



## Abschlussbericht über Ihre Stipendienzeit

Nachname, Vorname*	██████████
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Stipendienprogramm	RISE Worldwide
Förderzeitraum	06/2025 – 09/2025
Gastland/-ort	USA
Gastinstitution	Stanford University

\*Im Rahmen des Abschlussberichts haben Sie die Möglichkeit, freiwillige weitere Angaben zu machen. Sie können Ihren Namen und Ihre E-Mail-Adresse angeben, falls Sie mit einer **Weitergabe dieser Daten an künftige Stipendiatinnen und Stipendiaten** und einer **Kontaktaufnahme** durch diesen Personenkreis einverstanden sind. Bitte beachten Sie, dass diese Angaben nicht erforderlich sind und Sie allein entscheiden, ob Sie diese Daten mitteilen möchten. Eine Einwilligung können Sie jederzeit widerrufen, ohne dass die Rechtmäßigkeit der aufgrund der Einwilligung bis zum Widerruf erfolgten Verarbeitung berührt wird. Richten Sie ggf. Ihren Widerruf über das Portal an den DAAD.

### Hinweise:

Der Abschlussbericht ist **spätestens zwei Monate nach Förderende** einzureichen. Er soll Hinweise auf die Situation des Studienfaches im Gastland und die Arbeitssituation an der Hochschule/dem Gastlabor/der Praktikumsstelle enthalten. Insbesondere sollten Sie über die Ergebnisse des Aufenthaltes im Hinblick auf Erfolge und ggf. Hindernisse berichten. Besuche von Fachtagungen und Konferenzen sind ebenfalls von Interesse sowie Anregungen, die der Verbesserung der Arbeit des DAAD dienen.

**Kurzstipendiatinnen und -stipendiaten** (bis zu einer Förderdauer von 6 Monaten) sollten ergänzend auf folgende praktische Aspekte des Aufenthalts eingehen: Vorbereitung des Aufenthalts, Kontaktaufnahme zur Gastinstitution, Visum/Aufenthaltsgenehmigung, Zahlungsverkehr, Zimmersuche und Miethöhe, Freizeitgestaltung, nützliche Adressen im Gastland. Mit Annahme des Stipendiums (lt. Ziffer 10 der „Allgemeinen Bedingungen für Stipendiatinnen und Stipendiaten des DAAD im Ausland“) haben Sie sich bereit erklärt, dass dieser Bericht ohne Nennung Ihres Namens und Ihrer Kontaktdaten an künftige Stipendiatinnen und Stipendiaten des DAAD zur Information weitergegeben werden kann. Wenn Sie Ihren Namen und Ihre E-Mail-Adresse jedoch gerne mitteilen möchten, um eine eventuelle Kontaktaufnahme zu ermöglichen, tragen Sie Ihre Kontaktdaten bitte oben ein. Aus Gründen des Datenschutzes bitten wir Sie, in Ihrem Abschlussbericht keine personenbezogenen Daten Dritter zu nennen. Dazu gehören alle Informationen, die sich auf eine identifizierte oder identifizierbare natürliche Person beziehen, z.B. Namen, Kontaktdaten, Position im Institut, etc.

Weitere Einzelheiten zur Berichtspflicht sind ggf. in den "Besonderen Bedingungen" enthalten.

Bitte laden Sie den Bericht im PDF-Format über das DAAD-Portal unter dem Menüpunkt „**Berichte - Abschlussbericht**“ hoch.

**Verlauf des Vorhabens** (Textfeld erweitert sich nach Eingabe automatisch; Formatierungen sind jedoch nicht möglich. Für eine bessere Strukturierung können Sie dieses Formular als Deckblatt nutzen und den Bericht als Anlage beifügen.)

Klicken Sie hier, um Text einzugeben.

My internship took place at Stanford University, in the Department of Biochemistry, in the group of Prof. [REDACTED]. The [REDACTED] Lab focuses on uncovering the molecular basis of inherited Parkinson's disease through biochemical, cell biological, and genome-wide screening approaches. At the time of this internship, I had just completed my bachelor's degree in Biochemistry and Cell Biology, and the experience provided me with invaluable practical training. It not only strengthened my confidence as a young scientist but also enabled me to develop new technical skills, build meaningful professional connections, and form lasting friendships.

The [REDACTED] are pioneers in the study of Rab GTPases, which serve as master regulators of receptor trafficking within cells. A subset of these Rabs are the primary substrates of LRRK2 (Leucine-rich repeat kinase 2), a protein kinase whose activating mutations cause inherited forms of Parkinson's disease. LRRK2-mediated Rab phosphorylation acts as a molecular switch: phosphorylated Rabs lose their ability to bind their normal partners and instead interact with a new set of proteins. Research from the [REDACTED] Lab has shown that these altered interactions disrupt the formation of primary cilia, critical signaling organelles on the cell surface. Current work in the lab focuses on elucidating the molecular and cellular consequences of phosphoRab-specific interactions, as well as understanding how LRRK2 activity is counterbalanced by the Rab-specific phosphatase PPM1H.

The project I worked on was focused on understanding how LRRK2 activity leads to ciliogenesis defects by characterizing the environment around the mother centriole in conditions with and without LRRK2. I worked on establishing a new protocol in the lab to test D-amino acid-based proximity labeling as an improvement over traditional APEX labeling. I also cloned new constructs to optimize the localization of the APEX construct at the mother centriole. Throughout my time in the lab, I learned how to do plasmid amplification, cell culture, transfection of plasmids to cells using PEI, biotin labeling, immunofluorescence, and immunoblotting. In addition, I also helped in the purification of Rab8A and MST3 kinase proteins for in vitro experiments. The overall aim of the project was to perform a large-scale biotin-labeling experiment in cells expressing a mother centriole-localized APEX construct, with and without LRRK2, to isolate biotinylated proteins for downstream mass spectrometry analysis. At the end of my internship at Stanford, the project was still ongoing and will be carried forward by the PhD student who directly supervised my work. When I began my internship, I had only limited experience with the techniques required for the project. By the end of my stay, however, I was able to apply all of these methods independently, thanks to the supportive environment of the lab and the guidance of my direct supervisor, who carefully taught me the techniques I needed. All lab members were highly professional in their respective areas and were always willing to explain their work and share their expertise.

Each week, the lab held group meetings where members either presented their work or gave an oral update on their progress. As an intern and part of the group, I actively participated in these meetings and presented my own results. This often involved outlining my project schematically on the whiteboard and explaining my current work, which, although challenging, was also highly rewarding. These presentations not only strengthened my scientific communication and presentation skills but also deepened my understanding of all aspects of my project. The guidance provided by Professor [REDACTED] during these discussions was invaluable, and her approachable attitude encouraged me to ask questions and to engage with the work of other group members, broadening my perspective beyond my own project.

As part of the group, I also had the opportunity to participate in the monthly ASAP update meetings, organized in collaboration with other research groups working in the same field. These meetings allowed me to gain insight into the latest developments, compare different research approaches, and better understand how individual projects contribute to broader scientific goals. In addition, I attended talks given by guest speakers at Stanford. Both experiences were extremely valuable, as they broadened my knowledge beyond my immediate project, sharpened my ability to follow and evaluate complex research discussions, and inspired me to think more critically about my own scientific work.

Upon my arrival in the lab, I first completed the required safety training before beginning any experimental work. In addition, I was provided with several research papers to read, which introduced me to the background of the project as well as the techniques I would need to apply during my internship.

Professor [REDACTED] provided me with invaluable support, both in preparing for my internship and travel to the United States, and throughout my time at Stanford. I contacted her immediately after being accepted for the internship and had a video call, which gave me the opportunity to ask questions and get to know her before starting. She responded to my emails very promptly and even provided me with the contacts of two former interns to assist me in finding accommodation.

Finding suitable accommodation proved quite challenging. Only two weeks before my departure for the internship, I managed to secure a room in the house of a woman living in a small city near Stanford (Mountain View). I conducted my search online, reaching out to landlords directly. The main difficulty was that I needed housing for a relatively short period, while most landlords required a minimum lease of six months. Additionally, the generally high cost of accommodation in California made the search more difficult, as I wanted to cover the rent independently using the scholarship provided by the program. In the end, I found a furnished room equipped with a fridge and microwave. The rent for it was 1,150 USD. The landlady was exceptionally kind, and I experienced no issues during my stay.

Although I lived in another city, commuting to the university was very convenient. The Caltrain, which runs between San Jose and San Francisco with stops in the main towns along the way, was my primary means of transportation both to Stanford and around the Bay Area. Unlike Stanford students and employees, my Caltrain fare was not subsidized by the university, so I purchased a monthly pass for each month of my stay. The walk from my accommodation to the nearest Caltrain station took about 25 minutes, though I also had the option of taking a bus directly from my street to the station. Public buses were generally available for travel within the city and between neighboring towns, which made getting around easy. On campus, transportation was even more convenient thanks to the free Stanford Shuttles, which run frequently and provide excellent connections across the large university grounds.

For arranging the necessary documentation and obtaining my visa, I received support from both Professor [REDACTED] and the Bechtel International Center. Scheduling a visa appointment was straightforward, and suitable dates were readily available. Although the process required completing a substantial amount of paperwork, everything proceeded smoothly overall. I received my passport with the J-1 visa by post just one week after the appointment.

I booked my flights immediately after receiving my visa and realized that purchasing a round-trip ticket was significantly more economical than booking the flights separately. The transportation allowance provided by the program was sufficient to cover both flights. Upon my arrival in the United States, a member of the lab welcomed me at the airport and kindly drove me to a store to purchase a U.S. SIM card, as well as to my accommodation. These arrangements had been coordinated in advance with Professor [REDACTED]

Spending my summer in California was an incredible experience, not only because of the internship and the skills I gained, but also thanks to the wonderful weather, the inspiring people I met, and the many activities and places I had the chance to enjoy. On my very first day in the lab, another new student joined, and we quickly became friends. From that day on, I often had lunch with several lab members, and during my first week, the entire group, including Professor Pfeffer, went out together for ice cream. Over time, my colleagues became not just lab mates but also close friends.

Throughout my stay, we had several lab outings—celebrating a newly accepted paper with cake, going out for lunch, enjoying ice cream together, and even taking a one-day kayaking trip. All of these gatherings were generously supported by Professor [REDACTED]. The kayaking trip, which took place near the end of my internship, was a highlight and a truly memorable experience shared with the whole group.

In my free time, I enjoyed exploring the Stanford campus and visiting neighboring cities, both on my own and with friends. Exploring San Francisco, seeing the Golden Gate Bridge, and being shown around the city by friends were particularly memorable experiences. The Bay

Area also offers many opportunities for hiking, and I was fortunate to explore several trails with friends, including my first hike in a redwood forest. Another activity I really enjoyed was trying golf and mini golf for the first time. For those who love swimming—whether in pools or open water—the region is also an ideal place. Another highlight of my time in the U.S. was celebrating the 4th of July and watching the fireworks.

Overall, my time in the U.S. and at Stanford was an invaluable period of personal and professional growth. I gained extensive experience in the field I wish to pursue in the future and built meaningful connections within the scientific community. Beyond the academic and research aspects, I had the privilege of meeting wonderful people and experiencing life in the Bay Area, which was truly exceptional.

One piece of advice I would offer to future interns is to embrace as many new opportunities as possible—both in terms of professional development and personal experiences. The lab environment was incredibly supportive and encouraged me to explore and learn about areas beyond the scope of my project, which greatly enriched my internship.

This experience has strengthened my motivation to continue developing in my field and has left me with both valuable knowledge and lasting memories.