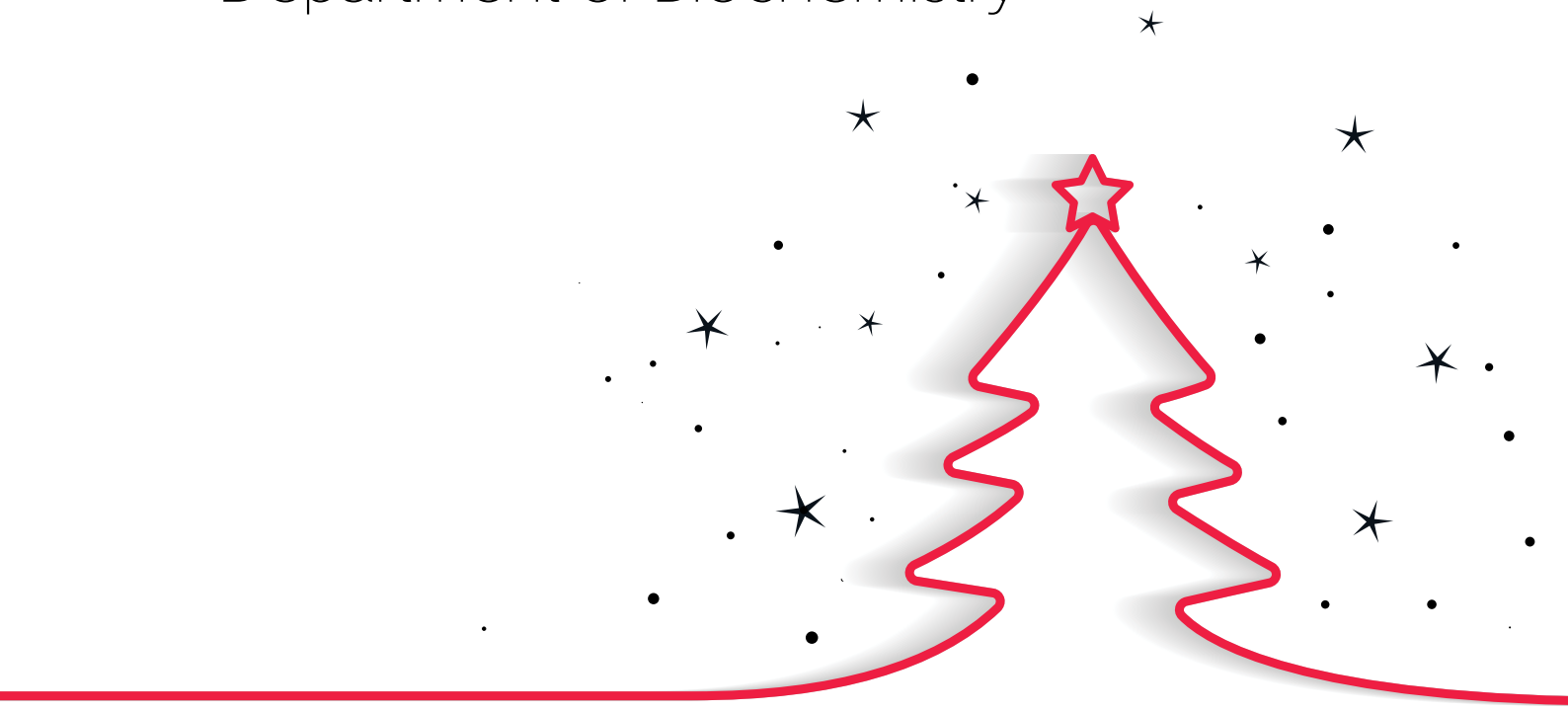
Merry Christmas
&
Happy New Year

from the Staff and Students
of the Otago
Department of Biochemistry



18th December 2018

Christmas is almost upon us once more. We have had a rush of PhD orals for people wanting to complete their degrees by the end of 2018, we have Divisional, School, and Department Christmas parties to attend, work is winding down, we've had our last seminar and Journal Club for the year, commuting traffic has lessened while shopping traffic has increased, and it's time to send out our Christmas newsletter.

Towards the end of the year Warren Tate completed his collection of honours with the Marsden Medal. It is awarded by the New Zealand Association of Scientists to "honour a lifetime of outstanding service to the cause or profession of science, in recognition of service rendered to the cause or profession of science in the widest connotation of the phrase." and joins his Rutherford Medal (2010) and CNZM (2011).

Sarah Diermeier was awarded a Rutherford Discovery Fellowship in October for her research on breast and colorectal cancer. Sarah is one of the three new lecturers who were appointed towards the end of last year, and arrived to take up her position in January, and has since received funding from the Cancer Society as well as this fellowship. Tony Merriman won a Fulbright New Zealand Scholarship to research the genetic basis of urate control and gout in African-Americans, and Parry Guilford's MSc student Yasmin Nouri won the National Three Minute Masters Thesis Competition.

This year saw the innaugural Joan Mary Anderson Awards in Plant Sciences go to three young women, Miriam Hunt, Caitlin Elborough and Caitlin Harris. Joan (Jan) Anderson was a not very well-known New Zealand scientist whose achievements really should have made her quite famous. She grew up in Otago, and graduated from Otago University, but spent most of her working life in Australia. She did ground-breaking research on photosynthesis, and was the first New Zealand woman to be made a Member of the Royal Society. It was over 20 years before Margaret Brimble became the second. The Joan Mary Anderson Award in Plant Sciences is funded by a bequest from her estate, and provides scholarships for 400-level students in the Department of Biochemistry who show great promise in plant sciences.

Professor Jan Anderson FRS

Above: Russell's retirement dinner at Glenfalloch.
Right: The photo he sent with his job application.

In early November Russell Poulter gave his last departmental seminar, which he described as a "pseudo-valedictory", as although he has now retired from teaching, he will continue as a researcher (most lately on ***Pseudo****monas syringae*) in the Department for as long as funding and inspiration permit. A dinner at Glenfalloch was held as a formal farewell. In his seminar he described his recent work identifying the cause and origin of the Psa outbreak in kiwifruit, with accompanying lawsuits and large damages awarded to kiwifruit farmers. Interesting stuff, and very far from "ivory towers".

We have said a few more goodbyes this year. Tony Zaharic, who has been the force behind, as well as the face in front of, our first year paper BIOC 192 for many years, left us to take the position of Assessment Convenor for Early Learning in Medicine at the Medical School. We were lucky enough to have an extremely able replacement at hand in Dr Annika Bokor, and we welcomed Dr Nicole Power in Annika's previous role. Chris Hart "retired" to the life of a stay-home/travelling-with-family Mum after working in the prep room and then as our Biological Safety officer for over 20 years, and Murray Hamilton, who has been the Property Services man in charge of our bit of campus since the 1970s, and who steered us through all the additions and renovations our building has had since it was built, retired in May.

The culmination of several years of Support Services Review (SSR) has resulted in a complete shake-up in the way Schools and Departments are administered. This has caused considerable stress in 2018, but as the new system beds in we hope the Department will be strongly supported in 2019.

Robyn Thomson, who has been in the front office for 14 years, and Tim Bain who has looked after the stores for 18 years, both took advantage of the voluntary redundancies offered during the SSR process. Robyn left us in June to move to Australia, while Tim leaves at the end of the year and will spend some time back in Canada before deciding what to do next.

Other members of staff have been moved around, some with different roles in our department and some now being based in other departments, but still within the university as a whole. We are very lucky indeed to have been able to retain, at least for a while, a core of staff who know how everything works.

It hasn't all been goodbyes however. Last year we told you about Peter Dearden being instrumental in the establishment of the nationwide genomics and bioinformatics platform Genomics Aotearoa, and this year we welcomed the GA team into the building. Not only is it a wonderful and exciting thing for us to have New Zealand's bioinformatics hub in our building, but the people themselves are extremely collegial, always willing to lend a hand in whatever activity we have going on, and will be an important part of the Department going forward.

We had another good year grant-wise, with $2.3M in Marsden funding, $2.4M from the HRC, $2M in MBIE funding, and more than $1M from the Cancer Society, Lotteries Health, and assorted other smaller funders. It is particularly gratifying that much of this money came to early career researchers, with post-doctoral/research fellows Megan Leask, Soledad Perez-Santangelo, and Andrew Cridge each being awarded significant funding.

In 2018 we had our largest 100-level and 200-level classes for many years, as well as strong cohorts at 300- and 400-level. Not only have the classes been large but the students have achieved excellent results, which is a credit to everyone involved in teaching.

Yet another new record has been set for the number of PhD students graduating in December, three up on last year's seven. Sadly they can't all be accommodated in one ceremony, but our graduation reception on Saturday had a good few red gowns in evidence.

Ten newly minted Biochemistry PhDs with HOD Catherine Day (red bands) and Deputy HOD Sally McCormick (blue bands).

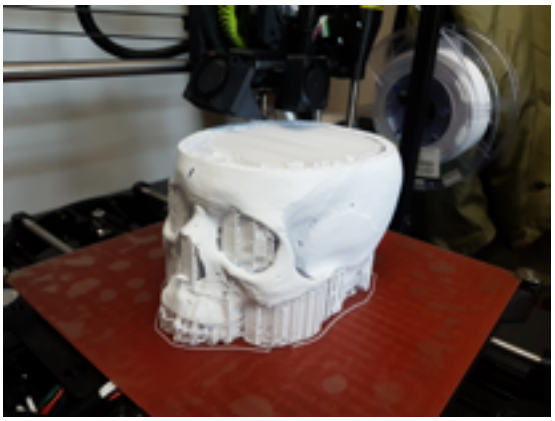
Our immediate physical environment has changed only a little in the last year. The final renovations to our building - third floor offices for Paul Gardner's and Tony Merriman's groups - have been completed, and the new owners have moved in. The renovated chemistry building next door (The Mellor Laboratories) has been "de-scaffolded" and is in use, but some floors are still not quite finished inside, and the car park between Biochemistry and Chemistry is still a builders' yard. Projected end dates have moved from March to September to January 2019 - and that is looking highly unlikely too. With the CELS teaching labs now being held in the Mellor laboratories, the ground floor lab space in our building is temporarily occupied by the Dental School Molecular Biosciences lab group while their building gets an upgrade.

Chemistry has a lovely new building, while we have a builders' yard

The south campus, and indeed all of central Dunedin, is like one big building site at present. Two large university building projects, the new Dental School and the new research support facility, dominate the Great King St cul de sac, while the one way system lanes are being totally re-jigged to accommodate a separated cycle lane, and the Moray Place end of Great King St is being turned into a bus hub. The DCC are also gradually converting many of the inner city traffic lights back to the Barnes Dance system. We oldies are very happy to see the reversion, but it does mean more disruption as the roads at intersections all need excavating to get it set up. We can only hope that these projects will be finished before "they" start on the new hospital. All of Christchurch's post-earthquake road cones appear to have migrated south!

The new research support facility building, with the Dental School crane in the background and some of the new separated cycleway in the foreground

Our outreach activities expanded again this year. In addition to the Hands on at Otago programme, the Science Academy, and Lab in a Box, in 2018 we hosted 20 intermediate school students with Pacific Island backgrounds, who extracted DNA and performed enzyme assays in laboratory sessions. Biochemistry's component of Hands on at Otago involves 24 high school students doing lactate and glucose blood analyses, while the 24 Science Academy children come twice each year - once to do the glucose/lactate laboratory, and once to perform a cloning experiment. As part of this initiative we also hold a teachers' workshop for 20 rural teachers. Biochemistry took Lab-in-a-Box locally this year; staff spent a week near Portobello School on the Peninsula, hosting classes from Portobello and Macandrew Bay schools doing some hands-on science activities. We received some beautiful artwork with a big thank-you letter afterwards.



Homo sapiens skull in progress on the 3D printer.

Scientists, as drawn by the pupils from Portobello School

In the middle of the year the Department received the gift of a 3D printer. Thus far, this has been used to print replacement PAGE and agarose gel combs for a small fraction of the cost of bought ones, as well as to print protein and DNA models, and a series of hominid skulls that will be lent to schools as a resource for Human Evolution study. The printer is quite mesmerising to watch, and regularly attracts spectators for its excruciatingly slow progress. It took over four days to produce the skull pictured above!

Many of you will remember The Oriental Hotel, aka "The Ori", and which has been called "Starters Bar" for the last few years. The OUSA announced this week that they have bought it, and intend to keep it as "a safe entertainment option for students, particularly first-year students". Many of the old student pubs have closed over the last decade or so, the Bowling Green is now part of the Medical School, the Gardens is a study centre, and the Robbie Burns is empty. The Cook closed for a couple of years for renovations, then reopened, and promptly went bankrupt again. It has since reopened and is turning into a major music venue by night while being a fairly upmarket restaurant/bar by day. The Ori is the one pub that just kept chugging along being a traditional student bar, so it's good to see that it will remain for the foreseeable future. We wait with bated breath to see what the new name will be!

The university has a great many plans for the 150th celebrations next year, and you can find out all about them at otago.ac.nz/150/. Make sure to update your details in the alumni database on that page if you would like to be kept informed. The Department still has plans to do something for our 70th, but the stresses and strains of the past year have put organising it somewhat on the back burner. Whatever we do will be in the second half of 2019 though, and we will definitely keep you up to date about it.

There is a new community garden in an empty section by Poppa's Pizza

The Great King St cul de sac outside the Cook has been turned into a "bee garden". Bee-friendly plants with seating for humans.

Now back to the ivory towers: To date, the publication count for the year stands at 93, of which the following have been the subject of university press releases:

Tanya Major and Tony Merriman's paper on the causes of gout otago.ac.nz/biochemistry/news/otago697595.html

Tony Merriman's collaborative paper characterising a gene that predisposes to hyperuricaemia otago.ac.nz/biochemistry/news/otago695178.html

Martina Foglizzo and Peter Mace's paper on the structure of BAP1 and ASXL1 otago.ac.nz/biochemistry/news/otago696784.html

Paul Gardner's bioinformatic tool to determine *Salmonella* strain invasiveness otago.ac.nz/biochemistry/news/otago685335.html

The full list of publications can be found on our website otago.ac.nz/biochemistry/publications

Our blog has in-depth articles on the research behind some of our publications. blogs.otago.ac.nz/thesheet/

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

Post your news to : The Secretary, Department of Biochemistry, PO Box 56, Dunedin 9054, New Zealand

"Like" us at facebook.com/Biochemistry.Otago, and/or follow us on Twitter @OtagoBiochemist for regular updates of news and publications.

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

Bronwyn Carlisle, Catherine Day

and the Biochemistry staff and students