Biopharmaceutical Industry Fellowship Program 2022-2024

Adaptive biotechnologies™

USC School of Pharmacy

About Adaptive Biotechnologies

Adaptive Biotechnologies is a commercial-stage biotechnology company focused on harnessing the inherent biology of the adaptive immune system to transform the diagnosis and treatment of disease. We believe the adaptive immune system is nature's most finely tuned diagnostic and therapeutic for most diseases, but the inability to decode it has prevented the medical community from leveraging its capabilities. Over the last decade, we have developed our proprietary immune medicine platform that reveals and translates the massive genetics of the adaptive immune system with scale, precision and speed to develop products in life sciences research, clinical diagnostics and drug discovery.

Our mission is to translate the genetic language of the adaptive immune system into clinical products to diagnose and treat diseases.

The combination of our unique approach and the near-infinite applications of immune medicine provide opportunities to make a difference in the lives of people living with many different diseases. We have three commercial products and a robust clinical pipeline to diagnose, monitor and enable the treatment of diseases such as cancer, autoimmune conditions, and infectious diseases. Our goal is to develop and commercialize immune-driven clinical products tailored to each individual patient.

Adaptive Executive Leadership

Chad Robins

CHIEF EXECUTIVE OFFICER, CO-FOUNDER, CHAIRMAN OF THE BOARD

Chad Robins is the co-founder and CEO of Adaptive Biotechnologies. Prior to co-founding Adaptive, Chad held numerous executive-level positions in medical technology, investment and real estate companies. Chad holds an MBA from The Wharton School at the University of Pennsylvania with a major in finance and concentrations in marketing and operations and a BS in Managerial Economics from Cornell University.

Harlan Robins, PhD

CHIEF SCIENTIFIC OFFICER & CO-FOUNDER

Harlan Robins is the co-founder and Chief Scientific Officer of Adaptive Biotechnologies. Before joining Adaptive, Harlan served in various roles in the Computational Biology Program at Fred Hutch, including as an Assistant Faculty Member and the Head of the program from April 2016 to June 2019. Harlan holds a BS in Physics from Harvard University and a master's degree and PhD in Physics from the University of California, Berkley.

AT A GLANCE

- Founded in 2009
- >650 employees
- >700 publications to date
- >58B immune receptors characterizes to date in our proprietary clinical immunomics database

Clinical Portfolio

At Adaptive, we are investing in the continued development of immune medicine products, which add new meaning to the stories every patient's immune system has to provide.

Our technology turns the vast and diverse genetic code of the adaptive immune system into data that we use to develop tools and products across Adaptive Biotechnologies' three business areas:

LIFE SCIENCES RESEARCH

immunoSEQ®

immunoSEQ Assays utilize a multiplex PCR-based assay enabling us to sequence directly from genomic DNA.

immunoSEQ® T-MAP™

Tools for researchers to study the COVID-19 T-cell immune response, including detecting past SARS-CoV-2 specific immune response in research sample & ability to track responses longitudinally.

CLINICAL DIAGNOSTICS

clonoSEQ®

FDA-cleared clonoSEQ Assay is a highly sensitive, specific, and standardized method for detecting and monitoring Measurable Residual Disease (MRD), in patient with multiple myeloma, B-cell acute lymphoblastic leukemia (ALL), and chronic lymphocytic leukemia (CLL).

T-Detect™ Microsoft

Through a collaboration with Microsoft, we are using our platform and Microsoft's AI and Machine Learning to develop a TCR-antigen map to the antigens they bind.

DRUG DISCOVERY

TruAB™

Neutralizing Antibodies

Adaptive has identified and characterized ultra-potent, neutralizing antibodies to SARS-CoV-2. Beyond COVID-19, Adaptive is exploring applications of TruAB in other diseases, including autoimmunity.

TruTCR®

Cancer Cellular Therapy

We are developing,manufacturing, and commercializing novel neoantigen directed T-cell therapies for the treatment of a broad range of cancers.

Adaptive biotechnologies® Genentech A Member of the Roche Group

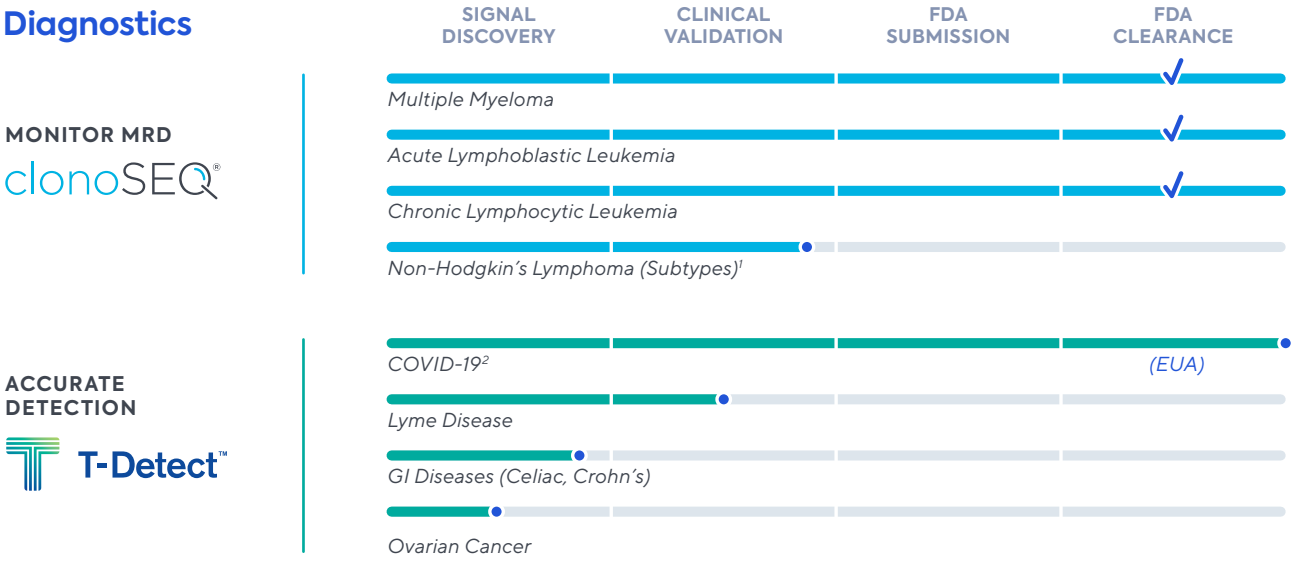
Vaccines

Informing Vaccine Design and Development

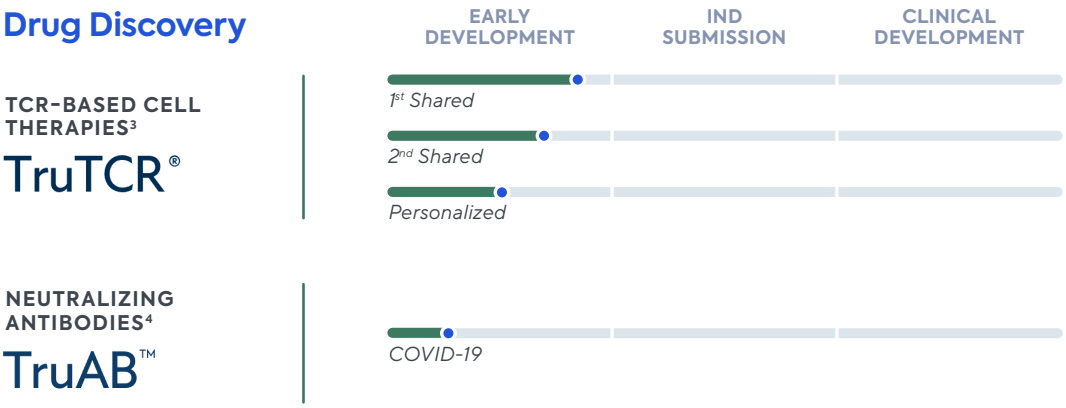
Our TCR-antigen discovery capabilities may inform the design and development of next-generation vaccines. Adaptive has validated hundreds of immunogenic antigens that can be selected to design differentiated vaccines.

Pipeline

Diagnostics



Drug Discovery



[1] Available to order as a CLIA-validated laboratory developed test (LDT) service. This use has not been cleared or approved by the FDA.

[2] This product has received Emergency Use Authorization and is not FDA cleared or approved.

[3] Product candidates in development as part of our worldwide collaboration and license agreement with Genentech. The "1st Shared" and "2nd Shared" product candidates refer to the two lead clinical product candidates selected from our library of TCRs that target cancer antigens present in many cancer patients. Genentech will determine the timing of discussions with, and submissions to the FDA.

[4] Product candidates in development.

Adaptive Fellowship Program Committee

Lance Baldo, MD

CHIEF MEDICAL OFFICER, FELLOWSHIP EXECUTIVE SPONSOR

Lance Baldo is the Chief Medical Officer of Adaptive Biotechnologies. Before joining Adaptive, Lance served in various roles of ascending responsibility with the Roche Group and its affiliates from February 2010 to April 2019, including most recently as Senior Vice President and Head of U.S. Medical Affairs of Genentech. Lance holds an MD from the University of Connecticut School of Medicine and a BA in Biology from John Hopkins University.

Amy Misnik, PharmD

SR. DIRECTOR, FIELD MEDICAL AFFAIRS, FELLOWSHIP SPONSOR

Amy Misnik is the Senior Director, Field Medical who leads the field medical teams across all therapeutic areas at Adaptive Biotechnologies. Before joining Adaptive, Amy served in various roles of increasing responsibility with Janssen Oncology, a Johnson and Johnson company, from 2012-2020. Most recently, she served as Director, Hematology Oncology MSLs and previously has experience as an MSL as well as within medical affairs and medical education. Amy holds a PharmD from the Duquesne University Mylan School of Pharmacy and completed a post-doctoral fellowship at Rutgers University.

Lori Pender, PharmD, MPH, BCOP

ASSOCIATE DIRECTOR,
MEDICAL AFFAIRS FELLOWSHIP SPONSOR

Lori Pender is the Associate Director of the Medical Affairs Data Dissemination team, which works with both the T-Detect™ and clonoSEQ® franchises. Lori started her career as a clinical pharmacist in an academic medical center, before moving into medical communications. She has worked in headquarters and field Medical Affairs, ran a medical communications consulting company, and worked in continuing medical education grant strategy and content development before joining Adaptive. She holds a BS degree from the University of Maryland, a PharmD from the University of Washington, where she also has a clinical faculty appointment, and a Master of Public Health degree from the Johns Hopkins University. She is a board-certified oncology pharmacist and board-certified editor in the life sciences.

Audrey Demaree, PharmD

SR. MANAGER, MEDICAL AFFAIRS,
FELLOWSHIP DIRECTOR

Audrey Demaree is a Senior Manager of Medical Affairs at Adaptive Biotechnologies supporting the clonoSEQ and T-Detect Assays. In her role, she focuses on medical communication, education, and internal training. Prior to joining Adaptive, Audrey completed a post-doctoral fellowship in Oncology Medical Affairs at Pfizer through the Rutgers Industry Fellowship Program (RPIF). Audrey holds a PharmD from the University of North Carolina - Eshelman School of Pharmacy and a BS in Biology from the University of Florida.

Krishna Patel, PharmD

MANAGER, MEDICAL AFFAIRS,
FELLOWSHIP PRECEPTOR

Krishna Patel is a Manager of Medical Affairs at Adaptive Biotechnologies supporting the T-Detect organization and focuses on medical communication and education. Prior to joining the team, Krishna completed a post-doctoral fellowship in Medical Affairs and Medical Information with the consumer division of Johnson & Johnson through the Pharmaceutical Industry and Education Fellowship Program at USciences. Krishna holds a PharmD from USciences- Philadelphia College of Pharmacy and is actively pursuing his MBA.

Year 1

EXPERIENCE OBJECTIVES:

- Develop a strong understanding of the therapeutic area and develop medical device expertise; complete all necessary medical training curriculum
- Collaborate with cross-functional teams and departments to review promotional materials and medical information resources to ensure scientific accuracy of claims and content
- Monitor, maintain, and evaluate scientific data and medical literature of internal and competitor products effectively
- Develop effective communication skills focused on delivering scientifically balanced clinical information of our pipeline and marketed devices to patients, health care professionals, and external customers
- Enhance medical writing capabilities through the development of written clinical responses to medical information requests, literature summaries, internal and external training materials, and clinical publications
- Deliver scientifically accurate and balanced educational presentations to the medical team and our commercial colleagues on assigned medical devices and disease states
- Attend and staff medical information booths at regional and national medical congresses
- Support publication strategy, development of manuscripts of scientific interest and commercial value, and write and review abstracts, manuscripts, and publications

Medical Affairs/ Medical Science Liaison Fellowship Program Overview

Adaptive Biotechnologies was founded on the premise that if you can read how the immune system detects and treats disease, you could harness these natural abilities to make a difference in the lives of people living with many different diseases. Our Immune Medicine Platform makes the adaptive immune system accessible by applying proprietary chemistry, computational biology and machine learning to read the diverse genetic code of a patient's immune system. It then generates and stores this immune receptor data in a dynamic and growing clinical database. As we continue to grow and expand in both our sequencing capabilities and development categories, the experience and exposure we can offer post-doctoral fellows will provide a unique and diverse opportunity to develop the core competencies needed within the biopharmaceutical and biotechnology industries. We foster a people-centric culture that enables all Adapters to succeed and thrive throughout their experience. Our aim is to realize our fullest potential, help Adaptive achieve its goals, and ultimately contribute to our collective mission to advance immune-driven medicine and improve patient lives.

In partnership with the University of Southern California, Adaptive Biotechnologies is offering one position for a two-year PharmD fellowship in Medical Affairs/ Medical Science Liaison (MSL). The Medical Affairs/MSL Fellowship program is designed to provide the fellow an opportunity to expand their biopharmaceutical industry experience through exposure to a broad range of Medical Affairs activities and specialized in-depth training in designated disciplines.

Adaptive Biotechnologies affiliation and partnership with the USC Pharmaceutical Industry Fellowship program will allow an opportunity for fellows to develop the strong biopharmaceutical industry experience needed to become our future leaders. Through significant hands-on experience in their respective functional area to unique teaching and scholarship opportunities under the mentorship of USC faculty, the fellows will be able to

Year 2

EXPERIENCE OBJECTIVES:

- Align Adaptive business needs with interests and strengths of post-doctoral fellow
- Develop strong understanding of field medical role and responsibilities through mentorship, shadowing, and learning the "art of MSLing"
- Support development of field medical resources, including internal training resources, SRDs, and medical slide decks
- Deliver scientifically balanced clinical information of our pipeline and marketed devices to internal and external stakeholders
  - » Lead journal club or other educational presentations
  - » Respond to medical information requests
  - » Deliver scientific presentations to HCPs as appropriate
- Attend and support regional and/or national medical meetings including medical booth staffing, session coverage, and medical insight reporting
- Collaborate with key opinion leaders, and practitioners via advisory boards, medical round tables, and field engagement.
- Provide proactive MSL territory coverage if needed and as identified by field medical leadership
- Develop cross-functional expertise and experiences through collaboration with the Market Access, Health Economics Outcomes Research (HEOR), and or Real-World Evidence (RWE) teams

reach their professional and personal development goals. We are dedicated to providing our fellows a unique post-doctoral learning and training opportunity to enhance their careers within the biopharmaceutical industry.

Our goal is to prepare postdoctoral fellows for a rewarding career in the biopharmaceutical industry by enhancing their industry experience through continual education, trainings, and hands-on experience in designated disciplines. The fellow will have an opportunity to collaborate with mentors and preceptors to cultivate a professional development plan, engage in daily functional area activities, and gain valuable insights through in-depth training and understanding of an assigned disease landscape and the associated medical diagnostic devices that Adaptive Biotechnologies has in development or available for clinical use. The structure and components of the fellowship program have been designed to incorporate the attributes of the fellows and requirements needed to be successful within the biopharmaceutical industry.

The Medical Affairs/ MSL Fellowship program focuses on providing exposure to four core functionalities: Medical Information, Medical Communication, Medical Training and Field Medical. In the first year of the program, the fellow will build their foundation in Medical Affairs working closely with leadership and cross-functional partners. During the second year, the fellow will complete a three-to-six-month rotation on the Field Medical team building upon the experiences gained thus far. Additionally, they will have an opportunity to participate in cross-functional collaborations and workstreams within our Market Access, Health Economics Outcomes Research (HEOR), and or Real-World Evidence (RWE) teams. This will provide the fellow a diverse experience to broaden their horizon within the biopharmaceutical industry. The focus of the second year is guided by the interests of the fellow, opportunities to utilize the competences from year one, and strategic placement based on business needs.

The fellow will be responsible for responding to unsolicited medical and clinical information requests about marketed products and products in development as well as disease/diagnosis-related questions received from healthcare professionals, consumers, and internal/external stakeholders. Additionally, they will act as an internal medical and scientific expert to train, educate, and ensure material accuracy and integrity by generating data, providing medical education, and communicating insights to address unmet medical needs.

USC School of Pharmacy

KEY HIGHLIGHTS

- Develop, coordinate, and deliver lectures in the pharmacy curriculum
- Access to USC courses and tuition remission
- Participate in professional development and leadership workshops
- Present data at scientific and clinical meetings
- Network with USC students, alumni, and affiliations

About Us

The USC School of Pharmacy is the only private pharmacy school on a major health sciences campus, which includes the Keck School of Medicine, Keck Hospital of USC and the USC Norris Comprehensive Cancer Center and is immediately adjacent to the LAC+USC Medical Center, one of the largest public hospitals in the country. Ranked by US News and World Report as a top ten pharmacy school nationwide and #1 among private schools, the USC School of Pharmacy is recognized for its century-old reputation for innovation in pharmaceutical education, clinical practice, and research. The School uniquely spans the entire spectrum of pharmaceutical development and clinical care – from drug discovery to regulatory approaches that promote safety and innovation, from delivery of patient care services to evaluating the impact of care on patient outcomes and costs. With a history of "firsts" that includes the nation's first Pharm.D. program (1950), first clinical clerkship program (1968), first Ph.D. in pharmaceutical economics (1990), and first professional doctorate in regulatory science (2008), the School holds an essential leadership role in the safe, efficient, and optimal use of medication therapy that can save lives and improve the human condition.

William C. Gong, Pharm.D., FASHP, FCSHP

- Associate Professor of Clinical Pharmacy
- Director, Residency and Fellowship Programs
- University of Southern California, School of Pharmacy

The Application

Requirements

To be admitted to the USC Pharmaceutical Industry Fellowship Program, the candidate must have completed a PharmD, MD, PhD or equivalent doctorate degree from an accredited college or university within five years of initial appointme

Process

- The application for the 2022-2024 cycle will be available October 1, 2021.
- The USC Postdoctoral Fellowship Portal can be accessed online at provost.sma.usc.edu/prog/fellowship, where you will be asked to submit the following:
  - Email addresses of three references
  - Curriculum Vitae (CV) or resume
  - Letter of intent (LOI)
  - Official pharmacy school transcripts may be sent electronically from the registrar's office to residentfellow@usc.edu or mailed to the following address:

    Pharmacy Residency & Fellowship Program
    1985 Zonal Avenue, PSC B-15
    Los Angeles, CA 90033
- When submitting documents, please submit as a PDF file and use the following naming conventions:
  - Last name_ First name_ CV.pdf
  - Last name_ First name_ LOI.pdf

Deadline

Important dates and deadlines will be posted on the USC Fellowship Program page at: pharmacyschool.usc.edu/programs/fellowship

Interviews

Fellowship interview details are to come and will be posted on the USC Fellowship Program page at: pharmacyschool.usc.edu/programs/fellowship

Final Interviews

Details regarding the final interviews will be conducted after preliminary interviews.

Webinar

Attend our informative online webinar to learn more about the fellowship program. Details will be posted on the USC Fellowship Program website when available.

Contact

For location and times, or any additional information on the program, please contact:

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- Director, Residency and Fellowship Programs
- Associate Professor of Clinical Pharmacy

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