Stephen Dzul, MD, PhD

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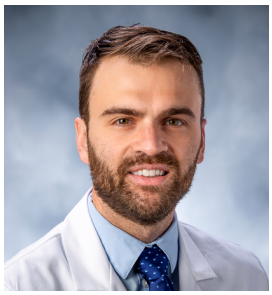

Current Role

2023-Present

Staff Radiation Oncologist
Corewell Health East – Dearborn

- Head/Neck Cancer and Genitourinary Cancer Subspecialist
  - Treatments Offered: LINAC-based 3D-CRT, SBRT, IGRT, IMRT, VMAT, Proton Pencil Beam Therapy
  - HDR intracavitary and interstitial brachytherapy
  - Radiopharmaceutical Therapy: Pluvicto

2023-Present

Associate Professor in Radiation Oncology
Oakland University William Beaumont School of Medicine

Education

2019-Present
Detroit, MI

Radiation Oncology Resident
Wayne State University/Karmanos Cancer Center

- Completing training in a high-volume NCI designated comprehensive center
- Organized and completed 3-month proton externship at McLaren Flint Proton Center
- Recipient 2022 QuESST award (institution-wide quality improvement conference. 2nd place)
- Served as Chief Resident (2022-2023)

2018-2019
Livonia, MI

Transitional Year Internship
St. Mary Mercy Hospital

2010-2018
Detroit, MI

Doctor of Medicine (M.D.)
Wayne State University School of Medicine

- Awarded Pokriefka Scholarship (for Medical Students pursuing career in Oncology)

2012-2016
Detroit, MI

Doctor of Philosophy (Ph.D) in Biochemistry and Molecular Biology
Wayne State University School of Medicine

2006-2010
Ann Arbor, MI

Bachelor of Science in Engineering (B.S.E)
University of Michigan

- Chemical Engineering Major
- Graduated *Summa Cum Laude*

Licensure/Certification

- **American Board of Radiology**: Radiation Biology/Physics Qualifying Exam – *Passed*
  Clinical Written Qualifying Exam – *Passed*
  Board Eligibility: Expires 2028

Professional societies/committees

2019 – present	American Society for Radiation Oncology (ASTRO)
2019 – present	Ukrainian Medical Association of North America (UMANA)
2019 – 2023	Association of Residents in Radiation Oncology (ARRO)
2012-2016	American Heart Association (AHA)

Professional Experience

2012-2016
Detroit, MI

Graduate Student
Wayne State University School of Medicine
- Department of Biochemistry and Molecular Biology
- Advisor: Timothy Stemmler, Ph. D.
- Dissertation: Insights into *de novo* Fe-S Cluster Biogenesis via the Eukaryotic Fe-S Cluster Pathway (ISC) *in vitro*

Summer 2012
Detroit, MI

Medical Student Research Externship
Eugene Applebaum College of Pharmacy and Health Sciences
- Advisor: Aloke Dutta, Ph.D.
- Project: Toxicity of alpha-Synuclein and Dopamine Analogs in Mouse Dopaminergic Neuroblastoma (MN9D) Cells *in vitro*

Summer 2011
Detroit, MI

Medical Student Research Externship
Karmanos Cancer Institute.
- Advisor: Anthony Shields M.D. Ph.D., Professor of Oncology.
- Project: Uracil-Analog FAU in Treating Patients with Advanced Solid Tumors and Lymphoma. CT#: NCT00769288

2008-2010
Ann Arbor, MI

Undergraduate Research Assistant
University of Michigan. Department of Emergency Medicine.
- Advisor: John Younger M. D., Professor of Emergency Medicine.
- Project: Use of Confocal Laser-Scanning Microscopy to Characterize Biofilms of Klebsiella Pneumoniae Isolated from Foley Catheters

2008
Ann Arbor, MI

Undergraduate Research Assistant
University of Michigan. Department of Chemical Engineering.
- Advisor: Nicholas Kotov Ph. D., Professor of Chemical Engineering.
- Project: Polymer Layer-by-Layer Self Assembly for Hydrogen Fuel Cell Ion-Exchange Membrane Synthesis

Honors/Awards

2023 **Wilhelm C. Roentgen Award** for Outstanding Research Achievement: Karmanos Cancer Institute

2022 **Best Research Poster Presentation: 2nd place.** Detroit Medical Center.
- Quality Education and Safe Systems Training (QuESST) Conference

2018 **Dorothy and Charles Pokriefka Sr. Endowed Scholarship.**

2016 **Best Oral Presentation. First place**
- Annual Wayne State University MD/PhD Research Conference

2015 **Best Oral Presentation. Second place**
- Wayne State Biochemistry and Molecular Biology Research Forum

2014 **Outstanding Achievement**
- Medical Student Recognition Day. Wayne State University.

Grants

2014-2018 **National Institute of Health**: 1F30DK101230-01A1 Dzul (PI)
- Characterizing Isu Scaffolding Protein and Iron Sulfur Cluster (ISC) Multiprotein Complex. Total award: $179,000

2013-2014 **American Heart Association**: 13PRE16490009 Dzul (PI)
- Pre-Doctoral Fellowship. Total award: $52,000

2013 **Wayne State University**: Graduate Student Assistantship
- Internal grant providing funding for first year of graduate school. Total award: $27,500

Publications

Recent Abstracts:

1. **Dzul, S**.; Bleta, C.; Jankulovski, A.; Baran, G.; Jaenisch, H.; Burmeister, J. Comparison of Predicted vs. Measured Heart Dose with and without Cone Beam CT from Tangential Whole Breast Radiotherapy in an Anthropomorphic Chest Phantom. Submitted and In Review. *ARS Annual Conference* 2024
2. **Dzul, S.**; Baran, G.; Zong, P.; Somnay, Y.; Gayar, H. Comparison of Daily Alignment to Iodinated Perirectal Hydrogel Spacer versus Intra-prostatic Fiducial Markers for Image-guided External Beam Radiation Therapy to the Prostate. Submitted and In Review. *ARS Annual Conference* 2024
3. Garlapati, J**.; Dzul, S.;** Estimating Uncertainty in Heart Dose During Tangential Whole Breast Radiotherapy due to Respiratory Organ Movement via 4D-CT**.** Presented at *Detroit Medical Center Quality Education & Safe Systems Training (QueSST) Conference.* April 2022.
4. **Dzul, S**.; Ninia, J.; Jang, H.; Kim, S.; Dominello, M. Predictors of Acute Radiation Dermatitis and Esophagitis in African American Patients Receiving Whole Breast Radiotherapy. *IJROBP.* 2021; 111(3); e221-222. Poster Presentation. Presented at ASTRO October 2021.
5. **Dzul, S**.; Ninia, J.; Jang, H.; Kim, S.; Dominello, M. Predictors of Acute Radiation Dermatitis and Esophagitis in Early-Stage Breast Cancer Patients Receiving Whole Breast Radiotherapy. Poster Presentation. *American Journal of Clinical Oncology.* 2021; 44(10); S40-41. Poster Presented at ARS September 2021.
6. **Dzul, S**.; Miller, S.; Vaishampayan, N.; Bossenberger, T.; Nalichowski, A.; Joiner, M. Estimating Equivalent Dose for a Dosimetric Comparison of HDR vs. LDR Prostate

Brachytherapy. Poster Presentation. Presented at *Detroit Medical Center Quality Education & Safe Systems Training (QueSST) Conference.* April 2020

7. **Dzul, S.**; Gits, H. Moderate Aerobic Activity for Improving Fatigue in Patients Receiving Adjuvant Whole Breast Radiotherapy: A Systematic Review. Oral Presentation. *St. Mary Mercy Annual Quality Improvement Conference*. April 2019.

Manuscripts:

1. Wang, P.; **Dzul, S**.; Joiner, M.; Miller, S. Adenocarcinoma Involving the Urinary Bladder. Submitted to *BMJ Case Reports*. Jul 2023. 16(7): e252747.
2. Musa, A.; **Dzul, S**.; Joiner, M.; Miller, S. Metastatic spread of serous ovarian carcinoma to the bilateral breasts: a rare presentation. *BMJ Case Reports*. 2022; 15(11):e251721.
3. **Dzul, S**.; Jaenisch, H.; Nagle, C.; Joiner, M.; Miller, S. Radiation induced mucoepidermoid carcinoma of the parotid gland following post-operative radiotherapy to the earlobe for keloid prophylaxis. *Ear Nose Throat J.* 2022; 0(0). Doi:10.1177/01455613221099998.
4. **Dzul, S**.; Ninia, J.; Jang, H.; Kim, S.; Dominello, M. Predictors of Acute Radiation Dermatitis and Esophagitis in African American Patients Receiving Whole Breast Radiotherapy. *Practical Radiation Oncology*. 2022 Jan-Feb;12(1):52-59.
5. Vickery, J.; Han, L.; **Dzul, S**.; Zhang, W.; Zhang, Z.; Lapadat R,.; Sattar, H.; Mueller, J.; Krausz, T.; Biernacka, A. Immunohistochemical Evaluation of 5-hydroxymethylcytosine (5-hmC) in Breast Phyllodes Tumors, 23 February 2022, Preprint (Version 1) available at *Research Square* [https://doi.org/10.21203/rs.3.rs-1374884/v1]
6. Trinh, H.; **Dzul, S. P**.; Hyder, J.; Jang, H.; Kim, S.; Flowers, J.; Vaishampayan, N.; Chen, J.; Winer, I.; Miller, S. Prognostic value of changes in neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR) and lymphocyte-to-monocyte ratio (LMR) for patients with cervical cancer undergoing definitive chemoradiotherapy (dCRT). *Clin Chim Acta*. 2020; 510: 711-716.
7. Kozman, D.; Abramowsky, C.R.; Poulik, J.; Dereje, P.; Bondarenko, L.; Vickery, J.; **Dzul, S**.; Hanan, A.; Shehata, B. M., Pediatric Right Ventricular Cardiac Steatosis following Immunosuppressive Treatment. *Fetal Pediatric Pathology*. 2020; 1-6.
8. Truong, P.T.; Broering, E.P.; **Dzul, S. P**.; Chakraborty, I.; Stemmler, T. L.; Harrop, T. C., Simultaneous nitrosylation and N-nitrosation of a Ni-thiolate model complex of Ni-containing SOD. *Chem Sci*. 2018; 9(45): 8567-74.
9. Blahut, M.; **Dzul, S**.; Wang, S.; Kandegedara, A.; Grossoehme, N. E.; Stemmler, T.; Outten, F. W., Conserved cysteine residues are necessary for nickel-induced allosteric regulation of the metalloregulatory protein Yqjl (NfeR) in E. coli. *J Inorg Biochem*. 2018; 184;123-133.
10. Truong, P.; Gale, E.; **Dzul, S. P**.; Stemmler, T. L.; Harrop, T. C., Steric Enforcement About One Thiolate Donor Leads to New Oxidation Chemistry in NiSOD. *J Inorg Chem.* 2017; 56(14): 7761-80.
11. Steiner, R. A.; **Dzul, S. P**.; Stemmler, T. L.; Harrop T. C., Synthesis and Speciation-Dependent Properties or a Multimetallic Model Complex of NiSOD That Exhibits Unique Hydrogen-Bonding. *J Inorg Chem*. 2017; 56(5):2849-2862.
12. **Dzul, S. P**.; Rocha A. G.; Rawat, S.; Kandegadara, A.; Kusowski, A.; Pain, J.; Murari, A.; Pain, D.; Dancis, A.; Stemmler, T. L., In vitro characterization of a novel Isu homologue from D. Melanogaster for de novo FeS-cluster formation. *Metallomics*. 2016; 9(1):48-60.
13. Walter, M. R.; **Dzul, S. P**.; Rodrigues, A. V.; Stemmler, T. L.; Telser, J.; Conradie, J.; Ghosh A.; Harrop, T. C., Synthesis of Co-NO complexes and their reactivity as a source of hydroxyl. *J Biol Chem*. 2016; 138: 12459-12471.

14. **Dzul, S. P**.; Barupala, D. P.; Riggs-Gelasco, P. J.; Stemmler, T. L., Synthesis, delivery and regulation of eukaryotic heme and Fe-S cluster cofactors. *Arch Biochem Biophys*. 2016; 592: 60-75.
15. Bafaro, E. M.; Antala, S.; Nguyen, T. V.; **Dzul, S. P.**; Doyon, B.; Stemmler, T. L.; Dempski, R. E., The large intracellular loop of hZIP4 is an intrinsically disordered zinc binding domain. *Metallomics*. 2015; 7: 1319-1330.
16. Plegaria, J. S.; **Dzul, S. P**.; Zuiderweg, E. R.; Stemmler, T. L.; Pecoraro, V. L., Apoprotein Structure and Metal Binding Characterization of a de Novo Designed Peptide, alpha3DIV, that Sequesters Toxic Heavy Metals. *Biochemistry*. 2015; 54: 2858-2873.
17. Byrne, E.; **Dzul, S.**; Solomon, M.; Younger, J.; Bortz, D. M., Postfragmentation density function for bacterial aggregates in laminar flow. *Phys Rev E Stat Nonlin Soft Matter Phys.* 2011; 83: 041911.
18. **Dzul, S. P.**; Thornton, M. M.; Hohne, D. N.; Stewart, E. J.; Shah, A. A.; Bortz, D. M.; Solomon, M. J.; Younger, J. G., Contribution of the Klebsiella pneumoniae capsule to bacterial aggregate and biofilm microstructures. *Appl Environ Microbiol*. 2011; 77: 1777-1782.

Book Chapters

1. **Dzul, S. P**.; Stemmler, T. L.; Penner-Hahn, J.E. “Manganese Proteins with Mono- and Dinuclear Metal Sites”. Encyclopedia of Inorganic and Bioinorganic Chemistry, Robert A. Scott Eds., Chichester, UK: John Wiley & Sons, Ltd., 2015.

Languages

English, Ukrainian