The Newsletter is back! Now with more content and more writers! We (Kevin and RJ) would like to introduce our new ChEGS Newsletter team: Ben Gastfriend, Leida Vázquez Ramos, and Abdullah Al Abdulghani. Our new team spans the spectrum of CBE researchers, from first-years to fourth-years, and from biology to catalysis to fluids and beyond. We are very excited to have them onboard and begin to incorporate their great ideas for the new Newsletter 2.0! In particular with more writers we have time for more content, including: more featured pieces, non-research student and faculty spotlights, research and publication updates, resources, a (~spicy~) opinions section, and more! If you have ideas for stories or features that you think should be included in the Newsletter, please feel free to send us an email: (uw.chegs.newsletter@gmail.com).

WHAT'S INSIDE THIS ISSUE!

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The effects of COVID-19 pandemic have been profound; in one form or another, we have all had to reevaluate and restructure our daily lives in order to combat the spread of the disease. Although it is important for us as graduate students to recognize that we are very fortunate to remain funded and employed, we also must acknowledge that our lives today are very different than they were a few months ago. Working from home is challenging, physically and mentally, and it’s unreasonable to expect ourselves to maintain the same productivity and progress that we had on campus. That being said, the experimentalists among us have been uniquely impacted in that their on-campus research has been halted. I asked Beichen Liu, a first-year student in the Gebbie group, how she’s handled the challenges of setting up the lab and beginning research all while quarantined. “While it was disappointing to have to leave lab right as we were ready to get everything up and running, working from home has been a great opportunity to read papers and textbooks both as a refresher on familiar topics and as an introduction to new ones. It’s also given us a chance to reevaluate the theories and assumptions behind our experiments. Now that labs are open again, all that time planning is finally being put to use!”

Bryce Connors (pictured above in his WFH set-up), a second-year student in the Venturelli group, has made the most of his time at home by developing new computational skills and applying them to his research. “Not having access to lab was a real curveball, especially having just finished planning so many experiments during my prelim! I’m really lucky in that I have some computational components to my project, but it was hard to focus at first (I’m not good at staring at a computer all day). Analyzing simulated “data” with different model structures helped me to understand how I should improve my real-life experimental design. I’m optimistic that this approach will be useful throughout my thesis... and speaking of optimism, I learned how to use MATLAB’s wonderous fmincon! Much respect to the optimization folks for doing the good work!”

Even a global pandemic cannot stop our graduate students from making progress towards their research goals! And as we slowly begin to return to campus, hopefully we can all hold a new appreciation for the time we spend together with colleagues and friends.
Diversity and Inclusion Open Forum

Professors Murphy, Lynn, Zavala, and Graham joined graduate students to discuss diversity and inclusion in the CBE department, with a focus on recruiting more diversity in both faculty and students. Highlights from the conversation include:

- **Faculty recruitment:** Prof. Lynn discussed how we are actively looking for new ways to recruit diverse faculty, despite a historic lack of diversity in the department. We are also limited in the number of offers we can make every year, so how can we incentivize faculty candidates to come here? Further, can we increase recruiting efforts and seek out candidates in new ways?

- **Graduate students:** Prof. Zavala discussed how he wanted demographics to be more representative of the general population. Should we stop considering GRE scores? How much does GPA matter? Should we have graduate applicants write diversity statements, and if so, how will we judge them?

- **Diversity statement:** Prof. Murphy asked if a department diversity statement is helpful. Faculty and students discussed the actions that would make this department inclusive; this includes recognizing a diversity of backgrounds and holding events (e.g., speakers, holidays) that reflect and celebrate these backgrounds. Faculty and graduate students also agreed that a diversity statement alone is not enough to promote diversity and inclusion in the department.

Black Lives Matter

The murder of George Floyd, Breonna Taylor, and Ahmaud Arbery as a result of police brutality have sparked public outcry. It has resulted in support for the Black Lives Matter movement via public protests and social media campaigns. ChEGS wishes to express support for Black folk and join the public calls for policy changes to protect Black lives. We also encourage everyone to embark on a journey to anti-racism by holding open conversations and educating ourselves about how racism oppresses BIPOC communities today. We suggest the some of the following: NPR – A Decade of Watching Black People Die; Stamped from the Beginning and How to be an Anti-Racist by Prof. Ibram X. Kendi; Is Science for Us? Black Students’ and Parents’ Views of Science and Science Careers by Archer, Dewitt, and Osborne; PNAS – The Diversity-Innovation Paradox in Science; A Letter From a Region in my Mind by James Baldwin.
Back to Campus!

The coronavirus (COVID-19) pandemic led to the suspension of on-campus research in mid-March. Now, experimental researchers are beginning to re-start their work in laboratories with several new precautions in place to prevent transmission of the disease. Masks are required, laboratory occupancy is limited, and isopropyl alcohol bottles abound. Signs have been installed to remind about social distancing, and given the difficulty engineers have in estimating 6 feet, and our extensive familiarity with the size of an average badger, a helpful conversion has been provided. Frequent hand washing, social distancing, wearing a face covering, and limiting non-essential trips remain the best ways to protect ourselves, colleagues, and other members of the community. More information is available from Public Health Madison & Dane County and the CDC. This is also stressful time, and it is important to take care of our mental health. Some tips: take breaks from the news and social media, stay connected with friends and family by video chat, and make time each day to take a walk or get some other form of exercise. Additional resources are available from the CDC and UW SMPH, and access to professional help is available through UHS.

Goodbye Maravelias Group!

On behalf of all CBE graduate students, we want to say goodbye and best wishes to Professor Maravelias and all graduate students and post-docs in the Maravelias group that are leaving for Princeton: Dr. Boeun Kim, Venkatachalam Avadiappan, Yaqing Wu, Joonjae Ryu, Eric O’Neill, Garry Taifan, Arthur Pastore de Lima, and Caleb Geissler! You are our friends and colleagues, and although we are going to miss you dearly, we wish you all nothing but the best in the next chapter of your lives. Though you’ll soon be Princeton Tigers, remember to stay in touch with us UW Badgers through the ChEGS Slack channel and keep us updated on your lives!
Statement on I.C.E.

Here at ChEGS we want to express support for all of the communities that makeup CBE. We are happy that ICE’s policy regarding international students has been rescinded, as it put at risk the well-being of our international colleagues. International students, postdocs, researchers, and faculty have the right to remain here, and we will continue to advocate for all of you and your rights. If you are feeling overwhelmed or just want someone to talk to, do not hesitate to reach out to your advisor, other faculty members and students, or even us here at the Newsletter.

A few other resources: UHS Mental Health (608-265-5600, opt 2); UHS Crisis Line (608-265-5600, opt 9); International Student Services (iss@studentlife.wisc.edu).

Congratulations to...

Xiao Zhang (Prof. Graham) successfully defended his thesis “Flow-Induced Segregation and Dynamics of Red Blood Cells in Sickle Cell Disease” on 2/19/20!

Apoorna Sampat (Prof. Zavaa) successfully defended his thesis “Optimization Formulations for Multi-Product Networks” on 5/7/20!

Ranjeet Kumar (Prof. Zavaa) successfully defended his thesis “Multiscale Control of Energy Systems” on 5/11/20!

Sanjan Gupta (Prof. Reed) successfully defended his thesis “Machine learning methods for protein and metabolic engineering” on 6/4/20!

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