

Dear Dr. Crews,

Given my strong biological background, dedicated work ethic and eagerness to transform agriculture from a strain to an asset for the environment, help me fit right in at The Land Institute. After a B.Sc. in Biology and participation in the iGEM (international Genetically Engineered Machine) competition, I received a M.Sc. in Biology before starting to work with Europe's flagship laboratory for the life sciences, EMBL, in Rome, Italy. Across various research projects I have worked both independently and as part of a team, gaining not only laboratory experience but also strong organizational skills and a proven ability to quickly adapt to new challenges.

For my theses ([Publication](#)) I manipulated and analyzed algae and cyanobacteria. More specifically, I used various transformation methods, analyzed protein and RNA expression and explored the endogenous *Synechocystis* CRISPR-Cas system for application in metabolic engineering. The wide array of lectures and courses in plant sciences, translational biology and microbiology in which I participated for my B.Sc. and M.Sc., has left me with a solid foundation to learn and develop new procedures and protocols in the lab. As an example: during a reorganization of my current lab, I consulted relevant literature to establish standard protocols for the production and quantification of viral vector tools in mammalian cell culture. Here, I precisely documented and monitored the generated data to identify areas for improvement and conferred with my supervisor to continually improve the procedure.

For the iGEM competition I participated in an interdisciplinary team of 20 highly motivated students to develop a quick, easy-to-use and affordable diagnostic kit. Within a month we agreed on a topic, and after only eight months of wet lab we produced high-value [data](#), finally presenting our team's findings on our [website](#) and at an international conference. This experience has not only left me with strong problem-solving skills, but also with the ability to efficiently identify the essentials from scientific findings and to present these in a comprehensive way. During this time we successfully ran our own lab independently, including ordering reagents, communicating with companies and funding agencies for financial or material aid, making and sterilizing media and keeping the lab and our data organized. At my current position I not only produce high-quality viral vector tools but also employ different genetic engineering methods in *E. coli* and apply various cloning approaches for the generation of genetic constructs. Furthermore, I took the initiative to improve the facility's database (FileMaker)—leaving me with excellent organizational skills I can invest to ensure accurate data recording and storage at TLI. 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—currently more than 12 at once—while managing my time to deliver final products as quickly as possible.

Given my skill set, I believe I could make valuable contributions to TLI. If you agree, I would appreciate the opportunity to discuss my skills and potential contributions in more detail. Thank you for your time and consideration, I look forward to hearing from you soon.

Sincerely,

Rabea Jesser