

Morgan MacBeth

Morgan brings 10 years of well-rounded scientific data analysis experience coupled with an independent, hard-working, and enthusiastic demeanor.

EXPERIENCE

University of Colorado, Anschutz Medical Campus, Robinson Lab — Professional Research Assistant

NOVEMBER 2018 - PRESENT

Lab manager/senior research assistant for the past 5 years. I am responsible for driving projects to completion. I have mentored 5 students. Have generated data responsible for ~\$1,000,000 in grant and gift funding. Using C++, SAS, and R I have generated statistical analysis of clinical data as well as RNA, ATAC, 16S, and ITS sequencing data.

National Jewish Health, Gelfand Lab — Lab Researcher

SEPTEMBER 2016 - OCTOBER 2018

Performing lab managerial duties as well as day-to-day benchwork. Processing all clinical study samples including whole blood (plasma, serum, PBMCs, RNA), urine, nasal brushing, and others. Helping lab immunologists with microbiology assays such as ChIP, Western blotting, molecular cloning, and other microbiology needs. Generated figures for posters and papers from data analysis.

University of Colorado, Anschutz, Espinosa Lab — Professional Research Assistant

AUGUST 2015 - SEPTEMBER 2016

Performed day-to-day benchwork for projects being investigated in the lab. Troubleshoot experiments and making decisions directly affecting the outcome of projects. Took care of laboratory equipment, performed lab chores, and kept a detailed laboratory notebook. Analyzed big data such as ChIP-seq and RNA-seq at the command line.

Case Western Reserve University, Cullis Lab, Cleveland, OH — Research Assistant

AUGUST 2013 - AUGUST 2015

Performed laboratory experiments such as cloning, plant transformation, PCR, interpreted, and evaluated data gained from experiments.

Holden Arboretum, Burns Lab, Cleveland, OH — Summer Research Assistant

SUMMER 2013

Performed laboratory experiments such as DNA isolation from soil samples, restriction digests, TRFLP, PCR, and data analysis

EDUCATION

BS, Biochemistry - 2014
Case Western Reserve University

MS, Biostatistics - 2024
University of Colorado

SKILLS

Data visualization
Data presentation and dissemination
Data analysis (R, C++, Python, SAS)
Microsoft Office
EHS data analysis

PUBLICATIONS

1: Turner JA, Fredrickson MA, D'Antonio M, Katsnelson E, **MacBeth M**, Van Gulick R, Chimed TS, McCarter M, D'Alessandro A, Robinson WA, Coutts KL, Pelanda R, Klarquist J, Tobin RP, Torres RM. Lysophosphatidic acid modulates CD8 T cell immunosurveillance and metabolism to impair anti-tumor immunity. *Nat Commun.* 2023 Jun 3;14(1):3214. doi: 10.1038/s41467-023-38933-4. PMID: 37270644; PMCID: PMC10239450.

2: Schedel M, Leach SM, Strand MJ, Danhorn T, **MacBeth M**, Faino AV, Lynch AM, Winn VD, Munoz LL, Forsberg SM, Schwartz DA, Gelfand EW, Hauk PJ. Molecular networks in atopic mothers impact the risk of infant atopy. *Allergy.* 2023 Jan;78(1):244-257. doi: 10.1111/all.15490. Epub 2022 Sep 4. PMID: 35993851.

3: Abbott JK, Chan SK, **MacBeth M**, Crooks JL, Hancock C, Knight V, Gelfand EW. Fluctuations in quality of life and immune responses during intravenous immunoglobulin infusion cycles. *PLoS One.* 2022 Mar 22;17(3):e0265852. doi: 10.1371/journal.pone.0265852. PMID: 35316278; PMCID: PMC8939786.

4: Dart CR, Mukherjee N, Amato CM, Goulding A, **MacBeth M**, Van Gulick R, Coutts KL, Lambert JR, Norris DA, Robinson WA, Shellman YG. A Novel Regimen for Treating Melanoma: MCL1 Inhibitors and Azacitidine. *Pharmaceuticals (Basel).* 2021 Jul 30;14(8):749. doi: 10.3390/ph14080749. PMID: 34451846; PMCID: PMC8399604.

5: **MacBeth M**, Joetham A, Gelfand EW, Schedel M. Plasticity of Naturally Occurring Regulatory T Cells in Allergic Airway Disease Is Modulated by the Transcriptional Activity of *Il-6*. *Int J Mol Sci.* 2021 Apr 27;22(9):4582. doi: 10.3390/ijms22094582. PMID: 33925531; PMCID: PMC8123826.

6: Hartman SJ, Bagby SM, Yacob BW, Simmons DM, **MacBeth M**, Lieu CH, Davis SL, Leal AD, Tentler JJ, Diamond JR, Eckhardt SG, Messersmith WA, Pitts TM. WEE1 Inhibition in Combination With Targeted Agents and Standard Chemotherapy in Preclinical Models of Pancreatic Ductal Adenocarcinoma. *Front Oncol.* 2021 Mar 25;11:642328. doi: 10.3389/fonc.2021.642328. PMID: 33869031; PMCID: PMC8044903.

7: Holman BN, Van Gulick RJ, Amato CM, **MacBeth ML**, Davies KD, Aisner DL, Robinson WA, Coutts KL. Clinical and molecular features of subungual melanomas are site-specific and distinct from acral melanomas. *Melanoma Res.* 2020 Dec;30(6):562-573. doi: 10.1097/CMR.000000000000688. PMID: 33156595.

8: Mukherjee N, Skees J, Todd KJ, West DA, Lambert KA, Robinson WA, Amato CM, Coutts KL, Van Gulick R, **MacBeth M**, Nassar K, Tan AC, Zhai Z, Fujita M, Bagby SM, Dart CR, Lambert JR, Norris DA, Shellman YG. MCL1 inhibitors S63845/MIK665 plus Navitoclax synergistically kill difficult-to-treat melanoma cells. *Cell Death Dis.* 2020 Jun 8;11(6):443. doi: 10.1038/s41419-020-2646-2. PMID: 32513939; PMCID: PMC7280535.

9: Andrysik Z, Galbraith MD, Guarnieri AL, Zaccara S, Sullivan KD, Pandey A, **MacBeth M**, Inga A, Espinosa JM. Identification of a core TP53 transcriptional program with highly distributed tumor suppressive activity. *Genome Res.* 2017 Oct;27(10):1645-1657. doi: 10.1101/gr.220533.117. Epub 2017 Sep 13. PMID: 28904012; PMCID: PMC5630028.

POSTER PRESENTATIONS

1. Coutts KL, Tobin R, Van Gulick R, Turner JA, Bemis J, Bagby SM, Vorwarld V, **MacBeth M**, Applegate A, Simmons D, Yacob B, Hartman S, Capasso A, Pitts TM, McCarter M, Robinson WA. Differential gene expression across melanoma subtypes predicts responses to immune checkpoint blockade. **Keystone Symposia: Uncovering Mechanisms of Immune-Based Therapy in Cancer and Autoimmunity.** February 18-22, 2019. Breckenridge, CO.
2. Coutts KL, Tobin R, Van Gulick R, Turner JA, Bemis J, Bagby SM, Vorwarld V, **MacBeth M**, Applegate A, Simmons D, Yacob B, Hartman S, Capasso A, Pitts TM, McCarter M, Robinson WA. Differential gene expression across melanoma subtypes predicts responses to immune checkpoint blockade. **Keystone Symposia: Cancer Immunotherapy: Mechanistic Insights to Improve Clinical Benefit.** March 10-14, 2019. Whistler, British Columbia, Canada.
3. Coutts KL, Tobin RP, Van Gulick R, Turner JA, Bagby SM, Vorwald VM, **MacBeth ML**, Pitts TM, McCarter MD, Robinson WA. Differential gene expression across melanoma subtypes predicts responses to immune checkpoint blockade. **University of Colorado Anschutz Department of Medicine Research Day.** April 22, 2019. Aurora, CO.
4. Van Gulick RJ, Coutts KL, Bagby SM, **MacBeth M**, Turner JA, Hintzsche JD, Amato CM, Tan AC, Tentler JJ, Robinson WA. Development and classification of rare melanoma patient derived xenograft models and cell lines. **Society for Melanoma Research Annual Meeting.** November 20-23, 2019. Salt Lake City, UT.
5. **MacBeth M**, Turner JA, Van Gulick RJ, Robinson WA, Rieth MJ, Coutts KL. A novel wild-type BRAF p61 isoform cooperates with GNAQ Q209L to activate MAPK and PI3K/AKT pathways in uveal melanoma. **Society for Melanoma Research Annual Meeting.** November 20-23, 2019. Salt Lake City, UT.
6. **MacBeth M**, Tobin RP, Van Gulick RJ, Vorwald VM, Turner JA, Bagby SM, McCarter MD, Robinson WA, Coutts KL. Loss of innate immune sensing contributes to mucosal melanoma development and immunotherapy resistance. **Keystone Symposia: Cancer Evolution and Combinatorial Cancer Therapies.** January 20-24, 2020. Banff, Alberta, CA.
7. **MacBeth M**, Tobin RP, Van Gulick RJ, Vorwald VM, Turner JA, Bagby SM, McCarter MD, Robinson WA, Coutts KL. Loss of intra-tumoral RIG-I immune signaling is a

potential microbiome-mediated mechanism underlying poor anti-tumor immunity and immunotherapy resistance in mucosal melanoma. **AACR Meeting: The evolving tumor microenvironment in cancer progression**. January 11-12, 2021. Virtual.

8. **MacBeth M**, Pulica R, O'Brien A, Robinson W, Coutts KL. High-throughput drug screen identifies p38 activators as effective treatments for acral and mucosal melanoma. **SMR Annual Congress**. October 17-20, 2022. Edinburgh, UK.