEWED WORKSHOPS/PRESENTATIONS:

International

- Olson, J., Yan, Y., Bai, X., Kriegel, A., Canfield, S., Liang M., Bosnjak ZJ, The Role of MicroRNA in Anesthetic-Induced Cardiac Preconditioning, Annual Experimental Biology Conference, San Diego, CA, 04/2012
- Olson, J., Ge, Z., Liu, Y., Yan, Y., Bai, X., Kriegel, A., Liang M., Bosnjak, ZJ, MicroRNA Expression Profiling of In Vivo and In Vitro Cardiac Models After Isoflurane Exposure, Annual Meeting of the American Society of Anesthesiologists, Washington, DC, 10/2012
- Olson, J., Yan, Y., Kriegel, A., Bai, X., Liang M., Bosnjak ZJ, miR-21 Knockdown Attenuates the Cardioprotective Effects of Isoflurane, Annual Experimental Biology Conference, Boston, MA, 04/2013
- Olson, J., Yan, Y., Canfield, S., Twaroski, D., Kikuchi, C., Kriegel, A., Bai, X., Liang M., Bosnjak ZJ, Downregulation MicroRNA-21 in Type-2 Diabetic Patient Stem Cell-Derived Cardiomyocytes May Contribute to Attenuated Anesthetic Cardioprotection, Annual Meeting of the American Society of Anesthesiologists, San Francisco, CA, 10/2013
- Bai, X., Yan, Y., Twaroski, D., Kikuchi, C., Zaja, I., Canfield, S., Olson, J., Liu, Y., Bosnjak, ZJ, Ketamine induces both neuronal autophagy and apoptosis in stem cell-derived developing human neurons, 5th European-American Anesthesia Conference, 2013
- Twaroski, D., Bai, X., Yan, Y., Olson, J., Liu Y., Bosnjak ZJ, Anesthetic Exposure and microRNA Expression in Developing Human Neurons, Annual Experimental Biology Conference, San Diego, CA, 04/2014
- Twaroski, D., Bai, X., Olson, J., Yan, Y., Liu Y., Bosnjak ZJ, The Role of miR-21 in Propofol-Induced Neurotoxicity in Developing Human Neurons, Annual Experimental Biology Conference, San Diego, CA, 04/2014
- Olson, J., Yan, Y., Twaroski, D., Canfield, D., Kikuchi, C., Kriegel, A., Bai, X., Liang, M., Bosnjak, ZJ, The Role of MicroRNA-21 in Anesthetic-Mediated Cardioprotection. Poster Presentation, Annual Experimental Biology Conference, San Diego, CA, 04/2014
- Olson, J., Yan, Y., Twaroski, D., Bai, X., Kriegel, A., Liang M., Bosnjak ZJ, The Role of MicroRNA-21 in Anesthetic-Mediates Cardioprotection, First Adriatic Symposium on Biophysical Approaches in Biomedical Studies, Split, Croatia, 08/2014
- Olson, J., Yan, Y., Bai, X., Liang, M., Bosnjak, ZJ, Upregulation of miR-21 Restores Cardioprotection in Stem-Cell Derived Human Cardiomyocytes Cultured in High Glucose, International Anesthesia Research Society International Science Symposium, Honolulu, HI, 03/2015
- Olson, J., Yan, Y., Bai, X., Liang, M., Bosnjak, ZJ, Upregulation of miR-21 Restores Cardioprotection Under Diabetic Conditions, Annual Experimental Biology Conference, Boston, MA, 04/2015

Regional

- Twaroski, D., Yan, Y., Olson, J., Bosnjak ZJ, Bai, X., microRNA-21 contributes to the anesthetic-induced developmental neurotoxicity in human neurons, Advancing a Healthier Wisconsin (AWH) 10th Anniversary Conference, 2014

Local

- Annual Graduate Student Retreat Seminar, 2011 - 2013
- Annual Post-Doc Brown Bag Lunch Seminar, 2011 - 2014
- Annual Graduate Student Poster Day, 2011 - 2014
- Annual Physiology Department Seminar, 2013 - 2014
- Developmental Stem Cell Seminar, 2013
- Annual Anesthesiology Department Seminar, 2013 - 2014

COMMITTEE SERVICE:

Medical College of Wisconsin

- 08/2013 - 08/2014 Graduate Outreach Representative, Department of Graduate Recruitment and Admissions, Medical College of Wisconsin
- 08/2014 - 08/2015 Faculty Council, Graduate Representative, Department of Faculty Affairs, Medical College of Wisconsin
- 08/2014 - 08/2015 Commencement Committee, Graduate Representative, Department of Public Affairs,

Medical College of Wisconsin
08/2014 - 08/2015 Graduate Studies Council, Graduate Representative, Graduate School of Biomedical Sciences, Medical College of Wisconsin

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:

High School Students

06/2013 - 05/2015 Karina Schmidt, Research Mentor, Divine Savior Holy Angels High School
08/2013 - 01/2014 7th Grade Students, Research Mentor, St. Matthias Middle School
01/2014 - 05/2015 4th and 5th Grade Students, Research Mentor, Wauwatosa STEM School

Undergraduate Students

06/2015 - 09/2015 Hanan Qasim, Research Mentor, Jordan University of Science and Technology

PROGRAMMATIC DEVELOPMENTS:

Community Programs

06/2015 - Present Milwaukee Academy of Science and High School for Health Sciences Scientific Mentorship Program

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Olson J, Taylor R, Sparapani R, Lenarczyk M, Baker J. A Combined Basic Science and Population Science Approach Demonstrating the Potential for Simvastatin to Mitigate Cardiovascular Disease after Lower Hemi Body Radiotherapy Circulation. https://www.ahajournals.org/doi/10.1161/circ.136.suppl_1.24082.
2. Olson J, Svoboda-Newman S, Gardner-Volle K, McNally M, Fabian E, Maurana C. More than a Conversation: the Power of Bringing Scientists and the Community Together to Change Perceptions About Cancer. *J Cancer Educ.* 2019 Jun;34(3):571-576.
3. Kamaraju S, Olson J, DeNomie M, Visotcky A, Banerjee A, Asan O, Tavares E, Rao A, LaCroix M, Krause K, Neuner J, Stolley M. Community Breast Health Education for Immigrants and Refugees: Lessons Learned in Outreach Efforts to Reduce Cancer Disparities. *J Cancer Educ.* 2019 Dec;34(6):1092-1096.
4. Olson J, Cawthra T, Beyer K, Frazer D, Ignace L, Maurana C, Millon-Underwood S, Pinsoneault L, Salazar J, Walker A, Williams C, Stolley M. Community and Research Perspectives on Cancer Disparities in Wisconsin. *Prev Chronic Dis.* 2020 Oct 08;17:E122. PMID: PMC7553208
5. Olson J, Shean P, Matthews L, Chitambar CR, Banerjee A, Visotcky A, Bonini M, Stolley M. Circulating miRNAs as early indicators of diet and physical activity response in women with metastatic breast cancer. *Future Sci OA.* 2021 Mar 04;7(4):FSO694. PMID: PMC8015665
6. Ortiz de Choudens S, Sparapani R, Narayanan J, Lohr N, Gao F, Fish BL, Zielonka M, Gasperetti T, Veley D, Beyer A, Olson J, Jacobs ER, Medhora M. Lisinopril Mitigates Radiation-Induced Mitochondrial Defects in Rat Heart and Blood Cells. *Front Oncol.* 2022;12:828177. PMID: PMC8924663
7. Brown SA, Sparapani R, Osinski K, Zhang J, Blessing J, Cheng F, Hamid A, Berman G, Lee K, BagheriMohamadiPour M, Lal JC, Kothari AN, Caraballo P, Noseworthy P, Johnson RH, Hansen K, Sun LY, Crotty B, Cheng YC, Olson J, Cardio-Oncology Artificial Intelligence Informatics & Precision (CAIP) Research Team Investigators. Establishing an interdisciplinary research team for cardio-oncology artificial intelligence informatics precision and health equity. *Am Heart J Plus.* 2022 Jan;13. PMID: PMC9012235
8. Olson J, Tucker J, Simi R, Wrucke S, Jordan CG. Building towards community-oriented policing: Forming an academic medical center partnership with local police. *Prev Med Rep.* 2022 Dec;30:102015. PMID: PMC9551139
9. Doren EL, Park K, Olson J. Racial disparities in postmastectomy breast reconstruction following

- implementation of the affordable care act: A systematic review using a minority health and disparities research framework. *Am J Surg*. 2023 Jul;226(1):37-47.
10. Sun LY, Echefu G, Doshi K, Roberts ML, Hamid A, Cheng RK, Olson J, Brown SA. Commentary: "Multimodality advanced cardiovascular and molecular imaging for early detection and monitoring of cancer therapy-associated cardiotoxicity and the role of artificial intelligence and big data". *Front Cardiovasc Med*. 2023;10:982028. PMID: PMC10009261
 11. Giles ED, Purcell SA, Olson J, Vrieling A, Hirko KA, Woodruff K, Playdon MC, Thomas GA, Gilmore LA, Moberly HK, Newell-Fugate AE. Trends in Diet and Cancer Research: A Bibliometric and Visualization Analysis. *Cancers (Basel)*. 2023 Jul 25;15(15). PMID: PMC10417030
 12. Twaroski DM, Yan Y, Olson JM, Bosnjak ZJ, Bai X. Down-regulation of microRNA-21 is involved in the propofol-induced neurotoxicity observed in human stem cell-derived neurons. *Anesthesiology*. 2014 Oct;121(4):786-800. PMID: PMC4174986
 13. Xu X, Kriegel AJ, Jiao X, Liu H, Bai X, Olson J, Liang M, Ding X. miR-21 in ischemia/reperfusion injury: a double-edged sword? *Physiol Genomics*. 2014 Nov 01;46(21):789-97. PMID: PMC4280148
 14. Olson JM, Yan Y, Bai X, Ge ZD, Liang M, Kriegel AJ, Twaroski DM, Bosnjak ZJ. Up-regulation of microRNA-21 mediates isoflurane-induced protection of cardiomyocytes. *Anesthesiology*. 2015 Apr;122(4):795-805. PMID: PMC4366274
 15. LaDisa JF Jr, Bozdog S, Olson J, Ramchandran R, Kersten JR, Eddinger TJ. Gene Expression in Experimental Aortic Coarctation and Repair: Candidate Genes for Therapeutic Intervention? *PLoS One*. 2015;10(7):e0133356. PMID: PMC4514739
 16. Qiao S, Olson JM, Paterson M, Yan Y, Zaja I, Liu Y, Riess ML, Kersten JR, Liang M, Wartier DC, Bosnjak ZJ, Ge ZD. MicroRNA-21 Mediates Isoflurane-induced Cardioprotection against Ischemia-Reperfusion Injury via Akt/Nitric Oxide Synthase/Mitochondrial Permeability Transition Pore Pathway. *Anesthesiology*. 2015 Oct;123(4):786-798. PMID: PMC4573345
 17. Brown SA, Sparapani R, Osinski K, Zhang J, Blessing J, Cheng F, Hamid A, MohamadiPour MB, Lal JC, Kothari AN, Caraballo P, Noseworthy P, Johnson RH, Hansen K, Sun LY, Crotty B, Cheng YC, Echefu G, Doshi K, Olson J, Cardio-Oncology Artificial Intelligence Informatics & Precision (CAIP) Research Team Investigators. Team principles for successful interdisciplinary research teams. *Am Heart J Plus*. 2023 Aug;32:100306. PMID: PMC10946054
 18. Brown SA, Hudson C, Hamid A, Berman G, Echefu G, Lee K, Lamberg M, Olson J. The pursuit of health equity in digital transformation, health informatics, and the cardiovascular learning healthcare system. *Am Heart J Plus*. 2022 May;17:100160. PMID: PMC10978355