**Acknowledgements**

I’ve been extremely fortunate in my graduate career to have the types of support that have enhanced my ability to learn at the highest level. This PhD hasn’t been easy. But even on the roughest days I’ve been able to find myself smiling because of the support that I’ve had around me.

First, I need to thank my advisor Alessandro Senes. Alessandro has taught me what it means to be a scientist, an expert in learning, a PhD. To remember to focus on the learning in every aspect, from teaching me how to present research to guiding me to figure out the questions I need to ask next. He’s been encouraging, honest, and extremely understanding throughout my entire time in graduate school. I had very little coding experience when I joined his lab, but he was always patient with me, giving me ample time and opportunities to learn. Whenever data looked confusing or didn’t follow what we expected, he emphasized that being able to discern what we learn matters the most. That the data will tell a story, and there’s no issue if it’s not the most exciting or groundbreaking knowledge because we ultimately learned something new. Thank you, Alessandro, I’ll be forever grateful for your mentorship!

I’ve had the fortune to have 1-on-1 relationships with each of my graduate committee advisors. Helen Blackwell has constantly asked inciteful questions that helped me hone-in on weaknesses in explaining my research. Phil Romero has given advice and encouragement for many parts of my work, helping to keep me excited about the research in front of me. Baron Chanda has kept me grounded in membrane protein biology, having multiple chats where we brainstorm ways to analyze data or think of potential experimental improvements and pitfalls. Sam Butcher has always been supportive and transparent, encouraging me whenever we’ve discussed the joys and difficulties of grad school and professor being a professor. Thank you all for giving me confidence in my research and willingly offering advice for after my PhD! Although I’m not sure what I’m doing next, I’m excited to be able to share it with you in the future.

The supportive community that Alessandro has fostered in the Senes lab is a major reason why I’ve been able to finish this PhD. From post-docs Beth Caselle and Kai Cai being willing to chat with me about so many things I knew nothing about in my first year (living in Madison, how NMR works, membrane protein folding basics), to all the graduate students that I’ve had the fortune to overlap with. Samuel Craven, my first bay mate and the one who most helped my critical reading skills. Samson Condon, who taught me the beauty of Vim and inspired me to learn computer skills after initially knowing next to nothing. Samantha Anderson, who still is always willing to chat back and forth about our troubles while having fun conversations about perspectives and life. Gladys Díaz-Vázquez showed me the beauty of learning at the highest level and inspired me to think harder about my research, becoming one of the main driving forces for me passing my 2nd prelim. Joshua Choi and I have worked closely on our projects, and he’s always been willing to discuss experiments and code. Samridhi Garg and I have shared our countless scientific difficulties and issues, and we’ve continually encouraged each other to take time outside of the stresses of lab. Tamalika Kar’s consistent positive attitude has invigorated me and helped me reflect on why I first came to grad school. Thank you all for teaching me, encouraging me, and for always being willing to chat about the more fun things (Magic, baking, food, culture, music, video games)!

I’ve been extremely fortunate to be a part of a few scientific communities in grad school. Thank you to Science and Medicine Graduate Research Scholars (SciMed) for funding and for creating an engaging environment for minorities in science. Meeting you all and vibing over culture and our shared experiences was always a joy! A huge shout out to the SciMed coordinators Sara Patterson, Beth Meyerand, Abbey Thompson, and Michelle Parmenter. Anytime I felt I lacked support in areas that SciMed had resources to give, they were always willing to chat and talk through ideas to implement something helpful for us students. The Chemical Biology Interface (CBI) training program supported me both financially and scientifically throughout my tenure. Many thanks to Helen Blackwell, Cara Jenkins, and all the CBI trainees! The supportive environment helped me work on communicating my research, and I thoroughly enjoyed everyone’s willingness to chat and laugh about the ironic comedies of grad school. I was also a part of IPiB’s Diversity, Equity, and Inclusion (DEI) committee, and I reveled in chatting about our own experiences as we came up with ways to make IPiB more welcoming! Thank you all for your camaraderie in the struggle!

A special shout out to the roommates and day ones who stuck around and supported me throughout. Peter Luong, Abel Ingle, Matthew Blackburn, Wojtek Delewski, Akshay Kholi, and Nithesh Chandrasekharan, from the movie nights and dinner parties to the board games and indoor hoops, I’ve experienced many core memories with you all. I felt revitalized just by being around you and bonding over our shared turmoil, yet still finding so many ways to have fun. Thanks for helping to keep the grad school journey light and upbeat. Excited to spend more time in the future!

For the ones who helped me put this thesis together with their many helpful critiques and edits. Thank you to my dad, Brandon Phan, Cecilia Nguyen, Jerry Yu, Joshua Choi, Tram-Anh Nguyen, Samridhi Garg, and Wojtek Delewski for helping me to communicate my research thoughtfully and clearly while cleaning up my many grammatical errors!

My therapists have helped me find myself again during times of intense stress and struggle, giving me ways to reign in/abate my stress while encouraging me to think deeper about my emotions. I wouldn’t have made it through grad school without those thoughtful conversations that kept me grounded.

My family has been nothing but happy for me making the decision to go to graduate school. My dad inspired me to continue, despite the many times I wanted to leave. My mom supported me through my droughts without eating, sending copious amounts of food my way so that I wouldn’t go hungry. My brother has consistently given me an outlet for stress, ready to play video games, meet up in Chicago, or chat about interesting things for world improvement. Thanks for being there for me and for being understanding throughout this entire journey! Excited to finally spend more intentional time :D!

And a final thanks to my cat, Jada, who’s given me ample emotional support when I’ve needed it most.