Demmig-Adams and Adams group
University of Colorado
1900 Pleasant Street, CO 80309-0334

July 16, 2018

Dear Dr. Demming-Adams and Dr. Adams,

Given substantial experience with photosynthetic organisms and their secondary metabolites and an excellent record in the lab, I believe I can make significant contributions to your research and would be thrilled to know if you have any upcoming open positions. After a B.Sc. in Biology and participation in the iGEM (international Genetically Engineered Machine) competition, I received a M.Sc. in Biology before working with the European Molecular Biology Laboratory (EMBL) in Rome. During my B.Sc. and M.Sc. I had an opportunity to work intimately with alga and cyanobacteria, gaining a strong foundation for handling photosynthetic organisms. Furthermore, I have a proven ability to adapt to new challenges and have become skilled in working with RNA, genetic engineering, and producing viral vector tools.

During my B.Sc. thesis I worked extensively with *Nannochloropsis oceanica* and *Phaeodactylum tricornutum* and for my M.Sc. thesis I cultivated and processed Synechocystis sp. PCC 6803 *(Publication)*. These experiences have left me well equipped to cultivate and manipulate algae and cyanobacteria and analyze their genetic background as well as their transcriptional activity and screen for secondary metabolites. The wide array of lectures and courses I took in plant sciences, translational biology and microbiology has meanwhile left me with a solid foundation to genetically alter different organisms, analyze and translate genetic pathways like CRISPR-Cas systems and implement published methods. More generally, I have consistently shown I can quickly learn and develop new procedures and protocols. For instance, during a reorganization of my current lab, I was tasked with establishing protocols for the production of viral vector tools in mammalian cell culture using techniques that were new to both my supervisor and me. During this time I also began working in a BSL2 environment and am aware of the importance of stringently following safety guidelines and maintaining a clean working environment.

In addition to what I learned from my studies, iGEM gave me the chance to work both independently and within an interdisciplinary team of 20 students and to present our team's findings to an international audience. iGEM also gave me a chance to hone my skills in organization and the daily upkeep of the lab, including ensuring the availability of reagents, approaching companies and funding agencies for financial or material aid, cleaning and sterilizing equipment and using an internal wiki for accurate and reliable data storage. Although my specific focus during iGEM was protein purification, I also taught myself adobe illustrator in order to generate higher quality designs for our *website*.

At my current position, I took the initiative to further develop and organize the facility's database (FileMaker) - leaving me with excellent organizational skills I could invest to improve data recording and storage in your lab. I have also attended a professional course on presenting with impact and project management for scientists and am able to apply these techniques to balance multiple projects at once while managing my time to keep ahead of deadlines. Finally, through a wide range of volunteering activities I have honed my interpersonal, organizational and communication skills which will help in any situation whether in the lab or presenting at conferences.

Your research is a natural continuation of my experience, skills and passions and I believe I could make valuable contributions to the Demming-Adams and/or Adams. If you agree, I would appreciate the opportunity to discuss a potential position and my skills in more detail. Thank you for your time and consideration, I look forward to hearing from you and will be following up next week.

Sincerely,

Rabea Jesser

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