

SEPTEMBER 10, 2017 \$3 (incl GST) Herald Sun

Sunday



JOBIE BOWS OUT

PAGE 5, SPORT

2ND SEMI-FINAL
V
 7:00PM AET

3RD SEMI-FINAL
V
 7:30PM AET



EAGLES MIRACLE
FINAL SIREN GOAL AFTER EXTRA TIME SENDS PORT PACKING SPORT



SOPHIE MONK

I'M FINALLY HAPPY

STILLAR

EXCLUSIVE: Melbourne breakthrough to end arthritis suffering for millions

JOINT HOPE



THREE million Australians crippled with pain are set to benefit from a breakthrough discovery for the condition.

Melbourne scientists have discovered a drug to tackle the most common cause of chronic pain in what is billed as the first blockbuster medicine since anti-cholesterol pills. The drug has the potential to delay or eliminate

SEE DUNLOVY

the need for hip and knee replacements, which cost Australia's health system more than \$1.2 billion a year.

A discovery by scientists at a Melbourne biotech firm could revolutionise treatment. They have found that proteinase polypeptide sodium, used for

20 years to treat blood clots and coronary heart infections in women, can reduce and eliminate osteoarthritis pain.

Former Carlton star Andrew Walker, who was slowed by growing body fat, has reached 30 because of bad knees, said the drug had "complete game-changing effect".

FULL REPORT, PAGE 10-11

12 PAGES OF TIGERS

▶ COTCHIN I'VE LEARNED FROM LOSSES
 ▶ RIEWOLDT IT'S BEEN A LONG WAIT
 ▶ PRESTIA SCARY TIGERS

DUSTY'S DAD I'M SO PROUD
 HERO POSTER INSIDE

DUSTY
 TIGER'S LIFE

ARTHRITIS PAIN SMASHED

Melbourne breakthrough with a blood-clot drug

SUE DUNLEVY

MORE than three million Australians crippled with pain are set to benefit from a breakthrough osteoarthritis medication.

Melbourne scientists have uncovered a drug to tackle the most common cause of chronic pain in the country in what has been billed the first blockbuster medicine since anti-cholesterol pills.

The drug has the potential to delay or eliminate the need for hip and knee replacements, which cost Australia's health system more than \$1.2 billion a year.

There is currently no effective medication for osteoarthritis, which is caused by the thinning of cartilage in joints which results in bones rubbing together, creating stiffness, pain and difficulty moving.

But a discovery by scientists at Melbourne biotech firm Paradigm Biopharma could revolutionise treatment methods.

They have found that pentosan polysulfate sodium, used for 70 years to treat blood clots and urinary tract infections in women — and more recently to ease osteoarthritis in horses and dogs — can reduce and eliminate human osteoarthritis pain.

A case study of arthritis patient Kaye O'Loughlin, to be published in the journal *BMC Musculoskeletal Disorders*, shows her arthritis pain level went from 8/10 to 0/10 after six injections of it over three weeks. She no longer needs a knee replacement.

Another 30 patients have been treated with the drug and 70 per cent have seen significant reduction in their arthritis pain.

A further 15 per cent got initial relief but the trial did not allow them a seventh dose.

Another clinical trial is due to start within months.

Osteoarthritis is the second leading cause of disability and the most common cause of chronic pain in Australia, with sufferers forced to rely on anti-inflammatories and other forms of pain relief to get any reprieve. No medicine can yet halt the progression of the disease.

Scientists Professor Peter Ghosh and Dr Jegan Krishnan discovered the new treatment by rethinking the cause of osteoarthritis.

"We're thinking osteoarthritis starts in the bone," Paradigm Pharma's chief executive Paul Rennie said. There appeared to be a link between bone marrow lesions and the swelling that caused pain and cartilage degradation in

osteoarthritis, he added.

His Melbourne branch, Paradigm Biopharma, has patented the treatment for osteoarthritis and secured 20 years' supply of the drug from the German company that manufactures it for use in blood clots.

Dr Krishnan, who tested the medicine on the 31 patients, said at this stage it was not clear why the drug worked. "It may have anti-inflammatory activities, it seems addressing the bone marrow lesions gives symptomatic relief. By controlling the lesions, you reduce the symptoms of the pain," he said.

Monash University arthritis expert Professor Flavia Cicuttini said the results were fantastic but the drug needed further testing in more people. Usually a third to half the people with osteoarthritis had the bone marrow lesions the drug seemed to target, she said.

The drug is being tested in people with osteoarthritis of the knee, but it may work in arthritis in other areas of the body as well, she says.

"It's often said that if you had to choose one disease, one drug — if you could find a drug to slow the progression of osteoarthritis you could be home and hosed for a decade," she said.

"At the moment osteoarthritis is

the last frontier of big diseases with no treatment. If this drug works, even if it just slows the progress, you don't need to cure it, you could change the pattern of the disease."

It could mean instead of getting one \$22,000 joint replacement at age 50 and another \$50,000 replacement when it wears out in 10-15 years, a person might need only one joint replacement in a lifetime, she said.

sue.dunlevy@news.com.au

