



CENTRE FOR  
Eye Research  
Australia

# visionary

SPRING 2018

Saving sight. Changing lives.

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## Letter from the MD

Welcome to the Spring edition of Visionary. It has been an exciting time at the Centre for Eye Research Australia with the announcement of our new Managing Director, Professor Keith Martin.

In September, we celebrated the publication of the promising results of the LEAD trial, a world-first study led by Professor Robyn Guymer, that investigated a new form of laser treatment as a potential therapy for people with early signs of age-related macular degeneration (AMD).

I hope to see many of you at our 10th Annual Gerard Crock Lecture on 22 November 2018. We look forward to a thought-provoking talk from our guest speaker, internationally-acclaimed ophthalmologist and scientist Professor Sir Peng Tee Khaw. To book your place at this special event, email [rsvp@cera.org.au](mailto:rsvp@cera.org.au) or call (03) 9929 8360.

Many thanks for your ongoing interest in the work that we do at the Centre for Eye Research Australia.

Kind Regards,



Dr Peter van Wijngaarden  
Interim Managing Director  
Centre for Eye Research Australia



## 5 minutes with Marios Constantinou

### How did you become interested in eye research?

After completing my Orthoptics degree in 2003, the opportunity came to work on the Vision Initiative Eye Health program led by CERA founder Professor Hugh Taylor. His mentorship provided invaluable guidance in pursuing a career in clinical eye research.

### What are you working on at the moment?

As the Clinical Trials Research Centre (CTRC) Manager, I am responsible for the ongoing management of a high quality clinical trial centre, in addition to developing and overseeing the Eye Trial Research Network. Learn more about the work of the CTRC at [www.cera.org.au/clinical-trials-research-centre/](http://www.cera.org.au/clinical-trials-research-centre/)



# Professor Keith Martin announced as CERA's next Managing Director

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**The Board of the Centre for Eye Research Australia (CERA) is pleased to announce the appointment of Professor Keith Martin as Managing Director of CERA and Ringland Anderson Professor of Ophthalmology at the University of Melbourne.**

Chair of the Board, Olivia Hilton says: "We were heartened by the fantastic response and the high calibre of candidates who applied for the role, but Keith was the outstanding candidate. He has a strong commitment to eye research, experience, passion and energy to lead CERA into the future."

Professor Martin was elected as the first Professor of Ophthalmology at the University of Cambridge in 2010 and at the time was the youngest full Professor at the University of Cambridge Clinical School. A glaucoma specialist, Professor Martin's ground-breaking research proved that gene therapy and stem cell therapy can reduce optic nerve damage in experimental models of glaucoma. He is co-founder of Quethera, a Cambridge-based gene therapy company which has developed a gene therapy for glaucoma that is currently progressing towards human clinical trials. He is also interested in the potential for regeneration and repair of nerve damage in the eye and brain.



Professor Martin said he is "delighted" to have been appointed as the next Managing Director of CERA and Ringland Anderson Chair at the University of Melbourne.

"Under the dynamic leadership of Jonathan Crowston, and in partnership with the University of Melbourne and The Royal Victorian Eye and Ear Hospital, CERA has consolidated its reputation as one of the world's leading eye research institutes," says Professor Martin.

"I look forward to working with you all as we seek to develop innovative and creative new approaches to protect and enhance vision, reducing the burden of blinding eye disease. I am excited to get started early next year and am looking forward to the challenges ahead!"



# Eye researchers acknowledged in Queen's Birthday Honours

**Two of CERA's longest-serving staff members were acknowledged in the 2018 Queens Birthday Honours List - Deputy Director Professor Robyn Guymer, Head of Macular Research at CERA and Dr Graeme Pollock, Director of the Lions Eye Donation Service.**

Deputy Director Professor Robyn Guymer was made a Member of the Order of Australia (AM) in recognition of her significant service to medicine in the field of ophthalmology, particularly age-related macular degeneration (AMD) as a clinician, academic and researcher. "The award recognises more than 20 years of persistent focus on a disease called age-related macular degeneration (AMD) and indeed recognises a whole team of researchers who together have improved outcomes for people with this disease," says Professor Guymer.

Lions Eye Donation Service Director Dr Graeme Pollock received a Medal of the Order of Australia (OAM) in recognition of his contribution to corneal research and the development of the world's first post-graduate course in eye-banking at the University of Melbourne.

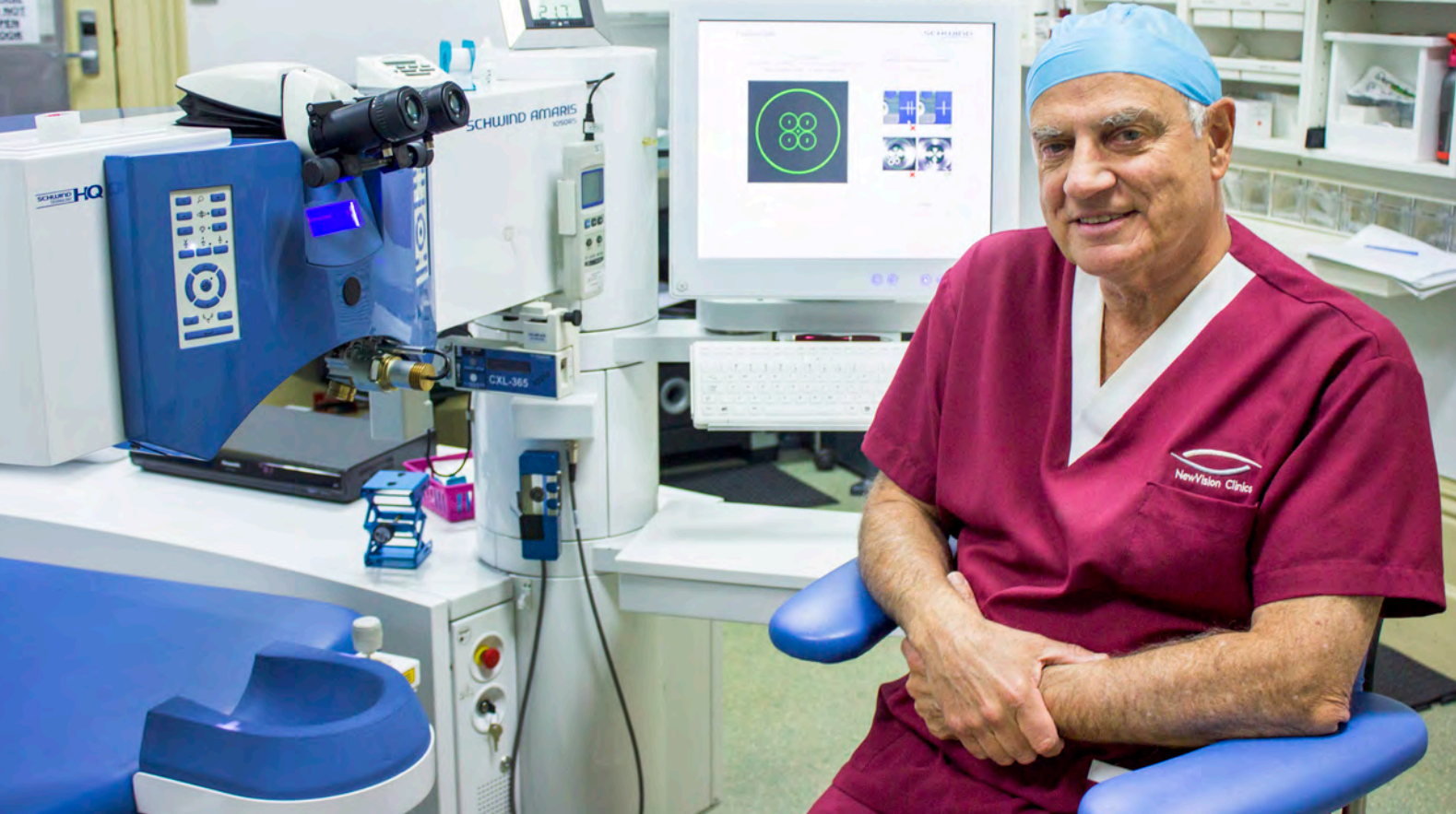
For 27 years, Dr Pollock has led the Lions Eye Donation Service at CERA, turning it from a small team to one of the largest providers of corneas in Australia. Dr Pollock also helped develop the first post-graduate course in eye-banking in the world.

Dr Pollock said he was surprised and honoured to receive the award. "It's always been rewarding to work in a field that can make a difference to people's lives and wellbeing. To receive a reward in recognition of such work is both a surprise and a wonderful bonus. I also have to be grateful for always being part of a committed and competent team at work, and having the ongoing support of my family and friends."



Dr Graeme Pollock OAM





Prof Noel Alpines AM

## Professor Noel Alpines AM: Solving the riddle of astigmatism

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**A problem-solver at heart, ophthalmologist Professor Noel Alpines AM discovered a passion for science and helping people when he was a medical student at the University of Melbourne.**

He first developed an interest in ophthalmology in his fifth year, thanks to the entertaining lectures of charismatic ophthalmologist Professor John Colvin. "I enjoyed them so much, I went back again in my sixth year!" he recalls fondly. Professor Alpines also credits Professor Colvin for sparking his interest in innovation and education. "It wasn't in my paradigm to be a lab researcher, until I had an idea that was going to be relevant to my patients in the clinic," he says.

Professor Alpines spent four years developing a new methodology for analysing and reporting astigmatism – a condition caused by an irregularly curved cornea that results in blurred vision. Dubbed 'The Alpines Method', it is now the world gold-standard method for analysing astigmatism and forms the basis of a software program he developed called ASSORT.

As a specialist in astigmatism and refractive surgery, Professor Alpines has developed and delivered education programs to train ophthalmologists in this field. Professor Alpines has also written a book on this topic, based on his 20 first-author peer-reviewed scientific papers and in 2017, he was awarded the Order of Australia medal for services to ophthalmology by innovation in Refractive Surgery.

One of his proudest achievements, however occurred earlier this year, when Professor Alpines was made an Honorary Clinical Professor at the University of Melbourne. "The University has been so instrumental in my background. It is such a fabulous, independent institution, it gives you the ability to think for yourself. By combining research and education, it allows us to ask questions, find the answers and then teach others what we've learnt. It's incredibly gratifying to be made a Professor at the institution where I studied all those years ago and to have cataract and refractive surgery in the forefront of a cutting-edge specialty like ophthalmology."

# World-first laser treatment shows promise in slowing ageing eye disease

**A world-first 'nanosecond laser study' has shown promising results in slowing the progression to vision loss in age-related macular degeneration; one of the most common cause of severe vision loss in the Western world.**

CERA's Deputy Director Professor Robyn Guymer AM, led a large clinical trial which found that the nanosecond laser treatment (known as Retinal Rejuvenation Therapy (2RT®) developed by Ellex Medical Lasers Ltd), showed promise by reducing the overall rate of disease progression in the treated eye. The patients with this promising outcome had large drusen (lipid-rich deposits) which characterise the earlier stages of the disease, when people still have excellent vision but are at risk of progressing to vision loss.

Over the entire group of participants, there was no significant benefit, however, different clinical groups appeared to respond differently to the treatment. Participants with less severe signs of disease (representing 76% of the participants), showed nearly a four-fold decrease in progression rate of their disease, whereas participants with more severe signs of disease at the beginning of the trial (24% of participants), had a doubling of their progression rate to late stages of AMD, when compared to participants who were not treated.

"Whilst this new laser isn't a cure, and it is not suitable for every person with early stages of AMD, this is an important first step in finding an intervention that potentially could reduce progression to late disease. If validated in future trials, this will be the first time that a laser intervention has successfully addressed AMD disease progression from its early stages to late AMD in more than 20 years of AMD laser research," says Professor Guymer

Professor Guymer wants to conduct further studies to validate these initial promising results. "The findings of this study give us reason to be optimistic, but at the same time, also highlight the need to better understand the patient selection requirements for 2RT," says Professor Guymer.

"The laser technique and protocol used, as well as the careful selection of participants based upon the clinical classification of AMD, will be a critical consideration," says Professor Guymer.



If you would like to participate in a clinical trial at CERA, you can register as a volunteer on our website [www.cera.org.au](http://www.cera.org.au)





Prof Robyn Guymer AM





## Protecting the rights of eye donors

The Agreement was signed in the presence of the Ministry of Health for Catalonia (central) and Dr Jose Nunez – WHO Medical Products of Human Origin Service Delivery and Safety Department, and Dr Paul Dubord WHO Expert Advisory Panel on Human Cell, Tissue & Organ Transplantation.

### Australian eye bankers have helped develop the world's first global Agreement on the ethical use of human eye tissue.

The Agreement was developed by a collaboration of eye banking organisations, led by the Melbourne-based Global Alliance of Eye Bank Associations (GAEBA). It outlines the ethical use of donated human tissue for ocular transplantation, research, and future technologies.

Dr Graeme Pollock heads the Lions Eye Donation Service at the Centre for Eye Research Australia (CERA) - and the GAEBA. "The Agreement, known as the 'Barcelona Principles' evolved due to the need to improve tissue access to millions of waiting recipients, without compromising what are universal ethical

principles and our own professional custodian responsibilities to the donor, recipient and the extended community," he said.

"We are fortunate that in Australia, we don't have a shortage of eye tissue and in most cases, anyone who needs a corneal transplant will receive one within a matter of weeks," explains Dr Pollock. "Unfortunately, many lower-resourced countries do not have the same access to donor eye tissue, creating issues around equity and the risk of commercial trade in human tissues."

"The Barcelona Principles include a clear statement – that it is our collective responsibility to protect and retain stewardship of altruistic donations as a public resource for the shared benefit of all," says Dr Pollock.

### The Barcelona Principles nine key strategies include:

1. Respect the autonomy of the donor and their next-of-kin in the consent process.
2. Protect the integrity of the altruistic and voluntary donation and its utility as a public resource for the shared benefit of all.
3. Support sight restoration and ocular health for recipients.
4. Promote fair, equitable and transparent allocation mechanisms.
5. Uphold the integrity of the custodian's profession in all jurisdictions.
6. Develop high-quality services that promote ethical Cell, Tissue and Organ (CTO) management, traceability, and utility.
7. Develop local/national self-sufficient services.
8. Recognise and address the potential ethical, legal and clinical implications of cross-border activities.
9. Ensure ethical practice and governance of research (non-therapeutic) requiring cells, tissue and/or organs.



# New eye screening program for people with diabetes

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Researchers at CERA are passionate about making a difference in the lives of people affected by eye disease.

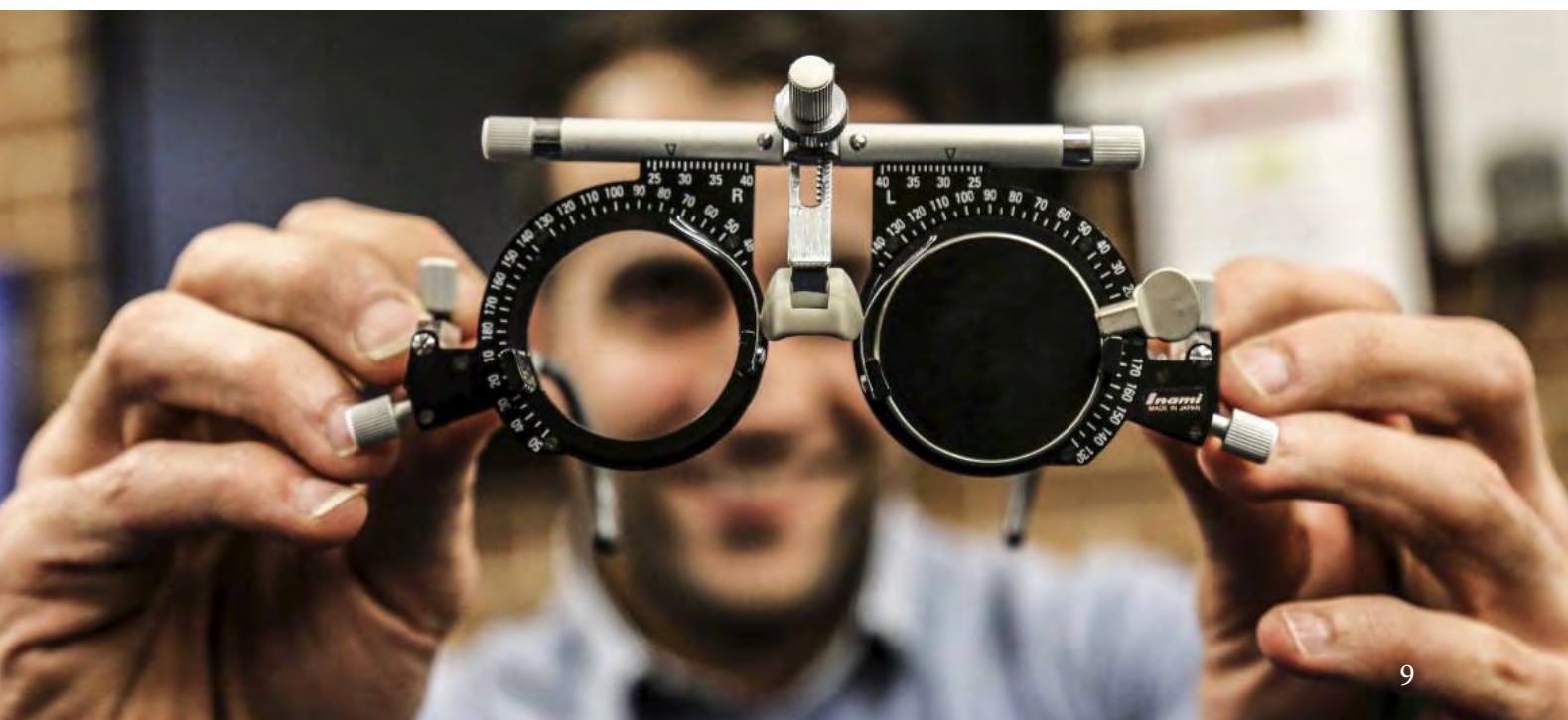
During Diabetes Awareness week in July this year, the Australian Government announced \$1 million in funding to develop the KeepSight program, to protect the sight of the 1.2 million Australians living with diabetes.

CERA's Interim Managing Director Dr Peter van Wijngaarden says that the program will help tackle the epidemic of diabetic eye disease – the biggest cause of avoidable vision loss and blindness in our country.

Together with former CERA researcher Dr Mohammed Dirani, Dr van Wijngaarden played a key role in the successful lobbying for this program. "CERA researchers were at the forefront in advocating for this visionary program," says Dr van Wijngaarden, "and we will play a key role in its implementation."

KeepSight will protect the eye health of people with diabetes by promoting biannual eye checks and a national electronic eye health record.

Diabetes Australia will partner with Vision 2020 Australia, Oculo and many other organisations in the eye health and diabetes sector to deliver this important initiative. The Government contribution of \$1 million will be matched by Specsavers Australia.



# 25th Lions Ride for Sight a roaring success

The 25th Lions Ride for Sight raised a record \$65,000 for eye research, much to the delight of CERA's Interim Managing Director, Dr Peter van Wijngaarden.

"This is an outstanding result and I would like to extend my gratitude to all the riders and the Lions Clubs in Gippsland and the Mornington Peninsula who have supported CERA for the past 25 years," says Dr van Wijngaarden.

The 2018 event saw 59 determined riders jump on their bikes to cycle over 300km around southern Victoria to raise funds for eye health.

Lions Ride for Sight organiser Nina Blythe said Lions District 201V3 is proud to have supported CERA's research into eye disease for the past 25 years, giving more people a chance to save their sight.

"Back in 1994, the Lions Club based in Gippsland, held a bicycle ride from Mallacoota to Melbourne and has held a ride each year travelling over a variety of routes throughout Gippsland," says Blythe.

"Since the ride began we have cycled over 9,000 km for eye research, that's like travelling from Melbourne to Broome and back!"

This year, riders travelled from Tidal River to Foster, then onto Wonthaggi, San Remo, and Korumburra, unfortunately having to abandon the final day's ride into Inverloch due to torrential rain and wind making the course unsafe.

CERA staff member Tanya Pejnovic completed the epic journey with her son Stefan. "The highlights were the beautiful scenery, the great comradery, and not to mention the wonderful home cooking from the Lions groups that hosted us along the way."

The Lions District 201V3 President presented the cheque for \$65,000 to Research Fellow Dr Isabel Lopez Sanchez on October 13. The money raised this year will go towards supporting CERA's Neurodegeneration researchers, Dr Lopez Sanchez and Associate Professor Ian Trounce.



2018 Lions Ride for Sight participants



# CERA says THANK YOU

Interim Managing Director Dr Peter van Wijngaarden is delighted with the response to our 2018 Tax Appeal, featuring long-time CERA supporters David and Margaret Knight.

The appeal raised in excess of \$150,000, which has been distributed to research projects across a range of ageing eye disease areas. "This money is critical in allowing our researchers to keep working towards eliminating blindness in the community," says Dr van Wijngaarden. "In a tough funding environment, the support of our loyal donors is even more important, and I'd like to extend my sincere thanks to everyone who contributed to our 2018 Tax Appeal."

As a special thank you, donors to the appeal were invited to attend an exclusive event in September, where they heard first-hand about the latest work from stem cell researcher Associate Professor Alice Pébay and retinal researcher Associate Professor Wilson Heriot (pictured below). The event also featured a Q&A session with David Knight, the face of the appeal, facilitated by CERA Community Engagement Officer Steve Hurd.



A/Prof Wilson Heriot presenting his research to CERA supporters



Support CERA's research, donate by phone 1300 737 757 or online [www.cera.org.au](http://www.cera.org.au)

Enclosed is my donation of \$\_\_\_\_\_ (please specify amount).

<VISION2018A>

☐ Please find enclosed a cheque/money order (made payable to Centre for Eye Research Australia).

Please debit my credit card: ☐ VISA ☐ MASTERCARD

Card number:  Expiry date:  /

Name on card: \_\_\_\_\_ Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Please send me more information on:**

☐ Becoming a 'Sight Saver' by making regular donations ☐ Leaving a gift to CERA in my Will

☐ Joining our mailing list to receive CERA updates on research and events

**Thank you! Your gift of \$2 or more is tax deductible.**

**Please complete this form and return it to:**

Centre for Eye Research Australia, Reply Paid 91268, EAST MELBOURNE VIC 8002

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CENTRE FOR  
Eye Research  
Australia

# Did you know CERA hosts free community information forums?

"The presenters told it as it is, but gave you confidence."

- Stem cell community forum, August 2018



"The best glaucoma info session yet that I've attended."

- Glaucoma community forum, October 2018

To sign up to receive invitations to our community events please email: [community@cera.org.au](mailto:community@cera.org.au)



## 10th Annual Gerard Crock Lecture

CERA's 10th Annual Gerard Crock Lecture will be presented by Prof Sir Peng Tee Khaw. Sir Peng will present insights from his glaucoma research career and will speak about new approaches to prevent degeneration and assist regeneration of the visual system.

**Date:** 22 November 2018

**Venue:** Dax Centre, Kenneth Myer Building,  
30 Royal Pde, Parkville, 3010

**Time:** 5:15pm – 7:30pm, drinks and canapes served on arrival

**Registration:** 5:15pm, Lecture commences at 6:10pm

**RSVP essential by Thursday 15 November 2018**

**Email:** [rsvp@cera.org.au](mailto:rsvp@cera.org.au) | **Ph:** 03 9929 8360



Prof Sir Peng Tee Khaw

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