

Lumen

MM 2002

INSIDE:

Solar Challenge
2005

Cultivating research

Antarctic adventures

No fantasy

Hard Wired
challenges of heroin treatment

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The six months since the last issue of *Lumen* have been dynamic for the University of Adelaide.



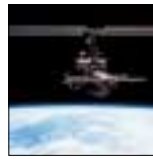
lumen contents

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Solar challenge

Building a state-of-the-art flagship solar car will require more than just the University of Adelaide's considerable engineering expertise – the entire University community can help.



Ice Trip

It seems like a world away, but Antarctica and Adelaide are closer than you think, especially for a geology student and a member of staff.



taking on the in flagship car

Building a state-of-the-art flagship solar car will require more than just the University of Adelaide's considerable engineering expertise—the entire University community can help.



The race is already on for the University of Adelaide's entry in the 2005 World Solar Challenge—despite the finish line being almost three years away.

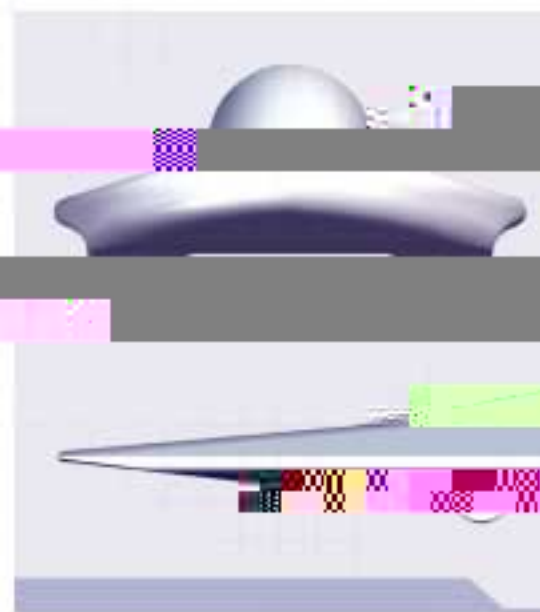
The University plans to enter its first solar car in this world-renowned event, and aims to finish high in the top 10.

The World Solar Challenge is a biennial race for solar cars from Darwin to Adelaide, a distance of 3000km. The cars' only source of energy is the sun's rays.

While the next race is in 2003, the University has set its sights on the 2005 event due to the time needed to mount a serious entry.

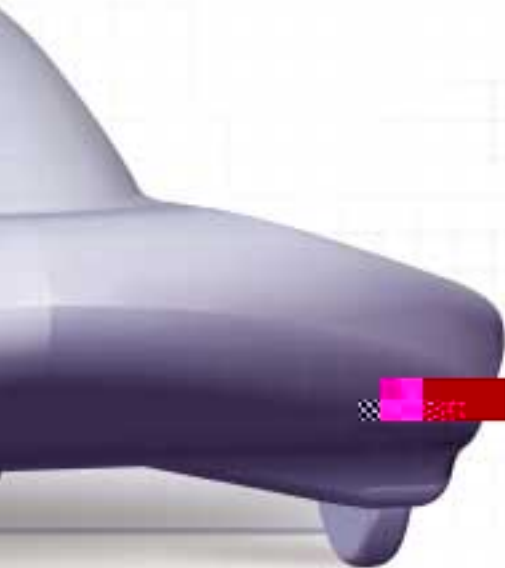
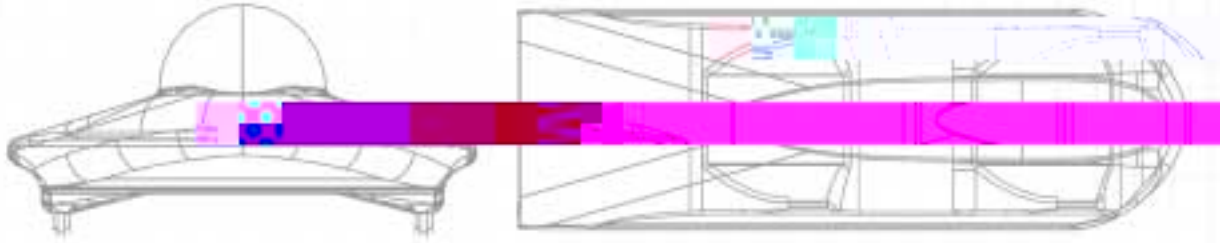
Lead organiser Associate Professor Gus Nathan from the School of Mechanical Engineering says Adelaide will break the tradition of such projects being the exclusive domain of engineering faculties.

"We are looking to make it a University-wide project, in reflection of the multi-disciplinary nature of the project," he says.



WORLD

R



disciplinary learning experiences and has a strong environmental focus.”

Work is already underway on the car for 2005, with two Mechanical Engineering Honours students, Jimmy Yeoh and Yin (Kenne) Tsui, developing the concept design for the vehicle in their fourth year of studies.

This concept design draws upon experience gained in the development



Heroin is the most destructive illicit drug hurting

"It's true to say that if you look across illicit drugs, in terms of the total cost to the community and the individual, heroin has the greatest impact," says the University of Adelaide's Professor of Addiction Studies, Jason White.

Professor White, who is also the Head of the Drug & Alcohol Services Council's Maintenance Pharmacotherapies Unit, shares his work between the university and one of Adelaide's drug treatment clinics.

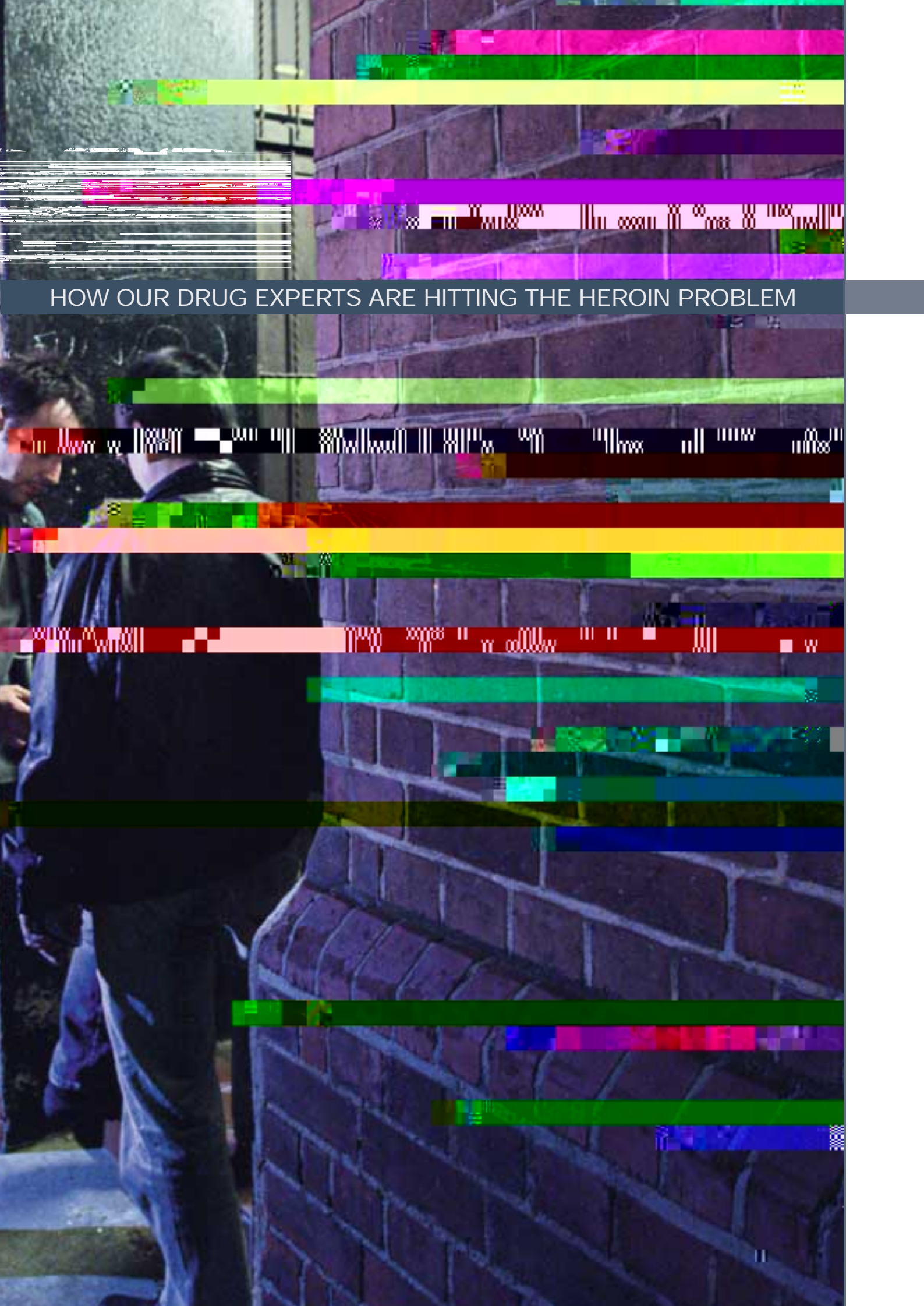
He and his colleagues in the Department of Clinical & Experimental Pharmacology have spent years investigating illicit drugs and their treatment. The treatment clinics are the public face of their work, providing opportunities to conduct a range of research projects into heroin use, and opportunities to put the results of research into practice.

For someone who spends much of his time with people living on the edge, desperate for help, Professor White is calm and optimistic about improving the lives of hardcore heroin users and the wider community.

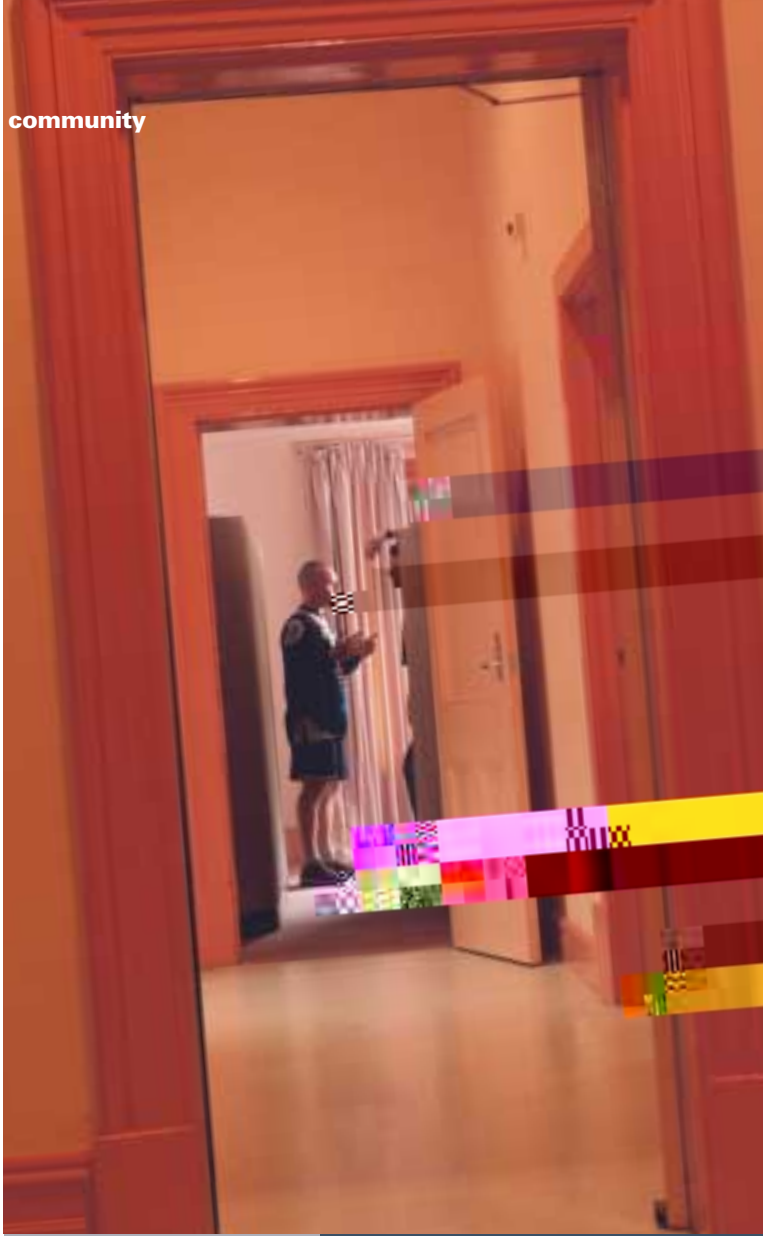
"There's a significant proportion of heroin users who become dependent—certainly not all of them, but a significant number—and dependent users tend to have very poor health and a high risk of engaging in criminal behaviour, and that produces a cost to the community," Professor White says.

"If you can address heroin problems you can have a very significant impact on an individual and a community in general—relatively easily and relatively inexpensively, if you compare it to a lot of other health areas. It's really not a huge amount of money that you spend per person involved, but the impact on that person, the people around them and the community is really huge," he says.





HOW OUR DRUG EXPERTS ARE HITTING THE HEROIN PROBLEM



While there are many success stories of users who have kicked the habit and blended back into the community, often the damage is already done. Heroin users suffer severe health problems, and by the time they have actively sought help and been successful they might have already contracted Hepatitis C or HIV. Another major side-effect of heroin use is an extreme sensitivity to pain—one of the many issues that the Department is currently researching, in collaboration with the University of California, Los Angeles (UCLA).

The problem is that dependent heroin users often don't seek treatment until well into their heroin "career".

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Koonamore Station is a long way from anywhere. Located 400km north-east of Adelaide, the property sits in saltbush country in South Australia's arid interior.

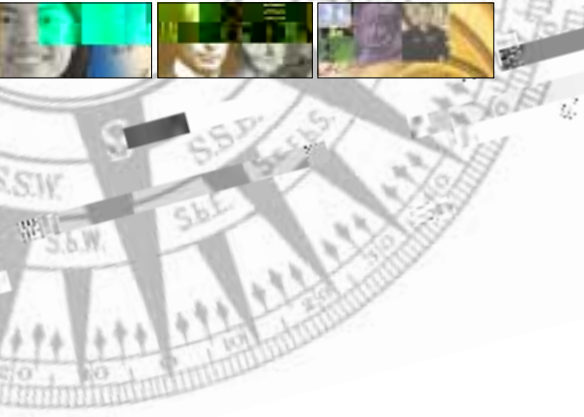
It's also the venue for one of the longest-running and most successful research projects of its type in the world.

Koonamore is home to the TGB Osborn Vegetation Reserve, named after Professor TGB Osborn, who set up the project in 1926 through the University of Adelaide's then Department of Botany.

Amid concerns about the impact overgrazing was having on the State's pastoral lands, Professor Osborn fenced off a 400-hectare section of the station to permanently exclude sheep. (Since the 1970s the



can build up a detailed picture of changes in the vegetation, when plants regenerate and when they die.



A Who's Who of Adelaide alumni took part in this year's Australian Universities International Alumni Convention (AUIAC).

Delegates to the convention included senior politicians from Malaysia and Cambodia, senior engineers, lawyers, doctors and environmentalists—and that was just the Adelaide graduates!

Close to 700 graduates of Australian universities met in Melbourne in September, representing 17 nations around the world. Prominent among them were Adelaide alumni from Malaysia, with a large contingent from Sarawak and Sabah, East Malaysia, and delegates from West Malaysia, Singapore, Indonesia and Cambodia.

The biennial convention has become one of the biggest events on the alumni calendar, offering a unique opportunity for international alumni from Australian universities to network, share experiences, and renew their connections and links with Australia. The theme for 2002 was "Networking in the Knowledge Economy", with corporate, social and education issues on the agenda.

Among those driving the event is one of Adelaide's most distinguished alumni, the Chief Minister of Sarawak, YAB Datuk Patinggi Tan Sri (Dr) Haji Abdul Taib Mahmud, who was one of the patrons of this

year's convention. At the opening of the convention, the Chief Minister called for stronger links between Australia and Asia. He urged Australia to engage at the highest level with university alumni to build these links, and said this was the role not just of Australian universities to engage with their alumni, but also of Australian political and business leaders.

"The globalised world has not come with a common perception," he said. "We must grow together to become partners in a world that

come "home"



mathematics enrolments, and the need for engineering bodies to assist in education. "The engineering profession must innovate itself to lead the way to sustainability," he said.

Adelaide Homecoming

The Homecoming event was hosted by the University of Adelaide in conjunction with the Governor of South Australia, Her Excellency Marjorie Jackson-Nelson, the Premier of South Australia, Mr Mike Rann, and the Lord Mayor of Adelaide, Mr Alfred Huang.

The event gave the opportunity for many international graduates to return to Adelaide and see their University as it is today, and included campus tours and updates on leading-edge research at the University.



ICE TRIP



By the time summer has well and truly settled over Adelaide, Geology student Kirsty Brown might be wishing for a slice of it.

Ms Brown has left Adelaide, Australia to spend three years in... Adelaide, Antarctica. Adelaide Island to be exact.

A PhD student, Ms Brown has been awarded a highly sought-after position working with the British Antarctic Survey. In Antarctica, she'll be working with a team of researchers looking at the impact of icebergs on animal and plant life at the sea floor.

The new position will put her scuba diving skills to good use. Ms Brown has been diving for the past seven years, including off the coast of Greenland.

Her diving also came in handy during her research at the University of Adelaide. For the past four years the British student has been studying sediment produced by

organisms that live on seagrasses along the South Australian coast.

"My main survey point was West Island near Victor Harbor —I spent about two months out of every year there," Ms Brown said.

"I've been diving right along the South Australian coast, from Streaky Bay down to Robe. I've done tropical, temperate, Arctic and now I'll be doing Antarctic diving, so I feel very lucky," she said. "I'll be down there scuba diving every day of the year, if I can."

Ms Brown's research has combined elements of marine geology and biology, and her new position will move her further into the marine biology field.

The research involves looking at the damage caused by icebergs as they scrape along the sea floor. This process, known as "grounding" or "berging", destroys flora and fauna on the sea floor.

"We'll be looking at how the

organisms down there survive in those conditions, and how fast they recover.

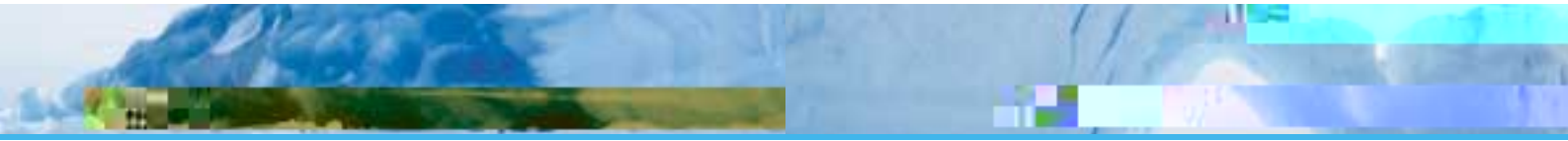
"The overall scope of that project is that with increases in global warming, the number of icebergs produced will increase. It's possible the animals and plant life may not be able to survive with increased rates of berging," she said.

Someone who has already seen those icebergs up close is University of Adelaide staff member John Edge.

Mr Edge, a maintenance plumbing foreman, realised a life-long dream when he spent five months on Antarctica's Davis base between November 2001 and March this year.

"It's something that I've wanted to do for a long time, and it ended up nothing short of being one of the best life experiences I've had," he said.

Mr Edge was employed as a maintenance plumber through the



Mr Edge's helicopter was used to transport him and his gear to the base camp.



Mr Edge's helicopter was used to transport him and his gear to the base camp.

Australian Antarctic Division and spent most of his working hours outside.

“The coldest it got to was -10°C, and one day it got as warm as 6°C, so it wasn’t as bitterly cold as it gets in winter when apparently it gets down to -35°C or -40°C,” he said.

“While the weather was fine it wasn’t usually a problem—but if there was a wind, or cloud cover,

then it became a bit of a hassle. You tried to spend as little time as was necessary outside because conditions quickly became unpleasant for working.”

Apart from the obvious aspects of being in Antarctica, one of the highlights of Mr Edge's trip was meeting and working with the more than 70 people stationed at Davis.

“I was amazed at the tolerance

and good-naturedness of everyone who was down there,” he said.

“There was a large number of people from all walks of life in a very confined space, but everyone got along really well and it was really easy to fit in and feel part of the group.” ■

Story **Ben Osborne**
David Ellis

Plant Genomics centre to cutting-edge research



The University of Adelaide's proud tradition in the field of plant science has provided the perfect springboard for a new age of plant research.

For nearly 80 years, plant scientists at the University of Adelaide's Waite campus have helped Australian farmers to grow healthier, higher-yielding varieties of cereal crops.

Now a new age in plant research at the Waite is about to begin. After

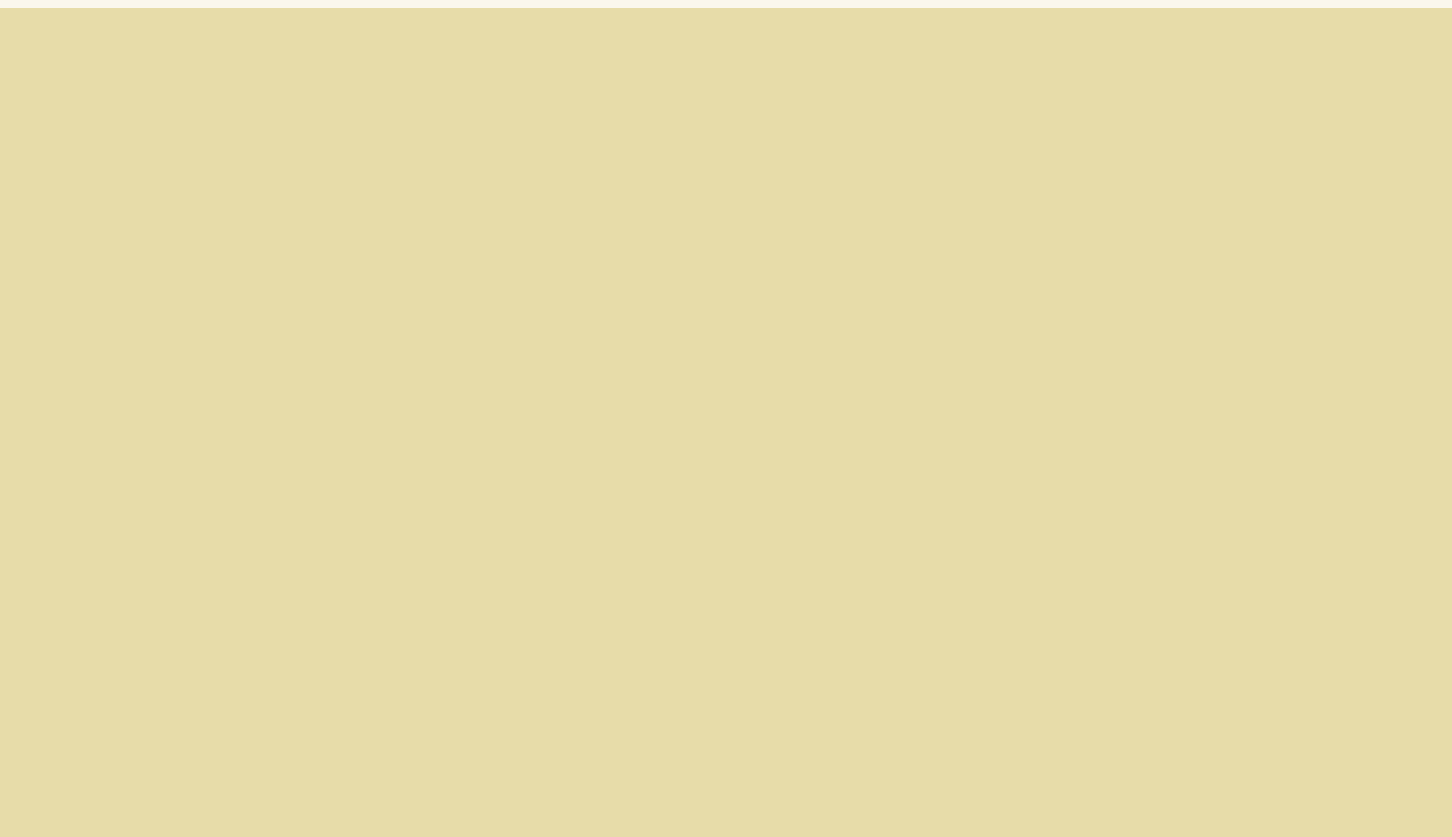
a keenly contested selection process, the University and partners have been awarded the Australian Centre for Plant Functional Genomics, a facility that will attract \$55 million (cash and in-kind) from the Australian Research Council, the Grains Research and Development Corporation (GRDC), the Federal and State Governments, and the University itself, over the next five years.

Work on a \$9.2 million new building at the Waite starts early in 2003. Initially, the building will accommodate 100 scientists

(including postgraduate and postdoctoral researchers) as well as spin-off bioscience companies.

"Our vision of the centre is that it will act as an international magnet for people who want to work in cereal genomics," says interim Director Professor Peter Langridge. "It will be one of the key centres in the world doing this kind of research."

In bidding for the centre, the University faced strong competition from other research institutions across Australia. The successful bid was developed in conjunction with





A Tradition of Giving

The impressive buildings on the University's North Terrace campus are a compelling reminder of how fortunate we are that people such as Sir Walter Watson Hughes and Sir Thomas Elder had a vision for building a prestigious university in the heart of Adelaide.

The University of Adelaide has grown to the prominent institution that it is today because of the foresight of many generous benefactors who have given their support so willingly over the past 130 years.

Much of that support has been by way of bequests to provide funds for building projects, research, artworks, books and equipment, or to endow academic chairs, travel grants, scholarships or prizes. Some of these valued benefactors are:

- Sir Thomas Elder, who in 1897 bequeathed the sum of £65,000 for Medicine, Music and general purposes of the University. The Elder Conservatorium of Music was established with these funds;
- Mr Peter Waite whose benefaction was largely responsible for the development of Agricultural Science at the University in 1922;

- more recently, the Benjamin Poulton Foundation was established in 1989 from the Cynthia and Frances Poulton estates.

Making a gift to the University by way of a bequest in your will is an intensely personal gesture and should be done in consultation with your legal adviser.

All bequests, no matter how modest, are beneficial to the University and have the power to make a lasting difference to the quality of research and education at the University of Adelaide.

Leaving a bequest in your will to the University of Adelaide requires special wording. This can be done at the time of preparing your will or can be added as a codicil to provide for your bequest.

Staff in the Alumni, Community Relations and Development Office of the University are happy to work with you and your adviser in strictest confidence to provide any information you require about making a bequest to the University of Adelaide.

Please phone +61 8 8303 5800 for more information. ■

Elaine Baker
Senior Development Officer

A Gift for the Future

"Acts of generosity from individuals can greatly assist the education and training of some of our brightest minds and best talent, leading to great benefits for the community in science, medicine, and many other fields."

Professor James McWha
Vice-Chancellor

Our alumni and friends have supported a wide variety of projects, programs and facilities over the University's 128-year history. Most recently, the Honours Scholarships in Science Appeal, Barr Smith Library Annual Appeal and Vice-Chancellor's Scholarships Annual Appeal have received generous donations.

To find out more about supporting the University you can visit our new development website. This is where you can read about the University's priority funding needs and the major appeals we are running as part of the University's fundraising program.

The new website has helpful information about how to make a gift to the University of Adelaide, tax advantages of making a gift, donating non-financial gifts, and making a bequest. There is also an easy-to-use online donation form.

If you are interested in ways to support the University, please visit our website: www.adelaide.edu.au/alumni/giving/ ■

Nicole Stones
Communications and Committees Officer

Is Adelaide becoming the "space university"?
Several major happenings around



The University's new Santos Petroleum Engineering Building has been given a personal stamp of approval by Australian Prime Minister John Howard.

Mr Howard officially opened the \$7.5 million building in August at a ceremony also attended by South Australian Premier Mr Mike Rann, and other senior staff from the University, industry and government.

The new building is home for staff and students from the School of Petroleum Engineering and Management, which began teaching this year.

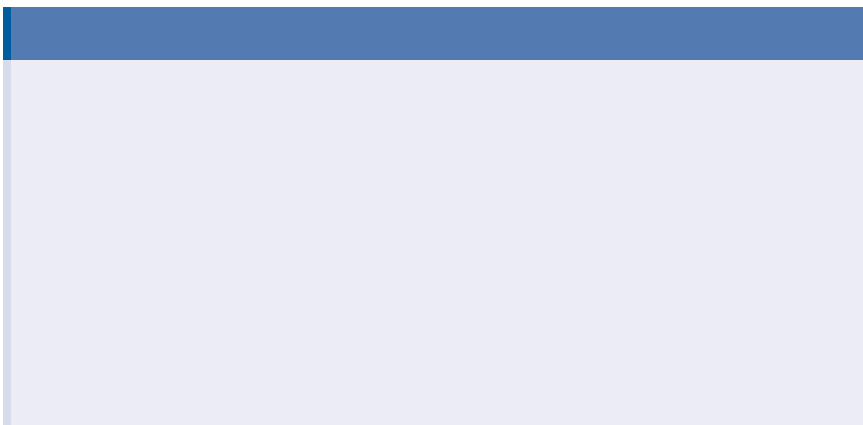
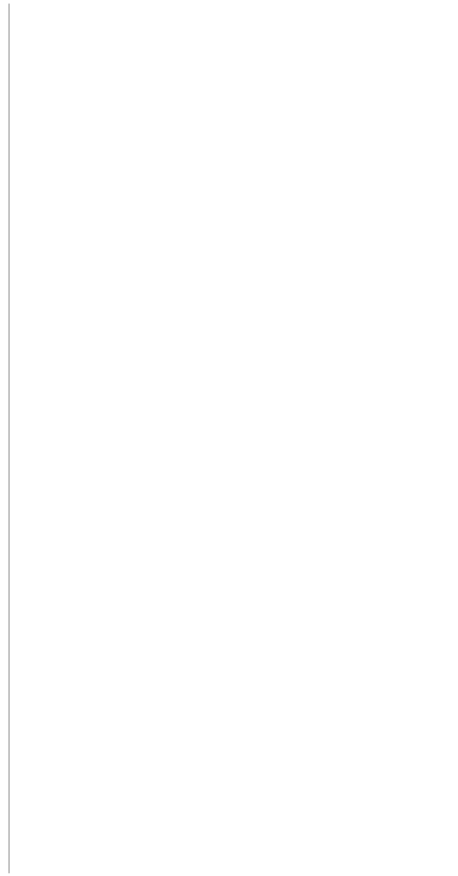
Santos is contributing \$25 million over to 10 years to the University for the School. This includes funding

Miriam Hyde, AO, OBE – Composer & Pianist

Miriam Hyde (B Mus 1931) was born in Adelaide in 1913. She studied at the Elder Conservatorium, achieved two diplomas at 15, graduated at 18, won the South Australian prize for the LAB in 1928, and won the Elder Scholarship to the Royal College of Music in London in 1931. In London she won three composition prizes and was soloist in her two piano concerti with major London orchestras including the BBC. She graduated in 1935 with the ARCM and LRAM and returned to Australia.

She has composed more than 50 songs, chamber music and

sonatas for viola, clarinet and flute, composed overtures and other orchestral works, recorded and broadcast many of her works, performed in a variety of high



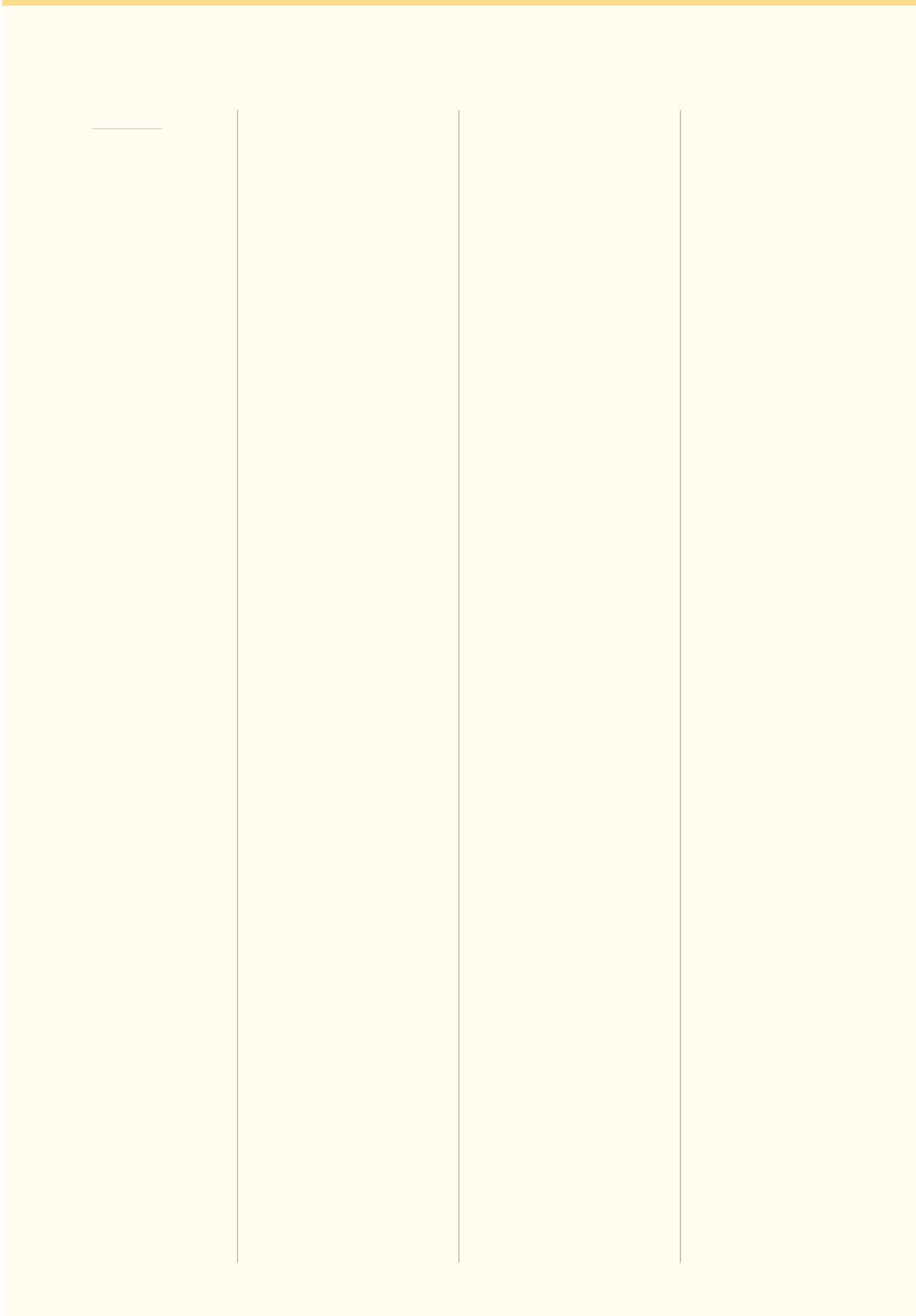
Alumni Program



could barely be parted from the Barr Smith. It both frightened me and awed me. I had never seen such a collection of books. Then, as I moved into postgraduate work, I realised what a splendid collection it truly is. The treasures I found tucked away in small, dusty, forgotten alcoves!

“I can still remember standing in absolute delight at finding some forgotten volume, often with its pages uncut, never opened since the library acquired it in the 19th century, my hands grimy from the dust on the cover, sneezing, wondering how I could bear to be parted from it. Now, much of my time is spent haunting rare book dealers around the world seeking out copies of these books, trying to recreate in my world here in Bendigo some of that delight I had found in the Barr Smith.

“The library has had, and continues to have, such an astounding influence on my life that—to be honest—I don't think there is anything I can do that



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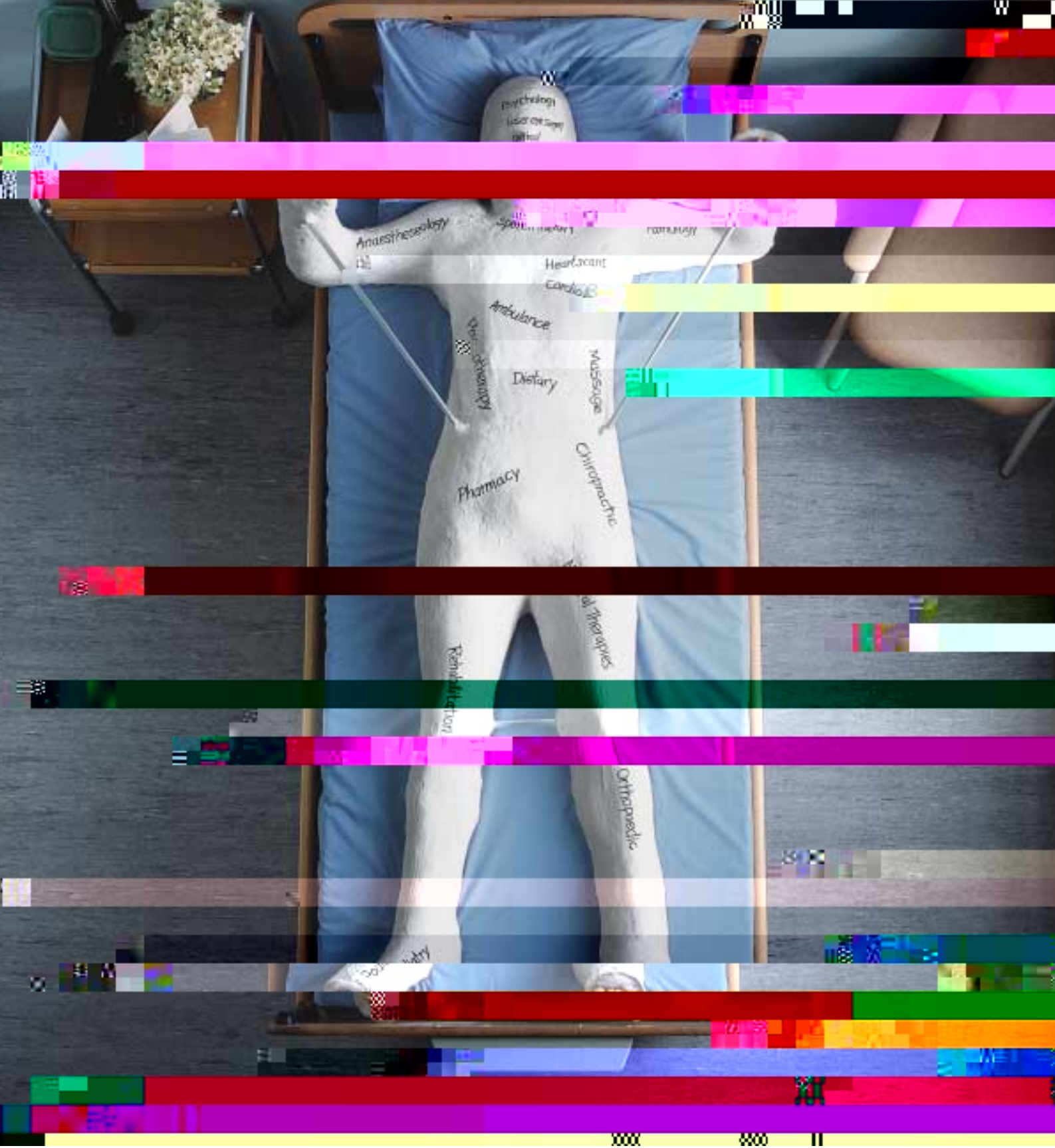
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