

MERRY
CHRISTMAS
AND A
HAPPY
NEW YEAR

*from the Staff and
Students of Otago
Biochemistry*

16TH DECEMBER 2019

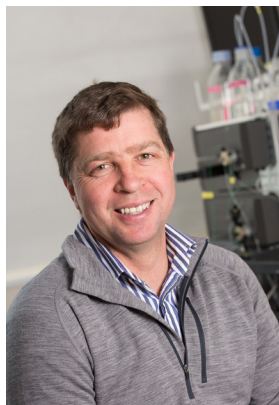
Christmas rolls around again, and as we look back 2019 has been a tremendously busy year in the Biochemistry Department. Out of all the many highlights, it is hard to go past our research success. Last year we thought we did very well, with around \$8M in research grants. However this year has been even more successful with several million dollars from the Marsden Fund, well over \$1M from MBIE, \$3.6M from the HRC, Parry Guilford received significant additional funding to support his ctDNA early cancer detection research from the Healthier Lives National Science Challenge, as well as many other applications funded from a range of sources. Again, early career scientists featured strongly in the funding successes as did our new appointees. These successes reflect the quality of research being undertaken and mean that the Department will be a vibrant research centre going forward.



Sarah Diermeier, Paul Gardner, and Chris Brown, who, along with Tanya Major and Tony Merriman, had successful Marsden Fund grant applications.



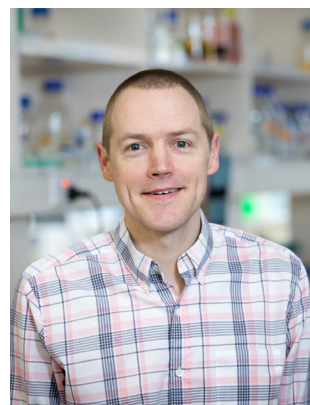
Richard Macknight and Lynette Brownfield lead one of the projects that were successful in the MBIE Endeavour Fund round.



Richard Macknight becomes Professor Macknight in February



Paul Gardner (left) and Peter Mace, our two new Associate Professors as of February 2020.



We are delighted to announce that Richard Macknight was promoted to Professor, and Peter Mace and Paul Gardner were promoted to Associate Professor in the last promotions round. These changes take effect in February, and reflect the excellent research and innovative and enthusiastic teaching that Richard, Peter and Paul have brought to the Department during their tenure here.

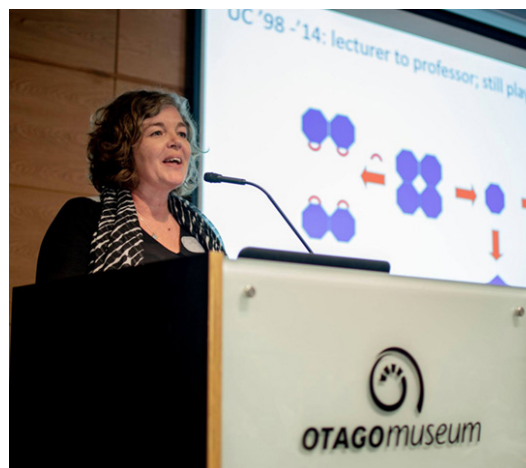
Alongside the events of a normal academic year, it was Biochemistry's turn for the 5 - 10 year Departmental Review. The ensuing report was very complimentary, with our teaching, research, outreach, leadership and staff all highly commended. As always, there are things that we need to work on but most relate to capitalising on our success, and we were most excited to get the maximum 10 year period until the next review. This closing remark from the review report reflects the tone of their comments overall:

'The Panel was impressed by the Department's success on so many fronts. Success brings challenges and it also brings opportunities. The Recommendations in this Report are focussed on ways the Department can use its excellence to seize new and emerging opportunities.'

Within the University it has been another year of enormous change. After our shift to “Shared Services”, as described in last year’s letter, we have had considerable support staff turnover as new structures have been established, with only Teena Joyce (ex “Executive Assistant to HOD”, now “Shared Services Administrator” - same job, different name) staying on in the office. After several changes we now have a great team in the office, have retained Lynn in charge of purchasing, and Darren and DJ continue to support IT. We just hope they will all be permitted to stay with us and not be moved around. While some of the new structures and processes are starting to work well, gaps remain and as a Department that has enjoyed very strong support we are cautious about how the roll out of the ‘One Otago way’ for everything from booking leave to getting a pamphlet made will meet our needs.

In other changes this year the Dean of Biomedical Sciences has navigated administrative movement of the School of Biomedical Sciences (which encompasses the Departments of Biochemistry, Microbiology & Immunology, Anatomy, Pharmacology & Toxicology, and Physiology) within the Division of Health Sciences. Formerly within the Otago Medical School, it now sits alongside it in the hierarchy of the Division, along with the Schools of Pharmacy, Dentistry, and Physiotherapy. This is good for the profile of the School, and will provide the new Dean (Vernon Ward has resigned from that position to concentrate on research) with a strong voice in the Division.

“Collaboration” has been the key word for 2019. This year a group of postdocs from Biochemistry initiated the formation of the Otago University Post Doctoral Association. This association aims to further collaboration between, and provide a support network for, early career researchers across university science and health science departments. Their inaugural event was a very successful careers symposium attended by around 100 PhDs from around the university. The keynote address was given by Professor Juliet Gerrard, the Prime Minister’s Chief Science Advisor. In November, postdocs and research fellows from Biochemistry and Microbiology & Immunology organised a “Research Celebration” for research staff and students of the two departments. This event was held in the Fulwood Room at the Town Hall and was very well attended.



Prime Minister’s Chief Science Advisor Prof Juliet Gerrard gave the keynote address at the Postdoc careers symposium.

As we reported in previous newsletters, Genomics Aotearoa, led by Peter Dearden, was formed to provide a platform for genomics and bioinformatics research within in New Zealand. The Department has already benefited significantly from the research collaborations, education and events lead by GA, including regular bioinformatics training sessions, the upcoming national eResearch conference in Dunedin and the international ‘SING’ Indigenous Genomics Conference in Hamilton. You can find more about Genomics Aotearoa and the great things that they are doing on their website: www.genomics-aotearoa.org.nz

Miriam Sharpe continues as the publicity and outreach coordinator in the Department and has been doing a great job helping to communicate department research, and produce educational resources, both physical and digital. In the fullness of time (i.e. on the not-too-distant retirement of Bronwyn Carlisle) Miriam will also take over writing these end-of year epistles to you, our alumni. In the meantime, she has been busy developing many resources, writing articles for our website, producing a series of excellent videos for our YouTube channel, and, most recently, introducing primary school children to the magic of enzymes using molecular models as well as kiwifruit and jelly!

Please take a look at some of Miriam’s recent videos showing how some research groups are using CRISPR-Cas technology:

[Gene editing 1, How legumes adapt](#)

[Gene editing 2: Pest control](#)

[Gene editing 3: Brain disease](#)

Biochemistry student numbers have been very good in recent years and we have 24 summer students in the Department over the coming break, suggesting 2020 will be a busy year in the research laboratories. This is very encouraging as we have been working hard to make our undergrad courses more relevant and engaging to students. In 2019 the new Health Sciences First Year (HSFY) programme was rolled out, which made for a busy year in BIOC 192 as much effort was devoted to meeting the HSFY programme specification. This resulted in adjustments to some lectures to accommodate more molecular biology in our first year paper, BIOC 192. These lectures were well received and BIOC 192 will better reflect the content of our 200- and 300- level papers on protein chemistry, molecular biology and metabolism. The availability of lecture podcasts appears to have contributed to a general downturn in lecture attendance amongst first year students, and we welcome any suggestions as to how to persuade them that they really are better off going to lectures in person! We will have to work hard to ensure that these habits don't become permanent.

Another cohort of students has just graduated and we had the last cramped graduation function in the Department on Wednesday. As always, it was well attended by graduands and their families, and we even had the opportunity to catch up with some Biochem alumni who were celebrating the graduation of the next generation of biochemists in their families.



Wednesday's graduation function. The next one will be in our refurbished and enlarged flexi-space.



The new seminar room on the ground floor gets a fire escape door directly to the car park.

Building work on campus continues apace. Work on the Mellor building next door has finally ended, and we have our car park back. The ORC have also finished their flood protection work on campus, and we're able to walk beside the Leith all the way to its mouth. Within the Department it has been a quietish year in terms of redevelopments but we are excited about the work that will happen over the summer. Currently the builders are working on the ground floor, busy turning half of the old CELS lab into a new seminar room for the Department. It will be a "pool room" available to anyone in the university, but Biochemistry have priority for bookings. It will be a great improvement over the old second floor seminar room, easy to find for visitors, and with plenty of room for everyone. Once that room is finished, in early 2020, work will begin on turning the current seminar room and reading room into one large "flexi-space", with a movable partition providing us with a small meeting room and new tea room that can be joined to form one room large enough to host departmental social functions in our own building. We are most excited about having a new kitchen and have fingers crossed that this will come with a new coffee machine.



Photos taken looking east (left) and west from the Leith St footbridge, showing the most recent flood protection works.



Sigurd Wilbanks (left) and Craig Marshall with the artworks their research inspired.

This year, both Craig Marshall and Sigurd Wilbanks had the unusual experience of their research being used as the basis for artworks. The Art and Science Series is an annual event co-coordinated by Pam McKinlay from the Dunedin School of Art and Dr Jenny Rock of the Otago University's Centre for Science Communication. Sigurd's research on phycoerythrin from seaweed inspired Georgina Young to use the pigment as a dye for a linen fabric/embroidered piece, while Dr Stella Lange designed a knitted cowl based on Craig's work on ice binding proteins. Her pattern, "Dirty Ice" can be [downloaded free from Ravelry](#).

It turns out that "Starters Bar" (ex "The Ori") retained its name after being bought by the student union. It seems to be going well, with Quiz Nights once a week, and not making any news headlines for inappropriate reasons. The Cook, however, has changed again. The upstairs music venue has remained, but the bar downstairs is no longer a bar - it is now a Sal's Pizza. The options for alumni to have a nostalgic student drink have narrowed almost to nothing.



The Registry Lawn Picnic was a big success, and will be repeated in 2020.



Sadly, the Departmental Review and rollout of the University's structural changes meant that we did not end up organising a 150th event at the Department level. Among the events that the University organised, the Registry Lawn picnic stands out as a great success. So much so that it will be repeated at the beginning of 2020, and we hope on an annual basis thereafter. Bands played, stilt-walkers walked, people in Victorian dress perambulated, picnickers brought their picnics to eat, and food trucks sold a huge variety of food to the less well prepared. Luckily this event coincided with one of the Biochemistry Happy Hours, so we were able to have a sneaky drink with our picnic.

In addition to sending you our best wishes for Christmas 2019, this newsletter marks the end of Catherine Day's tenure as Biochemistry HOD. Catherine hands over the leadership of the Department to Professor Sally McCormick on February 1st next year, and is looking forward to spending a lot more time in her research laboratory. Sally has chosen Sigurd Wilbanks to take over her previous position as Deputy Head.

Catherine says it has been a privilege to be the HOD for the last 5 years and to see the Department go from strength to strength with research income significantly up and increased numbers of students signing up for a Biochemistry major. It has been five busy years and it is time for a change, and she is very confident that Sally will do an outstanding job as HOD!

We wish you a very happy holiday season and new year,

Bronwyn Carlisle, Catherine Day

and the Biochemistry staff and students

For those of you who are interested in our research, a full list of publications can be found on our website otago.ac.nz/biochemistry/publications

As always, we do hope you will keep in touch, and send us your own news. You are always welcome to pop in to visit when you're in the vicinity.

You can keep up with our news during the year from our website on the news page (otago.ac.nz/biochemistry/news), and many years worth of our newsletter archive is also available to download (otago.ac.nz/biochemistry/news/newsletters).

Email your news to: biochemistry@otago.ac.nz

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