New research suggests Alzheimer’s can be beaten with grape seeds

We’ve all been spitting them out for years, but now grape seeds have been identified by Flinders University researchers as a potential treatment in preventing the development of Alzheimer’s disease.

Using a mouse model, a team of medical scientists in the Department of Human Physiology, headed by Professor Xin-Fu Zhou, has found that adding grape seed extract to the diet acts to prevent the formation of deposits of amyloid proteins in the brain.

Professor Zhou said that over-production of amyloid-beta proteins, or the body’s failure to degrade them, leads to the formation of clumps or snarls in the brain and is a major cause of Alzheimer’s disease.

“This aggregation of amyloid will cause loss of nerve connections, cell death and inflammation in the brain, leading to cognitive decline,” Professor Zhou said. Many fruits and vegetables contain polyphenols — complex molecules with anti-oxidant properties — and some have been identified by scientists as a possible method for reducing amyloid deposition.

Professor Zhou’s team, in collaboration with researchers from the CSIRO, chose to experiment with the polyphenol extract from grape seeds, a resource in which South Australia is particularly rich. Grape seed extract was fed to mice affected by transgenic Alzheimer’s for six months, after which the researchers observed their behaviour and brain.

continued on page 2
Evidence of life pre-dating the pyramids of Egypt will be used to shape an insight into the cultural life and society of the Ngarrindjeri people of South Australia.

Flinders University archaeology PhD student Chris Wilson has surveyed several sites along the River Murray once occupied by the Ngarrindjeri people, in an attempt to unlock the secrets of their diet, occupation and living conditions, in the Holocene period – the past 10,000 years.

“Many people do not realise just how much heritage there is along the River Murray and down to the South East,” Mr Wilson said.

“This research will help to highlight the depth of history that exists in the area because a lot of these sites are older than the pyramids in Egypt. For example, some of the sites in the northern regions are around 6,000 years old and we are aware that there are sites around here that are a lot older still,” he said.

“Hopefully the research will also uncover some information relating to the community that once lived here, from their diet to how and where they lived across a range of time periods.”

Mr Wilson began his research last year, which has included an archaeological survey along 30 kilometres of the banks of the River Murray between Mypolonga and Monteth, relocating nearly 100 shell midden sites in the area, as well as eight excavations.

Using this information, he identified several sites from which he would collect his data, including Hume Reserve Midden and Historic Campsite, which was significant due to its use as a campsite by generations of Ngarrindjeri families prior to and following European colonisation in Murray Bridge.

Once all the data has been collected, Mr Wilson will use radiocarbon dating to determine the age of the sites from which they came in an attempt to pinpoint key dates for the Ngarrindjeri people.

He will then correlate his findings to a Ngarrindjeri Creation story – Ngurunderi – which is a Ngarrindjeri interpretation of how the local landscape was formed, in the aim of providing future generations of Ngarrindjeri people and the wider community with a more personal understanding of the cultural significance of the area.

“This project is really about education and ensuring the entire community is aware of the treasure that lies on their doorstep,” Mr Wilson said.

“Once the project is complete, the task will then be to get the wider community to treasure the historical significance of what is here – particularly children,” he said.

Emma Kibble
A town with two heart-beats

Some 8,000 South Australians can trace their heritage back to a single, picturesque, hilltop town in southern Italy.

In a chain of migration extending over five decades, more than 1,600 former residents of Caulonia came to settle in South Australia, where they became the State’s largest group of Italian migrants from one town of origin. Their story has been traced in Caulonia in the Heart, a lavishly illustrated history published in both English and Italian by Flinders language academics Ms Daniela Rose and Professor Desmond O’Connor.

They researched archival sources and conducted interviews with more than 140 immigrants and their descendants in Adelaide, Perth and Mildura, as well as current residents of Caulonia.

Emigrating to Australia in a bid to escape the hardships of rural poverty in regional Calabria, the original families settled in and around the western suburbs of Lockleys, Seaton and Fulham, setting up market gardens along the River Torrens.

As time went on, the pioneer families were joined by relatives and friends, who, with three generations of locally born descendants, now form a community that still honours its distinctive cultural and religious traditions. Caulonia’s patron saint, St Hilarion, acts as a focus for community celebrations and festivals.

“They really nurture the bond they have with their hometown,” Ms Rose told Flinders Journal.

Cities, towns or villages of origin are central to Italian migrant identity, coming before region and country: “They feel first and foremost Cauloniese, then Calabrian, and after that Italian,” Ms Rose said.

Professor O’Connor said the migrants from Caulonia have been very successful, both in personal terms and in their contributions to the Australian society; three large nursing homes are operated by the Cauloniese community in the western suburbs of Adelaide.

“They have integrated with the wider community, but they have also maintained their traditions,” he said.

Professor O’Connor said that as decades passed, a migrant community usually maintained its traditions and dialect more faithfully than was the case in the town they left behind.

He said that the Australian Cauloniese have had a great deal of interchange and contact with their home town over the years, demonstrating that migration is a complex and continuing process rather than one of simple departure and arrival.

“And it often involves subsequent generations in the discovery of their heritage,” he said.

Caulonia in the Heart (Caulonia nel cuore) is published by Lythrum Press.

Charles Gent

Making a modern nation – just add migrants

The remarkable and transformative story of Australian immigration over the course of the 20th century is the subject of a major new study by Flinders University historian Professor Eric Richards.

In Destination Australia, Professor Richards’ narrative blends the often dramatic stories of individual migrants with the shifts in official attitudes that lay behind the ‘grand experiment’ of Australian immigration.

“I’ve tried to get a balance between the big picture – the long perspective – and some of the several million stories that make up the whole experience,” Professor Richards said.

“It’s a story that reaches into the lives of almost every Australian family,” he said.

“Australia is also a terrific example of mobility and migration in the world at large; even now it is among the top migrant nations.”

“This makes Australia an interesting case study in how people move about the world, and how that has changed over the course of the last century into the current situation where we have many different kinds of mobility.”

Professor Richards said Australia’s distance from the sources of its immigrants had largely enabled the Federal Government to pick and choose its immigrants according to the country’s perceived needs.

He points to two big changes in Australian policy in the 20th century: “British Australia continued right through to 1947 and then there was a radical switch under Arthur Calwell to the Europeanisation of Australia, which can really be seen as an attempt to reinforce the White Australia policy,” he said.

“Only in the 60s and 70s do we see the next big shift, with the demise of the White Australia policy and the emergence of a much wider catchment for migrants.”

“These were big shifts and, looking back, it’s interesting to see how Australia managed the change from a highly monocultural society and population into one that becomes increasingly diverse.”

Despite periods of political and social anxiety, Professor Richards said Australia has successfully realised one of the most racially diverse immigration programs in the world with a minimum of disruption.

“Australia has moved from an extraordinarily monocultural, monoglot condition to one of extreme diversity, which is a bigger shift than you see in most societies.

“The tensions were always greater in anticipation than in reality,” Professor Richards said.

Destination Australia is published by UNSW Press.

Charles Gent
A biofuel additive developed by Flinders University could significantly boost biofuel use in Australia following the product’s commercialisation by the University’s industry partners, Meat and Livestock Australia Midfield Group and Food Processing Equipment.

The additive lowers the temperature at which tallow-based biodiesel solidifies – a problem which causes fuel flow difficulties and has constrained the take-up of biofuels made from the waste products of abattoirs.

Leader of the Flinders Materials and Bioenergy Group, Dr Stephen Clarke, said there “is a huge potential market for tallow-based biofuels, with the current consumption of petroleum diesel being around 15 billion litres annually in Australia”.

“The additive that Flinders has developed removes one of the major impediments to the use of tallow-based biofuels and this market could expand considerably, perhaps to around one billion litres a year, when our product can be added to biofuel blends,” Dr Clarke said.

Flinders’ industry partner, Meat and Livestock Australia, has secured a provisional patent over the University’s additive, which can lower the solidification temperature of tallow-based biodiesel or diesel blends by about 5 degrees Celsius, to around minus 6 C˚. The temperature difference will boost the potential to use tallow-based biofuel in colder parts of Australia and cooler climates in Europe and elsewhere.

Meat and Livestock Australia is now commercialising Flinders’ additive with other industry partners that include the Midfield Group and Food Processing Equipment. Dr Clarke’s research team will play a key role in that process as they scale up the production of the additive from laboratory to commercial quantities.

“Flinders University is very excited to be at the leading edge of a project that offers new fuel options to a world that is very keen to reduce its dependency on fossil fuels as it seeks to address climate change,” Dr Clarke said.

Biodiesel fuel is generally prepared from a blend of lipids, such as used cooking oils, tallow and vegetable oils such as canola, soyabean and palm oil. The use of the Flinders additive could significantly increase the proportion of tallow-based fuel that could be included in such blends.

Flinders University’s expertise in biofuels research was reflected in the Federal Government’s decision to ask the University to host the launch, by the Minister for Resources and Energy, Mr Martin Ferguson, of its $15 million Second Generation Biofuels Research and Development Grant Program.

Flinders also hosted a workshop Australian Biofuels: Towards a sustainable future with its research partners which include SARDI, CSIRO and the Federal Department of Resources, Energy and Tourism, to coincide with the launch of the new grants scheme.

Flinders University’s Yunggorendi First Nations Centre for Higher Education and Research has received a United Nations Educational, Scientific and Cultural Organization (UNESCO) Award for “excellence and innovation in teaching, recruitment and support of Indigenous students to higher education”.

The Director of Yunggorendi, Professor Lester-Irabinna Rigney, said “UNESCO’s recognition of our Centre reflects Flinders’ commitment to the ideals of ‘education for all’.”

“Yunggorendi has built its reputation on community engagement with Indigenous peoples to produce genuine outcomes in higher education based on respect, relevance, reciprocity and responsibility,” Professor Rigney said.

“This honour bestowed on our past and present staff and students recognises their outstanding achievements in these areas,” he said.

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Since 1977, Yunggorendi – a name given to the Centre by the Kaurna Nation which means to ‘impart knowledge’ – and Flinders have advanced 217 Indigenous graduates. In 2008, there were 195 Indigenous students studying professional degrees at Flinders including Law, Education, Nursing,
Following Ibsen around the world

Professor Julie Holledge of the Drama Department at Flinders has received an ARC Discovery Grant for a project that will track performances of works by Henrik Ibsen, the 19th century Norwegian dramatist whose plays are still performed all around the world.

“The overall aim of this project is to account for the extraordinary international success of Ibsen’s plays, and create new knowledge about the mechanisms governing global cultural transmission through the performing arts,” Professor Holledge said.

Professor Holledge said that within Australia, the list of artists associated with Ibsen's plays reads as a Who's Who of theatre.

"Cate Blanchett’s recent interpretation of Hedda Gabler for the Sydney Theatre Company (which went on to tour Broadway) is only one example of the Ibsen tradition in Australia," she said.

Internationally, the project will focus on Ibsen’s play The Doll’s House, tracing its performances from the late nineteenth to the early 21st centuries. To identify these global flows, the project will use time-mapping, a computer-based technology that allows the movements of a cultural artefact to be charted through space and time.

“This represents a major innovation in the application of computer visualisation to research in the creative arts,” Professor Holledge said.

She has already presented research demonstrating some of the benefits from the use of this technology, and the work has attracted international attention in both Ibsen studies and in the use of time-mapping technology in Norway, the US and China.

Professor Holledge’s project will receive $124,000 in funding over three years, and is among 26 projects by Flinders researchers that received a total of nearly $11 million of funding in the latest round of grants from the two major Federal Government funding bodies, the Australian Research Council and the National Health and Medical Research Council.

Charles Gent

Engineering success - again

Flinders engineering undergraduates have maintained a strong performance by the University in South Australia’s leading competition for engineering technical student presentations taking out first and second places in 2008.

For the 10th occasion in 13 years, Flinders students have won the Institution of Engineering and Technology Rex Johns Presentation Prize.

As the state-level winner, a Flinders engineering student has subsequently gone on to win the national Presentation Prize six times in the 10 years since its inception. In 2005, Tim Nelson won the inaugural Premium International Technical Presentation Prize.

Flinders engineering has strong external links, with many of its student projects proposed and supported by industry colleagues, exemplified by this year’s winners who were supported by Flinders Clinical Skills and Simulation Unit and Electranet.

Biomedical engineering student, Tony Carlisle’s presentation on a nasogastric tube insertion simulator was awarded first prize. Tony’s simulator, which allows trainee doctors to practice inserting feeding tubes into patients, is already in clinical use.

Ryan Atkinson was awarded second prize for his presentation on the application and implications of power transformer tertiary deltas – a program that would increase the efficiency of power transmission networks. Ryan is currently completing his Bachelor of Engineering (Electrical and Electronic).

Professor Karen Reynolds, of the School of Computer Science, Engineering and Mathematics, said the latest competition results “confirm that the quality of Flinders engineering graduates remains extremely strong against good competition”.

"Ten victories in 13 years represents an impressive standard and a record we intend to maintain in future years,” Professor Reynolds said.

Flinders will offer a number of new engineering courses in 2009 which build on the University’s teaching and research strengths in biomedical, robotics, electronics, computer systems and software engineering. The University is also offering mechanical and civil engineering courses in collaboration with UniSA through a new ‘pathways degree’ program.

Peter Gill
Encouraging health care workers to take the simple step of listening more to the needs and coping capacities of chronically ill patients would help reduce unnecessary hospital admissions, improve working relationships between health workers and patients and ultimately deliver health outcomes for patients, according to a Flinders University academic.

Dr Sharon Lawn, the Course Coordinator of Postgraduate Programs in Chronic Condition Management and Self-Management for the University’s Human Behaviour and Health Research Unit, told Flinders Journal that health professionals often operate within the boundaries of a “reactive” system, which relies on a variety of structured support services to assist patients with chronic conditions rather than supplementing their self management skills.

“It is easy for us as health professionals to be one step removed from our patients,” Dr Lawn said.

“In doing so, we miss important information about their needs and coping capacities. As a result, we are in danger of overlooking the very things that are often the most important barriers and enablers to them living to their maximum potential despite the presence of chronic illness,” she said.

“Consequently, many patients often struggle to problem-solve and negotiate the health system in spite of good self management skills, with some even opting to act passively as recipients of expert advice and intervention, asking few questions.”

“The result of this is that they can receive little service other than ad hoc responses to issues as they arise which can sometimes be too late, resulting in an admission to hospital that may well have been avoided or delayed at the early intervention or prevention end, where real benefits could have been made.”

To address this, a team of health professionals studying at Flinders University, led by Dr Lawn, has compiled a collection of case studies from people suffering from chronic illness and produced a booklet entitled The Person’s Experience of Chronic Condition Self-Management.

Dr Lawn said the publication is aimed at providing a deeper understanding of the heavy burdens people with chronic conditions face, particularly in relation to beneficial and harmful aspects of liaising with health professionals, and how the system can work for or against the person.

“People are more than a string of symptoms to be managed with medications and behavioural adjustments; they have complex life histories that impact on their health behaviours in spite of knowing what is ‘good for them,’” she said.

“This book has provided patients with a voice and offered a greater understanding of how a person living with a chronic condition responds to illness management and to health system support.”

Dr Sharon Lawn

Effective policies key to strategic goals

Effective policy development and pragmatic implementation are key to the future success of Flinders University, especially in regard to achieving its strategic goals, according to University Council member Professor Gary Davis.

As former Dean of Law, Professor Davis developed a solid understanding of policy formation and was heavily involved in the external activities of the Law School. Both have served him well in his role on Council.

“This position has allowed me to bring all of my liaison and people skills together while my academic work, particularly in relation to understanding and working with the fine points of policy and procedure, has enabled me to assist the Council in its governance role,” Professor Davis said.

“As a Flinders employee, and especially as an elected representative of academic staff, I have an important role to play in ensuring the interests and concerns of staff are always taken seriously into account when Council makes its decisions,” he said.

With new directions including the establishment of a stronger presence in Adelaide’s CBD and increasing the University’s capacity to respond flexibly to opportunities, Professor Davis believes Flinders will be well positioned to enjoy continued success in the key areas of teaching, research and community engagement in the coming years.

His time on Council has also driven home for him the value added by the external members of Council.

“Flinders is being very well served not only by their skills that they bring to the University’s governance but also by their passion for, and interest in, the delivery of high quality higher education,” he said.

Emma Kibble

Professor Gary Davis
Flinders University recognised the achievements of 10 of its outstanding alumni with the presentation of Distinguished Alumni Awards (DAA) in October, celebrating their contributions to diverse fields of public life that range from rural medicine and theoretical physics to wine science and international trade.

Four DAA recipients were at present to receive their awards with the balance undertaking leading edge work interstate or overseas.

Dr Tony Lian-Lloyd

Dr Tony Lian-Lloyd [Rural Medicine]. A medical graduate in 1988, Dr Lian-Lloyd is a country GP with a strong personal commitment to the improvement of rural health services. His varied work in Quorn and surrounding areas won him the inaugural Rural Doctor of the Year Award in 1995.

Professor Anak Agung Banyu Perwita

Professor Anak Agung Banyu Perwita [International Relations] gained his PhD in 1993 and is now Professor of International Relations at Parahyangan Catholic University, Bandung, Indonesia. He has published widely on international relations and higher education issues in relation to Indonesia.

Ms Gosia Hill

Ms Gosia Hill [International Trade]. Holder of a Flinders BA and BSoc Admin and a long-time member of University Council, Ms Hill’s successful business career led to her appointment as Austrade’s Senior Trade Commissioner for Central South East Europe, based in Warsaw.

Professor Dennis Taylor

Professor Dennis Taylor [Chemistry, Oenology]. A science PhD in 1993, Professor Taylor is the Head of Discipline (Wine and Horticulture) and Professor of Oenology in the School of Agriculture, Food and Wine at the University of Adelaide. He has an extensive record of world-class chemistry research, and has established major collaborative research links with China.

The other recipients were:

Professor Andrew Cheetham [Research Management], a physics PhD in 1977, is

Pro Vice-Chancellor (Research) at the University of Western Sydney. Professor Cheetham has made a major research contribution to the field of plasma and fusion physics internationally, as well as in the use of IT in engineering and science education.

Dr Julie Owen [Aboriginal Health]. Dr Owen, who has a Masters in Public Health from Flinders (1996), is Health Promotion Coordinator for the South West Aboriginal Medical Service in Bunbury, Western Australia, and has been successful in promoting cardiovascular health among Indigenous people in that region.

Dr Bruce Graham [Computational Neuroscience]. A BA (Hons) graduate in 1981, Dr Graham is now a Reader in Computing Science at Stirling University. He has forged an international reputation in computational neuroscience, especially for the development of mathematical models related to experimental data from mammalian brains.

Professor Mohammad Kaykobad [Computational Mathematics], who received his PhD in 1988, is Professor of Computer Science and Engineering at Bangladesh University of Engineering and Technology in Dhaka. In addition to his research in computational mathematics, he has been instrumental in the development of computer science in Bangladesh.

Dr Daniel Phillips [Nuclear Theory] was awarded his PhD in physics in 1995. His academic career has led him to Ohio University, where he is an Associate Professor (tenured) in Theoretical Physics. His field of research is the application of Effective Field Theory to Few Body Problems in nuclear, atomic and molecular physics.

Professor Catherine Turner [Nursing Education]. Her Masters in Nursing at Flinders (1993) led Professor Turner into the area of teaching and curriculum development in nursing. She is currently Coordinator of Research and Research Higher Degrees in the UQ School of Nursing, focusing on recruitment and retention issues in the nursing profession.
Mature-aged study ‘a joy’

Making the decision to apply for a university course can prove to be a daunting prospect for the most studious of high school students, let alone a mother of three adult children who has already forged a successful career in teaching.

Yet for Janet Webber, the lure of finding out whether or not she had the talent and ability to become a writer proved too strong to ignore when she chose to enrol in a Bachelor of Creative Writing at Flinders University at the age of 52.

“I had always loved writing but was very reluctant to submit anything for publication,” Ms Webber said.

“By enrolling at university, I thought the grades I received for my work would be a good indication as to whether or not I was suited to writing and I realised that regardless of the outcome, I would still walk away with a qualification,” she said.

“In the end, I saw it as an opportunity to do something for myself – I didn’t want to die wondering what might have been.”

Inspired by the supportive environment at Flinders University at both an academic and social level, Ms Webber has continued on her scholastic journey, graduating with a University Medal and First Class Honours in 2007. She is now working on her PhD, focusing on her own life as the basis for her final dissertation, and is even considering pursuing post-doctoral work.

Although publication is the ultimate goal for any creative writer, Ms Webber says she will not be concerned if this does not eventuate.

“Whatever happens, I will be extremely satisfied with my decision to come to Flinders because I have experienced the joy of having people read my work and liking it and I’ve had such a good time while doing it,” she said.

“It really has been the best four years of my life and without a doubt the best decision I have ever made, partly because finally I had committed myself to what I wanted to do in life but also because I fell in love with the campus, staff and students – I slotted right in.”

For anyone considering becoming a mature age student, my advice would be to just go for it. The hardest task is actually submitting your application, because once you’re enrolled you’re free to commit yourself to enjoying the experience as much as you can.”

For further information about Adult Entry, contact the Admissions, Examinations and Graduation Office on 8201 3074.

Emma Kibble

Flinders University presents the 2008 Investigator Lecture

Law and Change

The Hon Murray Gleeson, AC
Former Chief Justice of the High Court of Australia

“As Chief Justice, Murray Gleeson has been a powerful influence on the High Court and on the way Australian law has developed. He has combined a traditionalist’s approach with a commitment to protection of rights where possible.”

Professor David Bamford, Dean, School of Law, Flinders University

“Fostering a strong sense of the importance of the rule of law and the role of the judiciary and the independence of the judiciary in that is, I have come to learn, something that needs constant reinforcement.”


The public is invited to this free lecture to be held on Wednesday, 19 November 2008, at 7.00pm in the Adelaide Town Hall, King William Street.

Please register your interest at: W: www.flinders.edu.au/lectures E: alumni@flinders.edu.au P: (08) 8201 3707

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