Issue number 10 of Micro-News offers a background to today’s seminar, to be given by Virus Research Unit visitor Peter Nettleton (profiled in Micro-News, Issue 5). The previously-advertised seminar to be given today by Sandy Smith will now be rescheduled for a later date. This week’s staff profile features Michelle McConnell and our historical sketch (courtesy of Sandy) is of Professor John Loutit, the 4th Professor of Microbiology (Bacteriology) at Otago and one of the pioneers in Australasia of research in the field of bacterial genetics. It was John who was at the airport to warmly welcome the Tagg family (just 3 of us then) to Dunedin nearly 20 years ago. All the way from the airport to the city John told us what a great place Dunedin was and how sure he was that we would enjoy living here. He was right you know!

During the week we had some group departmental photos taken. Unfortunately, one of the photographer’s cameras didn’t work. However, copies of his 35 mm shots will be on display in the tea room. Orders may be placed at $3 for size ‘5x7’ and $6 for ‘8x10’.

Dunedin
It’s All Right Here!

- John Tagg

Meetings this Week

Departmental Seminar 4 pm Monday
4th floor
Dr Peter Nettleton
Moredun Research Institute, Edinburgh
“How Pestiviruses Kill Farm Animals and Contaminate Your Cell Cultures”

Staff Meeting, 9.30 am Tuesday
2nd floor

Journal Club 12.10 pm Wednesday
8th floor
Steph Watson and Andy Mercer

Post grad colloquia 4.15 pm Friday
8th floor
Rafita Jama Udin

Seminar Preview

Pestiviruses are major killers of farm livestock. There are 3 serologically-related pestiviruses named after the diseases they cause. Swine fever (hog cholera) virus (SFV) causes a severe haemorrhagic disease of pigs with mortality approaching 100%; the virus has been eradicated from most developed countries but causes serious losses worldwide and is still present in Europe. Bovine virus diarrhoea virus (BVDV) is the most successful and widespread pathogenic virus in cattle everywhere, causing reproductive and enteric disease. Border disease virus causes reproductive disease in sheep and is also
known as 'hairy-shaker' disease (HSD) virus; sheep in the South Island of New Zealand have the highest reported seroprevalence rate in the world.

While SFV acts like an acute viral disease with rapid transmission particularly among young pigs, the ruminant pestiviruses owe their success to their ability to cross the placenta and infect the fetus. Depending on a variety of factors the outcome can range from fetal death and abortion to the birth of apparently normal offspring. A small proportion of these normal offspring are persistently infected with virus for the rest of their lives. They excrete virus continuously and are a constant source of infection for other animals. It is salutary to know that approximately 1% of all one year old cattle are persistent carriers of BVDV. These carriers can die at any time from a variety of causes but many die of mucosal disease (MD), a severe, invariably fatal disease with a unique pathogenesis related to genomic mutations in the persisting virus.

Because of the ability of pestiviruses to infect fetuses and the widespread nature of BVDV at least a quarter of all batches of commercially available fetal calf serum contain infectious virus. Because nearly all strains of BVDV are non-cytopathic in vitro anyone who has grown cell cultures in the laboratory has probably handled pestiviruses without knowing about them.

If you think your cells might be suffering, have seen evidence of pestiviruses down on the farm, want to know more about MD, are only interested in deer, or might like to see a picture of the sweetest-looking hairy shaker lamb that ever lived come along and experience “Pestiviruses – Farmyard Killers, Laboratory Contaminators” – on soon at a seminar room near you.

-Peter Nettleton

Micro-News Flashes

* Steve Flint from the Dairy Research Institute (Palmerston North) will be visiting the department this week. Steve will be having some seminar sessions with the 4th year Food Microbiology class.

Steve will also be meeting with Otago members of the Executive of the New Zealand Microbiological Society.

* Sam Hou is still somewhat shell-shocked as the realisation sets in that he has actually just purchased a house on Larnark Road, Waverley.

* Post card from Pam Brinkley this week was written on a canal boat, cruising at about 4 miles per hour, somewhere near Leicestershire.

* The Careers Advisory Service is running Information Sessions on CV Preparation and Job Interview Skills this week and next week. See notice board for details.

* The Institute of Environmental Science & Research Ltd has a vacancy for a technician in the molecular virology laboratory at the Communicable Disease Centre, Porirua. Closing date for applications is Oct 14.

* The BLIS study now includes more than 150 Biology 115 students. They really seem to enjoy coming 'within spitting distance' (so to speak) of real research activity.
John Stuart Loutit officially retired from the chair of Microbiology at the end of 1986, after serving for 30 years in the department — initially as a Lecturer, Associate Professor (1967-70), Personal Professor (1970-78) and Professor of Microbiology and Head of Department (Chairman) following the retirement of John Miles in 1978. Although primarily concerned with the “science side” of the department, John strove to have Microbiology, and in particular non-medically qualified microbiologists, accepted into the clinical teaching arena. In conjunction with his wife Margaret, he established Dunedin as the home of Microbiology teaching in New Zealand.

Born in 1925, John Loutit was educated at Adelaide Boys High School and the University of Adelaide, graduating Bachelor of Science in Microbiology and Chemistry in 1945 and Doctor of Philosophy in 1955. Early positions as a Junior Research Fellow at the University of Adelaide and Temporary Lecturer at the University of Queensland were followed in 1956 by his appointment as Lecturer in Microbiology at the University of Otago.

John Loutit’s research interests revolved around the genetics of *Pseudomonas aeruginosa*; I am sure that when he first started working with this bacterium in the late 1940’s he had no idea of the elevated status it would achieve both as a pathogen and environmental rogue over the next 40 years. While not quite matching his age in numbers, John’s research publications established him as a microbial geneticist of international repute; something which was mirrored by his membership of numerous scientific societies. On the local scene he served terms as President of the New Zealand Microbiological Society (1970-72) and Otago Medical School Research Society (1977), and was a member of the paraclinical assessing committee of the Medical Research Council (1979-82). A period (1974-76) as Dean of the Faculty of Science was followed by membership of numerous University Committees and as a University nominee on the council of the Otago Polytechnic.

John has always been interested in woodwork and laterally wood carving – those who have visited his and Margaret’s home in Granville Crescent will be familiar with the results of these endeavours. On retirement, John in fact served as foreman/contractor cum odd-job man during the building of this house. On completion of the house, John became something of a wine and computer/stock market fanatic; certainly he was in his days in the department the prime instigator of computer literacy within his staff. Unfortunately he failed with some of us!

John still frequents the department and is often seen attending Monday afternoon seminars or collecting Margaret from the Research and Development Office at lunch times. He appears to be thriving on retirement.

- Sandy Smith

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**Quotes of the Week**

“The North American Chronic Pain Association of Canada (NACPAC) is requesting Quick and easy recipes for its 2nd cook book.”

[Sounds like something from the Adams Family!]

- M.H.

From one of this year’s lab write-ups-

“Low numbers of collies were found on the L-agar plates, so all the collies were pooled together.”

[An experiment gone to the dogs!]

- C.R.
Profile
-Michelle McConnell

The eldest of five children, I was the first female born into my father’s family for 116 years. I was born and brought up in Christchurch, attending Christchurch Girls’ High School where no-one told us that girls didn’t do science. At the age of 18 I came to Dunedin (and never left) to attend Otago University - Microbiology and Biochemistry weren’t offered at Canterbury. I did my first year in Microbiology when the department was still housed in the Medical School. In 1975 we shifted into the new department - only the teaching areas were complete at this stage. In 1979 I married Stewart, who teaches at Otago Boys’ High School.

I completed my PhD with Gerald Tannock in 1981. In 1981 and 1982 I was employed by the department as an assistant lecturer (in the days before you needed 5 years post doctoral experience and a number of publications). I had my son Sean in 1983 (9 months & 17 days!!) and a year off work (no post-doc; no O. E.). I started back to work at the polytech in 1984, teaching laboratory classes for NZCS (Micro 4 & 5) and the Animal Technology course. 1985 saw the arrival of my daughter Kerryn (9 months & 14 days!!) and when she was 7 months old I took on a job in Consultancy (anywhere from 2-50 hours/week - real Microbiology - first principles live!) with Margaret Loutit in addition to the polytech work. I also did a term in Class Preparation while Jan Hesketh finished at Cancer Research. My Consultancy work continued until April 1988 when I started as a Junior Research Fellow with Gerald Tannock, funded by a Medical Research Council grant.

Outside of work, my biggest involvement over the years has probably been in hockey - both as a player and administrator (at club and association level) and this year for the first time as a coach of a team of 6-10 year olds. I still enjoy playing - both for a club and now also for the “Golden Oldies” (35+). I am currently the president of the Otago Golden Oldies hockey and have organised the hockey for the Masters’ Games held in Dunedin - where you play more games in a shorter space of time than you ever did in your youth!

Two years ago I took up playing bridge, so I have something to do when I’m too old and infirm to play hockey. The rest of my spare time seems to involve transporting children from one venue to another for their activities, though I still have on my list of things to do, learning to play tennis and golf and also to have the great O. E. that I missed in my youth.

Recent Publications


This paper describes the first juvenile hormone esterase gene to be isolated from a lepidopteran insect. The gene contains 4 introns and 5 exons that display consensus splice junctions. The precise location of the exon/intron boundaries were determined by sequencing. Insect mating experiments were performed using a defined insect family to determine the copy number of this gene on the insect chromosome. The gene was determined to be a single copy based upon parental, F1, and backcross RFLP data. The analysis of this gene offers further potential for the study and exploitation of insect juvenile hormone esterase genes and the regulation of gene expression within insect metamorphosis.

-V.W.
Deer Laboratory

Infected Farm Research
With the Ag Researchers out at Invermay we have started Year 3 of the Infected Farm Study. This year we have decided to look at genetic resistance factors to Tb. We have a group of 45 stags of known genotypes that have been infected with M.bovis. Semen was collected prior to infection, and the stags will be monitored over 6 months and then killed. The semen from culture-negative animals will be used for subsequent studies. We are obviously in for the long haul on this one.

Useless Information
Species tested in our laboratory have included: Cattle, Horses, Dogs, Sheep, Humans, Goats, Alpacas, Gazelles, Oryx, Zebras, Rhinos, Water Buffalo, Wild African Dogs, Lechwe, Reindeer and Yaks.

Keep you eye on this column for the replies from our vets when they were asked the question- what is a lechwe?

Unusual Requests
on our answer phone was a request from an American in South Africa who wanted to know what dosage of BCG (Tb vaccine) would be needed to vaccinate elephants.

![Image of a dog and a lechwe]

"Whoa, Frank.....Guess what youuuuuuuuuuuu said!"

PARKING
The loading zone in front of the building is provided for service vehicles and for the loading and unloading of equipment.

Visitors to the Department who can’t reasonably be expected to park elsewhere may also to park here.

Regular visitors can obtain from Bruce a blue "visitors card" to display on their dashboard. Casual visitors can obtain a card from either Maria or Bruce.

SOCIAL CLUB ACTIVITIES
The next departmental knees up will be on Friday the 4th of November. I know that its a long time overdue, but then again it will be worth the wait.

What? A games evening (Fancy dress??)
Where? Goblins in the Union.
Organisers? The 4th and 5th floor.

So keep that night free from 5pm onwards. More details at a later date.

“We are trying to look forward to the Christmas Party”. [That’s the spirit Buck!]. There seems to be a desire this year to have it ex-department. I am working on several alternatives to present soon in the newsletter, so that they can be put to a vote. If anyone has a viable idea please get it to me in the next week.

The difficulties include weighing up cost and entertainment. The social club has come into some monies which could perhaps be used to subsidise needy cases - such as students. We can debate these options later.

-Buck

Scientists, who are they?

Four-fifths of British schoolchildren aged 10 to 16 are unable to name a British engineer or scientist.

The minority who could name a scientist were more likely to choose a German than a Briton, despite the British record of 61 Nobel prizes for science. Albert Einstein, the German-born physicist responsible for the theory of relativity, was the top choice, followed in descending order by Sir Isaac Newton, Alexander Graham Bell and George Stephenson. None of the top seven is alive. Some were fictitious or fanciful: Frankenstein, the man famous for his monster, Richard Branson, the tycoon who heads Virgin Airlines, and "my teacher".

Sir Clive Sinclair, inventor of the C5 electric vehicle, and David Bellamy, the botanist, were more likely to be cited than Charles Darwin or Thomas Telford. David Attenborough and Patrick Moore also merited a mention by some. The research, based on a survey of more than 650 children, was conducted for the Toyota Science and Technology Education Fund, set up two years ago to enhance schools science teaching.