Jon Albo

Biomedical Engineer | Data Scientist | Biotech Innovator

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Innovative problem solver passionate about advancing biotech through data-driven solutions. Experienced in molecular diagnostics and translational science, with a primary focus on scalable technologies and strategic biotech innovation. Proven leader in translating science to practical applications, with a focus on developing accessible and reproducible technologies for all levels of stakeholders. Skilled in translating complex science into impactful, market-ready solutions, leveraging strong communication, collaboration, and project management abilities.

EDUCATION

Cornell University, Ithaca, NY, USA

PhD in Biomedical Engineering

Earned 5 years of self-funding totaling \$265,000 through competitive NIH and NSF fellowships, and recognized with 10 awards/fellowships, 1 patent, 3 publications, and 7 presentations

MS in Biomedical Engineering

Florida State University, Tallahassee, FL, USA

BS in Chemical Engineering (Cum Laude)

Earned 4 years of funded tuition and received 15 awards, 4 publications, and 8 presentations

SCIENTIFIC EXPERIENCE

Biomedical Engineering Graduate Research Fellow

Cornell University, Ithaca, NY supported by NIH and NSF

- Built a user friendly, highly reproducible high-throughput diagnostic platform to streamline complex translational science applications (e.g., antibiotic and oncology drug screening, genomic testing, chemical synthesis assays) which resulted in 3 papers, 1 patent, and 7 conference talks
- Developed numerous bioinformatic pipelines in Python including a two-stage machine learning workflow to screen 10,000 drug combinations which leveraged high-throughput experimental data, public databases, and computational drug-protein interaction modeling, resulting in the discovery of numerous novel synergistic drug combinations
- Performed data analysis on over 100 million data points across 10 projects using statistical methods such as principal component analysis and data visualization methods such as UMAP to uncover novel insights for drug development, reaction kinetics, and antibiotic resistance trends
- Led collaborations with 9 research labs at 7 universities and 1 international biotech company to expand molecular diagnostic platform applications, including adaptations to meet FDA regulations for antibiotic susceptibility testing, for use in regulated BSL-3 facilities to improve treatment options for tuberculosis, and for genomic testing and library preparation of human and bacterial DNA
- Established extensive technical writing and strategic direction skills, authoring vision for the lab's future direction through a funded \$2 million NIH grant to establish scalable screening methods targeting infectious diseases, such as malaria, dengue, and tick-borne diseases
- Initiated commercialization of a high-throughput diagnostic platform through fellowships and NSF-funded technology translation initiatives, resulting in extensive experience with product development and lifecycle management, assessing stakeholder interests, and business development decisions

Hematology and Oncology Clinical Intern

Weill Cornell Medicine and Memorial Sloan Kettering, New York, NY

- Enhanced high-throughput personalized medicine cancer diagnostics by identifying unutilized time in automated workflows for over 50 clinicians and stakeholders, enabling earlier and more accurate drug and dose recommendations for lymphoma and leukemia patients
- Optimized the scale-up of over 250 types of patient-derived organoids by implementing advanced cell culture techniques and workflow adjustments to develop a living biobank to predict resistance and treatment options, creating a scalable resource for personalized medicine and future research
- Leveraged data analytics and patient medical history to deliver personalized care insights for oncology rounds, working with a team of over 35 physicians and pharmacists to refine treatment strategies and improve bedside decision-making
- Supported oncology clinical trials by working with clinical trial coordinator to identify eligible patients from patient medical history, connecting 8 patients with cutting-edge CAR-T cell therapies and advancing access to innovative treatments

Aug 2020 – Present

May 2021 - Sept 2021

May 2025

May 2023

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May 2020

Biomedical Engineering Research Assistant

Florida State University, Tallahassee, FL

- Advanced cellular model development to develop targeted diagnostics and therapeutics for Alzheimer's disease by using in vitro cell culture techniques to differentiate human induced pluripotent stem cells into blood-brain barrier cells
- Authored a review paper in a leading tissue engineering journal by conducting comprehensive literature reviews on over 200 papers related to blood-brain barrier models, utilizing findings to identify research gaps and opportunities for new diagnostic and screening methods

Plant Pathology and Genetics Research Intern

US Department of Agriculture - Agricultural Research Service, Miami, FL

- Enhanced the accuracy and precision of DNA-based molecular diagnostics of low-guality and trace samples, enabling detection of agricultural cacao disease vectors, resulting in 1 paper and recognition as a top USDA-ARS employee in the southeast
- Utilized data science algorithms and statistical methods to analyze infection patterns and susceptibility in over 200 cacao cultivars, shaping research priorities to strengthen agricultural resilience and crop sustainability for the USDA Cacao Breeding Program
- Developed and optimized genomic-based workflows for international large-scale pathogen monitoring across regions including the US, Puerto Rico, Ecuador, Brazil and Ghana, advancing disease detection and prevention strategies

Food Safety and Quality Research Assistant

Florida State University; National High Magnetic Field Laboratory, Tallahassee, FL

- Designed and implemented polymer-based assays aligned with regulatory testing standards to detect pesticides, enhancing immediate access to methods for food guality assurance and safety compliance
- Optimized and improved specificity of protocols to detect adulterated meat products using antibodybased assays, focusing on improved regulatory compliance, culminating in 1 paper and 2 talks

ENTREPRENEURIAL EXPERIENCE

Life Science Technology Innovation Fellow

Aug 2024 – Present Cornell University; Weill Cornell Medicine; Memorial Sloan Kettering, New York, NY supported by Sanofi

- Developed business models for 1 patented life science and oncology innovation with cross-disciplinary teams, leveraging customer discovery, market research, and competitor analysis to mitigate business risks through mentorship from experienced entrepreneurs and investors
- Advanced commercialization efforts by pitching technology to investors, entrepreneurs, and customers, blending scientific expertise with strategic business communication, effectively communicating intricate innovations to numerous levels of stakeholders

Lead Teaching Assistant for The Business of Entrepreneurship Cornell University SC Johnson College of Business, Ithaca, NY

- Advised 70 MBAs, PhDs, and MS students in developing business models for life science ventures, focusing on teaching customer discovery, market needs, and risk assessment to refine commercialization strategies
- Led workshops on science communication, competitive positioning, and product-market fit, equipping students with tools to pitch life science innovations to investors and incubators

OUTREACH EXPERIENCE

Mentor for Various Professional Development Activities

Cornell University, Ithaca, NY

- Mentored 15 first-year undergraduate engineering students through Cornell's EMPower program, providing guidance on research, internships, and career development, resulting in 2 awards from Cornell's College of Engineering
- Led life science workshops for over 200 high school students Cornell's CURIE and Catalyst programs, inspiring STEM interest by introducing cutting-edge research through hands-on activities
- Trained 12 students in grant writing strategies, achieving an 80% success rate in securing prestigious NIH and NSF fellowships by fostering strategic thinking related to their career paths and research goals
- Advised 8 undergraduates on PhD applications, resulting in a 100% acceptance rate at top biomedical engineering programs through guidance on research interests and application strategy

Jan 2017 – May 2019

May 2019 – Nov 2019

Aug 2024 – Jan 2025

Aug 2020 – Present

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May 2019 – May 2020