# Brian P. Riesenberg, PhD | Postdoctoral Research Associate

UNC Chapel Hill – Lineberger Comprehensive Cancer Center

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### **Executive Summary**

- PhD research scientist and entrepreneur with a focus in cancer immunotherapy drug development and commercialization.
- Co-Founder, ER Therapeutics LLC: A drug discovery, academic spinout focused on mitigating endoplasmic reticulum (ER) stress as a means to improve patient outcomes in immunooncology.
- Developed and managed a sponsored research program aimed at supporting an IND filing for a potential clinical asset.
- Secured 3 competitive grant fellowships (SCTR TL1, NRSA NCI F31, T32 PIRE) in the past 6 years, worth approximately \$250,000 in support.

## **Research Experience**

2021- present **Postdoctoral Research Associate** | Lineberger Comprehensive Cancer Center | University of North Carolina at Chapel Hill | Chapel Hill, NC Mentor: Jessica Thaxton, PhD | Assistant Professor

Cancer Immunology and Drug Discovery

- Identified and validated the proteasome as a major cellular checkpoint responsible for controlling effectiveness of immunotherapy
- 2021

Postdoctoral Fellow | Department of Microbiology and Immunology | Program for Immunology Research and Entrepreneurship | Medical University of South Carolina | Charleston, SC

Mentor: Jessica Thaxton, PhD | Associate Professor

Drug Discovery and Technology Commercialization

- Co-Founder of an academic spinout company (ER Therapeutics) with Dr. Jessica Thaxton as a means to commercialize novel drugs developed from ongoing work in the lab.
- Developed and validated multiple cell-based, high throughput, phenotypic assays for screening proprietary drug libraries at the Medical University of South Carolina.
- 2019-2021 **Postdoctoral Scholar** | Pelotonia Institute for Immuno-Oncology | The Ohio State University James Comprehensive Cancer Center | Columbus, OH Mentor: Zihai Li, MD, Ph.D. | Founding Director, Pelotonia Institute for Immuno-Oncology

Technology Commercialization and Consulting

- Managed a team of six scientists (4 PhDs, 2 graduate students) in the validation and expansion of a preclinical pipeline for testing potential in-house developed clinical assets
- Primary liaison and scientific consultant for a biotechnology firm developing an in-house generated • clinical asset – responsible for hitting milestones associated with a sponsored research agreement aimed at generating a robust preclinical efficacy package to support IND filing
- Senior scientific consultant for the Immune Monitoring and Discover Platform at the Pelotonia Institute for Immuno-Oncology – tasked with developing and validating standard operating procedures for several next generation technology platforms including spectral flow cytometry (Cytek), single cell proteomics (Isoplexis), and single cell RNA sequencing (10x Genomics)

Translational Immunotherapy

Demonstrated the prognostic effect of platelet count on overall survival of late stage cancer patients treated with PD-1 blockade in collaboration with medical oncologists at Ohio State University (Abstract at ASCO 2020)

Spectral Flow Cytometry and Informatics

- Developed, optimized, and validated multiple high dimensional (30+ antigen) spectral flow cytometry panels for use on isolated tumor infiltrating lymphocytes (human and mouse) as well as PBMC from cancer and COVID-19+ patients
- 2014-2019 Graduate Research Associate | Department of Microbiology and Immunology | Hollings Cancer Center | Medical University of South Carolina | Charleston, SC Mentor: Zihai Li, MD, Ph.D. | Microbiology & Immunology Department Chair

Tumor Immunology

- Demonstrated platelets as a bona fide immunosuppressive entity in the tumor microenvironment via regulation of TGFβ1 activation and paracrine signaling
- **Biotechnology Commercialization** 
  - Developed, wrote, and pitched a commercialization/business plan for navigating an in-house developed clinical asset on to the market as part of a technology commercialization class received a perfect score piece.

Clinical Oncology

- Aided in the development of a clinical protocol testing the capacity of combination antiplatelet therapy with pembrolizumab to induce a more favorable immunologic response in patients with metastatic head and neck squamous cell carcinoma (NCT03245489)
- Primary liaison for sample collection, isolation, storage, and analysis for clinical trial NCT03245489
- 2013-2014 Graduate Rotation Student | Department of Microbiology and Immunology | Hollings Cancer Center | Medical University of South Carolina | Charleston, SC Mentor: Mark Rubinstein | Associate Professor

Tumor Immunology

- Assisted in uncovering the mechanism by which lymphodepletion improves engraftment of adoptively transferred, tumor specific T cells cultured with IL-12 prior to transfer
- 2010-2013 Research Associate | Wood Hudson Cancer Research Laboratory | Newport, Kentucky | Mentor: Dr. Julia Carter

## Education

 2013-2019 Ph.D. in Microbiology and Immunology | Focus: Cancer Immunotherapy Medical University of South Carolina (MUSC) | South Carolina, USA. Mentor: Zihai Li, MD, Ph.D. | Department Chair | Cancer Immunology Program Leader
2008-2011 B.S. in Biology. Barton College | Wilson, North Carolina Supervisor: Kevin Pennington, Ph.D.

## **Publications**

Select publications can be found here: https://pubmed.ncbi.nlm.nih.gov/?term=Riesenberg+B