In this issue we swing the spotlight onto youth—specifically the Faculty’s groundbreaking research initiatives in the children and young people arena. When looking to the future, the reality is inescapable: our future lies with the young. Investing in research that safeguards and improves their health and wellness is essential—not just for the young but for the future health and prosperity of our nation.

Innovation never gets old. With this in mind, in 2008 Curtin established the Curtin Health Innovation Research Institute or CHIRI as it is coming to be known. CHIRI is an Institute that integrates research, education and practice on campus. Health is more than curing illness and disease. For CHIRI prevention is paramount. The Institute is seeking preventative approaches to chronic disease and illnesses relating to longevity and lifestyle, particularly amongst those in the community who are most vulnerable to disease.

CHIRI wants results. Team members are intent on translating research and knowledge into practice and policy and creating the best possible physical and mental health outcomes. Looking for imaginative and innovative ways of evaluating health service delivery; delivering workforce and organisational change and applying new technologies also go under the CHIRI microscope.

Curtin is using CHIRI to drive the development of new models for the delivery of healthcare which are based on research. Preventative care that can keep people out of hospital and alleviate the current burden on the health care system is right at the top of the CHIRI agenda.

Research on prevention of chronic disease with an emphasis on biological science developments; pharmaceutical research; preventative sciences; public health; psychological interventions; advocacy; and social research and data linkage systems.

In this publication we hope you will be inspired by the talent, innovation and impact of our research in Health at Curtin.

Professor Jill Downie
PRO VICE-CHANCELLOR
FACULTY OF HEALTH SCIENCES
CURTIN UNIVERSITY OF TECHNOLOGY
Painting a clear picture of drug use

ALCOHOL AND OTHER DRUGS
NATIONAL DRUG RESEARCH INSTITUTE

THERE IS NO DOUBT THAT DRUG USE – BOTH LEGAL AND ILLEGAL – IS ONE OF THE MORE CONTENTIOUS PUBLIC HEALTH ISSUES. RECOGNISING THIS, THE NATIONAL DRUG RESEARCH INSTITUTE (NDRI) AT CURTIN IS FOCUSED ON CLARIFYING THE COMPLEXITIES SURROUNDING DRUG USE.

One of the largest centres of drug research expertise in Australia, and recognised internationally as a leading authority in alcohol and other drug research, NDRI draws together expertise from a range of disciplines – psychology, epidemiology, public health, sociology and anthropology – to offer multidisciplinary responses to existing and emerging drug use issues.

Since its establishment in 1986, it has played a critical role in influencing State and national drug policy, including liquor licensing decisions, guidelines for responsible drinking, and repeat drink driving and cannabis legislation. It has also been highly successful in developing harm-minimisation interventions that work at a community level.

In 2006, as further acknowledgement of its reputation as an international centre of excellence, NDRI was one of only six research centres at Curtin to receive Tier 1 research status, an honour that helps to attract increased funding.

"Drug use and related problems affect a large proportion of the Australian population. The role of research bodies such as NDRI is to look at practical and proven ways to prevent harmful drug use, and to protect people from the harmful consequences of their own and others’ drug use," explains director Professor Steve Allsop.

"To develop effective policies, we need to understand incidence and patterns of use, as well as the different contexts in which particular drugs are used. Drug policies and interventions are more likely to work if they reflect the complex interplay of these factors.

"Among other things, our research monitors patterns of use over time so that we can build as detailed a picture as possible of contributing issues and resulting outcomes. This results in alcohol and other drug policies that are well informed and based on the best available evidence."

The innovative methodological approach undertaken by NDRI to improve the precision of its estimates has given rise to the development of a set of core indicators for alcohol-related harm that has since been adopted by the Centres for Disease Control in the United States for use in that country.

"This research enables governments to better target prevention and harm reduction programs, and to evaluate their effectiveness. It has already been central to the development of the Australian Alcohol Strategy," Allsop says.

"The model was used to develop the Indigenous National Alcohol Indicators Project to address the gap in the evidence base supporting Indigenous alcohol harm-reduction initiatives."

NDRI is also involved with other national health research organisations in an NHMRC-funded project that aims to provide a greater understanding of the social, cultural and economic contexts of psychostimulant use and related harm among young Australians. The project, which will investigate recreational drug use in Perth, street-based injecting in Sydney and rave drug use in Melbourne, will provide important data to inform future interventions.

At a community level, NDRI is helping the City of Kalgoorlie-Boulder, in the Goldfields region of Western Australia, to address the high level of problematic alcohol use and related harm in that community. As part of the project, the community will choose and implement a range of harm minimisation activities best suited to local circumstances.

A designated World Health Organization Collaborating Centre for the Prevention and Control of Alcohol and Drug Abuse, NDRI’s research expertise has also been used to help bring together international research findings on the achievements and limitations of school drug education.

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A number of projects also underway to shed more light on the social contexts and outcomes of alcohol use include: measures of less quantifiable social outcomes associated with drinking (such as the effects on relationships within families); an ‘alcohol and poverty’ study which is examining the relationship between measures of income disparity and rates of key alcohol related harms in Australia; and the investigation of the social contexts and cultural meanings of alcohol misuse – including binge drinking among young adults in a range of recreational settings such as nightclubs, hotels and private parties.
GOVERNMENTS ARE OFTEN ACCUSED OF TAKING A ‘HIT AND MISS’ APPROACH TO SOCIAL PROBLEMS, AND RESPONDING IN A REACTIVE WAY TO ACCUSATORY HEADLINES OR HIGHLY PERSUASIVE INTEREST GROUPS. THE AUSTRALIAN EARLY DEVELOPMENT INDEX (AEDI) IS THEREFORE BEING GREETED BY BOTH SIDES OF POLITICS AS A WELCOME TOOL FOR ENSURING HELP FOR YOUNG CHILDREN IS DELIVERED WHERE IT IS NEEDED MOST.

Developed by Curtin’s Centre for Developmental Health, in partnership with the Centre for Community Child Health, in Melbourne, the AEDI works from the premise that the social, behavioural and learning skills possessed by a five year-old will generally predict their success in Year 12. It asks teachers of Year 1 students within defined geographical areas to answer a comprehensive series of about 100 questions covering children’s physical, social and emotional development, with the data aggregated to build a regional picture of learning readiness. Armed with this information, community stakeholders can come together to develop local strategies and actions to address the range of factors that may be preventing children from taking full advantage of the school learning environment – and, subsequently, future life opportunities.

Already trialled with more than 30,000 children in about 60 communities across Australia, the AEDI will be rolled out to every community in Australia in 2009 by the Federal Labor Government, which is honouring its pre-election commitment to allocate $16.5 million to the project. The index will be used to ascertain which disadvantaged Indigenous communities will be the first to acquire pre-schools – a part of the government’s promise to provide a pre-school place to every four-year-old.

“This is like a GDP of child development. It’s a measure of the nation’s social, educational and economic potential,” says the centre’s director Professor Sven Silburn.

“It’s incredibly useful from a planning and resource allocation perspective. The World Bank and UNICEF have contracted the Centre for Developmental Health to assist other countries in our region to build similar capacity for population monitoring of early child development outcomes.”

To help ensure resources to help people quit smoking are being used to best effect, the Centre for Behavioural Research in Cancer Control (CBRCC) is testing whether pharmacological smoking cessation aids (such as chewing gum, inhalers, patches and other nicotine replacement therapies) are as effective in real life as they are in clinical trials.

The $575,000 NHMRC-funded project involves a two-year longitudinal study of more than 1,200 smokers and their smoking behaviours, their quit attempts and the use of pharmacological quitting aids.

“Debate currently surrounds the effectiveness of these aids in real-life settings. With multi-million-dollar budgets allocated for their subsidy under the Federal Government’s Pharmacological Benefit Scheme, the project is expected to help better inform these debates.”

The study will also consider participants’ awareness of advertising such as the Quit campaign and nicotine replacement therapy product advertising.

Are smoking aids working in the real world?

TOBACCO INTERVENTIONS
CENTRE FOR BEHAVIOURAL RESEARCH IN CANCER CONTROL

Index a tool to improve outcomes for children

DEVELOPMENT INDEX
CENTRE FOR DEVELOPMENTAL HEALTH
The Aussie Optimism program, developed by researchers within Curtin’s Schools of Psychology and Public Health, in collaboration with the Western Australian departments of health and education, is designed to reduce the prevalence and incidence of anxiety and depressive disorders, especially during the vulnerable period of adolescence.

The program provides teachers, practitioners and parents with practical strategies and resources for developing children’s social competence, self-management and positive thinking in everyday life, particularly in times of stress, like the transition from primary to high school.

“Internalising problems such as depression and anxiety are the most common of childhood and adolescent mental health problems in Australia,” project leader Associate Professor Clare Roberts, from the School of Psychology, says.

“Recent surveys show that up to 13 per cent of children and adolescents report clinically significant levels of anxiety and or depression.

“The Aussie Optimism program is designed to help prevent problems being internalised by teaching children how to identify and challenge negative thoughts about themselves, their current life circumstances and the future, and to help them come up with more accurate and optimistic explanations for life events. They learn coping skills for dealing with a variety of controllable and uncontrollable life stresses, such as family conflict and the transition to high school. These skills include problem-solving strategies, coping with negative emotions and seeking appropriate social support.”

The program is designed to be delivered by teachers with little psychological training, taking into account the existing requirements of the education curriculum. A family-based program is also available, designed to improve communication and problem-solving within families.

Since 1997, more than 2,000 teachers, school nurses and psychologists, social workers and other practitioners from more than 400 schools and organisations nationally have received training in Aussie Optimism. An average of more than 3,500 students have participated annually in the program in recent years.

“The program has been extensively evaluated since 1997,” Roberts says.

“Children who were already reporting some symptoms experienced reductions in depression and anxiety, with effects observed up to three years later. When the program was provided to all Year 6 and 7 students in 63 primary schools, social skills improved and fewer students reported depressive disorders and suicidal thoughts following their transition to high school.

“Another side-benefit of the program is increased teachers’ awareness and concern for the mental health of their students.”

The Aussie Optimism program was recently recognised nationally when it was awarded the prestigious 2008 Life Award for Youth Suicide Prevention by Suicide Prevention Australia.

Roberts has also been working on a project to promote mental health among Aboriginal youth living in remote communities. The six-year Healthway-funded project, undertaken in partnership with the Ardyaloon Aboriginal community, focused on communities in Broome and One Arm Point, in the State’s north.

Widespread consultation was undertaken with Indigenous communities and agencies to identify both problems and solutions.

“We identified various mental health risk factors for these communities, including isolation, unstable living conditions and multiple stressful life events that were generating chronic problems such as drug and alcohol misuse, sexual health issues and early parenting, fighting, boredom and grief,” Roberts says.

“We then worked with the community to develop and implement health and recreational programs to promote youth and community wellbeing. These included a regular youth drop-in centre, more sporting competitions and family movie nights, inclusion of young people in more cultural activities, and programs in sexual health, cooking and grooming.

“Perhaps most importantly, we used a capacity-building approach to ensure knowledge and skills were transferred to community members, so that initiatives could continue after our project team had left.”

Indeed, independent funding was secured by the Ardyaloon community in 2006 to continue to implement a youth project – Baawa Ingul Gooron (or Kids Having Fun) – which will see the continuation of the youth drop-in centre.

The funding has provided a budget for staff and activities, and has enabled the community to bring in outside mentors and artists to spark the interest of young people and strengthen their talents.

The Curtin research team received a prestigious Healthway Award for Excellence in Health Promotion as an acknowledgement of the project’s success.
“GIVE ME A CHILD TILL THE AGE OF SEVEN AND I WILL GIVE YOU THE MAN.” AN OLD SAYING ATTRIBUTED TO THE JESUITS IS ENJOYING NEW RELEVANCE THESE DAYS, IN TERMS OF BETTER UNDERSTANDING ADULT HEALTH AND WELLBEING.

Our early years optimise life chances

CENTRE FOR DEVELOPMENTAL HEALTH
ILLNESS AND INJURY PREVENTION

The relatively new interdisciplinary research area of developmental health integrates the fields of population health with the biological, genetic, psychosocial and behavioural sciences to discover how our health behaviour and skills develop over the life course, and particularly how they are shaped by early environmental influences.

The Centre for Developmental Health – a partnership between Curtin and the Telethon Institute for Child Health Research, led by Professors Steve Zubrick and Sven Silburn – started operations only in 2002 but already has made a significant impact in influencing government policy, planning and decision-making.

“There is a growing recognition that the early years of life and brain development, including inter-uterine growth, are incredibly important for adult health outcomes,” Zubrick says.

“Discoveries in genomics are showing us the importance of social and physical environments in modulating the expression of genes across the life course. We know that early stress exposures, for instance, can have long-term effects on the endocrine and immune systems as well as brain development more generally.

“But it’s not just about health. We see health as the means to an end, rather than the end in itself. What we are particularly interested in is optimising the individual’s development at an early age to improve their longer-term life prospects, and enable their participation in all aspects of life – social, civic and economic.”

This new knowledge of human development is informing systematic approaches to prevention and being used to guide government policy and practice to promote population health.

The centre’s Looking at Language study, for instance, has had major funding from the US National Institutes of Health to investigate the genetic and environmental risk and protective factors – as well as remedial treatments – for Specific Language Impairment (SLI), a language delay problem experienced by about seven per cent of children with otherwise normal development. The study hopes to overcome the long-term problems often experienced by SLI children, including low academic achievement, social and behavioural difficulties, depression and poor adult employment opportunities.

The centre – the first of its kind in Australia – takes a population-based approach to its research, studying large sample groups, often over long periods, to build comprehensive profiles of the interplay of factors influencing childhood development.

Silburn and Zubrick initiated the landmark 1993 Western Australian Child Health Survey that revealed how families, neighbourhoods and communities influence the development of psychosocial problems in adolescence (such as depression, suicidal behaviour, eating disorders, criminal behaviour and alcohol and drug abuse). They also led the follow-on WA Aboriginal Child Health Survey (2000 to 2002) which profiled about one in six Aboriginal families living in Western Australia.

The survey has helped to build detailed knowledge of influences on the health and wellbeing of Indigenous children in WA, including the intergenerational impact of their parents, grandparents and other carers being forcibly removed from their own families during the Stolen Generation decades.

Currently, the two researchers are involved in the nation’s largest and most ambitious longitudinal study of child health and development, the $21 million Growing up in Australia survey, which is tracking 10,000 children and their families to help identify critical periods for the provision of services and welfare support.

The study is complemented by an award-winning ABC TV documentary which follows the progress of 11 Australian babies and their families from a range of backgrounds for seven years, and helps to unlock for TV audiences the secrets of what gives children the best start in life.
Treatments for disruptive conditions in children, such as attention deficit hyperactivity disorder (ADHD), continue to stir great controversy within the community, largely because there is still much debate as to what the causes of these conditions are – with explanations divided between environmental influences and genetic causes.

Research director Professor Jan Piek, from Curtin’s School of Psychology, says the school’s research arm, PsyLife, is looking at the relationship between early motor development and ADHD, autism, developmental coordination disorder, reading disorders and a range of other developmental conditions, to try to better understand the factors at play.

“Early spontaneous motor activity has been acknowledged as an important prerequisite for later motor development, and our research is increasingly showing that children born pre-term, with low birth weight or via a complicated birth, are more likely to experience developmental delays than their full-term counterparts,” says Piek, who is a chief investigator in many of these projects.

“The evidence is starting to grow that this early delay in motor development – which we think is caused by factors occurring before or during birth, similar to cerebral palsy – could be related to a range of development disorders, including ADHD and autism, and that it also has strong links in the longer-term with mental health issues such as anxiety and depression.

“The significance of this is that we can use early motor development progress to help predict which children may have coordination or cognitive problems later on, and develop appropriate interventions to help minimise the impact of these factors. For example, we are currently working with the Schools of Physiotherapy and Occupational Therapy on a motor program for pre-primary children.”

The developmental studies have been greatly assisted by the long-term twin research carried out by the school’s Professor David Hay, using the Australian Twin Registry to track and compare the progress of twins throughout Australia.

The registry enables Hay to explore a range of issues surrounding environmental versus genetic issues for ADHD children, given that the incidence of ADHD in twins is higher than in the general population. Recent findings that differences in birth complications are always associated with differences in ADHD inattention symptoms in identical twins have supported the view that ADHD is not purely genetic, but is influenced by birth factors.

Hay’s research in this area is extensive and includes investigation into the most common, but often overlooked, sub-type of ADHD in which young people have severe problems with attention, not hyperactivity. The collaborative project with Washington University has attracted a US$2.4 million grant from the US National Institute for Mental Health. Other work includes the identification of ADHD in Indigenous children and the manifestation of ADHD in adulthood.

“Due to our ability to stay in contact with so many twin families over the years, we have just been funded by the NHMRC for a unique study to investigate why some children grow out of their ADHD while, for others, it is the start of a lifelong problem,” Hay says.

Piek says that while PsyLife research focuses on early development, researchers were also looking at psychological development across the life span.

“This includes Dr Ros Morrow’s research into the psychological impact of children becoming carers for their sibling parents – which is a larger problem than many people realise – and research into the effectiveness of group therapy for people with obsessive compulsive disorder, which is being carried out by one of Australia’s top researchers in this area, Dr Clare Rees,” Piek says.

Keeping pace with new information technologies, research is also exploring the outcomes of delivering therapy online, instead of the traditional face-to-face method.

Twin research supports studies to minimise impact of disruptive conditions
NDRI’s deputy director, Professor Dennis Gray, who is the project leader for the Indigenous Australian Research Team. “As part of the program, we have commissioned five projects in priority intervention areas with Indigenous community-controlled organisations. These projects are being undertaken over a 15-month period and, based on the research findings, we will develop a comprehensive set of recommendations and implementation plans to improve the management of alcohol-related problems for Indigenous clients.”

Reflecting a common Curtin research theme of capacity-building within Indigenous organisations and groups, projects are designed to enhance the ability of Indigenous communities to address their own issues of alcohol and other drug misuse.

NDRI researchers have worked closely with the Tangentyere Council in Alice Springs, for example, to develop a low-cost computerised database that enables organisations to monitor and evaluate their night patrol and warden schemes (where respected community members patrol the streets to minimise harm relating to substance misuse).

Developed in 2001, the database has been widely piloted, and funding has since been secured to enhance its capacity and to develop a computer-based training package to assist in its use.

Building on this cooperative relationship, NDRI continues to work with Tangentyere Council to build its capacity to conduct its own research into alcohol and other drug issues.

NDRI has also established a joint internship with the Aboriginal Alcohol and Drug Service, in Perth, to help build Indigenous research capacity in the alcohol and other-drug field, and is a participant in the collaborative “Not just scholars but leaders: learning circles in Indigenous health” research project.

One key to the success of NDRI’s Indigenous Australian Research Team in translating research into practice has been the willingness of team members to share their expertise.

Research team member Associate Professor Ted Wilkes is a member of the Australian National Council on Drugs, for example. He is also chair of the National Indigenous Drug and Alcohol Committee – the peak advisory body on Indigenous substance misuse issues. Professor Gray is on the committee. In late 2007, Professor Gray, Professor Sherry Saggers, Associate Professor Wilkes and Research Associate Anna Stearne were invited to Brazil to present at an Indigenous mental health conference, and to advise the Brazilian Ministry of Health on substance misuse interventions.

Among other activities, these appointments and invitations reflect the high regard in which NDRI’s Indigenous Australian Research Team is held both nationally and internationally.

Since NDRI was established in 1992, the institute has conducted more than 30 projects with about 27 Indigenous community-controlled organisations in Western Australia, South Australia, the Northern Territory and Queensland.

In a project funded by the National Drug Law Enforcement Research Fund, the NDRI team worked with rural and remote Indigenous communities across four States and territories to describe the nature and extent of petrol sniffing and other inhalant misuse among Aboriginal and Torres Strait Islander people. It also worked to identify the strategies that work best when dealing with intoxicated individuals. The resultant report, distributed widely within State and territory police services and community-controlled Indigenous organisations, offers both proactive and reactive strategies to help police deal better with this complex issue.

“One of our latest projects is a multi-stage research program that aims to provide Indigenous Australians with improved access to quality treatment for alcohol-related problems,” says
Movement can heal or harm

WITH CHRONIC CONDITIONS ENCOMPASSING A WIDE VARIETY OF HEALTH PROBLEMS, IT IS NOT SURPRISING THAT THEIR DIAGNOSIS AND MANAGEMENT NEEDS TO BE TACKLED FROM A RANGE OF DISCIPLINARY PERSPECTIVES.

When Curtin’s School of Physiotherapy – which is focused on the role that movement and activity play in health – projects are underway to better understand and manage chronic musculoskeletal pain conditions, as well as to investigate the role exercise can play in managing chronic lung conditions.

Knowing more about the mechanisms underlying acute and chronic musculoskeletal pain conditions – such as osteoarthritis, headaches, fibromyalgia, low back pain, whiplash-related neck pain, tennis elbow and Achilles tendon pain – is critical to improving outcomes for patients, according to Dr Helen Slater and Dr Will Gibson.

“Collaborations with researchers at pre-eminent pain research facility the Centre for Sensory Motor Interaction, at the University of Aalborg in Denmark, and with Pain Medicine Units at Royal Perth Hospital and Fremantle Hospital, involves both basic and clinical translational research projects,” Slater says.

“We know from current research that the central nervous system is not hard-wired but capable of significant plasticity and ‘reorganisation’ in response to injury.

“An example is that a light touch can be experienced as pain following this reorganisation. This enhanced nervous system responsiveness is known as ‘sensitisation’."

In this aspect of research, Slater and her colleagues use experimental human pain models to study the reorganisation and sensitisation of the nervous system, developing ‘pain profiles’ that assist in identifying the mechanisms involved in acute and chronic musculoskeletal pain.

She elaborates: “With an injection of hypertonic saline, we can induce a brief window of muscular pain. By analysing the specific sensory and motor manifestations of that stimulus in both healthy subjects and in patients we can better understand how acute and chronic pain from muscles and tendons might be generated and maintained by changes in the nervous system. The goal is to better match physiotherapy treatments and pharmacological interventions to these pain mechanisms.”

The project is being funded by a Curtin strategic funding grant, as well as by the Physiotherapy Research Foundation and the Danish Research Council.

Slater is also leading an interdisciplinary team on a State Health Research Advisory Council-funded research project aimed at educating GPs on self-management options for patients with acute and chronic low back pain. A pain test kit developed within the school also aims to provide more targeted – and less expensive – treatment for chronic musculoskeletal conditions.

“People with severe osteoarthritis, fibromyalgia and back pain caused by injuries such as whiplash eat up a lot of health dollars because they tend to go from place to place looking for treatment for their pain and discomfort,” Head of School Professor Tony Wright explains.

“If we can identify these people among the general population at an earlier stage, we can refer them to specialist pain management clinics sooner rather than when all else has failed.”

Working in collaboration with Associate Professor Heather Benson, from the School of Pharmacy, Wright has developed a new ‘cold pain’ test kit that can be used by GPs and allied health professionals to help fast-track this process.

“Research shows that people with musculoskeletal problems, who have hyperalgesia, or added pain sensitivity to cold, will have problems over a longer period of time and poorer outcomes generally,” he says.

“Currently a thermode is used to test this cold sensitivity, but it is a sophisticated piece of equipment and expensive, so it is not widely used.

“We have identified the receptors in the nervous system that cause the cold sensation, and our research has shown that menthol will activate these sensors. Our test kit therefore uses menthol to replace the thermode as the sensitivity detector, making the test much quicker, easier and cheaper to carry out, so that it can be conducted in a much wider range of health settings, including GP and allied health clinics where these patients typically present.”

Meanwhile, Dr Sue Jenkins has been working with research students and their co-supervisors at Sir Charles Gairdner Hospital on studies designed to improve the exercise tolerance and quality of life for people with chronic obstructive pulmonary disease (chronic bronchitis and emphysema) and asthma.

“Because of the symptoms associated with their condition, such as shortness of breath, chest tightness and fatigue, people with these lung diseases often avoid exercise,” Jenkins says.

“This may lead to them becoming ‘deconditioned’ and limiting their activities – both physical and social – and becoming isolated and depressed.”

In one study, Jenkins and her team are using the school’s Metamax gas analysis system to provide detailed physiological information about patient responses to different types of exercise.

“As a result, we will be developing customised exercise training programs to help improve exercise tolerance, wellbeing and, ultimately, quality of life,” Jenkins says.

More invasive measurement techniques are also being used at Royal Perth Hospital to provide earlier diagnosis of patients with pulmonary arterial hypertension (continuous high blood pressure in the pulmonary artery that weakens the heart muscles over time). And research is being conducted on how best to assess the quality of life for people with this condition.

The Cold Pain Test Kit recently won WA Inventor of the Year 2008 – Early Stage Category. The WA Inventor of the Year Awards are the richest innovation award in the nation and celebrate the brilliant minds of many Western Australians who have developed solutions for a range of diverse applications.

Professor Tony Wright and co-inventors Associate Professor Heather Benson (left) and Penny Moss with their Cold Pain Test Kit.
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