Alexander J. Najibi

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# Profile

Cancer immunologist and biotech startup consultant with an exceptionally strong scientific background (4.0 GPA through a decade of courses at UC Berkeley, Harvard, and MIT and co-author of 12 publications since 2018). Experienced assessing pre-clinical and clinical data sets and therapeutic landscapes; passionate about translational research benefiting human health.

# Education

**PhD** Engineering Sciences, Harvard University 2016 – 2022

NSF Graduate Research Fellow, GPA 4.0/4.0.

**BS** Bioengineering, University of California at Berkeley 2012 – 2016

Regents and Chancellor’s Scholar, Dean’s Honors, GPA 4.0/4.0.

# Research Experience

**Postdoctoral fellow**, David Mooney Lab, Harvard University 2022 – present

* Leading validation of a novel, biomaterial-based vaccine technology for clinical translation by identifying and executing pivotal experiments.

**PhD researcher**, David Mooney Lab, Harvard University 2016 – 2022

* Investigated biomaterials for immuno-oncology and tissue engineering, gaining proficiency and publishing in diverse therapeutic areas (solid and liquid tumors, infectious disease, muscle injury and atrophy, hematopoietic stem cell transplantation).
* Directed team-based projects focused on research translation with collaborating hospitals, academic institutions, and biotech industry leaders.
* Mentored three undergraduate/master’s students through Amgen and SPARC programs.

**Undergraduate researcher**, Kevin Healy Lab, UC Berkeley 2014 – 2016

* Designed a microfluidic, point-of-care CD4+ T cell enumeration device for HIV monitoring.
* Led device testing team, trained new members, and presented at engineering symposium.
* Developed expertise in data analysis, interpretation, and presentation.

# Leadership and Professional Experience

**Freelance scientific writer**, ACIR.org 2018 – present

Generated concise summaries of 130+ cancer immunotherapy journal articles and assisted with fundraising and publicity. Effectively communicated scientific findings to a general audience. Spearheaded ACIR’s freelance writing program, now a team of ten, through a cold email.

**Consultant**, Gel4Med 2022 – present

Analyzed preclinical data sets and developed scientific strategy for startup Gel4Med ($4.29M raised), revising grants to secure research funding for bacterial infection and wound healing.

**Consultant**, Indee Labs 2019 – 2020

Reviewed the scientific literature and therapeutic landscape surrounding CAR-T manufacture for cancer therapy for startup Indee Labs ($5.1M raised), identifying unmet needs and opportunities for innovation. Prepared blog post-style summaries for company publicity.

**Chief Marketing Officer**, “Homemade,” European Innovation Academy 2015

Created a diverse, multinational team to launch a tech startup in an intensive entrepreneurship program in Nice, France. As CMO, formulated a marketing strategy, pitched to investors, and acquired pre-seed funding to attract 650+ interested users.

# Relevant Coursework

* “Investing in Publicly-traded Biotechnology Companies” (2022). Performed scientific, financial, and landscape due diligence to prepare a biotech stock evaluation and pitch.
* “Innovation in Science and Technology” (2019). Formulated a business plan and investor pitch for a neuro-technology device startup.

# Selected Publications (\* indicates co-first authorship.)

* **Najibi, A.J.** et al. Targeting tumor extracellular matrix activates the tumor-draining lymph nodes. *Cancer Immunology, Immunotherapy* 2022.
* **Najibi, A.J.** et al. Scaffold Vaccines for Generating Robust and Tunable Antibody Responses. *Advanced Functional Materials* 2022.
* **Najibi, A.J.\***, Shih, T-Y.\*, Mooney, D.J. Cryogel vaccines effectively induce immune responses independent of proximity to the draining lymph nodes. *Biomaterials* 2022.
* Wang, H.\*, **Najibi, A.J.\*** et al. Biomaterial-based scaffold for in situ chemo-immunotherapy to treat poorly immunogenic tumors. *Nature Communications* 2020.
* **Najibi, A.J.**, Mooney D.J. Cell and tissue engineering in lymph nodes for cancer immunotherapy. *Advanced Drug Delivery Reviews* 2020.
* Shah, N.J.\*, **Najibi, A.J.\*** et al. A biomaterial-based vaccine eliciting durable tumour-specific responses against acute myeloid leukaemia. *Nature Biomedical Engineering* 2020.
* Kwee, B.J., Seo, B-R., **Najibi, A.J.** et al. Treating ischemia via recruitment of antigen-specific T cells. *Science Advances* 2019.

# Patent

U.S. Provisional Patent Application No. 62/904,446. “Biomaterial-based antigen free vaccine and the use thereof,” Alexander J. Najibi *et al.*, filed 2019, now exclusively licensed.

# Selected Presentations

* “Combination chemotherapy and gel-based vaccination to treat diverse cancers,” Drexel Immune Modulation & Engineering Symposium, poster/video (virtual), Dec 2021.
* “Immunology and immune engineering,” invited lecture at Harvard University, Nov 2021.
* “A cryogel-based cancer vaccine against acute myeloid leukemia,” AACR Virtual Special Conference: Tumor Immunology and Immunotherapy, poster/video (virtual), Oct 2020.
* “Antigen-free therapeutic vaccines,” Wyss Institute Symposium, selected speaker for a broad audience of 250+, Nov 2019.
* “Introduction to project management,” invited lecture at Harvard University, Sep 2017.

# Additional Experience and Hobbies

* **Professional writing,** published in Harvard’s *Science in the News* (2020), *The Crimson* (2020).
* **Resident assistant,** UC Berkeley and Harvard University (2013-2019). Planned and marketed social events, mediated conflict situations, and individually counseled 250+ students.
* **Standup and improv comedy,** performed in the Bay Area, Los Angeles, Boston, Canada.
* **#SciComm/public engagement,** created a science TikTok video with 900k views/97k likes.