

Muayad F. Almahariq, M.D., Ph.D.

EDUCATION

2016 - 2021	Beaumont Health, Royal Oak, MI Radiation Oncology Residency
2009 - 2016	University of Texas Medical Branch, Galveston, TX M.D., Ph.D.
2003 - 2007	Middlebury College, Middlebury, VT B.A. in Biochemistry

PROFESSIONAL EXPERIENCE

06/2021 – present	Attending Physician, Radiation Oncology, Beaumont Health, MI
06/2007 - 06/2009	Research Assistant, Molecular Biology Lab, Rockefeller University, NY

TECHNICAL SKILLS

Treatment Modalities	Gamma Knife and LINAC-based SRS SBRT, including prostate SBRT Proton radiotherapy Adaptive radiotherapy HDR brachytherapy: interstitial prostate, intracavitary and interstitial gyn, interstitial and intraoperative breast, and coronary brachytherapy LDR brachytherapy: I-125 eye plaque brachytherapy
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ACADEMIC AWARDS

2020	Excellence in Research Award, Southeast Michigan Center for Medical Education
2019	Resident Recognition Award - poster viewing, ASTRO Annual Meeting
2015	Blocker Scholar Fellowship in Biomedical Research
2013	Who's Who Among Students in American Universities & Colleges Award
2013	Ann and John Hamilton Endowed Scholarship
2012	Robert Bennett Scholarship
2012	Harry B. and Mary S. Kelso Endowed Blocker Scholarship
2011	Bohdan Nechay Scholarship
2010	Truman Graves Blocker Junior Research Scholar

NIH TRAINING GRANTS

12/2013 - 12/2014	Predocctoral Training Fellowship, Biodefense Training Program, UTMB, Galveston, TX. NIAID Grant No. 5 T32 AI060549-10
11/2011 - 11/2013	Predocctoral Training Fellowship, Keck Center for Interdisciplinary Bioscience Training of the Gulf Coast Consortia, Houston, TX. NIGMS Grant No. 1 T32 GM089657-03

ADDITIONAL EXPERIENCE

10/2019 – Present	Ad-Hoc Reviewer, Journal of Clinical Oncology
08/2019 - Present	Vice Chair, Resident Fellow Council (elected position)
08/2019 - Present	Resident Mentor, ACRO Mentorship Program
07/2018 – Present	Member of Resident Research Committee: promote resident research involvement and increase research productivity
09/2012 - 09/2016	Big Sib, M.D., Ph.D. Program: organized meetings and presentations to help guide M.D., Ph.D. students transition to PhD. candidacy and return to clinical clerkships
09/2013 - 09/2014	Secretary, M.D., Ph.D. Student Organization (elected position)
09/2010 - 09/2012	Medical Curriculum Student Liaison (elected position): contributed to handbooks and academic support presentations for medical students
01/2011 - 06/2011	Student Representative, M.D., Ph.D. program (elected position): organized a seminar series addressing topics concerning translational and clinical research

PUBLICATIONS

Articles in peer reviewed journals

1. **Almahariq MF**, Quinn TJ, Arden JD, Philip R, Wilson G, Marples B, Grills IS, Chen PY, Krauss DJ, Chinnaiyan P, Dilworth JT. Pulsed Radiation Therapy for the Treatment of Newly Diagnosed Glioblastoma. *Neuro-Oncology*. 2021; 23(3): 447-456
2. **Almahariq MF**, Quinn TJ, Kesarwani P, Kant S, Miller CR, Chinnaiyan P. Inhibition of Colony-Stimulating Factor-1 Receptor Enhances the Efficacy of Radiotherapy and Reduces Immune Suppression in Glioblastoma. *In Vivo*. 2021; 35(1): 119-129
3. **Almahariq MF**, Levitin R, Quinn TJ, Chen PY, Dekhne N, Sayee K, Jawad MS, Gustafson GS, Dilworth JT. Omission of Axillary Lymph Node Dissection is Associated with Inferior Survival in Breast Cancer Patients with Residual N1 Nodal Disease Following Neoadjuvant Chemotherapy. *Annals of Surgical Oncology*. 2021; 28(2): 930-940
4. **Almahariq MF**, Chen PY, Dekhne N, Dilworth JT. ASO Author Reflections: Omission of Axillary Lymph Node Dissection for Breast Cancer Patients with Residual N1 Nodal Disease Following Neoadjuvant Chemotherapy: Not Ready for Primetime?. *Annals of Surgical Oncology*. 2021; 27(3): 869-870
5. Tagami T, **Almahariq MF**, Balanescu DV, Quinn TJ, Dilworth JT, Franklin BA, Bilolihar A. Usefulness of Coronary Computed Tomography Angiography in Evaluating Coronary Artery Disease in Radiotherapy-Treated Breast Cancer Survivors. *American Journal of Cardiology*. 2021; 143: 14-20
6. Mankuzhy N, **Almahariq MF**, Siddiqui ZA, Thompson AB, Grills IS, Guerrero TM, Lee KC, Stevens CW, Quinn TJ. The Role of Post-operative Radiation Therapy for pN2 Non-Small Cell Lung Cancer. *Clinical Lung Cancer*. 2021; 22(1): e5-e17
7. Mankuzhy N, **Almahariq MF**, Ye H, Krauss DJ. Prognostic Significance of Neuroendocrine Differentiation in Prostate Adenocarcinoma in Patients with Metastatic Disease. *American Journal of Clinical Pathology*. 2021; 155(6): 879-886
8. Arden J, Dokter J, **Almahariq MF**, Marvin K, Nandalur S, Al-Wahab Z, Field J, Gadzinski J, Rakowski JA, Rosen B, Jawad MS. Efficacy and Toxicity Following Adjuvant Vaginal Brachytherapy for Stage I and II Endometrial Cancer Using 30 Gy in 6 fractions. *Advances in Radiation Oncology*. (In press)
9. **Almahariq MF**, Maywood MJ, Levitin R, Squires BS, Jawad MS, Chen PY, Gustafson GS, Dilworth JT. Mapping of Metastatic Level I Axillary Lymph Nodes in Patients with Newly Diagnosed Breast Cancer. *Int J Radiat Oncol Biol Phys*. 2020; 106(4): 811-820.
10. **Almahariq MF**, Quinn TJ, Siddiqui ZA, Jawad MS, Chen PY, Gustafson GS, Dilworth JT. Breast conserving therapy is associated with improved overall survival compared to mastectomy in early-stage, lymph node-negative breast cancer. *Radiotherapy & Oncology*. 2020; 142: 186-194.

PUBLICATIONS (cont.)

Articles in peer reviewed journals (cont.)

11. **Almahariq MF**, Quinn TJ, Siddiqui ZA, Thompson AB, Jawad MS, Chen PY, Gustafson GS, Dilworth JT. Post-mastectomy radiotherapy is associated with improved overall survival in T3N0 patients who do not receive chemotherapy. *Radiotherapy & Oncology*. 2020; 145: 229-237.
12. Thompson AB, Quinn TJ, Siddiqui ZA, **Almahariq MF**, Grills IS, Stevens CW. Addition of Radiotherapy to Surgery and Chemotherapy Improves Survival in Localized Malignant Pleural Mesothelioma: A SEER Study. *Lung Cancer*. 2020; 146: 120-126.
13. Quinn TJ, **Almahariq MF**, Siddiqui ZA, Thompson AB, Hamstra DA, Kabolizadeh P, Gowans KL, Chen PY. Trimodality therapy for atypical teratoid/rhabdoid tumor is associated with improved overall survival: A SEER analysis. *Pediatric Blood & Cancer*. 2019; 66(12): e27969.
14. Koay EJ ... **Almahariq MF** ... Fleming JB. A Visually Apparent and Quantifiable CT Imaging Feature Identifies Biophysical Subtypes of Pancreatic Ductal Adenocarcinoma. *Clinical Cancer Research*. 2018; 24(23): 5883-5894.
15. **Almahariq M**, Mei FC, Cheng X. The pleiotropic role of exchange protein directly activated by cAMP 1 (EPAC1) in cancer: implications for therapeutic intervention. *Acta Biochim Biophys Sin*. 2016; 48(1): 75-81.
16. **Almahariq M**, Mei FC, Wang H, Cao AT, Yao S, Soong L, Sun J, Cong Y, Chen J, Cheng X. Exchange protein directly activated by cAMP modulates regulatory T-cell-mediated immunosuppression. *Biochemical Journal*. 2015; 465(2): 295-303.
17. **Almahariq M**, Chao C, Mei FC, Hellmich MR, Patrikeev I, Motamedi M, Cheng X. Pharmacological inhibition and genetic knockdown of exchange protein directly activated by cAMP 1 reduce pancreatic cancer metastasis in vivo. *Molecular Pharmacology*. 2015; 87(2): 142-149.
18. **Almahariq M**, Mei FC, Cheng X. Cyclic AMP sensor EPAC proteins and energy homeostasis. *Trends in Endocrinol & Metabolism*. 2014; 25(2): 60-71.
19. **Almahariq M**, Tsalkova T, Mei FC, Chen H, Zhou J, Sastry SK, Schwede F, Cheng X. A novel EPAC-specific inhibitor suppresses pancreatic cancer cell migration and invasion. *Molecular Pharmacology*. 2013; 83(1): 122-128.

Oral presentations

1. **Almahariq MF**, Levitin R, Quinn TJ, Jawad MS, Chen PY, Gustafson GS, Dilworth JT. Omission of Axillary Lymph Node Dissection is Associated with Inferior Survival in Breast Cancer Patients with Residual N1 Nodal Disease Following Neoadjuvant Chemotherapy. *ASTRO Annual Conference*. 2020
2. **Almahariq MF**, Quinn TJ, Kesarwani P, Kant S, Chinnaiyan P. Inhibition of Colony-Stimulating Factor-1 Receptor Enhances the Efficacy of Radiotherapy and Reduces Immune Suppression in Glioblastoma. *Southeast Michigan Center for Medical Education Annual Research Forum*. 2020
3. **Almahariq M**, Mei FC, Cheng X. Assessing the Efficacy of EPAC1 Inhibitors as Vaccine Adjuvants and Modulators of Treg-Mediated Suppression. *Society of Chinese Bioscientists in America Annual Conference*. 2014

Abstracts

1. **Almahariq MF**, Quinn TJ, Kesarwani P, Kant S, Chinnaiyan P. Inhibition of Colony-Stimulating Factor-1 Receptor Enhances the Efficacy of Radiotherapy and Reduces Immune Suppression in Glioblastoma. *ASTRO*. 2020
2. Mankuzhy N, Jahshan A, Quinn TJ, **Almahariq MF**, Qu L, Grills IS. An Efficient and Objective Method for Identifying Radiation-Related Cardiac Toxicity After Definitive Conventional Radiation for Locally Advanced Non-Small Cell Lung Cancer. *ASTRO*. 2020
3. **Almahariq MF**, Quinn TJ, Kesarwani P, Kant S, Chinnaiyan P. Inhibition of Colony-Stimulating Factor-1 Receptor Enhances the Efficacy of Radiotherapy and Reduces Immune Suppression in Glioblastoma. *ASTRO*. 2020
4. Mankuzhy N, Jahshan A, Quinn TJ, **Almahariq MF**, Qu L, Grills IS. An Efficient and Objective Method for Identifying Radiation-Related Cardiac Toxicity After Definitive Conventional Radiation for Locally Advanced Non-Small Cell Lung Cancer. *ASTRO*. 2020

PUBLICATIONS (cont.)

Abstracts (cont.)

5. Jahshan A, Quinn TJ, Johnson M, Mankuzhy N, **Almahariq MF**, Barski M, Ye H, Guerrero TM, Stevens CW, Grills IS. Dose-Escalated Radiation Therapy with a Simultaneous Integrated Boost with or without Adjuvant Immunotherapy for Locally Advanced Non-Small Cell Lung Cancer. *ASTRO*. 2020
6. Sebai M, **Almahariq MF**, Dilworth JT, Karabon P, Kalthoff R, Sayee K, Chen PY, Vaidya JS, Feldman S, Dekhne N. National Trends for Intra-Operative Radiation Therapy in Favorable, Early Stage Breast Cancer: a Propensity Scoring Analysis of the National Cancer Database. *TARGIT Collaborative Group Conference*. 2020
7. **Almahariq MF**, Quinn TJ, Siddiqui Z, Jawad MS, Chen PY, Gustafson GS, Dilworth JT. Breast Conserving Therapy is Associated with Improved Overall Survival Compared to Mastectomy in Early-Stage, Lymph-node Negative Breast Cancer with High Recurrence Score. *ASTRO*. 2019
8. **Almahariq MF**, Quinn TJ, Siddiqui ZA, Thompson AB, Jawad MS, Chen PY, Gustafson GS, Dilworth JT. Post-Mastectomy Radiotherapy is Associated with Improved Overall Survival in cT3N0 Breast Cancer. *ASTRO*. 2019
9. Quinn TQ, Kant S, **Almahariq MF**, Chinnaiyan P. Characterization of GBM Immunophenotype in Murine Heterotopic and Orthotopic Models, Implications for Novel Treatment Modalities. *ASTRO*. 2019
10. Mankuzhy N, **Almahariq MF**, Ye H, Krauss DJ. Prognostic Significance of Neuroendocrine Differentiation in Prostate Adenocarcinoma in Patients with Metastatic Disease. *ASCO*. 2019
11. **Almahariq M**, Tsalkova T, Mei FC, Chen H, Zhou J, Sastry SK, Schwede F, Cheng X. Exchange Protein Directly Activated by cAMP (EPAC1) Promotes Pancreatic Cancer Metastasis. *FASEB Journal*. 2015
12. **Almahariq M**, Mei FC, Chao C, Hellmich M, Cheng X. The potential of EPAC1 Inhibitors in Cancer Immunotherapy. *Arrowhead's Annual Cancer Immunotherapy Conference*. 2013
13. **Almahariq M**, Tsalkova T, Mei FC, Chen H, Zhou J, Sastry SK, Schwede F, Cheng X. The Potential of EPAC1 as a Therapeutic Target for Pancreatic Cancer Therapy. *Gulf Coast Consortia Annual Research Conference*. 2012