Gift of **SIGHT**

# OCTOBER 2022 NEWSLETTER

## CELEBRATING TWENTY YEARS OF ACADEMIC EYE RESEARCH IN SOUTHAMPTON

Dear friends and supporters

I joined the University of Southampton as Professor of Ophthalmology in September 2002. At that time research into eye conditions was limited. For example, scientists worldwide knew that age-related macular degeneration (AMD) could run in families but that was all they really knew about its cause. It was, and still is, the most common cause of blindness in the elderly. Twenty years ago there were no treatments for either 'dry' or 'wet' types of the disease, diagnosis was patchy and very much depended on the hospital clinic where a patient was seen. It was considered 'an ageing process'.

Moving on twenty years, worldwide research has developed a treatment for late stage AMD (wet), and therapies are being trialled for people in the early stages of dry AMD. We now understand many of the mechanisms that cause AMD. Diagnostic tools have improved greatly over the years too, both in clinics and laboratories. As a result of these innovations we are now seeing a reduction in blind registrations which is great news.

I'm pleased to report that our research team has grown considerably since I started in 2002! In 2022 our vision research group includes myself and five principal investigators, as well as a team of junior scientists and technicians. As an academic group within the University of Southampton we are expected to, and do, attract funding from national grant making bodies such as the Wellcome Trust, Medical Research Council and the National Institute for Health Research. Our success in winning such grants demonstrates that our peers judge our work valuable and helpful in ultimately developing new treatments for patients.

Gift of Sight has been fundamental to the success of many of the grants received as we have been able to provide leverage to external grant applications by funding some equipment and salaries for scientists to collect early data to commence larger trials. The support given through donations, legacy gifts, direct debits and attendance at our events has been essential to the growth of the team. A generous legacy is currently funding two PhD students.

Therefore, I would like to take this opportunity to pass on my heartfelt thanks for your ongoing support and personal interest in our work. Our team couldn't manage what we do without you and we hope to repay your help by further developing new treatments for the current and next generation of people who suffer with both common and rare blinding eye conditions.

With kind regards,

Andrew Lotery MD, FRCOphth
Professor of Ophthalmology
University of Southampton

## Professor Andrew Lotery - keynote speaker at Open Sight Eye Contact Exhibition

We were delighted to join the Open Sight team at their exhibition in Southampton, held at St Mary's Stadium. Professor Lotery spoke about his first study into age-related macular degeneration when he travelled to Guernsey in 2003 to take samples from people who had been diagnosed with the disease.

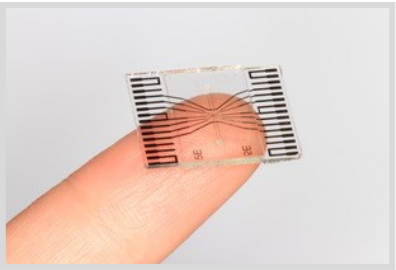
Twenty years later we are still investigating different aspects of AMD but, thanks to ongoing research in the UK and worldwide, some treatments are now available to patients and new therapies are on the way. Excitingly Andrew has just attended the first post-Covid in-person meeting for the PINNACLE Trial with all the collaborators working on this vital project.

## Associate Professor Parwez Hossain

Corneal transplantation is one of the most successful operations to restore eyesight. Sadly there is a shortage of donated corneas worldwide. Although improving the number of eye donors would help, the demand for tissue is outstripping the supply, even in those countries with high numbers of eye donors.

Ophthalmic Lasers could provide an approach to increase the yield of suitable corneal tissue for transplantation. An appropriate laser could, in theory, take a single eye donation and split the corneal tissue into different layers or segments to allow multiple recipients to benefit from a single cornea. For example, one cornea could allow restoring the eyesight to two or more recipients if a suitable laser could precisely divide the tissue into viable transplant material. Currently ophthalmic lasers for corneal surgery are dominated by ultra-violet and near-infrared femtosecond lasers, with both carrying the potential risk of tissue damage.

Together with engineers at the world-leading optoelectronic research centre at the University of Southampton, we are working on a new type of laser that uses a safer, less damaging longer wavelength of infrared light. Such lasers could not previously be made in a suitable size for the energy requirements for tissue ablation. We plan to evaluate the technology on human corneal tissue from the UK eye bank (unsuitable for transplantation) and assess the precision and safety of laser cutting, especially regarding collateral damage. We will also investigate if it can help yield and aid with precise layered/sectioned corneal dissection, thus facilitating multiple uses of a single donor cornea. Our corneal fellow Dr Harinderjeet Sandhu is starting a PhD to assess the benefits of this technology.

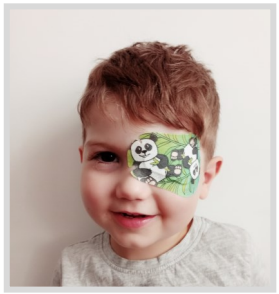


I am also working with the University of Southampton's Network for AntiMicrobial Resistance & Infection Prevention (NAMRIP) and colleagues from Electronic Engineering, Molecular Microbiology, Ophthalmology (Eye Unit) and Southampton University NHS Hospital Trust. By using the application of a technology known as an electrical impedance we can identify different types of bacteria with no sample preparation and 'instant' detection from, literally, a drop of the specimen. A dedicated prototype device has been set up for clinical samples for patients. With this cross-faculty clinical project the team will refine the technology to optimise it for clinical application. This will enable prompt treatment with the correct medication for patients with corneal infections.

## Occlusion Therapy (patching) survey: Maddie McGowan, medical student

**Amblyopia, also known as lazy eye, is the most common cause of preventable visual impairment in children but 50% fail the treatment and end up with life long poor vision.**

Our paediatric team would like to understand the challenges experienced with patching treatment and are launching a survey looking into the barriers and facilitators to occlusion therapy. It would be helpful to get a clearer idea of whether new advances in the field, such as apps that can detect whether a child is wearing their patch and give them rewards within the game, would be useful for people in everyday life. If you've ever worn an eyepatch, or helped a child to wear one, we would love your help! Please scan this QR code, using your smartphone, to find out more or participate on line through this link. The survey should take approximately 5 minutes to complete. If you would like to get involved with other children's research studies please email getinvolvedineyeresearch@gmail.com



## EYEland Fete, July 2022

**Grateful thanks to Sarah and Christopher Saunders-Davies for inviting us to hold a fete in their beautiful garden in July this year.**

VITEYES LIFE IN SIGHT

We were joined by 'Granny Bean' who read *The Tiger who came to Tea* and made the day fun for all the children, young and old. It was lovely to meet up with our supporters again and we were thrilled that Lady Mary Fagan, President of Gift of Sight, opened the fete for us.

Our guests were able to enjoy being in a beautiful garden, enthusiastically supporting our raffle and tombola as well as buying gifts at our stalls. Our huge thanks to the companies and individuals who kindly donated some amazing prizes!

We also owe thanks to everyone who helped with organising the fete and joined us on the day. Special thanks to Michelle and James Sutton at Butterflies Healthcare for their generous sponsorship of the event, helping us raise the amazing sum of **£1600 for children's eye research**.

## Nystagmus Network visit to Southampton


**It was lovely to meet friends from Nystagmus Network together with Mike Larcombe, who has nystagmus and fundraises generously for both charities, when they visited us in Southampton.**

Dr Jay Self and Dr Helena Lee work closely with the Nystagmus Network and the charity have generously donated £17,000 to enable the purchase of 4 x CROM (Cervical Range of Motion) devices and a RETeval device. These non invasive and effective pieces of kit will be used to accurately scan head postures in patients with nystagmus and will form the basis of a study by our paediatric research team.

Nystagmus Network

**THANK YOU ALL FOR YOUR INCREDIBLE HELP OVER THE YEARS**

Follow our news on social media

## FORTHCOMING EVENTS - Please get involved!

### Gift of Sight 'Beating Blindness' online Lecture
### Wednesday November 9th 2022 6.00pm-7.00pm

Our online Lecture, due to take place on the 21st September, was cancelled due to technical difficulties on the day. It has now been rescheduled and all guests who registered will have their details transferred to the new date. We hope you can make it!

This online event focuses on the world-class research of the University of Southampton Vision Research Team and includes a Q&A session. Our speakers are Professor Andrew Lotery, Dr Helena Lee and Dr Jörn Lakowski. The Lecture will now be hosted by Associate Professor Jay Self instead of Mr Andrew Luff, who was unable to reschedule.

There is no charge to attend this online lecture. To book your place(s), please visit www.giftofsight.org.uk/events

University of Southampton

## Mike Larcombe—Walk for Wiggly Eyes 3


Mike walked the full length of New Zealand two and half years ago, and rode a bicycle around the state of Tasmania last December to raise awareness and money for nystagmus research. Our intrepid fundraiser has now set himself another challenge and will be cycling 200 miles in two days in December, along two of Australia's longest trails in Queensland, Australia's 'Sunshine State'.

Mike has set up a fundraising page and we'd love you to encourage him by donating to his JustGiving page.

## THANK YOU FOR YOUR CONTINUED SUPPORT

We are very grateful to our regular Direct Debit donors. These generous gifts help us plan our spending. One-off gifts and Direct Debits can be set up electronically at www.donate.giftofsight.org.uk. If you have a smartphone camera to scan our QR code at the bottom of this page, you will be taken directly to our 'Donate' page. Alternatively card payments can be made by calling 023 8059 7239. Cheques can be posted to: Gift of Sight, Office of Development and Alumni Relations, Building 37, Highfield, Southampton SO17 1BJ.

## Thinking of leaving a legacy?

Many of our donors are thinking ahead and kindly finding a space for Gift of Sight in their Will, leaving a legacy to ensure eye research continues to help future generations. If you would like to consider this yourself, please do get in touch with us. We're always happy to chat about any questions you may have.

*Please remember to let us know if you no longer wish to receive Newsletters*

**Contact:** Ailsa Walter | T:023 8059 9073 or Jennie Mugridge | T:023 8059 5921
**Email:** info@giftofsight.org.uk | **Web:** www.giftofsight.org.uk