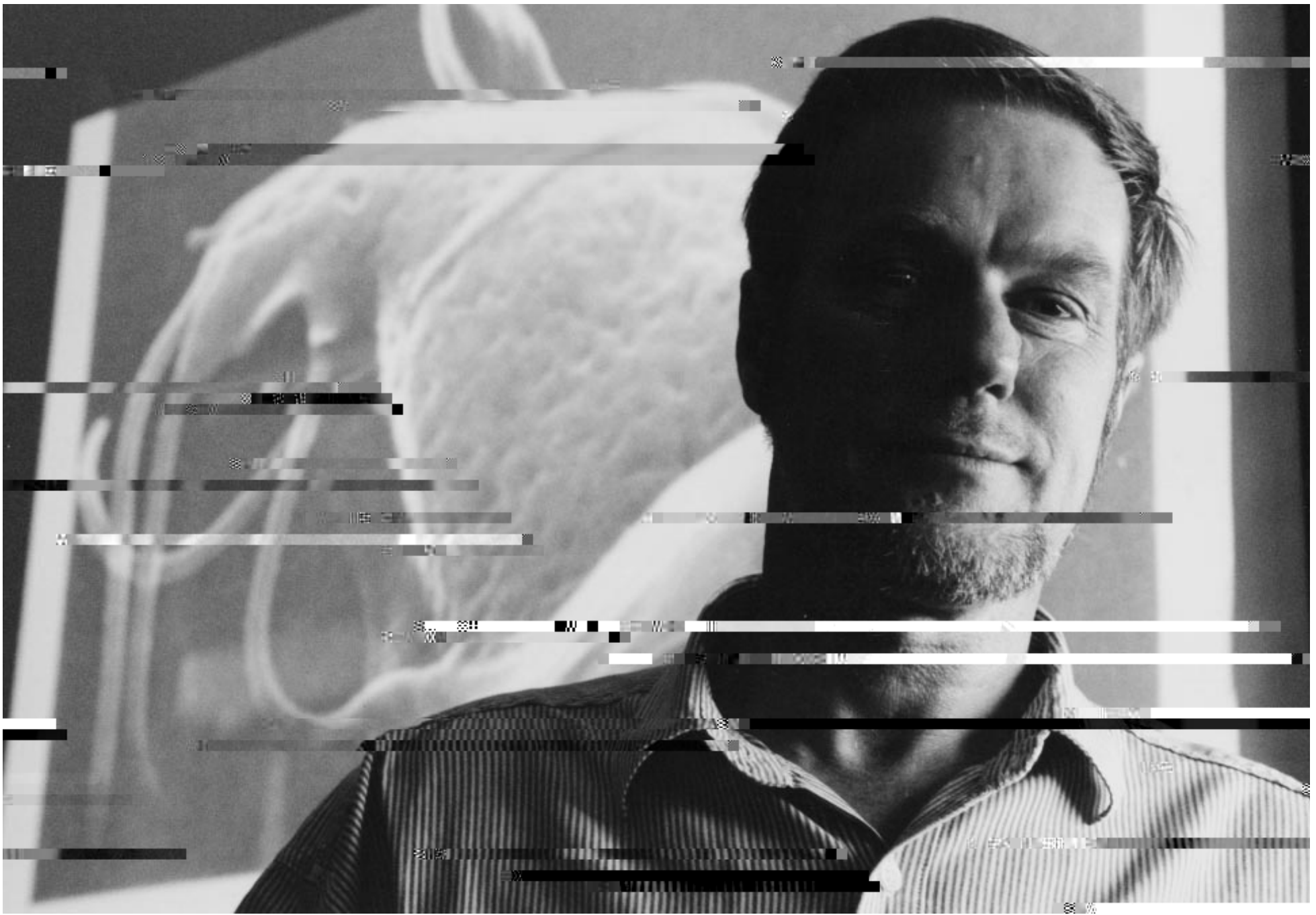


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NEWS FROM THE UNIVERSITY OF ADELAIDE

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Some people collect stamps or bottle tops. Peter Ey (above) collects diarrhoea. David Mussared explains on page four. Photo: Brenton Edwards

Telstra deal for intelligent network tools

Researchers at the University of Adelaide are developing new mathematics-based tools that will help improve the efficiency and effectiveness of Australia's telecommunications systems.

The research is being conducted by the University's Teletraffic Research Centre (TRC) under a two-year, \$700,000 contract with Telstra.

Telephone systems such as One-3 customer service numbers and mobile phone services operate on so-called "intelligent" networks.

In the case of a pizza delivery service, customers call the One-3 telephone number, which is connected to a database. The database then locates and connects the caller to their nearest pizza outlet.

When calling a mobile phone, the database must first contact the phone's "home" location, which then tracks down exactly where the mobile

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During 1996 much of the reporting in the *Adelaidean* has recorded our increasingly successful processes of internationalisation. Doubtless, in 1997 and beyond, this special dimension of University of Adelaide life will continue to grow. And so, as one academic year draws to a close and a new year is in the offing, we might make a little time to think about how we are going about this institutionally maturing process and how we might do it even better. We can all ponder that in our own way. There are so many shades of experience, ways of understanding and of con-

The University of Adelaide is participating in a new clinical study to help improve the quality of life for the estimated 240,000 Australians affected by Alzheimer's Disease.

The 24-week international study is aimed at investigating a new oral drug for the treatment of the disease. The study will look at both the safety and effectiveness of the new drug, currently known as 202026.

Professor David Jarrett, the University of Adelaide's Professor of Gerontology based at The Queen Elizabeth Hospital, said the trial medication could help to correct a chemical imbalance which was believed to be involved in the formation of new memories.

"Research indicates that people affected by Alzheimer's Disease have a reduced level of a certain chemical in the brain called 'acetylcholine'," Professor Jarrett said.

"If the levels of acetylcholine can be raised to normal again, correcting this imbalance could substantially improve not only the problem-solving ability of sufferers but also their overall quality of life, and indirectly that of their carers."

Alzheimer's Disease is the most common form of progressive dementia in adults, with those over the age of 65 having a one-in-20 chance of developing the disease.

Drug treatments so far approved for Alzheimer's Disease have not yielded outstanding results. Many doctors and patients are often disappointed with the inability to lessen the symptoms of the disease and the unacceptable level of side effects.

However, Professor Jarrett said

Guild's 1997 season a classic feast

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The News IN BRIEF

5UV MANAGER HONOURED

5UV Station Manager Dr Jeff Langdon has been made a Life Member of the Community Broadcasting Association of Australia.

Dr Langdon has been involved in community broadcasting since 1979. He ran a community radio station in central Victoria from 1982 to 1985 and was president of the CBAA in 1985. In 1989 he became only the third manager of 5UV. He was again president of the CBAA in 1992/93.

"The next decade for community broadcasting will be one of the most challenging yet," Dr Langdon said. "Changing technology and the increasing need for locally-relevant media will be the big issues as we head into the next century."

NEW BDS ACCREDITED

The Faculty of Dentistry has received the maximum five year accreditation for its new BDS curriculum from the Australian Dental Council (ADC).

The recently formed Council was conducting its first accreditation round. It identified particular areas of strength in the Adelaide Dental School, including its student-centred teaching focus, the commitment of staff to student welfare and performance, and the range and quality of clinically-based scenarios designed to integrate material presented in different streams of the new curriculum.

Associate Dean (Academic), Professor Grant Townsend, said the Assessment Team noted that students with whom it met were articulate, self-assured and positive towards the new curriculum, and had commented that recent graduates appeared to be well prepared for practice.

"The Team was impressed by the 'close knit' relationship between the Dental School, the Adelaide Dental Hospital and the dental profession, each being supportive of each other," he said.

ENGINEERING FELLOW

The Head of the Division of Engineering and Mathematical Sciences, Professor John Agnew, has been elected a Fellow of the Australian Academy of Technological Sciences and Engineering.

Professor Agnew is internationally known for his research in coal, oil and gas reaction engineering. He was recognised by the Academy for his distinguished record of achievement in Australian chemical engineering.

AGRICULTURE DELEGATION

The Chinese Economies Research Centre and the Department of Agricultural Business have recently hosted a delegation from the Chinese Ministry of Agriculture in Beijing.

The delegation, whose primary interest is in animal husbandry, was studying the structure and operation of rural co-operatives in Australia as part of a program aiming to develop new policies for rural co-operatives in China.

Led by Mr Li Huian, Deputy Director of the Department of Rural Co-operatives in the Ministry, the delegation included representatives from nine provinces across the country. Their program in Adelaide was organised by the Department of Agricultural Business.

The visit grew from the extensive research interaction built up with the Ministry of Agriculture by the Chinese Economies Research Centre through ARC and ACIAR grants, and demonstrates the potential for further research and training interaction with China in the agricultural area.

User-friendly guide to our rainforest plants

Identifying trees and shrubs in Australia's tropical rainforests will soon become as easy as the press of a button, thanks to a new CD-ROM being developed by a research team involving the University of Adelaide.

Adelaide and La Trobe universities joined forces with the CSIRO five years ago to document and catalogue almost 2000 species of Australian tropical trees and shrubs.

That information was initially released in 1993 in the form of three volumes of books and a computer diskette.

The new CD-ROM is an updated version of that, resulting in the world's largest computer database of tropical rainforest plant species.

The CD-ROM can be used in the field by researchers, park rangers or even tourists on a laptop computer, allowing them to identify a tree or shrub using several key criteria, such as leaf shape and size, bark, fruit, seedlings, flowers, and even the geographical location of the plant.

The computer identikit is the brainchild of La Trobe University botanist Dr Trevor Whiffen and CSIRO researcher Dr Bernie Hyland, and is funded by the Cooperative Research Centre for Tropical Rainforest Ecology and Management.

Dr David Christophel, from the University of Adelaide's Department of Botany, has played a major role in the development of the CD-ROM and the books on which it is based.

His main task has been to provide

the thousands of x-ray images needed to identify the plants' leaves.

"One of the reasons I was brought in on the project was because I'd developed a technique using x-rays which was very quick and non-destructive, but still recorded all the main features of the leaves," Dr Christophel said.

"The books and computer disk we produced three years ago have sold

Engineering at the crossroads

Both the role and education of engineers are under significant challenge to change in order to produce engineers equipped to meet Australia's needs and ensure our future economic wellbeing.

That was the thrust of the Robin Memorial Lecture delivered by the Governor of South Australia, His Excellency Sir Eric Neal, in Bonython Hall last month.

"Engineers are being called upon, and will be increasingly called upon, to address and respond to a wide range of community requirements and pressures," Sir Eric said.

Citing a recent review of undergraduate engineering education he drew attention to its finding that "patterns and assumptions that have ruled and proved to be of considerable value over the past 100 years are being found to be out of date, no longer productive, and not infrequently producing counter intuitive consequences."

Sir Eric suggested that if engineering courses were to continue to attract high quality students they needed to offer greater flexibility in the options available to students, more entry and exit points, and closer links with other disciplines, such as law or commerce, to stimulate "more interest in engineering, not less, and to make engineers even more adaptable and useful to the wider community".

The Robin Memorial Lecture honours the contribution to Engineering of Roland Cuthbert Robin, an Adelaide graduate and former Professor of Engineering here.

Sir Eric's address is available in full from the Department of Civil & Environmental Engineering.

Mainstreaming Aboriginal employment: program aims for change of attitudes

Staff responsible for employment at the University of Adelaide are being urged to consider Aboriginal and Torres Strait Islander people for "mainstream" jobs.

The University is taking part in a program funded by the Department of Employment, Education, Training and Youth Affairs to promote the employment of Aboriginal people.

Adelaide University is the only university in South Australia involved in the program. Its target over the next four years is to achieve a 1.5% representation of Aboriginal employees among staff. Currently there are only about 25 indigenous people employed at the University.

To help achieve the employment target a new Aboriginal Recruitment Officer, Mr Cecil Graham, has been appointed to the University's Personnel Services Branch, continuing the work started by Mr Kevin Khan last year.

Mr Graham has had more than 20 years experience in Aboriginal Affairs, having previously worked with the Australian Electoral Commission promoting ATSIC elections to Aboriginal communities, and with the University of South Australia in the recruitment of Aboriginal students.



Cecil Graham. Photo: David Ellis

Mr Graham sees his new job as a great opportunity to expand on Aboriginal employment within the University of Adelaide.

"My personal feeling is that many non-Aboriginal people in govern-

ment sectors, private companies, and universities have had little or no understanding of Aboriginal and Torres Strait Islander people in an employment sense.

"It's my job to go and talk to Deans of Faculties and people in other areas to encourage them to employ Aboriginal people in jobs for which we know they have the skills.

"I think the University can benefit from this, and it's a positive step for the Aboriginal and Torres Strait Islander people who deserve the chance to use their skills," Mr Graham said.

Part of Mr Graham's work involves running cultural awareness programs for deans and heads of departments, to give them a better understanding of indigenous people. He also encourages Aboriginal people, including high school and TAFE students, to apply for jobs within the University.

Mr Graham said he was trying to promote a change in attitudes on two fronts — changing the attitudes of employers, and those of Aboriginal people.

For more information about the program contact Cecil Graham on (08) 8303 5891.

—David Ellis

Project tests concrete limits

This concrete beam pictured right has been pushed to its limit at the University of Adelaide as part of an industry-funded research project aimed at preventing the cracking and collapse of structures such as buildings and bridges.

Much of the civil engineering infrastructure throughout the world, and in particular developed countries like Australia, is ageing and deteriorating.

The Department of Civil & Environmental Engineering, sponsored by Queensland-based company Advanced Composite Technology, is developing new methods for strengthening, stiffening and repairing reinforced concrete structures, by bonding plates to their surfaces.

Students David Arrowsmith and Darren Ball (pictured) are examining the resilience of a beam that was fitted with a fibreglass and carbon fibre plate.

Tests have shown the beam can withstand up to 60% more pressure thanks to the strength and durability of the additional plate. As well as increasing the resistance of the beam, the technique is relatively inexpensive.

This research project, part of the Sponsor Program for Undergraduate Research, has many implications for civil engineering world wide and is an excellent example of how the University is working closely with industry to meet the needs of the community.

—David Ellis



Adelaide wool research in Paris

Professor George Rogers, an Honorary Visiting Research Fellow in the Department of Animal Science, recently presented the John Ebling Memorial Lecture to the European Hair Research Society meeting in Paris.

The lecture commemorates the work of John Ebling, an endocrinologist who made major contributions to basic biological knowledge of hair growth in animals including man.

Professor Rogers was the only Australian at the conference which was attended by dermatologists and biomedical scientists, mainly from Europe and the USA, doing both fun-

damental and applied research into hair growth.

His lecture, "The role of wool research, past and present, in hair research", described some of the research relevant to hair growth and structure that is going on in the Wool Biology Group in the Department of Animal Science at the Waite Institute.

That research is part of Program 5 of the CRC for Premium Quality Wool, located at Waite Campus and, in collaboration with SARDI at Turretfield, is directed to producing transgenic sheep with genetically manipulated wool with altered growth and properties. Professor Rogers is Program Manager for Program 5.

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SMG UPDATE

▲ 1997 LOAD AND RELATED ISSUES

SMG has set preliminary target load for areas for next year as best it can given that the University has not yet had a formal response from DEETYA to its Educational Profiles submission. SMG has recently looked again at these targets, in light of SATAC application statistics, and identified those areas where making load targets might be difficult; it has made decisions about where to increase load to compensate in case there is a shortfall. By doing this now, in advance of the selection/admissions round in January, it is hoped that the last-minute load fluctuations that have characterised previous rounds will be avoided.

▲ NEW COMMITTEES/WORKING PARTIES

SMG has agreed to the establishment of the following advisory working groups:

- an "Intensive Semester" working group, chaired by the Convener of Academic Board, to explore and examine the issues associated with the introduction of a possible third or intensive semester, probably on a fee-paying basis.

- a "Service Centre" review group, chaired by the Acting DVCR, to look at funding mechanisms for service units, eg, the Statistical Consulting Unit.

▲ ECONOMICS AND COMMERCE

SMG has given in-principle endorsement to the separation of the Faculty of Economics and Commerce into two "Schools" or Faculties. Recognising that this cannot be done at this time formally without a Statute change, SMG has agreed that the next step should be preparation of a proposal for implementation on an interim basis, with review mid-1997, before any formal proposal is approved. The "siting" of the Graduate School of Management will be sorted out in the context of the incorporated Adelaide Graduate Business School and associated service agreement between the University and that school.

▲ STUDENT LAPTOP COMPUTER SCHEME

SMG has approved a pilot scheme in Mechanical Engineering which is expected eventually to provide each student in the department with his or her own laptop computer. A full description of this scheme was reported recently in the *Adelaidean*.

▲ COMMUNICATION COSTS

SMG is grappling with the fact that the University's communication costs — mail, telecommunications and Internet — are all contin-

Visitor on DNA mutation quest

A baffling collection of persistently ill small children in London has led immunologist Malcolm Turner on a search to China, Africa and now an Aboriginal community in the Northern Territory.

Professor Turner, a Visiting Senior Research Fellow in the University of Adelaide's Department of Paediatrics, discovered that the sick children had a mutation in the DNA which produces mannose binding lectin — a protein with primitive antibody-like functions.

As a result of this mutation, protein levels were low in these children who suffered recurrent health problems, such as respiratory and middle-ear infections.

He said that affected children were usually between the ages of six months and two years — a period during which an infant's immune system is still immature. Up until the age of about six

months, children are protected by their mother's antibodies but the child's own immune system does not reach maturity until about two years of age.

"Every child goes through a window of vulnerability during this time," he said.

Professor Turner, who is Professor of Molecular Immunology at the Institute of Child Health, University of London, decided to examine whether the mutation occurred in other parts of the world.

Certain members of the Hong Kong Chinese population were found to have low levels of the protein and the same mutation, whereas Gambians in West Africa were found to have low levels of the protein as a result of a different mutation.

"We think the mutation in the UK and China is at least 40,000 years old having occurred in a

population ancestral to both these present day populations," Professor Turner said.

"Aborigines are thought to have come to this continent at least 50,000 years ago. It could be that they came here before the mutation occurred. On the other hand, it might explain why Aboriginal children get a lot of infections."

In collaboration with the Blood Centre in Adelaide, an Aboriginal community in the Northern Territory is being studied.

Initial results show that the three previously known mutations are not present although it is possible that further work will reveal a new kind of mutation.

The collaborative studies will continue after Professor Turner has returned to the UK and will involve other Aboriginal communities that may differ from the initial study group.

—David Washington

Alumni
IN BRIEF

ADELAIDE: SE corner, close to transport, shops, university, fully furn row house, 2 br, 2 bathrooms, sitting, family rm/kitchen, air cond, garden. Suit visiting academic. Available late March - early July. Ph 8223 6398 or email: wrprest@ arts.adelaide.edu.au

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