

MONTHLY UPDATE

DEPARTMENT OF BIOCHEMISTRY

September 2019

It has been a busy and successful time since the last newsletter. Well done to Richard, Lynette, Kurt, Sarah and Paul for their MBIE successes (see website for article), and also to Anita, who was awarded a UORG in the latest round. These grants underpin research groups and give some much-needed security of employment to laboratory staff, as such they are very important for the ongoing vibrancy of the Department.

I would like to commend the great leadership shown by Indranil, Debina and Andrew Cridge in organising a new University wide group (University of Otago Postdocs Association, they are on Facebook as Otagopostdocs and Twitter as @otagopostdocto1). Their inaugural careers symposium, which you can read about on our website, was a huge success, and the collaboration and support that the Association aims to foster will, I am sure, be greatly appreciated by Otago's early career staff.

The recent MPI audit went well for the Department - well done to Jackie and everyone involved in ensuring our operations are both safe and compliant. As always, safety and compliance in the Department are very important but it is a testament to our good work that we have not been the focus of audit issues for some time.

It's good to see the new Genetics space on the Ground Floor completed and the staff mostly installed therein. Work on the ground floor seminar room should start in October (the plans are currently in for consent) and hopefully will be complete by Christmas. The builders will then move up to start redevelopment of the seminar room/tea room. Plans for that are still being finalised, but DJ, Lois, Tania, Teena, Peter Mace and others have been doing a great job working with the architect to come up with a plan that best meets the Departments needs.

We are all busy with various end of semester events - the Honours students are deep in the midst of their research reports, and staff are holding/attending a number of student functions to raise awareness of Biochemistry courses available to them in 2020. The exams are all ready to go at last. As it has been a busy semester with changes in some of our key papers we have included a short update about developments in 222, 223 and 192.

Thank you to everyone who participated in the selection process for the next Biochemistry HOD. With the announcement of Sally as the next HOD, the Department will be in good hands. As the current deputy HOD she is well-versed in the operation of the Department and I am sure the transition will be a smooth one.



Revamped papers report

BIOC 192

How has the paper changed from 2018?

The new curriculum is similar to previous years but the content has been reduced and simplified and a new topic has been added. There is a new series of "integrated lectures" (ICLs) which look at specific topics from a very broad perspective. As a consequence, there is one fewer lecture per week than in previous years.

The labs have also been updated to better reflect the lecture content, and we were required to reduce the number of labs down to five in the semester (originally twelve then six and now to five).

HSFY papers are no longer permitted to offer tutorial sessions or revision lectures.

And how is it going?

The lecturing staff, organised by Lynette, have done a sterling job of rewriting their lectures to fit with the new schedule. Kurt did a great job of his ICL on precision medicine, even though very few students took advantage of his excellent delivery. The Prep Room staff and demonstrators have coped well with the new lab course, with just a little fine tuning needed for next year - when we have new specs coming, which will require more rewriting of the lab book! It doesn't stop.

The university-wide trend of not attending lectures in person is evident amongst the BIOC 192 student cohort. Some of these students keep up with the lectures but many do not. This affects the latter students' lab performance as they do not understand the lecture-based labs.

Catherine

The proportion of students struggling seems to be the same as before, but a much larger number are participating in the Blackboard discussion board and coming to the office for help and advice. Nicole, Ben and I would like to thank Elise, as without her taking care of the admin we would not have been able to cope with the help requests.

The “Q&A” sessions that are run instead of tutorials are not well attended - names matter!

The BIOC 192 students recently had a progress test. With the reduced and simplified content the average score was the same as in previous years.



Figure 1. The number of emails written to Annika by BIOC 192 students overnight on the 24th September.

On the bright side though, many students are telling us that they're pleasantly surprised by how interesting biochemistry is, not as scary as they had imagined, and that they enjoy the challenge of studying it. They like that we have a heavier focus on understanding rather than memorising.

Annika

BIOC 223

Changes for 2019

The most significant change for this year has been the reintroduction of real samples in the laboratory where we assess nitrogen balance. About half of the students in the paper brought their own urine sample this year and we've seen a nice variety of urea data (so far) with other compounds to come. This approach also involves analysing diet for a few days around the time of the sample so we can assess how much nitrogen is consumed and match that with how much is excreted.

Other than that, much of the course is broadly similar to previous years. Some changes to the content of lectures have been introduced across the various topics (as is usual each year) but things are otherwise consistent with previous years.

As always, our thanks to Kaye and the demonstrating staff who do a fantastic job of keeping things in order, and to Nurit and the prep room who provide us with experimental materials that work as described and who solve any problems quickly and efficiently.

Craig

BIOC 222

What has changed since 2018?

BIOC222 students have been tackling a course which retains most of the familiar lecture content with the an all new practical course.

And how has it been?

In the first module of the lab the students purify a recombinantly expressed enzyme, with half the class working on an *E. coli* version and the other half the same enzyme from *Thermotoga maritima*. This was not without incident, when half way through the first lab the classroom lot of protein started to develop an unnerving cloudy look, which had not happened during any of the pilot testing! After some on-the-fly adjustments most of the students purifications went well, if running slightly longer than intended ...

In Module 2 students began to plot their own course, testing their own hypotheses around enzyme inhibition, substrate preference and active temperature range and stability. Lots of excellent kinetic analyses were performed, including results that challenged the literature, each other, or broke completely new ground (nothing has been previously published on the *Thermotoga* enzyme).

A big thank you to Nurit for prep work on the new lab course, and Kaye, Shar, Nicole and their teams of demonstrators for excellent delivery of the labs. A special thank you to Kate Ryder, who has been a stalwart demonstrator in 222 for many years. Unfortunately (for us) Kate departs for her new position in Germany shortly, so we will somehow have to run 222 next year without her!

The 200-level students also came along in excellent numbers to an information session about 300-year. Great turnout was completely unrelated to a happy hour following the session, which was enjoyed by academic staff, teaching fellows and a large number of students. We look forward to seeing many of the same faces next year.

Peter Mace

Congratulations

To Shar (née Rae) and Leon Snoeck on their marriage over the weekend of the 21st.

To Sole and family on the birth of their baby girl Mailen Luna Sclovich born 4.40 pm Tuesday 24th September, 3.310 kg.

Health & Safety

IBSC and MPI audits both went well over the last month or two in the department, with minor corrective actions given. The inspector spoke to a few lab members and was impressed with the general level of awareness. The final MPI report is still to come.

Intranet – I have updated the Safety & Biological Compliance section on the Department's Intranet. Currently listed are:

- Lab-specific training sheets (new),
- Permits,
- Forms,
- Biological and Chemical Waste instructions,
- Manuals,
- Approvals,
- Links to OURDrive login and VAULT

Please let me know if you would like anything else included here.

Jackie

Purchasing

There is a new role-based email address that must be used when communicating with Lynn and Nigel for anything work-related.

`purchasing.north@otago.ac.nz`

This allows requests to be processed seamlessly by other members of the "North Hub Supply Chain" if either Lynn or Nigel are away.

Please do not use the old `biochem.orders`, `biochem.store` or personal email addresses for work related requests.

PhD and MSc completions

Congratulations to the following people who have completed their degrees.

Josiah Doorman (MSc) from the Day Lab. Josiah has a temporary job at the MSD while saving to move to Wellington.

Peixi Choo (MSc) from the Eaton-Rye Lab. Peixi is still considering her options for the future.

Khanh Nguyen (MSc) in the Day Lab. Khanh is working in the Day & Mace labs as an ARF.

Matthew Chisnall (PhD) from the Macknight Lab. Matthew is in the UK, looking for a position.

New arrivals

Jasmine Lock starts her PhD in the Hughes lab in October. Jasmine did her honours degree with Steph in 2018, and has been working with her as an ARF this year.



Linda McNeill (left) and Sonja Bohn (right) are the new Client Services Administrators in the main office.



Gwendal Lazennec is a visiting scientist in the Diermeier Lab.



John Crowley is the new Finance Associate, replacing Ethan.



Mifra Faiz is Liz Ledgerwood's new PhD student.