

# Benjamin R. Wolfson, PhD

## EDUCATION

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**University of Maryland, Baltimore**  
*PhD, Molecular Medicine*  
*Concentration: Cancer Biology*  
Advisor: Dr. Qun Zhou, MD, PhD

**Baltimore, MD**  
Aug. 2013-May 2018

**Tulane University**  
*BS, Cellular and Molecular Biology*  
*Minor in Public Health*

**New Orleans, LA**  
2009-2013

## RESEARCH EXPERIENCE

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**Postdoctoral CRTA Fellow**  
Laboratory of Tumor Immunology and Biology  
National Cancer Institute, National Institute of Health  
Mentors: James Hodge, PhD, MBA, Jeffrey Schlom, PhD

**May 2018-Present**

**Graduate Research Assistant**  
University of Maryland Baltimore  
Mentor: Qun Zhou, MD, PhD  
*Dissertation: miRNA-140 Regulation of the Mammary Microenvironment*

**2013–2018**

**Research Assistant**  
Tulane University  
Mentor: WT Godbey, PhD

**2010-2013**

**Research Assistant**  
University of Texas Austin  
Mentor: Laura Suggs PhD

**May-Aug. 2011**

## PEER-REVIEWED PUBLICATIONS

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1. **Wolfson B**, Padget MR, Hodge J. (2020) Exploiting off-target effects of estrogen deprivation to sensitize estrogen receptor negative breast cancer to immune killing. *JITC*. In submission

2. **Wolfson B**, Hodge J. (2020). Next Generation Therapeutic Strateg-Es: *Evolving* cancer immunotherapy through agents that *Engage, Expand* and *Enable* the anti-tumor immune response. *ImmunoMedicine*. Under Review
3. Fabian KP, Malamas A, Padget MR, Solocinski K, **Wolfson B**, Fujii R, Sater HA, Schlom J and Hodge JW. (2020). Therapy of established tumors with multiple tactical agents targeting diverse immune-tumor interactions: engage, expand, enable. In submission
4. **Wolfson B**, S. E. Franks, Hodge J. (2020). Natural Born Killers: NK Cells in Cancer Therapy. *Cancers*. *Cancers*. doi: 10.3390/cancers12082131
5. Solocinski K, Padget MR, Fabian KP, **Wolfson B**, Cecchi F, Hembrough T, Benz S, Rabizadeh S, Soon-Shiong P, Schlom J, Hodge JW. (2020). Overcoming hypoxia-induced functional suppression of NK Cells. *J Immunother Cancer*. doi: 10.1136/jitc-2019-000246
6. Fenerty KE, Padget M, **Wolfson B**, Gameiro SR, Su Z, Lee JH, Rabizadeh S, Soon-Shiong P, Hodge JW. (2018). Immunotherapy utilizing the combination of natural killer- and antibody dependent cellular cytotoxicity (ADCC)-mediating agents with poly (ADP-ribose) polymerase (PARP) inhibition. *J Immunother Cancer*. doi: 10.1186/s40425-018-0445-4
7. **Wolfson B**, Lo P-K, Yao Y, Linhao L, Hongbing W, Zhou, Q. (2018). Impact of miR-140 Deficiency on Non-Alcoholic Fatty Liver Disease. *Molecular Nutrition & Food Research*. Doi: 10.1002/mnfr.201800189
8. Fang Y, **Wolfson B**, Godbey WT. (2017) Non-invasive Detection of Bladder Cancer via Expression-targeted Gene Delivery. *Journal of Gene Medicine*. Doi: 10.1002/jgm.2992
9. **Wolfson B**, Yu JE, Zhou Q. (2017). Exosomes may play a crucial role in HIV dendritic cell immunotherapy. *Annals of Transl Med*. Doi: 10.21037/atm.2017.05.09
10. Lo P-K, **Wolfson B**, Zhou Q. (2017) Adipogenesis and Noncoding RNAs. In V. Patel & V. Preedy (Eds.), *Handbook of Nutrition, Diet, and Epigenetics*. pp. 1–23
11. Lo P-K, Zhang Y, Yao Y, **Wolfson B**, Yu JE, Han S-Y, Duru N, Zhou Q. (2017). Tumor-associated myoepithelial cells promote the invasive progression of ductal carcinoma *in situ* through activation of TGF $\beta$  signaling. *J Biol Chem*. Pii:jbc.M117.775080. DOI: 10:1074/jbc.M117.775080
12. Yu JE, Han S-Y, **Wolfson B**, Zhou Q. (2017). The Role of Endothelial Lipase in Lipid Metabolism, Inflammation, and Cancer. Accepted, *Histology and Histopathology*

13. Duru N, Zhang Y, Gernapudi R, **Wolfson B**, Lo PK, Yao Y, Zhou Q. (2016). Loss of miR-140 is a key risk factor for radiation-induced lung fibrosis through reprogramming fibroblasts and macrophages. *Sci Rep.* 6: 39572. PMID 27996039
14. **Wolfson B**, Zhang Y, Gernapudi R, Duru N, Yao Y, Lo PK, Zhou Q. (2016). High-fat diet promotes mammary gland myofibroblast differentiation through miR-140 downregulation. *Mol Cell Biol.* 37(4): e00461–16. PMID 27895151
15. Lo PK, **Wolfson B**, Zhou Q. (2016). Cellular, physiological and pathological aspects of the long non-coding RNA NEAT1. *Front Biol.* 11:413-426.
16. Duru N, **Wolfson B**, Zhou Q. (2016). Mechanisms of the alternative activation of macrophages and non-coding RNAs in the development of radiation-induced lung fibrosis. *World J Biol Chem.* 7(4): 231–239. PMID 27957248
17. Lo PK, Zhang Y, **Wolfson B**, Gernapudi R, Yao Y, Duru N, Zhou Q. (2016). Dysregulation of the BRCA1/long non-coding RNA NEAT1 signaling axis contributes to breast tumorigenesis. *Oncotarget.* 7(40): 65067–65089. PMID 27556296
18. Duru N, Gernapudi R, Lo PK, Yao Y, **Wolfson B**, Zhang Y, Zhou Q. (2016). Characterization of the CD49f+/CD44+/CD24- single-cell derived stem cell population in basal-like DCIS cells. *Oncotarget.* 7(30): 47511–47525. PMID 27374087
19. Lo PK, **Wolfson B**, Zhou X, Duru N, Gernapudi R, Zhou Q. (2016). Noncoding RNAs in breast cancer. *Brief Funct Genomics.* 15(3): 200–221. PMID 26685283
20. Gernapudi R, **Wolfson B**, Zhang Y, Yao Y, Yang P, Asahara H, Zhou Q. (2015) miR-140 Promotes Expression of long non-coding RNA NEAT1 in Adipogenesis. *Mol Cell Biol.* 36:30-38. PMID:26459763
21. Duru N, Gernapudi R, Zhang Y, Yao Y, Lo PK, **Wolfson B**, Zhou Q. (2015) NRF2/miR-140 signaling confers radioprotection to human lung fibroblasts. *Cancer Lett.* 369:184-91. PMID:26300493
22. Lo PK, **Wolfson B**, Zhou Q. (2015) Cancer Stem Cells and Early Stage Basal-like Breast Cancer. *World J Obstet Gynecol.* 5(2):150-161.
23. **Wolfson B**, Eades G, Zhou Q. (2015) Adipocyte Activation of Cancer Stem Cell Signaling in Breast Cancer. *World J Biol Chem.* 6(2) 39-47. PMID: 26009703
24. Gernapudi R, Yao Y, Zhang Y, **Wolfson B**, Roy S, Duru N, Eades G, Yang P, Zhou Q. (2015) Targeting exosomes from preadipocytes inhibits preadipocyte to cancer stem cell signaling in early-stage breast cancer. *Breast Cancer Res Treat.* 150:685-95. PMID:25783182

25. Eades G, **Wolfson B**, Zhang Y, Li Q, Yao Y, Zhou Q. (2015) lincRNA-RoR and miR-145 Regulate Invasion in Triple-negative Breast Cancer via Targeting ARF6. *Mol Cancer Res.* 13:330-8. PMID: 25253741
26. **Wolfson B**, Eades G, Zhou Q. (2014) Roles of microRNA-140 in stem cell-associated early stage breast cancer. *World J Stem Cells.* 6(5), 591–597. PMID: 25426255

## ABSTRACT & POSTERS

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1. **Wolfson B**, Schlom J, Hodge J. Exploiting off-target effects of estrogen-receptor targeting drugs to sensitize breast cancer to immune killing. AACR Conference on Tumor Immunology and Immunotherapy. November 2019
2. **Wolfson B**, Zhang Y, Gernapudi R, Duru N, Zhou Q. High-fat diet regulation of miR-140 in the mammary microenvironment. Biochemistry and Molecular Biology Retreat. University of Maryland Baltimore. January 2017
3. Duru N, **Wolfson B**, Gernapudi R, Zhou Q. Characterization of the CD44<sup>+</sup>/CD49f<sup>+</sup>/CD24<sup>-</sup> single-cell derived stem cell population in basal-like DCIS cells. Graduate Research conference. University of Maryland Baltimore. March 2016
4. Duru N, **Wolfson B**, Gernapudi R, Zhou Q. Characterization of the CD44<sup>+</sup>/CD49f<sup>+</sup>/CD24<sup>-</sup> single-cell derived stem cell population in basal-like DCIS cells. Biochemistry and Molecular Biology Retreat. University of Maryland Baltimore. January 2016
5. **Wolfson B**, Gernapudi R, Duru N, Zhou Q. Preadipocyte Exosomes Promote Early Stage Breast Cancer Formation by Enhancing Cancer Stem Cell Renewal Signaling. AACR Meeting Abstract No. 5067, Philadelphia PA. April 2015
6. Doshi KA, Natarajan K, **Wolfson B**, Huszar D, Baer MR. The Pim kinase inhibitor AZD1208 sensitizes acute myeloid leukemia cells with fms-like tyrosine kinase 3 internal tandem duplication (FLT3-ITD) to cytotoxic effects of chemotherapy drugs. AACR Meeting Abstract No. 5332, Philadelphia PA. April 2015
7. **Wolfson B**, Gernapudi R, Duru N, Zhou Q. Preadipocyte Exosomes Promote Early Stage Breast Cancer Formation by Enhancing Cancer Stem Cell Renewal Signaling. Graduate Research Conference Abstract. University of Maryland Baltimore, March 2015
8. Eades G, **Wolfson B**, Zhou Q. Long non-coding RNA RoR and microRNA-145 regulate tumor cell invasion in triple-negative breast cancer via targeting of ADP-Ribosylation Factor 6. Biochemistry and Molecular Biology Retreat. University of Maryland Baltimore. January 2015

9. Fang Y, **Wolfson B**, Godbey W. Non-Invasive Urinary Assay for Cancer Detection Via Expression-Targeted Gene Delivery. American Society of Gene & Cell Therapy Annual Meeting Abstract No. 668, Washington DC, May 2014
10. **Wolfson B**, Fang Y, Godbey W. Expression-Based Targeting for Early Cancer Detection. Center for Engaged Learning and Teaching Research Retreat. Tulane University, New Orleans, La. April 2011

## TALKS

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1. **Wolfson B**. Adopting Standard-of-Care Therapies for Tumor Immunogenic Modulation to Enhance Immune Cell Killing. 7<sup>th</sup> Annual ACEA Cancer & Immunotherapy Symposium. March 2019.
2. **Wolfson B**. High-fat diet regulation of miR-140 in the mammary microenvironment. University of Maryland RNA Interest Group, February 2017.
3. **Wolfson B**. High-fat diet regulation of miR-140 in the mammary microenvironment. 7<sup>th</sup> Annual Cancer Biology Research Retreat. University of Maryland Baltimore, May 2016

## AWARDS

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**Best Predoctoral Oral Presentation** **2016**  
7<sup>th</sup> Annual Cancer Biology Research Retreat.  
University of Maryland Baltimore

**Tulane Provost Grant for Scholarly Engagement** **2010-2013**  
Competitive grant to fund on-campus undergraduate research  
Tulane University

## PROFESSIONAL EXPERIENCE

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**Primary Editor** **2020-Present**  
NIH Fellows Editorial Board  

- *Collaborated with board members to provide manuscript editing services to NIH Fellows.*

**Blog Manager and Editor-in-Chief** **2018-Present**  
NIH Science Policy Discussion Group  
<https://sciencepolicyforall.wordpress.com>  

- *Organized twice-weekly blog submissions and weekly essays from members of the NIH SPDG*
- *Provided editorial advice to essay authors and organized weekly small group peer-review of submitted essays prior to publication.*

**Associate Editor****2017-Present**Journal of Science Policy and Governance

- *Collaborated with and supervised small groups of multidisciplinary PhD students in the editing of submissions to the Journal of Science Policy and Governance.*
- *Worked closely with manuscript authors to refine manuscript content and improve writing style and clarity.*

**Science Communications Intern****2017-2018**University of Maryland School of Medicine

- *Competitive program for intensive development of writing, public speaking, and communications skills for both scientist and general audiences.*
- *Developed 3-minute thesis, articles discussing science for general audience, audiovisual productions about graduate school.*

**SCIENCE OUTREACH AND ADVOCACY**

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**Science and Science Policy Blogger****2017-Present**Science Policy for All blog

- *Contributed science and science-policy news summaries as well as policy analysis essays to Science Policy for All, a science-policy blog run by the NIH Science Policy Discussion Group*

AACR Cancer Policy Monitor

- *Worked closely with senior members of AACR regulatory policy office to identify topics, craft, and write articles concerning current events in cancer clinical trials, drug regulation, and science policy.*
- *Published article, AACR Cancer Policy Monitor, Funding is Essential for FDA Oncology Center of Excellence, 9/5/17 (<http://www.aacr.org/AdvocacyPolicy/GovernmentAffairs/Pages/cancer-policy-monitor-sept-5-2017.aspx> - oce)*
- *Published article, AACR Cancer Policy Monitor, Basket Trials: Accelerating Precision Medicine, 7/11/17 (<http://www.aacr.org/AdvocacyPolicy/GovernmentAffairs/Pages/cancer-policy-monitor-july-11-2017.aspx#bas>)*

Local Media

- *Developed and wrote articles related to science and science policy for publication on my personal blog and local media.*
- *Published Op-Ed, Baltimore Sun, Fund Science to Fight Cancer, 9/7/17 (<http://www.baltimoresun.com/news/opinion/oped/bs-ed-op-0908-cancer-funding-20170906-story.html>)*
- *Published Op-Ed, Baltimore Sun, Why I Marched for Science, 4/24/17 (<http://www.baltimoresun.com/news/opinion/oped/bs-ed-why-i-marched-20170424-story.html>)*

**Volunteer educator****2015-2016**Baltimore Underground Science Space (BUGGS)

- *Assisted with community outreach during lab open-houses including microscopy, education concerning cell structure, and leading discussion of molecular and cancer biology.*
- *Presented lecture concerning thesis research to general audience including scientists and non-scientists from the greater Baltimore area.*

**TEACHING EXPERIENCE**

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**Research Mentor****2019**National Cancer Institute

- *Served as primary mentor for undergraduate research intern. Designed and implemented hypothesis-based research project and provided instruction for in vitro research techniques, experimental design, and analysis.*

**PROFESSIONAL MEMBERSHIPS**

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American Association for Cancer Research (AACR)

**2014-present**

American Association for the Advancement of Science (AAAS)

**2017-present**

Engaging Scientists and Engineers in Policy (ESEP)

**2017-present****LEADERSHIP EXPERIENCE & INSTITUTIONAL SERVICE**

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**Primary Editor****2020-Present**

NIH Fellows Editorial Board

**Blog Manager and Editor-in Chief****2019-Present**

Science Policy Discussion Group

NIH

**Organizer****Fall 2017**

Molecular Medicine Student Seminar Series

University of Maryland, Baltimore

**UMB Liaison****2017-2018**

National Science Policy Group (NSPG)

University of Maryland, Baltimore

**President and Founding Member****2017-2018**

Student Organization for Advocacy and Policy

University of Maryland, Baltimore

**Member****2015-2017**

Molecular Medicine Department Event Committee

University of Maryland, Baltimore

**Member****2015-2016**

Molecular Medicine Department Recruiting Committee

University of Maryland, Baltimore

**Parliamentarian/Co-President****2012-2013**

Phi Sigma Pi Honors Fraternity, Chapter Gamma Tau  
**Treasurer**  
Phi Sigma Pi Honors Fraternity, Chapter Gamma Tau  
**Eagle Scout**

Tulane University  
**2010-2012**  
Tulane University  
**2007**