
THE FACULTY OF MEDICINE OF HARVARD UNIVERSITY
CURRICULUM VITAE

Date Prepared: 12/01/19
Name: David M. Miller MD, PhD, FAAD
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Education:

8/1996- 5/2000	BA (Cum Laude)	Political Science	Boston College
8/2002- 6/2010	MD, PhD (Alpha Omega Alpha)	Medicine and Biomedical Sciences/ Immunology (PhD Advisors: Aldo Rossini MD & Dale Greiner PhD)	University of Massachusetts Medical School

Postdoctoral Training:

06/2010- 06/2011	Intern	Internal Medicine	Brigham and Women's Hospital
07/2011- 06/2014	Resident	Dermatology	Columbia University Medical Center
07/2013- 06/2014	Visiting Fellow	Dermatology (Mentor: Hensin Tsao MD, PhD)	Massachusetts General Hospital
07/2014- 06/2015	Resident	Internal Medicine	Brigham and Women's
07/2015- 12/2018	Clinical Fellow	Hematology/Oncology	Beth Israel Deaconess Medical Center
07/2016- 12/2018	Post-Doctoral Research Fellow	Hematology/Oncology and Dermatology (Mentor: Keith Flaherty MD/ Hensin Tsao MD, PhD)	Massachusetts General Hospital
07/2016- 05/2018	CT Academy Member	Clinical and Translational Investigation	Harvard Catalyst
09/2018- 10/2018	Clinical Fellow	Regulatory Medicine	Oncology Center of Excellence Food and Drug Administration

Faculty Academic Appointments:

2010-2011	Clinical Fellow	Medicine	Brigham and Women's Hospital
2011-2014	Clinical Fellow	Dermatology	Columbia University Medical Center
2014-2015	Clinical Fellow	Medicine	Brigham and Women's Hospital
2015-2018	Clinical Fellow	Medicine	Beth Israel Deaconess Medical Center
2019-	Instructor	Medicine/Dermatology	Harvard Medical School

Appointments at Hospitals/Affiliated Institutions:

Updated October 2016

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Harvard Medical School | Gordon Hall, Suite 206 | 25 Shattuck Street, Boston, Massachusetts 02115

02/2015-12/2015	Fee-Basis Physician	Medicine	VA Boston Healthcare System
07/2015-04/2018	Fee-Basis Physician	Medicine	Brigham & Women's/Faulkner Hospital
02/2016-12/2018	Clinical Associate	Dermatology	Massachusetts General Hospital
12/2018-	Clinical Assistant	Dermatology	Massachusetts General Hospital
01/2019-	Clinical Assistant	Medicine	Massachusetts General Hospital
02/2019-	Clinical Associate	Dermatology	Massachusetts Eye and Ear Infirmary

Other Professional Positions

08/2018-	Consultant	Pfizer
10/2018-	Consultant	Merck Sharp & Dohme Corp
12/2018-	Consultant	Regeneron
10/2019-	Consultant	Sanofi Genzyme

Committee Service:

National

March 2018	Merkel Cell Carcinoma Expert Consensus Workshop on the Biology and Clinical Care of Merkel Cell Carcinoma	National Cancer Institute, Rockville Maryland
2018-	ECOG-ACRIN Melanoma Committee	
2018-	Co-Chair: Project Data Sphere Merkel Cell Carcinoma Tumor Registry Task Force	

Professional Societies:

2011-2012, 2014-15	Alpha Omega Alpha Medical Honor Society	Member
2014-2015	Massachusetts Medical Society	Member in Training
2014 -	Medical Dermatology Society	Member in Training
2014-2018	American Academy of Dermatology	Member in Training
2015-2019	American Society of Clinical Oncology	Member in Training
2015-2018	American Society of Hematology	Member in Training
2016-	New England Dermatology Society	Member
2016-2018	American College of Physicians	Resident/Fellow Member
2016-2018	Society for Melanoma Research	Member in Training
2017-2018	Society for Immunotherapy of Cancer	Student Member
2018-2019	United States Cutaneous Lymphoma Consortium	Trainee
2018-2019	American Association of Cancer Research	Associate Member
2018 -	ECOG-ACRIN Cancer Research Group	Member
2019 -	American Academy of Dermatology	Fellow Member
2019 -	American Society of Clinical Oncology	Member

Editorial Activities:

Ad hoc Reviewer

British Journal of Dermatology
Journal of Investigative Dermatology
Journal of the European Academy of Dermatology and Venereology
Clinical Cancer Research
Cancer Research

Honors, Prizes And Awards:

05/2000	Pi Sigma Alpha Membership	National Political Science Honor Society	Scholarship in Political Science
07/2005	American Diabetes Association Physician-Scientist Training Award	American Diabetes Association	3 year Training Award
10/2009	Fuller Foundation Scholarship Award	Fuller Foundation	Scholarship in Biomedical Science
11/2010	Alpha Omega Alpha Membership	Alpha Omega Alpha Honor Society	Scholarship in Medicine
05/2013	Best Presentation at Best of Grossman Consult Service Grand Rounds	Professor Marc Grossman MD Columbia University Medical Center, Dept. of Dermatology. New York, NY	First Place/Best Presentation
05/2014	Best Presentation at Best of Grossman Consult Service Grand Rounds	Professor Marc Grossman MD Columbia University Medical Center, Dept. of Dermatology. New York, NY	First Place/Best Presentation
06/2014	Best Presentation at New York Academy of Medicine’s Annual Dermatology Residents’ Night	New York Academy of Medicine New York, NY	First Place/Best Presentation
07/2017	Loan Repayment Award	National Institutes of Health/NCI	N/A
01/2018	Research Grant	American Skin Association	Research Award
05/2018	Paul Carbone, MD Fellowship Award	ECOG-ACRIN Cancer Research Group	Fellowship Award
07/2019	Project Data Sphere’s Mentoring Award in Oncology, Advanced Analytics and Regulatory Science	Project Data Sphere	Research in Merkel Cell Carcinoma

Report of Funded and Unfunded Projects

Funding Information:

Current

01/2016- *Phase I study of INCB039110 in combination with dabrafenib and trametinib in patients with BRAF-mutant melanoma.*

Funding: American Skin Association Research Grant

- Role: Principal Investigator – I designed the concept of the trial, wrote the clinical protocol and am leading the research effort along with my mentor Keith Flaherty.
- Mentor: Keith Flaherty

Funding: ECOG-ACRIN Cancer Research Group’s Paul Carbone, MD Fellowship Award

- Role: Principal Investigator – I designed the concept of the trial, wrote the clinical protocol and am leading the research effort along with my mentor Keith Flaherty.
- Mentor: Keith Flaherty

Overview: This proposed research is designed to test the hypothesis that targeting the recently identified RNF125-JAK1-AXL/EGFR axis will overcome resistance to BRAF/MEK-targeted therapy. To test this hypothesis, we are conducting an investigator-initiated, Phase Ib/single-arm phase II expansion study with the novel JAK1 inhibitor INCB039110 in patients with metastatic BRAF-mutant melanoma co-administered with the BRAF inhibitor dabrafenib and the MEK inhibitor trametinib. We will also perform correlative studies to identify molecular and cellular determinants of resistance of

triplet BRAF/MEK/JAK1 inhibition (BRAFi/MEKi/JAK1i). This project is funded in part by Incyte Pharmaceuticals. The correlative studies for this work are, in part supported, by an American Skin Association Research Grant and the ECOG-ACRIN Cancer Research Group's Paul Carbone, MD Fellowship Award.

01/2018- *Study of clinical and pathological determinants of recurrence, response to therapy and disease-specific survival in Merkel cell carcinoma*

- Role: Principal Investigator
- Mentor: Keith Flaherty

Funding: Project Data Sphere's Mentoring Award in Oncology, Advanced Analytics and Regulatory Science

Overview: The goal of this study is to describe the experience with Merkel cell carcinoma at various Partners institutions and examine the evolution of its management and outcomes over a 30-plus year period. Data concerning patient, tumor, and treatment characteristics will be collected and analyzed for their association with recurrence and disease-specific survival. Identification and characterization of these predictors may then be used to generate hypotheses that can be tested in prospective trials in the future. This project is currently unfunded.

04/2019 *A Phase 2, Open-Label, Single-Arm Study of KRT-232 in Patients with p53 Wild-Type (p53WT) Merkel Cell Carcinoma (MCC) Who Have Failed Anti-PD-1 or Anti-PD-L1 Immunotherapy*

- Role: MGH Site Principal Investigator
- Sponsor: Kartos Therapeutics, Inc.

The study will evaluate the safety and efficacy of KRT-232 in subjects with p53WT MCC who have failed anti-PD-1 or anti-PDL-1 immunotherapy

05/2019 *A Phase III Randomized Trial Comparing Adjuvant MK- 3475 (Pembrolizumab) to Standard of Care Observation in Completely Resected Merkel Cell Carcinoma*

- PI: Robert Comis, ECOG-ACRIN
- Role: PI of clinical trial at Dana-Farber/Harvard Cancer Center site
- Sponsor: NCI 3U10CA180820-04S1, Comis (PI)

The study will test the hypothesis that an anti-PD-1 based regimen will improve outcomes in high risk resectable MCC in the adjuvant setting.

Previous Training Grants and Mentored Trainee Grants

07/1/2005 – *Umbilical cord blood stem cells as therapy for Diabetes Mellitus*

06/30/2008 American Diabetes Association Physician-Scientist Training Award: 7-05-PST-02

- Role: Principal Investigator
- Mentor: Aldo Rossini

The objective of this research was to investigate the ability of mesenchymal stem cells (MSCs), isolated from human bone marrow and human umbilical cord blood, to be used as cellular therapy for diabetes mellitus

Report of Local Teaching and Training

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2004-2008	Biology of disease Pharmacology Medical Students	University of Massachusetts Medical School Between 15-20 lectures per year 1-2 hour lectures
2012-2014	Biology of Keratinocytes Dermatology Residents	Columbia University Medical Center Two hour lecture
2012-2014	Immunology Review of T-Cell Immunity Dermatology Residents	Columbia University Medical Center Two hour lecture
2012	Immunology Review of B-Cell Immunity Dermatology Residents	Columbia University Medical Center Two hour lecture
2013-2014	Immunology Review of Innate Immunity Dermatology Residents	Columbia University Medical Center Two hour lecture

2012-2014	Environmental & Sports-Related Diseases Dermatology Residents	Columbia University Medical Center Two hour lecture
2012-2014	Melanoma Dermatology Residents	Columbia University Medical Center Two hour lecture
2013-2014	Cutaneous T-Cell Lymphoma Dermatology Residents	Columbia University Medical Center Two hour lecture
2013	B-Cell Lymphoma & Other Lymphoproliferative & Myeloproliferative Diseases Dermatology Residents	Columbia University Medical Center Two hour lecture
2013	Clinical Problems-A Case-Based Therapeutics Review Dermatology Residents	Columbia University Medical Center Three hour lecture
2015	Common Primary Care Dermatoses Internal Medicine Residents	Brigham and Women's Hospital Two hour lecture
2015	Vesiculobullous Eruptions Internal Medicine Residents	Brigham and Women's Hospital Two hour lecture
2015	Cellulitis and Its Mimics Internal Medicine Residents	Brigham and Women's Hospital Two hour lecture
2016	The Red Leg Internal Medicine Residents	Brigham and Women's Hospital Two hour lecture
2016	Approach to Purpura Internal Medicine Residents	Brigham and Women's Hospital Two hour lecture
2016-2017	Overview of diagnosis and management of basic dermatology conditions for the PCP Internal Medicine Residents	Brigham and Women's Hospital One hour lecture
2017	mGODS: Monoclonal Gammopathies of Dermatological Significance Harvard Dermatology Residents	Massachusetts General Hospital One hour lecture
2017	Sézary Syndrome Harvard Dermatology Residents	Massachusetts General Hospital One hour lecture, given twice
2017	Melanoma Harvard Dermatology Residents	Massachusetts General Hospital Ninety minute lecture
2017	MGUS for Dermatologists Harvard Dermatology Residents	Massachusetts General Hospital One hour lecture
2018	JAAD March/April Journal Club Harvard Dermatology Residents	Massachusetts General Hospital One hour journal club
2018	PAMPs, DAMPs and Dermatology Harvard Dermatology Resident	Two hour lecture Beth Israel Deaconess Medical Center
2018	Introduction to Melanoma Harvard Dermatology Residents	Brigham and Women's Hospital Two hour lecture
2019	mGODS: Monoclonal Gammopathies of Dermatological Significance Harvard Dermatology Residents	Massachusetts General Hospital Ninety minutes lecture
2019	Sézary Syndrome Harvard Dermatology Residents	Massachusetts General Hospital Ninety minutes lecture
2019	JAAD March/April Journal Club Harvard Dermatology Residents	Massachusetts General Hospital One hour journal club
2019	Cutaneous Oncology – Medical Oncology Board Preparation	Beth Israel Deaconess Medical Center One hour session

2019	Medical Oncology Fellows Introduction to Melanoma Harvard Dermatology Residents	Massachusetts General Hospital Two hour lecture
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Clinical Supervisory and Training Responsibilities:

2016	Ryan Trowbridge, MD Supervised Dr. Trowbridge on the consult service	MGH Dermatology Inpatient Consult Service Daily oversight x 1 week
2017	Fungdi Sun, HMS MSIV Horatio Thomas, HMS MSIV Supervised medical students on consult service	BIDMC Heme/Onc Consult Service Daily oversight x 1 week
2018	Laura Sherburne, RN Instruction in clinical dermatology	MGH Dermatology Clinic Daily oversight x 1 day
2019	Emily Nguyen, MSIV Instruction in clinical dermatology	MGH Dermatology Clinic Daily oversight x 1 week
2019	Samantha Guhan, MSIV Instruction in dermatology and medical oncology	MGH Dermatology and Medical Oncology Clinic Daily oversight x 1 week
2019	Sophia Shalhout, PhD Instruction in dermatology and medical oncology	MGH Dermatology and Medical Oncology Clinic Weekly oversight in clinic x 6 months
2019	Michelle Shabo, MSII Instruction in dermatology and medical oncology in shadowing capacity	MGH Dermatology and Medical Oncology Clinic Daily oversight x 2 days
2019	Farees Saqlain, MSIII Instruction in dermatology and medical oncology	MGH Dermatology and Medical Oncology Clinic Daily oversight x 10 days

Laboratory and Other Research Supervisory and Training Responsibilities:

2005	Nicholas G. Csikesz Supervised medical student research project	UMass Medical School Daily oversight x 2 months
2006	Jacqueline LeBoeuf Supervised undergraduate research assistant	UMass Medical School Daily oversight x 3 months
2019	Romi Bloom, MD Mentored research elective in dermatology	MGH Dermatology 4 week research elective
2019	Sophia Shalhout, PhD Mentored research in cutaneous oncology	MGH Medical Oncology/Dermatology Ongoing, daily oversight
2019	Farees Saqlain, MSIII Mentored research in cutaneous oncology	MGH Dermatology and Medical Oncology Clinic Ongoing, daily oversight

Local Invited Presentations:

2011	The Man with the Dragon Tattoo/Grand Rounds Department of Dermatology, Columbia University Medical Center
2012	Painful Papules/Grand Rounds Department of Dermatology, Columbia University Medical Center
2012	Severe Scalp SCCs of a Heart Transplant Recipient/Grand Rounds Department of Dermatology, Columbia University Medical Center
2012	A Swedish and French Connection?/Grand Rounds Department of Dermatology, Columbia University Medical Center
2013	Deep Impact/Grand Rounds Department of Dermatology, Columbia University Medical Center
2013	Progression After Failure/Grand Rounds Department of Dermatology, Columbia University Medical Center
2014	Over Stimulated/Grand Rounds Department of Dermatology, Columbia University Medical Center
2014	Emerging Therapies in Melanoma/Grand Rounds Department of Dermatology, Columbia University Medical Center

2015 A Case of Mycobacterium Chelonae/Morning Report
Department of Medicine, Brigham and Women's Hospital

2015 A Case of Acute Generalized Exanthematous Pustulosis/Intern Report
Department of Medicine, Brigham and Women's Hospital

2015 A Case of Early-Onset Dementia/MD-PhD/LHB Grand Rounds
Harvard Medical School

2015 Merkel Cell Carcinoma/Topics in Oncology
Division of Hematology/Medical Oncology, Beth Israel Deaconess Medical Center

2016 Mycosis Fungoides/ Hematology Conference
Division of Hematology/Medical Oncology, Beth Israel Deaconess Medical Center

2016 Acute Cutaneous Graft Vs. Host Disease/ Hematology Conference
Division of Hematology/Medical Oncology, Beth Israel Deaconess Medical Center

2017 Sézary Syndrome/ Hematology Conference
Division of Hematology/Medical Oncology, Beth Israel Deaconess Medical Center

2017 Avelumab in patients with chemotherapy-refractory metastatic Merkel cell carcinoma
Hematology/Oncology Clinical Journal Club, Beth Israel Deaconess Medical Center

2017 Adjuvant nivolumab versus ipilimumab in resected stage III or IV melanoma
Hematology/Oncology Clinical Journal Club, Beth Israel Deaconess Medical Center

2017 No Claims, No Gains: Why you need to know the business side of medicine/Topics in Oncology
Division of Hematology/Medical Oncology, Beth Israel Deaconess Medical Center

2018 Merkel Cell Carcinoma/Grand Rounds
Department of Otolaryngology, Massachusetts Eye and Ear Infirmary

2018 Reducing M&M in M&M: Strategies to improve Morbidity and Mortality in Melanoma and Merkel Cell
Carcinoma/Grand Rounds
Division of Hematology/Medical Oncology, Beth Israel Deaconess Medical Center

2019 Regulatory Medicine in Cutaneous Oncology
Cutaneous Oncology Lecture Series, Department of Dermatology, Massachusetts General Hospital

2019 Clinical and Translational Research in Cutaneous Oncology
Dermatology Interest Group/Harvard Medical School

2019 Merkel Cell Carcinoma Tumor Registry
MGH-MEEI NMSC Program Research Meeting, Massachusetts General Hospital

2019 Diagnosis and Initial Dermatologic Management of Melanoma
Medical Education Program on Melanoma Management, Massachusetts General Hospital

2019 Work Up and Management of Non-Melanoma Skin Cancer
Medical Education Program on Melanoma Management, Massachusetts General Hospital

2019 2019 ASCO Immuno-Oncology Abstract Review (Sanofi Genzyme)

2019 Clinical Investigation in cSCC -Updates from ASCO and ESMO
MGH-MEEI NMSC Program Research Meeting, Massachusetts General Hospital

Additional Formal Local Training:

2016	Certificate course in Applied Biostatistics	Harvard Catalyst
2016	Introduction to Translational Medicine	Harvard Catalyst
2017	Translational Pharmacology	Harvard Catalyst
2017	Translational Genetics and Omics	Harvard Catalyst
2018	Introduction to R: Basics, Plots, and RNA-seq Differential Expression Analysis!	Harvard Catalyst

Report of Regional, National and International Invited Teaching and Presentations**Regional**

06/2014 CDK7 Inhibition in Melanoma/Dermatology Resident's Night,
New York Academy of Medicine. New York, NY.

National

03/2014 CDK7 Inhibition in Melanoma/The Latest in Dermatology Research Session
American Academy of Dermatology Annual Meeting. Denver, Colorado

01/2015 Biology of Keratinocytes/Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

03/2015 Melanoma/Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

05/2018 Monoclonal Gammopathies of Dermatological Significance/ Faculty and Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

05/2018 The Biology of Cutaneous Oncology/ Faculty and Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

05/2018 Merkel Cell Carcinoma/ Faculty and Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

05/2018 Melanoma/ Faculty and Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

08/2018 TCRs, Tregs and TILs: T-cell Immunity for the Dermatologist/ Faculty and Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

08/2018 PAMPs, DAMPs & Dermatology/ Faculty & Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

10/2018 FDA Action in Cutaneous Oncology/ Oncology Center of Excellence
US Food and Drug Administration, Silver Spring, Maryland

10/2018 PDS MCC Tumor Registry/Real World Evidence Registries Working Group
US Food and Drug Administration, Silver Spring, Maryland

11/2018 Sézary Syndrome/ Faculty and Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

11/2018 Regulatory Medicine in Cutaneous Oncology/ Dermatology Residents
Department of Dermatology, Columbia University Medical Center. New York, NY

01/2019 Monoclonal Gammopathies of Dermatological Significance/Faculty and Dermatology Residents
Department of Dermatology, George Washington University School of Medicine

01/2019 Sézary Syndrome/ Faculty and Dermatology Residents
Department of Dermatology, George Washington University School of Medicine

03/2019 Project Data Sphere & MCC patient Registry: From Promise to Prototype to Patient
Multi-Center MCC Interest Group Meeting, Washington, DC

04/2019 Merkel Cell Carcinoma/ Faculty and Dermatology Residents
Department of Dermatology, George Washington University School of Medicine

05/2019 Regulatory Medicine in Cutaneous Oncology/ Dermatology and Medical Oncology Faculty
Department of Dermatology Grand Rounds, University of Nebraska Medical Center

06/2019 Project Data Sphere & MCC patient Registry: From Promise to Prototype to Patient
SCOUT – Skin Cancer Outcomes Consortium, Chicago, IL

08/2019 Merkel Cell Carcinoma Patient Registry/ FDA Mini-symposium
MCC Patient Registry, Drug Repurposing for Oncology Rare Diseases
Oncology Center of Excellence, Food and Drug Administration, Silver Spring, MD

Report of Clinical Activities and Innovations

Current Licensure:

2014 – Massachusetts Medical License

Board Certifications:

2014 – Dermatology, American Board of Dermatology
2016 – Internal Medicine, American Board of Internal Medicine
2019 – Medical Oncology, American Board of Internal Medicine

Practice Activities:

2015-2016	Ambulatory Care	Hematology/Oncology, BIDMC	Seven half-day sessions per week
2016-2017	Inpatient Consult Service	Hematology/Oncology, BIDMC	Nine weeks
2016-2017	Inpatient BMT Service	Hematology/Oncology, BIDMC	Nine weeks
2016	Inpatient Consult Service	Dermatology, MGH	1 weekend, 5 week day nights
2016-2018	Ambulatory Care	Cutaneous Oncology Clinic, BIDMC	One half-day session per week
2016-2018	Ambulatory Care	Dermatology, MGH	Three half-day sessions per month
2019-2019	Ambulatory Care	Dermatology, MGH	One half-day session per week
2019-	Ambulatory Care	Medical Oncology/Dermatology, MGH	One half-day session per week
2019-	Ambulatory Care	Dermatology/Medical Oncology, MEEI	One half-day session per week

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Original Research Investigations

1. Al-Khunaizi M, Luke CJ, Askew YS, Pak SC, Askew DJ, Cataltepe S, **Miller D**, Mills DR, Tsu C, Brömme D, Irving JA, Whisstock JC, Silverman GA. The serpin SQN-5 is a dual mechanistic-class inhibitor of serine and cysteine proteinases. *Biochemistry*. 2002 Mar 5;41(9):3189-3199.
2. Cole EB, **Miller D**, Rometo D, Greenberg RM, Brömme D, Cataltepe S, Pak SC, Mills DR, Silverman GA, Luke CJ. Identification and activity of a lower eukaryotic serpin from *cyanea capillata*: Analysis of a jellyfish serpin, Jellypin. *Biochemistry* 2004; 43: 11750-11759.
3. Yamazaki M, Pearson T, Brehm MA, **Miller DM**, Mangada JA, Markees TG, Shultz LD, Mordes JP, Rossini AA, Greiner DL. Different mechanisms control peripheral and central tolerance in hematopoietic chimeric mice. *American Journal of Transplantation* 2007; 7 (7): 1710.
4. Pearson T, Shultz LD, **Miller D**, King M, Laning J, Fodor W, Cuthbert A, Burzenski L, Gott B, Lyons B, Foreman O, Rossini AA, Greiner DL. Non-obese diabetic-recombination activating gene-1 (NOD-Rag 1(null)) interleukin (IL)-2 receptor common gamma chain (IL 2 rgamma(null)) null mice: a radioresistant model for human lymphohaematopoietic engraftment. *Clinical and Experimental Immunology*. 2008 Nov;154(2):270-284
5. **Miller DM**, Thornley T, Pearson T, Yamazaki M, Brehm, M, Rossini, A, Greiner D. TLR agonists abrogate costimulation blocked-induced mixed chimerism and transplantation tolerance. *Annals of the New York Academy of Sciences*. 2008 Dec; 1150:149-151
6. **Miller DM**, Thornley T, Pearson T, Kruger A, Yamazaki M, Shultz, L, Welsh R, Brehm M, Rossini A, Greiner D. TLR agonists prevent the establishment of allogeneic hematopoietic chimerism in mice treated with costimulation blockade. *Journal of Immunology*. 2009; 182(9):5547-5559.
7. Brehm MA, Cuthbert A, Yang C, **Miller DM**, DiIorio P, Laning J, Burzenski L, Gott B, Foreman O, Kavirayani A, Herlihy M, Rossini AA, Shultz LD, Greiner DL. Parameters for establishing humanized mouse models to study

- human immunity: analysis of human hematopoietic stem cell engraftment in three immunodeficient strains of mice bearing the IL2rgamma(null) mutation. *Clinical Immunology* 2010; Apr;135(1):84-98
8. Eliades P*, **Miller DM***, Miao B, Kumar R, Taylor M, Buch S, Srinivasa SP, Flaherty KT, Tsao H. A novel multi-CDK inhibitor P1446A-05 restricts melanoma growth and produces synergistic effects in combination with MAPK pathway inhibitors. *Cancer Biol Ther.* 2016 Jul 2;17(7):778-784. **co-first author*
 9. Eliades P, Abraham B, Ji Z, **Miller DM**, Christensen C, Kwiatkowski N, Kumar R, Ching Njauw C, Taylor M, Miao B, Zhang T, Wong K, Gray N, Young R, Tsao G. High MITF Expression is Associated with Super-enhancers and Suppressed by CDK7 Inhibition in Melanoma. *Journal Investigative Dermatology.* 2018 Feb 2
 10. Klebanov N, Gunasekera N, Lin W, Hawryluk E, **Miller DM**, Reddy B, Christman M, Beaulieu D, Rajadurai S, Sober A, Tsao H. The Clinical Spectrum of Melanoma Morphology. *Journal of the American Academy of Dermatology.* 2018 Aug 27.

Other peer-reviewed scholarship

Review Articles

1. **Miller DM**, Thornley T, Greiner D, and Rossini A. Viral Infection: A potent barrier to transplantation tolerance. *Clinical and Developmental Immunology.* 2008; 2008: 742810
2. **Miller DM**, Rossini A, Greiner D. Role of innate immunity in transplantation tolerance. *Critical Reviews in Immunology.* 2008; 28(5): 403-439
3. **Miller DM**, Flaherty KT. Cyclin-dependent kinases as therapeutic targets in melanoma. *Pigment Cell and Melanoma Research;* 2014 May;27(3):351-365
4. **Miller DM**, Flaherty KT, Tsao H. Current status and future directions of molecularly targeted therapies and immunotherapies for melanoma. *Seminars in Cutaneous Medicine and Surgery.* 2014 Jun;33(2):60-7
5. Reddy B, **Miller DM**, Tsao H. Somatic driver mutations in melanoma. *Cancer.* 2017 Jun 1;123(S11):2104-2117

Clinical Communications

1. **Miller DM**, Faulkner-Jones B, Stone J, Drews R. Complete pathologic response of metastatic cutaneous squamous cell carcinoma and allograft rejection after treatment with combination immune checkpoint blockade. *JAAD Case Reports.* 2017 Sep 8;3(5):412-415
2. **Miller DM**, Trowbridge RM, Desai A, Drews RE. Kaposi's varicelliform eruption in a patient with metastatic melanoma and primary cutaneous anaplastic large cell lymphoma treated with talimogene laherparepvec and nivolumab. *Journal for ImmunoTherapy of Cancer.* 2018 Nov 19;6(1):122

Non-peer reviewed scholarship in print or other media:

Commentary

1. **Miller DM**, Flaherty KT, Tsao H. Molecular Testing in Melanoma. *Journal of the American Academy of Dermatology;* 2014 May;70(5):863-870

Book Chapters

1. **Miller DM**, Helliwell LA. Chapter 58: Malignant Melanoma: Basis and Treatment. In: *Pearls of Wisdom: Plastic & Reconstructive Surgery Board Review, Third Edition.* New York, NY: McGraw Hill, Inc., 2016: 567-574
2. **Miller DM**, Reddy B, Tsao H. Chapter 198: Molecular Target Therapies. In: *Fitzpatrick's Dermatology, Ninth Edition.* New York, NY: McGraw Hill, Inc. Accepted

Thesis

1. **Miller DM.** TLR activation prevents hematopoietic chimerism induced by costimulation blockade [Doctoral dissertation]. Worcester MA: University of Massachusetts Medical School Graduate School of Biomedical Sciences; 2008

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:

1. **Miller D**, Luke CJ, Askew DJ, Silverman GA. Jellypin – An investigation of serpin evolution. Abstract and poster presentation at the 3rd International Symposium on Serpin Biology, Structure and Function. June 2-5, 2002. Chicago, IL.

2. **Miller D**, Thornley T, Pearson T, Yamazaki M, Rossini A, Greiner D. TLR agonists abrogate costimulation blockade-induced hematopoietic chimerism and the induction of central tolerance. Abstract and poster presentation at the 9th International Congress of the Immunology of Diabetes Society. November 14-18, 2007. Miami, FL. Published in *Acta Diabetologica*. 2007. Nov; 44: S3
3. **Miller D**, Thornley T, Pearson T, Yamazaki M, Rossini A, Greiner D. TLR agonists abrogate costimulation blockade-induced hematopoietic chimerism and the induction of central tolerance. Poster presentation at the 3rd Annual Umass MD/PhD Retreat. March 28, 2008. Worcester, MA.
4. **Miller D**, Alavian C, Wiss K. A 15-month-old with skin fragility since birth. Abstract for the New England Dermatological Society Clinical Meeting. May 2, 2009. Worcester, MA
5. **Miller DM**, Yoda A, Yoda Y, Weinstock DM. Mechanisms of CRLF2 Rearrangement with IGH and P2RY8 in B-Cell Acute Lymphoblastic Leukemia. Abstract and poster presentation for the American Society of Hematology Meeting. December 5-8, 2009. New Orleans, LA.
6. Fenner J, Miller DM, Laffert V, Han R, Belazarian, L. Kwashiorkor attributed to rice milk in a child with atopic dermatitis and food allergies. Abstract and poster for the 69th Annual AAD Meeting. Feb 4-8, 2011 New Orleans, La.
7. **Miller DM**, Fung M, Kim G. Back to Basics: Bedside Chemistry and Urine Microscopy. Abstract and poster at the Society of Hospital Medicine Annual Meeting. May 11-13, 2011. Grapevine, Tx.
8. **Miller DM**, Knobler E, Grossman M. Painful Papules and a History of Uterine Fibroids. Abstract for the 89th Atlantic Dermatological Conference. New York, NY. April 28, 2012
9. **Miller DM**, Taylor M, Kumar R, Kwiatkowski N, Zhang T, Gray T, and Tsao H. CDK7 Inhibition in Melanoma. Abstract for the Latest in Dermatology Research Session, American Academy of Dermatology Annual Meeting, Denver, Colorado. March 22, 2014
10. **Miller DM**, Taylor M, Kumar R, Flaherty KT, Srinivasa S, Buch S, and Tsao H. P1446A-05: a potent cyclin-dependent kinase inhibitor with preclinical activity in melanoma. Abstract and Poster for the 2014 Society of Investigational Dermatology Annual Meeting. Albuquerque, New Mexico. May 9, 2014
11. **Miller DM**, Flaherty KT. JAK1 inhibition to overcome therapeutic resistance in metastatic melanoma. Poster for the 2017 C/T Academy Research Day. Boston, MA. May 2, 2017
12. **Miller DM**, Flaherty KT. JAK1 inhibition to overcome therapeutic resistance in metastatic melanoma. Poster for the 2018 C/T Academy Research Day. Boston, MA. May 15, 2018

Narrative Report

I am a physician-investigator in cutaneous oncology. My clinical and research experience has provided me with an excellent background in molecular biology, immunology, internal medicine, dermatology and hematology/oncology. As a predoctoral research assistant I was able to conduct research with Dr. Gary Silverman on the biochemical mechanisms of serine protease inhibitors. As a graduate student working with Drs. Dale Greiner and Aldo Rossini we investigated the interplay between innate immunity and T-cell immune checkpoints. Following the MD/PhD program, I chose to train serially in dermatology and internal medicine. Training in dermatology provided a critical and invaluable knowledge base in the underlying pathophysiology, histology and diagnosis of skin malignancies. However, in order to provide training in the management of advanced skin cancer, I enrolled in a Hematology/Oncology fellowship at the Beth Israel Deaconess. Following a core education in hematology and medical oncology. Concurrently, I maintained a complex medical dermatology clinic at the MGH since the beginning of 2016. In January 2019, I was hired as with a dual appointment in Hematology/Oncology and Dermatology at MGH.

As a clinician, I have integrated these two complementary clinical skill sets (dermatology and medical oncology) by developing a set of complementary multidisciplinary clinics at MGH and Mass Eye and Ear Infirmary (MEEI), where I also have a clinical appointment. These two clinics provide comprehensive care to patients with non-melanoma skin cancer (NMSC). These clinics have been developed as part of a establishing a new NMSC program at MGH and MEEI. My dual appointments in both medicine (hematology/oncology) and dermatology and background in regulatory medicine and basic science was instrumental developing a program of clinical and scientific experts in dermatology, medical oncology, surgical oncology, and radiation oncology, and pathology. We are in the process of activating several therapeutic trials at MGH to investigate novel therapeutic strategies for Merkel cell carcinoma, squamous cell carcinoma and adnexal tumors. In addition, our group meets weekly as part of an academic program that consists of a Journal Club, Tumor Board and Research Meeting.

As a scientist, my laboratory conducts translational research in NMSC. My graduate work at UMass and early postgraduate research during dermatology residency focused on basic and preclinical science. While a dermatology resident, I worked at MGH with Drs. Hensin Tsao and Keith Flaherty to investigate the role of cyclin-dependent kinases in melanomagenesis. I presented this data as an oral presentation at the AAD and a poster at the SID. We subsequently published several papers including the report of a novel cyclin-dependent kinase inhibitor with promising preclinical activity in melanoma, two review papers, and an invited commentary in the JAAD. As a Heme/Onc fellow, I focused on developing skills to become a translational investigator. Three years ago, I was selected by Harvard Catalyst to participate in the Clinical/Translational Research Academy, a two-year certificate program that provides foundational training in clinical and translational research. Key elements of the program included: 1) weekly seminars on fundamental aspects of C/T research, mentoring, grant writing and career development; 2) seminars on bioethics and epidemiology; and 3) courses in Applied Biostatistics, Translational Pharmacology, Translational Genetics and Omics. In addition, I worked with Dr. Flaherty to develop an investigator-initiated trial, aiming to translate the preclinical discovery that came from a collaboration between Dr. Flaherty and Ze'ev Ronai of the Burnham Institute. This paper described the potential role for a JAK1 selective inhibitor to target the residual, resistant cell population that survives MAP kinase inhibition. We successfully secured access to the one and only JAK1 selective inhibitor in clinical development from Incyte Pharmaceuticals (INCB39110). I was involved with the development of the concept and the full trial protocol, under Dr. Flaherty's mentorship. The trial has been approved by the DF/HCC SRC and IRB, and was recently activated. This research project was the focus of a successful Loan Repayment Grant funded by the NIH, a Research Grant sponsored by the American Skin Association, and the ECOG-ACRIN Cancer Research Group's Paul Carbone, MD Fellowship Award.

As co-chair of the Project Data Sphere Merkel cell carcinoma registry Task Force, I have been the chief architect of a data collection effort in MCC. We are developing a multi-institutional registry of MCC patients in order to better define the natural history of MCC, as well as identify best practices and prognostic and predictive covariates. I was recently granted the Project Data Sphere's Mentoring Award in Oncology, Advanced Analytics and Regulatory Science for this work.