

November 2019

Welcome to the November edition of the NSW Tissue Banks Newsletter

NEW VIDEOS SHOWCASE THE NSW TISSUE BANKS

The NSW Organ & Tissue Donation Service (OTDS) created a series of short videos showcasing the amazing work done at the NSW Tissue Banks. Produced by *Digital Storytellers*, the films take a close look behind the scenes.

The team of specialists are responsible for the coordination, retrieval and processing of tissue in preparation for transplantation. One tissue donor can save and transform the lives of many people.

To learn more about how tissue donation is made possible through the work of the NSW Tissue Banks, check out the videos by heading to the DonateLife YouTube channel (*DonateLifeAustralia*), or the NSW OTDS website. The videos are encouraged to be shared, and can be used as an educational resource.



RESEARCH & DEVELOPMENT TEAM PRESENT AT RANZCO

The NSW Tissue Banks Research & Development (R&D) team presented a poster at the 51st Annual Scientific Congress of The Royal Australian and New Zealand College of Ophthalmologists (RANZCO), held in November at the International Convention Centre in Sydney.

The team's important role as researchers is funded by the Lions NSW-ACT Save Sight Foundation.

The poster detailed a component of the research work being undertaken into cultivating and growing the cells on the inner most layer of the cornea, the endothelial layer.

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Corneas for transplantation in NSW are stored in a media up to three weeks from the day of retrieval. This media contains foetal bovine serum (FBS), a sterile product widely used in cell culture due to its rich source of proteins that maintain cells and support them to survive, grow and divide. Eye banks are exploring non-animal products to support corneal storage and the NSW Tissue Banks are considering the possibility of replacing the FBS with human platelet lysate.

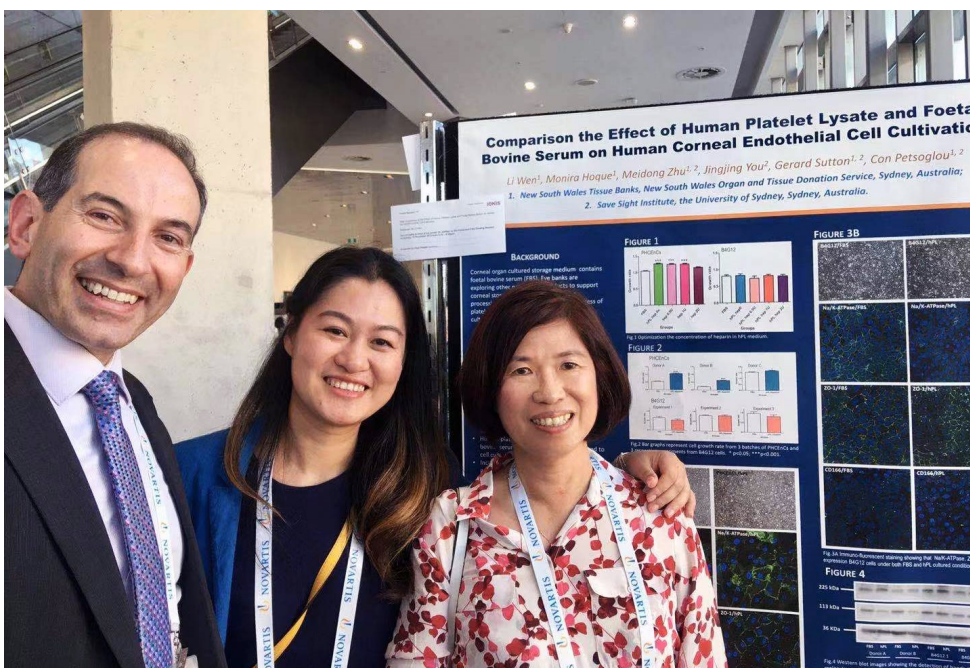
Platelet donation is one form of blood donation. Platelets are the cells within the blood that prevent or stop bleeding. If a blood vessel is damaged by trauma, surgery or illness, platelets form a plug, which helps stop bleeding. Platelets are held in place by special proteins in blood until the damage is healed. Platelets also contain growth factors that help to repair damaged body tissue. Due to the fragile nature of the platelet cells, they expire within a matter of days.

Human platelet lysate is a light-yellow liquid that is obtained from expired human blood platelets after freeze/thaw cycle(s). The freeze/thaw cycle causes the platelets to break down, releasing a large quantity of growth factors necessary for cell expansion. To test the effect of the human platelet lysate on the corneal tissue, a number of experiments were conducted to test the impact on the growth of the endothelial layers.

The R&D team have demonstrated that human corneal endothelial cells were able to grow healthily with culture medium supplemented with human platelet lysate and should be considered as a replacement to animal derived products.

NEXT STEPS FOR RESEARCH & DEVELOPMENT

The R&D team plan to incorporate these findings into their ongoing primary goal which is to establish a standardised protocol to isolate and grow human corneal endothelial cells for donation. Collaborations with Singapore Eye Research Institute have enabled the team to refine their tissue handling techniques in the hope of achieving “cleaner” groups of cornea endothelial cells. This will aide in their attempts to make this process a TGA-approved culture system.



From left to right:
Dr Con Petsoglou, Dr Jingjing You
and Ms Li Wen

Contact

Please contact the staff of the NSW Tissue Banks on 02 9382 7855 if you have any questions or would like a speaker for a meeting, dinner or event. To book facility tours on the 1st Wed of the month at 11am please ring 02 9382 7855

ARTICLE ON AMNION PROGRAM ACCEPTED FOR PUBLICATION

A short article on the commencement of the NSW Tissue Banks' innovative amnion donation program has been accepted for publication by Clinical and Experimental Ophthalmology, which is the official journal of The Royal Australian and New Zealand College of Ophthalmologists.

The journal primarily publishes peer-reviewed original research and reviews dealing with all aspects of clinical practice and research in ophthalmology and vision science.

More than 119 amnion grafts have been transplanted to date by 58 different ophthalmic surgeons across all states and territories except the Northern Territory.



Production Scientist, Amy Chan processing an amnion donation.

DONATELIFE THANK YOU DAY

DonateLife Thank You Day took place on Sunday 17th November, and was a national day to recognise all Australians who make organ and tissue donation possible.

DonateLife Thank You Day is an important opportunity for the Australian community to collectively say thank you to all the individuals and their families who make donation possible.

This year, the NSW Organ & Tissue Donation Service unveiled an important memorial in South West Sydney to remember deceased organ and tissue donors and their families.

The event took place shortly after Thank You Day, consisting of speeches by a donor family and transplant recipient, and attendance by local media, hospital staff and the community.



Pictured left to right: An original artwork by local Indigenous artist, Susan Grant Murphy; the artist with donor family member Luke Russell and family.

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MEDIA & PROMOTION

SAFFRON DAY

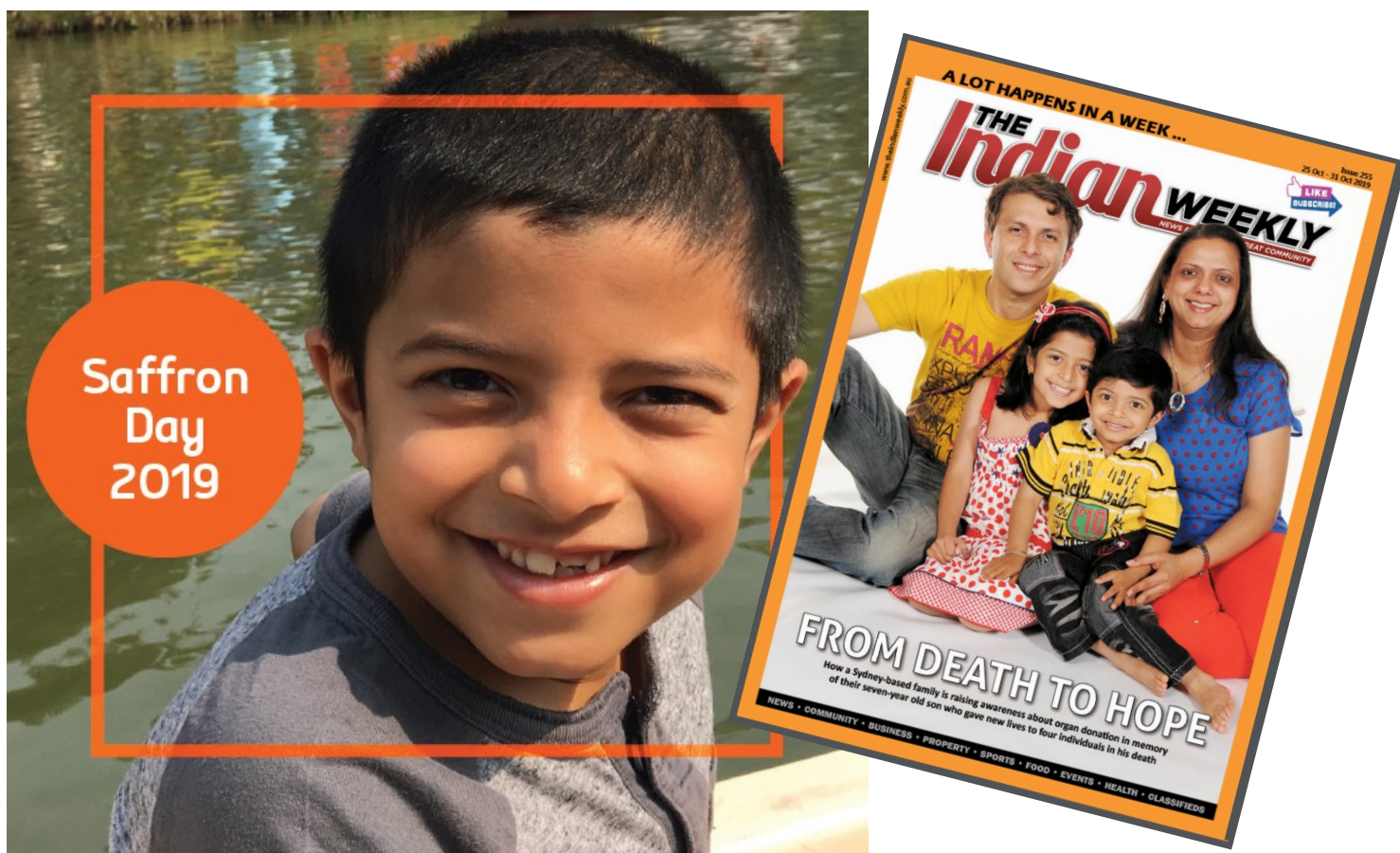
Saffron Day was held on Tuesday 22nd October, and was a day to honour the life of Deyaan Udani, who passed away in 2016 at the age of only seven and became an organ and tissue donor.

Deyaan's parents created Saffron Day as a way to remember Deyaan, and to get people in their community talking about organ donation.

Saffron Day, now in its second year, urges all Australians to 'Do it for Deyaan' by wearing orange and registering their decision to become an organ and tissue donor.

Saffron symbolises courage and strength, qualities seen in Deyaan. Saffron is especially important to the Udani family as orange was Deyaan's favourite colour.

A pinch of saffron goes a long way, as does the generous gift of organ donation. More about Saffron Day can be found at saffronday.org.



Pictured left to right: Deyaan Udani; the Udani family on the front cover of The Indian Weekly

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