Phillip M. Pifer

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EDUCATION

Residency	Radiation Oncology Program: July 2019 – Present	**University of Pittsburgh Hillman Cancer Center** Pittsburgh, PA
Internship	Transitional Year Residency Program: July 2018 – June 2019	**West Virginia University School of Medicine** Morgantown, WV
M.D.	M.D.-Ph.D. Dual degree scholar: Aug 2010 - May 2018	**West Virginia University School of Medicine** Morgantown, WV Honors: Alpha Omega Alpha Honor Medical Society
Ph.D.	M.D.-Ph.D. Dual degree scholar: Aug 2010 - May 2018 Degree date: May 2018 Time in Ph.D.: Aug 2010 -June 2016	**West Virginia University School of Medicine** Morgantown, WV Department of Biochemistry, Program in Cancer Cell Biology **Dissertation Title:** Grainyhead-like-2 inhibits the coactivator p300, suppressing tubulogenesis and the epithelial-mesenchymal transition **Dissertation Advisor:** Dr. Steven M. Frisch, Ph.D. **Dissertation Defense Date:** 06/24/2016
B.S.	Chemistry: Aug 2006 - May 2010 Honors: *Summa Cum Laude*	**West Virginia University School of Arts & Sciences** Morgantown, WV Department of Chemistry

RESEARCH EXPERIENCES

Transitional Year Researcher, Department of Radiation Oncology, WVU 2017 – present

- Advisor: John Austin Vargo, MD.
- "*Retrospective Review of Anatomical Patterns of Chest Wall Recurrence for Breast Cancer: Implications for Post-mastectomy Radiotherapy Clinical Target Volume Design*"
- *Retrospective Review of Retrocrural Lymph Node Positivity on PET Scan in Esophageal and Gastroesophageal Junction Cancer: Implications for Radiotherapy CTV Design*"

Medical Student Researcher, Department of Radiation Oncology, WVU 2017 – 2018

- Advisor: Malcolm D. Mattes, MD. "*Comparative analysis of the views of oncologic subspecialists and palliative/supportive care physicians regarding advanced care planning and end-of-life care*"

MD/PhD Trainee, Cancer Cell Biology Program, WVU 2011 – 2018

- Advisor: Steven M. Frisch, PhD. "*Grainyhead-like-2 inhibits the coactivator p300, suppressing tubulogenesis and the epithelial-mesenchymal transition*"

Visiting Graduate Researcher, Children's Hospital of Pittsburgh, Dept. of Nephrology 2014

- Advisor: Carlton M. Bates, MD. *Laboratory methods of the developing kidney*.

Undergraduate Researcher, Dept. of Chemistry, WVU 2009-2010

- Advisor: Justin Legleiter, PhD. *"Point mutations in Aβ result in the formation of distinct polymorphic aggregates in the presence of lipid bilayers."*

PEER-REVIEWED PUBLICATIONS

MacFawn, I., Wilson, H., Selth, LA., Leighton, I., Serebriiskii, I., Bleackley, R.C., Elzamazamy, O., Farris, J., **Pifer, P.M.,** Richer, J., and Frisch, S.M. (2019) *"Grainyhead-like-2 confers NK-sensitivity through interactions with epigenetic modifiers."* Molecular Immunology.

Pifer, P.M, Bice, R.P., Jacobson, G.M., Lupinacci, K., Beriwal, S., Hazard, H.W., and Vargo, J.A. (2019) *"The Lack of Consensus of International Contouring Guidelines for the Dorsal Border of the Chest Wall CTV: What is the Impact on Organs at Risk and Relationships to Patterns of Recurrence in the Modern-Era?"* Advances in Radiation Oncology.

Pifer, P.M., Farrugia, M.K., and Mattes, M. D. (2018). *"Comparative Analysis of the Views of Oncologic Subspecialists and Palliative/Supportive Care Physicians Regarding Advanced Care Planning and End-of-Life Care."* American Journal of Hospice and Palliative Medicine.

Kalash, R., **Pifer, P. M.,** Beriwal S, Glaser, S. M., Vargo, J. A, & Heron, D. E. (2017). *"Exceptional Eight-year Response to Stereotactic Radiosurgery Monotherapy for Multiple Brain Metastases."* Cureus.

Frisch, S.M, Farris, J.C, and **Pifer, P. M.** (2017). *"Roles of Grainyhead-like transcription factors in Cancer."* Oncogene.

Pifer, P. M., Farris, J. C., Thomas, A. L., Stoilov, P., Denvir, J., Smith, D. M., & Frisch, S. M. (2016). *"Grainyhead-like-2 inhibits the coactivator p300, suppressing tubulogenesis and the epithelial-mesenchymal transition."* Molecular Biology of the Cell.

Farris, J. C., **Pifer, P. M.**, Zheng, L., Gottlieb, E., Denvir, J., & Frisch, S. M. (2016). *"Grainyhead-like 2 Reverses the Metabolic Changes Induced by the Oncogenic Epithelial-mesenchymal Transition: Effects on Anoikis."* Molecular Cancer Research.

Cieply, B., Riley, P. T., **Pifer, P. M.**, Widmeyer, J., Addison, J. B., Ivanov, A. V., Frisch, S. M. (2012). *"Suppression of the Epithelial-Mesenchymal Transition by Grainyhead-like-2."* Cancer Research.

Pifer, P. M., Yates, E. A., & Legleiter, J. (2011). *"Point mutations in Aβ result in the formation of distinct polymorphic aggregates in the presence of lipid bilayers."* PLoS One.

Kumar, B., **Pifer, P. M.**, Giovengo, A., & Legleiter, J. (2010). *"The effect of set point ratio and surface Young's modulus on maximum tapping forces in fluid tapping mode atomic force microscopy."* Journal of Applied Physics.

ABSTRACTS, PRESENTATIONS, & CONFERENCES

Abstracts

Martin, D.J., **Pifer, P.M.**, Bice, R.P., Renz, P., and Vargo, J.A. *"Retrocrural Lymph Node Positivity on PET/CT Staging in Esophageal and Gastroesophageal Junction Cancer: Implications for Radiotherapy Clinical Target Volume Design."* Van Liere Research Convocation; West Virginia University (2019).

Pifer, P.M, Hazard, H., and Vargo, J.A. *"Is Intraoperative Radiotherapy Safe in Early-Stage Breast Cancer with Associated Rheumatoid Arthritis? "* Van Liere Research Convocation; West Virginia University (2019).

Pifer, P.M, Bice, R., Jacobson, G., Lupinacci, K., Beriwal, S., Hazard, H., and Vargo, J.A. **"***The Lack of Consensus of International Contouring Guidelines for the Dorsal Border of the Chest Wall CTV: What is the Impact on Organs at Risk and Relationships to Patterns of Recurrence in the Modern-Era?"*

- Annual Meeting Scientific Program Committee of the American Society for Radiation Oncology (ASTRO) (2018).
- WVU Cancer Institute Annual Scientific Meeting (2018).

Pifer, P.M., Cieply, B., Frisch, S.M. *"The role of GRHL-1 and GRHL-2 in clear cell renal cell carcinoma."* – Van Liere Research Convocation- West Virginia University (2013).

Pifer, P.M., and Legleiter, J. *"The effect of mutant beta amyloid peptide aggregation on the stability of model lipid bilayers."*

- 54th Annual meeting of Biophysical Society (2010).
- WVNANO Initiative Research Symposium (2009).
- WVU American Chemical Society Student Affiliates Chemical Symposium (2009).

Presentations

Pifer, P.M, Bice, R., Jacobson, G., Lupinacci, K., Beriwal, S., Hazard, H., and Vargo, J.A. **"***The Lack of Consensus of International Contouring Guidelines for the Dorsal Border of the Chest Wall CTV: What is the Impact on Organs at Risk and Relationships to Patterns of Recurrence in the Modern-Era?"* West Virginia University Cancer Institute Breast Cancer Leadership Meeting (December 7th, 2019).

Pifer, PM, Farrugia MK, Mattes M. *"Comparative analysis of the views of oncologic subspecialists and palliative/supportive care physicians regarding advanced care planning and end-of-life care."* Annual Meeting Scientific Program Committee of the American Society for Radiation Oncology (ASTRO) (Sept 26th, 2017).

Pifer, PM. "*Grainyhead-like-2 inhibits the coactivator p300, suppressing tubulogenesis and the epithelial-mesenchymal transition."* The Ohio State University, Department of Radiation Oncology (August 17th, 2017).

Pifer, PM, Farris, JC. *"The Physician-Scientist career track: How to be a successful MD-PhD candidate."* WVU Cancer Institute undergraduate research program invited speaker. (May 31st, 2016).

Pifer, PM. *"Advancements in Melanoma- PD1 inhibitors."* WVU Cancer Cell Biology Journal Club. (Jan. 21st, 2016).

Pifer, PM. *"Role of grainyhead-like 2 in the establishment of the epithelial phenotype."* WVU Genomics Group; Invited speaker. (Jun. 24st, 2015).

Pifer, PM. *"The MD-PhD Track: A Brief Overview."* IDeA Network of Biomedical Research Excellence (INBRE) invited speaker. (Jun. 8st, 2015).

Pifer, PM, Frisch SM. *"GRHL2 in Kidney Tubulogenesis."* WVU Department of Biochemistry; Cancer Cell Biology Dissertation Proposal. (Apr. 28, 2014).

Pifer, PM. Sharma SB, Farrugia MK. *"The MD-PhD Track: A Brief Overview."* WVU American Chemical Society Student Affiliates invited speaker. (Feb. 27st, 2014)

Pifer, PM, Sharma SB, Farrugia MK, Pilkerton CK, Turner RC. *"The Physician-Scientist Career Track: How to be a Successful MD-PhD Candidate."* WVU Chapter of American Physician-Scientist Association; Invited talk. (2011)

Conferences

Annual Meeting Scientific Program Committee of the American Society for Radiation Oncology (ASTRO) (2017, 2018).

American Physician Scientist Association Regional Meeting, SUNY UPSTATE Medical University (Oct 2015).

Tackling Translational Challenges, 14th Annual World Preclinical Congress Conference, Focus on Novel Preclinical Models in Oncology and Targeting Histone Acetylation (Jun 2015).

54th Annual Meeting of Biophysical Society, (Feb 2010).

TECHNIQUES

Cell and Molecular Biology: Tissue cell culture, three dimensional cell culture, PCR Primer Design, molecular cloning techniques (Including sub-cloning, site-directed mutagenesis, and plasmid preparation), RNA isolation (from primary tissues and cells), DNA purification, qRT-PCR, RNA-Seq preparation, cell transfection, mammalian cell retroviral and lentiviral transduction, luciferase reporter assays, immunoblotting (western blot), immunofluorescent staining, histone acetylation assays, bacterial and mammalian protein purification, Ingenuity Pathway Analysis examination, immunoprecipitation, chromatin immunoprecipitation, Anoikis assays (caspase 3/7 activation assays, cell death ELISA, and cell viability assays), and confocal microscopy for MDCK Cysts.

Animal and Kidney models: Timed breeding, embryonic kidney harvesting, ex vivo kidney culture, kidney imaging, colony maintenance, mouse genotyping, folic acid kidney injury model, murine models of mammary development, tumor burden scoring of mice, H&E Staining, and RNA in situ hybridization assays.

HONORS & AWARDS

1st Place Poster in WVU Cancer Institute Annual Scientific Meeting, West Virginia University 2018
- Clinical Science Division

E.B Flink Award for Excellence in Internal Medicine, WVU School of Medicine 2018
- Awarded to MSIV for best performance in Internal Medicine at Morgantown Campus

Walter H. Moran, Jr., M.D. Surgery Award, WVU School of Medicine 2018
- Awarded to MSIV for best performance in General Surgery at Morgantown Campus

Delegate Vicki V. Douglas Award for End-of-life Care, WVU School of Medicine 2018
- Awarded to MSIV demonstrating exemplary compassion for dying patients and outstanding knowledge and skills in palliative care

Alpha Omega Alpha (AOA) Honor Medical Society, WVU School of Medicine 2017
- Junior member of West Virginia Alpha Chapter

Featured Researcher, WVU Microscope Imaging Facility Newsletter 2013
- My research images were featured in the November issue

Class Honors (Top 15%), West Virginia University School of Medicine 2010 - 2012, 2016 - 2017
- MS1- Human Function, Public Health, Physical Diagnosis & Clinical Integration 1, Human Structure, Neurobiology
- MS2- Pathology, Microbiology, Pharmacology, and Physical Diagnosis & Clinical Integration 2B

- MS3- Surgery, Internal Medicine, and Obstetrics and Gynecology

Early Decision Scholar, West Virginia University School of Medicine 2010
- Early acceptance with priority scheduling

West Virginia University Medical Scholarship, West Virginia University School of Medicine 2010
- Awarded based on merit and financial need; ½ tuition waiver

Most Outstanding Senior, West Virginia University 2010
- One of thirty-five WVU graduating seniors of West Virginia University by the WVU Foundation

Phi Beta Kappa Society, West Virginia University Chapter 2010
- Recognizes excellence in liberal arts and sciences

Most Outstanding Chemistry Student, WVU College of Arts and Sciences 2010
- Only one student per major chosen

Phi Lambda Epsilon Member, West Virginia University 2009 –2010
- WVU Chemistry Honorary

West Virginia PROMISE Scholarship Recipient, West Virginia University 2006 – 2010

WVU Presidential Award for Excellence in Scholarship, West Virginia University 2006 - 2010
- 4.0 GPA for four semesters

Outstanding Junior Chemistry Major, ACS Northern WV Section 2009

1st Place in WVNano Initiative Research Symposium, West Virginia University 2009
- Undergraduate Division

1st Place in WVU ACS Student Affiliates Chemical Symposium, WVU 2009
- Undergraduate and Graduate Division

LEADERSHIP EXPERIENCE

ACGME Clinical Learning Environment Review Site Visit 2018
- Transitional Year Representative

Herald of Student Tours (HOST) Guide 2016 - 2018
- Lead tours for WVU medical school applicants

President of WVU American Physician Scientist Association Chapter 2011 - 2015, 2015 - 2016
- Member from 2011 - present, President from 2015 - 20016

Pre-Health Advisor Workshop, WVU School of Medicine 2014
- Panelist

President/Member of WVU Neurology Specialty Group 2011 - 2012, 2010 - 2011
- Member from 2010 - 2011, President from 2011 - 2012

President/ Member of WVU American Chemical Society Student Affiliates 2007 - 2010
- Secretary for 2008 - 2009, President from 2009 – 2010

Coordinator of Chemistry Learning Center 2007 - 2010
- Volunteer teaching Chemistry 115 and 116 and coordinating tutors

Officer in WVU Undergraduate Mortar Board Honorary 2009 - 2010
- Active leader in service events, social events and academic endeavors

COMMITTEES

MD/PhD Student Admissions Committee 2012 - 2013, 2015 - 2016
- Interviewed perspective incoming MD/PhD candidates

Cancer Cell Biology Faculty Senate Student Representative 2015 - 2016
- Advocate for student issues

Eberly College Outstanding Teacher Award Committee Member 2009 - 2010
- Advocate for student issues

TEACHING EXPERIENCE

Multidisciplinary Clinical Oncology MS IV Course- WVUSOM 2018
- Co-course creator with Dr. Malcom Mattes, WVU Department of Radiation Oncology
  Course immerses students in real-world multidisciplinary, inter-professional delivery of clinical oncologic care

Mentorship of Undergraduate Researchers, West Virginia University School of Medicine 2012 - 2016
- Mentor of multiple undergraduate Biology Honor Thesis students

Peer Advisor for MS1s, WVU School of Medicine 2011 - 2012
- Mentor to MS1 WVU medical students

Head Tutor for Academic Resource Center, West Virginia University 2008 - 2010
- Chemistry tutor/teacher for WVU students

Tutor for Chemistry Learning Center, West Virginia University Chemistry Department 2007 - 2010
- Chemistry tutor/teacher for WVU students

Teaching Assistant, West Virginia University Chemistry Department 2008
- Teaching Assistant for Honors Chemistry class

WORK EXPERIENCE

Pifers' Service Center, Mineral Wells, WV 2003 - 2010
- Light mechanic, cashier, CDL wrecker driver

Tutor at Academic Resource Center, Morgantown, WV 2008 - 2010
- Tutor from 2008-2009, Head tutor from 2009-2010

Undergraduate Researcher, WVU Honors SURE, Morgantown, WV 2009
- Research using Atomic Force Microscopy

Teaching Assistant in WVV Chemistry Department, Morgantown, WV 2008

- Teaching assistant for honors CHEM 117

VOLUNTEER ACTIVITES

Community Service*

- Bartlett House: Volunteer on Wednesday evenings in the kitchen to prepare dinner for residents of this transitional housing in Morgantown, WV
- The MD-PhD Track Presentations for multiple undergraduate programs
- WVU Fly-fishing Club, Get Trashed Even t- picking up trash on Decker's Creek
- SAFE Clinic: participant; student and faculty-run free health clinic
- Class Trip to New Orleans, LA: Service work with Habitat for Humanity in the Lower Nine
- Coordinator of the Chemistry Learning Center
- WVU SOM HOST leader

*Over 200 hours logged in undergraduate; 150+ hours in medical school

PERSONAL INTERESTS & HOBBIES

Fly-fishing, traveling, backpacking & hiking, cooking, and reading