**Ian Schrack**

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**PROFESSIONAL SUMMARY**

Ph.D. biomedical scientist with 10 years of experience in cellular & molecular immuno-oncology and a specialty in transcriptomics. Strong collaborator with a track record of leading interdisciplinary teams and mentoring junior scientists. I’m eager to apply my skills in an industry setting focused on translational research and data-driven discovery—while growing into roles that combine scientific leadership with strategic impact.

**EDUCATION**

**University of Michigan August 2019 – January 2025**

*Ph.D.* in Biomedical Engineering (GPA 4.00/4.00)

Dissertation Title: Longitudinal Monitoring of Metastatic Cancer Dynamics Using Engineered Biomaterials

**University of Minnesota**

*M.S.* in Biomedical Engineering (GPA 3.72/4.00) **October 2018**

Thesis Title*:* Scaffold Engineering of CD19 for Molecular Therapeutics

*B.S.* in Biomedical Engineering (GPA 3.53/4.00) **May 2017**

**RESEARCH EXPERIENCE**

**Graduate Researcher (Ph.D. Candidate) September 2019 – January 2025**

*Lab of Dr. Lonnie Shea in the Department of Biomedical Engineering at the University of Michigan*

* Collected and analyzed multi-tissue, multi-timepoint scRNA-seq data using clustering, trajectory inference, and ligand-receptor interaction modeling to characterize pro-metastatic immune subsets and their interactions, identifying potential targets for immunomodulatory therapy.
* Developed a synthetic metastatic niche platform as an accessible site for longitudinal flow cytometry and transcriptomic analysis, enabling early detection of cancer progression and monitoring of immunotherapy response in preclinical models.

**Research Associate II** **June 2018 – August 2019**

*T Cell Therapeutics Research Laboratory at the City of Hope Beckman Research Institute*

* Designed and optimized CAR T cell constructs to enhance tumor microenvironment specificity, reducing off-target toxicity and improving therapeutic efficacy in preclinical models.
* Optimized CAR design parameters (stability, specificity, affinity) using high-throughput screening and functional assays, contributing to the development of next-generation CAR T cell therapies.

**Graduate Researcher (M.S. Student) September 2017 – October 2018**

*Lab of Dr. Benjamin Hackel in the Department of Chemical Engineering at the University of Minnesota*

* Developed yeast-surface display libraries to engineer high-affinity protein binders for CAR T cell therapy, optimizing molecular targeting and improving immunotherapeutic function.
* Performed high-throughput flow cytometry screening to analyze protein binding kinetics and functionality, identifying lead candidates for CAR T immunotherapy development.

**Research Assistant September 2014 – August 2017**

*Lab of Dr. Benjamin Hackel in the Department of Chemical Engineering at the University of Minnesota*

* Developed and optimized yeast-surface display selection protocols to improve ligand discovery efficiency, increasing candidate enrichment for therapeutic applications.
* Mentored and trained junior researchers in molecular biology and protein engineering techniques, enhancing lab productivity and technical proficiency in biopharmaceutical research.

**PROFESSIONAL EXPERIENCE**

**Project Manager June 2023 – November 2024**

*miLEAD Consulting Group at the University of Michigan*

* Led a market entry strategy for a biomedical device startup, identifying key clinical stakeholders and optimizing regulatory and commercialization pathways for product adoption.

**Consultant October 2022 – June 2023**

*miLEAD Consulting Group at the University of Michigan*

* Conducted competitive analysis and market landscape assessments for a Fortune 500 company, identifying high-growth global markets and strategic technology investments.
* Designed a go-to-market strategy for an emergency medicine startup, evaluating clinical needs, regulatory requirements, and commercial viability for product launch.

**Co-Entrepreneurial Lead June 2020 – August 2020**

*The National Science Foundation Innovation Corps (NSF I-Corps)*

* Conducted 109 customer discovery interviews to assess market demand and refine the business model for a novel cancer diagnostic technology, securing NSF funding.
* Developed and pitched a commercialization strategy for an oncology diagnostic platform, winning the People’s Choice Award in a 32-team NSF startup incubator.

**LEADERSHIP & PROFESSIONAL ENGAGEMENT**

**Ambassador September 2023 – September 2024**

*Summer Research Opportunities Program (SROP) at the University of Michigan*

* Mentored and advised prospective graduate students from underrepresented backgrounds, helping them navigate research careers and competitive graduate programs in STEM and biomedical sciences.

**Ph.D. Representative for the Department of Biomedical Engineering March 2022 – May 2024**

*College of Engineering Graduate Student Advisory Committee (GSAC) at the University of Michigan*

* Represented the interests of 100+ biomedical engineering Ph.D. students, collaborating with faculty and administration to improve curriculum, funding opportunities, and research resources.

**Co-Chair of Social Affairs May 2023 – May 2024**

*Department of Biomedical Engineering Graduate Student Council at the University of Michigan*

* Organized networking and professional development events for the BME graduate community, securing funding and increasing cross-disciplinary collaboration.

**Volunteer Student Teacher October 2020 – December 2022**

*Science Education and Engagement (SEEK) at the University of Michigan*

* Designed and delivered STEM outreach programs to K-12 students, increasing science literacy and engagement in underrepresented communities.

**Co-President November 2020 – January 2022**

*Department of Biomedical Engineering Graduate Student Council at the University of Michigan*

* Led a student organization of 200+ members, overseeing event planning, diversity initiatives, and recruitment strategies while transitioning to virtual engagement during the pandemic.

**Diversity, Equity & Inclusion Committee Member November 2020 – November 2021**

*Department of Biomedical Engineering at the University of Michigan*

* Co-founded the BME DEI Committee, establishing strategic initiatives to improve representation, mentorship, and inclusion within the graduate program.

**TECHNICAL & COMPUTATIONAL SKILLS**

***In Vivo* Technical:** Animal Models of Cancer | General Husbandry | Subcutaneous Implants | Tumor Inoculation | Tumor Resection | Tissue Explants | Blood Collection | Bone Marrow Extraction | Intracardiac, Intravenous, and Intraperitoneal Injections | Drug Administration | *In Vivo* Bioluminescence & Fluorescence Imaging

***In Vitro* Technical:** Multi-Color Flow Cytometry | Sterile Mammalian & Bacterial Culture (BSL-2) | Bulk & Single Cell Sequencing Preparation | Cell Behavior Assays | Immunofluorescent Microscopy | DNA/RNA purification

**Computational:** R (proficient) | Bulk & scRNA-seq Pipelines (Seurat, Monocle, CellChat, Scanpy, etc.) | FlowJo | Graphpad (PRISM) | Python (intermediate) | Command Line (intermediate)

**General:** Science Communication | Laboratory Record Keeping | Mentoring & Training | Experimental Design and Troubleshooting | Statistical Analysis | Data Management | Protocol Development