

The Vision Centre  
ARC Centre of Excellence in Vision Science

MEDIA RELEASE

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## SAFFRON: GOLDEN SECRET OF CLEARER SIGHT

The herb saffron may hold one of the keys to preventing the loss of sight in old age – and may even help to improve vision in people suffering certain blinding eye diseases.

Research by Professor Silvia Bisti of the ARC Centre of Excellence in Vision Science (The Vision Centre) and University of L'Aquila, Italy, has established that saffron has remarkable effects on the genes which regulate the performance of the eye's key vision cells.

Her research has shown that the high-priced golden culinary herb made from crocus flowers not only protects the vision cells (photoreceptors) from damage, it may also acts to slow and possibly even reverse the course of blinding diseases such as age-related macular degeneration (AMD) and retinitis pigmentosa.

A clinical trial with patients suffering AMD in Rome has found early indications that treatment with a dietary supplement of saffron may cause damaged eye cells to recover.

“Saffron is not simply an anti-oxidant. It seems to possess a number of other properties which are protective to vision,” Prof Bisti, who is currently visiting colleagues in The Vision Centre in Australia, says.

“For example it appears to affect genes which regulate the fatty acid content of the cell membrane, and this makes the vision cells tougher and more resilient.

“Secondly we have shown in animal models that a saffron diet will protect the eye from the damaging effects of bright light – something we all suffer whenever we go out in the sun.”

Prof. Bisti says a third line of research has found that saffron is active in affecting genetic diseases of the eye, such as retinitis pigmentosa, which can cause life-long blindness in young people. Animal research here too offers the prospect of slowing down the progression of sight loss.

And fourthly, saffron given to human patients suffering from age-related macular degeneration, which causes partial or total loss of sight to many people in old age, has shown signs of cell recovery.

“We are excited by these early findings. We will know more when all the results are in later this year,” Prof. Bisti says. The saffron diet treatment may also be trialled as part of a wider experiment involving ways to prevent vision loss in humans in Sydney and Rome later this year.

Prof. Bisti said she began to study the effects on saffron at L’Aquila, in Italy’s mountainous Abruzzi country because it was a widely-grown local crop. It was already well-known as an anti-oxidant, but no-one had explored its effects on eyesight before.

“The point about saffron is that it is completely safe and harmless. It has been used in cooking and medicine for three thousand years.”

Prof. Bisti’s team are also working to isolate the active components of saffron which produce the various beneficial effects on vision with the goal of developing therapies based on them.

Prof. Bisti’s laboratory at L’Aquila University was severely damaged in the recent earthquake in Italy and her experiments disrupted. In view of the tragedy and the importance of her work, The Vision Centre has agreed to support one of her key researchers to come to Australia and work at the Australian National University for a year, Centre director Professor Trevor Lamb has announced. Two more of her research staff will be working at the University of Sydney, enabling this important research to proceed.

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