

Curriculum Vitae: updated July 16, 2023

I. IDENTIFYING DATA

Name Maxine C. Umeh Garcia, Ph.D., M.Sc.
Current Position Instructor, Stanford School of Medicine
Current Affiliation Stanford University

II. EDUCATION HISTORY

Colleges and Universities Attended

2010 B.S. with Honors (Developmental Biology), minor (Psychology), University of California at Merced

2013 M.Sc., Quantitative and Systems Biology, University of California at Merced (laboratory of Dr. Michael D. Cleary)
Thesis: Dynamic Regulation of mRNA Decay during *Drosophila* Neural Development

2019 Ph.D., Biochemistry Molecular Cell & Developmental Biology, emphasis in Translational Research, University of California at Davis (laboratory of Dr. Colleen A. Sweeney)
Dissertation: Regulation of Triple Negative Breast Cancer by MicroRNAs and Methylation

III. EMPLOYMENT

Academic Appointments:

08/26/2019 – 06/30/2021 Postdoctoral Fellow, Department of Neurosurgery (laboratory of Dr. Melanie Hayden Gephart, co-mentor: Dr. Sylvia K. Plevritis)
Stanford University School of Medicine, Stanford, CA

08/26/2019 – 06/30/2021 T32 Fellow, Stanford Cancer Imaging Training (SCIT) Program
Stanford University School of Medicine, Stanford, CA

08/23/2021 – present Instructor, Department of Neurosurgery (laboratory of Dr. Melanie Hayden Gephart)
Stanford University School of Medicine, Stanford, CA

IV. HONORS AND AWARDS

2007 – 2008 Bobcat Scholarship, UC Merced
2007 – 2010 Dean's Honor List, UC Merced
2009 Chancellor's Honor List, UC Merced
2012 Best Speaker, Quantitative & Systems Biology Spring Retreat, UC Merced
2013 Best Speaker, Bay Area RNA Club (BARC) Conference
2013 Commencement Student Speaker, UC Merced School of National Sciences
2013 Academic Excellence Scholarship, UC Davis
2013 McNair Fellowship, UC Davis (declined)

2018 Alan and Ruth Stein Scholarship, Bridge Housing
2018 Best Oral Presentation, 12th Annual Spotlight on Junior Investigators, UC Davis School of Medicine, Comprehensive Cancer Center

V. BIBLIOGRAPHY

Peer-reviewed original research (9 total, 1 in preparation)

1. Burow, DA*, **Umeh-Garcia, MC***, True, MB, Bakhaj, CD, Ardell, DH, Cleary, MD. "Dynamic regulation of mRNA decay during neural development." *Neural Development* (2015): 1-16. PMID: 25896902. (*indicates co-first authors, listed in alphabetical order).
2. Amir, S., Simion, C., **Umeh-Garcia, M.**, Krig, S., Moss, T., Carraway, K.L. III and Sweeney, C. Regulation of the T-box transcription factor TBX3 by the tumour suppressor microRNA-206 in breast cancer. *British Journal of Cancer* (2016): 1125-34. PMID: 27100732.
*Contributed to collection, analysis, and interpretation of -omics data, and to manuscript writing
3. Zsófia Pénczváltó, Jane Qian Chen, Clifford G. Tepper, Ryan Davis, Matthew Silvestrini, **Maxine Umeh-Garcia**, Colleen Sweeney, Alexander D. Borowsky. A Syngeneic ErbB2 Mammary Cancer Model for Preclinical Immunotherapy Trials. *Journal of Mammary Gland Biology and Neoplasia* (2019): doi: 10.1007/s10911-019-09425-3. PMID: 30810966.
*Contributed to collection and analysis of data, and to manuscript writing (methods section)
4. **Umeh-Garcia, M.**, Simion, C, Ho, PY, Batra, N, Yu AM, Sweeney, C. Novel bioengineered microRNA-127 prodrug suppresses the growth and metastasis of triple negative breast cancer cells. *Cancer Research* (2019): doi: 10.1158/0008-5472.CAN-19-0656. PMID: 31694904.
5. Bhambhvani HP, Rodrigues AJ, **Umeh-Garcia MC**, Hayden Gephart M. Leptomeningeal Carcinomatosis: Molecular Landscape, Current Management, and Emerging Therapies. *Neurosurg Clin N Am* (2020): 31(4):613-625. doi: 10.1016/j.nec.2020.06.010.
*Contributed to data interpretation and manuscript writing
6. Chernikova SB, Deng J, Tsau S, Polyak D, Bhambhvani HP, Casey K, **Umeh-Garcia MC**, Rodriguez M, Fischer WN, Jandeleit B, Koller KJ, Li Y, Johnson E, Khoeur LK, Jeong H, Kolluru SS, Connolly ID, Eyben RV, Rafat M, Recht L, Nagpal S, Ahn GO, Ringold GM, Brown JM, Hayden Gephart M. (2020). Response of a Breast Cancer Leptomeningeal Metastasis Pre-Clinical Model to a Novel Brain-Permeant Chemotherapeutic Drug. *Journal of NeuroOncology*. Submitted.
*Contributed to data analysis and manuscript writing
7. Deng J, Chernikova S, Wang Y, Rodriguez M, Andersen SJ, **Umeh-Garcia MC**, Godfrey B, Ahmadian SS, Fischer WN, Brown M, Koller KJ, Jandeleit B, Koller K, Ringold GM, Hayden Gephart M. (2021). A novel brain-permeant chemotherapeutic agent for the treatment of brain metastasis in triple-negative breast. *Mol Cancer Therapeutics*. doi: 10.1158/1536-7163.MCT-21-0140.
*Contributed to data collection, data interpretation, and manuscript writing
8. **Umeh-Garcia, M.***, O'Geen, H., Simion, C., Hayden Gephart, M., Segal, D.J., Sweeney, C*. Aberrant promoter methylation contributes to LRIG1 silencing in basal/triple negative breast cancer. *Br J Cancer*. (2022) <https://doi.org/10.1038/s41416-022-01812-8>. (*indicates co-corresponding authors).
9. Pribus, S.J., **Umeh-Garcia, M.**, Gu, B., Godfrey, B., Han, S.S., Chernikova, S.B., Hayden Gephart, M. Loss of hormone receptor in breast cancer is associated with increased metastatic tropism for the brain

and accelerated progression of leptomeningeal disease. *In preparation, submission expected to Neuro-Oncology July 2023.*

*Contributed to design of study, data collection, data interpretation, and manuscript writing

Peer-reviewed publications (other - 1 total)

1. **Umeh-Garcia M**, Sweeney C. Cancer prevention through miRNAs: miR-206 prevents the initiation and progression of hepatocellular carcinoma by attenuating c-MET signaling and cell-cycle progression via cyclin D1 and CDK6. *Non-coding RNA Investigations* (2018). doi: 10.21037/ncri.2018.06.05. (editorial)

Non-Peer-reviewed Articles (1)

1. **Umeh-Garcia, M.** Challenges Faced by Black/African American People in Academia. *How to Be an Ally*, edited by Daldrup-Link, HE. Monasteria Press LLC. (2021): 12-13. (commentary)

VI. GRANT FUNDING

Current:

- | | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 07/2021 – 06/2023 | Funder: National Cancer Institute (K99)
Title: Do Tumor-Immune Interactions Prime Systemic Tolerance of Triple-Negative Breast Cancer Brain Metastases?
Role: PI |
| 07/2023 – 06/2024 | Funder: National Cancer Institute (K99)
Title: Administrative Supplement to K99CA256522
Role: PI |
| 07/2024 – 06/2027
(Pending) | Funder: National Cancer Institute (R00)
Title: Do Tumor-Immune Interactions Prime Systemic Tolerance of Triple-Negative Breast Cancer Brain Metastases?
Role: PI |

Submitted:

- | | |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08/2023 – 07/2024 | Funder: National Cancer Institute
Title: Identifying and Targeting Shared Molecular Characteristics of Breast- and Melanoma-Derived Brain Metastases (Supplement to U54CA261717)
Role: Significant Contributor |
| 08/2023 – 07/2024 | Funder: National Cancer Institute
Title Accelerating exploration of spatial transcriptomics data through an exploration portal (Supplement to U24CA274494)
Role: Significant Contributor |

Completed:

- | | |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08/2019 – 06/2021 | Funder: National Cancer Institute (T32)
Title: Stanford Cancer Imaging Training (SCIT) Program
Role: T32 Fellow (PIs: Dr. Sandy Napel & Dr. Bruce Daniel, Mentor: Dr. Melanie Hayden Gephart) |
| 08/2016 – 08/2019 | Funder: National Academies of Science Engineering & Medicine
Title: Ford Fellowship |

Role: Predoctoral Fellow

- 05/2016 – 08/2016 Funder: University of California at Davis (Graduate Studies)
Title: Graduate Student Research Fellowship in Engineering and Computer Methods
Role: Research Fellow
- 08/2014 – 05/2016 Funder: National Institute of General Medical Sciences (T32)
Title: UC Davis Molecular & Cellular Biology Training Program
Role: T32 Fellow (PI: Dr. James Trimmer, Mentor: Dr. Colleen Sweeney)
- 08/2013 – 07/2014 Funder: National Institute of General Medical Sciences
Title: Maximizing Student Development (IMSD)
Role: Fellow (PI: Dr. Barbara Horwitz)

VII. CLINICAL TRIALS

None.

VIII. PATENTS

None.

IX. EDITORIAL SERVICE

None.

X. SERVICE AS GRANT REVIEWER

None.

XI. UNIVERSITY ADMINISTRATIVE SERVICE

- 2014 – 2019 Committees: Executive Committee, Diversity Committee, Admissions Committee, & Recruitment Committee, UC Davis BMCBD Graduate Group
- 2019 – Present Diversity Committee, Department of Radiology, Stanford School of Medicine

XII. SERVICE TO PROFESSIONAL ORGANIZATIONS

- 2022 Planning Committee, 2022 NIH/NCI Junior Investigators Annual Meeting
- 2023 – Present Co-Chair, 2023 NIH/NCI Junior Investigators Annual Meeting
- 2023 Trainee Planning Committee, 2023 NIH/NCI Metastasis Network Annual Meeting

XIII. INVITED PRESENTATIONS (since 2012)

Grand Rounds:

None.

National and Regional Meetings:

1. 2013 “Identification of mRNA decay networks in the *Drosophila* nervous system.” Bay Area RNA Club Conference. San Francisco, CA
2. 2016 “Investigating the role of microRNA-127 in regulating Triple Negative Breast Cancer.” Rigor and Reproducibility Lecture Series: Molecular and Cellular Biology T32. Davis, CA
3. 2017 “MicroRNAs: Do They Hold Promise for Breast Cancer Therapy.” Breast Cancer Care and Research Fund Advocacy Meeting. Davis, CA
4. 2017 “My Journey to Becoming an Independent Cancer Researcher.” UC Davis Biology Undergraduate Scholars Program (BUSP). Davis, CA
5. 2017 – 2018 “Breast Cancer Research in the Sweeney Lab.” Sacramento Charter High School Science Partnership Program Lecture Series. Sacramento, CA
6. 2018 “Investigating the role of microRNA-127 in regulating Triple Negative Breast Cancer.” 12th Annual Spotlight on Junior Investigators Cancer Symposium. UC Davis, Sacramento, CA
7. 2018 “Investigating the role of microRNA-127 in regulating Triple Negative Breast Cancer.” Fresno State Biology Department Lecture Series. Fresno, CA
8. 2021 “Studying the Microenvironment of Triple Negative Breast Cancer Brain Metastases.” Stanford.Berkley.UCSF Next Generation Faculty Symposium. Virtual
9. 2022 “Studying the Microenvironment of Breast Cancer Brain Metastases.” Memorial Sloan Kettering Cancer Center MERIT Emerging Leaders Symposium. New York, NY
10. 2022 “Investigate and Inhibit Microglia Support of Brain Metastases.” NCI MetNet Annual Meeting. Stanford, CA
11. 2023 “Deconvolution and Interruption of the Cancer-Neuro-Immune Axis Facilitating Brain Metastases.” MC2 Kickoff Meeting. Virtual

International Meetings:

None.

IX. TRAINEES

Graduate students:

None.

Medical students/Medical residents:

R. Taiwo, , Stanford University, 2022 – present

D. Herrick, , Stanford University, 2022 – present

Undergraduate students:

M. True, University of California at Merced, 2011 – 2013

M. Hernandez, University of California at Davis, 2017 – 2019

B. Godfrey, Stanford University, 2019 – 2022

M. Myles, Stanford University/Spelman College, 2022

P. Nunez Perez, Stanford University, 2022 – present

E. De Belen, Stanford University, 2023 – present

Highschool students:

D. Schenck, Sacramento High School, 2018

Postdoctoral scholars:

None.