Guidelines for the safe use of anti-inflammatory medications in older people are being ignored, researchers from the Faculty of Pharmacy have found.

Research has found that older Australians are taking non-steroidal anti-inflammatory drugs (NSAIDs) for too long and without sufficient precautions to minimise harmful side-effects, says lead author of the paper Dr Danijela Gnjidic from the Faculty of Pharmacy at the University of Sydney.

These drugs are commonly used to treat pain and inflammation associated with rheumatoid arthritis and other musculoskeletal disorders. In Australia, they include both prescription and over-the-counter medicines, such as celecoxib, ibuprofen and diclofenac.

Despite guidelines recommending the short-term use of NSAIDs, the study of 1700 men in Australia aged 70 years and older reports that patients were prescribed these drugs for five years on average.

"Prescribing doctors are not adhering to the specific guidelines for the safe use of NSAIDs in older people," Dr Gnjidic says.

"Australian and international guidelines suggest NSAIDs should be used for short-term treatment and be taken as needed. This is clearly not what is happening in reality.

"Our study found that although NSAID use was relatively low, it was more likely to occur on a regular basis than an as-needed basis.

"Older people have a higher risk of developing serious complications from taking NSAIDs, so these drugs should be used with caution.

"Use of these drugs has been linked with adverse gastrointestinal and cardiovascular effects, including ulceration and bleeding, elevated blood pressure, stroke and heart failure.

"Only 25 per cent of NSAIDs users were prescribed a proton pump inhibitor to prevent or manage side-effects, despite guideline recommendations that this should be standard.

"Our study also found that older people taking NSAIDs were more likely to take other potentially harmful interacting drugs.

"The difference between the guideline recommendations for prescribing NSAIDs and what is happening in the real world is alarming, and should be explored further. This study shines a light on a topic into which little research has been done.

"Our study has highlighted the need for health practitioners and consumers to work together to determine the most effective strategies for ensuring safe and appropriate prescribing of NSAIDs for older people.

"It is important to regularly review medicines taken by older people to ensure they meet their treatment goals while avoiding putting patients at greater risk of harmful side-effects," Dr Gnjidic says.
Welcome to the 2014 spring edition of Fiat Mist. This time of year provides a great opportunity to reflect on our achievements to date and begin to look towards 2015 for what promises to be another exciting year for the faculty.

I recently returned from the International Congress of the International Pharmaceutical Federation, which was held in Bangkok this year. The event attracts a huge gathering of the world’s top researchers and academics and I was delighted to see that, as always, our staff and students made important contributions to the proceedings.

At the congress, Associate Professor Tim Chen was elected President of the Social and Administrative Pharmacy Section of the federation for a four-year term. This is one of the eight sections within the federation and, as President, Professor Chen will be a member of the Board of Pharmaceutical Practice, which aims to foster the development of the pharmacy profession throughout the world, regardless of national or local issues. He now joins Associate Professor Parisa Aslani and fellow Sydney pharmacist Mr Paul Sinclair as board members.

I am also pleased that Vivien Tong has been awarded the federation’s 2014 Young Pharmacists’ Group Grant for Professional Innovation. My congratulations to all involved.

In October I was delighted to be part of a University delegation to visit the Shanghai Jiao Tong and Fudan Universities. This was an important trip for the University of Sydney to build on our Australia-China relations and was very successful. Following my visit to Shanghai I was invited to attend an alumni dinner hosted by the Hong Kong Alumni Association. Thirty international alumni attended the event and heard updates about the Charles Perkins Centre, the investment going into obesity and health research, and the University’s rise in the latest international rankings. I was particularly pleased that nine pharmacy alumni attended.

The Faculty of Pharmacy recently hosted the fantastic Under the Scope: Dinner for Diabetes Research. It was inspiring to see such a good turnout for what has always been a particularly strong research area for our faculty. I would like to thank everyone who supported the event and raised more than $32,000 for diabetes research. You can read a review of the evening on the following page.

Professor Andrew McLachlan recently presented the faculty’s first public Sydney Ideas lecture entitled ‘Six drug myths you probably believe’. The event was a huge success with more than 200 people in attendance. The topic also drew considerable media interest. Read the full story on page 6.

Finally, I am very pleased to announce the Faculty of Pharmacy’s NHMRC grant recipients. Please join me in congratulating Professor Mary Collins, Dr Thomas Balle, Associate Professor Jane Hanrahan, Associate Professor Philip Ahring, Dr Vidya Perera, Dr Lorraine Smith, Dr Bandana Saini, Professor Ines Krass, Associate Professor Sallie Pearson and Professor Andrew McLachlan for their recent NHMRC grant success. These grants are a prestigious recognition of their research and an excellent outcome for the faculty. More information on these ground-breaking research projects will follow in the next edition of Fiat Mist.

All the best for the rest of the year and the festive season.

Professor Iqbal Ramzan
MSc 1977, PhD 1981
Dean, Faculty of Pharmacy
MESSAGE FROM OUR ALUMNI PRESIDENT

As we approach the end of the year, I hope you will join us for one of our alumni events.

On 25 November, in partnership with Nexia, we will be hosting our inaugural Fiat Mist seminar dedicated to key developments in health. For details, see page 7. We also have a 25-year alumni reunion on 8 November and a 50-year reunion on 14 November. All these events promise to be fantastic opportunities to catch up with old friends, so please put the dates in your diary and contact Vaiju Deb, Alumni Relations Manager, for more details and to register.

We are also seeking expressions of interest regarding a possible reunion for graduates from 1985 to be held in March 2015. If you are interested in attending or would like to be on the organising committee please email Vaiju at pharmacy.alumni@sydney.edu.au.

We are delighted to announce the winners of our recent Alumni Awards in this edition of Fiat Mist. The awards recognise graduates whose work has made a positive impact in their professional field or communities in Australia and overseas. Turn to the back page to find out about this year’s winners.

We invite you to join us on Facebook to stay up to date with all our latest news.

The committee and I look forward to seeing you at an event over the coming months.

Lillian Chen
BPharm ’90, BHA ’93
President, Pharmacy Alumni Association

For the latest alumni news, visit: sydney.edu.au/pharmacy/about/alumni

OH WHAT A NIGHT: UNDER THE SCOPE DINNER FOR DIABETES RESEARCH

Staff from the Faculty of Pharmacy welcomed more than 200 alumni and guests to the sold-out Under the Scope: Dinner for Diabetes Research on 15 August. The event highlighted and raised funds for the work of the faculty’s leading researchers in this important area.

“The Faculty of Pharmacy has a long-standing interest and an international reputation for leading innovation in diabetes research, ranging from basic sciences and clinical and translational research to offering diabetes health services in community pharmacies,” the Dean of the Faculty of Pharmacy, Professor Iqbal Ramzan, said.

“The dinner served as a great opportunity to celebrate the faculty’s latest research breakthroughs and developments, such as Associate Professor Thomas Grewal and his team’s world-first discovery linking cholesterol and wound healing, which is a major health issue for diabetic patients.

“Guests also learnt about Professor Ines Krass and her team’s community health services initiative, as well as Professor David Hibbs, whose team is focused on the development of novel anti-diabetic drugs.

“The event was a great success, raising $32,516 for diabetes medicines research. Thank you to everyone for their support.”

Read more about the faculty’s diabetes research on pages 4 and 5.
RESEARCH
MAKING A DIFFERENCE
FOR PEOPLE WITH DIABETES

Diabetes is Australia’s fastest growing chronic disease and the sixth highest cause of death.

The Faculty of Pharmacy is committed to helping people who live with this condition. We have a long history of developing disease-management programs, and our leading researchers are actively examining new and innovative ways to improve health outcomes.

Along with laboratory-based research projects focusing on drug-target identification and drug development, the faculty is also creating better management, treatment and prevention models for metabolic syndromes, including diabetes. Here are just some examples of how our people and their research are making a difference.

DEVELOPING NOVEL ANTI-DIABETIC DRUGS

The design, synthesis and evaluation of potential new treatments for type 2 diabetes are main areas of research for Professor Dai Hibbs and his team.

Some of the first-line clinical treatments for type 2 diabetes (such as rosiglitazone) focus on increasing the activity of a key protein responsible for lowering blood glucose and increasing insulin sensitivity, namely, PPAR-gamma. While remarkably effective, the treatment is not without problematic side-effects such as fluid retention, weight gain and heart disease. These adverse reactions arise because, while PPAR-gamma is increased, its close family members PPAR-alpha and PPAR-delta remain at low levels.

To overcome these side-effects, it is necessary to increase the activity of all members of the PPAR group concurrently. Using computational drug design and synthetic chemistry, Professor Hibbs’s team has successfully identified a drug candidate that can increase the activity of all PPAR family members substantially over current clinical therapies, and at considerably lower doses.

The candidate molecule is non-toxic, reduces the symptoms of type 2 diabetes, and acts as a prophylactic, preventing the onset of diabetes. Professors Hibbs’s team is working to take this discovery further by modifying the drug structure, so that in addition to the treatment of type 2 diabetes, the drug can reduce ‘bad’ cholesterol and increase ‘good’ cholesterol – and therefore treat two critical symptoms of type 2 diabetes – heart disease and wound healing.
Delayed wound healing is one of the most common complications associated with both type 1 and type 2 diabetes. Left untreated, wounds can lead to infection, amputation, and even death. The rate of amputation for people with diabetes is 10 times higher than for those who don’t have the disease.

High ‘bad’ cholesterol (low-density lipoprotein or LDL) and low ‘good’ cholesterol (high-density lipoprotein or HDL) are common in diabetic lipid disorders and are associated with impaired wound healing.

Most cells in our bodies stick to neighbouring cells with the help of ‘velcro-like’ molecules on their surface known as integrins. Integrins are also needed in wound repair, a critical process after an injury that breaks the skin. Integrins help cells from the side of the wound to migrate inwards to close the gap and prevent infection. A better understanding of the factors that control integrins therefore offers great therapeutic potential.

Research has identified that ‘good’ and ‘bad’ cholesterol determine the ability of integrins to help cells move into the wound. Associate Professor Grewal and his team aim to identify the novel targets sensitive to ‘bad’ (LDL) and ‘good’ (HDL) cholesterol in the integrin-migration machinery for wound healing. This may have important implications for the treatment and quality of life for those people with diabetes.
The event brought together students, staff, alumni, industry and the wider community and was a huge success. More than 200 people attended and the lecture drew media coverage from Channel 7’s Sunrise, Channel 9’s A Current Affair, ABC Radio and national newspapers. Professor McLachlan’s lecture tackled common misconceptions, including:

- generic medicines don’t work as well as brand-name medicines
- pain relievers can target specific parts of the body
- it’s safe because it’s ‘natural’
- I feel better now, so I can stop taking my medicine

Explaining why he chose this topic, Professor McLachlan said:

“Medicines play an important role in the health and wellbeing of our communities, however, consumers need the correct information to use them safely.

“Most medicines we take can provide important health benefits, but can also have the potential to be harmful in other ways. Some medicines can have serious side-effects, some might interact with other medications, or you might not be taking the correct dose.

“A well-informed person can make a judicious and appropriate choice about the medications they decide to take. You have a choice when it comes to medicines, so you need to know your options when deciding what medication to take.

“Sometimes we think that because we take a tablet that we can have it all – eat what we like, don’t need to exercise, keep our unhealthy lifestyle – but it’s not true. Rarely is a simple tablet a magic cure-all.

“Medicines should only be used when needed; however, our culture is shifting to a society of overuse, particularly with some medicines such as antibiotics. And just because you buy something over-the-counter doesn’t mean it doesn’t have the potential to have harmful side-effects.

“Marketing and advertising can mislead consumers into making purchases that may not be the best for them – physically or financially. For example, consumers can pay a lot more for pain relievers that claim to work on specific parts of the body, but the truth is they can’t target specific types of pain – the labelling is misleading and consumers are paying more unnecessarily.

“We need to work towards a goal of personalised medicine – the right drug for the right person, with the right information.”

Couldn’t attend? Listen to a podcast of the event here.
SEMINAR SERIES GETS STARTED

We are pleased to announce that one of Australia’s leading chartered accountancy firms, Nexia Australia, is the exclusive partner of our upcoming Fiat Mist seminar series. We are looking forward to expanding our relationship with Nexia Australia into a strong and mutually beneficial partnership for our alumni.

The inaugural Fiat Mist seminar will take place on the Camperdown Campus and address how our latest research is improving health care and quality of life. In addition to guest speaker Craig Wilford from Nexia Australia the seminar will feature:

– Professor Andrew McLachlan
– Professor Mary Collins
– Dr Claire O’Reilly.

When: Tuesday 25 November 2014
Time: 10.30am – 12pm
Where: Holme Building

This event is free and open to all and a light luncheon will be served.

We hope you will be able to join us for what promises to be an enjoyable and informative event. Visit whatson.sydney.edu.au/events/published/pharmacy-alumni-medicines-ageing for full information and to register.

Professor Iqbal Ramzan
(MSc 1977, PhD 1981) Dean, Faculty of Pharmacy

LOOKING AHEAD

Craig Wilford, Nexia Australia, Partner of Financial Services Division

The first question most retirees ask when discussing their retirement is: “How long will my retirement savings last?” People naturally want to be confident that their income streams and investment portfolios will provide adequate income for their life expectancy.

For individuals planning their retirement, lifestyle should be considered in the long-term wealth-creation process. The sum of money that retirees accumulate during their working lives will drive their total retirement income and therefore influence their lifestyle choices. Once in retirement it becomes unlikely that individuals will be able to ‘top up’ their capital base.

Changes in medicine have ensured that life expectancy is longer and evidence suggests this trend will continue. The proposition that some of us will outlive our savings is not unrealistic. One thing is almost certain – you will be relying on your retirement savings to provide you with peace of mind to enjoy retirement. Those years between now and retirement are important for generating income to build your retirement savings to reach those retirement goals.

Ask yourself:

– What do I want to do in retirement?
– How much money will I need to do it?
– Is there a gap in my retirement savings?
– When can I retire?
– How and when will I be able to access my super?
– What government support will I be eligible to receive?

The great news is that if you have reached your preservation age you can use a transition to retirement pension to access your superannuation as a non-commutable income stream while you are still working. This may be particularly attractive if you have reduced your working hours and need to top up your income to maintain your standard of living.

So the key is to plan ahead. This can help you make the most of the opportunities that are available and help you achieve financial security, reduce uncertainty and enjoy your retirement.
ALUMNI AWARD WINNERS

The Alumni Awards celebrate graduates whose work has made a positive impact in their professional field or communities in Australia and/or overseas.

Pharmacy alumni, staff and friends were invited to nominate their peers for the 2014 awards. This year the faculty, in conjunction with the Pharmacy Alumni Association, recognised outstanding alumni efforts in two categories:

– community achievement
– professional achievement.

We are delighted to announce that the 2014 winners are:

**Michael Anderson (graduate of 1981)**
Blooms the Chemist, Dubbo
2014 Community Achievement Award Winner

Michael Anderson is not only a trusted and caring healthcare professional, he also has a long history of achievement within the pharmacy field. He has been a supplier of Webster packs to rural, remote and isolated towns with no other pharmacy supply chain; the first (and possibly only) pharmacist to be trained by This Way Up – the Clinical Research Unit for Anxiety and Depression – an initiative of the University of Sydney and St Vincent’s Hospital; and a member of the Rural and Remote Pharmacy Committee which helped cement financial support for rural pharmacists.

**Elizabeth Frost OAM (graduate of 1963)**
2014 Professional Achievement Award Winner

Elizabeth Frost has made an outstanding contribution to the pharmacy profession. She owned two pharmacies in Wamberal on the Central Coast of NSW, and was the first female president of the NSW Pharmacy Board from 1998 to 2007. Elizabeth was also president of the Australian Pharmacy Council from 2004 to 2010, deputy chair of the Australian Pharmacy Examining Council from 1999 to 2010, and chair of the National Accreditation of Pharmacy Schools of Australia committee from 2002 to 2003. She is still involved in the accreditation process for pharmacists and counsels graduates. Elizabeth was awarded an Order of Australia Medal in the Queen’s Birthday Honours list in 2012.

Left: Michael Anderson and family members pictured with Professor Ramzan.
Below: Elizabeth Frost receiving her prize from Professor Ramzan.

**MORE INFORMATION**

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